

Rouse Hill Hospital

Landscape SSDA Report



SITE IMAGE
Landscape Architects

bangawarra



Health
Infrastructure



Health
Western Sydney
Local Health District

Contents

Introduction	3	Hospital Garden	19
SEARS Reporting	4	Grasslands	21
SDRP Responses	5	Mortuary Garden	22
Planning Context	6	Existing Trees	23
Landscape Principles	7	Canopy Coverage	24
Site Introduction	8	WSUD Initiatives	25
Landscape Context	9	Planting Strategy	26
Landscape Masterplan	10	Materials Strategy	27
Designing with Country	11	Draft Greener Places Design Response	28
Stone Journey	12	CPTED and External Lighting	29
Casurina Grove (A Safe Place)	13		
Mungari Birdsong in Grassland Ecology	14		
Main Entry	15		
Casuarina Grove	17		

Revision	Issue	Date
A	Draft Issue	21.10.2024
B	Response to Comments	08.11.2024
C	40% Issue	20.03.2025
D	Architectural Coordination	21.03.2025
E	Draft Issue	17.06.2025
F	SSDA Issue	27.06.2025
G	Response to Comments	26.08.2025
H	Response to Comments	03.11.2025

Introduction

This Landscape Architectura Report has been prepared by Site Image to support a State Significant Development Application (SSDA) for the construction and operation of a new hospital campus at the Corner of Commercial Road and Windsor Road, Rouse Hill (SSD-96248991).

The proposed development comprises:

- Site preparation including earthworks and tree removal;
- Construction of internal roads with connection to Commercial Road;
- Incoming electrical and communications services
- Construction of hospital buildings up to eleven storeys;
- Construction of a ten storey above-ground car park;
- Pedestrian and cycle pathway connections;
- Landscaping; and
- Ancillary works to Commercial Road, comprising:
 - minor works (including realignment of existing median strip, kerb and gutter, footpath and lane marking) to provide access from Commercial Road into Hospital Road; and
 - associated tree removal along Commercial Road.

The scope of the proposed works includes:

- An emergency department and primary access clinic
- Comprehensive birthing services including birthing rooms and a maternity inpatient unit
- Inpatient beds and day surgery services
- Short stay medical assessment services
- Pathology, pharmacy, and medical imaging services
- Outpatient and ambulatory care services including paediatrics and renal dialysis and antenatal and postnatal services
- Virtual care and hospital in the home services
- Prehabilitation, rehabilitation and lifestyle medicine.
- Administration, staff support, loading dock and back-of-house services; and
- Ancillary commercial uses to support the hospital, including retail.

The landscape design for the new Rouse Hill Hospital will seek to provide a locally appropriate setting which supports the patients, staff and visitors which follows through on the broader concept of a neighbourhood hospital within the landscape. Further to this Landscape Principles have been established to drive a successful outcome that Connects with Country, creates a place of healing that integrates and enhances the existing urban framework.

The landscape serves as the community introduction to the site, which is accessible, inclusive, legible and welcoming. Landscaped interfaces and opportunities throughout the building will allow uses to be in contact with nature on a day-to-day basis bring a sense of calm and familiarity.

Spaces though the landscape will compliment clinical uses as well as gathering, respite and recreation. Endemic species present in the native grasslands, and surrounding the nearby creeks will provide an ecological frame-work for planting.

The design will promote and support ESD through the site in the use of Water Sensitive Urban Design (WSUD) features, promotion of canopy cover and green links, range of species for biodiversity and use of sustainable materials.



SEARS Reporting

This report has addressed the following matters within the Secretary’s Environmental Assessment

Item	SEARS Requirement	
	Public Space	
7	Demonstrate how the development maximises the amount, access to and quality of public spaces (including open space, public facilities and streets/plazas within and surrounding the site), reflecting relevant design guidelines and advice from the local council and the Department.	<i>Extensive areas of publicly accessible open space will be provided. Refer to landscape plans.</i> <i>The proposed design anticipates and seeks to compliment the future development of public open space to the east.</i>
	Demonstrate how the development: ensures that public space is welcoming, attractive and accessible for all. • maximises permeability and connectivity. • maximises the amenity of public spaces in line with their intended use, such as through adequate facilities, solar access, shade and wind protection. • minimises potential vehicle, bicycle and pedestrian conflicts.	<i>Refer to landscape plans</i>
	Address how Crime Prevention through Environmental Design (CPTED) principles are to be integrated into the development, in accordance with Crime Prevention and the Assessment of Development Applications Guidelines.	<i>Refer CPTED report under separate cover</i>
8	Trees and Landscaping	
	Assess the number, location, condition and significance of trees to be removed and retained and note any existing canopy coverage to be retained on-site.	<i>See page 24 for Existing Trees and page 25 for Canopy Coverage</i>

Provide a detailed site-wide landscape plan, that:	<i>Refer to landscape plans under separate cover</i>
details the proposed site planting, including location, number and species of plantings, heights of trees at maturity and proposed canopy coverage.	<i>See page 26 for Planting Strategy Indicative plant schedule page 24 for Canopy coverage and documentation for tree species</i>
provides evidence that opportunities to retain significant trees have been explored and/or informs the plan.	<i>Refer to tree retention and removal plan and arborist report under separate cover</i>
demonstrates how the proposed development would:	
contribute to long term landscape setting in respect of the site and streetscape	<i>See page 10 for Landscape Masterplan</i>
• mitigate the urban heat island effect and ensure appropriate comfort levels on-site.	<i>See page 24 for Canopy Coverage</i>
• contribute to the objective of increased urban tree canopy cover	<i>See page 24 for Canopy Coverage</i>
• maximise opportunities for green infrastructure, consistent with Greener Places	<i>See page 28 for Draft Greener Places Design Response</i>

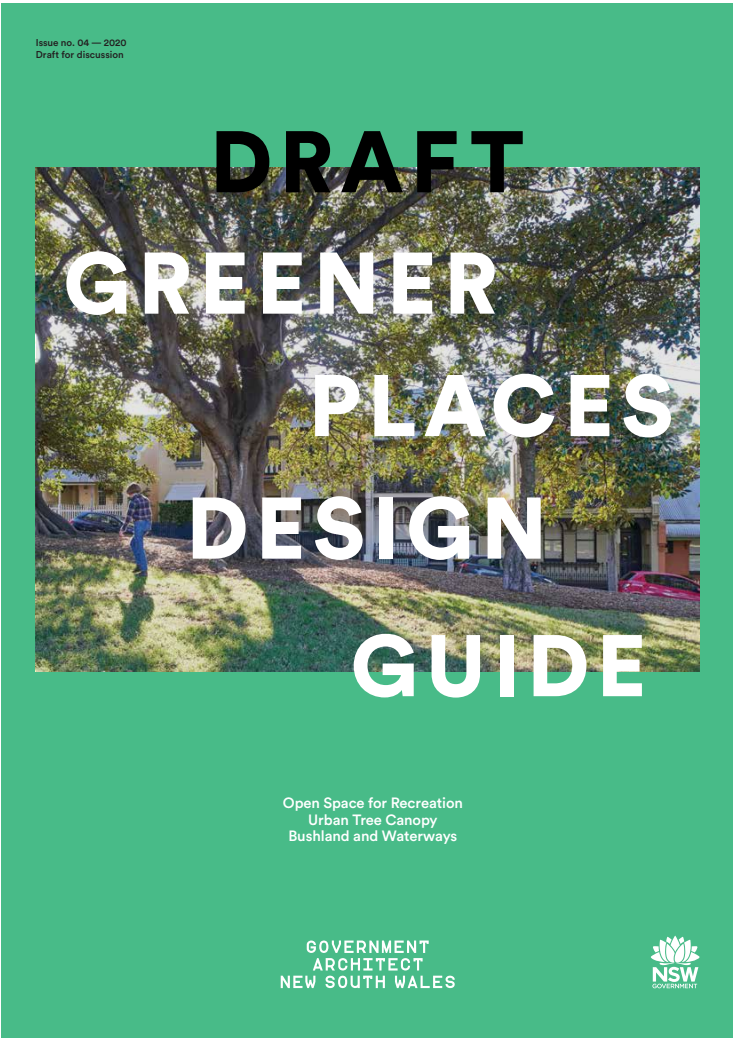
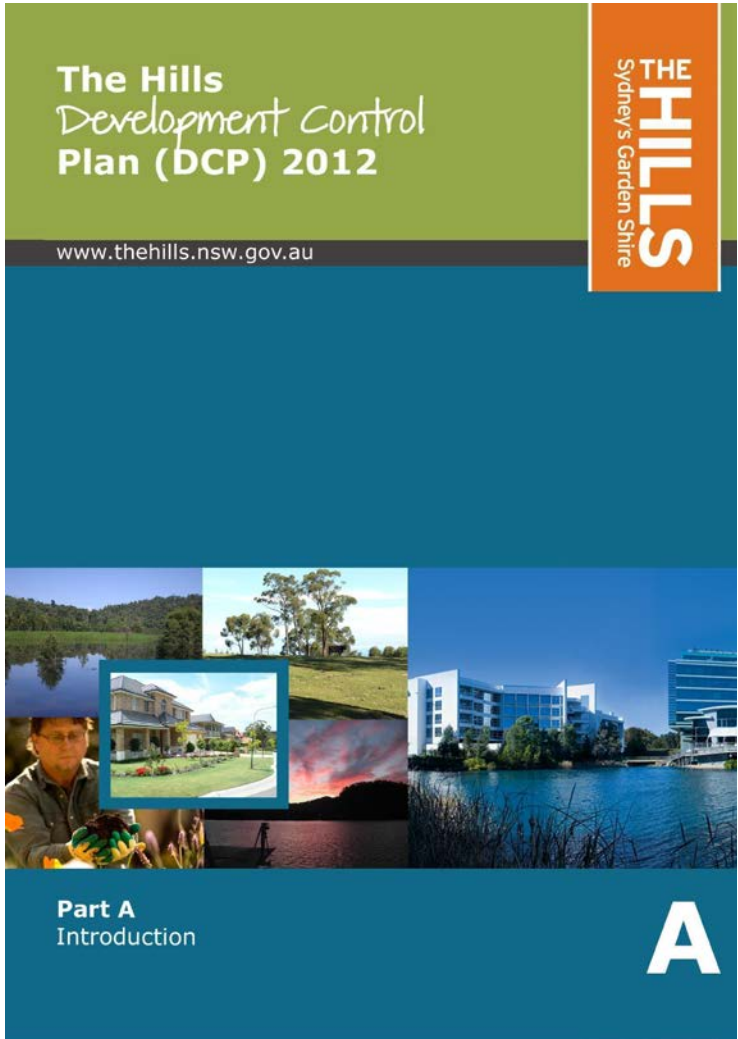
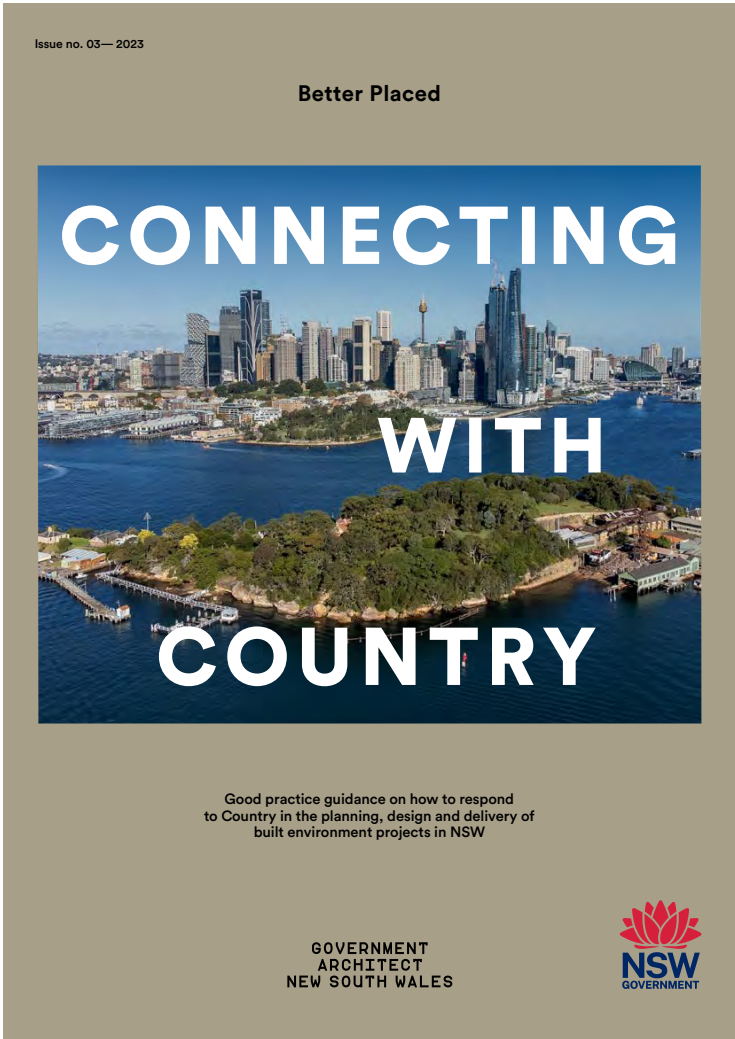
SDRP Responses

