LANDSCAPE ARCHITECTURE DESIGN REPORT
PLANNING PROPOSAL
NOV 2023

ROGANS HILL PARK

1020 MELIA COURT, CASTLE HILL NSW

THE HILLS SHIRE COUNCIL

LAND AND FORM

Prepared for

Project Status - Planning Proposal
20th November 2023

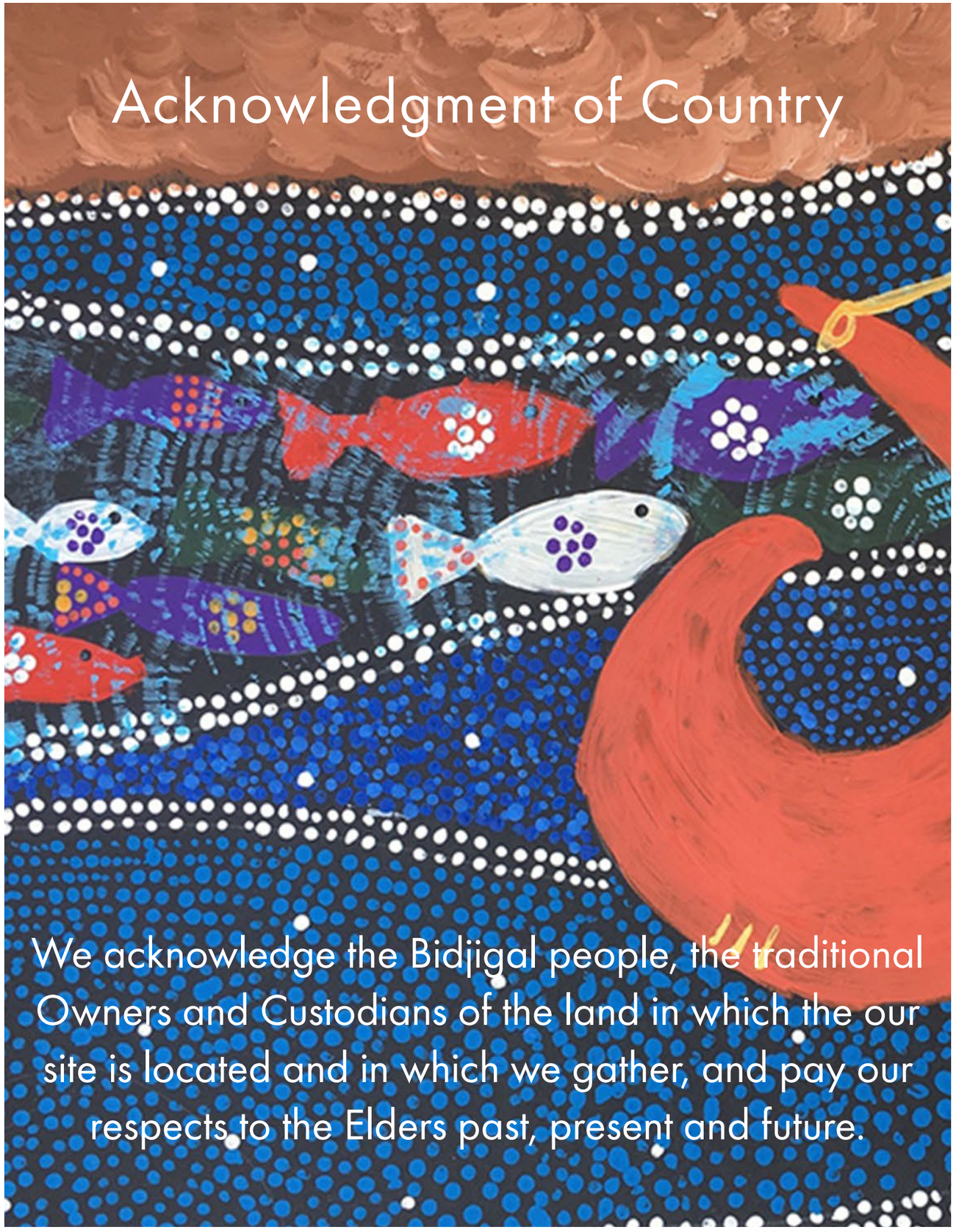
This report should be read in conjunction with
Landscape Planning Proposal Drawings (Appendix A) Prepared by
Land and Form

This Design Report provides an explanation that verifies how the development addresses how design quality principles are achieved, and demonstrates, in terms of the DCP for Hills Shire Council Public Domain Guidelines and how the objectives and relevant sections have been achieved.

Land and Form Studios
10 Boronia Street Redfern 2016 NSW

Gadigal Country

This document has been prepared in collaboration with:



Contents

LAND AND FORM

INTRODUCTION & CONTEXT

Introduction

Project Overview

The project involves the re-development of 1020 Melia Court in Castle Hill for Planning Proposal Application to the Hills Shire Council. The site is to be developed for low to medium density residential including a new public park, series of open spaces and public domain upgrades. This design report demonstrates the quality of the public domain and private open space provisions and embellishments.

Design Process

Land and Form Studios and DKO Architects have gone through a thorough design process including a pre planning proposal workshop with Council and subsequent internal QA and design review workshops to ensure a high quality outcome is achieved for local communities and ecologies.

Public Domain & Public Park

A new 2000m2 public park is provided within the proposed development for local residents and members of the Castle Hill community. Along with a new streetscape and improvements to the interface of Glen Rd, the proposal aims to prioritise the experience of the public realm for future residents.

This document provides an outline of the context, the brief, concepts and principles that have played a role in the preparation of the overall design and public domain works.

LAND AND FORM

Strategic Context (State)

RELEVANT POLICIES, GUIDELINES & CONTROLS

BETTER PLACED & GREENER PLACES (GANSW)

Good design is fundamental in creating better places, considering the needs of people and the community. The NSW EP&A Act has been amended to include the new design object, reinforcing the importance of good design and amenity in the planning process.

To promote good design and amenity of the built environment

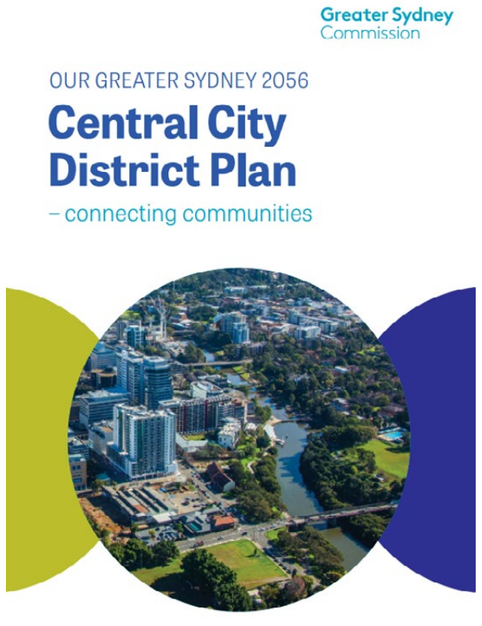
To promote the sustainable management of built and cultural heritage (including Aboriginal cultural heritage)

