Sutherland Hospital
Operating Theatre Upgrade

SSDA LANDSCAPE PUBLIC DOMAIN REPORT

FEB 2021

20-693_REP_L001

ARCADIA

This report concludes that the proposed Sutherland Hospital Expansion is suitable and warrants approval.

Executive Summary

This Landscape & Public Domain design report has been prepared by Arcadia Landscape Architecture to accompany a detailed State significant development (SSD) development application (DA) for the Expansion at the Sutherland Hospital site.
This report has been prepared to address the relevant conditions of the concept SSD DA (SSD-11099584) and the Secretary's Environmental Assessment Requirements (SEARs) issued for the detailed SSD DA (SSD-11099584).

Introduction

This report has been prepared to accompany a detailed State significant development (SSD) development application (DA) for the Expansion at the Sutherland Hospital site. site. The detailed SSD DA is granted for the maximum building envelope on the site.

The Minister for Planning, or their delegate, is the consent authority for the SSD DA and this application is lodged with the NSW Department of Planning, Industry and Environment (DPIE) for assessment.

This report has been prepared in response to the requirements contained within the Secretary's Environmental Assessment Requirements (SEARs) dated 8 April 2020 and issued for the detailed SSD DA. Specifically, this report has been prepared to respond to the SEARs requirements summarised below:

ENVIRONMENTAL ASSESSMENT REQUIREMENTS (SEARS)

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01 ANALYSIS

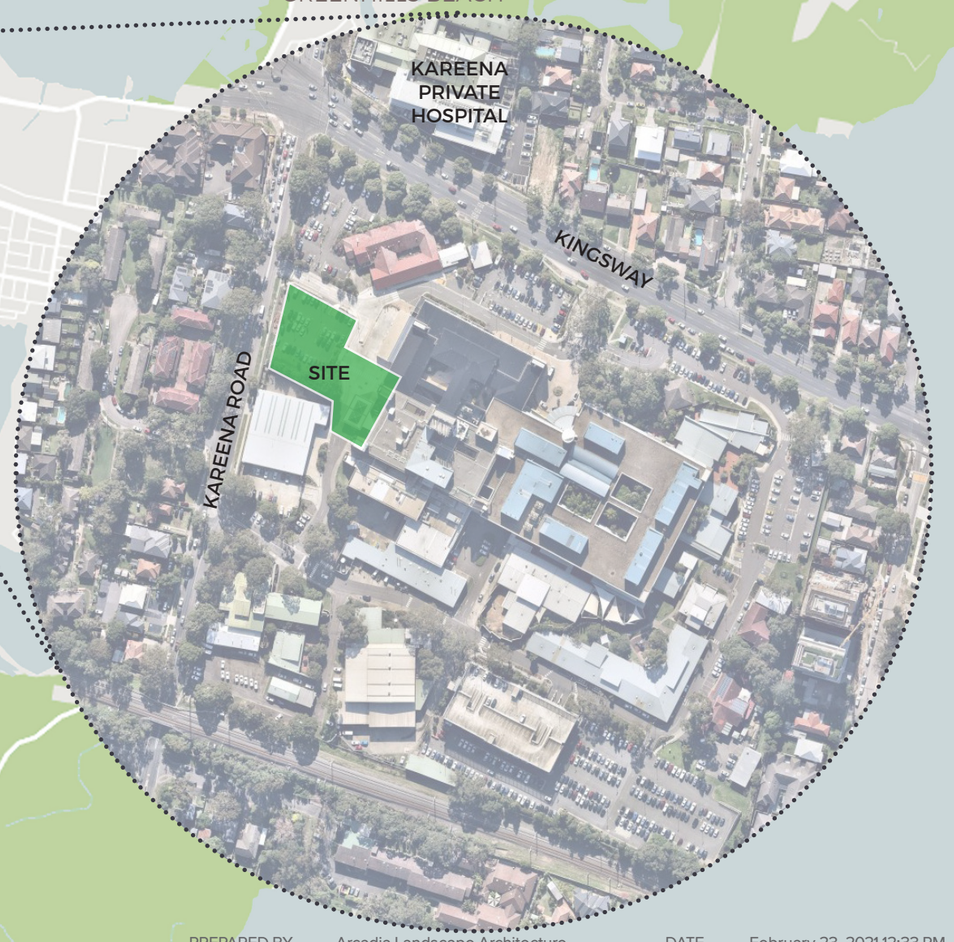
LOCATION

Situated in southern Sydney, Caringbah is approximately 24 kilometres from Sydney's CBD and is part of Sutherland Shire.

The Sutherland Hospital site is centrally located on Kingsway and Kareena Road, approximately 1.6km away from Caringbah's centre.

The site is in close proximity to Caringbah High School, Te Teahouse Camellia Gardens and Caringbah Station.

OATLEY
GEORGES RIVER
SANS SOUCI
SYLVANIA
WEENEY BAY
KAREELA
TAREN POINT
GREENHILLS BEACH
WORONORA HEIGHTS
CARINGBAH
GYMEA BAY
YARRWARRAH
PORT HACKING
ROYAL NATIONAL PARK



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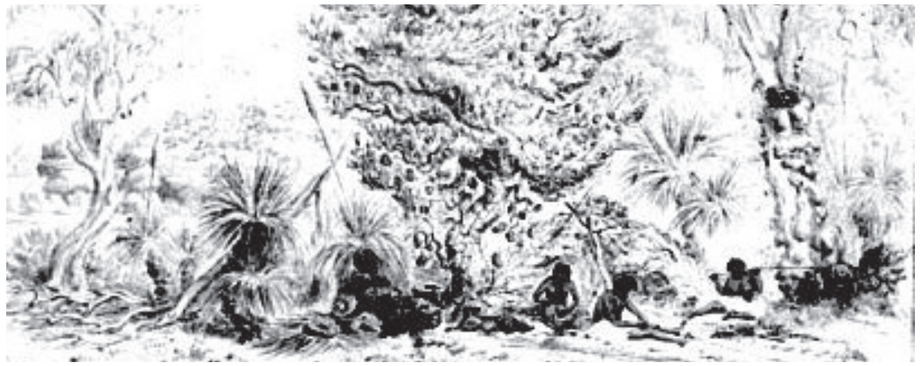
HISTORY & HERITAGE



Pre 1788 - The Gweagal (of the Dharawal) live in their territory extending from Cronulla to as far as Liverpool. They were the guardians of white clay pits considered to be very sacred by many who ventured many miles for it. It's value in its many uses from lining canoes to medicine and body paint.