Item	SDRP Comment	
	Public Domain	
13	Prioritise the design of all streets and associated public domain within and bounding the site. In consultation with Council and TfNSW (as necessary) provide good urban design outcomes and a high-amenity pedestrian environment through rigorous technical studies and detailed street sections. Include the following: a. generous footpath allocation for pedestrians b. well located street crossings – e.g. access to the park c. generous deep soil planting zones d. street trees of an appropriate scale to the built form e. integration of bike paths to support the precinct cycling network f. inclusion of kerbside parking and slip lanes at intersections (if deemed necessary)	<i>Refer site plan, road sections and canopy cover plan</i>
14	Ensure pedestrian connections to the park are direct, safe, generous, highly legible and prioritise pedestrians over vehicles.	<i>Pedestrian crossings have been provided directly to the park from the main circulation footpath. The location is aligned with key access points within the hospital garden</i>
15	Provide a more inviting, natural flow for pedestrians: a. minimise or eliminate tightly angled path transitions at the terraces b. continue to provide accessible gradients at 1:20 or shallower c. eliminate or minimise the use of 1:14 ramps.	<i>Refer Hospital Garden and terrace plans page 19</i>
32	Revisit the outdoor spaces as a group to ensure year-round comfort and amenity is available across the grouping. For example, demonstrate access to shade in summer and midday sun in winter.	<i>A variety of landscape spaces have been provided around the building. The orientation and aspect allows for the use of these spaces throughout the day</i>
33	Maximise biophilia at the Care Arcade by ensuring the following: a. indoor plants are provided, noting it is unclear from the presentation material if they are in scope b. outdoor soft landscape spaces come close to the entries and exits.	<i>Refer planting strategy and landscape plans</i>
34	Continue to develop Country-led landscape opportunities, e.g. landscape treatments to represent songlines and supporting local species and biodiversity.	<i>Refer Designing with Country page 11</i>
35	Adopt a landscape maintenance strategy that supports long-term habitats and biodiversity. Review the benefits and impacts of maintenance after one year.	<i>Long term habitats and biodiversity will be supported by a stringent maintenance strategy. This strategy will be developed in consultation with users and indigenous stakeholders through the ongoing stages of design development</i>
36	During the remaining design stages improve inclusivity by ensuring key cultural considerations relative to the design and use of spaces is understood and designed in.	<i>Refer Connecting with Country and LHD strategy capture strategy for ongoing consultation across the community</i>

Planning Context | Relevant Documents

The relevant planning documents are as follows:

- Draft Greener Places Design Guide
- Connecting with Country Framework
- The Hills Development Control Plan (2012)
- Technical Guidelines for Urban Green Environment and Heritage (2015)
- Biodiversity in Place Guide
- Design Guide for Health
- Relevant Design Guidelines
- The Hills Local Environmental Plan 2019 Design Excellence Matters
- Better Placed



Landscape Principles | Designing with Country



Healing and Wellness Journey

Provide spaces to enhance care within the hospital

- Calming spaces for reflection & respite
- Complement and support clinical uses
- Provide a healthy workplace for staff
- Use of medicinal and food species



Care for Country

Support ESD initiatives across the site protecting and improving the natural setting

- Use of locally native low water use species
- Create strong tree canopy & cultivate biodiversity through use of endemic ecologies
- Create green links through the site and
- Facilitate and encourage active transport modes
- Use of durable, recycled or sustainably sourced materials
- Ecotones in materiality



Community Focused

Provide a welcoming accessible place for the community

- Legible, accessible, inclusive spaces
- Promote social interaction
- Cater to all ages
- Provide opportunity for education and learning
- Culturally safe welcoming spaces
- Connecting to future and existing public open spaces surrounding the site



Site Introduction

The site is bound by

- Windsor Road to the west
- Commercial Road to the north
- Existing commercial uses to the north
- Proposed residential development to the east.
- The Metro station is located south of the site on Windsor Road

The site is sloping from north to south, the site is generally modified grassland with scattered existing trees.

To the east of the site Caddies Creek provides ecological and recreational connections to the local area.

- Hospital Site Boundary
- Temporary Construction Zone
- Commercial Road Works
- Metro Pathway Works



Landscape Context



1 The existing commercial development to the north consists of extensive on grade car parking with minimal tree planting and boundary planting

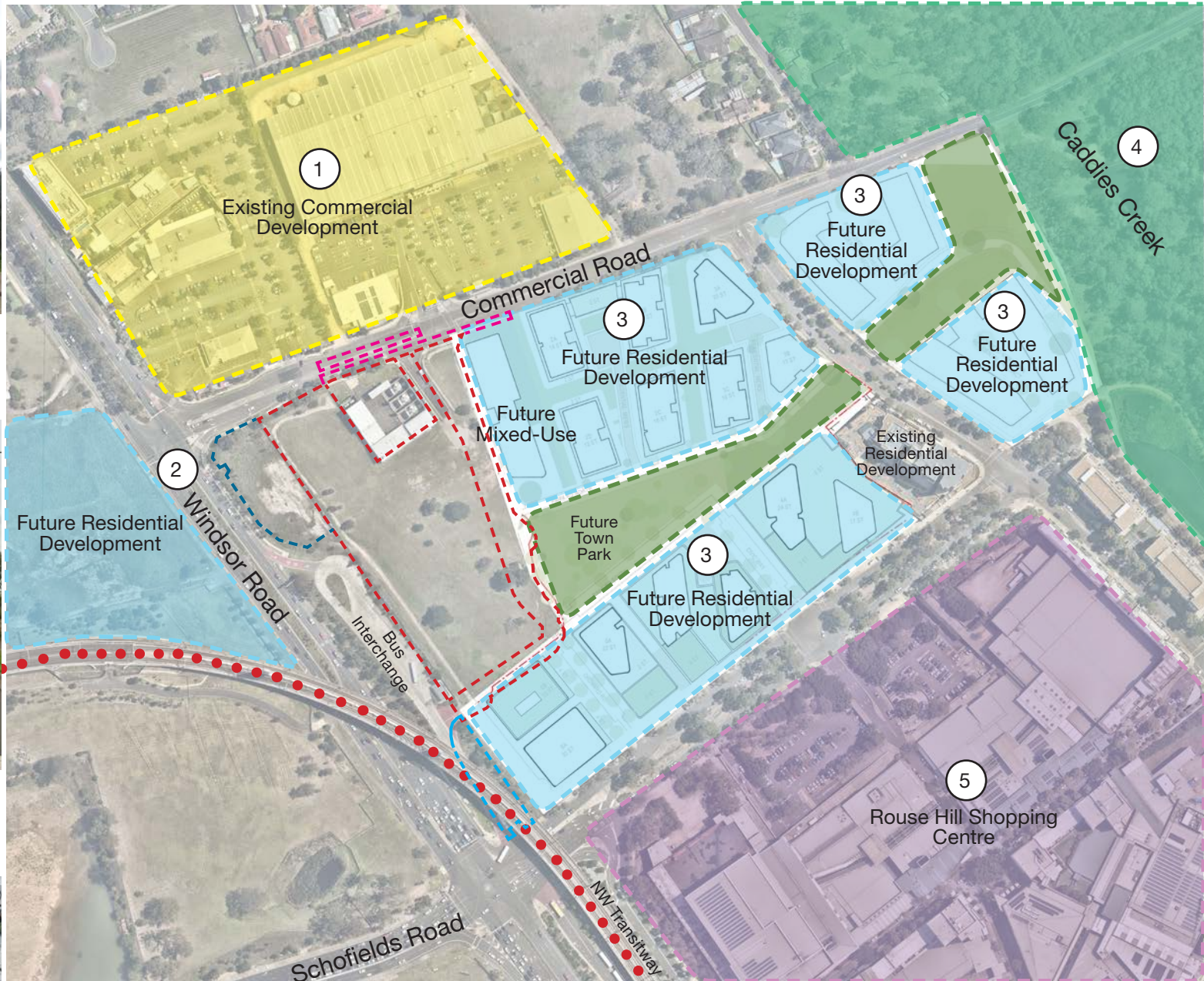


2 Windsor Road is a key arterial route. Existing canopy trees between the hospital site and road are proposed for retention.



3 Proposed residential and potential mixed-use developments to the east of the site will provide green connections through to Caddies Creek.