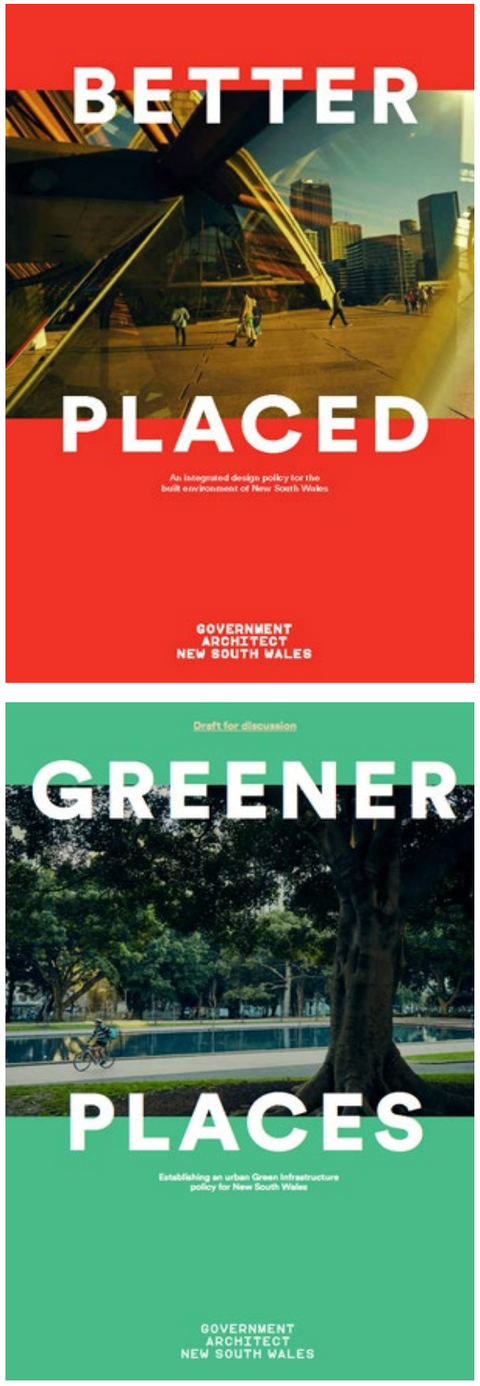
GANSW policies and guidance form the line of sight from the Environmental Planning & Assessment (EP&A) Act amendments to include the promotion of good design and amenity of the built environment.

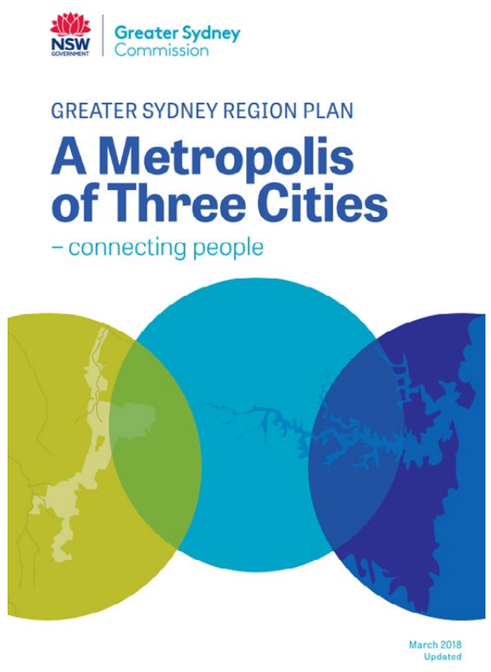
- Sourced from The Government Architect NSW (GANSW) policies and frameworks

OBJECTIVES FOR GOOD DESIGN (GANSW)

- Sourced from Better Placed - The Government Architect NSW (GANSW) policies and frameworks







Strategic Context (Local)

Draft DCP Amendments 2012 - Objectives

- (i) To ensure that landscaping preserves and contributes to the Shire's environmental and visual character and the existing and past cultural landscape.
- (ii) To promote the principles of ecologically sustainable development.
- (iii) To encourage the landscape treatment of sites which takes into account their context - the subdivision design, the streetscape design, the design of neighbouring buildings.
- (iv) To encourage landscaping that can be effectively maintained.
- (v) To encourage innovative landscape design.
- (vi) To define and outline the provisions necessary for lodgement of landscape proposals.
- (vii) To recognise the right of a property owner to be able to manage vegetation on their land, including the removal of trees that they consider a danger to their dwelling.

Hills Shire Recreation Strategy

This Strategy is based around the following planning priorities to guide our actions over the next five years and for the longer term:

- provide social infrastructure to meet residents' needs, using clear benchmarks and acknowledging the different types of open space and how this relates to the Shire's changing centres.
- provide new and upgraded passive and active open spaces by understanding current provision, supply and demand, gaps, opportunities for enhancement, and the kind of recreation facilities that the growing community is most likely to use.
- expand and improve the active transport network, including recreational tracks and trails, local links, and cycling links.

Landscape Development Controls

- (a) The landscaping of any site should have regard to the natural environment of the location and be consistent with landscaping character of the area.
- (b) Landscaped areas shall have a minimum width of two metres.
- (c) All landscaping is to adhere to the following principles:

- Planting is to be in scale with the proposed buildings;

- Planting to consist of a variety of trees shrubs and ground covers;

- Landscaping to side and rear boundaries should effectively screen the development;

- Consideration should be made to alternative to traditional fencing by using vegetation or change in height of the landform as natural barriers;

- Artificial mounding using excavated materials is encouraged to enhance or screen buildings and car parking areas - See Figure 53 – Screening and mounding for noise attenuation.

- Planting shall be of advanced species except where it is demonstrated to Council's satisfaction that semi-advanced stock is more suited to soil and / or plant characteristics;

- All electrical substations, water supply valves, hydrants and the like shall be indicated on the plans and suitably screened. However, due consideration given to the requirements of the appropriate authority, and must not be located through the root ball of any trees being retained;

- Plant selection for all landscape developments will be assessed for its suitability toward existing site conditions such as soils, aspect, drainage and micro-climate;

- Plant selection appropriate to the existing or proposed cultural landscape will also be included in the general assessment of a proposal; and

- Species selection and landscape design

should minimise the need for watering.

(c) Trees should be of species unlikely to cause structural damage to buildings, retaining walls, paths, services and other property.

(d) Consideration should be given to the types of footings to be used in a development to reduce the impact on mature trees.

(e) Stormwater drainage lines and other services should be located to minimise the disturbance around existing trees which are to be retained.

(f) Landscaping plans should be consistent with architectural plans and engineering plans, especially with regard to levels, stormwater drainage and on-site detention.

(g) Landscaping in bushfire prone areas shall be in accordance with Planning for Bush Fire Protection 2006.

(h) For all planting on slab and planter boxes allow the following minimum soil depths:

- 1.2m for large trees, 1m for medium trees

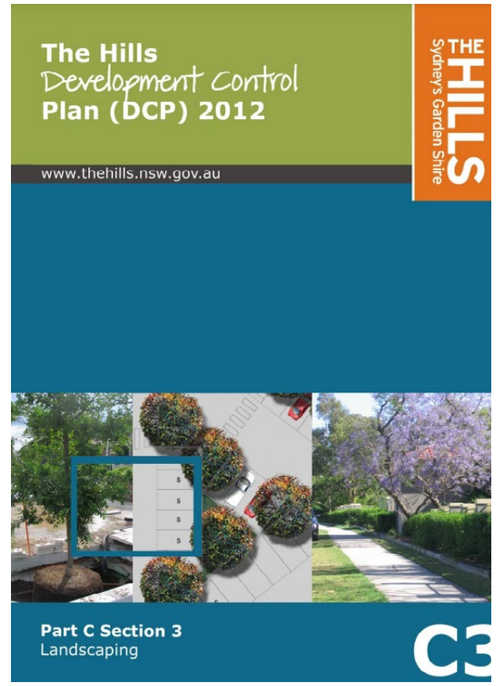
and 800mm for small trees.

- 500-600mm for shrubs.

- 200-450mm for groundcovers; and

- 200mm for turf.

Note: This is soil depth alone and not the overall depth of the planter.