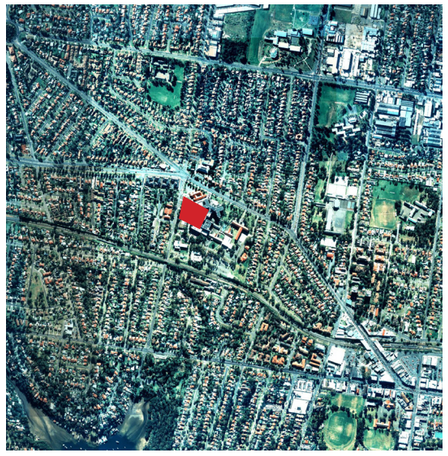
Much of what is now Sutherland Shire was originally land grants purchased over a period of time by Thomas Holt. The South Botany Estate, as it was known, was an estimated 12,000 acres (4856 hectares) and was divided into 11 paddocks. Those sections of the estate that were destined for the Sutherland township subdivision were part of the Woronora Paddock and the Gymea Ground Paddock. The Gymea Ground Paddock was noted for its forest timber, ironbark, stringybark, red and white gum, blackbutt, bloodwood and turpentine.

Timber-getters had contracts to take timber from the Holt-Sutherland township area before the railway line was completed to Sutherland. Supplies for the railway line could have been milled at the site, in addition to being used for general building purposes.

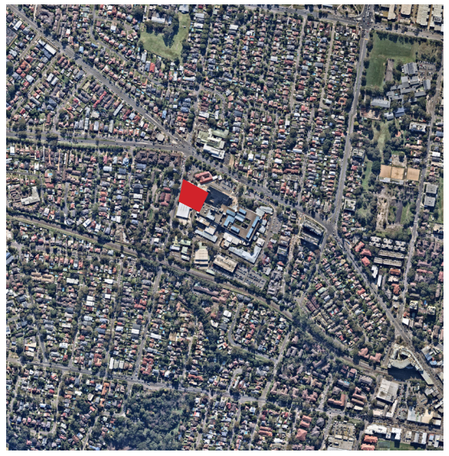
1930 - Increased access to public facilities, transport; poultry and fruit growing becomes more prevelant. Railway opens in 1939.

1955 - Post-war boom; 1958 - Sutherland District Hospital opens.

1970 - Shift in central shire role to Miranda; continued suburban growth.



1994



2010 - Since the 1990s the development of Sutherland has largely been determined by its proximity to public transport. The redevelopment of single dwellings to medium density townhouses and high density flats has been prolific. Other infrastructure improvements, including office space, roads and parking have been prominent in planning strategies aimed at maintaining Sutherland's identity as the central transport hub and administrative centre for the Shire.

[https://www.ssec.org.au/our_environment/our_bioregion/kurnell/history/origins/firstaust.htm]
[https://maps.ssc.nsw.gov.au/ShireMaps/]
[https://dictionaryofsydney.org/entry/sutherland]
[https://inheritanceorg.wordpress.com/tag/thomas-holt-sutherland-estate/]

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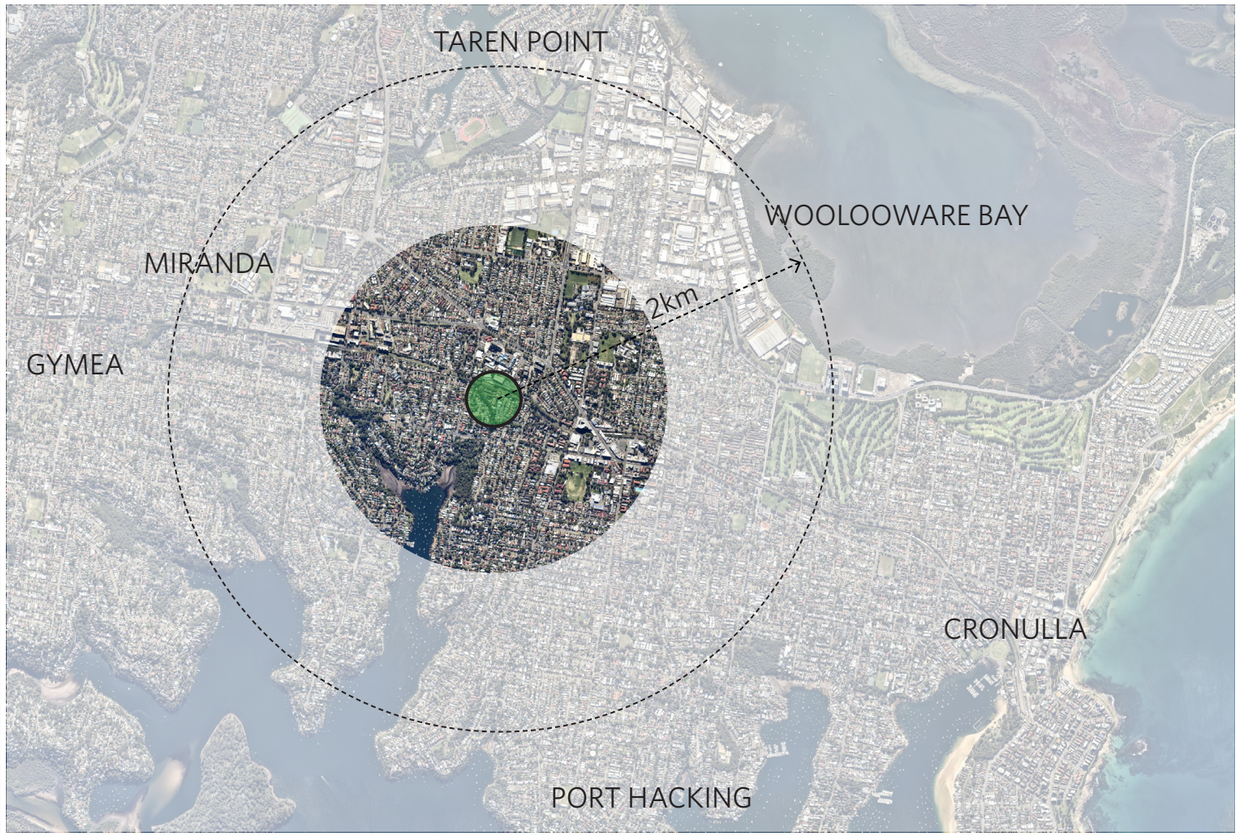
LANDSCAPE CONTEXT

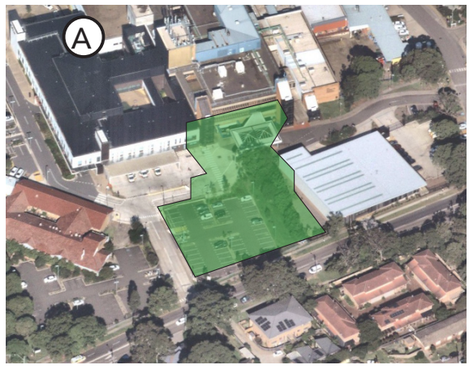
REGIONAL CONTEXT

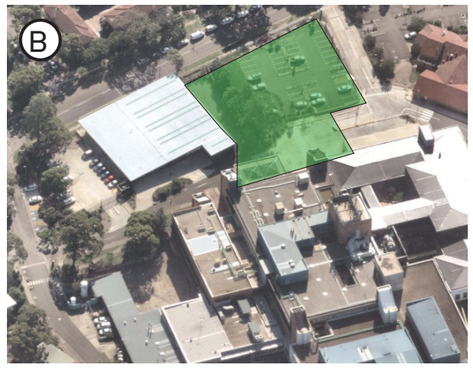
The site is nestled on a rise between Woolooware Bay and Port Hacking in the suburb of Caringbah within the Sutherland Shire LGA. The landscape character of Port Hacking and the Georges River is expressed throughout the site in the native planting palette. The Royal National Park is a short distance to the site, and still exhibits a similar forest characteristic that this site once would have posessed.