Image - Rouse Hill Strategic Centre Northern Precinct

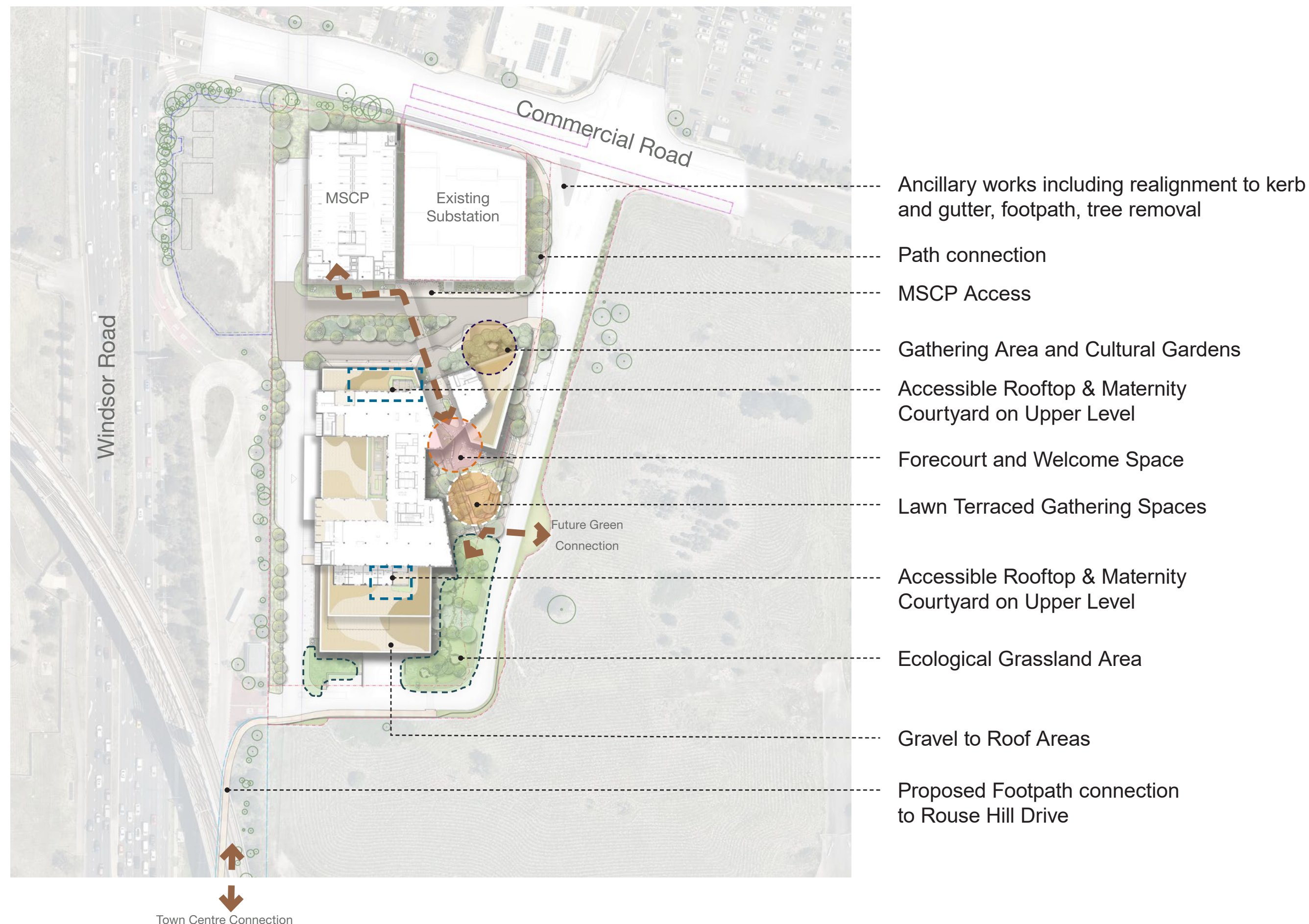


4 The Caddies Creek reserve is a major recreational facility and ecological habitat linking 30ha of bushland



5 The Rouse Hill Shopping Centre is mixed use development of retail, residential and commercial with landscaped streetscapes, squares and laneways throughout

Landscape Masterplan



Designing With Country

The landscape scheme has been designed in close collaboration with Bangawarra, the project’s Connecting with Country consultant, through a process of co-design, learning and listening to stories generously been shared by knowledge holders.

The Cultural Values already established by Bangawarra, shall inform the landscape design, and more importantly have shaped the overall Landscape Principles.

Healthy Country Healthy People

Incorporating the concept of taking care of Country and it will take care of people, is a strong theme which shall be an overarching driver of the Healing and Wellness Principle.

More tangibly the landscape and external design shall foster the idea of the future site being a ‘journey’ not a destination. Encouraging walking by designing good, legible networks with engagement with nature.

By designing a landscape that demonstrates a thriving restored ecosystem; evokes healing through biophilia and other benefits to patients, staff and visitors.

Stone Journey

Learnings of the local Stone song line is strong thematic that will be demonstrated physically within the landscape design. Motifs, general spatial arrangement, art pieces, plant and material selection shall all aid in the celebration and education of this important narrative. Incorporation of water within the landscape shall enhance this story telling, playing homage to the local river network – creating a sense of place and meaning.

Mungari - Birdsong in Grassland Ecologies

The recognition of the site Grassland ecology and associated fauna in particular small birds (Superb Fairy Wren) shall be explicitly demonstrated within the landscape design. Recreating of grassland ecologies, which can be practically engaged with by a large range of users, shall aid in the ambition to connect people with ecology.

The Casurina Grove (A Safe Place)

Creating a cultural safe space through the landscape design is paramount to a successful, thriving health precinct. Landscape design’s role in creating this from lessons learnt through the Connecting with Country process is vital in achieving this outcome.

The Casurina Grove has inspired the landscape principle of ‘Community Focused’.

Practically, the careful consideration of spatial arrangements is the framework to creating a culturally safe environment. Allowing for a variety of areas for gathering, respite, reflection and more generally, understanding existing cultural practices is an example of the landscape design responding spatially to this principle.

Casuarinas are a culturally significant tree which in groves, naturally created safe spaces for many local Traditional Custodians. A literal recreation of these groves would be an appropriate, meaningful and practical inclusion to the landscape design to achieve this outcome.



Stone Journey



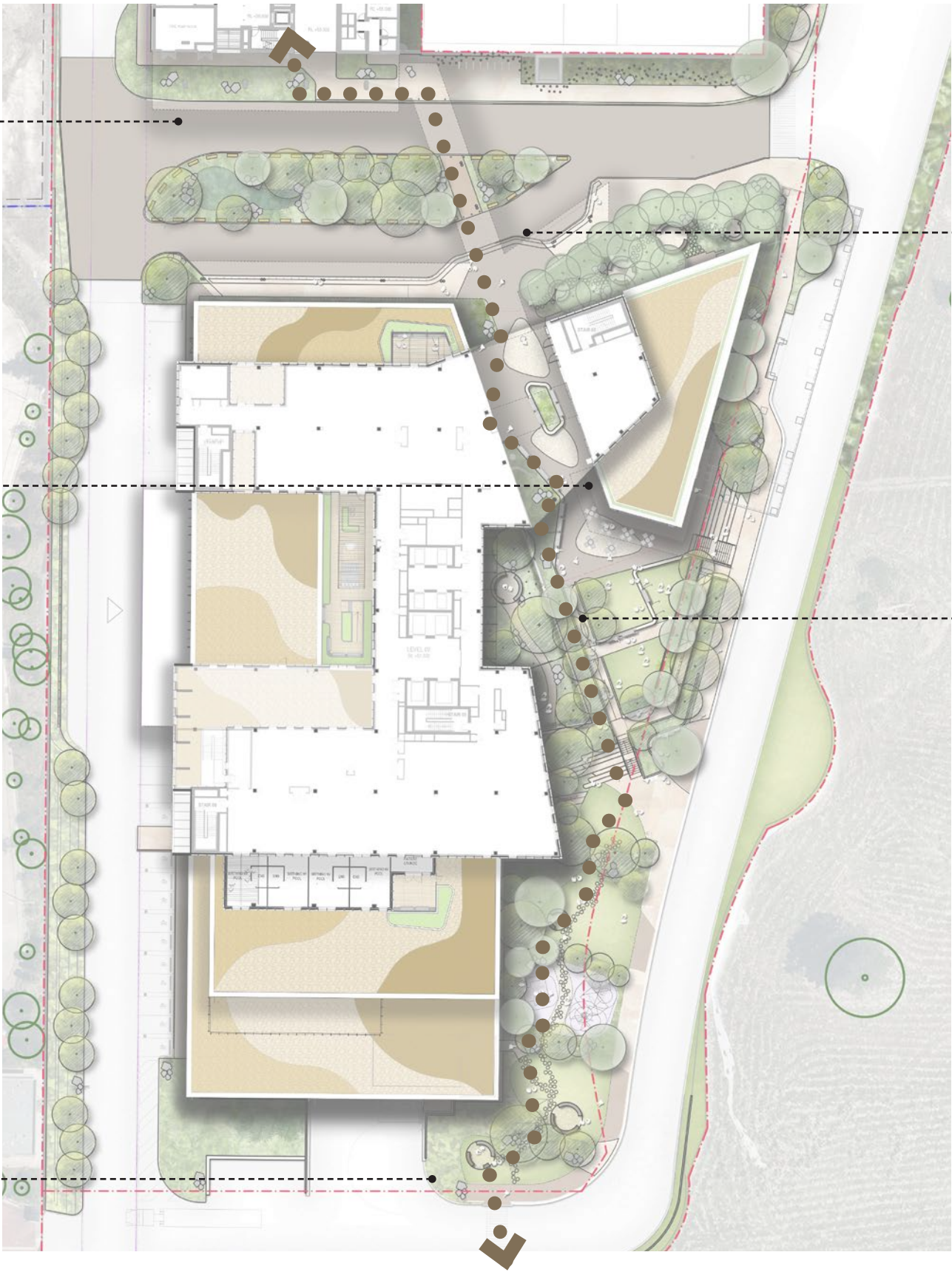
Improvement and **Restoration of natural systems** through WSUD initiatives



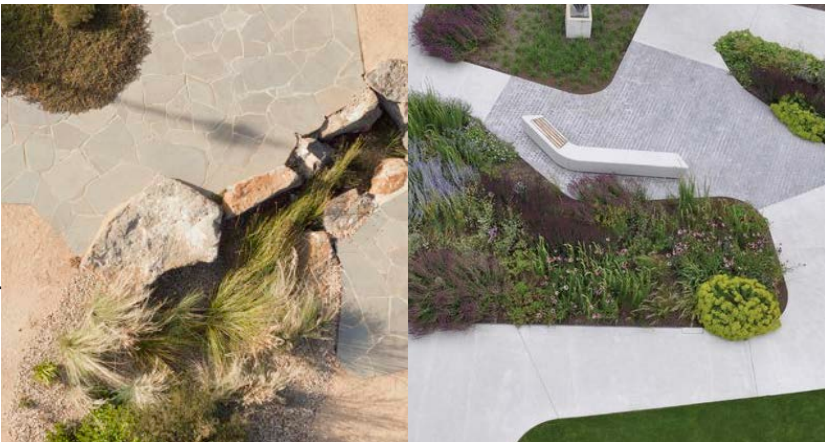
Materiality, colours and textures of boulders and stone



Species for **traditional food sources and medicine**



Landscape cues provide legible journeys through the site



Stone journey takes landscape forms from jagged to smooth

The Casurina Grove (A Safe Place)