LAND AND FORM

Local Context - Open Space

BC OVAL
LAWRENCE OVAL
DAMIEN OVAL
HERMAN OVAL
HERMAN OVAL
OLD NORTHERN RD
20MIN
10MIN
5MIN
ANGLICARE
AGED CARE
DAVID RD
TREETOPS PARK
COUNTY DR
CASTLE HILL METRO
STATION
CASTLE HILL RD
GLEN RD
MELIA CT
THE SITE
ROGANS HILL
RESERVOIR
BLUE GUM HIGH FOREST
(BGHF)
HIGHS RD
5MIN
EXCELSIOR
CREEK
CORRIDOR
CHERRYBROOK
METRO STATION
CASTLEWOOD
PARK

- 5/10 MIN DRIVING DISTANCE
- EXCELSIOR CREEK
- METRO LINE
- 4 DRIVEWAY MAIN ROAD
- SECONDARY ROAD
- NATURE RESERVE/ PASSIVE GREEN SPACE
- SPORTS & LEISURE ACTIVE GREEN SPACE

Site Context & Character

Local Context and Landscape Character

The site lies approximately 1.2km from Castle Hill Metro Station, 900m from Cherrybrook Metro Station and approximately 8km from the Parramatta CBD.

The site sits adjacent to a significant blue gum high forest (BGHF) creek corridor which is an important biodiversity thread connecting all the way to the wider Berowra Valley Regional Park system.

The site on the junction of Castle Hill and West Pennant Hills which is primarily characterised by its leafy, green vegetation corridors, numerous creek lines and well connected series of active open spaces. A large portion of the current site is surrounded by significant endemic vegetation communities which are well established and provide important habitat for local flora and fauna.

Parks and Open Space

The site is surrounded by a number of parks & reserves with a particular focus on passive, natural spaces. Approx 3 parks lie within a 10min walk with the majority being nature reserves with a further 6 notable open spaces being within a 20min walk including a number of sports reserves and active open spaces.

Public Transport

The closest heavy rail station to the site is Cherrybrook Metro Station located approx 900m walk from the site with buses acting as the primary mode of public transport.












LAND AND FORM

VISION & STRATEGY

Design Objectives

CREATE ADDITIONAL QUALITY GREEN OPEN SPACES

PROVIDE NEW HABITAT FOR LOCAL FLORA & FAUNA

IMPROVE WATER QUALITY TO THE EXCELSIOR CREEK SYSTEM

ENHANCE PEOPLE'S CONNECTION WITH NATURE

INCREASE AWARENESS OF PLACE & LOCAL ECOLOGY

CREATE A COMFORTABLE, SAFE & WALKABLE PRECINCT

Design Principles

Connection with Nature and Biodiversity

The landscape proposal is driven by the protection and enhancement of the existing pockets of endemic vegetation communities and celebrating these areas by allowing people to connect and engage with the natural environment.

The proposal seeks to not only strengthen the connection between people and nature but also to strengthen the connection between existing biodiversity corridors such as the adjacent Excelsior Creek vegetation corridor.

Community and Social Connection

The public open space and new streetscapes promote the new community to connect, engage and care about their fellow neighbour and the existing community surrounding the site.

The spaces have been designed to build community & ecology resilience. This will also enable the sharing of stories and memories instilling a strong sense of place and ownership over their land and homes.

Place and Identity

To create a high quality parkside development involving an active large public open space appropriate to the local urban setting and needs of the community. The sense of place of the site will restore, reinforce and forge a community identity and sense of ownership.

Rogans Hill Park pays homage to the site's past and connection with the Excelsior creek riparian corridor, re-establishing and reinforcing existing blue gum forest vegetation corridors, and embedding a strong sense of interaction within the new park

Vision


ROGANS HILL PARK IS AN
AUTHENTIC PARKSIDE & FOREST
LIVING EXPERIENCE WHERE
A STRONG CONNECTION TO
NATURE AND HEALTH & WELL-
BEING SETS A NEW PRECEDENT
FOR A BIOPHILIC COMMUNITY
IN THE HILLS SHIRE AREA

Embedding a Sense of Place

Design with Country Process

Connection to Country Traditionally cognitive mapping by Aboriginal people was done through walking Country and learning about important sites, cultural lore, and wayfinding through storey telling. This can be argued as a universally human trait where our brain (like animals) senses place – using mental models of space to navigate and remember important features in the environment. In 1960, urban planner Kevin Lynch proposed that mental mapping has five elements:

1. paths

2. edges

3. districts

4. nodes

5. landmarks

These features can be seen in the current design proposal through the use of planting, materials & structures. The design seeks to instil fundamental principles of leaving country in a better state through the supplementation of endemic and native landscaping which can further enhance and contribute to the wider biophilic systems and Excelsior Creek Corridor.

An additional approximate 360 native trees will be planted on site with a diverse range of endemic shrubs & groundcover providing habitat for local flora and fauna whilst promoting the connection between people and nature in a passive native landscape. Refer to the planting palette.

A Designing with Country / Indigenous Design specialist will be engaged as part of the next phase of the process to ensure a strategy and approach is embedded into the site early at the appropriate stage of the design process. This is integral to ensure an appropriate and sensitive response to country is achieved and to also ensure the site's long standing history and sense of place is celebrated with the indigenous communities of Castle Hill and West Pennant Hills

Calang'oral - Blue Gum

Benson and Howell (1990) comment that "the Sydney Blue Gum, Eucalyptus saligna, Blackbutt, Eucalyptus pilularis and Grey Ironbark, Eucalyptus paniculata of the Blue Gum High Forest probably grew to 30-40m, and provided valuable timber. At Pennant Hills, for instance, the trees were described as in general of an uncommonly large size, perhaps more so than in any other part of Cumberland, and therefore very advantageously situated so near a rapidly increasing town'.

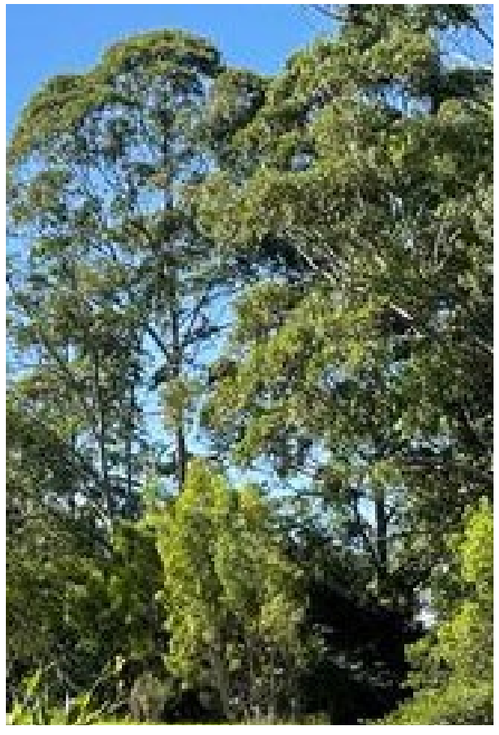
The big trees were cut and the land cleared for farms and orchards, suburbs followed the development of the northern railway and today, no sizeable example of the impressive High Forest is left in Hornsby". The site within the Hills Shire at Castle Hill is within the same locality at Pennant Hills.

LAND AND FORM

Connecting Biodiversity Corridors

One of the key strategies of the proposal is the retention and enhancement of a number of existing corridors of significant native Blue Gum trees on site. These connected areas of endemic vegetation currently provide important environmental & ecological benefits to the Castle Hill region and wider Castle Hill Heritage as well as being important habitats for local flora and fauna (Dural Land Snail, Gang Gang Cockatoo, Powerful Owl, etc) to thrive and prosper.

These corridors also currently act as a natural buffer for the site to adjacent residential areas, an important landscape element the proposal seeks to retain for future development.



LAND AND FORM

LANDSCAPE MASTERPLAN

Design Statement

Public Domain and Streetscapes

A new internal street network has been proposed as part of the development offer to ensure seamless transitions throughout the ground plane and into the adjacent communities.

Access, Egress and Connectivity

The site has been designed to promote precinct wide permeability and connectivity to the surrounding residential areas and Glen Rd. Egress has been provided at the main entry/ exit of the site at Glen Rd, with the inclusion of a emergency route along the Hilltop walk for pedestrians and for fire emergency vehicles.