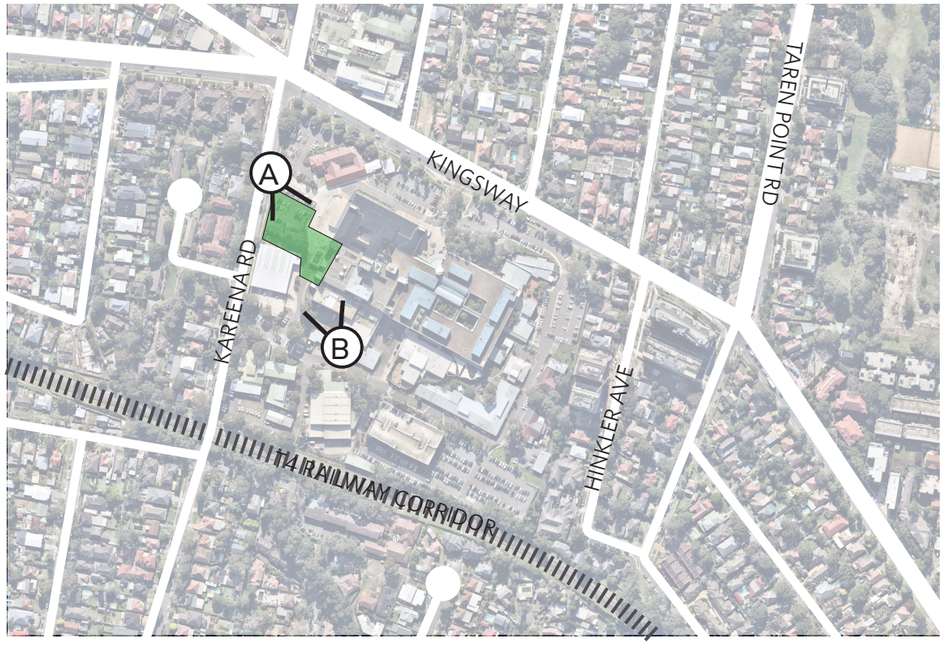


LOCAL CONTEXT

The site is situated approximately 20km from The Sydney CBD, in close proximity to Port Hacking Estuary and Westfield Miranda with views to Botany Bay in the North. To the North West of site is a particularly busy junction, where Port Hacking Road, Kareena Road and Kingsway meet.







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LOCAL ECOLOGY

GEOGRAPHY

The general landform and character of the area consists of gentle undulations, broad crests, ridges and low soil fertility. Sitting on a mixed Clay and Shale Plateau and Sandstone Slope environmental zone.

The site appears to sit on a junction between the Erosional Gymea and Residual Blacktown Soil Landscape types. Commonalities of vegetation character to these geological conditions include an "...almost completely cleared tall open-forest (wet sclerophyll forest), open-forest and woodland (dry sclerophyll forest)". And "Low open-woodland dominates ridges and upper slopes...." .

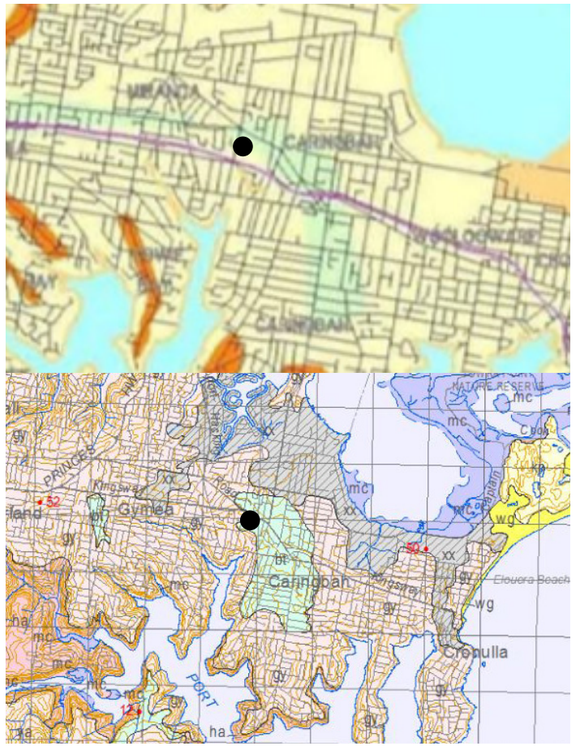
The sandstone slopes are a common geological characteristic of the area, generally low in nutrients and organic matter however are home to a variety of floral species that have evolved to live in these conditions. In opposition you have the clay and shale environments which are higher in nutrient value and have greate water holding capacity. Floral features to this area include Turpentine, Grey Ironbark, and on occasion Sydney Blue Gums.

[Ashfield Shale - 'Geography and Geology' Sutherland Shire Studies. USYD]

['Soil Landscape Series - Sheet 9029-9129' by the Dep. of Environment, Climate Change & Water, 2010.]

[Sutherland Shire Environmental Specification, 2007]

LEGEND
- Coastal and Estuarine
- Clay and Shale Plateau
- Sandstone Slopes
- Exposed Ridges
- Site



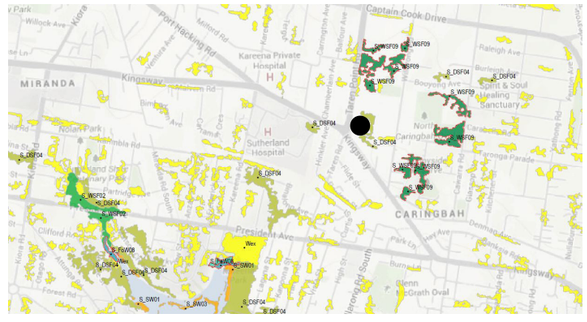
ECOLOGY

The landscape of the Sutherland Shire is characterised by significant areas of bushland, such as The Royal National Park and Kamay Botany Bay National Park and waterways such as Port Hacking Estuary.

Dominant Vegetation communities local to Sutherland Hospital include Sydney Turpentine Ironbark Forest, Sydney Sandstone Gully Forest and Shale/ Sandstone Transition Forest.

