

26-42 EDEN STREET, ARNCLIFFE

State Significant Development Application

Design Report

Application Number SSD-1429726

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GLOSSARY OF TERMS

Key term	Definition
The site	The lots included in this design proposal at 161-179 Princes Highway & 26-42 Eden Street, Arncliffe.
The proposal	Design for the mixed use and residential development at the Site
Council	Bayside Council
Billbergia	Billbergia Pty Ltd

Abbreviation	Definition
ACHAR	Aboriginal Cultural Heritage Assessment Report
AEO	Authorised Engineering Organisation
ASA	Asset Standards Authority
AHIMS	Aboriginal Heritage Information Management System
APAR	Airports Protection of Airspace Regulations
AS	Australian Standard
ASS	Acid Sulfate Soils
ATP	Australia Technology Park
BC Act	Biodiversity Conservation Act 2016
BCA	Building Code of Australia
BDAR	Biodiversity Assessment Report
CBD	Sydney Central Business District
CMP	Conservation Management Plan
CPTED	Crime Prevention Through Environmental Design
CPTMP	Construction Parking and Traffic Management Plan
DES	Design Excellence Strategy
District Plan	Eastern City District Plan
DCP	Development Control Plan
DPC	NSW Department of Premier and Cabinet
DPIE	NSW Department of Planning, Industry and Environment

Abbreviation	Definition
DP	Deposited Plan
EIS	Environmental Impact Statement
EP A	NSW Environment Protection Authority
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999
ESD	Ecologically Sustainable Development
FSR	Floor space ratio
GANSW	NSW Government Architect's Office
GFA	Gross Floor Area (as defined under the relevant LEP)
HIS	Heritage Impact Statement
Infrastructure Strategy	State Infrastructure Strategy 2018-2038
LaHC	Land and Housing Corporation
LEP	Local Environment Plan
LGA	Local Government Area
LSPS	Local Strategic Planning Statement
m	metre
NIA	Noise Impact Assessment
NSA	Net Sellable Area
OEH	NSW Office of Environment and Heritage
OWMP	Operational Waste Management Plan
Pans-ops	Procedures for Air Navigation Services – Aircraft Operations
PP	Planning proposal
Region Plan	A Metropolis of Three Cities – Greater Sydney Region Plan 2018
RAPs	Registered Aboriginal Parties
RMS	Roads and Maritime Services
RTTC	Radar Terrain Clearance Chart
SEARs	Secretary's Environmental Assessment Requirements
SEPP	State Environmental Planning Policy
SEPP 55	State Environmental Planning Policy No.55 – Remediation of Land
SEPP Infrastructure	State Environmental Planning Policy (Infrastructure) 2007

Abbreviation	Definition
SEPP SRD	State Environmental Planning Policy (State and Regional Development) 2011
sqm	Square Metres
SSD	State Significant Development
SSDA	State Significant Development Application
TfNSW	Transport for New South Wales
The Minister	The Minister for Planning, Industry and Environment
The Regulation	Environmental Planning and Assessment Regulation 2000
Transport Strategy	Future Transport Strategy 2056
VIA	Visual Impact Assessment
WMP	Waste Management Plan

SEARS

This Design Report is submitted to the Department of Planning, Industry and Environment (DPIE) in support of a State Significant Development Application (SSDA-11429726) for the development of land identified at 26-42 Eden Street and 161-179 Princes Highway, Arncliffe (the site) for the purposes of a mixed-use precinct with open space, retail, and residential uses, comprising social and market housing as part of the NSW Land and Housing Corporation (LAHC)'s 'Communities Plus' program.

SSDA-11429726 seeks approval for the following development:

- Demolition of all existing buildings and structures on the site;
- Site preparation works, excavation and tree removal;
- + The construction of a mixed-use development comprising:
 - + 744 apartments across (4) buildings between 17-21 storeys in height (not including upper and lower ground levels), including:
 - + 186 market housing apartments in Building A;
 - + 202 market housing apartments in Building B;
 - + 180 social housing apartments in Building C; and
 - + 176 market housing apartments in Building D;
 - + 3,353m² gross floor area of retail premises;
 - + 3,727m² of communal open space;
 - + 797 spaces of lower ground and basement car parking; and
 - + 4,870m² of public open space including a 4,000m² publicly accessible park, and a 870m² public meeting space and through site link.

In accordance with section 4.39 of the Environmental Planning & Assessment Act 1979 (EP&A Act), the Secretary's Environmental Assessment Requirements (SEARs) for SSDA-11429726 were issued on 18 December, 2020.

This report has been prepared to respond to the following SEARs:

SEARS

2/ Design excellence

	Report reference
The development will achieve design excellence in accordance with the relevant EPI provision and objectives for good design (of the built environment) in Better Placed	Chapter 2: Strategic Context, Chapter 5: Urban Design Strategy
The detailed design has been reviewed by the SDRP, and advice addressed, prior to lodgement	Appendix A: SDRP Summary
Design integrity will be maintained in subsequent stages of the planning process (such as post approval and in any modifications)	Chapters 7 and 8: North and South Precinct

3/ Built Form and design

Explain and illustrate the proposed built form, including a detailed site and context analysis to justify the proposed site planning and design approach	Chapter 3: Analysis, Chapter 5: Urban Design Strategy
Demonstrate how the proposed building (layout, height, bulk, scale, separation, setbacks, interface and articulation) addresses and responds to the context, site characteristics, streetscape and existing and future character of the locality	Chapter 3: Analysis, Chapter 5: Urban Design Strategy, Chapter 7: North Precinct, Chapter 8: South Precinct
Demonstrate how the detailed building design will deliver a high-quality development, including consideration of façade design, articulation, activation, roof design, materials, finishes, colours and integration of services	Chapter 7: North Precinct, Chapter 8: South Precinct
Assess how the development complies with the relevant accessibility requirements	Chapter 6: Public Domain
Include a table identifying the proposed land uses, including a floor by floor breakdown of gross floor area (GFA), total GFA and FSR	Refer to Architectural Drawing set
Identify opportunities for Aboriginal culture and heritage to be incorporated holistically in the design proposal	Chapter 4: Designing with Country and also separate consultant report by WSP

5/ Public domain

Maximises the amount, access to and quality of public spaces (including open space, public facilities and streets/plazas within and surrounding the site)	Chapter 5: Urban Design Strategy , Chapter 6: Public Domain
Reflects relevant design guidelines and advice from Council and the Department	Chapter 2: Strategic Context
Ensures the public space is welcoming, attractive and accessible for all	Chapter 5: Urban Design Strategy, Chapter 6: Public Domain
Maximises permeability and connectivity	Chapter 5: Urban Design Strategy, Chapter 6: Public Domain
Ensures public spaces have excellent amenity, suitable for their intended use, such as adequate facilities, solar access, shade and wind protection	Chapter 5: Urban Design Strategy, Chapter 6: Public Domain
Maximises street activation	Chapter 5: Urban Design Strategy, Chapter 6: Public Domain
Minimises potential vehicle, bicycle and pedestrian conflicts	Chapter 5: Urban Design Strategy, Chapter 6: Public Domain

SEARS	Report reference
6/ Trees and landscaping	
Details the proposed landscaping and planting, including proposals for native vegetation communities and plant species	Chapter 6: Public Domain
Demonstrates how the development proposes to protect and increase the urban tree canopy	Chapter 6: Public Domain
Includes justification for any tree and vegetation removal	Chapter 6: Public Domain
Demonstrates how the development maximises opportunities for green infrastructure, consistent with Greener Places	Chapter 6: Public Domain
7/ Environmental amenity	
Demonstrate how the proposal achieves a high level of environmental amenity within the proposal and on surrounding buildings, assessing impacts associated with view loss, ventilation, pedestrian movement, access to landscape and outdoor spaces, visual privacy, lighting and wind	Chapter 5: Urban Design Strategy, Chapter 6: Public Domain
Provide a solar access analysis of the overshadowing impacts of the development within the site, on surrounding buildings and public spaces (during summer and winter solstice and spring and autumn equinox) at hourly intervals between 9am and 3pm, when compared to the existing situation and a compliant development	Chapter 5: Urban Design Strategy, Chapter 6: Public Domain
Provide an assessment of the development against State Environmental Planning Policy No 65 - Design Quality of Residential Apartment Development and the associated guidelines	Chapter 5: Urban Design Strategy, see also Architectural Drawing set for separation distances and SEPP compliance
8/ Social Housing	
Detail the integration and mix of private and social housing	Chapter 5: Urban Design Strategy, Chapter 8: South Precinct
12/ ESD and climate change	
Identify how ESD principles (as defined in clause 7(4) of Schedule 2 of the Regulation) will be incorporated into the design, construction and ongoing operation of the development	Chapter 7: North Precinct, Chapter 8: South Precinct

EXECUTIVE SUMMARY

This Design Report has been prepared on behalf of Billbergia to support a State Significant Development Application for a mixed-use precinct at 161-179 Princes Highway and 26-42 Eden Street, Arncliffe.

The proposal includes new strata residential, social housing, retail and public space that will address the rising demand for greater housing choice in Sydney's south. It will reflect the cultural context of the Bayside West Precincts and promote an inclusive community.

Document Purpose and Structure

The primary purpose of this document is to accompany a State Significant Development Application for the subject site. The report seeks to demonstrate how the proposal integrates key opportunities and constraints affecting the subject site including:

- the strategic ambitions of state and local planning efforts,
- the broad aims of state design guidelines,
- the site's location in its urban context,
- the physical site characteristics
- Designing with Country and Aboriginal Design Principles established with WSP

The report structure is intended to demonstrate understanding of the site, through both its physical and strategic context. We have a dedicated chapter to Designing with Country in order to articulate how our engagement process has informed the development of the design narrative

The report then steps through the public domain approach, identifying and defining the importance of the public open space and key civic spaces. Following this, a chapter has been dedicated to guide the reader through the design and architectural approach for each precinct.

Overview of the Proposed Development

SSDA-11429726 seeks approval for the following development:

- Demolition of all existing buildings and structures on the site;
- Site preparation works, excavation and tree removal;

The construction of a mixed-use development comprising:

- 744 apartments across (4) buildings between 17-21 storeys in height (not including upper and lower ground levels), including:
 - 186 market housing apartments in Building A;
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 - 180 social housing apartments in Building C; and
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- 797 spaces of lower ground and basement car parking; and
- 4,870m² of public open space including a 4,000m² publicly accessible park, and a 870m² public meeting space and through site link.

In accordance with section 4.39 of the Environmental Planning & Assessment Act 1979 (EP&A Act), the Secretary's Environmental Assessment Requirements (SEARs) for SSDA-11429726 were issued on 18 December, 2020.

View of the North Precinct and meeting place from Eden Street



Designing with Country

The design narrative for the project has evolved alongside our engagement process - to help understand the value of Country and ensuring that better built environment outcomes are informed and guided by Aboriginal knowledge and leadership.

We have had two engagement sessions with Auntie Yvonne Sims (Elder of the Bidjigal people) and two codesign sessions with Peter Cooley from Indigigrow to ensure that our interpretations and embedding of Country into the design hold significant meaning and expression. This has allowed us to prioritise and think differently about Country, to establish a pathway and re check and align with Aboriginal values as a way of connecting throughout the project lifecycle. It has also enabled us to refine our design and ensure the best outcomes for the project and the community it will serve.

Significant design development has been undertaken in the public realm to explore the relationship between Country and play.

Aboriginal peoples' continued connection with Country is a source of valuable wisdom and knowledge that can be used to guide the way we plan and design the places where we live, work, and play.

The material expression of the architectural and landscape elements in the proposed master plan integrates Aboriginal design principles, derived through consultation with WSP's Indigenous Specialist Services.

These design interventions might include entry statements, wayfinding strategies, principal shared paths and/or cultural markers.

The proposed design incorporates gathering places and places to connect.

These meeting places allow discussion and learning, an informal place to allow for quietness and reflection, and to reveal qualities of the built and natural environment.

The proposed landscape design includes the planting of significant portions of Eastern Suburbs Banksia Scrub.

Design Concept

North Precinct

The North Precinct consists of two residential towers atop a seven storey mixed-use podium.

The ground floors contain retail spaces that will activate Eden Street as per the precinct vision outlined in the DCP.

The architecture is characterised by strong civic gestures to the open spaces - a consistent street wall to the new park, 'meeting place', Princes Highway and Eden Street, and generous double-height colonnades at entrances.

A retail kiosk with a distinct sculptural identity punctuates the western edge of the 'Meeting place'.

The architectural language of the North precinct is derived from the Aboriginal Design Principles, developed with Michael Hromek of WSP, and the consultation process with Auntie Yvonne Sims.

The project's form, expression and materiality seeks to connect the site to Country, and pays respect to the traditional significance of ground and sky in Bidjigal lore.

This interpretive framework has provided a conceptual benchmark for developing the design, and has been refined through both the consultation and design excellence processes.

Playspace and public park viewed from South Precinct outside Tower C



South Precinct

The South Precinct consists of two residential towers - one private, the other by LAHC - at the south western edge of the new park.

The architecture is more volumetric than the north precinct - pertaining to the concept of 'two sentinels locked in context'. Whereas the Northern Precinct podium presented a consistent street wall to the new Park and surrounding context, the Southern Precinct offers a more varied approach to form.

The two tower figures are connected at ground level by a row of town houses, that contribute a more domestic scale to the park's edge.

The architectural language of the South precinct is derived from the Aboriginal Design Principles, developed with Michael Hromek of WSP, and the consultation process with Auntie Yvonne Sims.

The project's form, expression and materiality seeks to connect the site to Country, and pays respect to the traditional significance of the eastern suburbs banksia scrubland. The life-cycle of the banksia flower provided immense inspiration for the development of the proposal.

This interpretive framework has provided a conceptual benchmark for developing the design, and has been refined through both the consultation and design excellence processes

The Design Excellence Process

The project has developed in close consultation with Bayside Council and has been reviewed as part of the State Design Review Panel process.

The SDRP contributes to good design by offering practical advice which proponents can action. It provides a structured forum in which critical issues can be raised early in the development process, helping proponents to make well-informed decisions about the design development of proposals. It is highly valued by the Department's Planning and Assessment Group and contributes to the coordination and streamlining of approval processes by providing confidence to the consent authority and other decision makers on the design quality of projects.

This project has undergone three review sessions with the SDRP throughout the design process:

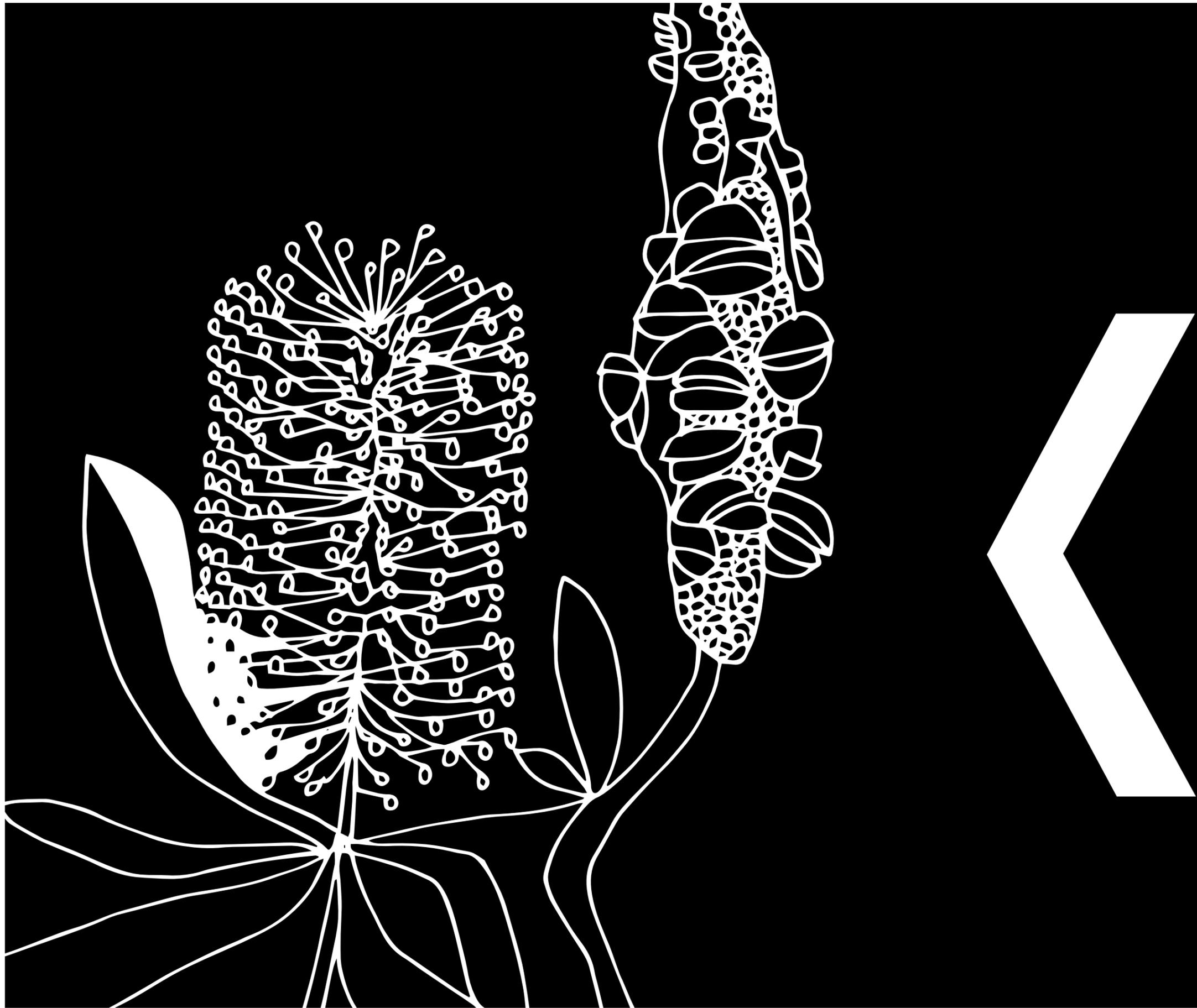
- September 2020: first review – master plan and briefing
- October 2020: second review – design development
- March 2021: third review – design development, materiality.

The details of the design excellence process have been outlined in the appendices to this report.

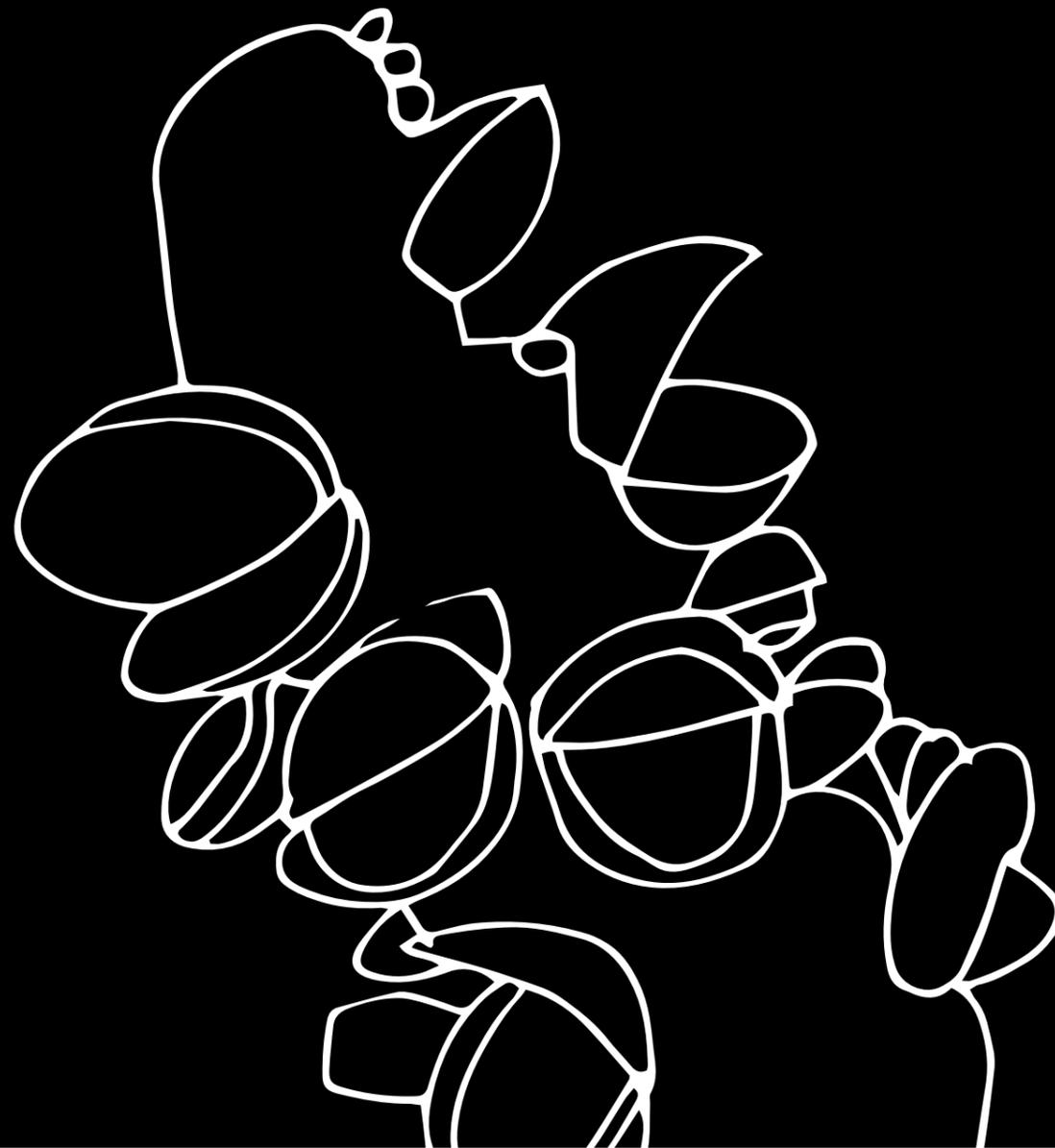
The Meeting Place







1.0 INTRODUCTION



01

1.1 PROJECT BACKGROUND

The site is located in the Bayside West Precinct of Arncliffe, Banksia and Cooks Cove.

Project History

The Department of Planning, Industry and Environment (DPIE) exhibited plans under the Bayside West Strategy 2036 that identified the subject site for rezoning. As part of this, the site was listed as a State Significant Development.

In May 2018, an invitation for Expressions of Interest was released to private sector and not for profit organisations.

In 2018, Billbergia engaged Group GSA to assist with the master plan and architectural concept design for a new development that aspires to revitalise a 1.3 hectare site in close proximity to Arncliffe train station. The proposal will consist of 744 apartments across 4 towers of heights varying from 19 to 22 storeys. The residential component will feature a social housing contribution of 180 apartments that will be returned to the sites existing owners, the Land and Housing Corporation of NSW. In addition to this, the development will include a new community centre, child care facility, full line supermarket with supporting retail and an 'eat street' restaurant and café precinct. Car parking for retail and residents will be serviced through two and a half levels of site wide basement.

In February 2020, Billbergia Pty Ltd and Evolve Housing, a community housing provider, were selected as development partners as a result of the EOI and tender.

Project Objectives

The proposal, which forms part of the State Significant Development Application seeks to achieve the following:

- Provide high quality residential apartments as both social, affordable and strata
- Comply with all relevant planning controls
- Fulfil the aims and objectives of the Rockdale DCP with specific note of Part 7 Special Precincts.

Group GSA's design of the Architecture, Landscape Architecture and Urban Design of the precinct have actively worked towards achieving the following:

- Provide a seamlessly integrated community comprising private, affordable and social housing dwellings. The density and quantum of housing is supported with a new public park for the community, that is accessible via Eden Street and the Princes Highway.
- Provide sustainable outcomes for social housing residents, and sustainable management of housing dwellings.

The Design Excellence Process

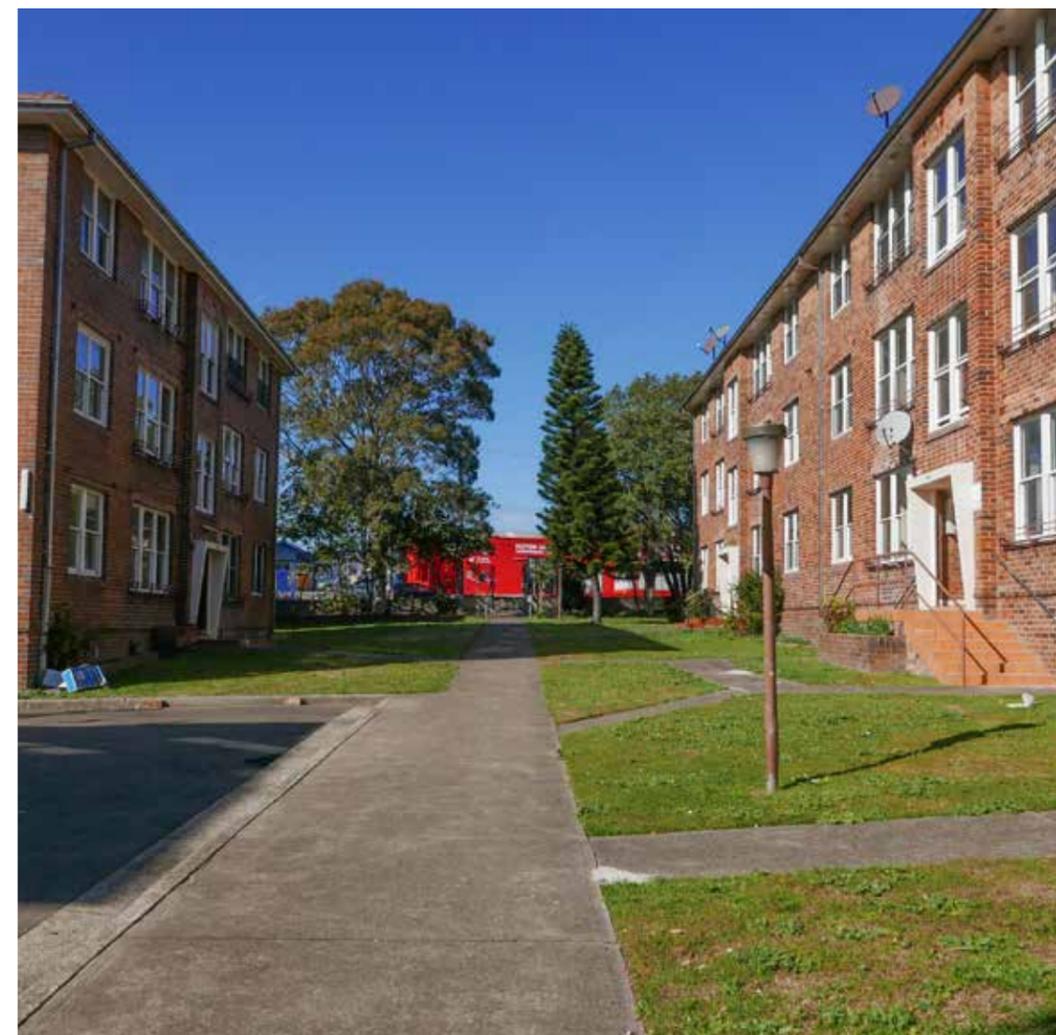
The project has developed in close consultation with Bayside Council and has been reviewed as part of the State Design Review Panel process.

The SDRP contributes to good design by offering practical advice which proponents can action. It provides a structured forum in which critical issues can be raised early in the development process, helping proponents to make well-informed decisions about the design development of proposals. It is highly valued by the Department's Planning and Assessment Group and contributes to the coordination and streamlining of approval processes by providing confidence to the consent authority and other decision makers on the design quality of projects.

This project has undergone three review sessions with the SDRP throughout the design process:

1. September 2020: first review – master plan and briefing
2. October 2020: second review – design development
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The details of the design excellence process have been outlined in the appendices to this report.



Existing site looking east towards Pacific Highway

1.2 THE PROPOSAL

Outlined adjacent are the minimum requirements to be met as part of the LAHC PDA for the project.

Social Housing Unit NSA Entitlement means the greater of NSA Proportion (17.24%) multiplied by the greater of Total Residential GFA OR the Target Social Housing Units NSA (10,544m²).

Actual Social Housing Unit NSA means the NSA of the Social Housing Units to be delivered as set out in the Agreed Development Consent.

a. Indicative Non-social Unit Mix 32% 1 bed, 46% 2 bed, 22% 3 bed

b. NSA proportion 17.24%

c. Social Housing Unit Mix:

1. 5% of social housing units as studio apartments, being 9 social housing units based on target number
2. 56% of social housing units as 1 bedroom units, being 100 social housing units based on the target number
3. 35% of the social housing units as 2 bedroom units, being 63 social housing units based on the target number
4. 4% of the social housing units as 3 bedroom units, being 8 social housing units based on the target number; and
5. Without limiting subclause a to b at least 18 twin key social housing units

d. Social housing units NSA entitlement means the greater of

1. NSA proportion (mentioned above) multiplied by Total Residential GFA; or
2. The Target Social Housing Units NSA

e. Target Non-resi GFA 3,353m²

f. Target Number of social housing units is 180

g. Target Project GFA means 64,513m²

h. Target Social Housing Units NSA 10,544m²

i. 10% of social housing units at the gold level and balance at silver level

Building C PDA requirements

(a) 5% of the Social Housing Units as studio apartments, being 9 Social Housing Units based on the Target Number;

(b) 56% of the Social Housing Units as 1 bedroom units, being 100 Social Housing Units based on the Target Number;

(c) 35% of the Social Housing Units as 2 bedroom units, being 63 Social Housing Units based on the Target Number;

(d) 4% of the Social Housing Units as 3 bedroom units, being 8 Social Housing Units based on the Target Number; and

(e) without limiting (a) to (d) above, at least 18 'Twin Key' Social Housing Units

AND

2) Indicative Non-Social Unit Mix being, with respect to Private Housing Units: (a) 32% x 1 bedroom units;

(b) 46% x 2 bedroom units; and

(c) 22% x 3 bedroom units.

The unit mix for Social Housing Units must not be varied without the prior written consent of LAHC, although the unit mix for Non Social Housing Units may be varied to meet market demands provided that:

a) no changes are made to the GFA allocated for Social Housing Units;

b) Developer's ability to achieve the Minimum Requirements is not adversely affected; and

c) Developer or LAHC's ability to meet Project Objectives is not adversely affected.

1.3 SITE LOCATION

The site is located in the suburb of Arncliffe, 11 km south of the Sydney Central Business District.

It is located within the Bayside Council Local Government Area, south of the Cooks River and Wolli Creek and within close proximity to Sydney Airport.

Arncliffe comprises mostly residential uses with some commercial and light industrial development. The suburb is bisected by the railway line, which opened in 1884.

On the western side of the station is the historic main street, including a heritage post office and isolated pockets of residential flat buildings that have been redeveloped from the 1970s onwards.

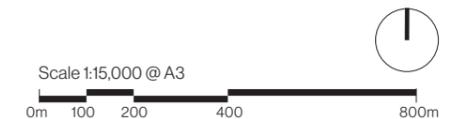
The eastern side of the rail alignment comprises a similar urban development pattern which interfaces with the Princes Highway. The Princes Highway is an arterial road that is also undergoing change, with the redevelopment of many former industrial and commercial buildings into residential flat buildings with ground floor activation onto the highway.

A significant network of public and private open space runs in a north-south orientation between the site and Sydney Airport. This is comprised of several recreation reserves, a golf club and St George Football Stadium.