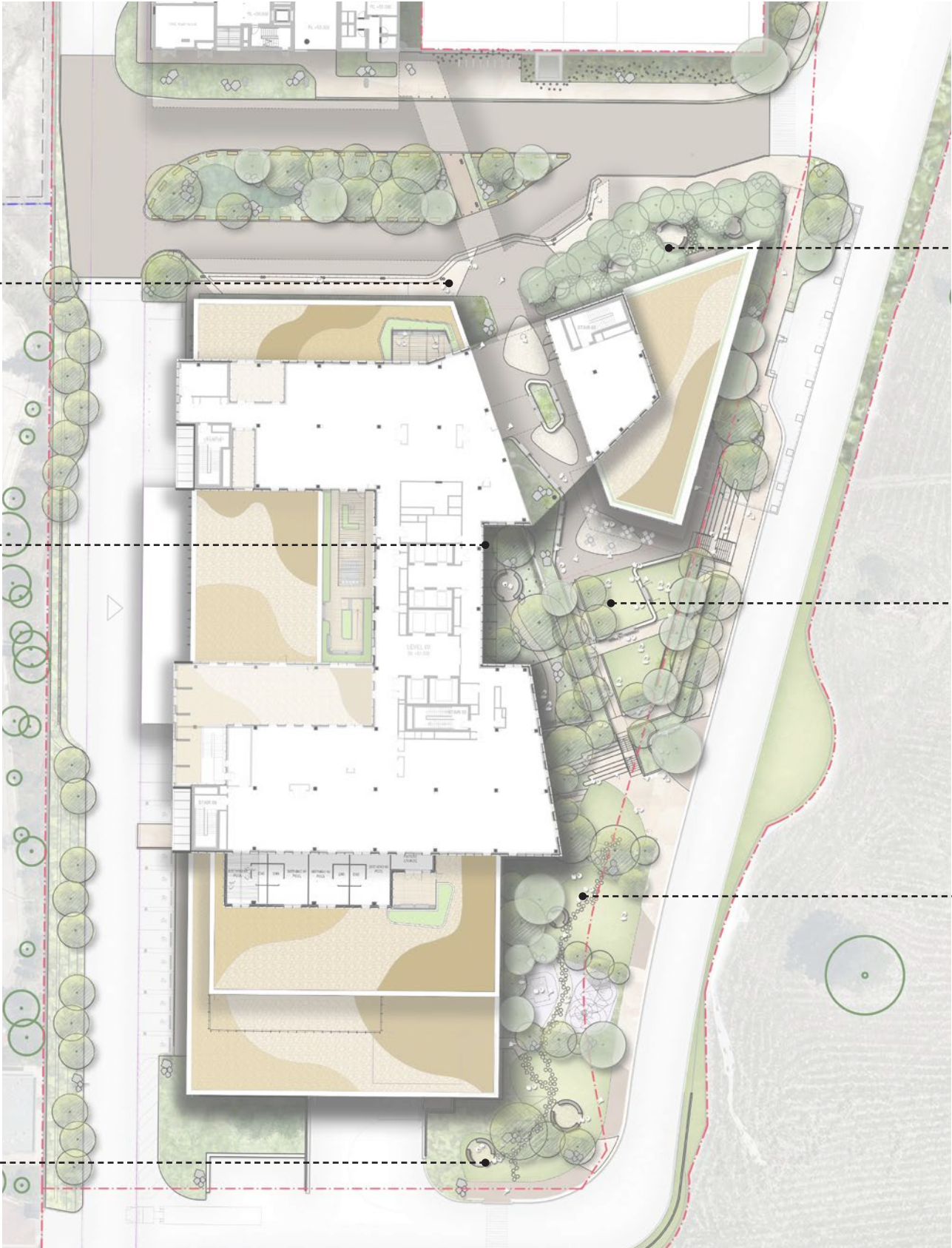
Forecourt **welcomes** visitors into the site



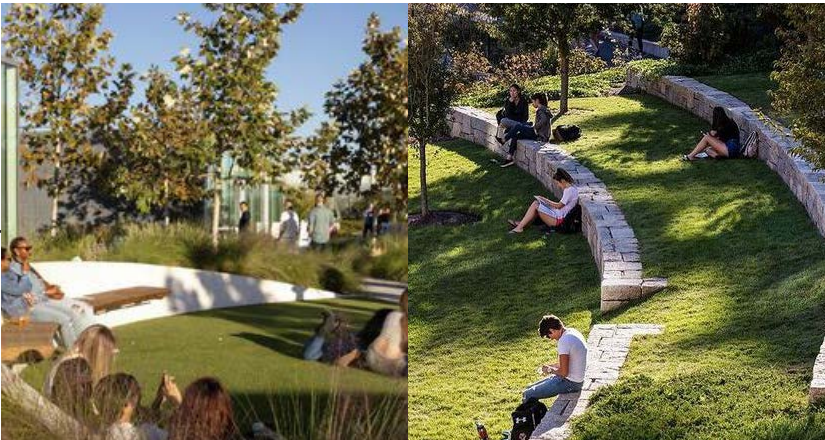
Sacred space mortuary garden for bereavement ceremony and respite



Traditional food and medicinal species



Cultural Garden nodes for ceremony and respite Dahl'wah Casuarina provides shelter



Terraced gathering space allows for connections, gathering, education and outlook to broader landscape



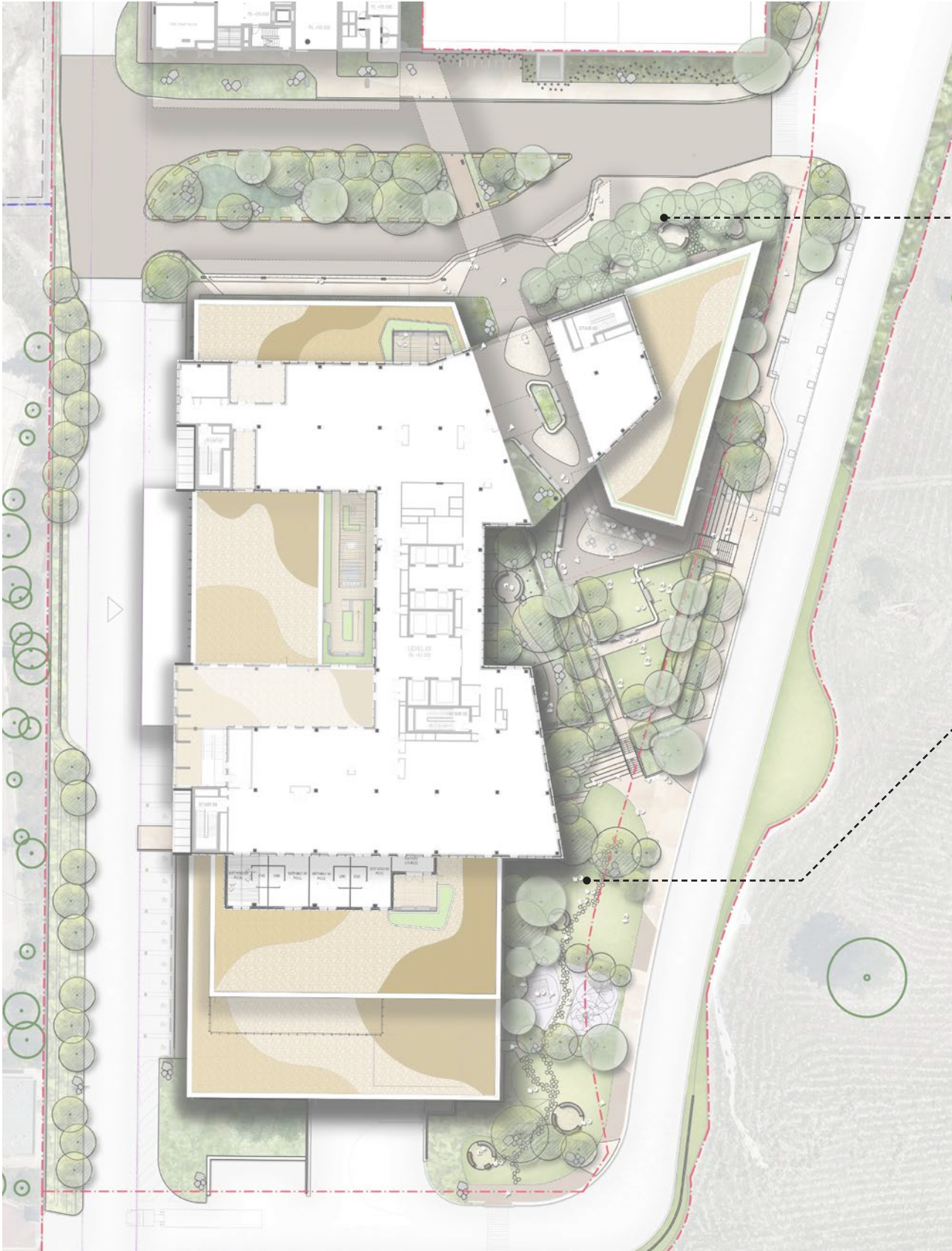
Multi-generational **inclusive spaces** places of engagement and discovery



Mungari Birdsong in Grassland Ecology



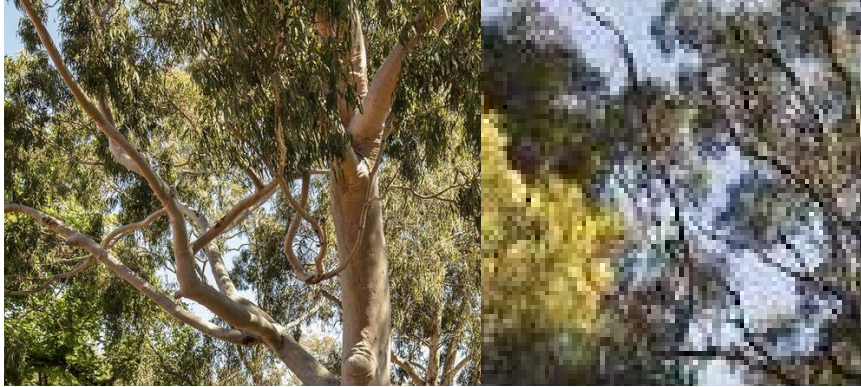
Terraces provide external spaces for treatment and respite while connecting with the sky, views, greenery and birdsong