Some key vulnerable fauna species include the Swift Parrot and Stuttering Frog. Some typical floral species for the area include the Sydney Red Gum(Angophora costata),Old Man Banksia(Banksia serrata);and Spiny Head Mat Rush(Lomandra logifolia)

LEGEND
- North Hinterland Wet Schlerophyll Forests
- (Sydney turpentine-ironbark forest)
- Sydney Coastal Dry Sclerophyll Forests
- (Coastal enriched sandstone dry forest)
- Weed Species
- Site



1. Stuttering Frog (Mixophyes balbus); 2. Swift Parrot (Lathamus discolor); 3. Bush Stone-Curlew (Burhinus grallarius); 4. Regent Honeyeater (Anthochaera phrygia)

['The native vegtation of the Sydney Metropolitan Area, V 2.0' by the NSW Catchment Management Authority and Office of Environment & Heritage, October 2013.]

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SITE ANALYSIS

EXISTING SITE

LEGEND

- Site
- Vehicular Entry Points
- Kareena Private Hospital
- Major Site Contours
- Greater Overland Flow
- Bus Stops
- Railway
- Proposed Bicycle Network*
- Prevailing Winds
- Sun Path
- Urban Exotic Cover
- Native Vegetation Communities

*Sutherland Shire Bicycle Network Map, Sutherland Shire DCP 2015

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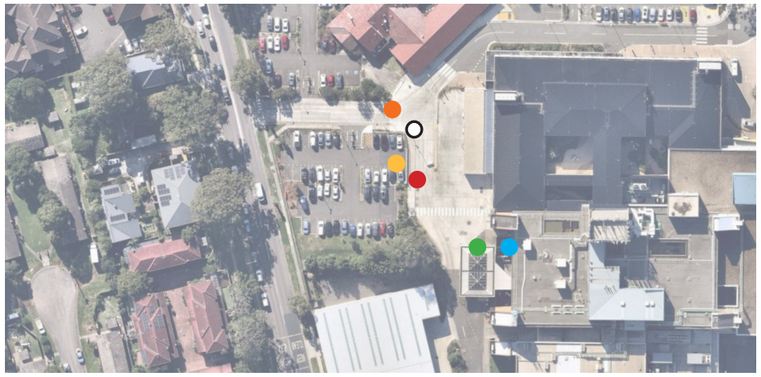
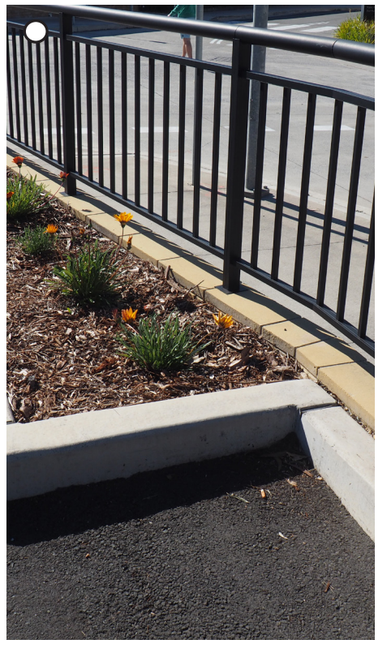
SITE CONDITIONS

KEY NOTES

- Wayfinding is challenging due to hierarchy of pedestrian and vehicle
- Pedestrian and vehicle movement creates conflict area;
- Existing landscape around project site is varied - areas provide shade, mixture of native and exotic plant species;
- Width of footpaths are not Australian Standard compliant and provide limited disabled access;





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EXISTING TREES

Eucalyptus botryoides x saligna (Wollongong Woollybutt) 16

C. maculata (Spotted Gum) 17 & 18

Casuarina glauca (Swamp Sheoak) 10

E. microcorys (Tallowwood) 20

Eucalyptus sp. Eucalypt 22

Eucalyptus microcorys 21

- Corymbia maculata (Spotted Gum)
- Eucalyptus microcorys (Tallowwood)
- Backhousia myrtifolia (Grey Mrytle)
- Leptospermum petersonii (Lemon Scented Tea Tree)
- Waterhousea floribunda (Weeping Lilly Pilly)
- Grevillia robusta (Silky Oak)
- A — Incomplete identification of species (insufficent plant material)
- B — Diameter taken below 1.4m due to low stem bifurcation
- Casuarina glauca (Swamp Sheoak)
- Eucalyptus botryoides x saligna (Wollongong Wollybutt)

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02 VISION

DESIGN PRINCIPLES

INCLUSIVITY

Ensure that the landscape proposal is inclusive and entries are easily defined throughout the site.

CONNECTIONS

The design is an integrated node of the greater medical campus, community, and ecology.

BIOPHILIC THREADING

Utilise the beneficial healing aspects of nature in the proposal by weaving natural infrastructures into the interactive functions of the site and bringing the landscape under and through the building.

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DESIGN STRATEGIES

The landscape strategies provide a increased level of amenity and comfort for hospital users and visitors.

New spaces are provided for healing - Biophilic design has been used to increase the occupant connectivity to the natural environment through the use of direct nature, indirect nature, and space and place conditions connection to landscape.

The landscape design provides increased, safety and inclusion for hospital users and visitors.

INCLUSIVITY

CONNECTIONS

BIOPHILIC THREADING

SAFETY

Implement design choices which encourage safety in egress and use.

- Accessible pathways
- Reduced vehicular intersection with pedestrians
- Buffering planting
-Providing Social Spaces
-Provide consistent visual permeabiliy

ARRIVAL

Design a positive and welcoming green arrival experience

- Feature planting to entrance
- Integration with artwork and lighting
- Utilising higher orders of planting/trees
- Working with existing desire lines
-Experience of enclosure and reveal

AMENITY

Design amenity which is both natural and familiar through key planting and material use.

- Use of warm and familiar materials
- Places to rest, wait, and congregate
- Use of geomorphology in paving and fixtures