LEGEND

	Site Boundary		Tunnel
	Motorway		Train line/station
	Highway		
	Main Road		



1.4 THE SITE

The site is located at 161-179 Princes Highway and 26-42 Eden Street, Arncliffe. It is proximal to Arncliffe railway station.

The site incorporates 13 separate lots currently occupied by 142 social housing dwellings in three storey residential buildings.

The western side of the site is located on Eden Street, a quiet tree-lined street with a heritage property directly across the road from the proposed future park. Connecting Eden Street to Arncliffe Station is The Arcade, a direct pedestrian link approximately 100m in length.

The eastern site boundary is located directly on the Princes Highway, which is a regional arterial that is undergoing redevelopment in isolated areas.

The broader site context comprises mixed-use, retail and residential developments within the immediate context. On the western side of Arncliffe Station is the existing town centre, with active ground floor retail, a library and post office.

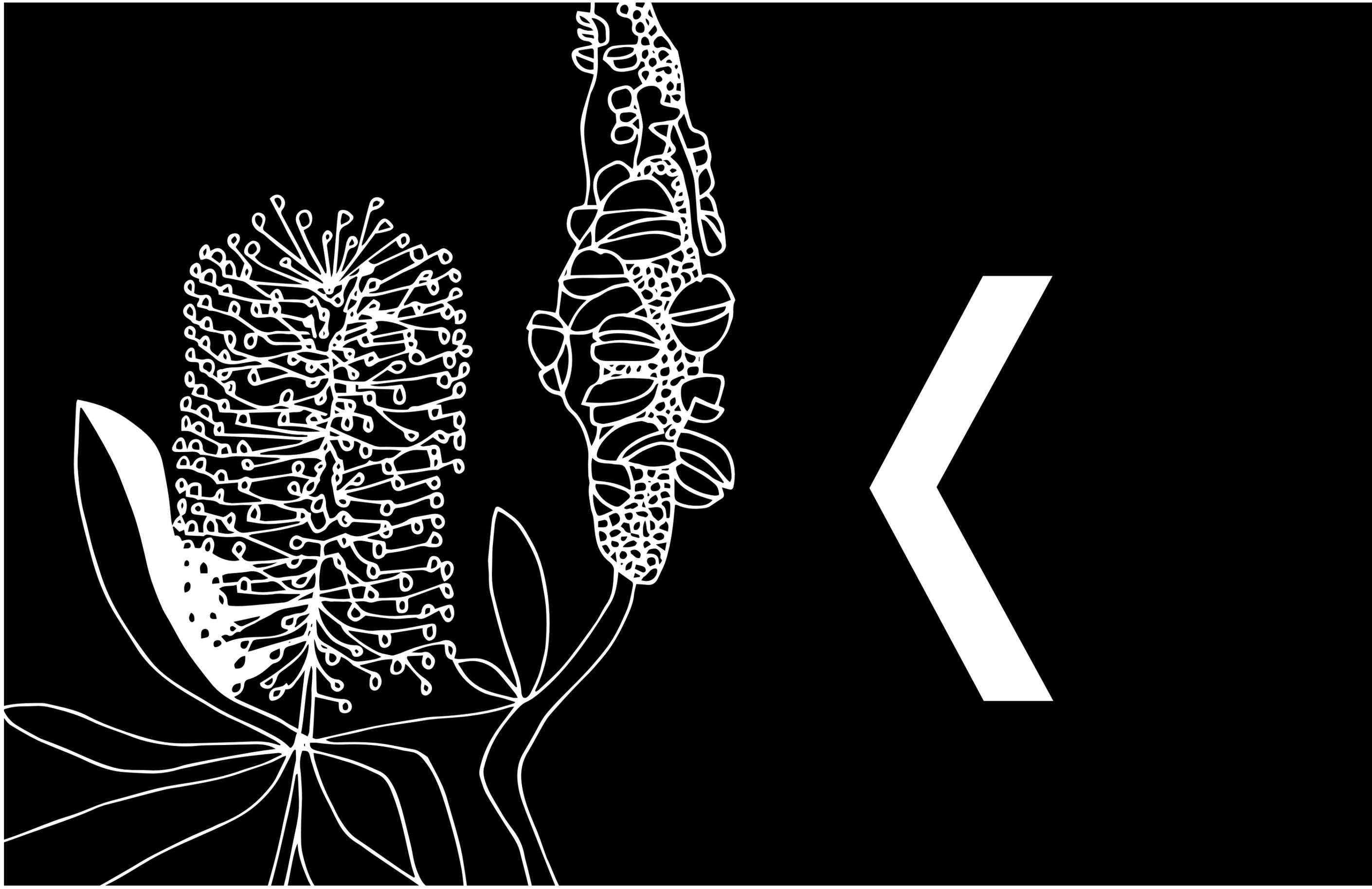
The site is well-connected to public transport, town centre services and community uses.



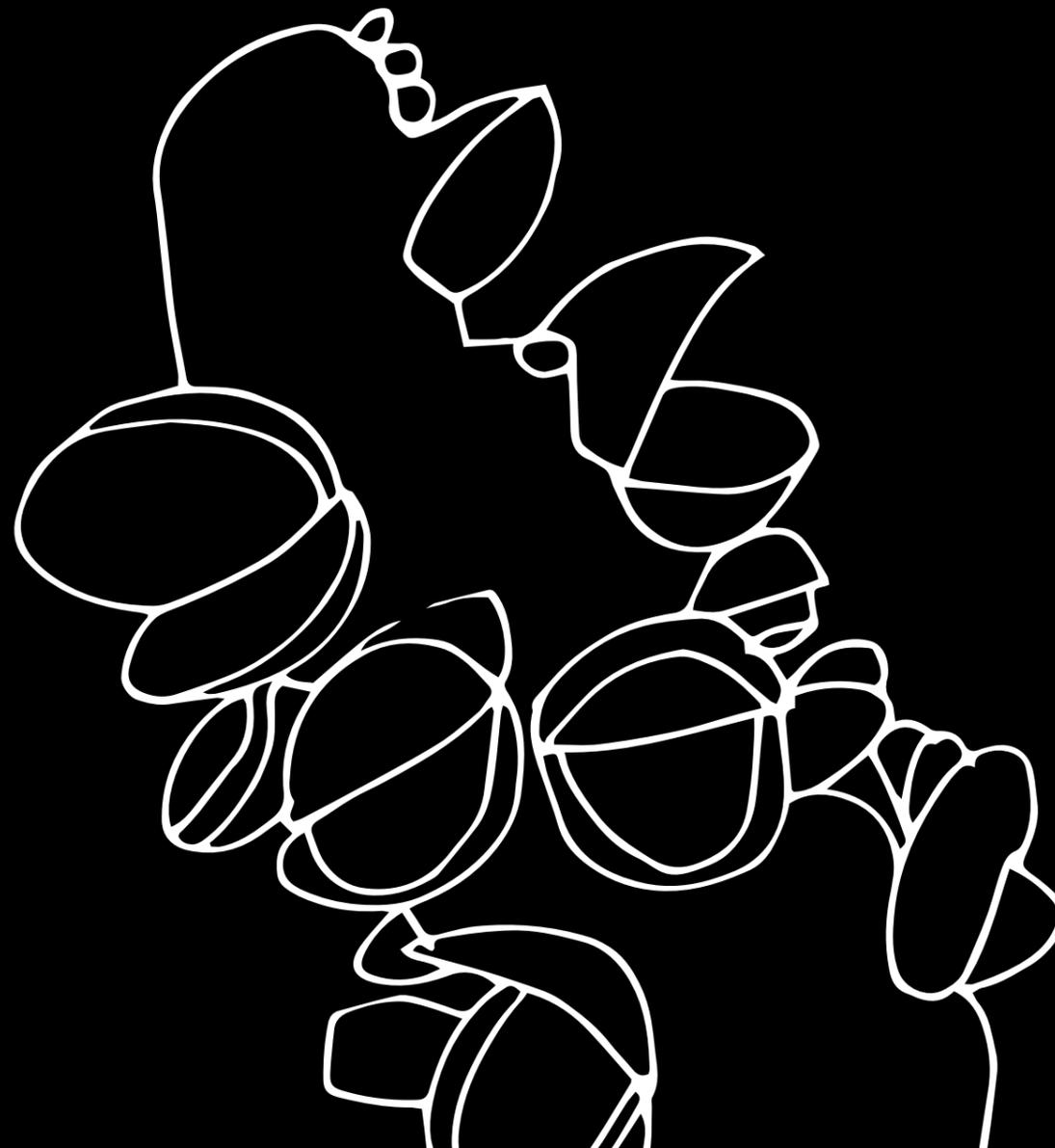
LEGEND

 Site Boundary





2.0 STRATEGIC CONTEXT



02

2.1 METROPOLITAN PLANNING CONTEXT

Eastern City District Plan

The site is located in the Eastern City District in the Bayside Council LGA.

The Eastern City District Plan is a 20-year plan to manage growth in the context of economic, social and environmental matters to achieve the 40-year vision for Greater Sydney. It contains the planning priorities and actions for implementing the Greater Sydney Region Plan, *A Metropolis of Three Cities*, at a district level and is a bridge between regional and local planning.

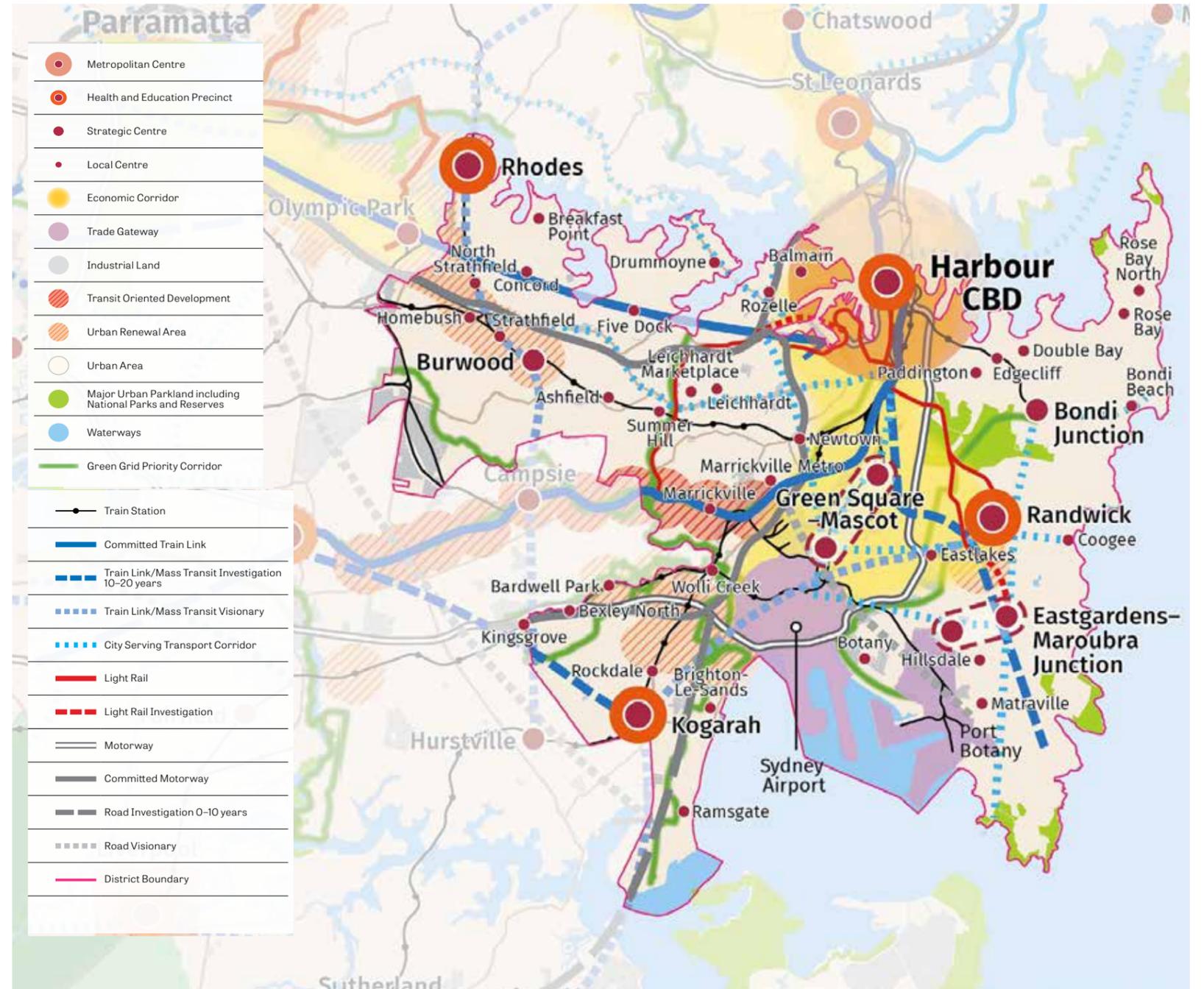
The District Plan informs local strategic planning statements and local environmental plans, the assessment of planning proposals as well as community strategic plans and policies. Community engagement on the District Plan has contributed to a plan for growth that reflects local values and aspirations, in a way that balances regional and local considerations.

The number of single-person households is projected to increase by 61,100 households and comprise 35 per cent of all household types across the District. Couple-only households are expected to experience strong growth, increasing by 31,750 households to 2036. This requires more smaller homes, group homes, homes of universal design and aged care facilities.

By local government area, the greatest proportional increase in single-person households will be in the City of Sydney (from 45 to 48 per cent) and Waverley (34 to 37 per cent). The greatest proportional decrease in households made up of couples with children are expected in Bayside (from 35 to 33 per cent) and Canada Bay (34 to 32 per cent). Of course, while proportions decrease, overall the numbers of these households are still increasing with population growth.

This proposal responds to the following strategic objectives outlined in the Plan;

- Planning Priority E2, Objective 5
Benefits of growth realised by collaboration of governments, community and business.
- Planning Priority E5, Objectives 10 and 11
Providing housing supply, choice and affordability, with access to jobs, services and public transport.



Source: South District Plan, GSC

2.2 METROPOLITAN PLANNING CONTEXT

Bayside West Precincts Plan 2036

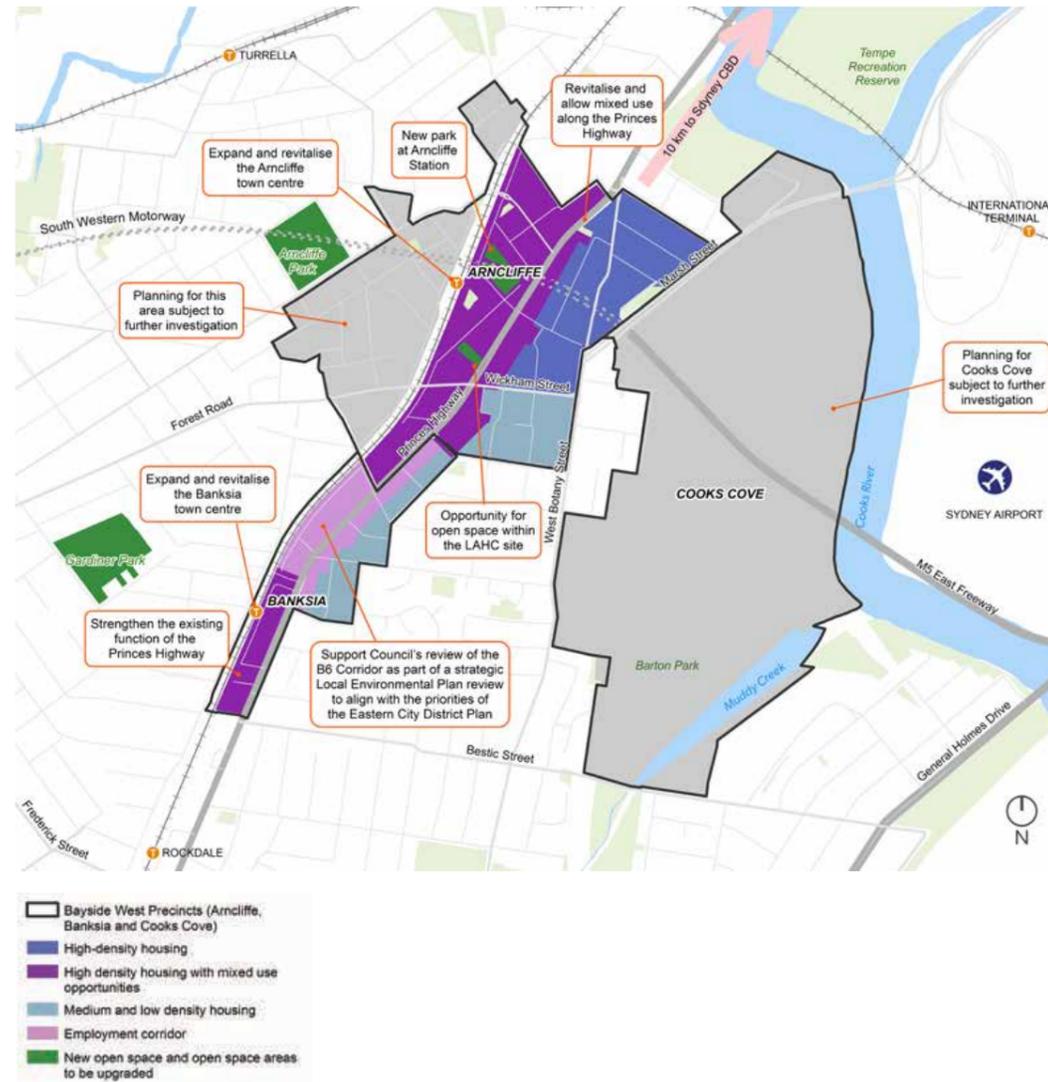
This Bayside West Precincts Plan sets out strategic land use and infrastructure planning to guide the future transformation of the Bayside West Precincts.

The plan lays out a vision for the suburbs of Arncliffe, Banksia and Cooks Cove.

- Create vibrant and connected town centres at Arncliffe and Banksia.
- Improve accessibility for pedestrians, cyclists and vehicles; and connect homes, jobs and local families across the Precincts to make it easier to get around.
- Provide more homes and improve and increase housing choice.
- Revitalise and activate the Princes Highway Corridor and make it a safe place for pedestrians.
- Improve existing and provide new areas of open space.

At the core of this plan is residential uplift centred on the areas around Arncliffe and Banksia train stations - linking housing supply and transit access in order to boost housing choices, expand existing commercial centres, increase the mix of land uses, improve the public domain and increase social infrastructure provisions.

The subject site is located within the high density housing with mixed use opportunities area.



Source: Bayside West Precincts Plan 2036, NSW Department of Planning and Environment

Future Directions in Social Housing

Future Directions for Social Housing in NSW sets out the NSW Government's vision for social housing over the next 10 years.

This strategy will drive better outcomes for tenants including helping those who are able to transition out of social housing.

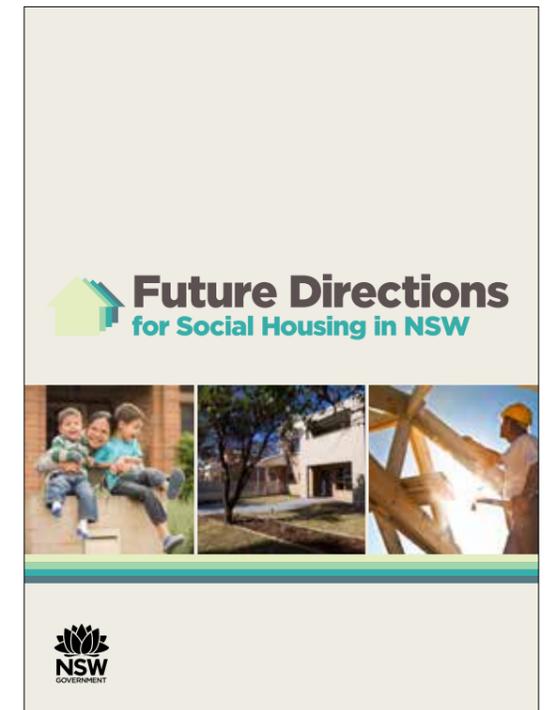
The NSW Government will:

- Transfer management of government owned dwellings so that the community housing sector either owns or manages up to 35% of all social housing in NSW
- Engage the non-government and private sector to deliver up to 23,000 new and replacement social housing dwellings
- Continue to introduce measures that ensure social housing meets the changing needs of tenants, such as better utilisation of social housing
- Implement innovative financing mechanisms.

Over the next 10 years the NSW Government will:

- Deliver redevelopment projects on Land and Housing Corporation sites throughout NSW through Communities Plus
- Align redevelopment projects with UrbanGrowth priority renewal areas
- Work with planning agencies and authorities to ensure appropriate rezoning is possible
- Ensure large redevelopments target a 70:30 ratio of private to social housing.

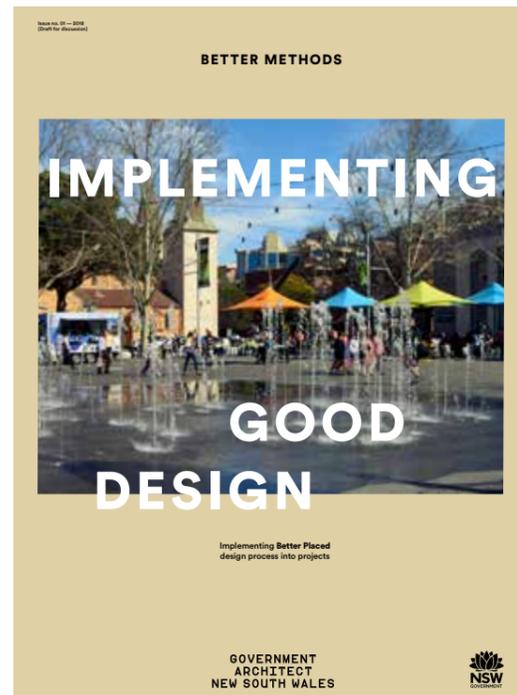
Arncliffe Estate has been identified as a major site in the Communities Plus portfolio and responds to all of the above initiatives for provision and renewal of social housing on the subject site.



2.3 NSW DESIGN GUIDELINES

The site is subject to a number of state policies and guidelines that have informed the master plan.

We have distilled the key information that has informed our master plan structure throughout the design process.

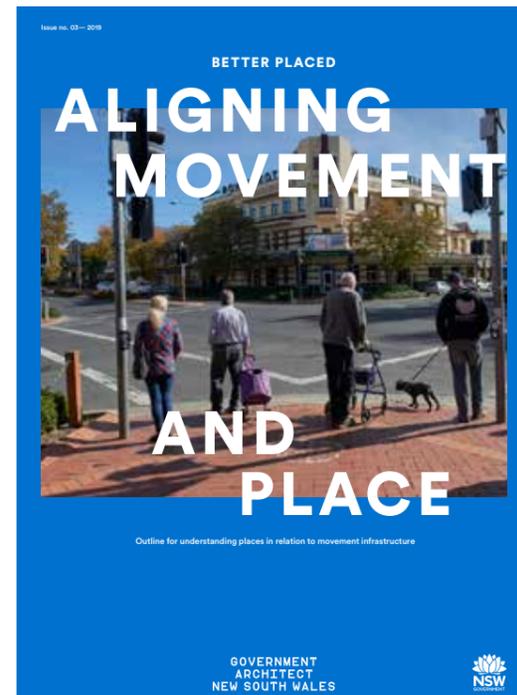


Implementing Good Design

Good design depends on good process. This document presents a process that will help to design, develop and deliver both large and small projects.

It is not intended as an instruction manual – good design is a complex, iterative process that demands a high level of skill, training and experience. Rather, this is a series of prompts to help you gain maximum value from the design process, support and advocate for good design, and make well-informed design decisions about your project.

This document is for everyone involved with the design of the built environment in NSW.



Aligning Movement and Place

Sets out a better approach to aligning movement and place in the design, planning, construction and operation of NSW's overall transport network.

The framework will build on a body of interstate and international work. It will ensure the network delivers effective and efficient movement while delivering the maximum social and economic benefits for the people of NSW through the consideration of better places.

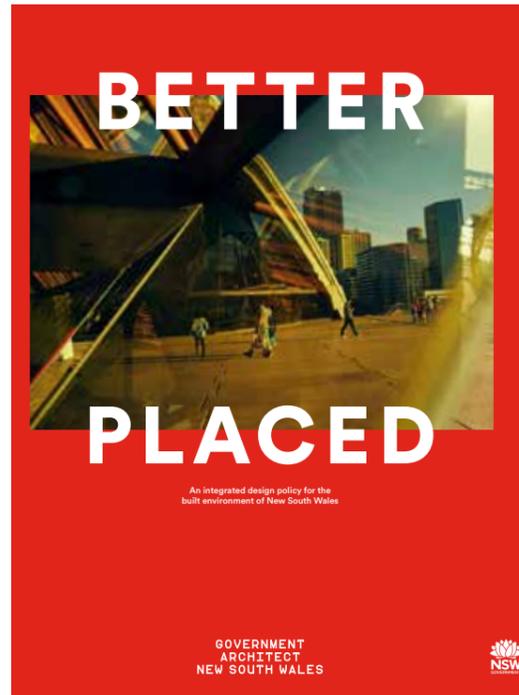


Everyone Can Play

A guideline for designing inclusive playspaces that invite people of all ages, abilities and cultures to come together.

Inclusive playspaces are easy to access, easy to move around, provide a range of play options and challenges, and have appropriate facilities in a comfortable environment. Inclusive playspaces encourage everyone to stay as long as they choose.

2.4 BETTER PLACED



Better Placed is an integrated design policy for the built environment of NSW.

It captures the collective aspiration and expectations for the places where we work, live and play. It creates a clear approach to ensure good design that will deliver the architecture, public places and environments we want to inhabit now and those we make for the future.



OBJECTIVE 1

Better Fit

contextual, local and of its place

- The proposed scheme aims to 'return to landscape' so as to maintain a connection to the local natural context through the site structure and communal open space
- The master plan response enhances the Eden Street condition and aligns with Council's future vision for Arncliffe
- The site is unlocked via a through site link that connects the Princes Highway to Arncliffe Station via the subject site

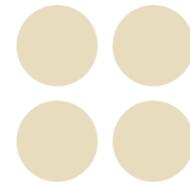


OBJECTIVE 2

Better Performance

sustainable, adaptable and durable

- The proposed design is configured to achieve a high level of amenity for each apartment. Due consideration has been given to solar access, indoor and outdoor spaces, visual and acoustic privacy, efficient apartment layouts and outlook
- The design maximises solar access to apartments through considered massing and orientation. It complies with ADG requirements for open space and apartment design



OBJECTIVE 3

Better Community

inclusive, connected and diverse

- The master plan proposes three key civic places that are connected via key pedestrian desire lines. Each place responds to its location on the site and program.
- Equitable paths of travel are proposed across the site, which unlocks Arncliffe from the Princes Highway to the Train Station

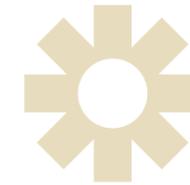


OBJECTIVE 4

Better For People

safe, comfortable and liveable

- The design of the safety and security features across the development have been carefully considered through physical and passive surveillance, accessibility and the design of the park.
- Landscaped setbacks and through site links, and street interfaces have all been designed to activate the precinct and provide pedestrian friendly connections



OBJECTIVE 5

Better For Working

functional, efficient and fit for purpose

- Optimal building locations to maximise solar access satisfies the developments function as a mixed use residential precinct
- Open spaces are fit for purpose, each with a clear intent, appropriate location and scale relative to use

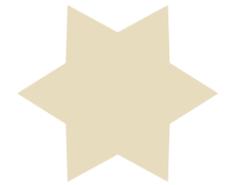


OBJECTIVE 6

Better Value

creative and adding value

- The proposal offers new amenities for the existing and future community through the introduction of a new public park, through site link and a mix of uses
- The proposed retail floor space in the podiums will generate economic and social benefits for the Arncliffe Community and extend the town centre to Eden Street to align with Council's future vision of the area.



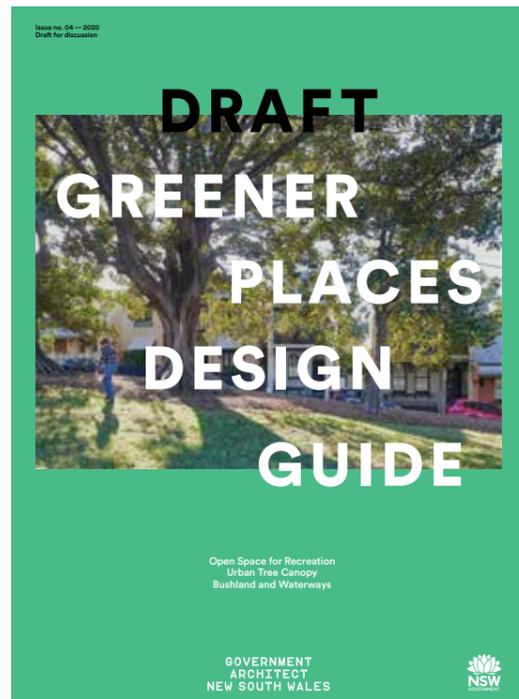
OBJECTIVE 7

Better Look And Feel

engaging, inviting and attractive

- All external material have been selected for their appropriateness to their immediate context, and conceptual design narrative derived with our Indigenous consultant.
- The proposal provides new high quality dwellings that respond to the site, context and character of Arncliffe

2.5 GREENER PLACES



Greener Places provides information on how to design, plan, and implement green infrastructure in urban areas throughout NSW.

The draft guide provides a consistent methodology to help State and local government, and industry create a network of green infrastructure.

Greener Places explains green infrastructure, why we need it, and the benefits of providing it.

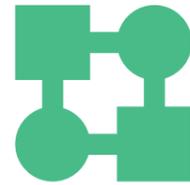


PRINCIPLE 1

Integration

combine green infrastructure with urban development and grey infrastructure

- Integration of vehicular and pedestrian networks for public accessibility with carefully defined private communal open space areas
- Promotes the use of alternative transport
- Promotes health and wellbeing of residents
- The landscape buffer areas within the setbacks will blur the line between the development and open space network
- Enhance passive environmental principles



PRINCIPLE 2

Connectivity

create an interconnected network of open space

- The native landscape of the development expands the green infrastructure by linking the landscape and native vegetation through the site from the adjoining open space network
- The network is connected to enhance the role of the site in the community by the through site link providing additional access to Eden Street and Arncliffe Station.

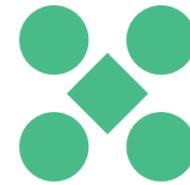


PRINCIPLE 3

Multifunctionality

deliver multiple ecosystem services simultaneously

- Promotes connectivity within the neighbourhood with the through the link
- The podium and rooftops will reduce the impacts of urban heat island effect and increase canopy cover
- The native landscape will offer enhanced ecological value from the site



PRINCIPLE 4

Participation

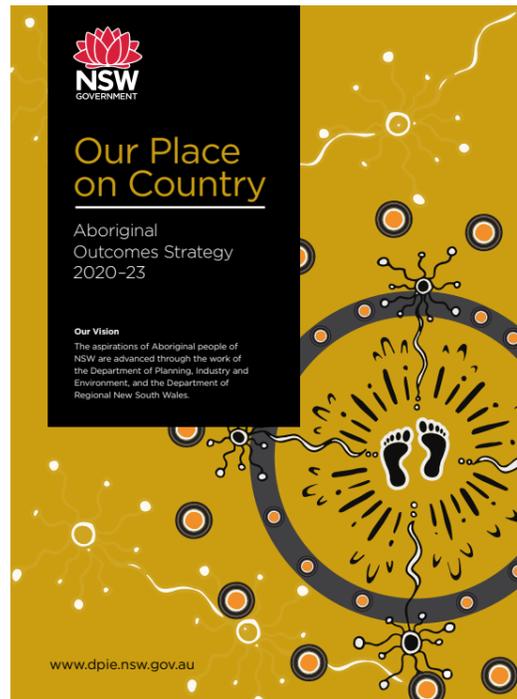
involve stakeholders in development and implementation

- The process to date has incorporated an extensive review and feedback process with WSP, Auntie Yvonne Sims and Peter Coolie.
- The future process will continue to engage with Council and stakeholder

2.6 NSW DESIGN GUIDELINES

Key to the design process for this project is the integration of Aboriginal Design Principles and Knowledge to develop the design narrative.