CPTED, Safety and Visibility

Any raised edges or planter walls are at seating height or lower allowing clear sight-lines and visibility throughout the open space. Trees are used to frame spaces and ensure clear visibility to and from the streetscape at all times.

Regular congregation spaces enables passive surveillance to all areas, discouraging undesired behaviour and possible blind spots. In addition, appropriate and attractive lighting will be implemented to enhance safety and visibility for the community and residents.

Universal Access and DDA Compliance

The ground plane offers full universal accessibility to all areas including within the dedicated public open space with accessible and comfortable grades across an undulating terrain reducing the amount of handrails and clutter in the public realm generally.

Landscape Masterplan

Rogans Hill Park will become a place of enhanced well-being where natural systems are rehabilitated and celebrated, a place where communities connect and where people have access to state of the art open green space, tree lined streetscapes and nature at your doorstep.

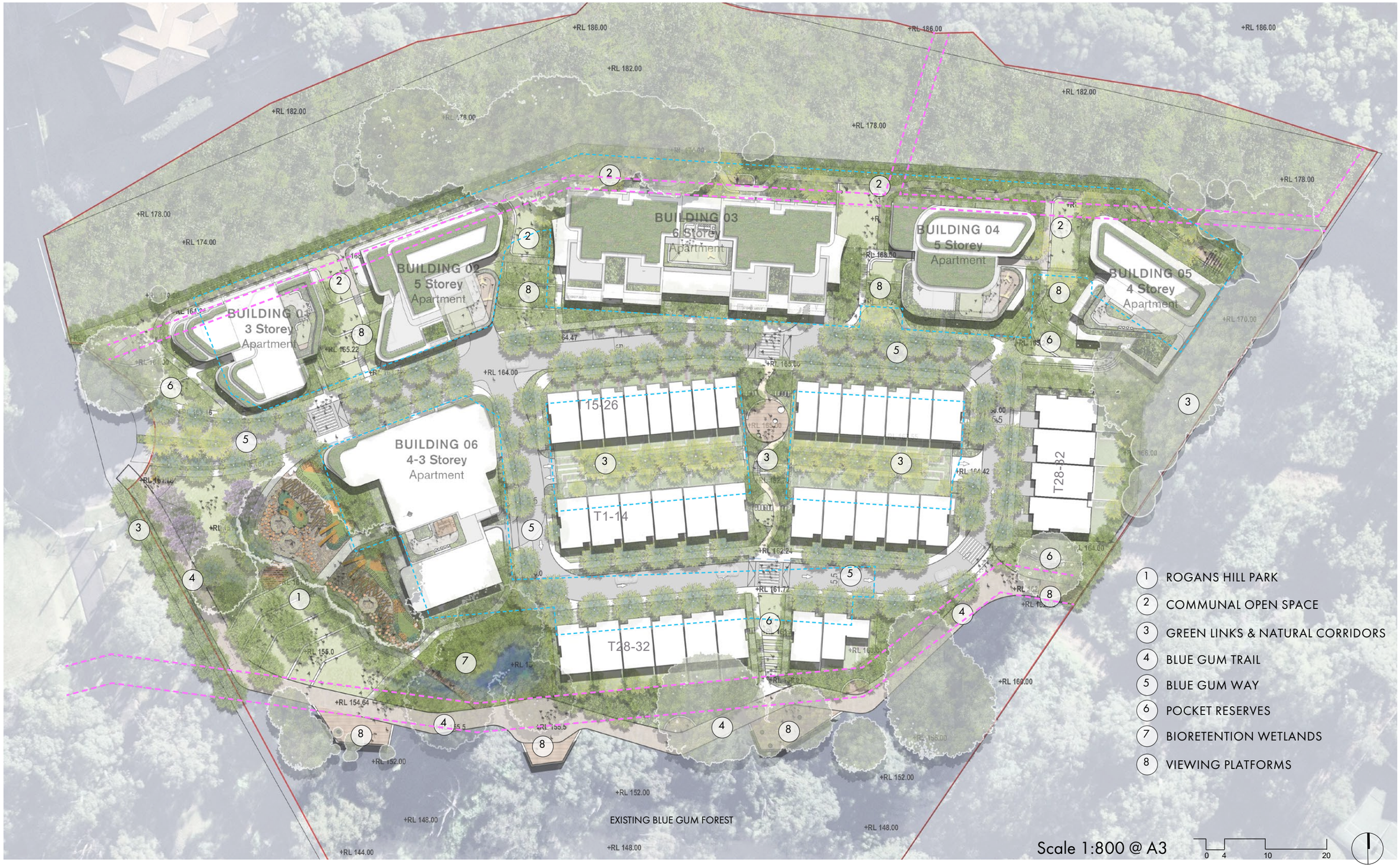
Public Open Space

The public open space is created around stands of existing trees and biodiversity corridors, forming a neighbourhood-scale public open space for both passive and active recreation. The space provides a variety of program, open to air experiences which promote community connectedness with the natural environment. Some of these experiences include nature play, terraced amphitheatres with views over the existing Blue Gum High Forest and areas for social gathering including passive spaces for seating & relaxation.

Streetscapes & Laneways

The proposed street & laneway network promotes positive green infrastructure & WSUD principles such as perforated kerbs, raingardens,permeable paving as well as including significant tree canopy coverage to mitigate urban heat island affect and create a comfortable streetscape experience for residents and visitors.

Landscape Masterplan



LAND AND FORM

Landscape Masterplan - Key Areas

Tree Planting and Canopy Coverage

TOTAL DEVELOPMENT AREA

BLUE GUM RETAINED

EXISTING TREES RETAINED

PROPOSED TREES

45M APZ ZONE - REFER TO BUSH FIRE PROTECTION REPORT

SITE AREA: **45,059M2**

DEVELOPMENT AREA: **21,328M2**

EXISTING TREES RETAINED: **55**
PROPOSED TREES: **418**
TREES REMOVED: **209**

RETAINED CANOPY COVERAGE =**18.9%**
PROPOSED CANOPY COVERAGE =**42.2%**
TOTAL CANOPY COVERAGE = **61.1%**

TREE OFFSET PLANTING = **2:1**

TOTAL DEEP SOIL AREA = **32,475M2 = 72%**
TOTAL LANDSCAPE AREA = **36,123M2 = 80%**

LAND AND FORM

Masterplan Framework

Street Network

The primary loop road anchors the development allowing access to each development block, pedestrian access to each public and communal space and creating an informal loop fitness trail for future residents under generous native tree canopy.

Public Open Space

The site is anchored by a generous 2,000m2 public open space for the local community with an additional 600-800m2 of pocket reserves distributed evenly throughout the precinct.

Pedestrian Network

A highly connected and safe pedestrian network of footpaths and shared paths create universally accessible public domain.

Biodiversity Corridors

A series of connected vegetation corridors surround the site and penetrate through the site (North-South) to connect Blue Gum High Forest communities. This approach also provides a soft buffer to adjacent properties whilst facilitating habitats for local flora and fauna.