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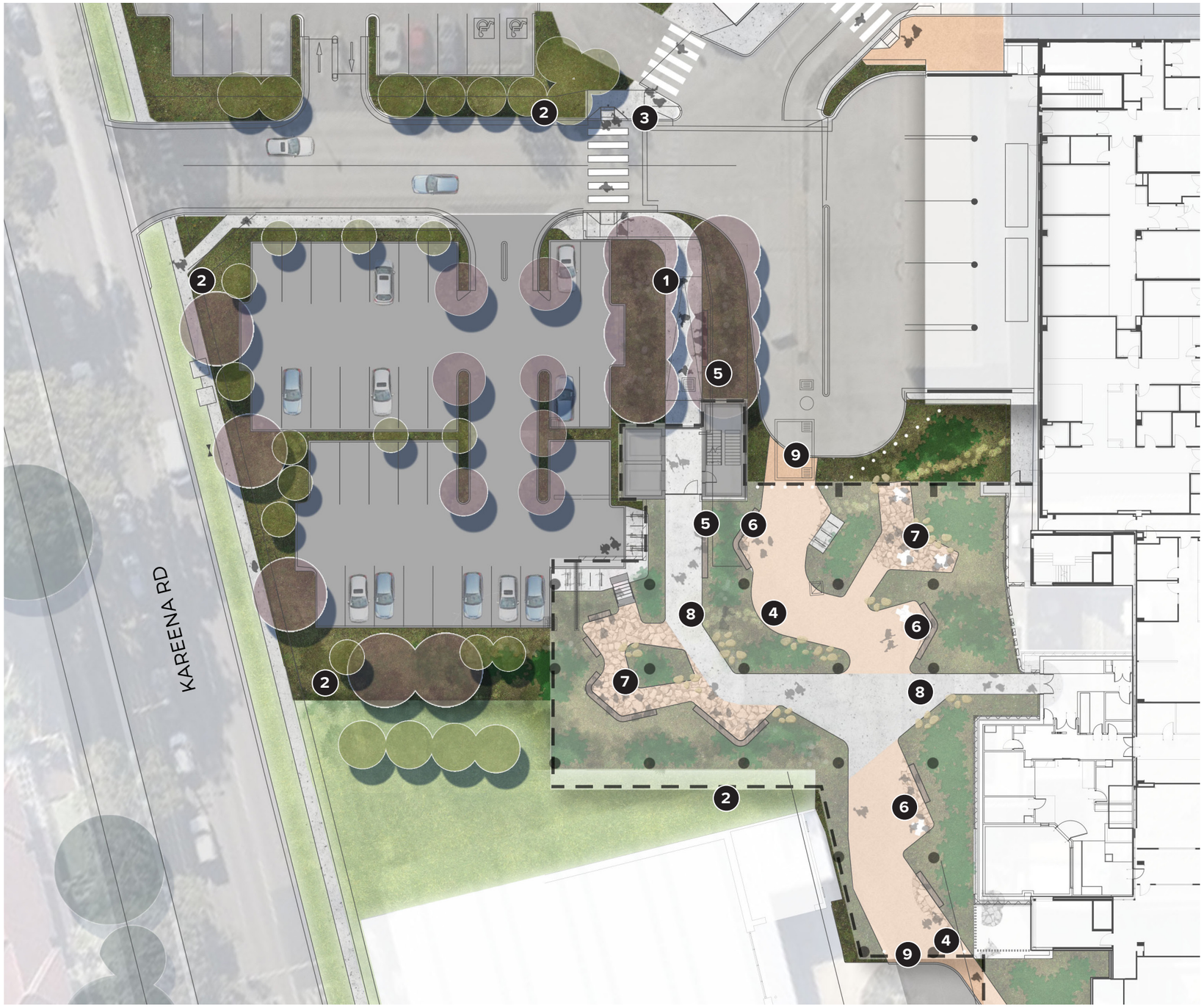
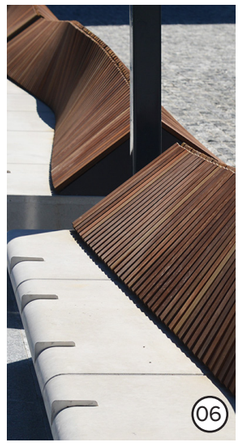
03 CONCEPT

LANDSCAPE PLAN



LEGEND

1. 1:20 Ramp access to lifts
2. Existing vegetation buffering and screening
3. Improving the safety of crossing conditions
4. Exposed Agg paving to match existing
5. Feature long bench seating
6. Respite spaces
7. Meeting/Congregation Space
8. Main path of egress
9. Emergency/service & maintenance access considered



1:200 @ A3

0 1 2 4 6 8m

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LANDSCAPE PLAN - CANOPY COVER

LEGEND

- Scope Boundary
  (Total Landscape Area 4881m2)
- Existing Trees Retained
  (96m2 Canopy area)
- Proposed Trees
  (1167m2 Canopy area at mature growth)
- Trees omitted from Arborist Report or omitted from Species Data.
- Large Shrubs/Small Trees omitted from Arborist Report or omitted from Species Data.
- Trees Removed

A total of 20 trees are proposed which will compensate for those trees being removed from the site. Existing tree canopy cover pre-development is **16% (772m2)** and post-development is **26% (1263m2 – estimated mature growth of trees)**. Existing tree canopy cover on the site is estimated to be **772m2 by the arborist. (total calculated from 'Crown Spread' column of '6.0 Table 1 - Tree Species Data' in the January 2021 Arborist Report)**

COMPENSATORY TREE PLANTING;
To compensate for trees required to be removed as part of the works, and for the creation of amenity for hospital users and for presentation to the public domain, a total of **20 trees are proposed** to be planted. These trees are a combination of native and endemic species to the area.

TREE CANOPY COVERAGE;
Arcadia landscape architects have calculated the proposed tree canopy cover for the site accounting for trees removed and proposed. In summary proposed tree canopy cover is **26% (1263m2 of landscape area – estimated mature growth of trees)**.
The Draft Greener Places Design Guide sets an overall target for the Greater Sydney Region to achieve 40% tree canopy cover. However the extent of works are located within a medium/high density Precinct. The achievement of **26% tree canopy cover** for the extent of works area is consistent with achievable canopy cover in medium/high density precincts.