The engagement process outlined in the Connecting with Country framework has been used, with more detail on this process provided in Chapter 4.



Our Place on Country: Aboriginal Outcomes Strategy 2020-23

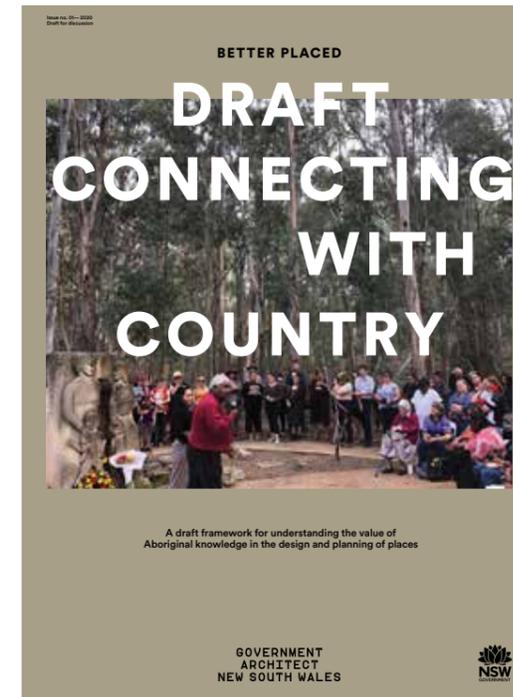
In 2020, Department of Planning, Industry and Environment and the Department of Regional New South Wales released Our Place on Country: Aboriginal Outcomes Strategy 2020-23.

The purpose of the Strategy is to outline methods in which to embed Aboriginal cultural knowledge within the two departments, working together to advocate for and celebrate the living history of Aboriginal communities that have existed within our state for thousands of generations.

The Strategy is described as a “a roadmap to empower Aboriginal voices within decision-making; to give Aboriginal people greater choice, access and control over land, water, housing and resources within the state; to drive success in Aboriginal organisations and businesses; and to create better outcomes for every Aboriginal person in NSW.”

Our Place on Country principles

- Acknowledge, value and embed Aboriginal cultural knowledge and world views in program delivery and business as usual
- Respect Aboriginal people’s rights, obligations and roles as Traditional Custodians of the land, sea and waterways
- Promote and strengthen connections to culture and identity
- Prioritise economic independence for Aboriginal people through increased employment and enterprise development
- Establish and maintain meaningful ongoing relationships with Aboriginal people and Country
- Recognise appropriate engagement and connection with Aboriginal people and Country as core to our service delivery.



Draft Connecting with Country framework

In 2020, Government Architect NSW issued the Draft Connecting With Country framework.

The purpose of the draft framework is to help project development teams; advocating ways they can respond to changes and new directions in planning policy relating to Aboriginal culture and heritage, as well as place-led design approaches. It also aims to help project teams gain a better understanding of, and to better support, a strong and vibrant Aboriginal culture in our built environment.

Connecting with Country Draft Framework is a set of pathways, commitments, and principles for action intended to help form, design, and deliver government infrastructure including building projects such as roads, transport, and major public facilities.

The draft framework has been informed by engagement through interviews and workshop discussions with selected stakeholders including an Advisory Panel of Traditional Custodians, representatives from community organisations, and government. This document has been written by and with Aboriginal experts in spatial design in collaboration with Government Architect NSW (GANSW) staff.

2.7 BAYSIDE COUNCIL STRATEGIES

Local Strategic Planning Statement

The Bayside Local Strategic Planning Statement will help shape the future of land use in Bayside.

It aligns both existing and planned future infrastructure to support the growth of Bayside and will be important in supporting a more sustainable city, better connecting people with the places they live, work and play, while also preserving our natural areas, landscapes and waterways.

The Bayside Local Strategic Planning Statement's Planning Priorities and Actions provide a road map for the future land use planning of Bayside to 2036. This means that planning for growth in Bayside will be staged to coincide with existing and planned future public transport. Our current population of around 162,900 is culturally diverse with 46% of residents born overseas. Our population is expected to reach 228,200 by 2036.

New homes will be required to house our growing community and it is important to ensure this growth happens in the right places and is serviced by high quality amenities, facilities, services and open space.

Bayside is also home to Sydney Airport and Port Botany. The role these important gateways play in Sydney's economy is expected to grow over the next 20 years, providing jobs and increasing productivity

The LSPS identifies Arncliffe as a priority over the next 5 and 10 years.

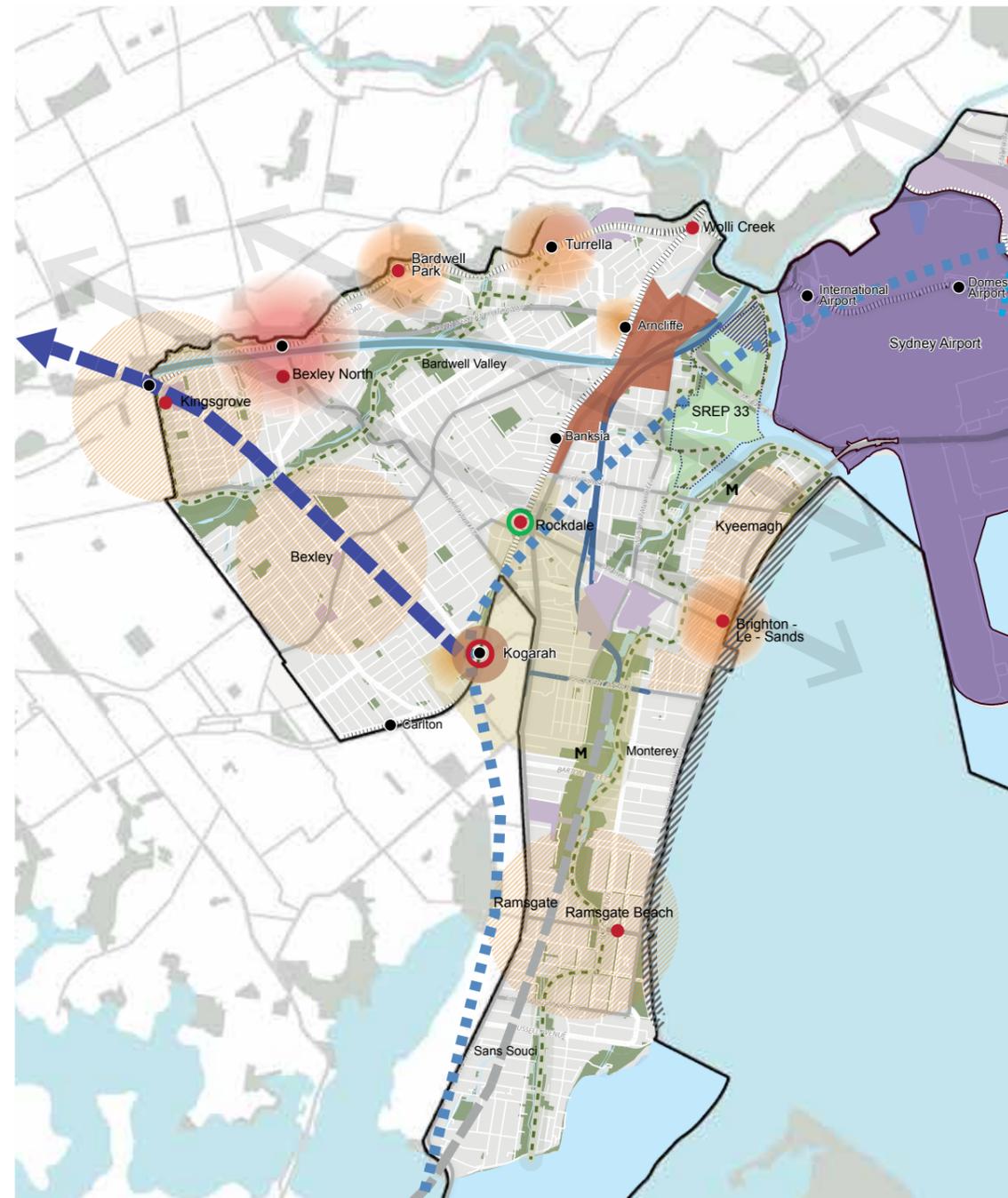
The land use structure plan highlights Arncliffe as an identified area for Urban Growth over the next 20 years.

Bayside Housing Strategy

The Bayside Local Housing Strategy (the Strategy) sets the strategic framework and vision for housing in the Bayside Local Government Area (LGA). It draws on existing policy and demographic trends alongside analysis of local opportunities and constraints to formulate an action plan for residential growth.

The Strategy plans for housing until 2036 and includes a series of priorities needed to make housing more affordable, diverse and matched to the changing needs of the local community. The Strategy directs the majority of growth to activity centres near fixed rail transport with minimal growth directed to low-scale, less accessible residential neighbourhoods.

In the Strategy, Arncliffe has been identified as one of the most appropriate centres in the Bayside Local Government Area for additional housing intensification.



Structure Plan

- Urban Growth**
 - Planned/ Planning Commenced
 - Planned Investigation (1-5 years)
 - Future Investigation (6-10 years)
 - Future Investigation (10+ years) (Subject to Mass Transit)
 - Kogarah Collaboration Area
- Employment Land**
 - Trade Gateway - Airport & Port
 - Industrial Land
- SREP/SEPP**
 - State Environmental Planning Policy (Three Ports) 2013
 - Sydney Regional Environmental Plan No. 33 - Cooks Cove (SREP 33)
 - SREP 33 - Open Space
 - SREP 33 - Trade and Technology
- Open Space and Green Grid Corridors**
 - Open Space
 - Market Gradens
 - Major Foreshore Destination
 - Major Green Grid Corridor
- Major Centres (GSC)**
 - Health and Education Precinct
 - Strategic Centre
 - Local Centre
 - Proposed Strategic Centre (Bayside Council)
- Existing & Planned Connections**
 - Existing Rail Network
 - Major Roads
 - Westconnex
 - M6 Stage 1
 - City and South East Light Rail
- Potential Future Connections (indicative)**
 - M6 Stage 2
 - Train Link/ Mass Transit Visionary
 - South East suburbs to CBD Mass Transit Visionary
 - Kogarah to Parramatta Mass Transit Investigation
 - City Serving Transport Corridor
- Heritage Conservation Areas**
 - Conservation area
- Desired Future Connection (Bayside Council)**
 - East West Transport Links

NOTE: Committed projects of M6 - WestConnex to President Avenue Kogarah is subject to final business case, no investment decision yet. Routes & stops for some transport corridors/projects are indicative only.

Source: Future Bayside Local Strategic Planning Statement, Bayside Council

2.8 LOCAL ENVIRONMENT PLAN

Rockdale Local Environmental Plan 2011

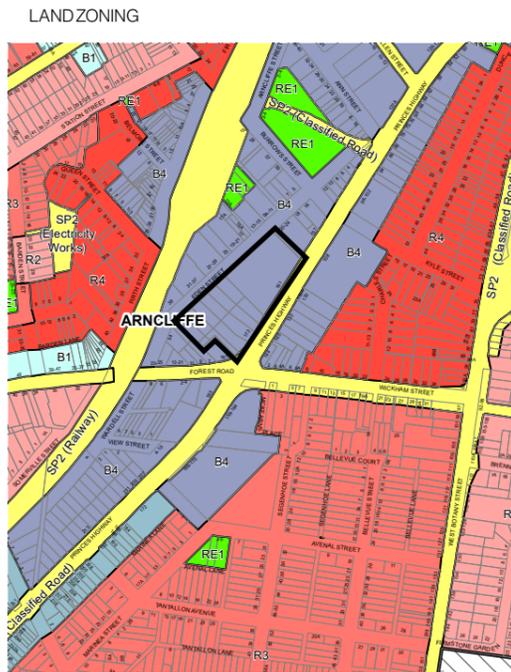
LEP controls upon the site demonstrate the following:

The site is zoned as B4 - Mixed Use land. It is located adjacent to the significant infrastructure of the Princes Highway and the Illawarra railway line.

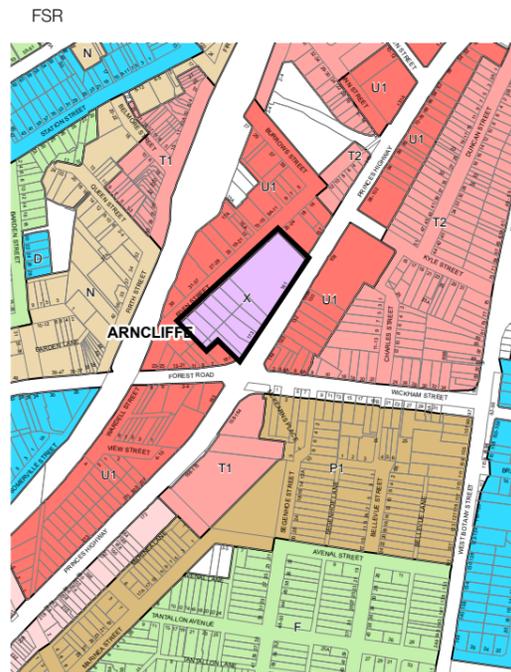
The site is control by a maximum permissible building height of 70m. The proposed massing has been designed carefully with the existing site contours in mind to ensure there is a general compliance with the 70m height control.

The allowable FSR for the site is 4:1 and is eligible for an FSR bonus of 0.8:1 under the SEPP (Affordable Rental Housing) 2009.

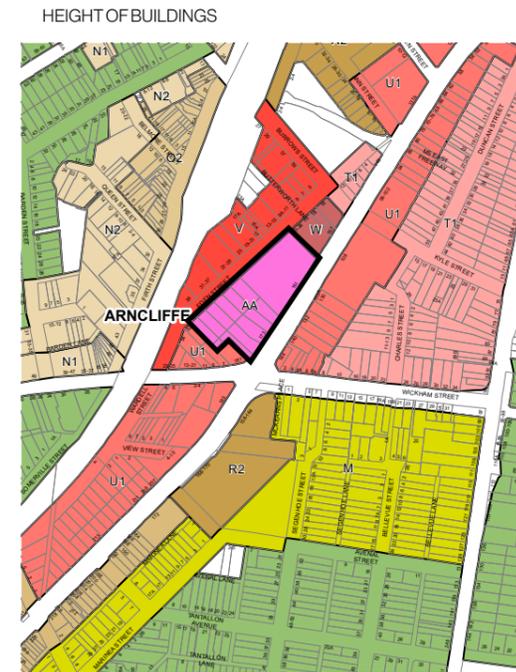
There are no heritage items located on the subject site. A heritage item of note has been identified on Eden Street. In accordance with the DCP, care has been taken to ensure the site plan allows the new public park to address this heritage item.



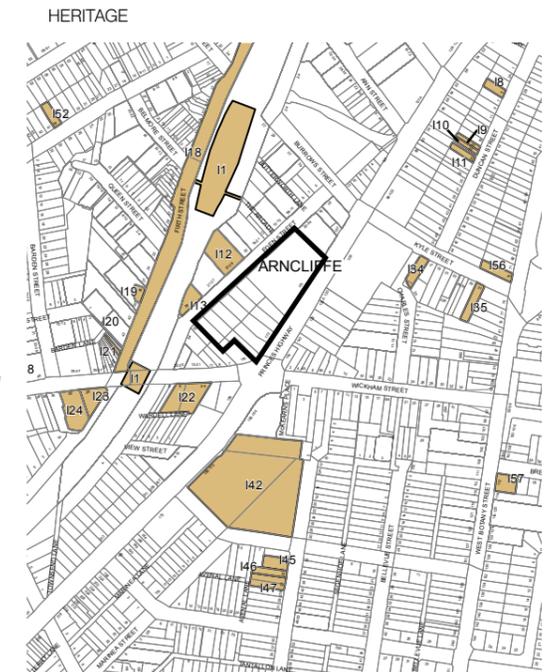
B1	Neighbourhood Centre
B2	Local Centre
B4	Mixed Use
B6	Enterprise Corridor
IN2	Light Industrial
R2	Low Density Residential
R3	Medium Density Residential
R4	High Density Residential
RE1	Public Recreation
RE2	Private Recreation
RU4	Primary Production Small Lots
SP2	Infrastructure
SP3	Tourist
UL	Unzoned Land



D	0.5
F	0.6
N	1
P1	1.25
P2	1.26
S1	1.5
S2	1.65
S3	1.8
T1	2
T2	2.2
T3	2.4
U1	2.5
U2	2.85
V1	3
V2	3.1
V3	3.4
W	3.93
X	4



I	8.5
M	12
N1	13
N2	14.5
O1	15
O2	16
P1	17.5
P2	17.75
P3	18
Q1	19
Q2	20.5
R1	21
R2	22
S	24
T1	26.5
T2	27
T3	28
T4	29
T5	29.5
U1	31
U2	33
V	36
W	42
X	46
X2	47.15
Y	51
AA	70
Refer to Clause 4.3	



Item - General

Immediately adjacent to the subject site is a heritage-listed two-storey Victorian villa, originally named 'Glenwood'. The villa is significant as a rare example of a grand, symmetrical house with an unusual captain's walk above the gabled timber entrance and highly unusual timber detailing on the veranda and balcony.

This villa is of further significance as a part of the original Wickham Estate subdivision, and was built in a prominent location on the original Rocky Point Road alignment.

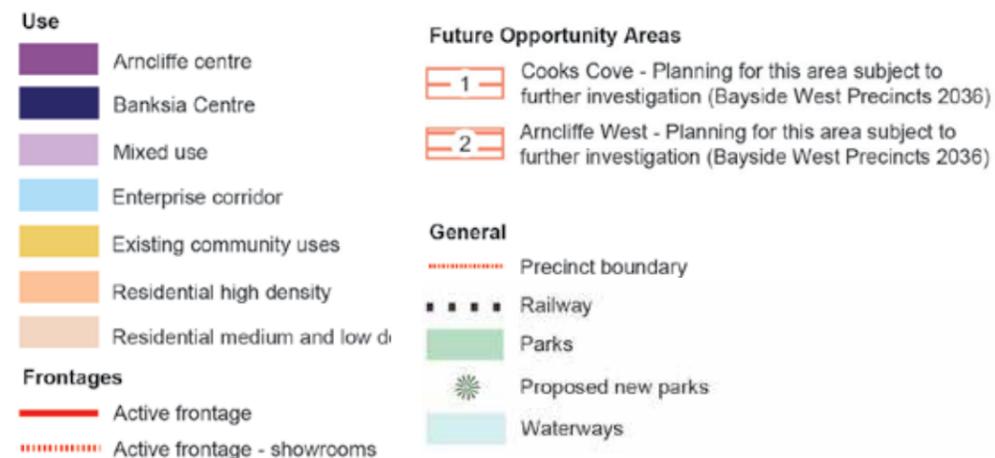
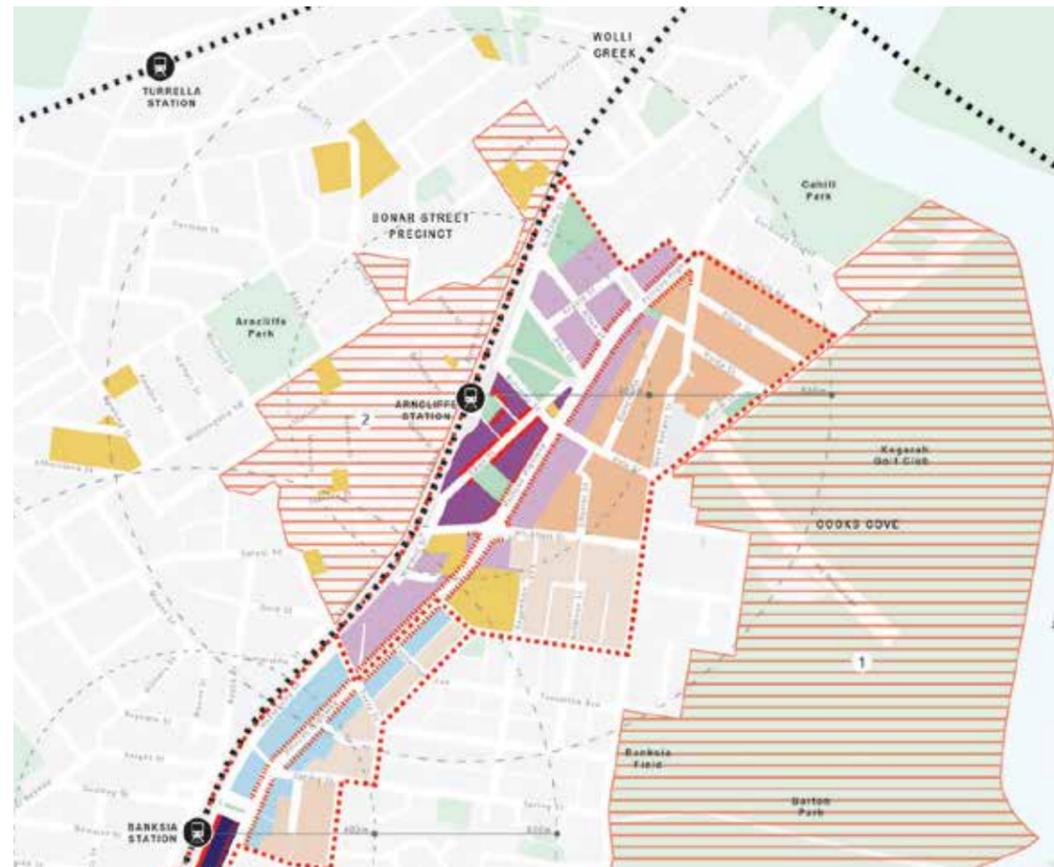
2.9 DEVELOPMENT CONTROL PLAN

Amendment 7 part 7.7 Arncliffe and Banksia Rockdale Development Control Plan

The adapted Structure Plan presented in this section of the DCP identifies the objectives of the Bayside West Precincts 2036 and the Arncliffe and Banksia Precinct Proposal, drawing upon the detailed analysis undertaken for the Arncliffe and Banksia Planned Precincts. The Structure Plan identifies the desired future character of Arncliffe and Banksia, detailing key development sites and built form outcomes.

Structure Plan Requirements:

- The DCP establishes a pattern of centrally-located, Mixed Use sites and generous open spaces at the heart of the Arncliffe Precinct, of which the subject site is at the core.
- These sites offer services and amenity for a wider context of higher-density residential properties, primarily located to the east of the Princes Highway.
- South-east of the Arncliffe Precinct, residential density begins to lower, providing a sympathetic interface with the wider context at the Precinct's boundaries.
- The DCP requires the creation of Active Frontages along the ground floor facades of Eden Street and the Princes Highway. Where possible, this proposal has provided retail frontages to all street edges and corners, as well as along the periphery of the public park.
- The DCP outlines the intention for showroom type frontages along the Princes Highway.
- The potential future development of Cooks Cove, and specifically that of nearby Arncliffe West, will further establish the subject site as a key community and services hub for the wider neighbourhood.

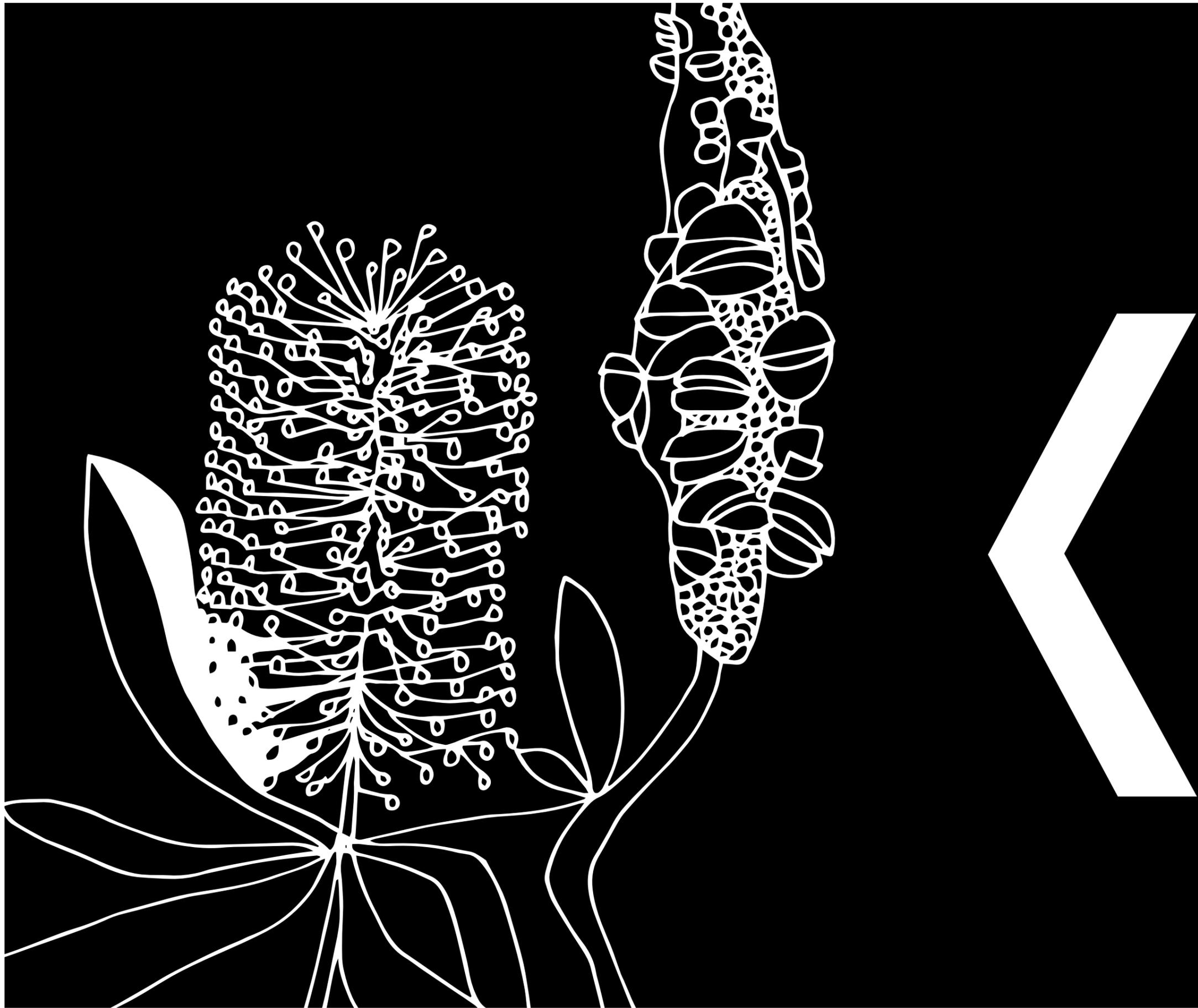


Structure Plan. Source: Rockdale Development Control Plan, Part 7.7 Arncliffe and Banksia Special Precincts

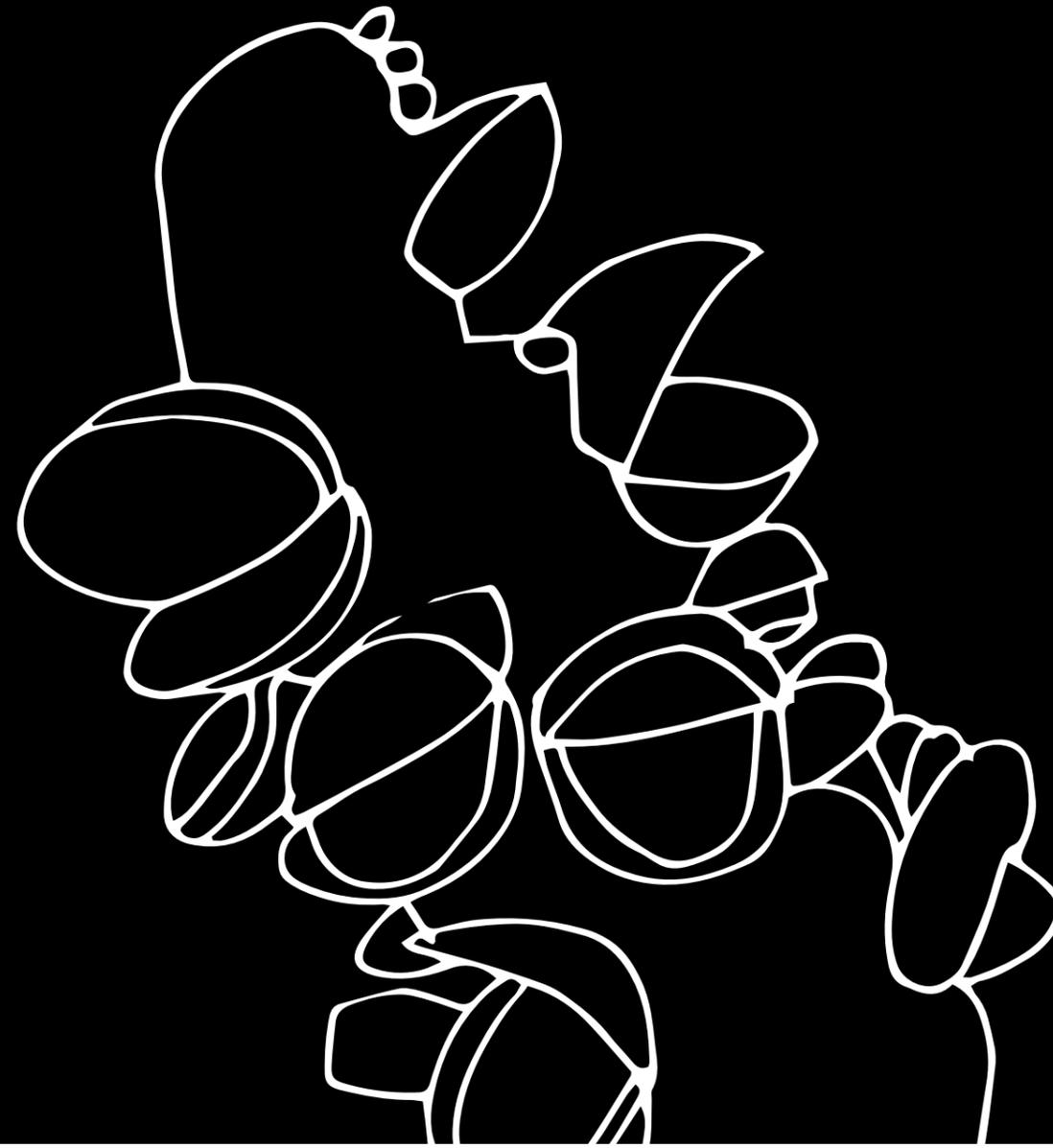


The park is required to be a minimum of 4000m², achieve maximum solar access, have minimum 50m frontage to Eden Street, ensure generous landscaped interface with existing trees and additional planting, ensure exiting through site links are incorporated and have direct view of Eden Street heritage item amongst other objectives.