WSUD Hydrology & Drainage

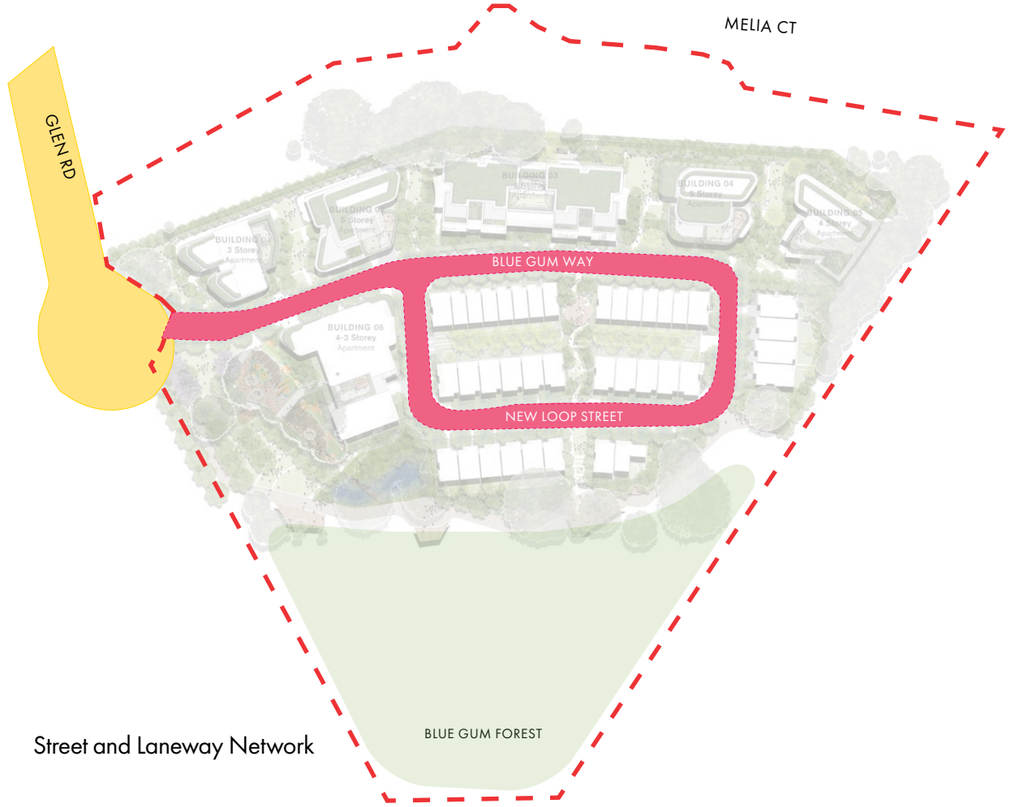
The site falls North to South approximately 15m at the highest point with a low point in the South-West corner of the site where two bioretention wetlands are proposed to slow and filter stormwater run-off and provide new opportunities for habitat for local flora & fauna.

The streetscape contain WSUD infrastructure which will also aid the filtration, treatment and slowing down of stormwater run off before it meets the low point of the site and disperses back into the wider catchment system. Refer to Northrop engineers design report for further information on drainage strategy.

Built Form

The proposal offers a variety of low-rise medium density housing options with sizeable lots and amenities for young families and downsizers in the area.

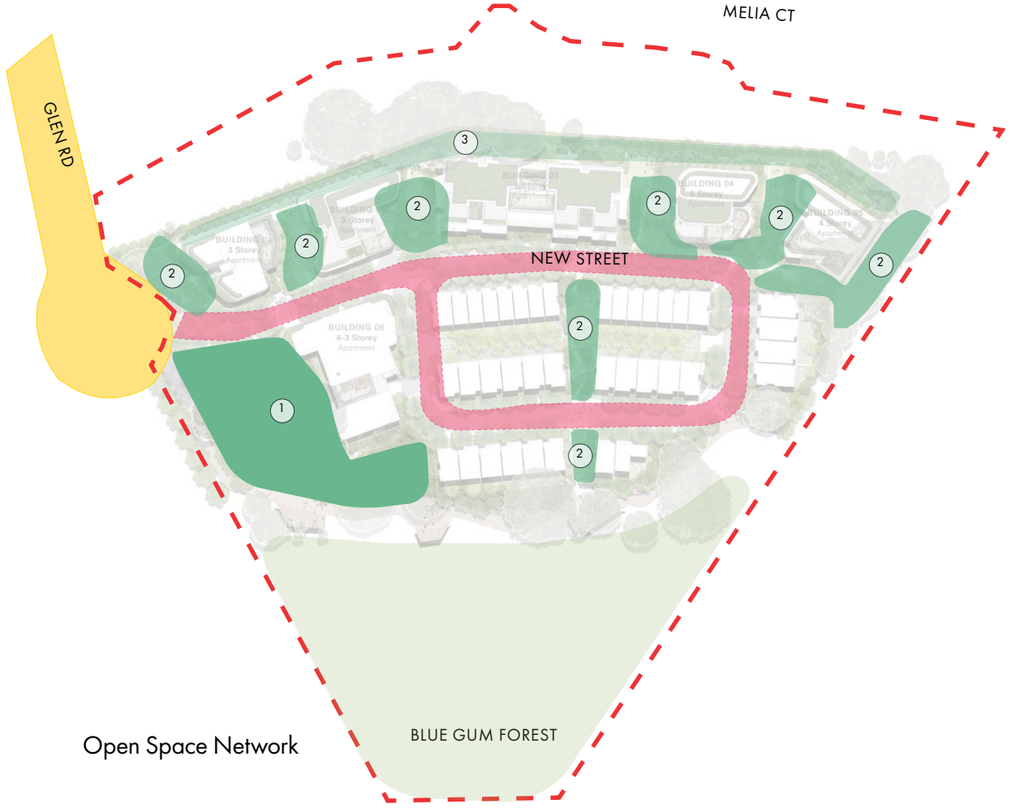
The built-form footprint allows the masterplan to embrace its landscape setting and allow for greenery to be an everyday amenity and feature for future residents to enhance people's connection with the natural environment. Significant high retention value trees have also been prioritised in the design layout of lots and houses. Refer to DKO Architecture design report for further information on built-form and master plan design.