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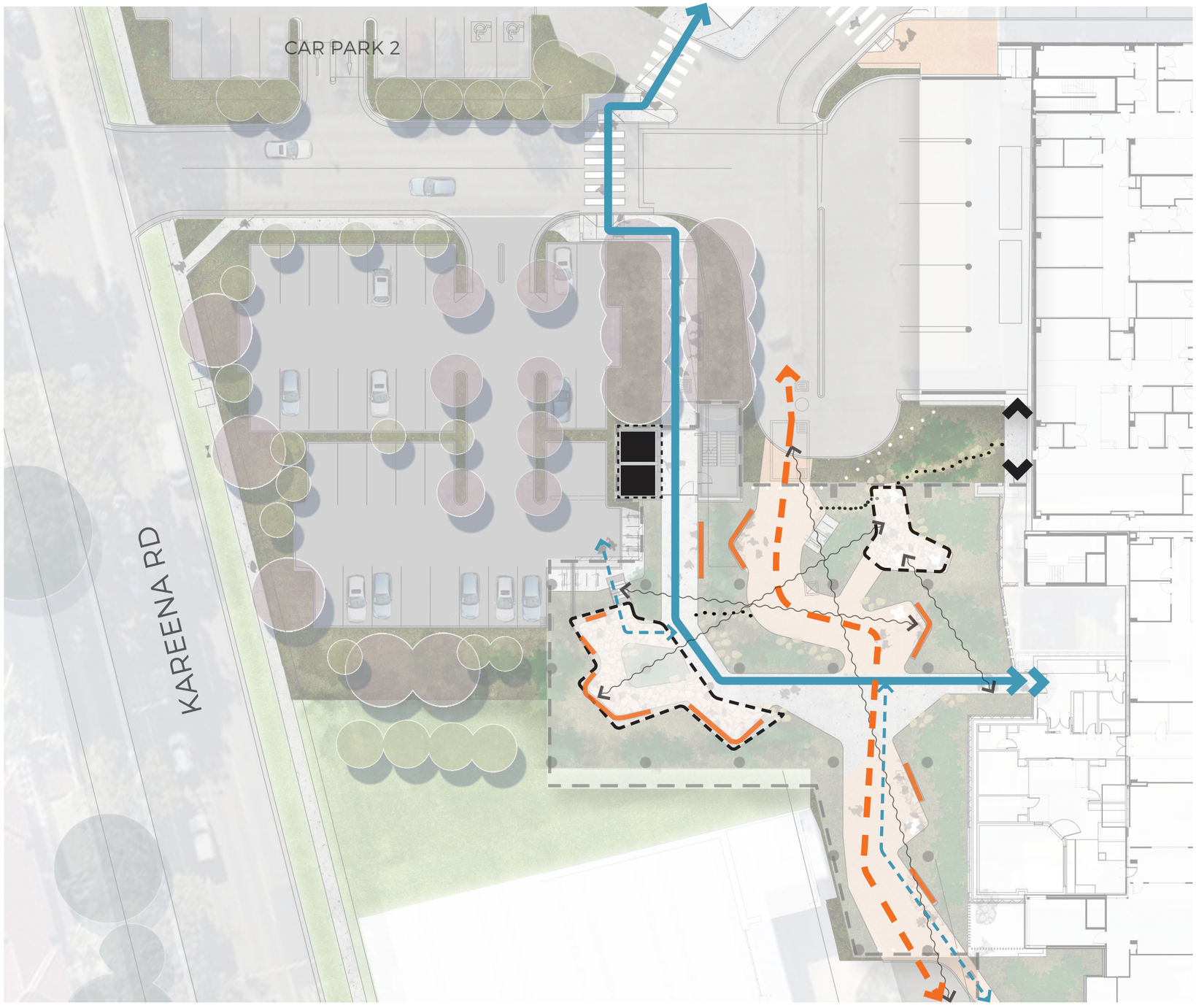
LANDSCAPE CONCEPT DIAGRAM



LEGEND

- Main Staff Entries
- Main Visitor Entry
- Primary Pedestrian Path
- Secondary Pedestrian Path
- Informal Pedestrian Path
- Emergency Vehicular Access
- Meeting Places
- Seating Opportunities
- Visual Connection Paths
- Lifts

1:200 @ A3

0 1 2 4 6 8m

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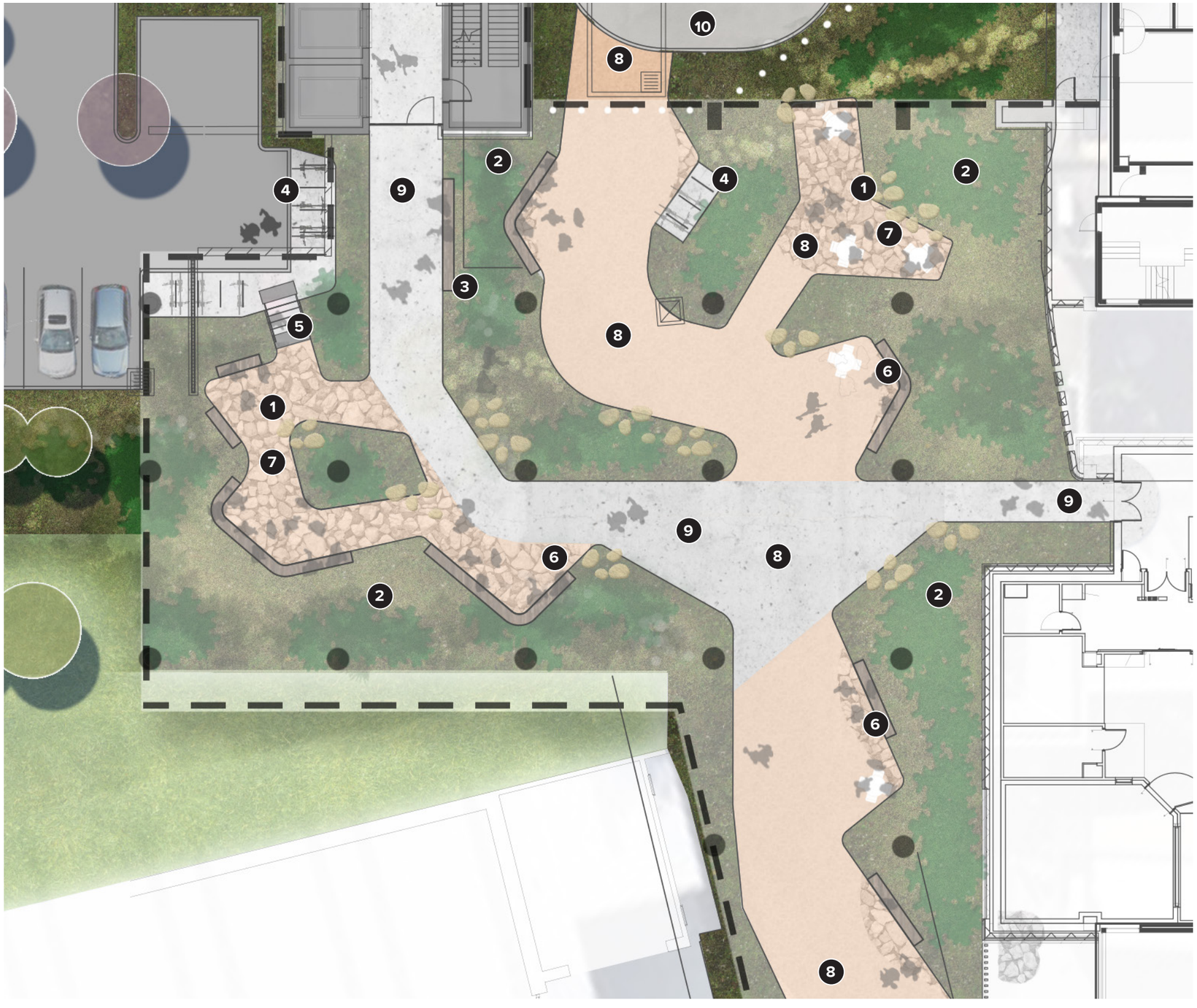
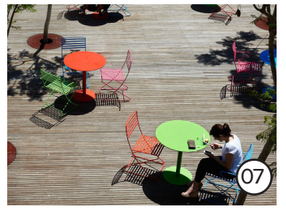
LANDSCAPE DETAIL PLAN



LEGEND

1. Meeting/Congregation Space
2. Planting recieving light
3. Feature concrete benches
4. Proposed bicycle parking
5. Access down from car park
6. Resting spaces for staff, patients, visitors
7. Feature paving to key spaces
8. Emergency/vehicular service access considered
9. Main egress through to MRI
10. Controlled access for vehicles