Built Form and Open Space Diagram - Indicative Built Form Study. Source: Rockdale Development Control Plan, Part 7.7 Arncliffe and Banksia Special Precincts



3.0 ANALYSIS



03

3.1 COUNTRY

“One day our history will be known
And through our own books be shown.

Our children will be proud
In the knowledge their heritage is sound.”

Ruth Simmin in 'A History of Aboriginal Illawarra Volume 1 Before Colonisation', Dharawal Publications.

Dharawal Country

Aboriginal people in this Country used sophisticated environmental management conducted over long periods of time, in particular traditional fire practices.

The First Fleet officer John Hunter noted that Aboriginal people around Sydney “set the country on fire for several miles extent”. He recognised that the purpose was “to clear that part of the country through which they have frequent occasion to travel, of the brush or underwood”, as well as enabling women to get at edible roots with digging sticks and hunting kangaroo.

The mosaic of landscapes was “maintained by Aboriginal burning, a carefully calibrated system which kept some areas open while others grew dense and dark”.

Bidjigal Country and People

The Bidjigal people living in La Perouse have the strongest connection with the old folk of this land. They are connected to all people of this land, but in particular to the Dharawal language group.

The people of coastal Sydney suffered from the trauma of occupation and the severing of their spiritual bonds to Country. Within two years of settlement, kinship ties in the area were ruptured and more than half the Eora died from smallpox.

Harbour and Wetland Resource Areas

People living around Botany Bay caught fish and marine animals in the bay and hunted land animals, including birds and reptiles, and gathered plants, shellfish, birds' eggs and other small animals around wetlands in the eastern suburbs such as Lachlan Swamp.

These wetlands were important resource areas of fresh water, food, tool-making supplies and raw plant materials and were home to an abundance of animal species.

Campsites and Rock Shelters

Campsites are usually located close to the shore, especially during summer when fish and shellfish are relied upon as key sources of food.

Large shell middens at camp sites near the mouth of the Cooks River and in sandstone rock shelters on its north and south banks are evidence of the occupation of the valley for at least between 1,000 and 4,000 years.

An ancient campsite and fireplace at the mouth of Wollie Creek near Tempe House is dated at around 10,500 year old and is one of the oldest sites in the Sydney region.

Pathways and Viewpoints

The first roads of the Sydney region follow traditional pathways used by Aboriginal people. These pathways link spiritual and ceremonial sites, as well as travel corridors throughout the landscape between the coast and hinterland campsites.

Botany Road follows a traditional pathway that connects Port Jackson to Botany Bay.

Spurs and ridgelines are important as routes for travel and campsites above wetlands, with view points in all directions.

Whale Country - Rock Engravings

Rock engravings are prolific in the Sydney region where sandstone dominates the landscape. Rock engravings are most common near the coast. An important totem of this Country is the Humpback Whale, who often uses Sydney Harbour and annually passes by the coast each June.

Rock engravings are often shallow grooves less than 5mm deep, formed through the pecking of a series of holes in the soft sandstone by a hard rock often brought in from another area. These holes were then joined by scraping away the rock between them, possibly over time and repeatedly at ceremonies.



Map of Cooks River Valley areas of archaeological sites pre-Botany Bay formation. Source: Aboriginal History Along The Cooks River



Historic photo of Wollie Creek. Source: Heritage NSW



Botany Bay, New South Wales by Joseph Lycett. Source: National Gallery of Australia.

3.2 COLONIAL AND URBAN HISTORY

Originally, Arncliffe Hill was known as Cobbler's Hill and the area developed as the vegetable garden for Sydney.

Original Land Grants

Reuben Hannam, a brickmaker, was granted 100 acres (0.40 km²) of land in 1825 along the banks of Wolli Creek. His son, David Hannam, obtained a 60-acre (240,000 m²) grant near the Cooks River in 1833 directly behind the Tempe estate. Alexander Brodie Spark (1792–1856) purchased the estate on the Cooks River in 1826 and built Tempe House in 1828. This part of the suburb is today known as Wolli Creek.

Later, both Rocky Point Road and Gannons Forest Road ran through Hannam's grant, now known as the Princes Highway and Forest Road.

Subdivision

When Hannam's land was subdivided, many new small holdings became farms, spreading towards Black Creek or Muddy Creek. Allotments in the village of Arncliffe were between 10 and 20 acres (81,000 m²). In 1843, newspaper advertisements declared that there was "money to be made by woodcutters and farming men and persons about Cook's River".

In 1856, the subdivision of Tempe, close to the village of Arncliffe, was described as having "all the characteristics of an English village, being beautifully situated amidst quiet rural scenery, spotted here and there with neat cottages which charm the eye with their pretty, well trimmed gardens, perfect pictures of competence and content".

Eden Street was originally part of Rocky Point Road (Princes Highway) before its diversion.

The area is home to a significant Victorian villa, originally named 'Glenwood'.

The villa is recognised as part of the original Wickham Estate, and was built in a prominent location on the original Rocky Point Road alignment.

Its name is thought to be a reference to the many market gardens in the area.

The villa is significant as a rare example of a grand, symmetrical house with an unusual captain's walk above the gabled timber entrance and highly unusual timber detailing on the verandah and balcony.

In 1998, the villa was extensively restored and the rear service wing was demolished to make way for apartments built to the rear and to the south. The villa has now been turned into two apartments.



Aerial Photo 1943. Source: Six Maps.



'Glenwood' 1990. Source: Rockdale Heritage Study.



Firth Street Tramway. Source: Facebook.

3.3 LOCAL ECOLOGY AND GEOLOGY

The site is located on the upper slopes of a land form which rises from Botany Bay.

Ecotones

An ecotone is a transition area between two biological communities, where two communities meet and integrate. It may be narrow or wide, and it may be local (the zone between a field and forest) or regional (the transition between forest and grassland ecosystems).

The site is an eco-tonal vegetation community; straddling Sandstone Woodland to the eastern slopes and the Turpentine Iron Bark Forests to the western slopes.

As an ecotone, the vegetation exhibits characteristics of both vegetation communities including Turpentines, Angophora, and Iron Bark eucalypts.

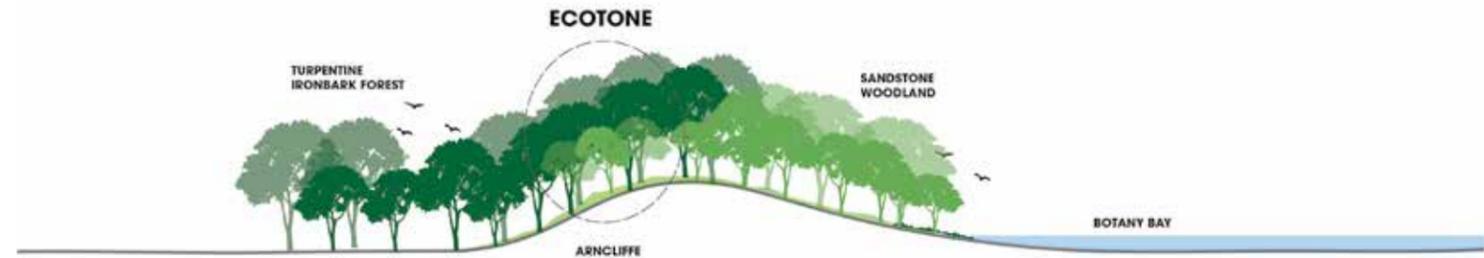
Eastern Suburbs Banksia Scrub is an endangered ecological scrub that is found in deep, wind formed sand deposits in the coastal suburbs of Sydney.

The scrub is characterised by a wide-ranging assemblage of sclerophyllous vegetation, including Acacia, Banksia and Melaleuca species. Many species may only be present in one or two sites or in very small quantity.

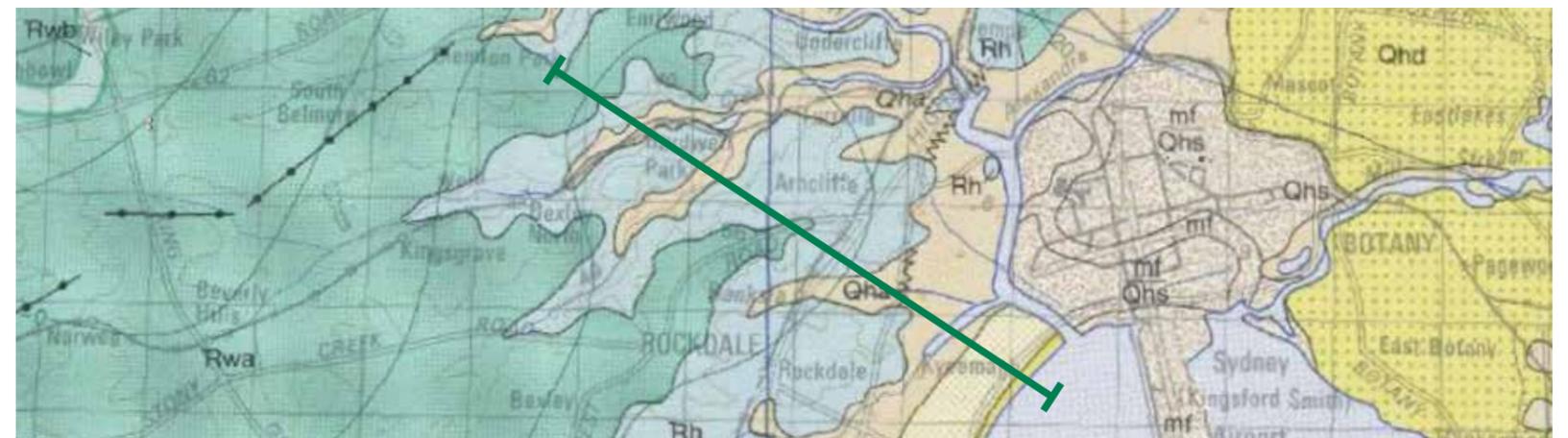
The Banksia community has been reported from areas of sand deposits in the local government areas of Botany, Manly, Randwick, Waverley and Woollahra.

Threats to the survival of the community include fragmentation, development, increased nutrient status, inappropriate fire regimes, invasion by exotic plants, grazing by horses and rabbits and erosion from use of bicycles, motorcycles and excessive pedestrian use.

The vegetation community is in decline. Estimates suggest that the scrub originally covered over 5,300 hectares, however today there is less than 127 hectares remaining (a loss of over 97%).



Wallamutta Nature Reserve. Source: National Parks NSW.



1:100,000 Geological Services Sheet 9130. Source: NSW Government Resources and Geosciences.

3.4 CONTEXT ANALYSIS

Arncliffe is located 11 km south of Sydney's Central Business District.

Development context

The development context in which the site is located is evolving, due to its identification as an area with high growth potential by the State and Local Governments.

To the north and east of the site, there are apartment buildings ranging from two to four storeys in height.

To the south of the site are several separate dwellings, apartment buildings, as well as shop top housing and retail uses at the corner of Forest Road and Eden Street.

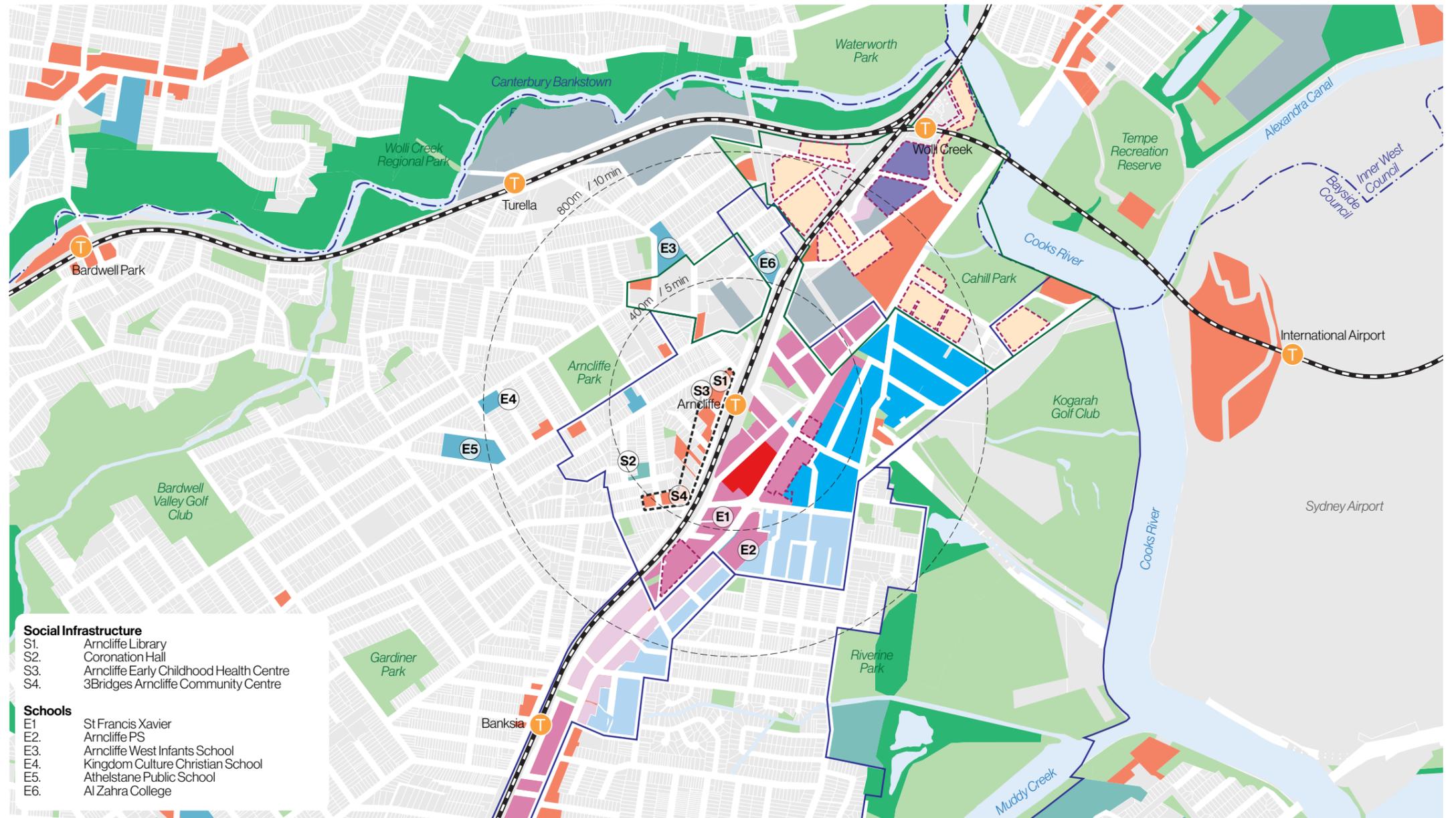
To the east of the site, across the Princes Highway, are industrial land uses in addition to the recently constructed ten storey mixed-use 118 Princes Highway.

Princes Highway Context

The eastern boundary of the site sits on the Princes Highway, a major arterial that runs through New South Wales. In recent years, significant redevelopment has occurred along this interface in isolated areas. The majority of this change has seen commercial and light industrial land rezoned and redeveloped as residential properties with ground floor retail or showrooms. The corridor itself is more amenable, which is supported by controls set by Bayside Council.

Social Infrastructure

There is a significant amount of social infrastructure that surrounds the site and the broader Arncliffe context. These are highlighted on the adjacent map, including schools, libraries and other community facilities.



- Social Infrastructure**
- S1. Arncliffe Library
 - S2. Coronation Hall
 - S3. Arncliffe Early Childhood Health Centre
 - S4. 3Bridges Arncliffe Community Centre
- Schools**
- E1. St Francis Xavier
 - E2. Arncliffe PS
 - E3. Arncliffe West Infants School
 - E4. Kingdom Culture Christian School
 - E5. Athelstane Public School
 - E6. Al Zahra College

LEGEND

■ Site Boundary	□ LGA Boundary	□ Bayside West Precincts (BWP) Boundaries	■ Residential (Existing)	■ High Density Housing with Mixed Use Opportunities (BWP)
■ Existing lots	T Train line/station	□ Woll Creek + Bonar Street Urban Renewal Areas	■ Education (Existing)	■ High Density Housing (BWP)
■ Open space		□ Arncliffe town centre	■ Industrial (Existing)	■ Employment Corridor (BWP)
■ Nature reserve		□ Recent development	■ Mixed Use (Existing)	■ Medium and Low Density Housing (BWP)
■ Water body		■ Community facilities (Existing)	■ Commercial (Existing)	

Scale 1:15,000 @ A3
0m 100 200 400 800m

3.5 CONNECTIVITY

The site is well connected and located for intermodal transport and connectivity within the Arncliffe context.

Bus Network

There is an extensive bus network located near the site that connects commuters to nearby destinations. These include the 422 and 420 which run from Eastgardens in Pagewood to Burwood.

Active Transport

There is currently no dedicated cycle path that runs adjacent to the site. However, opportunities for intermodal movement exist due to the location of the nearby train station. The Rockdale DCP prescribes an approach to cycle lanes that should extend directly adjacent to the site along the Princes Highway and Eden Street.

Rail Network

The site is well located, within 400m of Arncliffe Station, accessed via The Arcade, a direct pedestrian link that terminates on Eden Street toward the northern end of the site. Arncliffe is located on the Illawarra line, which services the eastern and southern suburbs of Sydney.

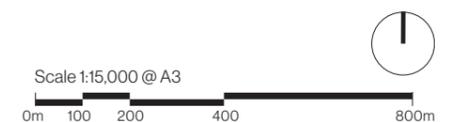
Road Hierarchy

The site is located directly on the Princes Highway, which offers the potential for future residents and visitors to utilise its direct connection to this major thoroughfare.



LEGEND

- | | | | |
|----------------|--------------------|-------------------|--|
| Site Boundary | LGA Boundary | Motorway | 420 Bus (Eastgardens to Burwood via Sydney Airport and Rockdale) |
| Existing lots | Train line/station | Motorway (Tunnel) | 422 Bus (Kogarah to Sydney CBD) |
| Open space | Highway | Primary Road | 473 Bus (Rockdale to Campsie) |
| Nature reserve | Bus Stop | Primary Road | N10 (Sutherland to City Town Hall, Night Service) |
| Water body | | | N11 (Cronulla to City Town Hall, Night Service) |



3.6 OPEN SPACE

There is a significant amount of open space within a 2km radius of the site.

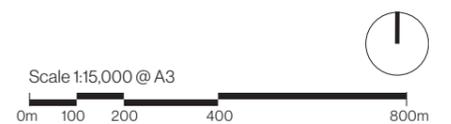
Below and adjacent is a summary of these spaces, their primary use and distance to most homes within the Arncliffe local area.

Performance Indicators	Typical size	Distance from most homes
Regional <ul style="list-style-type: none"> Serves whole city, metropolitan districts or local government or regional centre and multiple towns and villages in non-metropolitan areas Users drive significant distances to access regional open spaces They are managed by state agencies, trusts and locals 	> 5 ha	5-10 km
District <ul style="list-style-type: none"> Serves catchment of one or two local government and neighbourhood but can service a catchment spanning two LGAs Users drive up to 30min to access these spaces Sporting facilities operate at District level 	2-5 ha	2 km
Local <ul style="list-style-type: none"> Serves to local neighbourhood area Users walk or cycle to access these spaces 	0.5-2 ha	400m
High Density Areas(60dw/ha) <ul style="list-style-type: none"> Local open spaces to be provided in close proximity 	0.1-0.5 ha	200m



LEGEND

■ Site Boundary	 LGA Boundary	 Motorway	 District Open Space
 Existing lots	T Train line/station	 Motorway (Tunnel)	 Sports Ground
 Open space	 Highway	 Primary Road	 Local Park
 Nature reserve	 Primary Road	 Proposed Local Park	 Environmental Protection Zone
 Water body			



3.7 SITE ANALYSIS

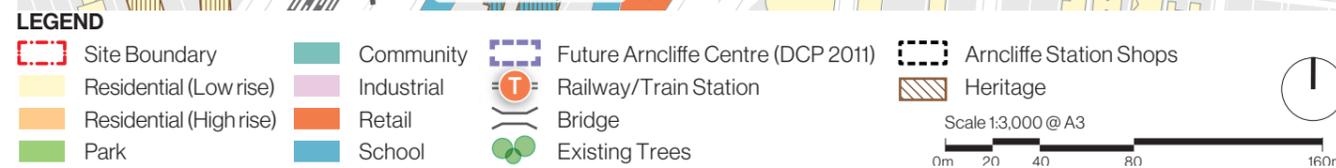
Land Use

The site is currently occupied by several medium density social housing residential flat buildings. Mature trees scattered along its periphery on Eden Street form a light visual barrier between the existing buildings.

Surrounding the site is predominantly residential uses, comprising 5-6 storey apartment buildings and

isolated examples of single lot residential buildings. Community facilities in Arncliffe feature, in the form of religious places of worship, schools and also a library near the train station.

There are a few examples of heritage-significant sites, the most predominant of these is 'Glenwood', a two storey house located directly opposite the site on Eden Street.



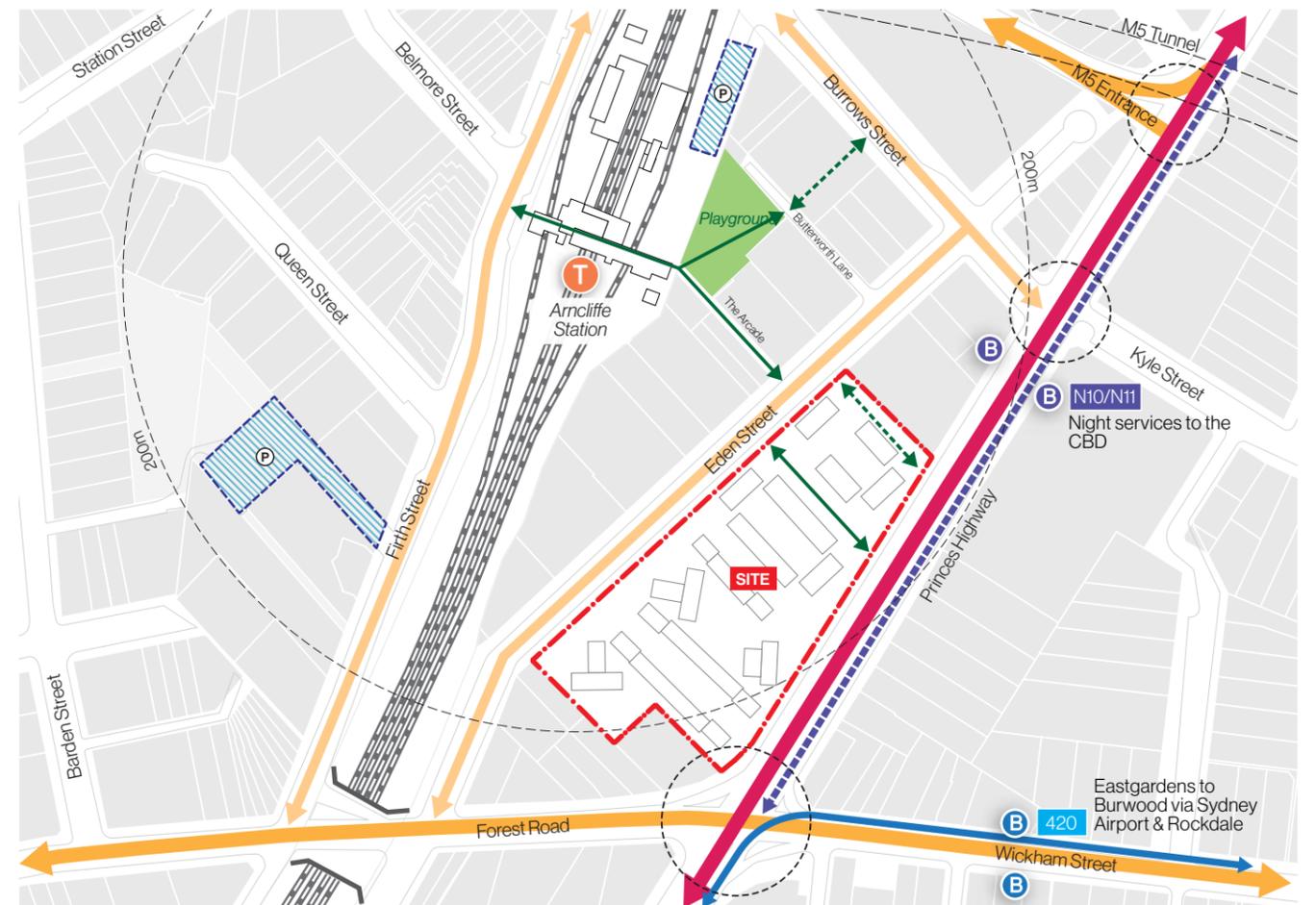
Connectivity

The site is adjacent to one the main arterial roads in Sydney; the Princes Highway which connects Sydney to Wollongong. Similarly, Forest Road and Wickham Street in the south connect the site to Sydney Airport.

Less than 200m from the site is Arncliffe Train Station, which is directly accessible via The Arcade, a

pedestrian link that terminates on Eden Street across the road from the site.

To the north of the site on the Princes Highway are two bus stops that connect Arncliffe to Pagewood and Burwood, and are directly located near the proposed through site link identified for the site in the DCP.



Built Form

The site is located within an evolving urban context due to its identification as a growth area in the Bayside West Precinct Strategy.

The majority of the built form surrounding the site ranges from low to medium density residential with ground floor activation. Along Eden Street, there are

a number of c.1970s and c.1980s apartment buildings, particularly towards the northern end of the site.

Across the road from the site, the eastern edge of the Princes Highway has significant redevelopment up to 10 storeys near Kyle Street, with ground-floor active frontages along the Princes Highway.



Topography

The topography of the site comprises a gradual but consistent land fall.

The lowest part of the site is the north western boundary along Eden Street near The Arcade.

The highest point on the site is the southern boundary, along the Princes Highway.

Contour lines run generally in an east-west direction from the Princes Highway to Eden Street.



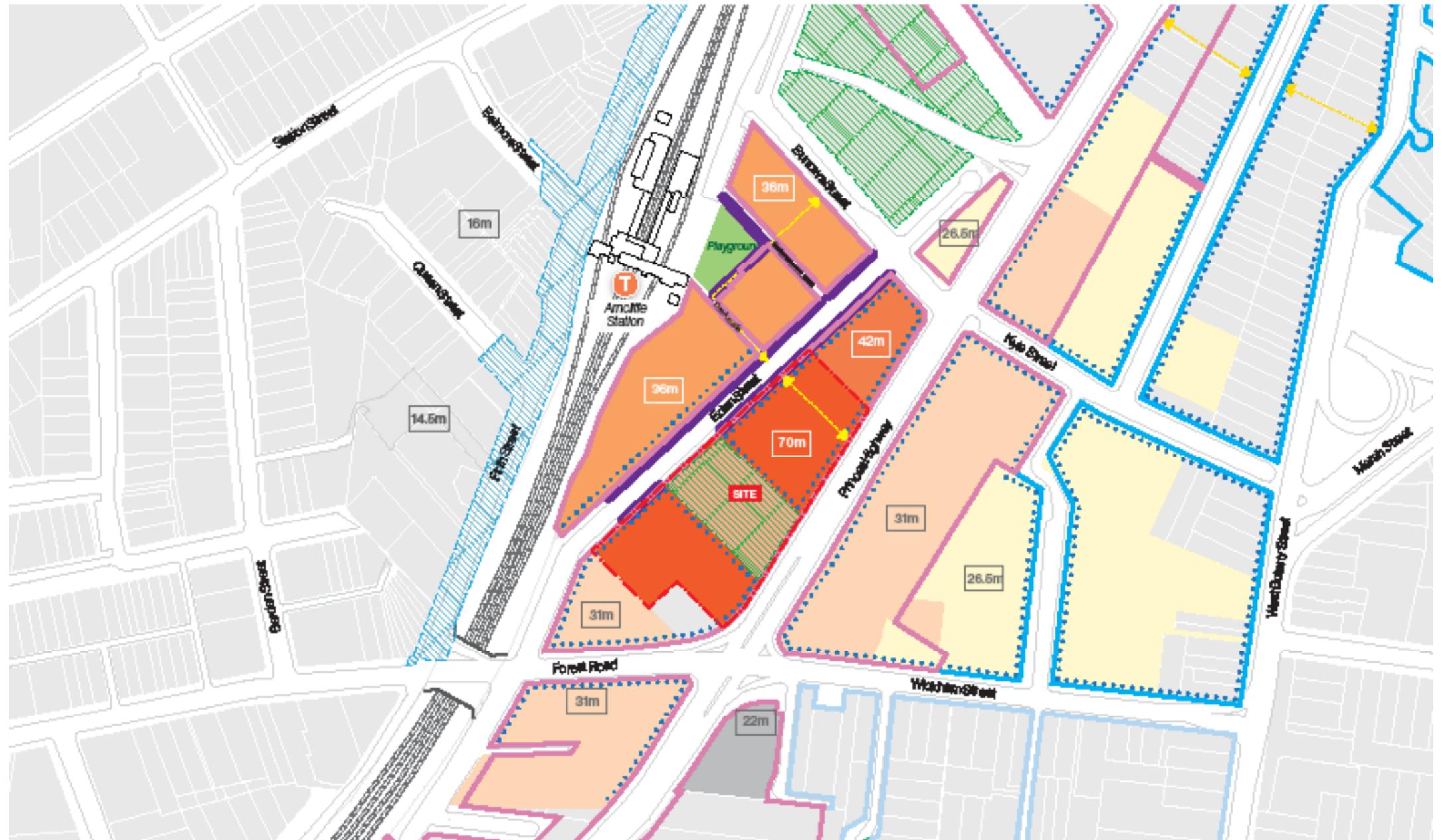
3.8 FUTURE DEVELOPMENT CHARACTER

The site plays a significant role in defining a distinctive identity for the Arncliffe Town Centre that aligns and responds to the desired future character of the area.

The adjacent diagram illustrates the LEP height controls surrounding the site and the proposed activation along Eden Street.

Other key objectives from the DCP that informs the design response include:

- Provision of a vibrant mixed-use town centre with 24 hour activation
- Eden Street identified as one of the main retail streets east of the railway line and to undergo streetscape improvements to further enhance the amenity
- Retain active uses and street edge alignment to the corner of Eden Street to mark entry into the Town Centre
- Existing and new pedestrian links improve access to the railway station and create a more walkable centre
- Eden Street Park is a new local park catering to new residents with a centrally located lawn, gardens and significant tree planting
- Taller buildings near the station visually reinforce the area as a centre and assist in highlighting the location of key connections and open spaces
- High-quality residential development is encouraged above retail and commercial uses within the town centre, and as a standalone use on sites outside of the centre.



3.9 LOCAL CHARACTER

Arncliffe Station and The Arcade

The site is located on the eastern side of Arncliffe Station, connected by a pedestrian path known as The Arcade. This is a pedestrian, through site link that connects Firth Street to the Princes Highway.

An existing collection of retail premises on Firth Street and Belmore Street forms a local centre adjacent to the station.

Arncliffe Station itself has been recognised as a heritage-significant site. Here, a pedestrian overpass connects the eastern and western portions of Arncliffe and also provides access to the station's platforms.