Street and Laneway Network

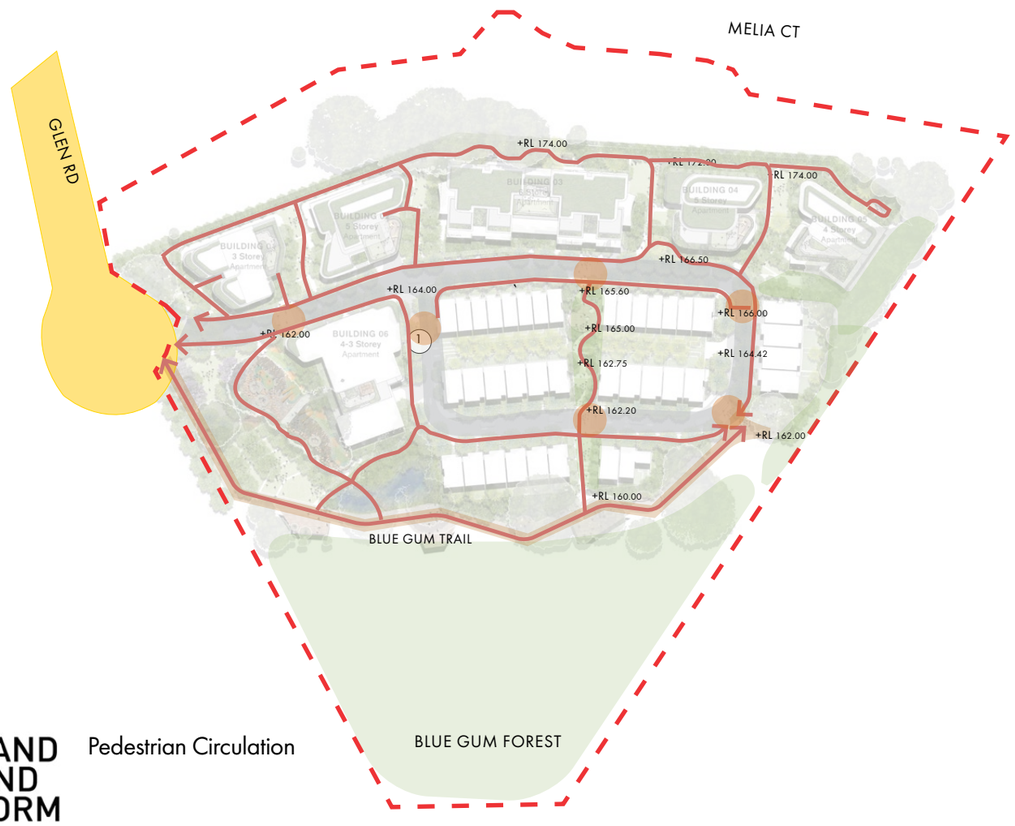
Built Form & Footprint

LAND AND FORM

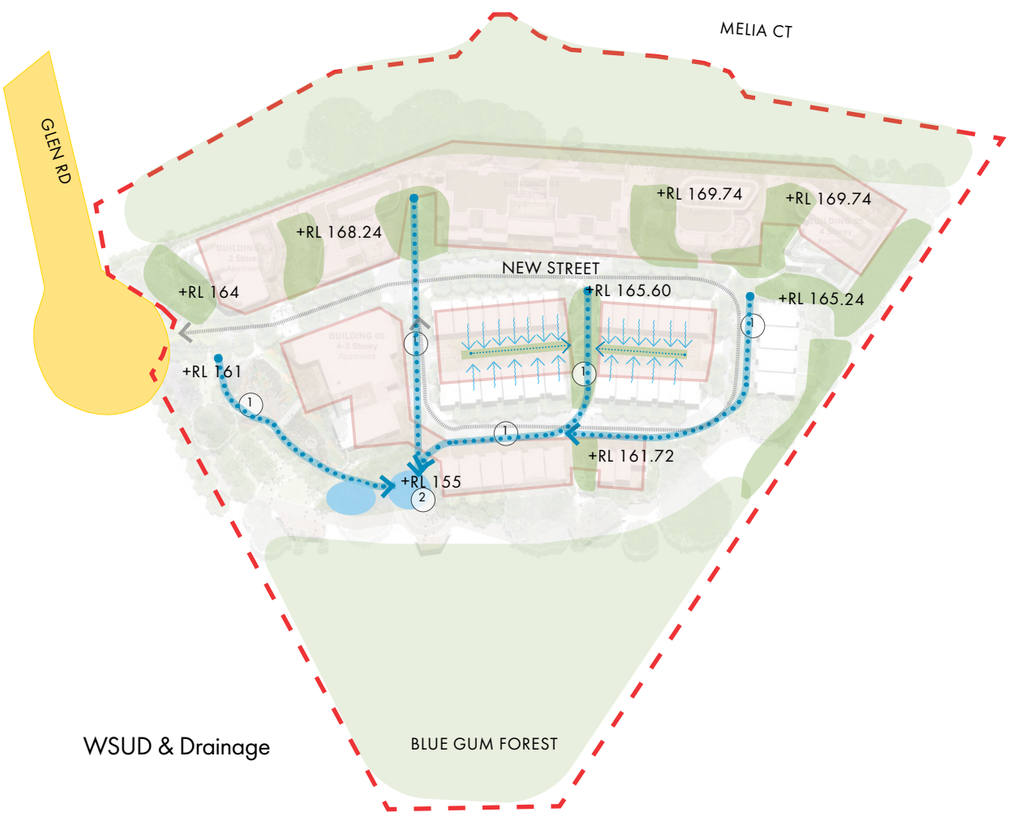


Open Space Network

Green Links & Corridors



Pedestrian Circulation



WSUD & Drainage

KEY AREAS & DESIGN DETAILS

Rogans Hill Park

Rogans Hill Park is the centrepiece of the development. A new 2,000m2 state of the art local park with a feature nature play precinct connecting kids & families to the character of the local area and the iconic Blue Gum High Forest which is endemic to the local area. The natural terrain provides challenges but opportunity to mould the landscape and create a series of terraces & viewing spaces & undulating landscapes as people transition from North to South, from the top of the hill to the bottom.

Central Green Link

The Green spine anchors the centre of the site, provides a biodiversity link between the Blue Gum High Forest and native scrublands to the Northern edge. In addition this space is used as a key WSUD intervention, located over deep soil, the space captures, slows and filters stormwater run-off whilst simultaneously facilitating small open spaces along the route for people to sit and engage with natural systems.

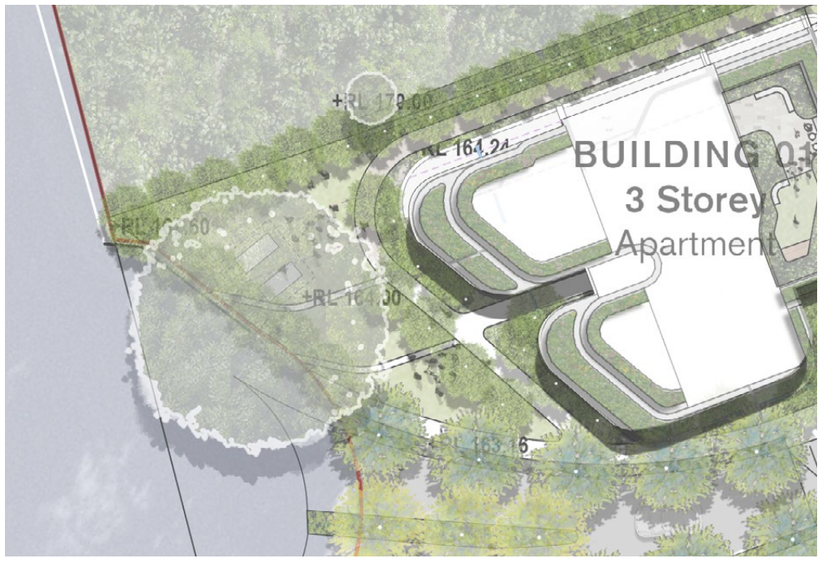
LAND AND FORM

Blue Gum Trail

The Blue Gum Trail is a natural trail which hugs the edge of the escarpment facing the Blue Gum High Forest region to the southern portion of the site. This trail acts as a fitness trail, passive trail and social trail with spaces that feed off the main route for gathering and connection to nature. Feature cantilevered decks allow poeple to engage with the Blue Gum canopy and provides a spectacular outlook and destinational point.

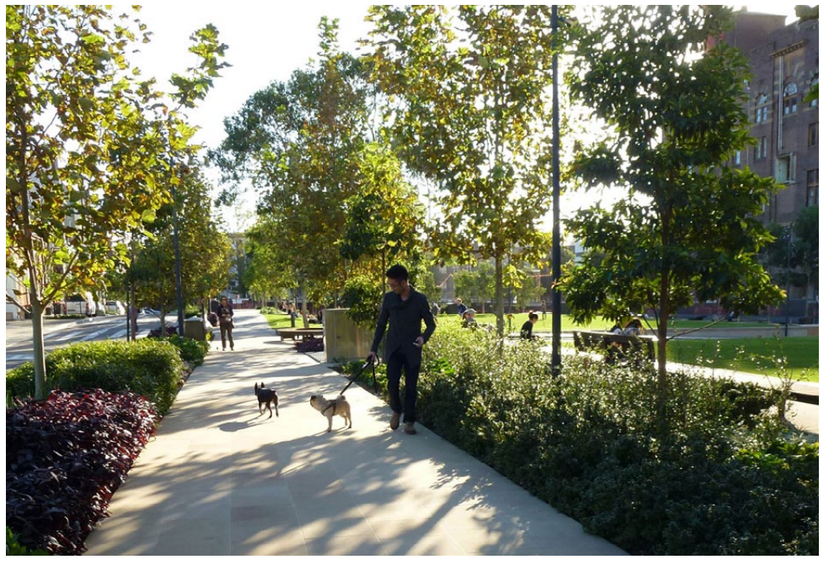
Pocket Reserves

A series of smaller pocket reserves/parks have been provided for public & resident access across the precinct. These spaces are passive in nature with high quality landscape amenity allowing a closer and more intimate connection with the natural context of the precinct.