Planting indicates seasonal and climatic cycles



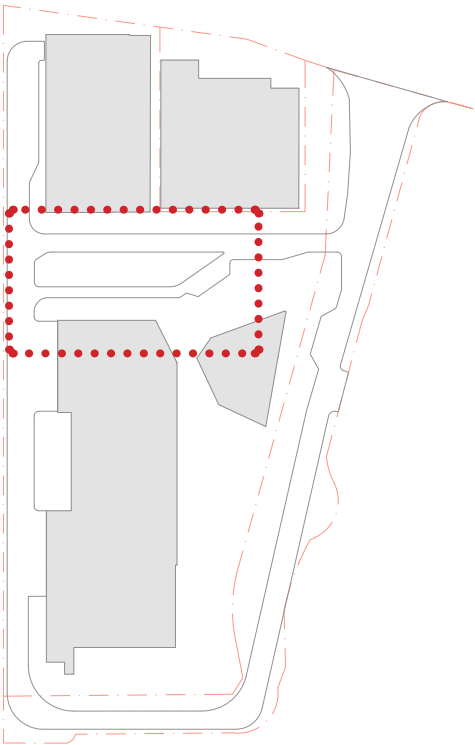
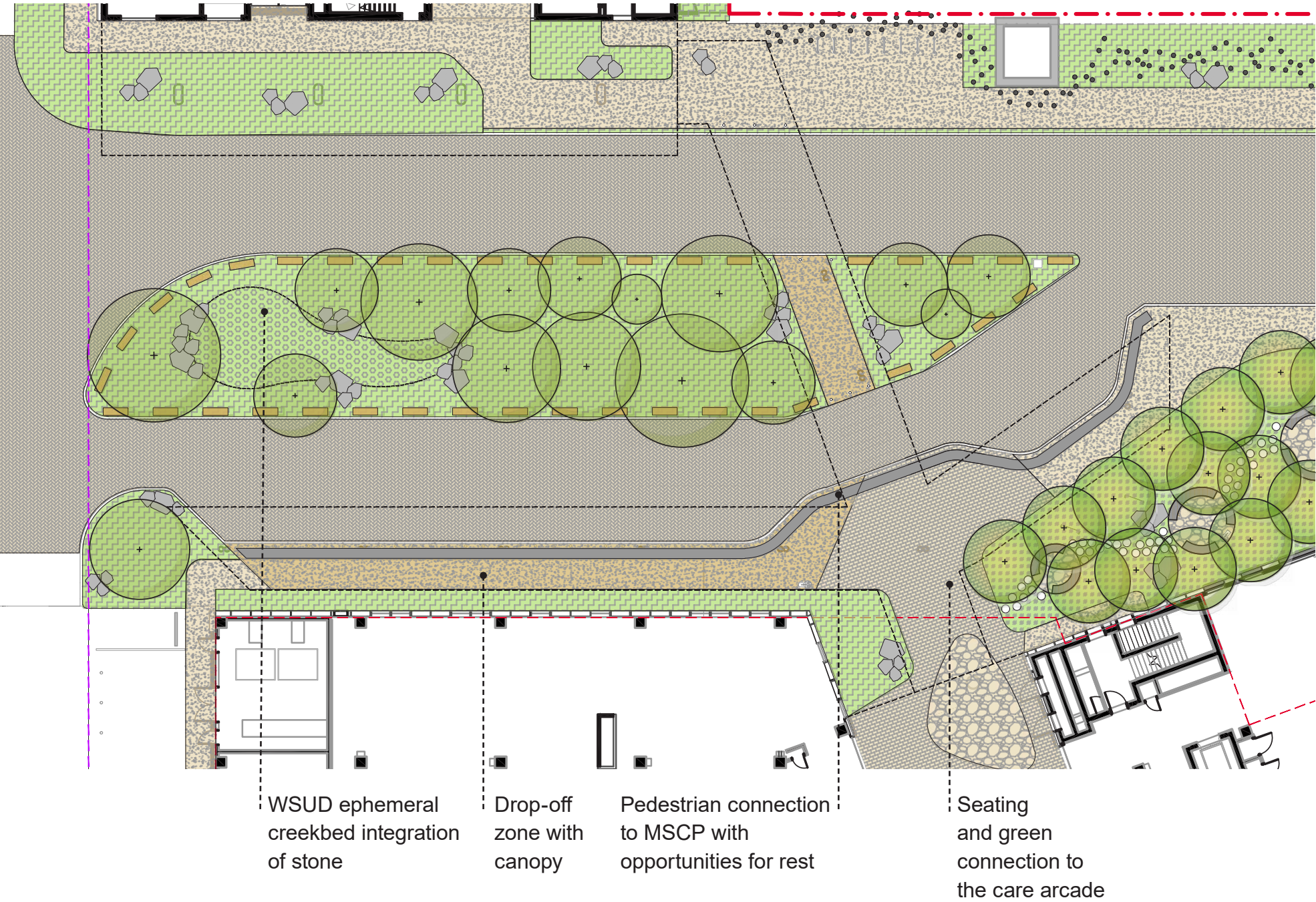
Grassland ecologies for habitat, education and engagement



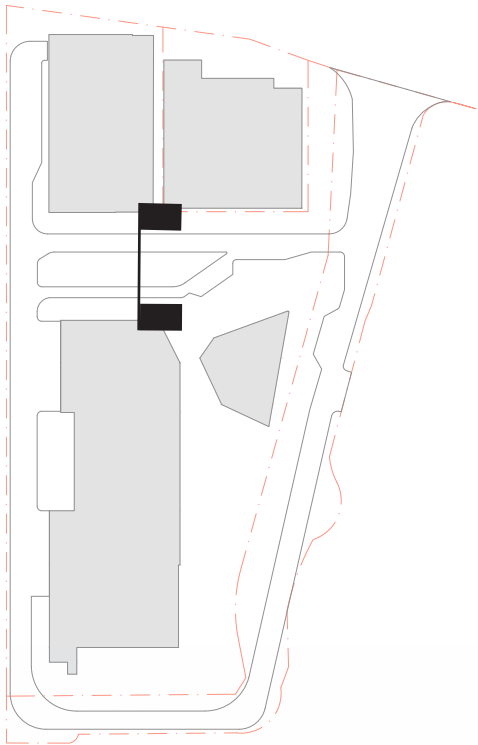
Canopy trees provide shade, sense of shelter and ecological connections to surrounding landscapes

Main Entry

The Main Entry is the primary drop-off zone for the site, with connections that lead through to the care arcade and the nearby Casuarina Grove. A shade structure covers the path that runs along the drop off area, and a pedestrian connection that leads to the MSCP meanders through a traffic island with WSUD planting & ephemeral creekbed elements. Seating elements provide people leaving or waiting at the drop-off zone with areas for respite, further complimented by canopy tree planting that ties back into the site's green connection.



Main Entry Landscape Section

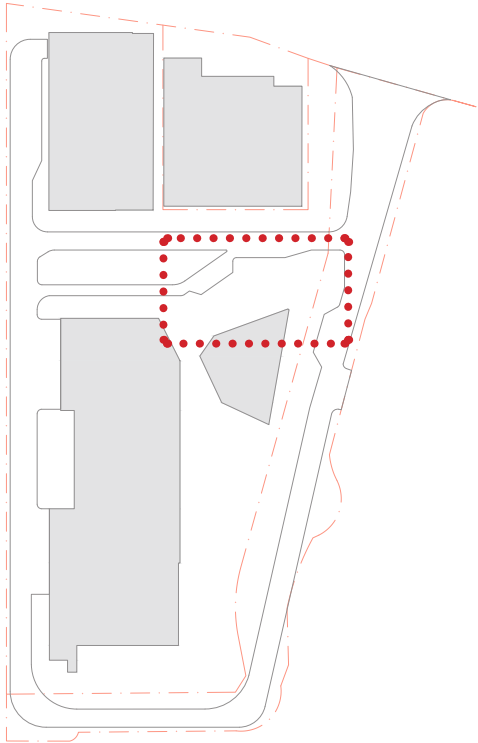


Casuarina Grove

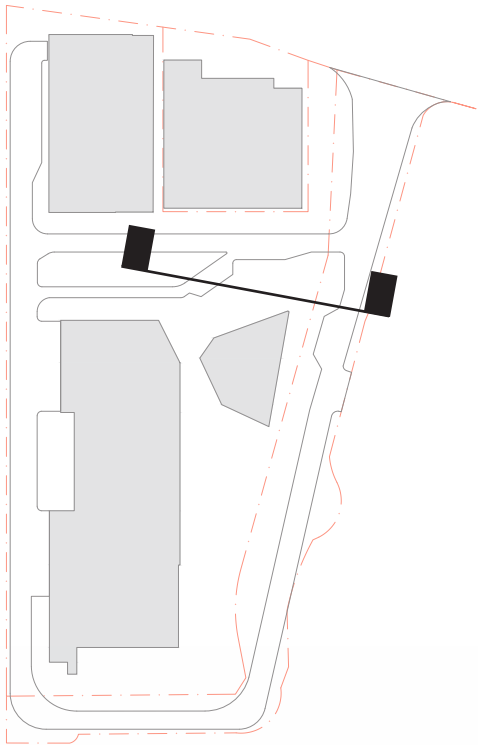
The Casuarina Grove is an important element of the site, playing a vital role in cultivating a safe cultural space. The Grove features a series of inter-connected areas that allow for gathering, respite & reflection, all sheltered by She-oak trees which are a culturally significant species for the area. The meandering path between the gathering spaces allow for a deeper exploration of the site, with the surrounding planting providing opportunities to shelter & screening of these pathways.



- Seating for rest and small gatherings
- Gathering space with conversational speaking
- Meandering journey pathway though Casuarinas
- Casuarina planting surrounding sheltered seating areas