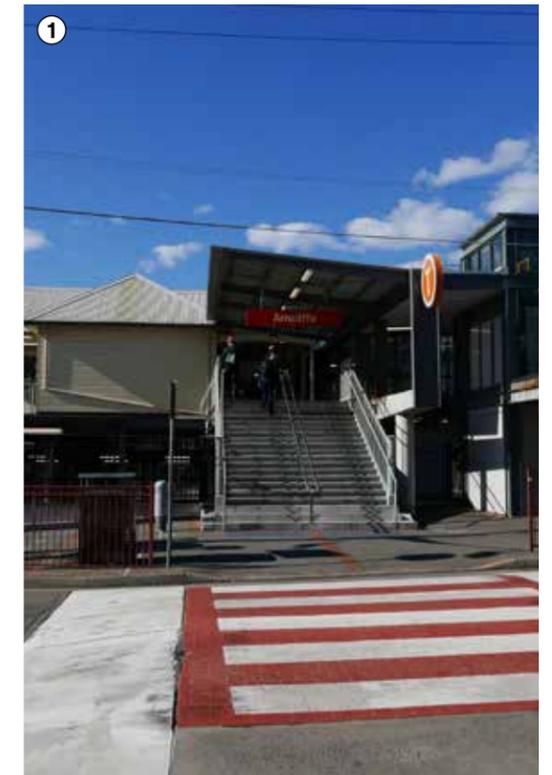
Much of the remaining area that surrounds the station is residential, with blocks of apartments located closer to the station and low to medium density housing further away.



The Arcade



Arncliffe Train Station



Arncliffe Train Station



Park and playground



Parking on the eastern side of the station

Street Character

Eden Street is a local street where 3-4 storey residential blocks form most of the streetscape with sidewalks on both sides. Two heritage houses sit on the western side giving a variety of heights and styles.

The site is bounded by the Princes Highway to the east and Eden Street to the west. The Princes Highway is a six-lane primary road that connects Arncliffe to the Sydney CBD in the north and Sutherland in the south. Alongside the highway are houses and light industrial blocks with some recent high-density residential development.

Forest Road, to the south of the site is another busy main road that connects to Sydney Airport. On the southern side of the road is St Francis Xavier's Catholic Primary School and Arncliffe Public School, which serves the local catchment.

There is currently one through site link on site that connects the Princes Highway to Eden Street, which is heavily used at peak travel times.



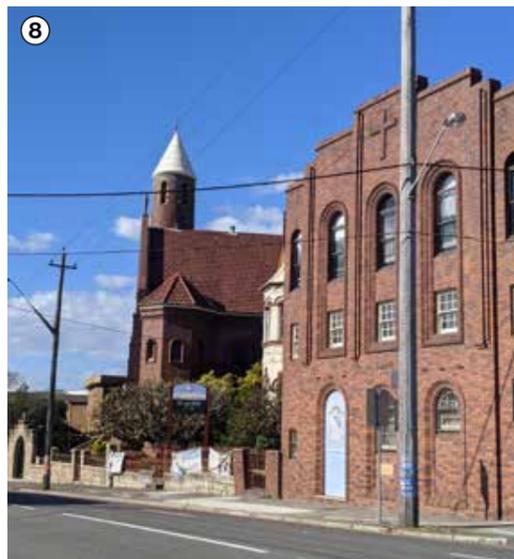
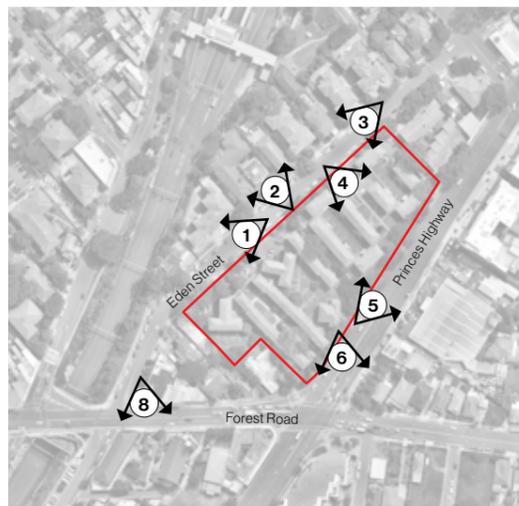
Eden Street



Existing through site link on site



Princes Highway and Forest Road Junction



St Francis Xavier's Catholic Primary School



Side walk on Eden Street



Princes Highway

3.10 OPPORTUNITIES

The site has the potential to unlock pedestrian connectivity in the future Arncliffe Town Centre.

Built Form

- The subject location is within close proximity to numerous community, transport and services hubs, positioning the site as a key centre within the suburb and a cornerstone of the desired future Arncliffe precinct.
- Multiple street frontages offer a range of facade opportunities and the ability to create a space that is cohesive with the surrounding interfaces and inclusive of the wider community.
- Support inter modal transport via a new through site link along the northern boundary to the bus stops on Princes Highway and Wickham Streets.
- Sensitively locate massing and density to capture district city and water views.
- Orientation towards open spaces and the community hub will similarly optimise views, while also encouraging engagement and connectivity with the public domain.
- Provide activation along Eden Street, and into the site to support Council's future vision for Arncliffe.

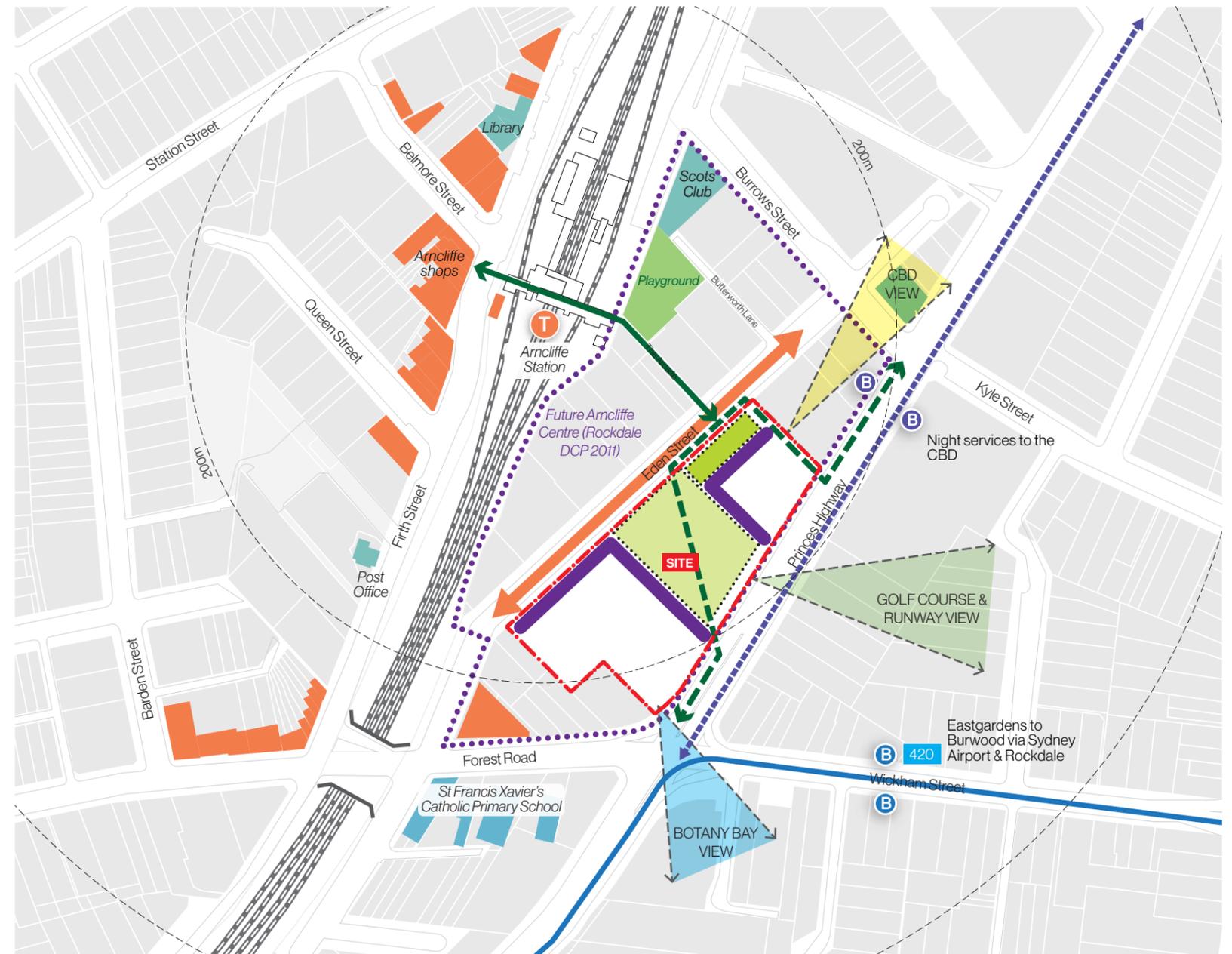
Connectivity

- Strengthen the connection to Arncliffe Train Station through The Arcade to Princes Highway to promote a highly walkable neighbourhood.
- The site can be used as an active link to facilitate movement in a north-south direction and also east-west via the arcade to allow for inter modal transport access.

- The site is well located to facilitate pedestrian connectivity for significant catchments in the area. To the south of the site are two schools, who are currently separated from bus and train access by significant major roads.
- Access to bus stops on the Princes Highway and Wickham Street can be enhanced through convenient connections and through-site links.
- Multiple frontages also facilitate a range of site agendas, enabling efficient resident, visitor and services access.

Open Space

- Gradual land fall on the site can provide a bespoke response to landscape and open space.
- The proposed design intends to increase public open space and recreation amenity beyond the Development Control Plan.



LEGEND

Site Boundary	Strengthen Existing Link	Proposed Retail Street (DCP 2011)	Existing Schools
Existing lots	Potential Through-Site Link	Potential Active frontages	Existing Community Facilities
Park	Proposed Park (DCP 2011)	Bus stop/route	Existing Retail
Railways/Train Station	Potential additional public open space	Night Bus Services	Future Arncliffe Centre (DCP 2011)

3.11 CONSTRAINTS

Our analysis of the site and context has led us to an understanding of the range of constraints that will inform the design response to the site.

Existing Features

- The site is located along the busy thoroughfare of the Princes Highway. Development of the built environment and upgrades to the public domain here should be driven by the increased safety and amenity of this highly-frequented space.
- Potential overshadowing from the high rise development across the Princes Highway
- Potential overshadowing to the existing residential properties located to the south of the site
- Potential noise from the Princes Highway
- Gradual land fall across the site
- Existing tree on the northern site boundary
- Nearby properties of heritage significance, particularly Eden Street's 'Glenwood' villa will necessitate a development approach that is sympathetic to surrounding historical value.

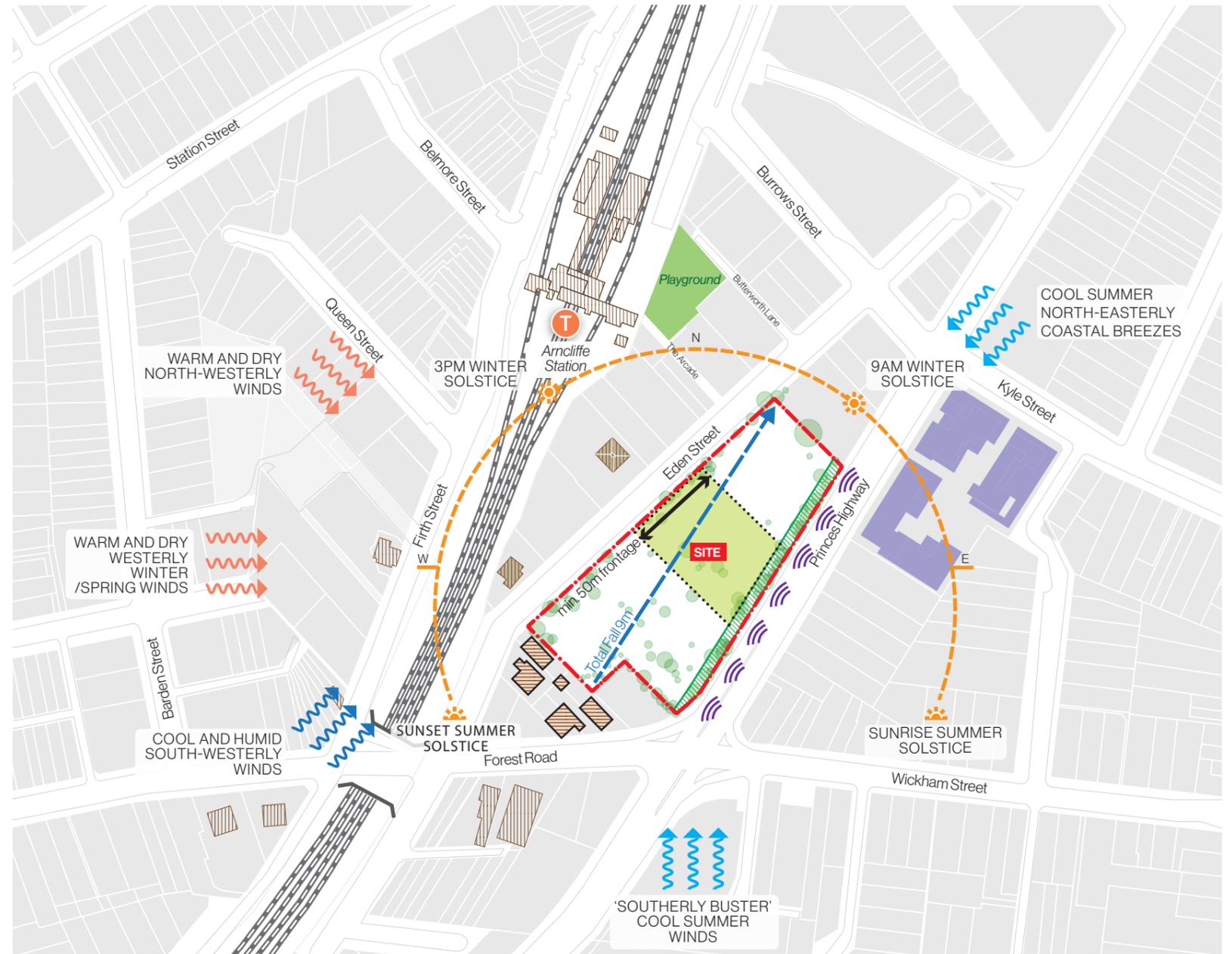
Built Form

- The 'Mixed Use' land use zone and desired future precinct character will ensure a pattern of taller, denser future development. Upgrades to the public domain should provide copious public open space, through-site links and activity space to offer outdoor relief, comfort and connectivity.

- Design of the Princes Highway interface needs to mitigate noise and improve the pedestrian interface along the length of the site

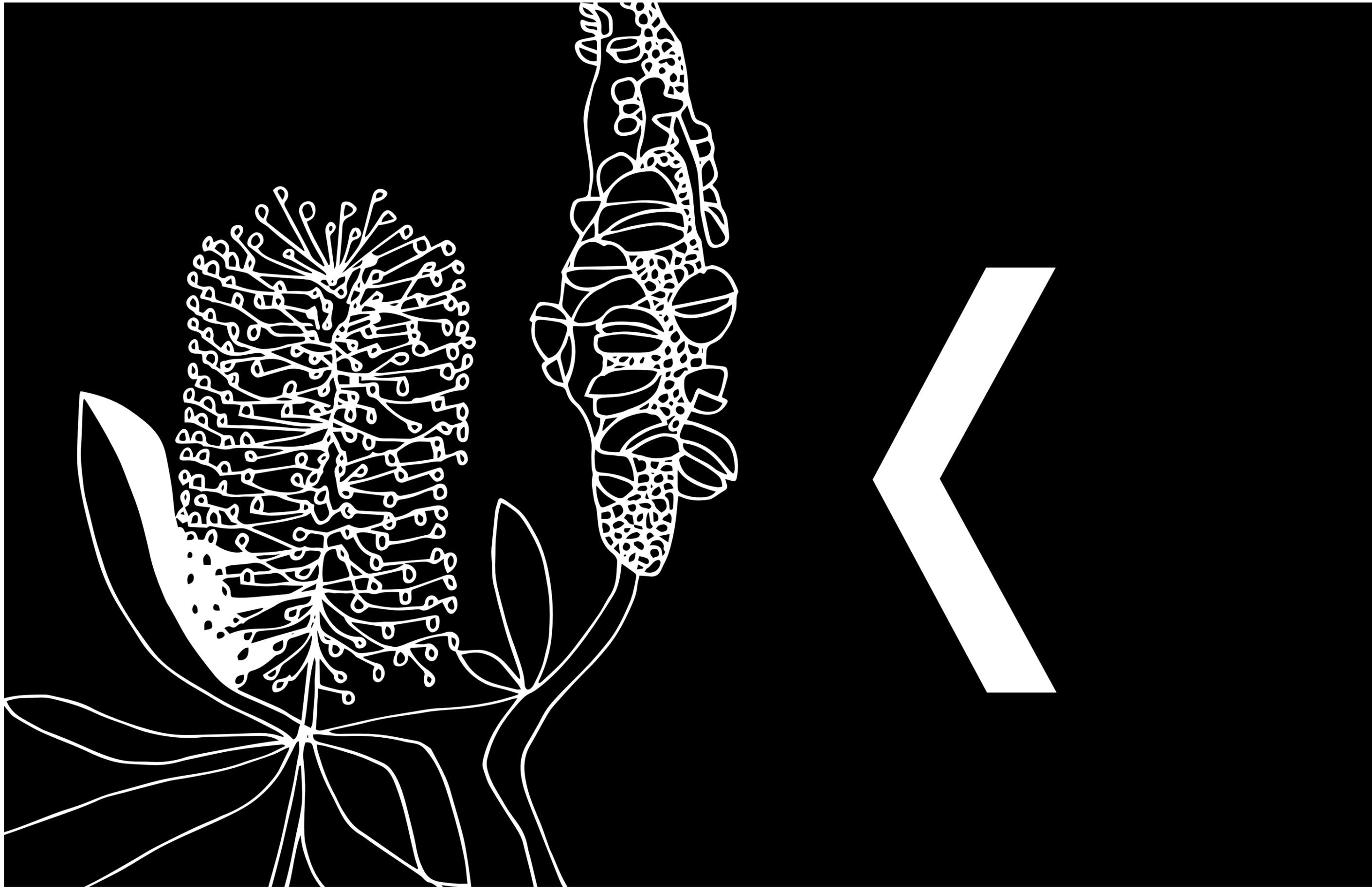
Access and Connectivity

- The major thoroughfare of the Princes Highway presents significant challenges pertaining to traffic and congestion, the mitigation of pedestrian access and significant noise pollution.
- Existing residential properties along the north-western elevation of Eden Street constraints opportunities for greater pedestrian through-site links from the site, to the station and Firth Street shops.

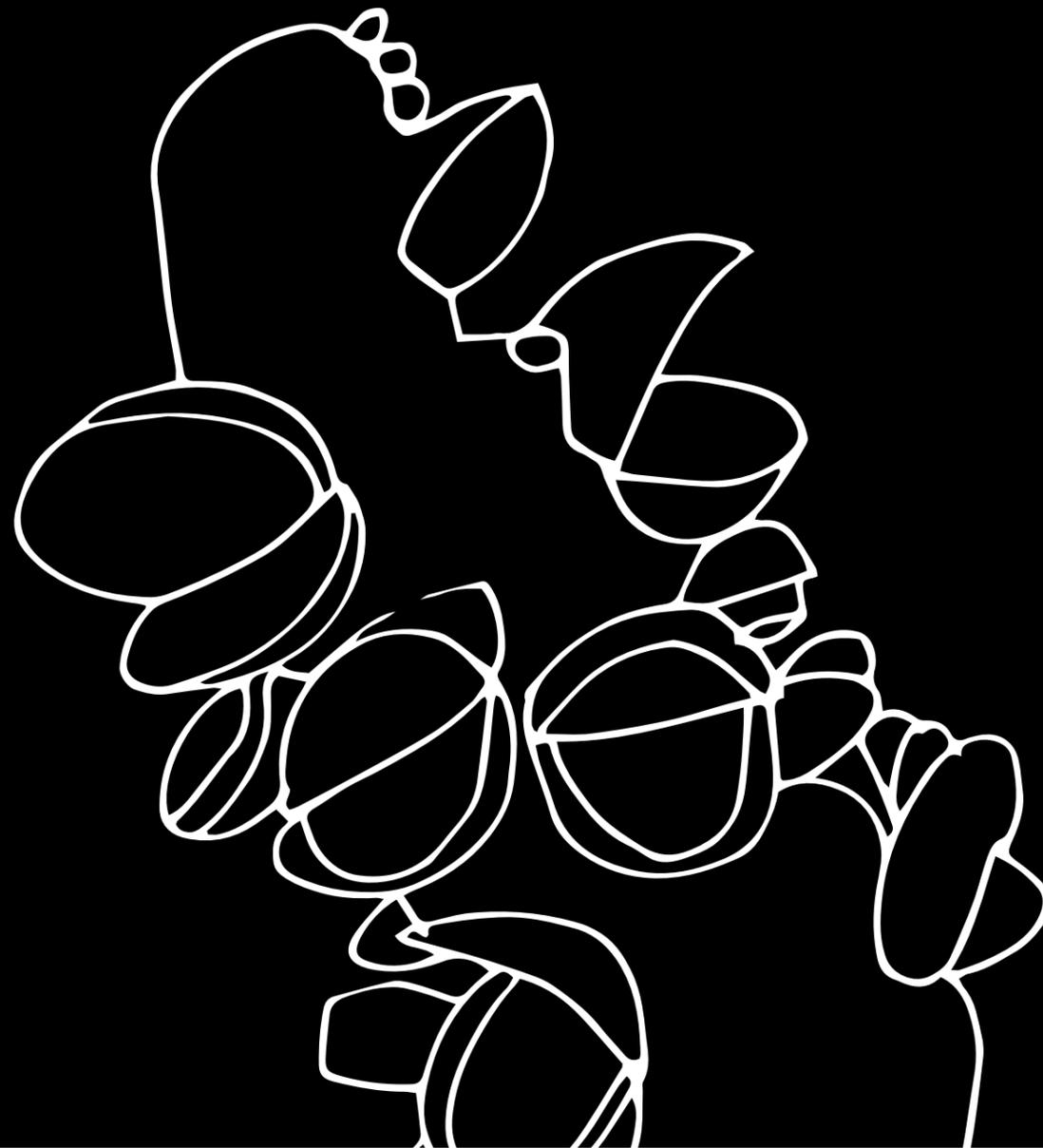


LEGEND

Site Boundary	Heritage	Noise source
Existing lots	Potential Overshadowing	Existing Trees
Park	Proposed Park (DCP 2011)	6m Landscape Setback (DCP)
Railways/Train Station	High Rise Development	Sun path



4.0 DESIGNING FOR COUNTRY



04

4.1 INDIGENOUS DESIGN STATEMENT

“How are you going to leave my Country better than what it was before?”

Indigenous peoples and the built environment have had a problematic relationship, with settlements, roads, and railways often cutting through and disrupting the connection between people and Country.

In establishing a design narrative for the project, we asked the following questions;

How can we reconnect the relationship between Country and people?

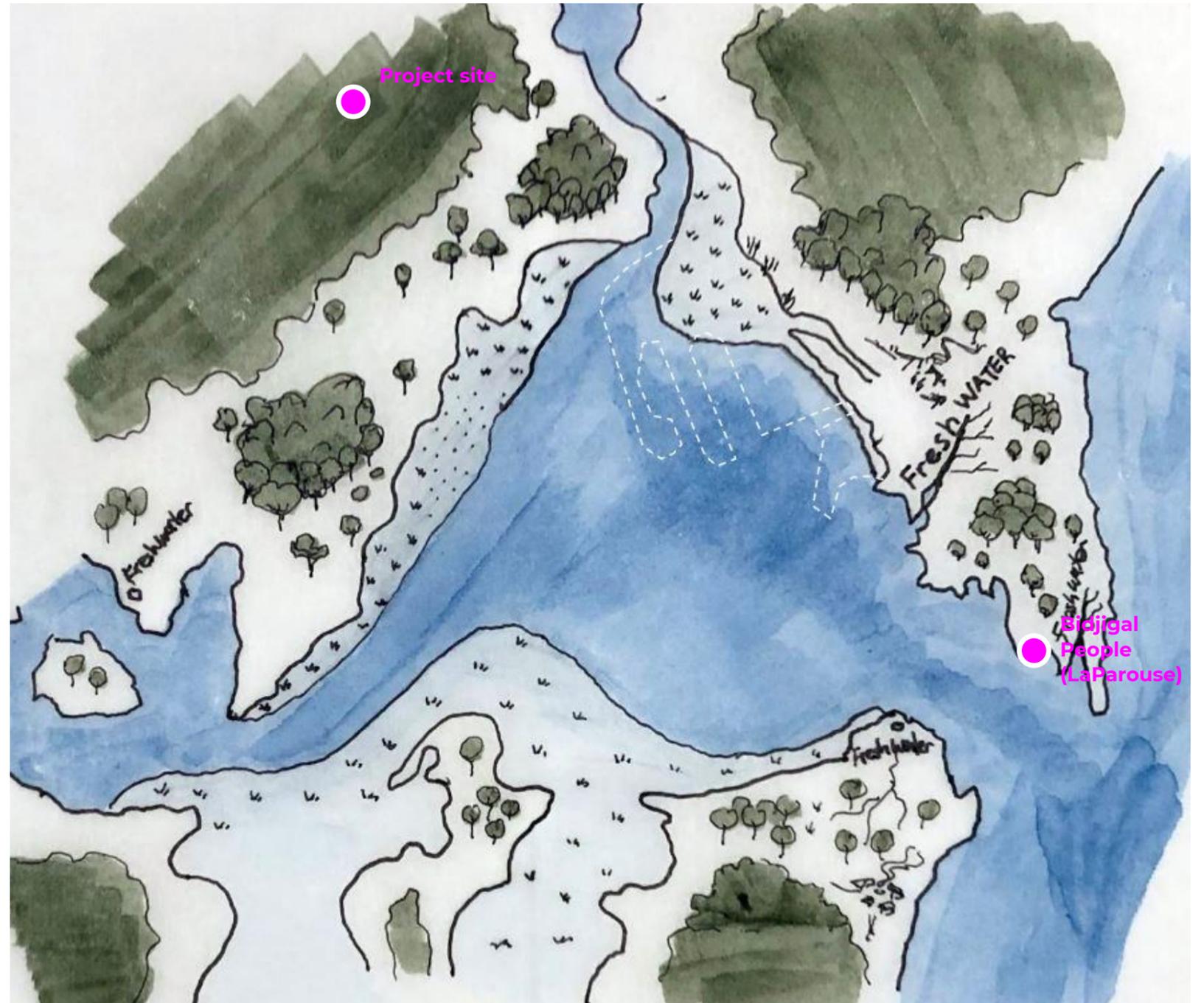
The precinct can provide an opportunity to celebrate and acknowledge the Aboriginal Country, Culture and people of the land on which it is located.

We can acknowledge Country

and reveal the latent Aboriginal history of the site through the design elements of the project and through place based landscape interventions including architecture, landscape, infrastructure and art.

The principles set out in this chapter articulate a starting point of engagement with the Eora and Dharawal people and Country.

While much more consultation and permission must be sort from the local elders, the concepts set out in this chapter outline the ideas and engagement process that have been undertaken to evolve the design narrative.



4.2 DHARAWAL COUNTRY

There are about 29 clan groups of the Sydney metropolitan area, referred to collectively as the Eora Nation. There has been extensive debate about which group or nation these 29 clans belong to.

Greater Sydney Region

It is generally acknowledged that the Eora are the coastal people of the Sydney area, with the Darug people occupying the inland area from Parramatta to the Blue Mountains.

The Dharawal people's lands are mostly confined to the area south of Botany Bay, extending as far south as the Nowra area, across to the Georges River in Sydney's west.

Although there is much information about the life and culture of the coastal Sydney people, the early colonial writings have no detailed information or clear descriptions of direct observations of people using the land and resources of the sandhills and wetlands on the eastern Sydney peninsula.

Bidjigal Country and People

The Bidjigal people living in La Perouse have the strongest connection with the old folk of this land. They are connected to all people of this land, but in particular to the Dharawal language group.

The people of coastal Sydney suffered from the trauma of occupation and the severing of their spiritual bonds to Country. Within two years of settlement, kinship ties in the area were ruptured and more than half the Eora died from smallpox.

Dharawal Country and Kameygal Clan

Dharawal people occupy the area between Georges River and Jervis Bay. Around Botany Bay live the most northerly clans of the Dharawal- the Kameygal (Spear Clan), who live on the north between the mouth of the Cooks River and present day La Perouse and the Gweagal (Fire Clan), who live on the south side of the bay.

A Country of Beauty and Abundance

Early settlers "found environments which reminded them of the manicured parks of England, with trees well spaced and a grassy understorey".

Arthur Bowes Smyth from The First Fleet described the landscape around Sydney as:

".. fresh terraced, lawns and grottos with distinct plantations of the tallest and most stately trees I ever saw in any nobleman's grounds in England, cannot excel in beauty those whose nature now presented to our view."

Food resources were readily available along the coast and in the bays. Captain Cook gives us an insight in his journal on 3 May, 1770 as to what resources people were accessing:

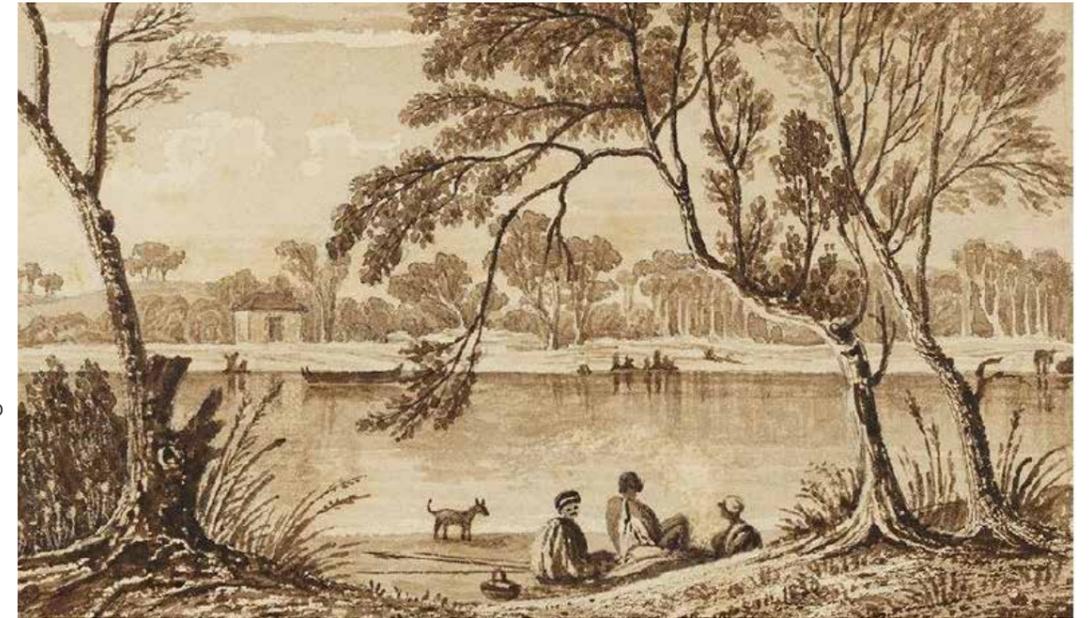
"There were Six Canoes and Six small fires near the shore, and Muscles roasting upon them and a few Oysters laying near."