Blue Gum Way

Blue Gum Way is the central loop road which allows vehicular and service vehicles to access each building and home. The design intent is to make this loop road feel like a highly landscaped street, through the implementation of large native canopy trees, planted verges, perforated kerbs for WSUD initiatives, clear paths of travel and pedestrian crossings at key locations to slow traffic and reinforce pedestrian priority within the precinct

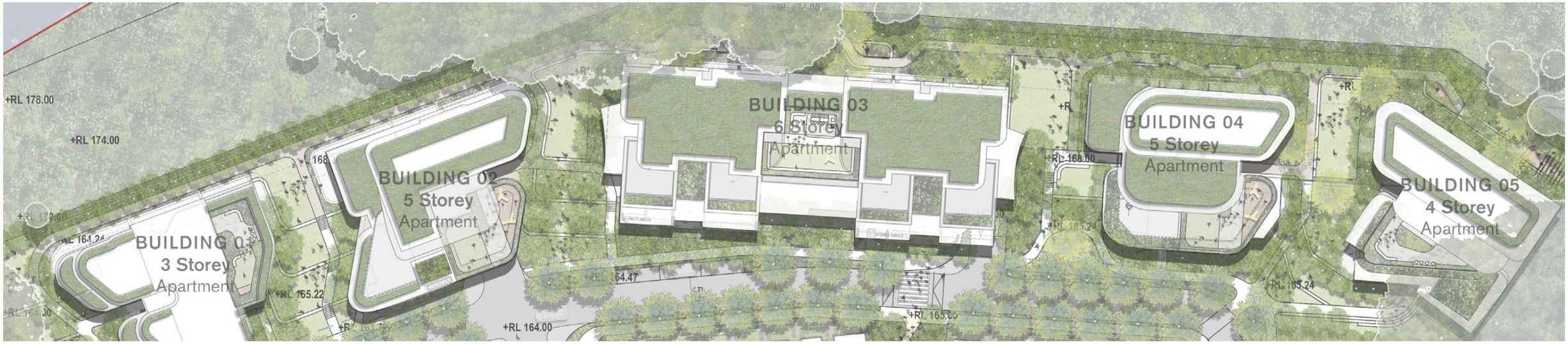


Bioretention Wetlands

The bioretention, constructed wetlands are located on the low point on site collecting, slowing and filtering stormwater run off from the development, streets and Rogans Hill Park with the intention to cleanse the system further down the line within the Excelsior Creek system.

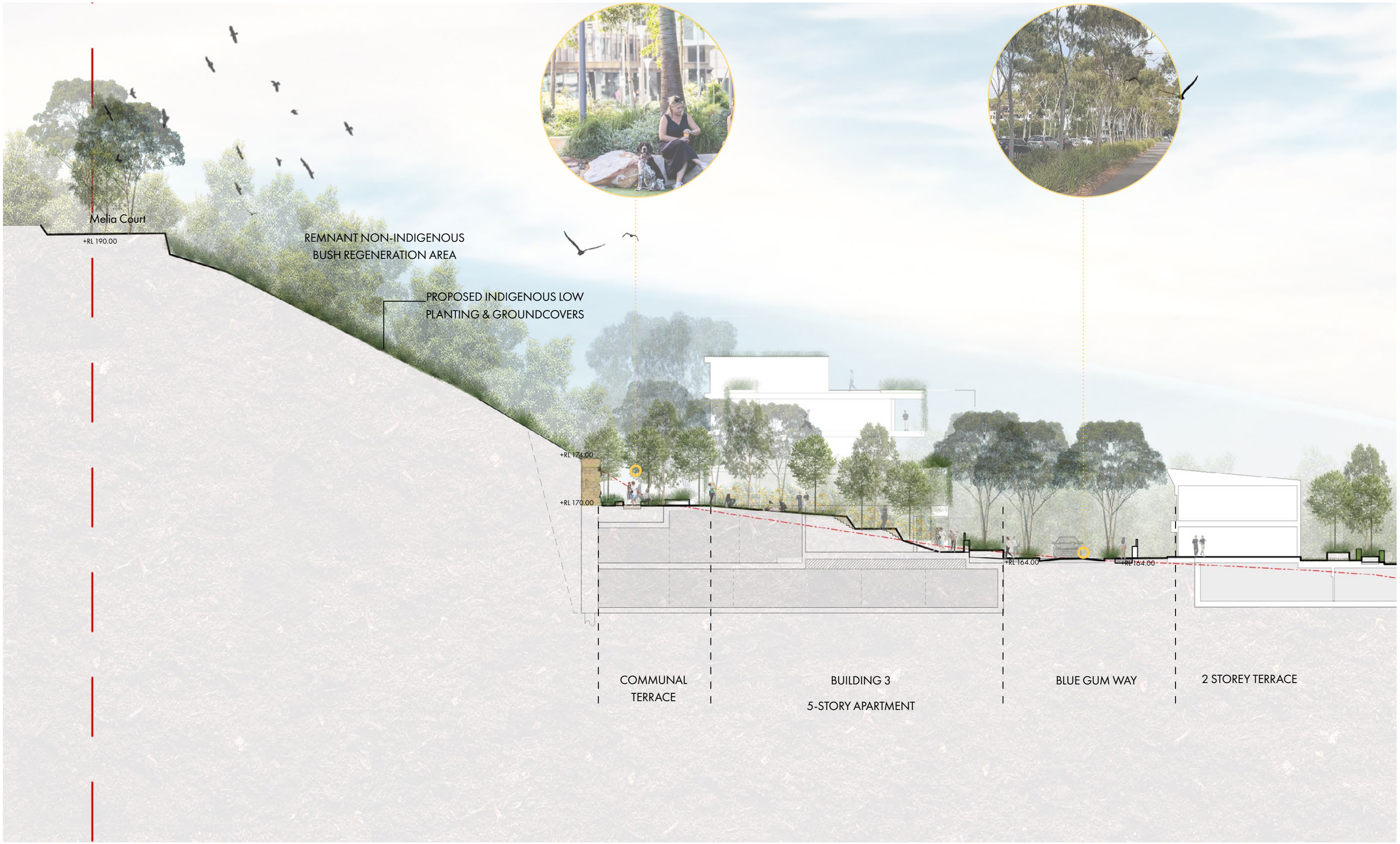
Communal Terraces

The Communal Terraces are a series of connected communal open spaces for future residents of the precinct. The terrace is an undulating landscape flowing from the top of the escarpment down to the new loop road, a series of passive and social spaces/ terraces for gathering has been provided whilst the hilltop walk along the northern boundary is an immersive landscape garden walk.

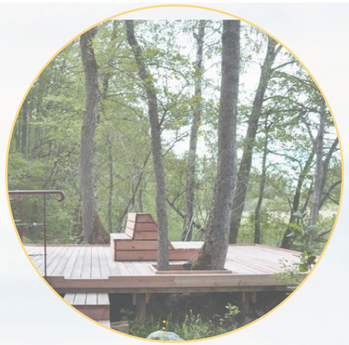


LAND AND FORM

Site Sections



LAND
AND
FORM



2 STOREY TERRACE

BLUE GUM WAY

2 STOREY TERRACE

BLUE GUM TRAIL

VIEWING PLATFORMS

BLUE GUM FOREST

+RL 162.24

+RL 156.91

+RL 156.91

SYDNEY WATER EASEMENT

LAND AND FORM

Detailed Section - Northern COS

LAND AND FORM

Typical Street Section

Detailed Section - Hilltop Broadwalk

LAND AND FORM

Site Sections - Rogan Hill Park

Scale 1:200 @ A3

0 2 4 8M

LAND AND FORM

Planting Palette

The planting is minimum 70% endemic and is reflective of the local remnant Blue Gum high Forest and native to the area with the use of deciduous tree species used along roads and laneways running east-west to allow sunlight into the streetscapes during winter whilst also providing shade during summer. The native palette is a feature element of the design proposal with the intention of creating a natural haven for the local community. The species selection is made up of endemic and important vegetation to the local regions and has been cross referenced with council's native planting list.