1:100 @ A3

0 0.5 1 2 3 4m

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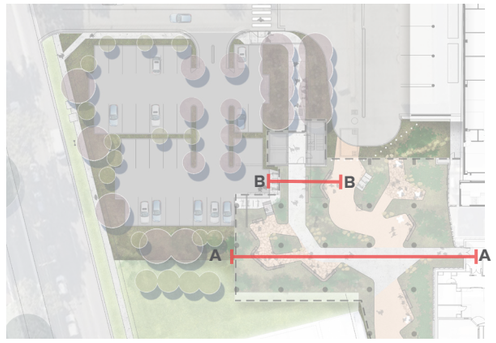
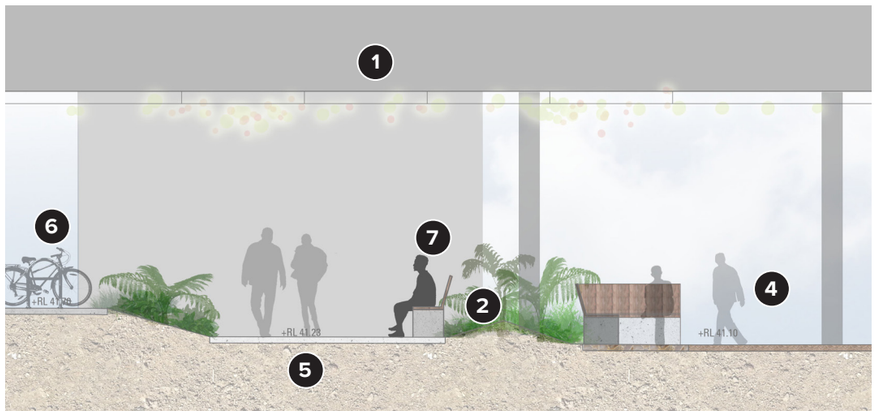
LANDSCAPE SECTIONS



SECTION A

1:100 @ A3 0 0.5 1 2 3 4m



SECTION B

1:50 @ A3 0 0.25 0.5 1 1.5 2m

LEGEND

1. Proposed building extension
2. Lush native planting
3. Congregational spaces
4. Shared path
5. Main pedestrain path
6. Bicycle parking
7. Feature seat
8. Proposed Native Trees
9. Trees to be retained

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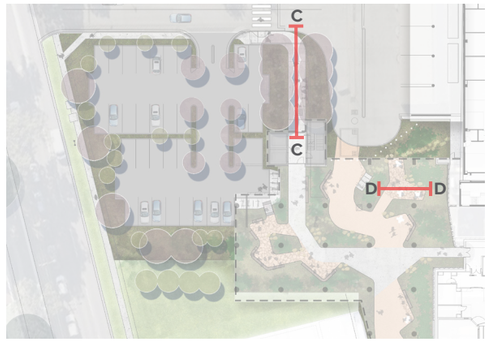
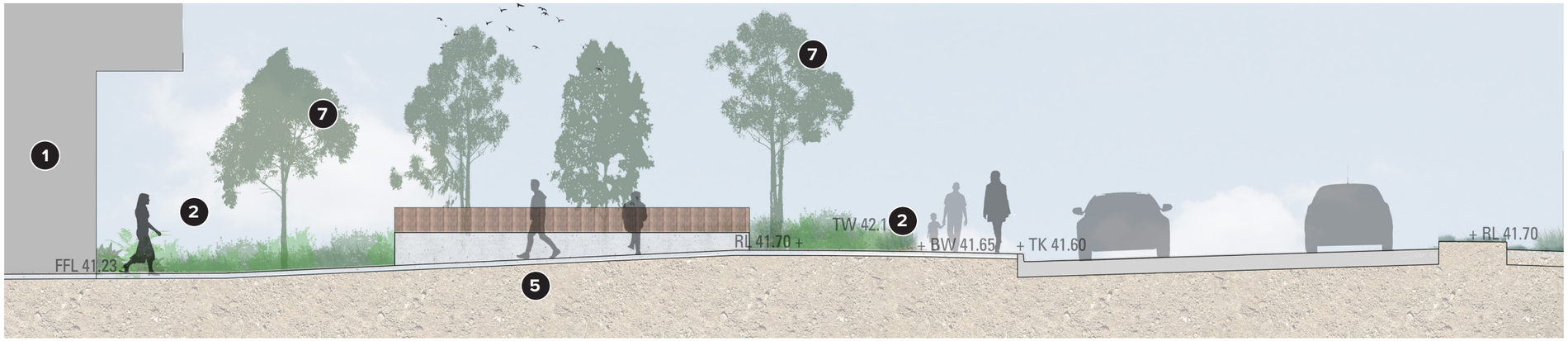
LANDSCAPE SECTIONS





SECTION C

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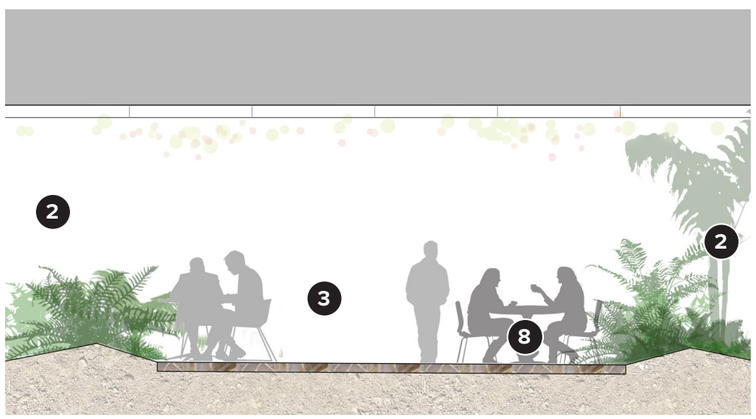

SECTION D

1:50 @ A3 0 0.25 0.5 1 1.5 2m

LEGEND

1. Proposed building extension
2. Lush native planting
3. Congregational spaces
4. Shared path
5. Main pedestrain path
6. Feature seat
7. Proposed Native Trees
8. Fixed furniture for small groups