A Country Curated by Fire

Aboriginal people in this Country used sophisticated environmental management conducted over long periods of time, in particular traditional fire practices.

The First Fleet officer John Hunter noted that Aboriginal people around Sydney "set the country on fire for several miles extent". He recognised that the purpose was "to clear that part of the country through which they have frequent occasion to travel, of the brush or underwood", as well as enabling women to get at edible roots with digging sticks and hunting kangaroo. 3

The mosaic of landscapes was "maintained by Aboriginal burning, a carefully calibrated system which kept some areas open while others grew dense and dark".



From Mud Bank Botany Bay - mouth of Cooks River 1830, by John Thompson From the State Library of New South Wales [DL PXX 31, 2a]. Source: Dixson Library.



Botany Bay, New South Wales by Joseph Lycett. Source: National Gallery of Australia.

A summary of the cultural practices and evidence of the Dharawal people.

Harbour and Wetland Resource Areas

People living around Botany Bay caught fish and marine animals in the bay and hunted land animals, birds, reptiles; and gathered plants, shellfish, birds' eggs and other small animals around wetlands in the eastern suburbs such as Lachlan Swamp.

These wetlands were important resource areas of fresh water, food, tool-making supplies and raw plant materials and were home to an abundance of animal species.

Campsites and Rock Shelters

Campsites are usually located close to the shore, especially during summer when fish and shellfish is the main food.

Large shell middens at camp sites near the mouth of the Cooks River and in sandstone rock shelters on its north and south banks are evidence of occupation of the valley for at least between 1,000 and 4,000 years.

An ancient campsite and fireplace at the mouth of Wollli Creek near Tempe House is dated at around 10,500 year old and is one of the oldest sites in the Sydney region.

Pathways and Viewpoints

The first roads of the Sydney region follow traditional pathways used by Aboriginal people. These pathways link spiritual and ceremonial sites, as well as travel corridors throughout the landscape between the coast and hinterland campsites.

Botany Road follows a traditional pathway that connects Port Jackson to Botany Bay.

Spurs and ridgelines are important as routes for travel and campsites above wetlands, with view points in all directions.

Whale Country - Rock Engravings

Rock engravings are prolific in the Sydney region where sandstone dominates the landscape. Rock engravings are most common near the coast.

An important totem of this Country is the Humpback Whale, who often uses Sydney Harbour and passes by the coast like clockwork every June.

Rock engravings are often shallow grooves less than 5mm deep, formed through the pecking of a series of holes in the soft sandstone by a hard rock often brought in from another area. These holes were then joined by scraping away the rock between them, possibly over time and repeatedly at ceremonies.

Middens

These are mounds of shell built up over hundreds or thousands of years as a result of countless meals. They primarily contain mature species of edible shellfish species. They might also contain bird and animal teeth and bones, campfire charcoal and stone tools.

Rock Shelters – “giba gunyahs”

These are places where the Cammeraygal people would have taken shelter. This would have been a warm place to eat, sleep, repair or fashion tools and, we can imagine, talk of stories and exploits. Artefacts such as stone tools may be found in the rock shelters.

Bora or Ceremonial Ground

Bora grounds are Aboriginal ceremonial places. These are where initiation ceremonies are performed and are often meeting places as well. A bora ground most commonly consists of two circles marked by raised earth banks, and connected by a pathway.



Merriverie Rocks engraving site.



Rock engravings at Ben Buckler, North Bondi.

Significant Sites

The adjacent map shows a number of significant sites in the Wollri Creek/ Arncliffe area of the Dharawal people.

1 Wollri Creek Campsite

In 1788, Watkin Tench noted in his diary: 'On the northwest arm of Botany Bay [the Cooks River] stands a village, which contains more than a dozen houses, and perhaps five times that number of people'. Large middens in this area shows occupation over thousands of years.

2 Fireplace at Tempe House, Wollri Creek

The earliest documented evidence of Aboriginal people here is a 10,500 year old fireplace which consisted of a concentration of charcoal in a roughly dinner-plate sized patch of soil. Stone artifacts were also uncovered here.

3 Art site at Earlwood

A midden in a rock shelter with stencils of 23 hands and 2 feet on the rock walls of the shelter. The Midden is largely undisturbed and the site is situated within the context of a rock outcropping from the sandstone ridgeline which dominates the landscape on the south side of the Cooks River valley at Earlwood.

4 Dugong Bones, Shea's Creek Alexandra

Uncovered in the 1890s, some ribs and other bones had deep scratches and cuts that could only have been made by Aboriginal people. Radiocarbon dating shows they are 6,000 years old.

5 Randwick Stabling Yard Artifacts

Over 22,000 artefacts around 3000 years old were uncovered on a construction site for Sydney's Light Rail line. Among the artefacts were spear tips, knife blades, scrapers, cutters and marriage stones.

6 Hearth near Prince of Wales Hospital

Dated to 8,000 years ago. This is a rare site predating sea level rise.

7 Lachlan Swamp resource area

An important resource area or 'living larder' where people would go to collect food, fiber and freshwater. These wetlands formed the largest freshwater wetland system in the eastern Sydney area.

8 La Perouse

The only Sydney suburb where Aboriginal people have held onto their territory from settlement until the present day, it is a story of survival of Aboriginal culture and coexistence.

9 Rocky Point

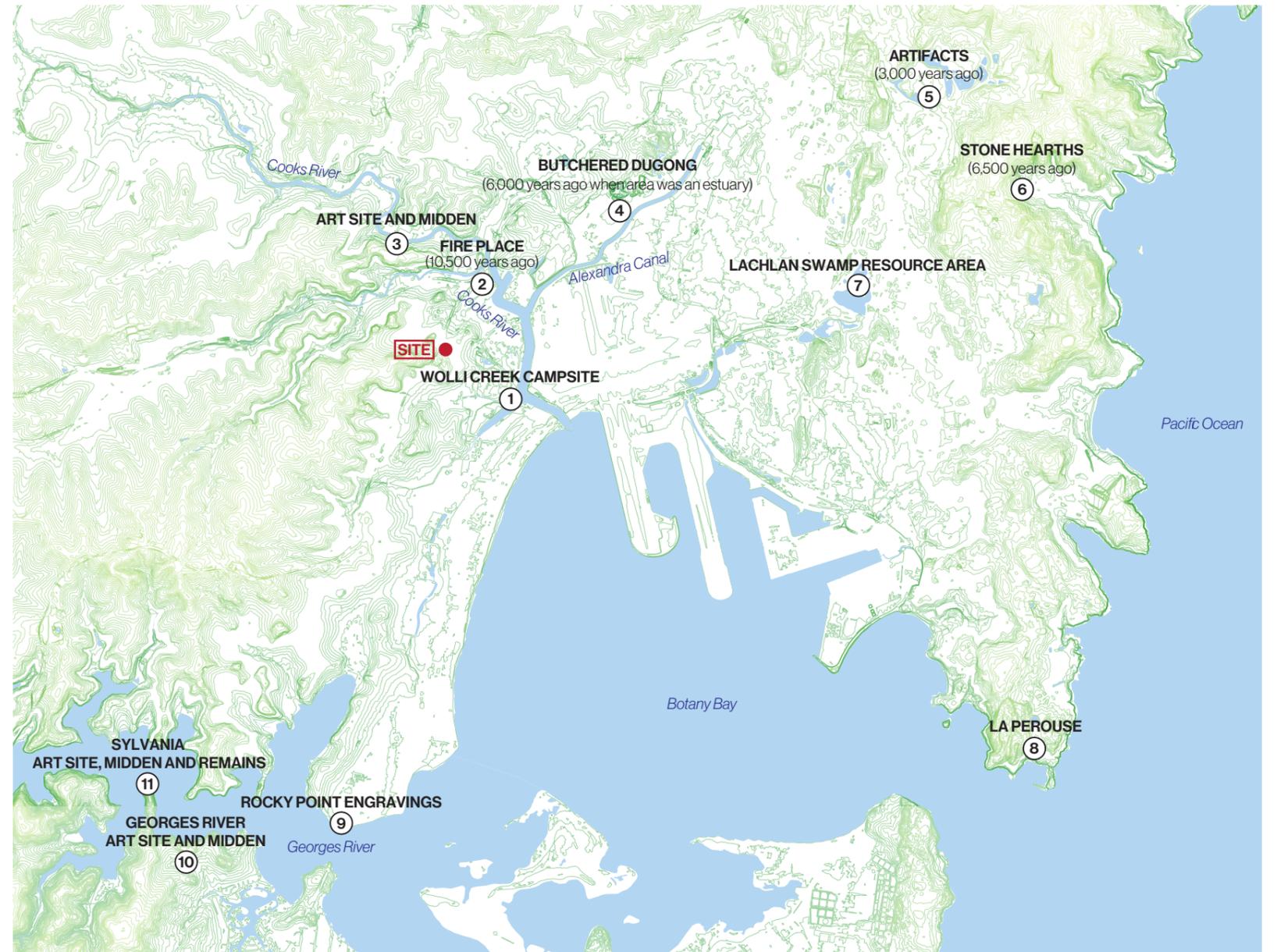
Rock engravings of 3 fish and a short V line are visible below the high water mark on rocks on the south-west side of the point.

10 Georges River

Rock art, axe grinding grooves and middens are common around the bays of the Georges River. Middens are still visible at Alford's Point, Connells Point, Lime Kiln Bay, the largest midden being on Jewfish Bay, Oatley Park.

11 Sylvania

A rock shelter, midden, hand stencils, human remains, a traded axe and remains from cooking fires were uncovered in 1982. A permanent source of water and rock shelves used to store items were identified within the cave.



4.3 KEY ISSUES FOR ABORIGINAL PEOPLE

WSP identified a number of key issues for Aboriginal people in the design of the precinct.

As a team, we have asked the following questions to guide explorations and shape the overall design narrative for the precinct;

How might we honour Country and ensure it's dignity is still intact after the project?

How might the project bring people closer to Country?

Can the project provide a space to celebrate this important gateway to Country?

How might we tell the stories of this Country and it's first peoples in the design of this building?

A number of key issues were identified that can provide guidance on implementing the key issues;

Connecting the site to Country

- Any new building should Honour Country and the Tribes associated with this land through tangible and intangible outcomes.
- This site was an important place of resources, crossings and other cultural and settlement related activities. Protection of the clean water is paramount.

Open up the site

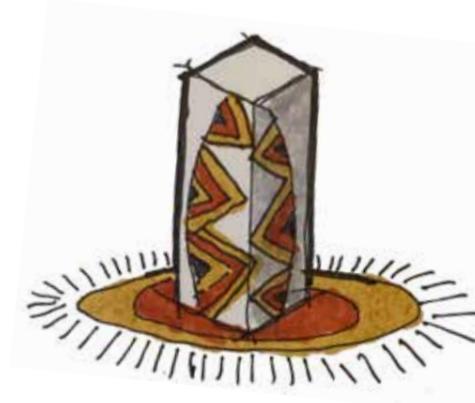
- Ensuring the abutments and columns are far enough back to provide access for people.
- Create a new public park and open space for the community.

Celebrate Country

- This project will be a threshold to the city and to Aboriginal Country.
- The design will consider the site interfaces and the response to each street and boundary.

Tell our stories

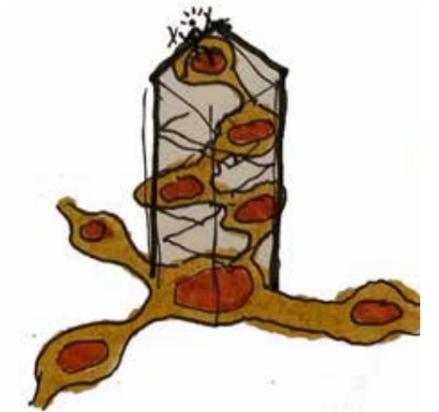
- Sydney was a place of ceremony, law, sport, and settlements. There are many latent stories associated with this place waiting to be told through place based interventions.



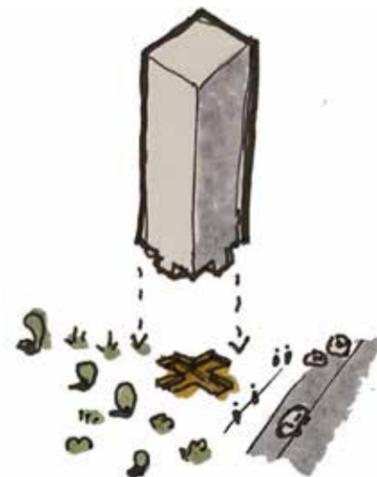
Connect the building to Aboriginal Design



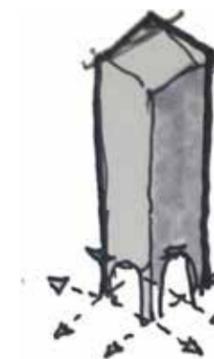
Invite Country into the building



Connect the building to culture



Connect the building to Country



Connect people to the site

4.4 THE ENGAGEMENT PROCESS

The design narrative for the project has evolved alongside our engagement process - to help understand the value of Country and ensuring that better built environment outcomes are informed and guided by Aboriginal knowledge and leadership.

We have had two engagement sessions with Auntie Yvonne Sims (Elder of the Bidjigal people) and two codesign sessions with Peter Cooley from Indigrow to ensure that our interpretations and embedding of Country into the design hold significant meaning and expression. This has allowed us to prioritise and think differently about Country, to establish a pathway and re-check and align with Aboriginal values as a way of connecting throughout the project lifecycle. It has also enabled us to refine our design and ensure the best outcomes for the project and the community it will serve.

Significant design development has been undertaken in the public realm to explore the relationship between Country and play.



Engagement session with Auntie Yvonne Sims to discuss cultural awareness and the childrens play area and productive garden



Site visit to Indigrow to meet Peter Cooley and learn about potential plant species for the open space

A summary of key themes from the engagement

GroupGSA participated in three engagement sessions. A summary of these is below;

Session 1: Auntie Yvonne Sims

In this introductory session we met at Auntie's house, as that was the most comfortable for her. Bringing drawing and baked goods, we got to know each other, and held an initial co-design session to get some ideas and feedback from Yvonne on the importance of the site from a cultural perspective, and how to best integrate these values within the design of the precinct. Various family members visiting Auntie gave their input also. The ideas mentioned included:

- The project should have spaces to celebrate Country, a space for smoking ceremonies, weaving space, yarning spaces.
- Thinking of kids was important for Yvonne and she expressed interest in the design of the playground and how it should reference local fauna and flora, such as a swing in the shape of a flower, or a totem, like the whale.

Session 2: Auntie Yvonne Sims

This follow up session was to report Auntie how her feedback had been integrated with the current design, and to gain endorsement for the design.

Auntie endorsed the concepts of representing the whale and weaving practices within the playground as appropriate themes.

The use of language was mentioned as important and if places could be named in language.

Session 3: Peter Coolie

For this intro session Peter gave the design team a tour of his indigenous nursery which focuses primarily on species within the eastern suburbs extending to the Arncliffe site.

Landscaping plans were introduced to Peter and some of his staff, and initial input and thoughts were given.

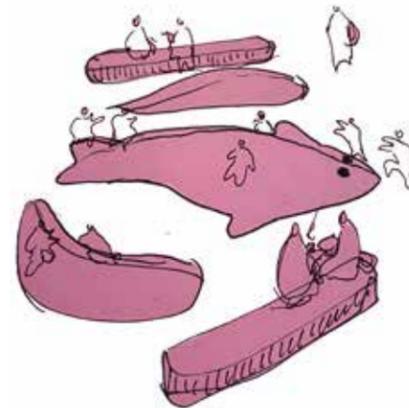
Peter stressed the importance of planting the right vegetation, which needs to be plants of the Eastern Suburbs Banksia Scrubland family.

Session 4: Peter Coolie

For this follow up session the team presented to Peter how they have integrated his initial feedback into the parklands around planting choices, soil deaths, appropriate species etc.

Peter was happy with the range of opportunities to use Eastern Suburbs Banksia Scrubland species within the landscape design.

Peter agreed to put together a species list and match them to a landscape plan.



Tell the story of Country

The story of Country should be told through an integrated literal and representational theming through subtle and tangible elements that reference the important elements of this Country.

This is whale Country.

Auntie spoke about the importance of the whale as a totem for this Country. How might we honour the story in the project?

The Eastern Suburbs Banksia Scrubland

What this Country wants to be, with its sandy soil and salty winds. With Aboriginal land management principles in mind, how might landscape design work with Country?

4.5 INTEGRATION OF ABORIGINAL DESIGN PRINCIPLES

Aboriginal peoples' continued connection with Country is a source of valuable wisdom and knowledge that can be used to guide the way we plan and design the places where we live, work, and play.

The material expression of the architectural and landscape elements in the proposed master plan integrates Aboriginal design principles, derived through consultation with WSP's Indigenous Specialist Services.

These design interventions might include entry statements, wayfinding strategies, principal shared paths and/or cultural markers.

The proposed design incorporates gathering places and places to connect.

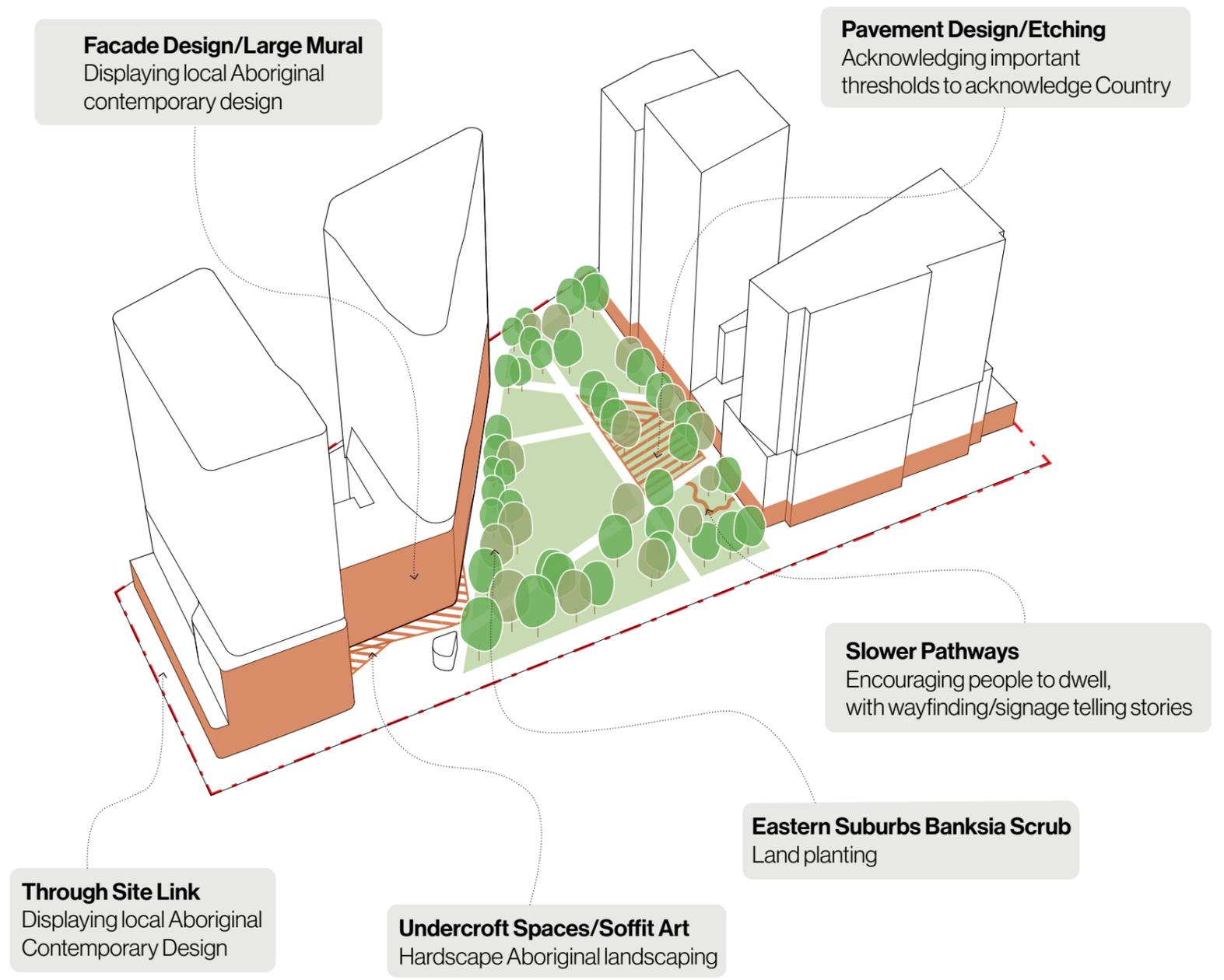
These meeting places allow discussion and learning, an informal place to allow for quietness and reflection, and to reveal qualities of the built and natural environment.

The proposed landscape design includes the planting of significant portions of Eastern Suburbs Banksia Scrub.

This sclerophyllous heath is an endangered ecological scrub that has declined by over 97% from its original community. The scrub is a community of rare and endemic species and its wider protection is an important step in ensuring native bush regeneration.

The Arncliffe project has the potential to engage with Aboriginal Design in the following (but not limited to) ways, as illustrated in the adjacent diagram:

- **Shared pathways** with patterns in coloured asphalt
- **Resting places** with treatments in pavement, seating, landscape art
- **Slower pathways** encouraging people to dwell
- **Iconic sculptures or murals** to mark important gateways and/or zones, communicating stories and design
- **Architecture** reflecting the form, colour and texture of cultural themes
- **Facade design/large mural** displaying local Aboriginal contemporary design
- **Columns** painted up in colours and patterns of Country
- **Undercroft spaces/soffit art** with hardscape Aboriginal landscaping
- **Native planting** with generous portions of Eastern Suburbs Banksia Scrub.



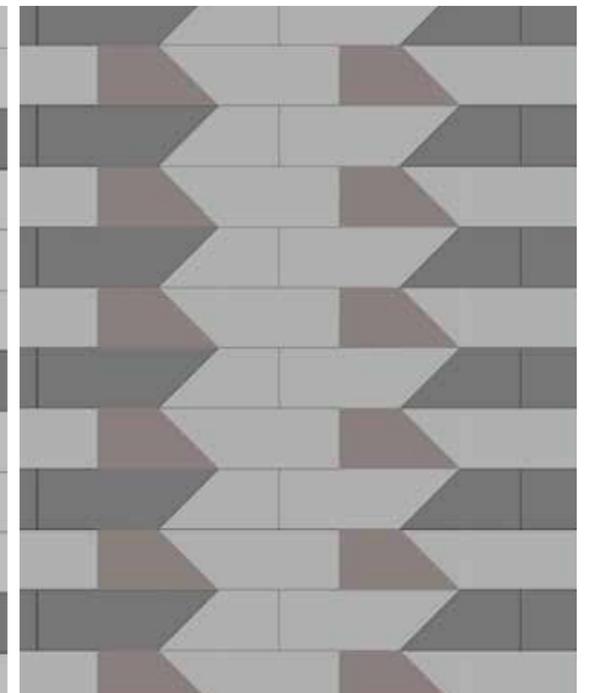
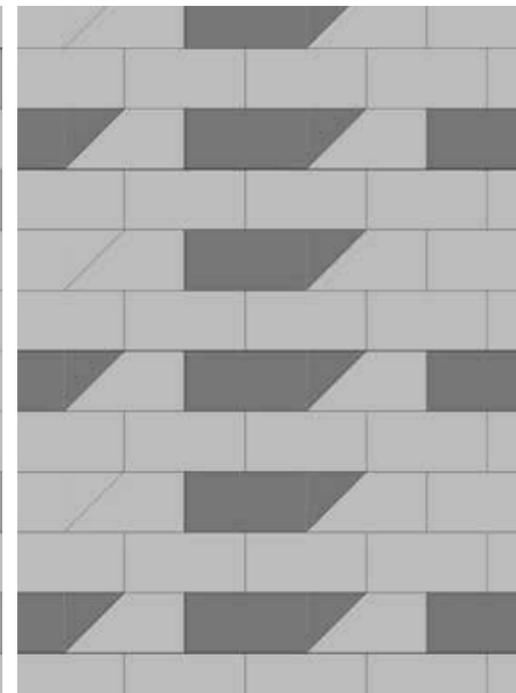
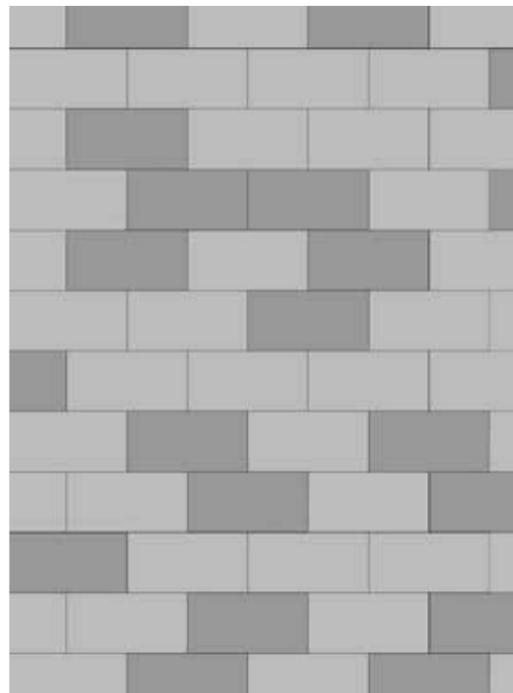
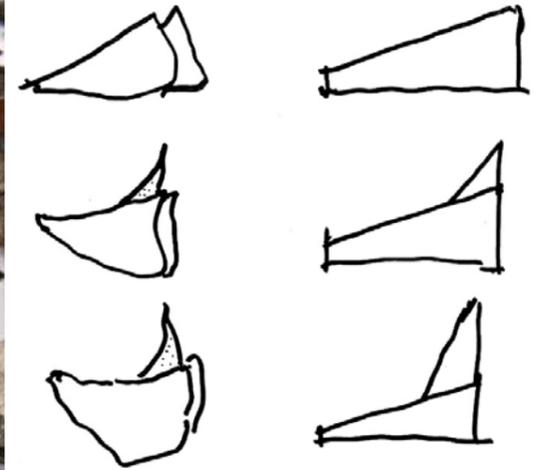
Pattern and Abstraction

The concept of landscape regeneration is represented in the design of the pavement in the public domain and featured in the ker civic spaces.

The Banksia seed germination is represented in detail areas of pavement in important civic spaces in the precinct

The concept of the pattern is derived from the process of seed germination, representing:

- Field
- Seed dispersal
- Germination



Sculptural and Discovery Play

Sculptural play elements sit in the landscape within Eden Street Park. The design of the play elements is inspired by the 6 seasons of the Bidjigal calendar.

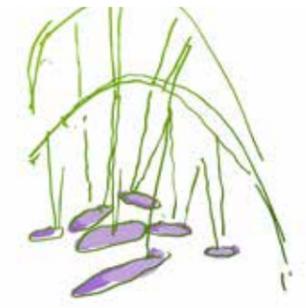
The sculptural play space represents the six seasons through representation of six flowers which are key indicators for those seasons. The flora is abstracted into play elements including :

- Waratah / climb and lookout
- Angophora gum / slide
- Wattle / climbing structure
- Lily Pilly / swing
- Pea flower / spin
- Dianella / tunnel and scramble



The design of the play space integrates the following

- Story telling,
- Understanding of people and culture and environment.
- Exploration and discovery through self determined play.
- The sculptural elements are something significant to engage and excite.



Wattle / climb

Waratah / climb and lookout

Pea flower / spin

Dianella / tunnel and scramble

Angophora gum / slide

Lily Pilly / swing

4.6 CONNECTION THROUGH LANDSCAPE AND SEASONALITY

Ecology of the place

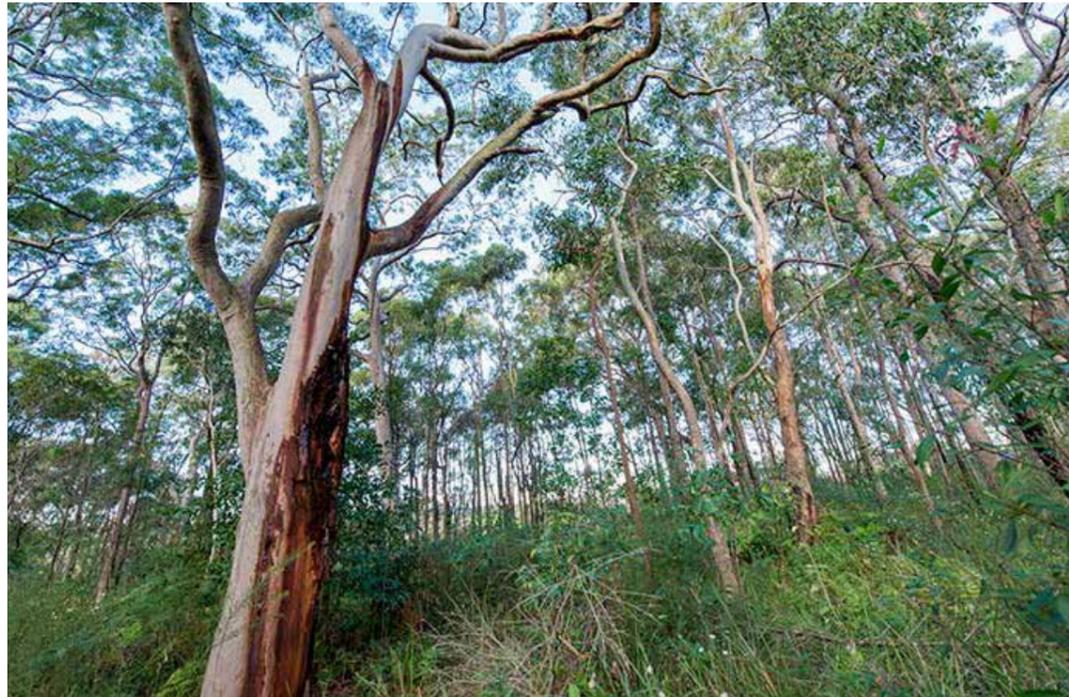
The Arncliffe site is located on the upper slopes of a landform which extends up from Botany Bay.

The vegetation community of area transitions up the slopes from Eastern Suburbs Banksia Scrub into Sandstone Woodland.

The vegetation type of the site exhibits characteristics of both coastal heath and woodland, including Banksia, Angophora, and Iron Bark Eucalypts.

The Eastern Suburbs Banksia Scrub is an important ecological community to the local area, and is important to the local Bidjigal community.

The landscape design of the Eden Street Precinct will integrate the locally indigenous planting of these vegetation communities.