Landscape Section Casuarina Grove



Drop off zone

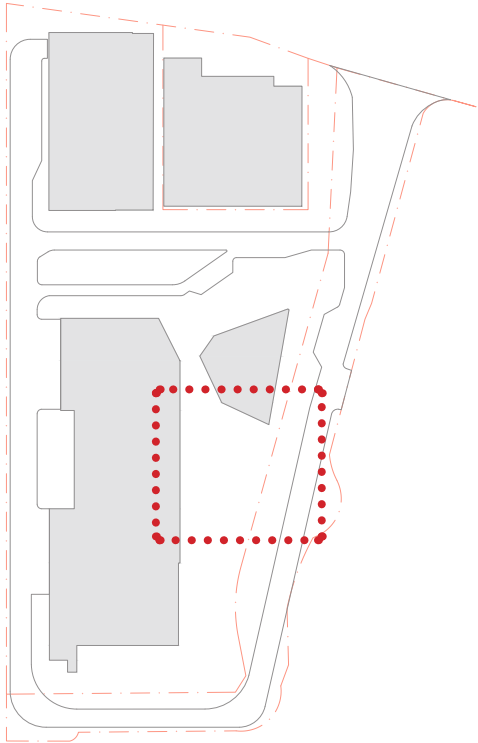
Seating and gathering node

Main gathering space surrounded by Casuarinas

North south street connection



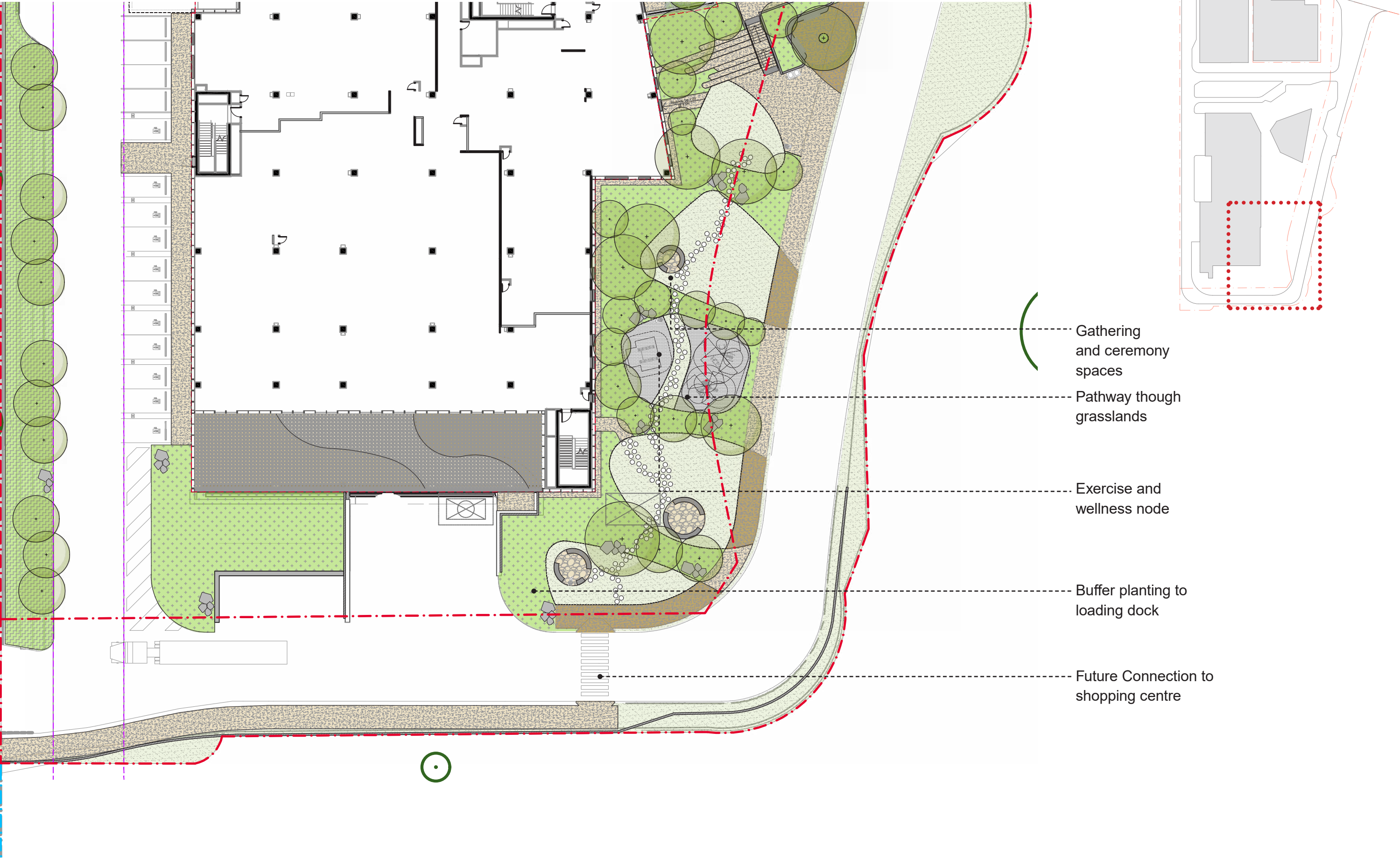
Hospital Garden



Hospital Garden Landscape Section



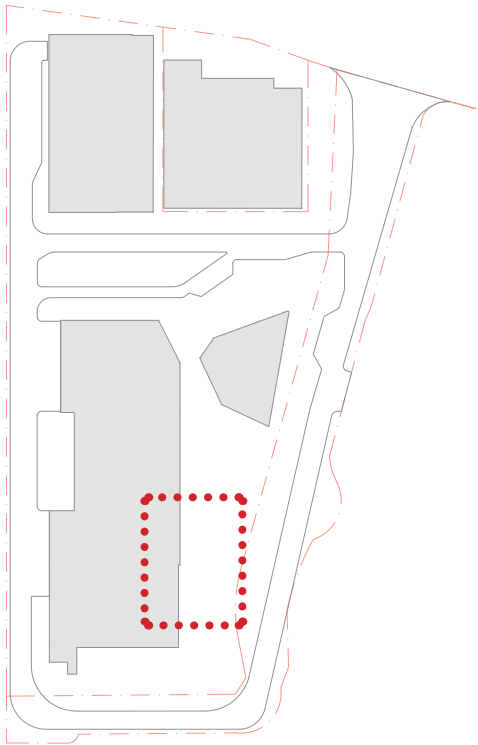
Grasslands



Mortuary Garden

The mortuary garden provides a private space for visitors in mourning, situated on the lower ground floor and isolated from the larger outdoor hospital garden. The space is characterised by lush, shade tolerant planting that helps screen the surrounding built form to create a softer & more inviting area, which is complimented by the warmer tones of the stepping stones & hard paved surfaces.

Planting within and adjacent the courtyard will include species to be used in ceremonies including dwarf hybrid Eucalyptus species for smoking ceremonies include Seating amenity is provided for occupants of the space, while a path leading out of the mortuary garden connects to the outdoor hospital garden area as a fire safety requirement.



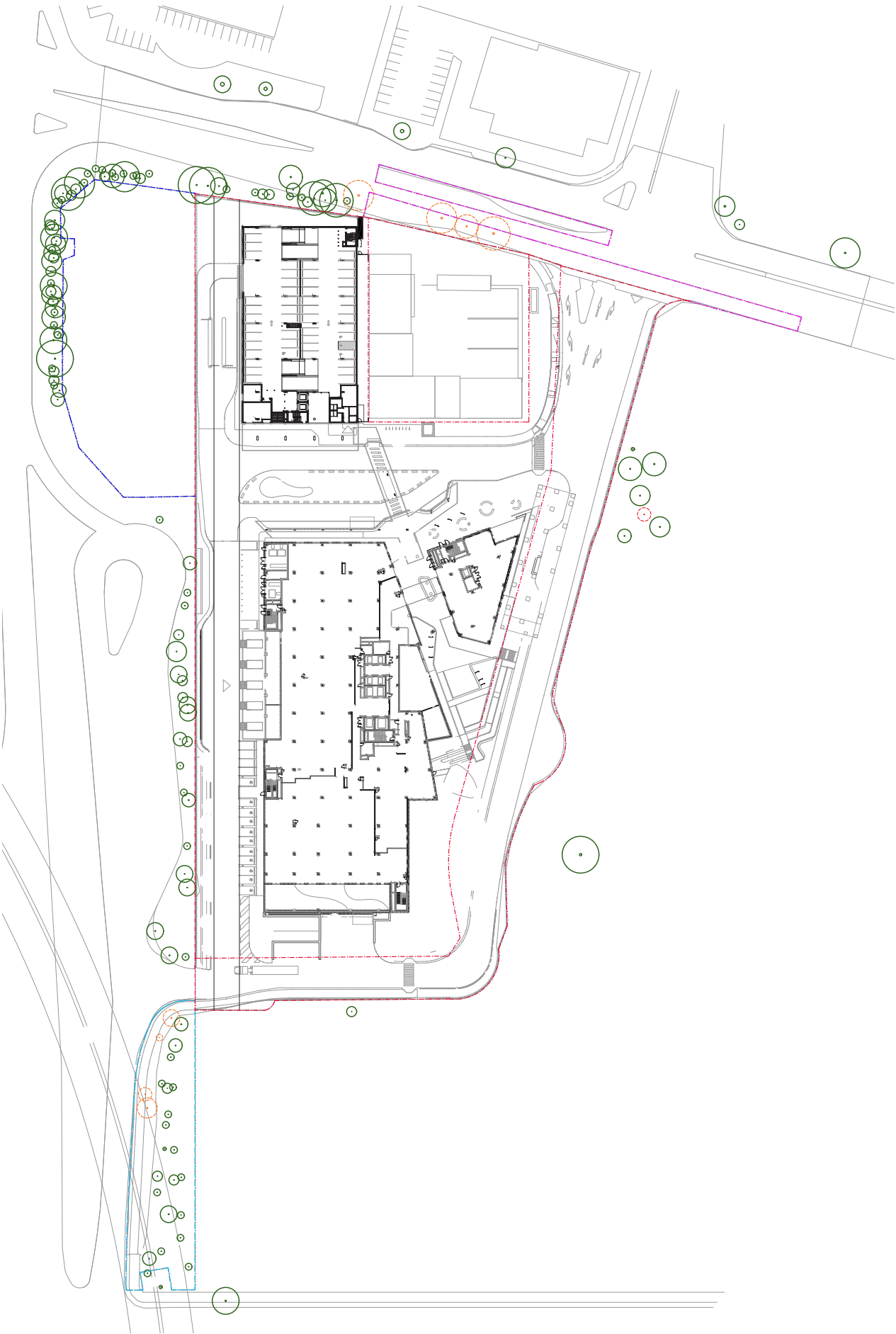
Existing Trees

Existing trees are proposed to be retained and protected wherever possible providing shading and a green setting.

This removal of existing trees shall be offset by a significant replanting proposal.

Refer to Creative Planning Solutions Arboricultural Impact Assessment dated 22 August 2025 for detailed tree information.