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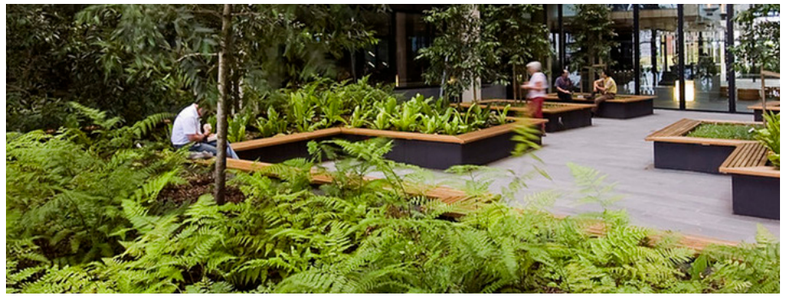
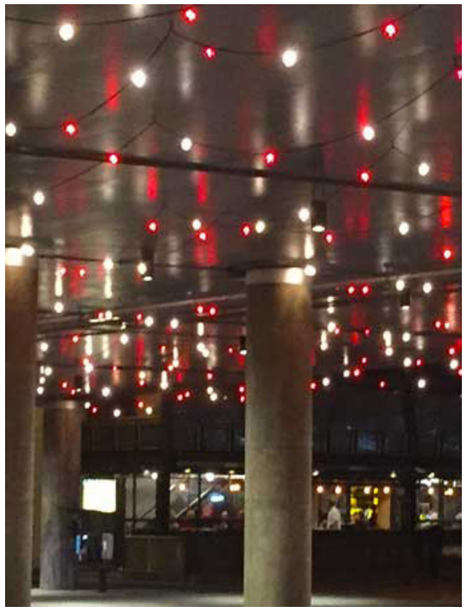
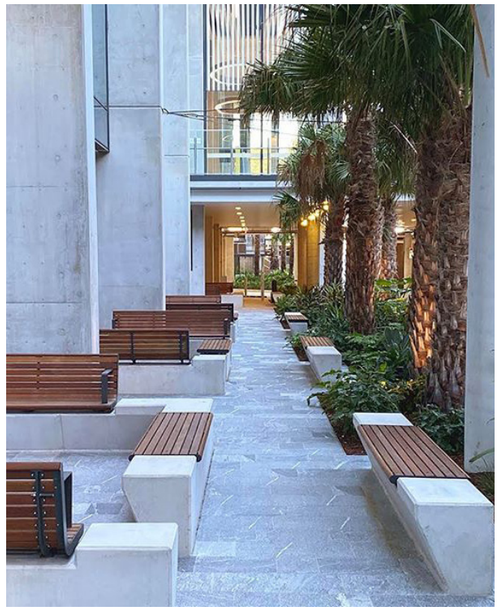
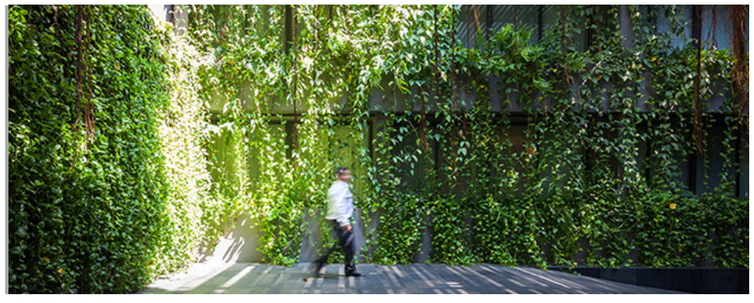
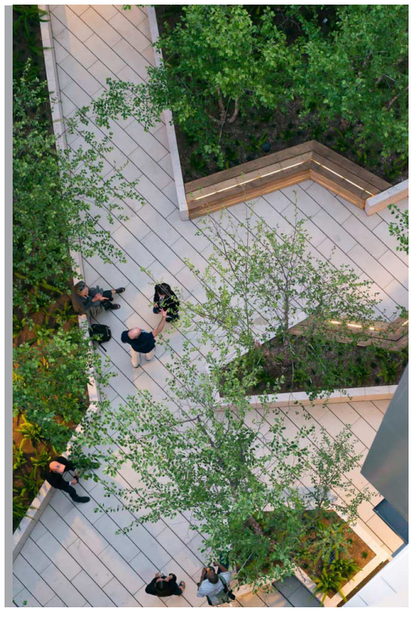
LANDSCAPE CHARACTER











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MATERIAL PALETTE

High Quality Paving

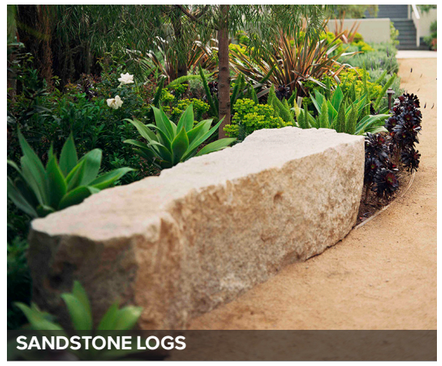

EXPOSED AGGREGATE PAVING (EXISTING)


EXPOSED AGGREGATE CONCRETE


FEATURE PAVE TO KEY AREAS

Edges & Seating

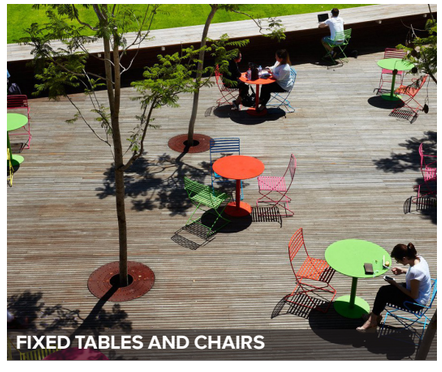

INSITU CONCRETE

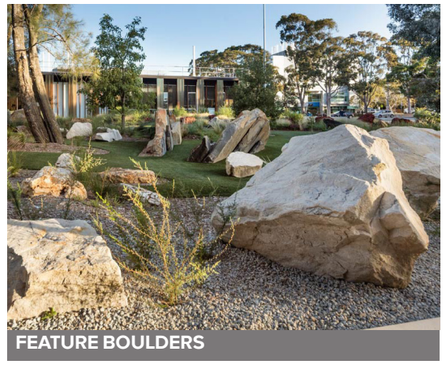

SANDSTONE LOGS

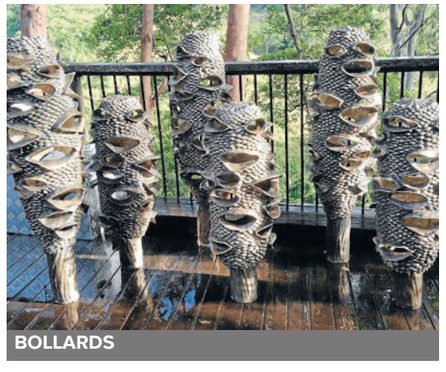

INSITU CONCRETE WITH TIMBER

Fixtures


BICYCLE PARKING


FIXED TABLES AND CHAIRS


FEATURE BOULDERS


BOLLARDS

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PLANTING PALETTE

Trees


Angophora costata


Corymbia maculata


Elaeocarpus reticulatus


Tristaniopsis laurina

Shrubs


Hovea linearis


Hibbertia empetrifolia


Philodendron xanadu


Libertia paniulata


Zamia furfuracea


Banksia serrata

Grasses


Themeda australis


Ficinia nodosa


Lomandra 'Verday'


Poa labillardieri


Poa poiformis


Wahlenbergia gracilis

Ferns


Asplenium australasicum


Blechnum 'Silver Lady'


Adiantum aethiopicum


Dicksonia antarctica


Cyathea australis


Calochlaena dubia

Groundcovers


Hardenbergia violacea


Dichondra repens


Actinotus helianthi


Viola hederacea


Dampiera diversifolia


Dichondra repens 'Silver Falls'

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