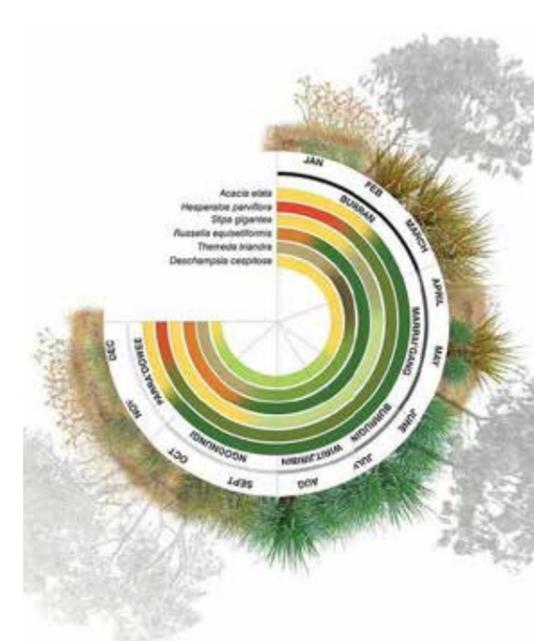
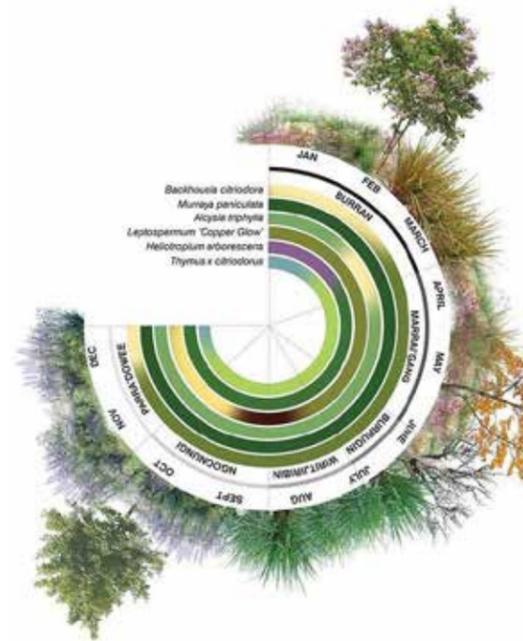
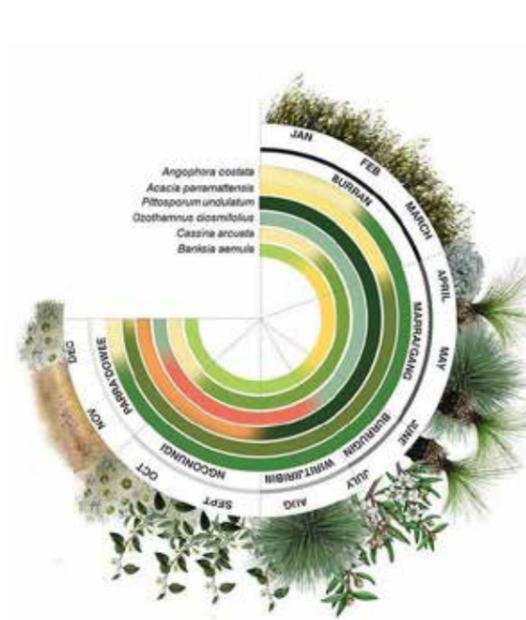
The Bidjigal Calendar : Six Seasons

Traditional knowledge, like that captured in these Indigenous seasons calendars, tell us much about the ecology of Australia.

Indigenous calendars inform the understanding of the relationships between people and the seasonal cycles of resource availability with respect to plants and animals.

The local Bidjigal calendar will be expressed directly in the selection of plant material in Eden Street Arncliffe. Plan palettes are being developed to ensure that seasonality is expressed and demonstrated on the site.

The understanding of the seasons will also be expressed in the design of the play area, making Indigenous knowledge more accessible to children and the broader community.



4.7 ONGOING MANAGEMENT AND ENGAGEMENT WITH THE SITE

The complex and dynamic relationships that characterise Country mean that making a connection with Country is not a task that will ever be completed, but rather an ongoing commitment to pay attention and to evolve our understanding, before, during and beyond the timeframe of a single project lifecycle.

Ongoing Involvement and Management

To ensure a meaningful and curated landscape into the future it is proposed to engage Indigigrow for the design development, planting supply and future maintenance of the project for the key open space and communal spaces.

The scope of involvement for Indigigrow is to:

- Work with the design team in co-design workshops to develop a unique indigenous palette that is site specific.
- Grow plants for installation on the site.
- Be involved in the ongoing management and maintenance of the site to ensure that the native planting is curated and managed in the long term.



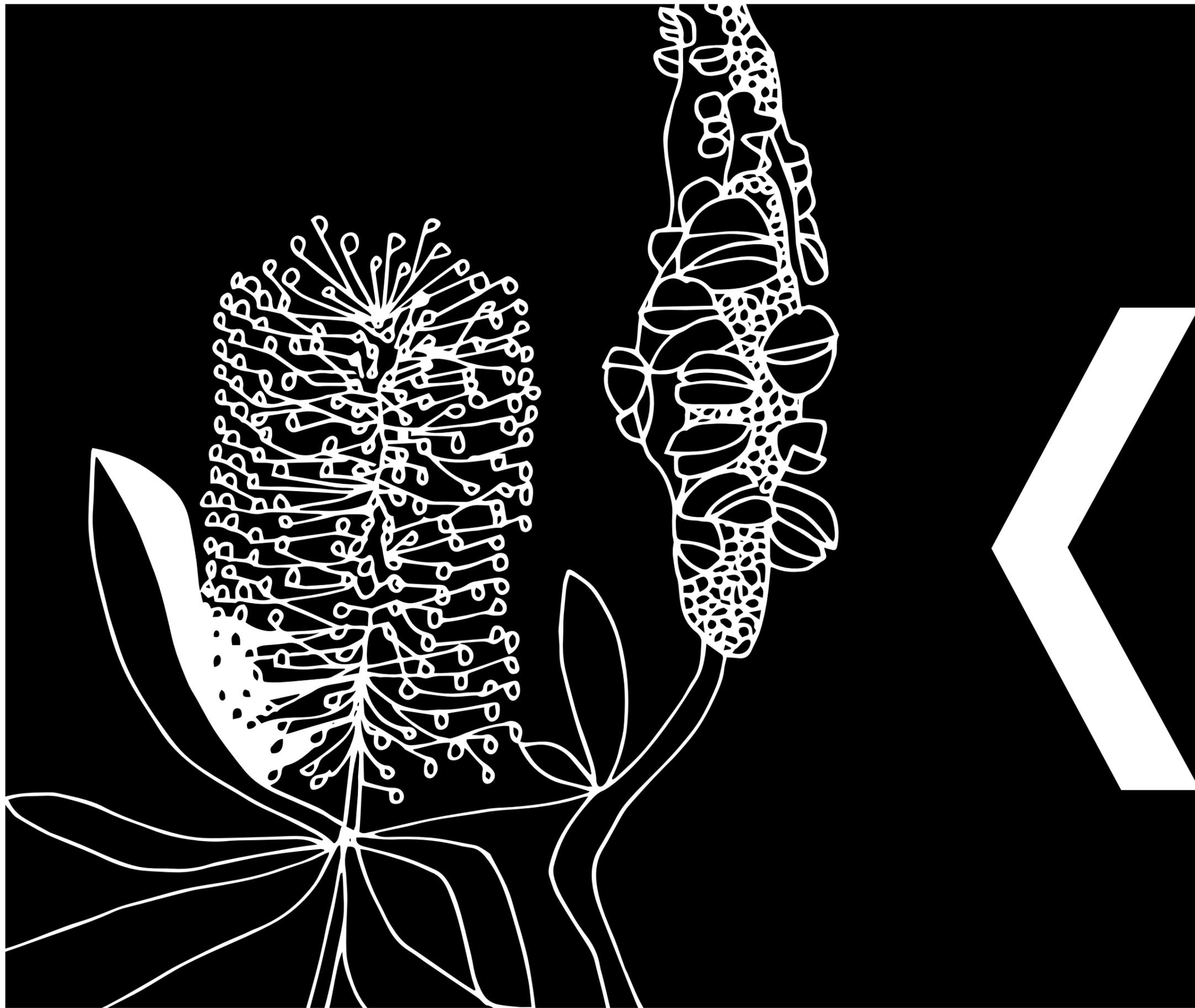
Peter Cooley, Indigigrow



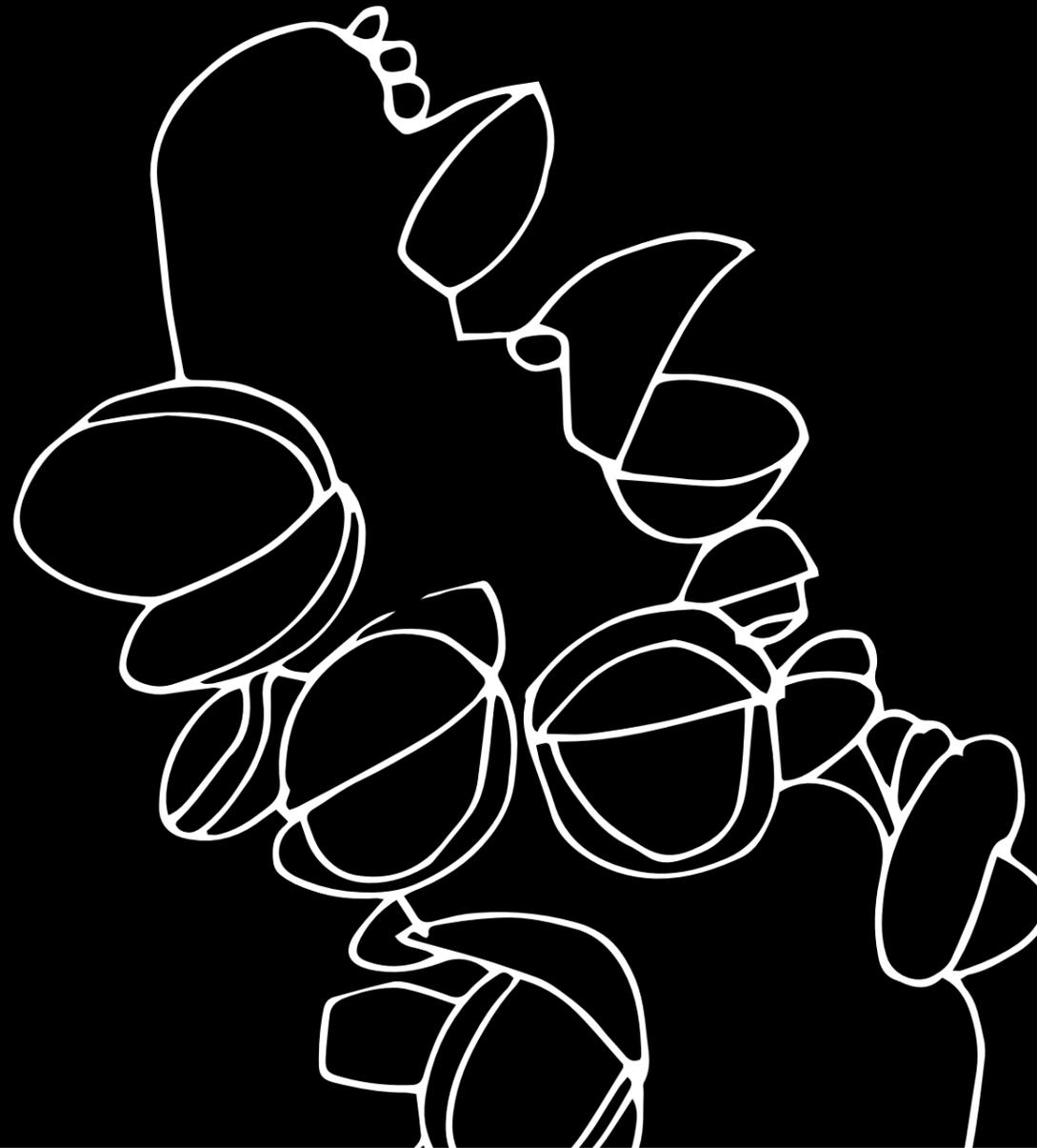
Codesign design with Peter Cooley, Indigigrow



Site visit to Indigigrow to meet Peter Cooley and learn about potential plant species for the open space



5.0 URBAN DESIGN STRATEGY



05

5.1 MASTER PLAN CONCEPT

The master plan concept is driven by a response to the public realm and landscape.

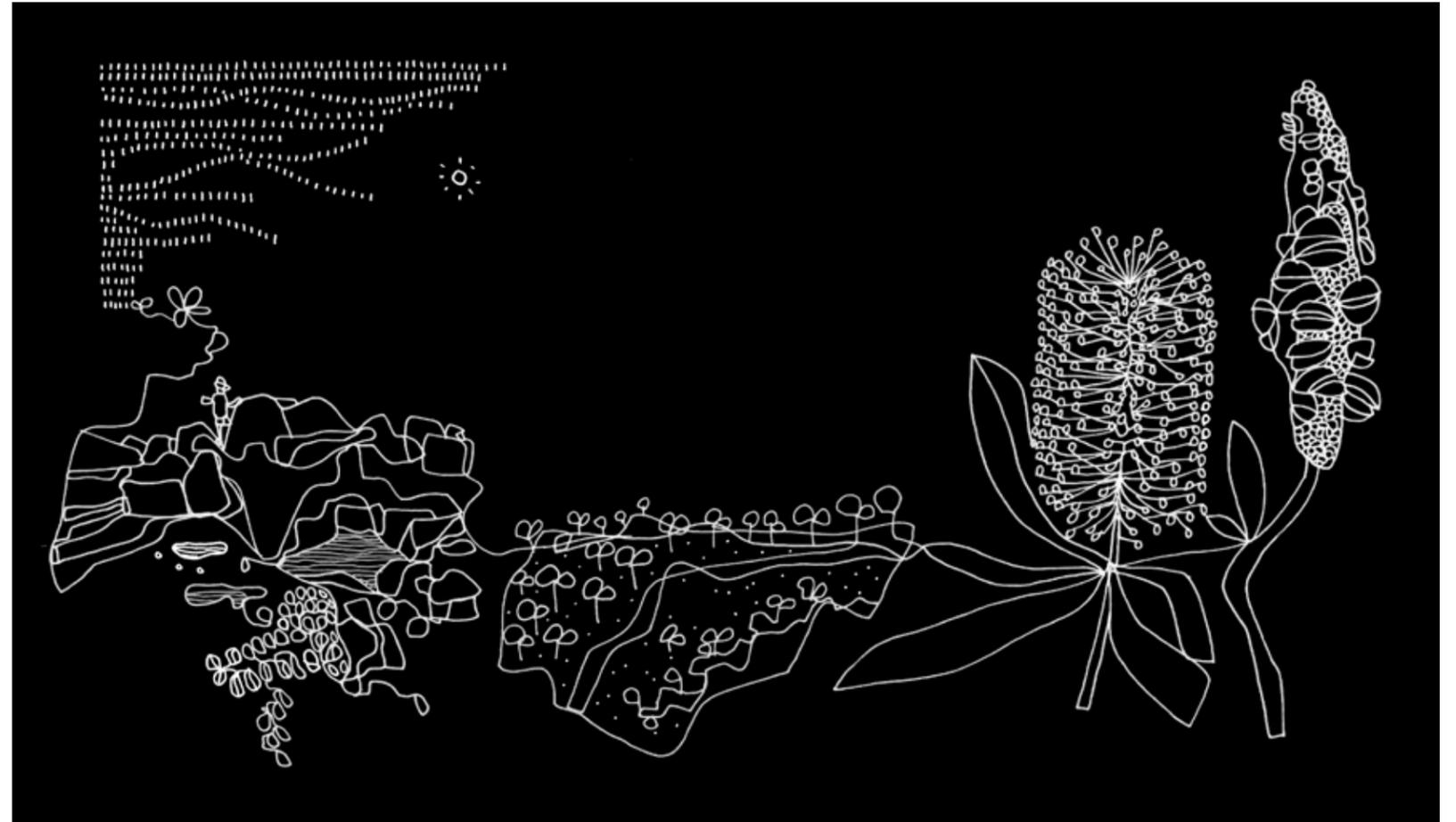
A place-based narrative has been developed that reflects the unique qualities of Arncliffe. This complements the strategic planning vision while providing tangible qualities for people to connect with and support.

Key to our methodology is the creation of a rigorous approach underpinned by urban design principles that enable a whole of precinct approach. These underpin the identity and vision for the project and establish key objectives that respond to the site's policy context. Within these principles, built form typologies, staging, phasing and other development scenarios have been tested and confirmed in a robust way without altering the overall integrity of the project.

The urban design principles also articulate the urban logic for the precinct in the form of whole of site strategies.

The urban design principles for the project align with the GANSW Better Placed and Greener Places objectives and have been identified in section 5.2;

-  1. Better Fit
-  2. Better Performance
-  3. Better Community
-  4. Better for People
-  5. Better for Working
-  6. Better Value
-  7. Better Look and Feel
-  1. Integration
-  2. Connectivity
-  3. Multifunctionality
-  4. Participation



5.2 URBAN DESIGN PRINCIPLES

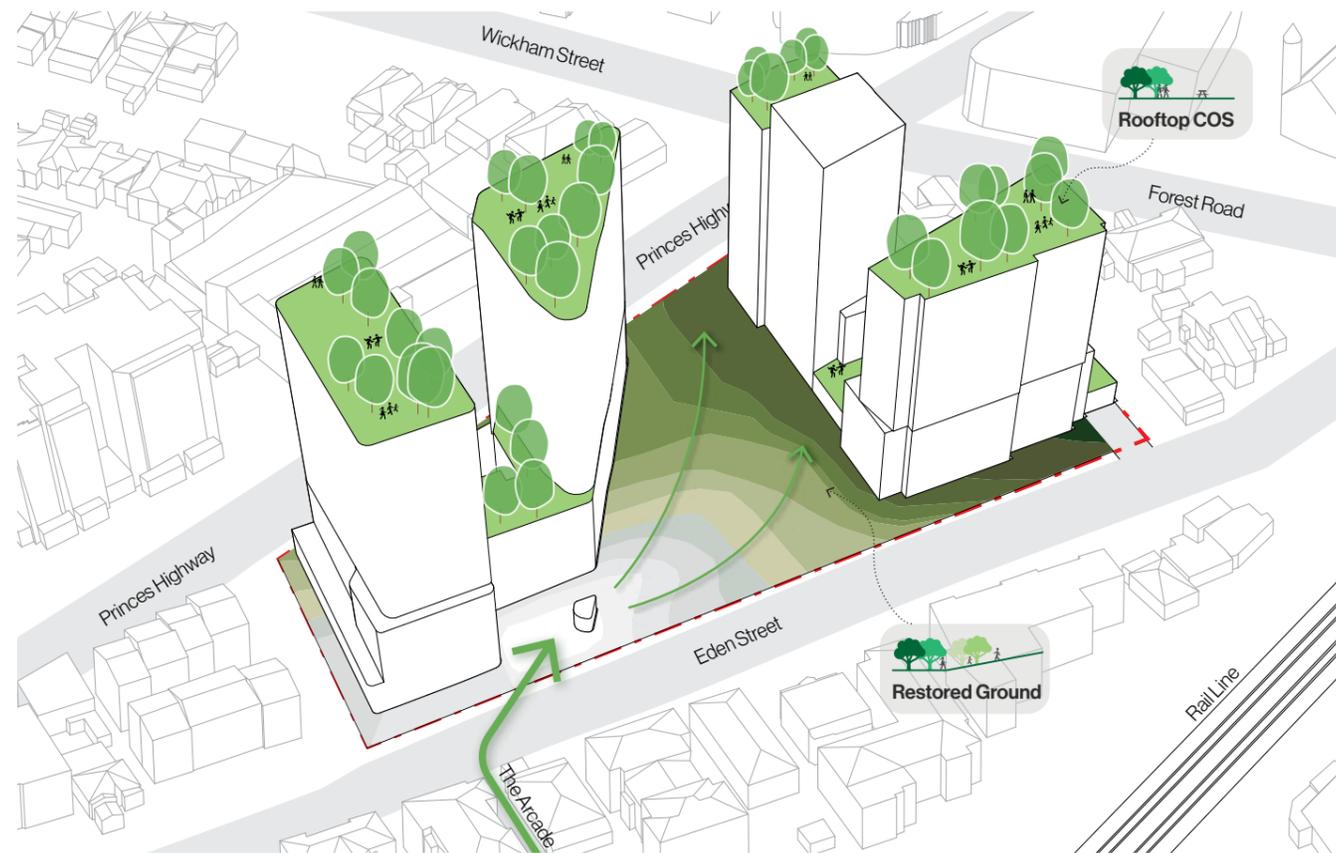
Return to Landscape

The design response will reinstate the natural topography of the site which has a gradual fall from south to north.

Within the site, the land form is sculpted to facilitate access to buildings at different levels and folded to create usable outdoor places. Edges are active and respond to the landscape condition in different ways across the precinct.

Objectives:

- Reinstating the natural topography of the site.
- The new public park will cater to local residents and the Arncliffe community (DCP 7.7.1).
- Embed a green network of recreational and ecological spaces that will contribute to the visual quality of the precinct.
- Communal open spaces to be located on rooftops to free up ground plane for public uses.



Two Precincts

The scheme is divided into two precincts - north and south. The form and massing approach to each precinct has been derived by its interface to the broader site to ensure contextual fit to the future Arncliffe Town Centre.

At the heart of the two precincts is the central park, a public open space that creates a large urban room and frames the interface between the podiums and the informal recreation and gathering.

Objectives

- in accordance with 7.7.5: Arncliffe Town Centre, taller buildings are located near the station visually reinforce the area as a centre and assist in highlighting the location of key connections and open spaces.
- Eden Street Park, the centralised park between the two precincts is a new local park catering to new residents with a centrally located lawn, gardens and significant tree planting.



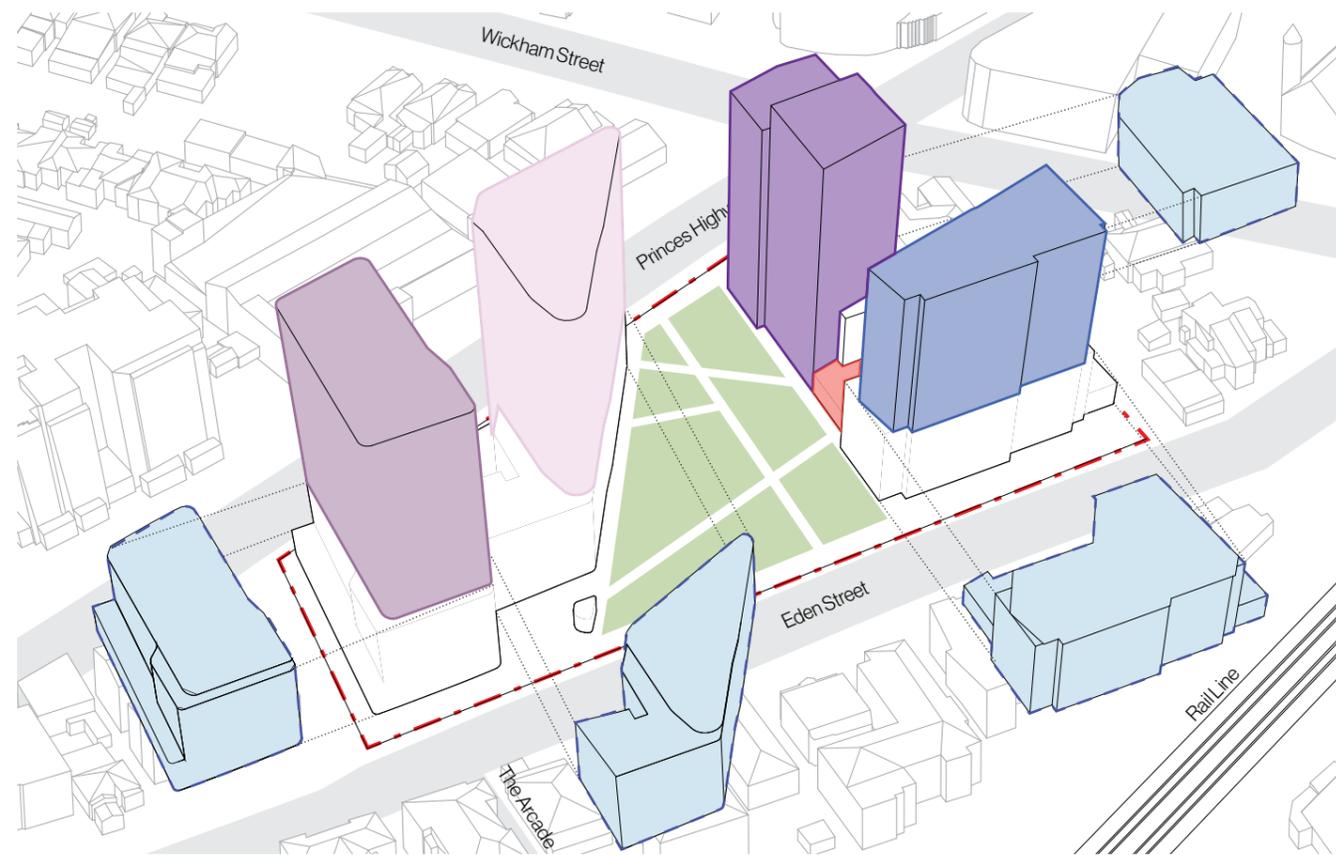
A diversity of buildings, materials and identities

The NSW Government is committed to ensuring that there is an adequate supply of new dwellings that are affordable, well-designed and located in places that people want to live.

The housing needs and preferences of the community have changed over time and will continue to change. Diverse housing supply reflects the diversity of people, their incomes, their needs and where they are in their lives.

Objectives

- High-quality residential development is encouraged above retail and commercial uses within the town centre, and as a standalone use on sites outside of the centre in accordance with 7.7.5: Arncliffe Town Centre Sub-Precinct
- Large format commercial uses at lower levels in accordance with 7.7.6: The Princes Highway / Arncliffe Sub-Precinct
- Residential levels located above lower commercial levels with visual and acoustic separation from busy road frontage.



- LEGEND**
- Site boundary
 - Public park
 - Private townhouses
 - Tower A
 - Tower B
 - Tower D
 - LAHC apartments (Tower C)
 - Podiums

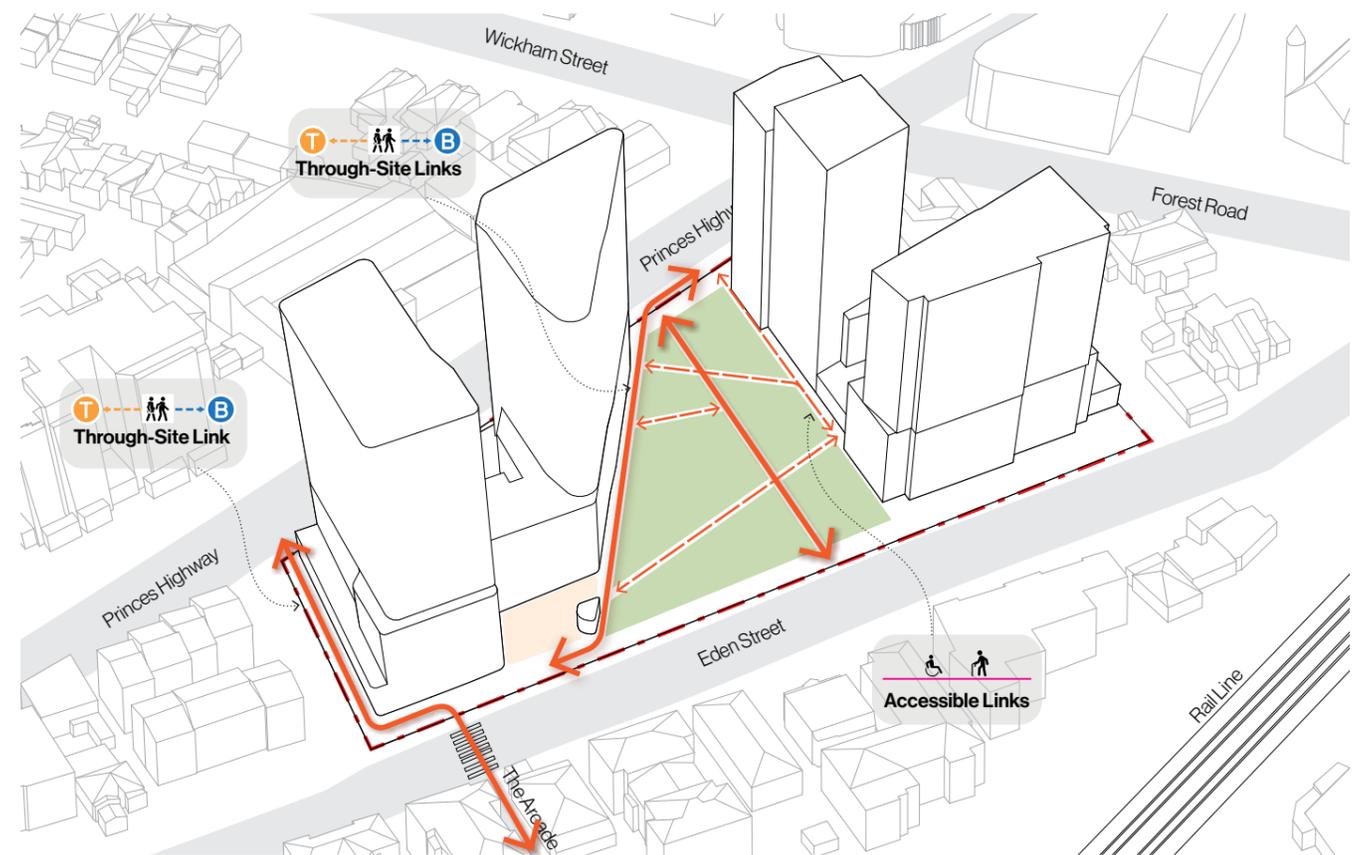
Provide safe, permeable and legible connections

Improve and facilitate amenity through and surrounding the site.

Create and enhance through site links to unlock the site's access between Eden Street and the Princes Highway. Promote connection to The Arcade to leverage the proximity of the precinct to Arncliffe Station.

Objectives:

- Existing and new pedestrian links improve access through the site and its surrounds to improve walkability (DCP 7.7.1).
- Provide new connections in accordance with DCP 7.7.39.
- Ensure dignity and equity of access for all occupants.
- Differentiate public open spaces to facilitate different uses.
- Separate vehicular and pedestrian access.



- LEGEND**
- Site boundary
 - Meeting space
 - Public park
 - Accessible connections
 - Major pedestrian connections
 - Vehicular access

A Mixed Use Precinct

The Rockdale DCP 2011 envisages the creation of a "vibrant Town Centres that provide for the daily needs of the local and wider community".

The redevelopment of the Eden Street site will include new retail opportunities, which will provide amenity and employment opportunities and activate the site in line with the DCP's objectives for the Arncliffe Town Centre Special Precinct.

Objectives

- 7.7.5: Arncliffe Town Centre to provide a vibrant mixed use Town Centre, extending along the east side of the rail line, with activity during the day and night.
- Activate the ground plane with retail and social uses.
- Locate social infrastructure and retail on the Eden Street side to facilitate this transition.