	Botanical Name	Landscape Significance	Retention Value
1	<i>Brachychiton rupestris</i>	High	High
2	<i>Livistona</i> sp.	Medium	Medium
3	<i>Brachychiton rupestris</i>	High	High
4	<i>Eucalyptus tereticornis</i>	Medium	Medium
5	<i>Eucalyptus moluccana</i>	Medium	Medium
6	<i>Pyrus calleryana</i>	Medium	Medium
7	<i>Eucalyptus tereticornis</i>	Medium	High
9	<i>Acacia parramattensis</i>	Low	Low
10	<i>Eucalyptus</i> sp.	Low	Medium
11	<i>Acacia parramattensis</i>	Low	Low
12	<i>Acacia parramattensis</i>	Medium	Medium
13	Dead tree	Low	Dead
14	<i>Acacia parramattensis</i>	Low	Low
15	<i>Acacia parramattensis</i>	Low	Low
16	<i>Pinus radiata</i>	Medium	Medium
17	<i>Pyrus calleryana</i>	Low	Low
43	<i>Corymbia maculata</i>	Medium	High
44	<i>Corymbia maculata</i>	Medium	High
45	<i>Corymbia maculata</i>	Medium	High
46	<i>Corymbia maculata</i>	Medium	High
47	<i>Eucalyptus tereticornis</i>	Low	Medium
48	<i>Eucalyptus tereticornis</i>	Medium	Medium
49	<i>Eucalyptus crebra</i>	Medium	Medium
50	<i>Acacia binervata</i>	Medium	Medium
51	<i>Eucalyptus crebra</i>	Medium	Medium
52	<i>Corymbia maculata</i>	Medium	High
53	<i>Acacia decurrens</i>	Low	Low
54	<i>Eucalyptus tereticornis</i>	Low	Low
56	<i>Melaleuca nodosa</i>	Low	Low
57	<i>Acacia decurrens</i>	Low	Low
59	<i>Melaleuca nodosa</i>	Low	Low
60	<i>Melaleuca nodosa</i>	Low	Low
62	<i>Melaleuca nodosa</i>	Low	Low
65	<i>Eucalyptus tereticornis</i>	Low	Medium
66	<i>Eucalyptus tereticornis</i>	Medium	Medium
67	<i>Eucalyptus tereticornis</i>	Medium	High
68	<i>Eucalyptus crebra</i>	Medium	High
69	<i>Acacia decurrens</i>	Low	Low
70	<i>Acacia decurrens</i>	Low	Low
71	<i>Melaleuca nodosa</i>	Low	Low
73	<i>Melaleuca nodosa</i>	Low	Low
74	<i>Eucalyptus tereticornis</i>	Medium	High
75	<i>Melaleuca nodosa</i>	Low	Low
76	<i>Melaleuca nodosa</i>	Low	Low
77	<i>Eucalyptus tereticornis</i>	Medium	Medium
78	<i>Melaleuca nodosa</i>	Low	Low
79	<i>Eucalyptus tereticornis</i>	Low	Low
80	<i>Melaleuca nodosa</i>	Low	Low
81	<i>Melaleuca nodosa</i>	Low	Low
82	<i>Melaleuca nodosa</i>	Low	Low
83	<i>Melaleuca nodosa</i>	Low	Low
84	<i>Eucalyptus tereticornis</i>	Medium	Medium
85	<i>Melaleuca nodosa</i>	Low	Low
86	<i>Melaleuca nodosa</i>	Low	Low
87	<i>Eucalyptus tereticornis</i>	Medium	Medium
88	<i>Cotoneaster glaucophyllus</i>	Low	Low
89	<i>Melaleuca nodosa</i>	Low	Low
90	<i>Melaleuca nodosa</i>	Low	Low
91	<i>Eucalyptus crebra</i>	Medium	High
92	<i>Melaleuca nodosa</i>	Low	Low
93	<i>Olea europaea</i> subsp. <i>cuspidata</i>	Low	Low
94	<i>Eucalyptus tereticornis</i>	Medium	Medium
95	<i>Melaleuca nodosa</i>	Low	Low
96	<i>Eucalyptus tereticornis</i>	Medium	Medium
97	<i>Melaleuca nodosa</i>	Low	Low
98	<i>Eucalyptus tereticornis</i>	Medium	Medium
99	<i>Melaleuca nodosa</i>	Low	Low
100	<i>Eucalyptus tereticornis</i>	Medium	High
101	<i>Melaleuca nodosa</i>	Low	Low
102	<i>Eucalyptus tereticornis</i>	Medium	High
103	<i>Melaleuca nodosa</i>	Low	Low
104	<i>Melaleuca nodosa</i>	Low	Low
105	<i>Eucalyptus tereticornis</i>	Medium	Medium
106	<i>Melaleuca nodosa</i>	Low	Low
107	<i>Eucalyptus tereticornis</i>	Medium	High
108	<i>Melaleuca nodosa</i>	Low	Low
109	<i>Eucalyptus tereticornis</i>	Medium	High
110	<i>Melaleuca nodosa</i>	Low	Low
111	<i>Acacia decurrens</i>	Low	Low
112	<i>Melaleuca nodosa</i>	Low	Low
113	<i>Eucalyptus tereticornis</i>	Medium	High
114	<i>Eucalyptus tereticornis</i>	Medium	High
115	<i>Melaleuca nodosa</i>	Low	Low
116	<i>Eucalyptus tereticornis</i>	Low	Low
117	<i>Melaleuca nodosa</i>	Low	Low
118	<i>Eucalyptus tereticornis</i>	Low	Low
119	<i>Eucalyptus moluccana</i>	Medium	Medium
120	<i>Eucalyptus crebra</i>	Medium	Medium
121	<i>Acacia decurrens</i>	Low	Low
143	<i>Acacia decurrens</i>	Low	Low
145	<i>Casuarina glauca</i>	Low	Low
146	<i>Acacia decurrens</i>	Low	Low
148	<i>Melaleuca styphelioides</i>	Low	Low
149	<i>Casuarina glauca</i>	Medium	Medium
150	<i>Acacia decurrens</i>	Low	Low
151	<i>Eucalyptus moluccana</i>	Low	Medium
152	<i>Casuarina glauca</i>	Low	Low
153	<i>Eucalyptus tereticornis</i>	Low	Medium
154	<i>Acacia decurrens</i>	Low	Low
155	<i>Acacia saligna</i>	Low	Low
156	<i>Melaleuca styphelioides</i>	Low	Low
158	<i>Casuarina glauca</i>	Low	Low
159	<i>Casuarina glauca</i>	Low	Low
160	<i>Eucalyptus tereticornis</i>	Low	Medium
161	<i>Melaleuca styphelioides</i>	Low	Low
162	<i>Corymbia maculata</i>	Medium	High
163	<i>Acacia decurrens</i>	Low	Low
165	<i>Eucalyptus moluccana</i>	Medium	High
166	<i>Eucalyptus moluccana</i>	Medium	High
167	<i>Melaleuca decora</i>	Low	Low
168	<i>Acacia decurrens</i>	Low	Low
169	<i>Eucalyptus tereticornis</i>	Low	Medium
170	<i>Eucalyptus tereticornis</i>	Low	Medium
171	<i>Casuarina glauca</i>	Low	Low
172	<i>Acacia decurrens</i>	Low	Low
173	<i>Acacia decurrens</i>	Low	Low
174	<i>Casuarina glauca</i>	Low	Low
175	<i>Melaleuca styphelioides</i>	Low	Low
176	<i>Acacia decurrens</i>	Low	Low
177	<i>Acacia decurrens</i>	Low	Low
178	<i>Acacia decurrens</i>	Low	Low
179	<i>Casuarina glauca</i>	Low	Low
180	<i>Acacia decurrens</i>	Low	Low
181	<i>Melaleuca quinquenervia</i>	Low	Medium
182	<i>Acacia decurrens</i>	Low	Low
183	<i>Acacia decurrens</i>	Low	Low
184	<i>Melaleuca decora</i>	Low	Low
185	<i>Melaleuca decora</i>	Low	Low
186	<i>Acacia decurrens</i>	Low	Low
187	<i>Melaleuca styphelioides</i>	Low	Low
188	<i>Melaleuca decora</i>	Low	Low
189	<i>Melaleuca decora</i>	Low	Low
190	<i>Acacia decurrens</i>	Low	Low
191	<i>Casuarina glauca</i>	Low	Low
192	<i>Eucalyptus</i> sp.	Low	Low
193	<i>Melaleuca decora</i>	Low	Low
194	<i>Eucalyptus crebra</i>	Medium	High

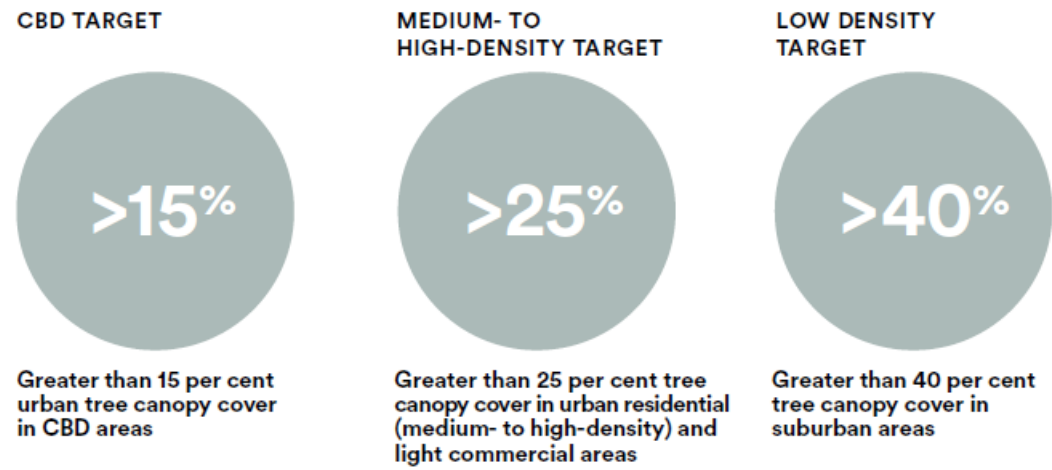


Canopy Coverage

The canopy coverage target for the Greater Sydney Region is 40% as outlined in the following policy documents:

- Draft Greener Places Design Guide - Government Architects NSW (2020)
- Greater Sydney Region Plan (2018)
- Department of Planning, Industry and Environment NSW's 5 Million Trees Program (2018-19)

The Draft Greener Places Design Guide provides indicative place-based targets based on surrounding urban conditions, as shown below.



Proposed tree planting results in an overall gain in canopy cover across the site The tree replacement ratio equals over 3:1 with a minimum of 72 proposed trees required to meet this ratio.

	Area	Coverage	Quantity
Existing Tree Removed			
Existing Trees to be Retained			
Total Existing Trees			
Proposed Trees	2704 sqm		120
Proposed and Retained Trees	2704 sqm	11.51%	

Coverage calculations based on hospital site area (23.5 ha)

	Area	Coverage	Quantity
Existing Tree Removed	242.20 sqm		7
Existing Trees to be Retained	115.70 sqm		20
Total Existing Trees	357.90 sqm	1.21%	27
Proposed Trees	2704 sqm		120
Proposed and Retained Trees	2819.80 sqm	9.56%	

Coverage calculations based on site area (29.5 ha) inclusive of temporary construction zone works, commercial road works and metro pathway



WSUD Initiatives

Urban trees have a critical role in creating healthy cities. They provide shade and shelter, improve air quality, absorb carbon and rainfall, cool local environments, and support wildlife. Trees contribute to attractive urban places, providing seasonal variation and creating memorable landmarks. The network of trees in our cities plays a critical function, and provides an array of benefits.

Draft Greener Places Design Guide, 2020

Utilising the streetscape for enhanced tree canopy coverage is essential for combating the urban heat island effect and offsetting the impact of substantial grey infrastructure.

Performance Outcomes, Recommendations and Benchmark Solutions

- Consolidate areas of deep soil and provide minimum dimensions which allow for sufficient tree planting.
- Encourage connected soil networks with ample soil volume to encourage healthy tree growth
- Street trees to be passively irrigated
- Water supply and hydrology to be designed with civil engineer to ensure optimum tree growth. The canopy cover provided by a tree planted with access to an appropriate soil volume and soil moisture has a canopy area

- over 6 times greater than a tree in constrained conditions with limited access to any water supply.
- Potential for implementation of raingardens within the verges of streets.

Soil Condition

Trees need the soil available to be of a suitable condition for optimum growth. Even with adequate soil volumes, if the soils are of poor quality (e.g. lack nutrients, are compacted or otherwise lack oxygenation) the tree may not achieve optimum growing outcomes, or may not survive in some cases, even with adequate soil volumes.

Ideally soils will have: 500 mm depth that is freely draining (i.e. not waterlogged). (Best practice tree planting details allow for a minimum 700mm total depth) & adequate nutrients, aeration and water retention and be uncompacted.

Passive Irrigation

Passive Irrigation will be incorporated to garden beds where possible to reduce potable water irrigation demands and enable biofiltration of runoff.



Planting Strategy

The planting strategy is to focus on bringing grassland and surrounding Cumberland Plain Woodland, Shale Sandstone Transition forest and riparian creek ecologies into the site.

Further planting aims to enhance the amenity of the site, being responsive to the unique location and positioning to ensure the health and success of planting as a functioning ecology.