Tree selection should be based on the performance matrix below for Main Streets

- Large tree / Australian native/ Evergreen Mature height at least 15-20m/ 12m mature canopy spread and provide a unique character and promote diversity in street scape

The following species are recommended for the central loop street:

- Eucalyptus saligna (Sydney Blue Gum)
- Eucalyptus sideroxylon (Red Ironbark)
- Eucalyptus moluccana (Grey Box)
- Tristaniopsis laurina 'Luscious' (Kanooka Gum)

Tree selection should be based on the performance matrix below for Local Streets.

Tree selection should be based on the performance matrix below for Open spaces and pedestrian corridors.

- Small size tree/ Australian native or exotic /Evergreen or deciduous & Mature height approximately 5-8m

The following species are recommended for Open spaces and pedestrian corridors.

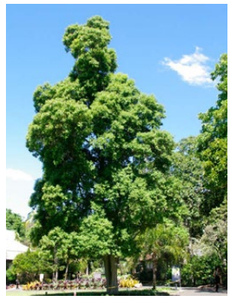
- Elaeocarpus reticulatus (Blueberry Ash)
- Acer Rubrum (Water Maple)
- Quercus palustris (Pin Oak)
- Syncarpia Glomulifera (Turpentine)

TREES


Eucalyptus saligna


Eucalyptus sideroxylon


Lophostemon confertus


Backhousia citriodora


Syncarpia glomulifera


Angophora costata


Elaeocarpus reticulatus


Allocasuarina littoralis


Syncarpia glomulifera


Tristaniopsis laurina


Quercus palustris


Acer rubrum

SHRUBS


Gompholobium grandiflorum


Leucopogon appressus


Cyathea cooperi


Acacia falcata

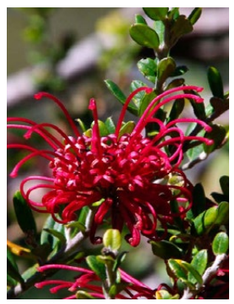

Backhousia myrtifolia


Pittosporum revolutum


Pimelia linifolia


Persoonia linearis


Dillwynia rudis


Grevillea speciosa


Leucopogon esquamatus


Styphelia triflora

GROUNDCOVERS


Helichrysum scorpioides


Hardenbergia violacea


Dichondra repens


Banksia spinulosa

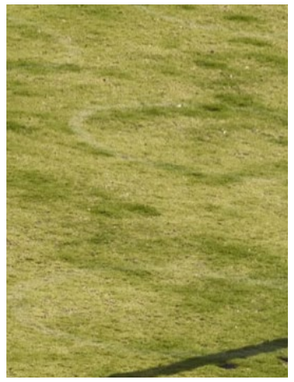

Viola hederacea

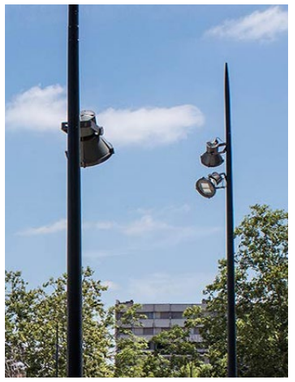

Kennedia rubicunda

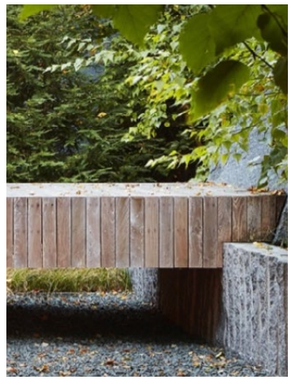
LAND AND FORM

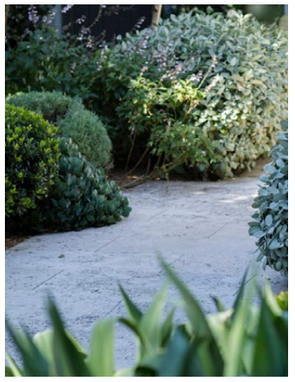
Materials Selection

The materiality complements the natural setting of the site with the use of natural materials such as stone and timber. A high quality set of finishes are proposed throughout the public domain and new park for longevity of use for the local community.
As the proposal goes through the development approval process the team will work closely with Hills Shire Council to ensure the public domain aligns with Council's ambitions, standards and guidelines.

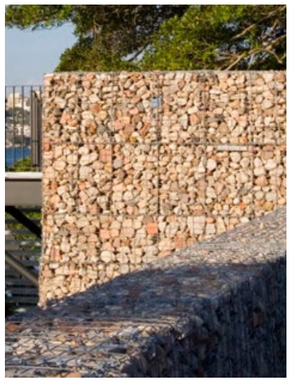



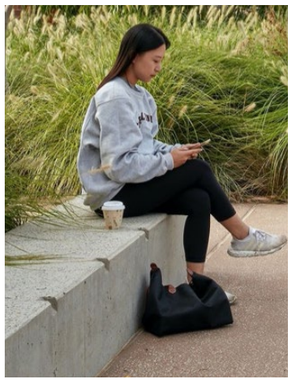








DESIGN
PERFORMANCE

Place Performance

OBJECTIVE 1.

Better fit

contextual, local and of its place

Rogans Hill Park offers a diverse range of program & activation enabling different cultures, age groups & community members to come together contributing to the quality of place in Castle Hill

OBJECTIVE 2.

Better performance

sustainable, adaptable and durable

Rogans Hill Park offers new open spaces for gathering and community engagement allowing plenty of opportunities for access to sun, air & natural light throughout the day

OBJECTIVE 3.

Better for community

inclusive, connected and diverse

All public open space offered in the project is universally accessible creating a walkable and safe environment for the local community to gather and interact with each other

OBJECTIVE 4.

Better for people

safe, comfortable and liveable

All public open spaces are protected by extensive native tree canopy providing a safe, inclusive and comfortable space for people to gather and congregate in open space

OBJECTIVE 5.

Better working

functional, efficient and fit for purpose

All public open space can host new and different community events, temporary activation whilst retaining its character and sense of place at all times

OBJECTIVE 6.

Better value

creating and adding value

Rogans Hill Park offers a high quality and bespoke nature play precinct adding significant value in terms of proximity to natural play for all ages, abilities and peoples.

OBJECTIVE 7.

Better look and feel

engaging, inviting and attractive

Rogans Hill Park is an highly naturalised living quarter which has a strong sense of place and connection to the existing Blue Gum High Forest communities

Design Outcomes

INCREASED TREE CANOPY

The retention of key existing trees and the provision of new public domain spaces will enable the site to increase it's current tree canopy coverage to 61% to further mitigate Urban Heat Island effect and create comfortable spaces around homes and within the public domain.

61%

OF THE SITE IS COVERED BY TREE CANOPY

CREATING 'GREEN' CORRIDORS

The proposal will create a series of green corridors and shared streets to connect existing biodiversity corridors., create comfortable pedestrian environments and contribute to local flora and fauna systems

396

NEW TREES TO BE PLANTED THROUGHOUT THE PRECINCT

IMPROVED PUBLIC DOMAIN

The master plan provides a number of public domain spaces , which enrich both leisure and recreational opportunity across the site.

1100M2

FOOTPATH UPGRADES

A CATALYST FOR HEALTHY LIVING

The project will activate the precinct and become a catalyst for the area with recreational open green spaces, outdoor fitness and well-being spaces for people of all abilities and ages

*Note figures indicative only and are subject to design development.

500M²

GREEN ROOFS & TERRACES

LAND AND FORM

APPENDIX A:
LANDSCAPE DRAWINGS