Indicative Plant List

BOTANIC NAME	COMMON NAME	MATURE SIZE	QUANTITY
TREES			
<i>Acacia binervia</i>	Coastal Myall	8 x 8	2
<i>Acacia decurrens</i>	Black Wattle	10 x 4	2
<i>Acacia falcata</i>	Sickle Wattle	3 x 2	1
<i>Acacia implexa</i>	Lightwood	8 x 7	4
<i>Allocasuarina torulosa</i>	Forest She Oak	8 x 5	20
<i>Angophora costata</i>	Sydney Red Gum	30 x 15	5
<i>Banksia integrifolia</i>	Coast Banksia	15 x 6	3
<i>Banksia oblongifolia</i>	Fern Leafed Banksia	2 x 1.5	1
<i>Brachychiton acerifolius</i>	Illawarra Flame Tree	20 x 8	4
<i>Corymbia ficifolia</i> cvs.	Dwarf Gum	6 x 6	1
<i>Eucalyptus agglomerata</i>	Blue Leafed Stringybark	30 x 8	7
<i>Eucalyptus fibrosa</i>	Red Ironbark	30 x 5	11
<i>Eucalyptus maculata</i>	Spotted Gum	30 x 10	4
<i>Eucalyptus piperita</i>	Sydney Peppermint	20 x 8	2
<i>Eucalyptus pilularis</i>	Blackbutt	20 x 10	1
<i>Eucalyptus tereticornis</i>	Forest Red gum	20 x 5	5
<i>OEucalyptus moluccana</i> 4	Grey Box	25 x 8	10
<i>Melaleuca decora</i>	White Feather Honey Myrtle	8 x 4	4
<i>Persoonia levis</i>	Broad Leafed Geebung	5 x 2	8
<i>Persoonia linearis</i>	Narrow Leafed Geebung	2 x 2	7
<i>Pittosporum undulatum</i>	Sweet Pittosporum	14 x 7	4
<i>Pittosporum revolutum</i>	Yellow Pittosporum	3 x 2.5	5
<i>Tristaniopsis laurina</i>	Water Gum	13 x 6	9
SHRUBS			
<i>Acmena smithii</i> 'Sublime'		5 x 3	
<i>Banksia ericifolia</i>	Heath Banksia	2 x 2	
<i>Banksia spinulosa</i>	Hairpin Banksia	2 x 2	
<i>Correa reflexa</i>	Common Correa	1 x 1	
<i>Callistemon</i> 'Little John'	Dwarf Bottlebrush	1 x 1	
<i>Dillwynia sieberi</i>	Siebers Parrot-pea	1 x 1	
<i>Daviesia ulicifolia</i>	Gorse Bitter-pea	2 x 1	
<i>Darwinia biflora</i>		.8 x 1	
<i>Doryanthes excelsa</i>	GyMEA Lily	2 x 2	
<i>Kunzea ambigua</i>	Tick Bush	2 x 2	
<i>Kennedia rubicunda</i>	Dusky Coral Pea	3 x 3	
<i>Lasiopetalum parviflorum</i>		1 x 1	
<i>Lissanthe strigosa</i>	Peach Heath	1 X .5	
<i>Indigofera australis</i>	Austral Indigo	2 x 2	
<i>Ozothamnus diosmifolius</i>	Everlasting	1.5 x 1.2	
<i>Persoonia linearis</i>	Narrow Leaved Geebung	2 x 2	
<i>Pimelia linifolia</i>	Rice Flower	.5 x 1	
<i>Pittosporum revolutum</i>	Rough Fruit Pittosporum	.5 x .5	
<i>Syzygium</i> 'Tiny Trev'	Dwarf Lilly Pilly	0.6 x 0.6	
<i>Westringia fruticosa</i>	Coastal Rosemary	2 x 1.5	
GROUNDCOVERS / GRASSES			
<i>Banksia spinulosa</i> 'Bush Candles'	Banksia	2 x 2	
<i>Grevillea lanigera</i> 'Mount Tamboritha'	Wooly Grevillea	0.5 x 1	
<i>Leptospermum</i> 'Pink Cascade'	Tea Tree	0.8 x 1.5	
<i>Aristida ramosa</i>	Purple Wire Grass	1 x 0.6	
<i>Arthropodium milleflorum</i>	Vanilla Lily	0.6 x 0.3	
<i>Asperula conferta</i>	Common Woodruff	0.3 x 0.5	
<i>Brunoniella australis</i>	Blue Trumpet	0.3 x 0.3	
<i>Baumea juncea</i>	Bare Twig-Rush	1 x 1	
<i>Clematis aristata</i>	Old Man's Beard	Climbing 15m	
<i>Commelina cyanea</i>	Scurvy Weed	0.3 x 0.3	
<i>Chloris truncata</i>	Australian Fingergrass	0.5 x 0.4	
<i>Chloris ventricosa</i>	Tall Chloris	0.4 x 0.3	
<i>Commelina cyanea</i>	Scurvy Weed	0.2 x spreading	
<i>Dianella longifolia</i>	Blue Flax Lily	1 x 1.5	
<i>Dianella revoluta</i>	Blueberry Lily	.4 x .4	
<i>Dichelachne micrantha</i>	Shorthair Plumegrass	0.3 x 0.3	
<i>Dichondra repens</i>	Kidney Weed	0.15 x spreading	
<i>Entolasia marginata</i>	Panic Grass	0.4 x 0.3	
<i>Goodenia hederacea</i>	Forest Goodenia	0.3 x spreading	
<i>Hardenbergia violacea</i>	Purple Coral Pea	.4 x1	
<i>Hibbertia diffusa</i>	Wedge Guinea Flower	.3 x 1	
<i>Isolepsis inundatus</i>		0.5 x 0.4	
<i>Juncus kraussii</i>	Sea Rush	0.8 x 1	
<i>Juncus usitatus</i>	Common Rush	0.4 x 0.5	
<i>Lomandra longifolia</i>	Spiny Mat-rush	0.75 x 1	
<i>Pratia purpurascens</i>	Pratia	0.15 x 0.15	
<i>Themeda australis</i>	Kangaroo Grass	1.5 x 0.5	
<i>Wahlenbergia stricta</i>	Australian Bluebell	.4 x .4	
<i>Viola hederacea</i>	Native Violet	0.2 x 0.5	



Materials Strategy

Materiality shall be driven by criteria, covering several aspects including but not limited to:

Connecting with Country

Use of local material where possible, e.g. use of locally sourced stone for paving and as an aggregate in concrete or feature banding.

Durability

Selections must be robust to ensure longevity and low ongoing maintenance

Design Cohesion

Built form and external elements should aesthetically tie together through continuity of materiality, types, colours and style.



Materials Schedule

Image	Description	Location	Colour / Finish
Paving			
	Aggregate concrete	Ground floor circulation	Local river aggregate
	Feature Unit Paving	Ground Floor care atrium	Engineered unit pavers with natural aggregate
	Feature Unit Paving	Ground Floor gathering nodes	Natural Stone
	Rooftop Gravel	Upper level roof areas	Various stone/ballast
Structures / furniture			
	Seating Walls		
	Bench seating with back and armrests	Ground Floor Drop-off	Timber or timber look finish with metal fixtures
	Planter walls	Ground Floor plaza	Concrete walls/edging to planter beds and lawn
	Bins	Ground Floor Drop-off	Composite and steel 240L bin enclosure



Draft Greener Places Design Response

Designing to the Greener Places and Better Placed Design Framework for Green Infrastructure:

Following the ethos of the ‘Greener Places’ design framework, this project focuses on providing a development harmonious with the existing setting.

Incorporating the Greener Places and Better Places principles through the landscape design philosophy.

1.

Integration & Better for community

Combine green infrastructure with urban development and grey infrastructure.

Tree planting and site planning enables a large green space to the northern portion of the site. This is in close proximity to Caddies Creek vegetation corridors allowing for greater canopy connection. Tree planting around the proposed building and streetscapes will further reinforce these connections. The open space provides pedestrian connections to future adjacent masterplan connecting to the broader Rouse Hill masterplan.

Exploration of Water Sensitive Urban Design (WSUD) initiatives have been employed with swales for water capture, passive irrigation and swales across the ground plane.
2.

Connectivity

Create an interconnected network of open space.

The Rouse Hill masterplan provides a framework for the inclusion of pedestrian and cycle connections to streetscapes. The building design allows for permeability across the ground plane between the two building wings and surrounding landscape. The path network allows for different journeys though the landscape.
3.

Multi-functionality & Better Fit

Deliver multiple ecosystem services simultaneously.

The landscape performs a variety of ecosystem services including the treatment and management of water on site, and climate regulating though minimising hardstand and increasing tree canopy cover.

Greater biodiversity in planting will allow for pollination and habitat creation. Cultural spaces have been provided to support the gatherings, the passing of knowledge and wisdom in the support of health care.
4.

Participation & Better Value

Involve stakeholders in development and implementation.

Participation as a principle seeks to involve the knowledge and needs of diverse parties in relation to planning. Ongoing engagement across indigenous groups and user groups has informed key design drivers and principles explained in this document. The look and feel of the landscape is to represent the community and include opportunities for ongoing participation and evolution through time.

Clinical courtyards are to be developed with future user groups. The wealth of knowledge offered within this setting ensure the design and features are relevant for the community and supported by the day to day end users.

These principles are supported by three key strategies of:

- Open space for recreation

The open space provides for recreation including the Ceremony Spaces and promoting open passive and active spaces for mental health wellbeing. These spaces allow for formal and informal gatherings of a variety of sizes, day and year round use of the space. Secure outdoor spaces enable users the chance to connect with nature, relax and reflect while undertaking treatment.

Urban tree canopy

The landscape design proposes canopy cover across the extent of the ground plane resulting in a net increase in canopy cover this is to be supported by an understory of locally native species complementing local ecologies of the area.

Connecting bushland and waterways

The addition of tree planning across the site will complement existing surrounding tree canopy. New plantings will ensure diversity in the maturity of trees ensuring secession in stock- protecting and increasing canopy cover in the future.

Within the site, a Water Sensitive Urban Design (WSUD) approach will ensure that water coming though the site will be appropriately captured treated and reused.

The key benefits of adopting the Greener Places and Better Places framework as a basis for this design include:

- Locally harmonious landscape character
- Consideration of micro climates within the site
- Sharing of the cultural and environmental stories of the area

CPTED and External Lighting

The landscape design has adhered to Crime Prevention Through Environmental Design (CPTED) through the following;

- Minimisation of concealment areas, All attempts have been made to reduce areas of concealment, particularly through plant selection and placement. Taller canopy trees mixed with lower planting have been used to ensure the critical “eyeline” heights are not blocked creating “hiding spots”for anti social behaviour
- The general layout the landscape design has created many area have clear site lines. The ampitheatre style design, sloping with the natural topography, means many areas are pasively overlooked and survealed
- Strong heriarchy of paths and circulation, with most importantly no ‘dead ends’ has reduced entrapement risks throughout the site.
- Ample lighting shall be designed and installed to safely illuminate landscape/ external areas, creating a safe environment during nighttime,
- Connectivity through the site partocularly to transport shall mean external paths shall be activiated effectively, increasing survilance and reducing risk of anti social behaviour.

- Proposed poletop light
- Proposed bollard light
- Proposed wall light
- Proposed tree uplight
- Proposed strip light