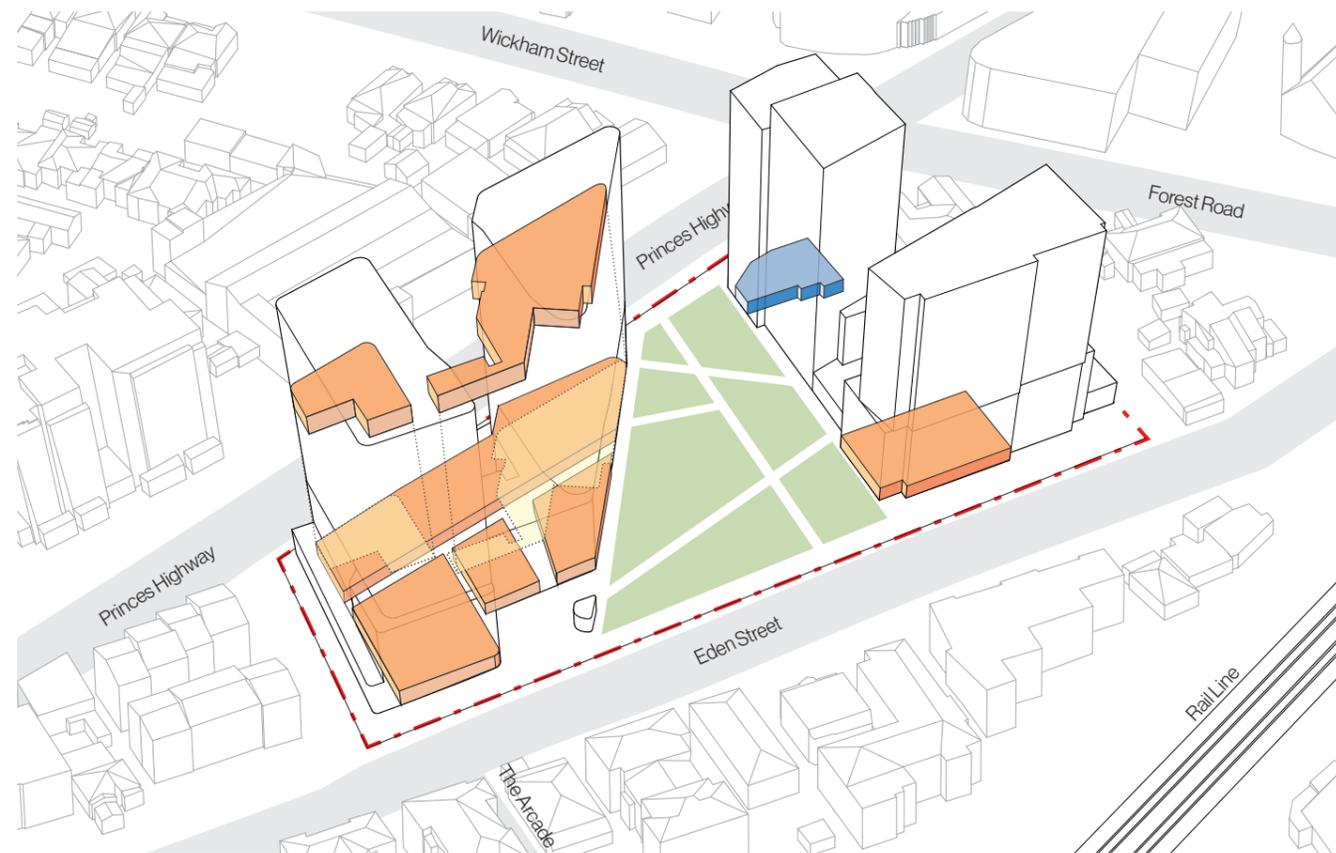
A series of key civic places

The site comprises three key civic spaces act as important nodes in the master plan. These include; the meeting place, the connecting place and the through site link.

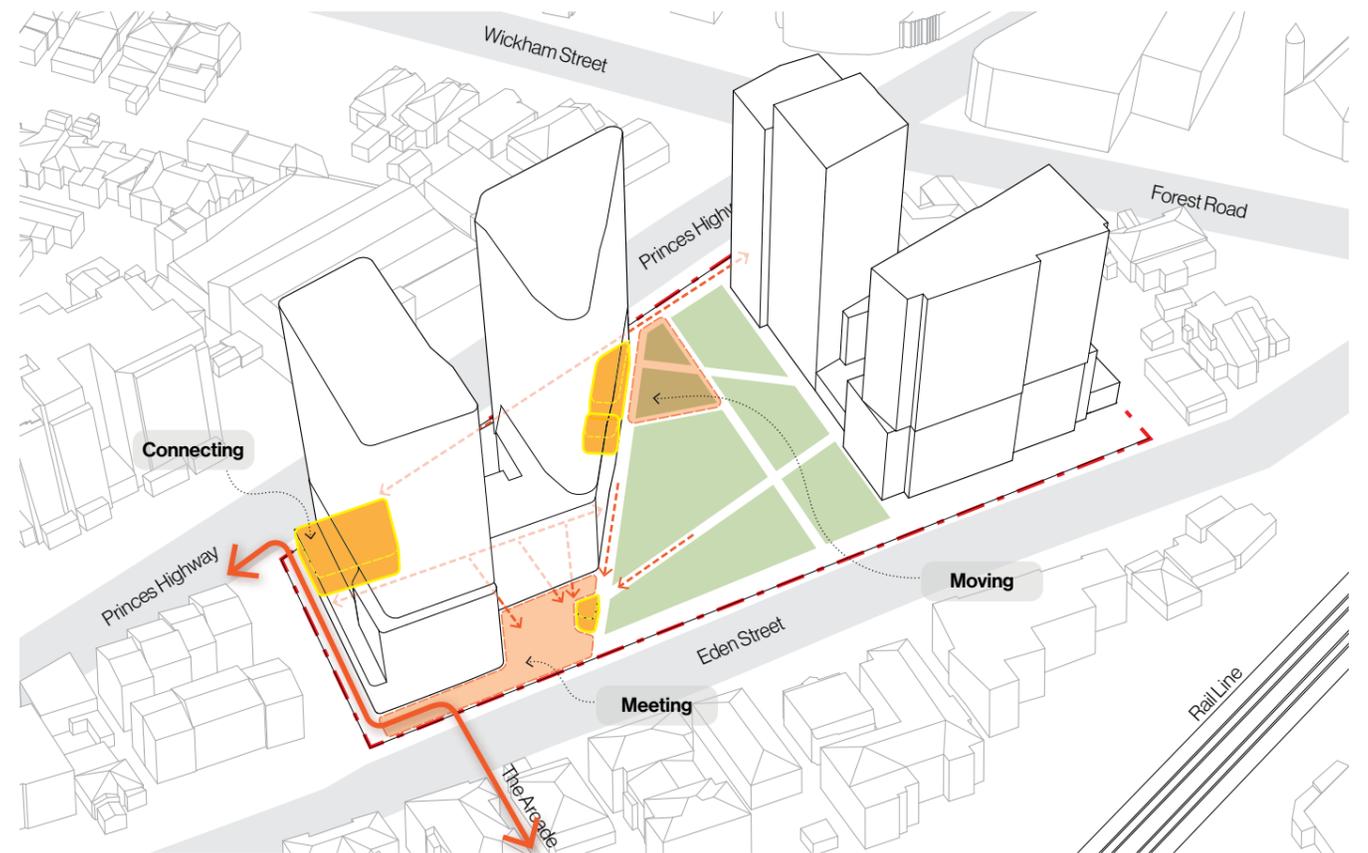
The Through Site Link is an important linear space which connects Eden Street to the Princes Highway. It interfaces and activates the south precinct and retail entries with the town centre.

The Meeting Place is a central space in the precinct which connects keys uses of the retail and open space. The Meeting Place contains areas to sit, eat, dwell, play and socialise.

The Connecting Place is another key civic space in the precinct with an emphasis on the connectivity of uses. It addressed the Princes Highway, retail spaces, through site link as well as nearby lobbies.



- LEGEND**
- Site boundary
 - Public Park
 - Retail Space
 - Child Care Centre



- LEGEND**
- Site boundary
 - Public park
 - Outdoor Civic Space
 - Indoor Civic Space
 - Main Connection
 - Through-site connection

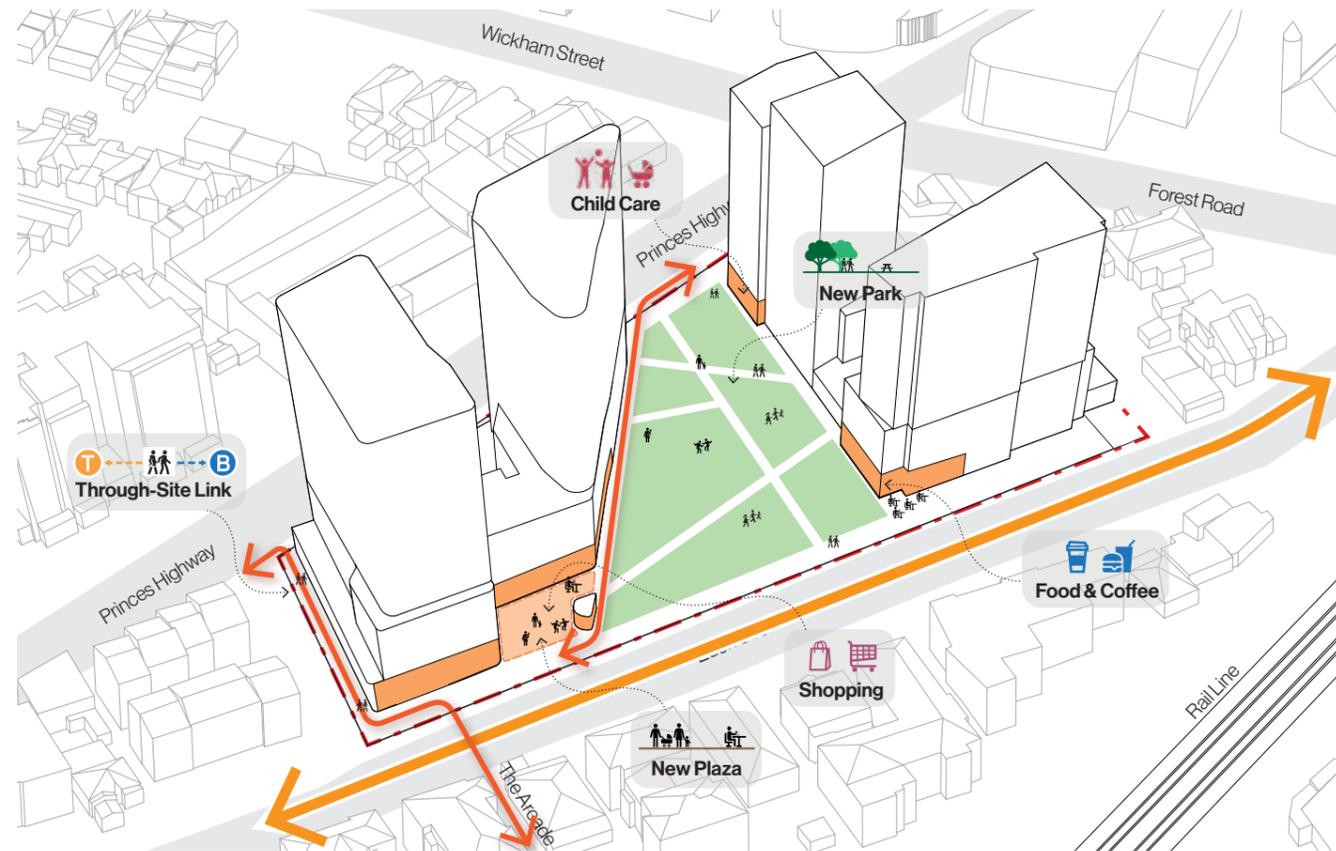
Promote Eden Street as an extension of Arncliffe town centre

The Eden Street interface comprises of a six storey datum, consistent with DCP controls and interfaces the public open space with active edges to promote Eden Street as a retail destination in the Town Centre.

Taller buildings near Arncliffe Station visually reinforce the area as a future centre and assist in highlighting the location of key connections and open spaces.

Objectives:

- 7.7.1: Eden and Burrows Street become retail streets, complementing Firth Street and extending the Town Centre uses and activity to the east of the rail line.
- 7.7.42 built to street alignment - the design response has setbacks from zero to three metres.
- Activate the ground plane with retail and social uses.
- Locate social infrastructure and retail on the Eden Street side to facilitate this transition.



- LEGEND**
- Site boundary
 - Key civic nodes
 - Meeting place
 - Public park
 - Town centre connection
 - Eden Street retail street

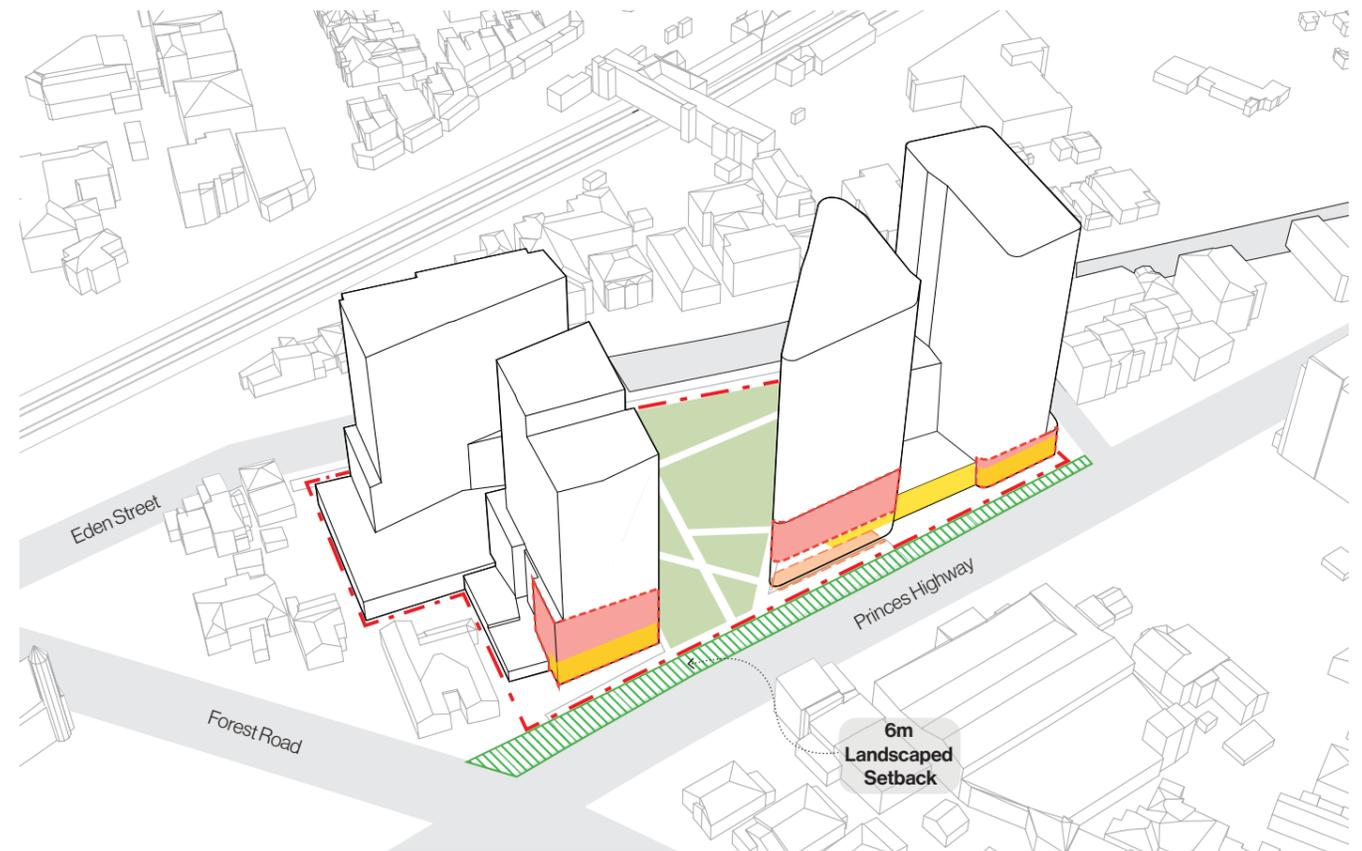
Princes Highway Interface

The Princes Highway Interface is setback along a 6m landscaped area for contribution to intermittent deep soil zones consistent with the DCP. This landscape zone will create a boulevard character along the Princes Highway and reinforces the location of the Arncliffe Town Centre with the planting of large trees.

Vehicle entry into the site facing has been amalgamated into one entry, encouraging minimal vehicle crossover. The active street edge provides for destination commercial spaces and encourages a mix of compatible uses and activity.

Objectives:

- 7.7.6: The Princes Highway / Arncliffe Sub-Precinct allows provision for destination commercial spaces and showrooms that are highly visible from passing vehicles
- 6 metre setback and dedication on sites adjoining Princes Highway. Proposed landscape improvements include significant boulevard tree planting and the creation of a dual footpath that allows for the staged delivery of the setback and continued pedestrian access during transition.



- LEGEND**
- Site boundary
 - Public park
 - Public Plaza
 - Street Wall
 - Active Frontages
 - Landscaped Setback

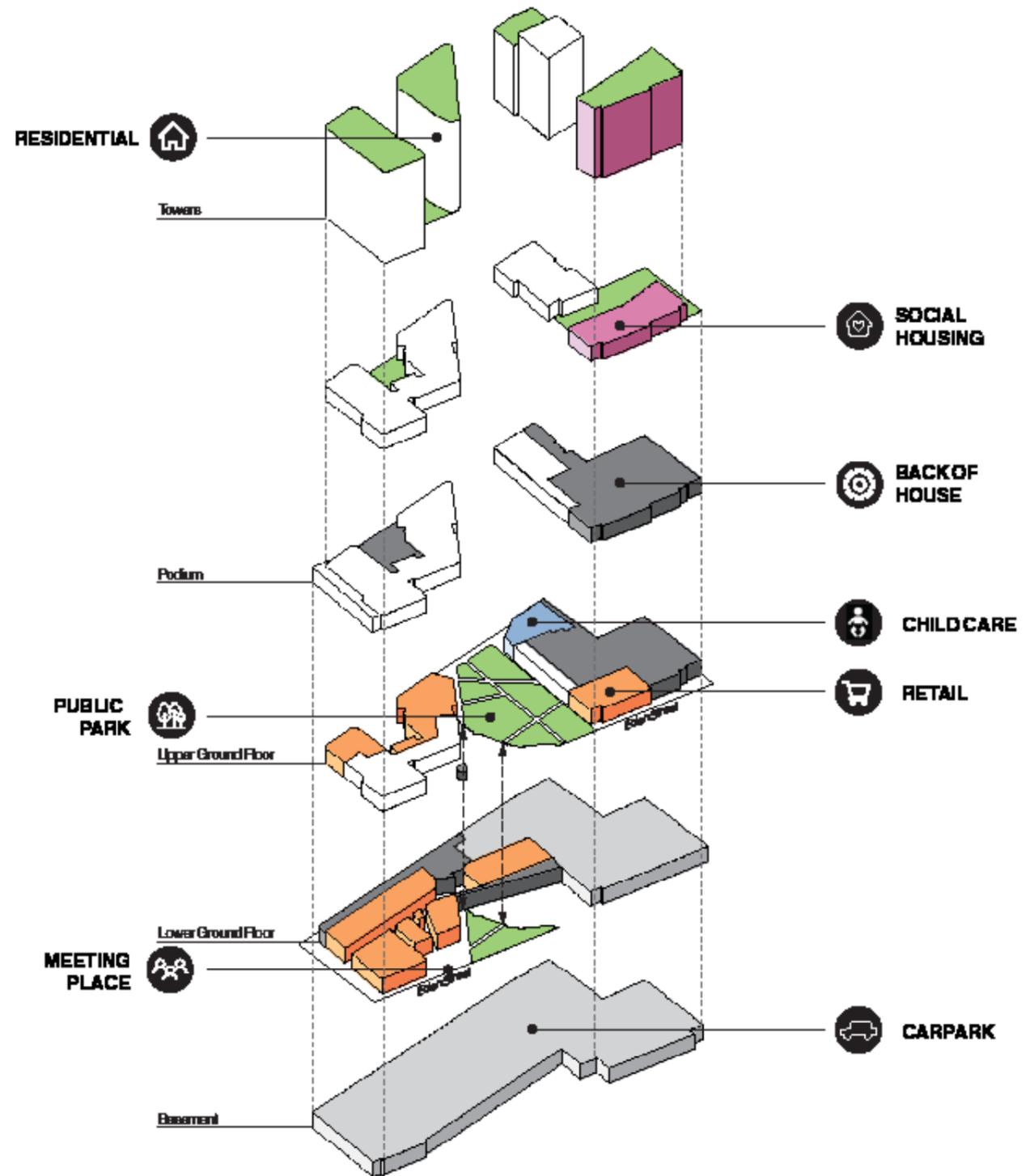
5.3 MASTER PLAN ELEMENTS

The project consists of four residential towers across two podiums, framing a new public park.

The proposal contains;

- 744 apartments across (4) buildings between 17-21 storeys in height (not including upper and lower ground levels), including:
- 186 market housing apartments in Building A;
- 202 market housing apartments in Building B;
- 180 social housing apartments in Building C; and
- 176 market housing apartments in Building D;
- 3,353m² gross floor area of retail premises;
- 3,727m² of communal open space;
- 797 spaces of lower ground and basement car parking; and
- 4,870m² of public open space including a 4,000m² publicly accessible park, and a 870m² public meeting space and through site link.

Equity and dignity in access is achieved by making all four towers accessible from the public park.



The master plan establishes a clear hierarchy in the distribution and uses of communal and public open spaces.

The purposes of public and communal open space range from providing opportunities for group and individual recreation and activities, opportunities for social interaction, connection to the outdoors and the natural environment as well as to provide some 'breathing space' for residents.

The public and communal spaces provide complementary uses to each other.

Public open space is targeted at connectivity and activation, whereas communal open space is focused on daily needs for individuals and smaller gatherings.

The master plan establishes a public ground plane, which connects built form uses and activity nodes.

The core park space of 4000m² is located at the centre of the site facing Eden Street.

The consolidation of area into the public domain facilitates greater opportunity for uses and activities.

Communal open space is distributed to be equally allocated to individual buildings as rooftop or above loading dock.

Rockdale DCP 2011

The design response complies with the Rockdale DCP 2011 clauses;

- 7.7.1b, by providing a minimum width of 50m along the Eden Street frontage with a site area of 4,000m² public park.

Public Open Space

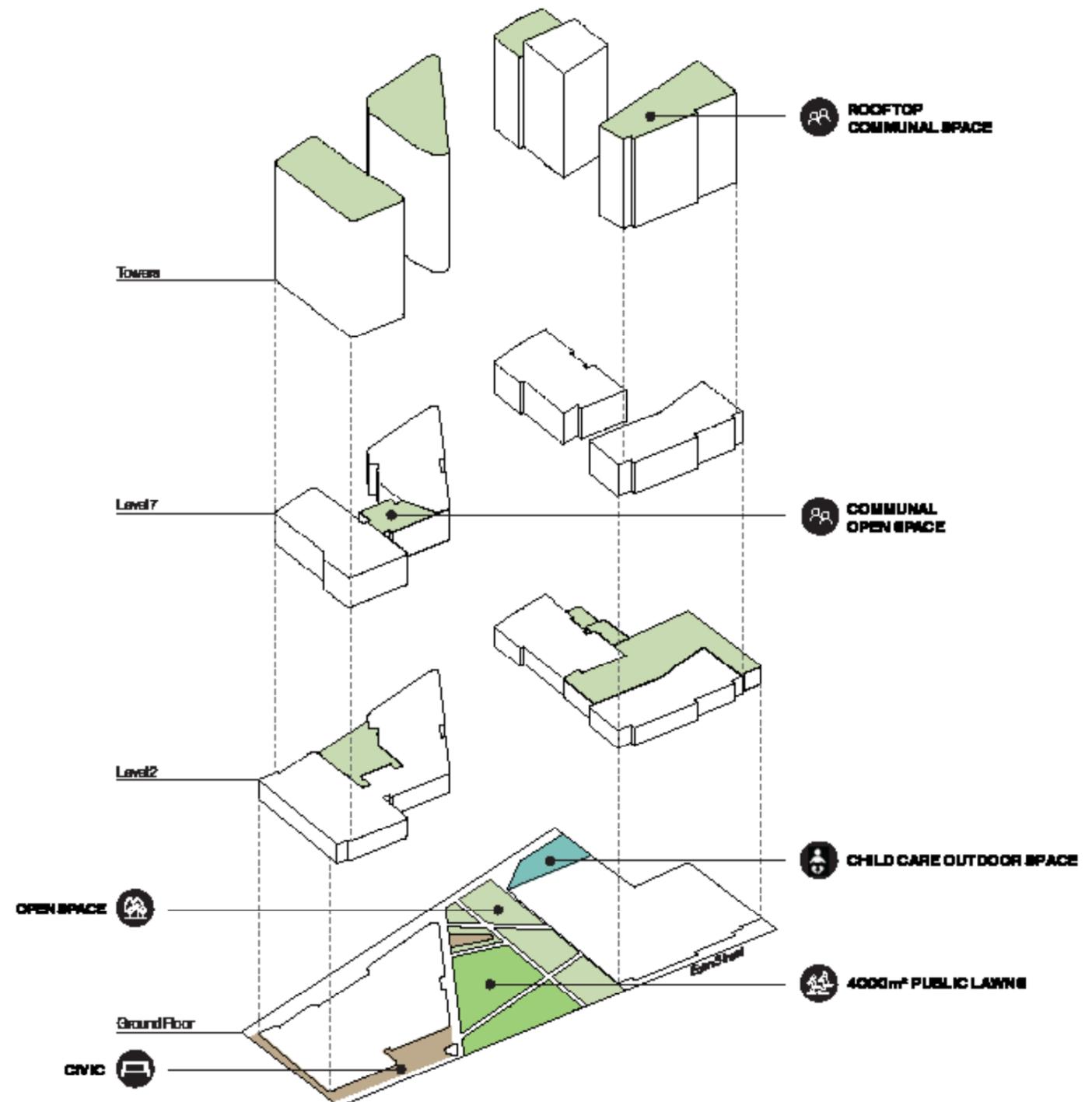
The design principles for the public open space are discussed in more detail in Chapter 6 and include;

- Well connected to the Eden Street frontage.
- Located for good sun access.
- Linked through desire lines and view lines to activity areas.
- Interconnected to the public nodes, urban uses and activity areas within the site
- Flexible for a range of recreational opportunities and larger gatherings.
- A venue for social gatherings and connections.
- Highly active, facilitating play and recreation.

Communal Open Space

The design principles for the communal open spaces are discussed in more detail in Chapter 6 and include:

- Places for residents to use on a daily basis.
- Quiet and intimate places which are suitable for individuals or small gatherings.
- Provide areas for sensory and communal gardens.



5.4 SUSTAINABILITY

Whole of precinct sustainability initiatives

A precinct wide approach is adopted across core imperatives: equitable | resilient | enabled. Interdependent strategies deliver a high quality public realm that responds to urban heat, water quality and comfort.

Priorities are integrated at a built form scale: resource regeneration | health + wellbeing | whole of life. These act to seamlessly address the triple bottom line; delivering health benefits by reducing resource consumption and improving livability by managing energy costs.

- Precinct and built form opportunities and initiatives translate to a development response that delivers integrated design outcomes that benefit all residents and businesses.

7 STARS

THERMAL COMFORT



Design:

- Building fabric optimisation
- Passive solar shading/heating
- Natural ventilation effectiveness

Perform:

- Average 7 star NatHERS rating



BASIX 45/38

ENERGY (Social/Market)

Design:

- Individual comfort control
- Energy efficient appliances
- LED lighting
- Internal clothes drying line
- Ceiling fans (Building C)

Perform:

- BASIX Energy 45 (social)
- BASIX Energy 38 (market)

45

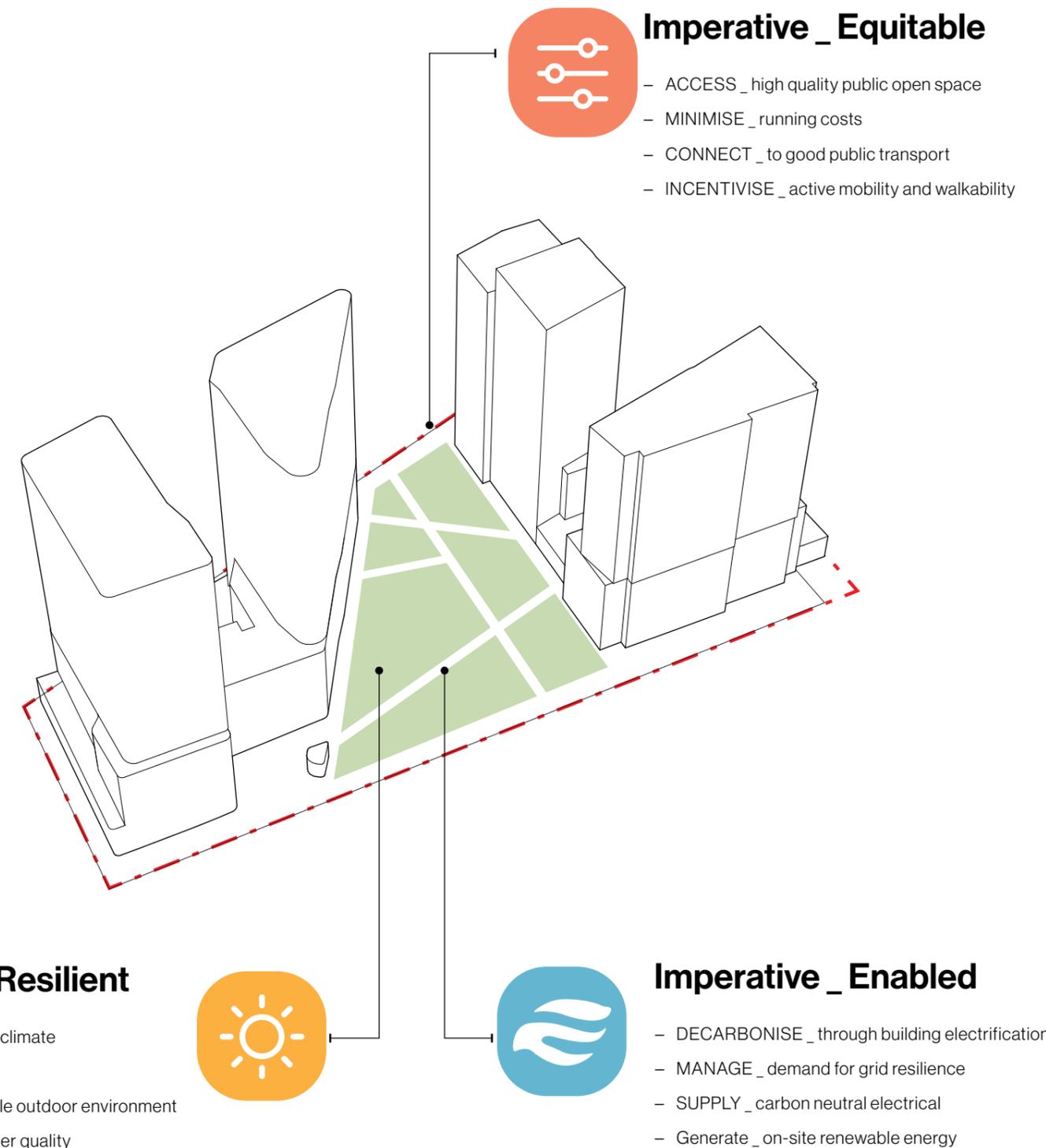
WATER for all buildings

Design:

- Water efficient fixtures and fittings
- Alternative water reuse strategy
- No water-based heat rejection

Perform:

- BASIX Water 45 (all)



5.5 MASTER PLAN COMPLIANCE

The proposed tower orientation and form has been designed through extensive testing to ensure compliance with solar access and to maximise district views to Sydney Airport, Botany Bay and the CBD.

Rockdale Development Control Plan 2011

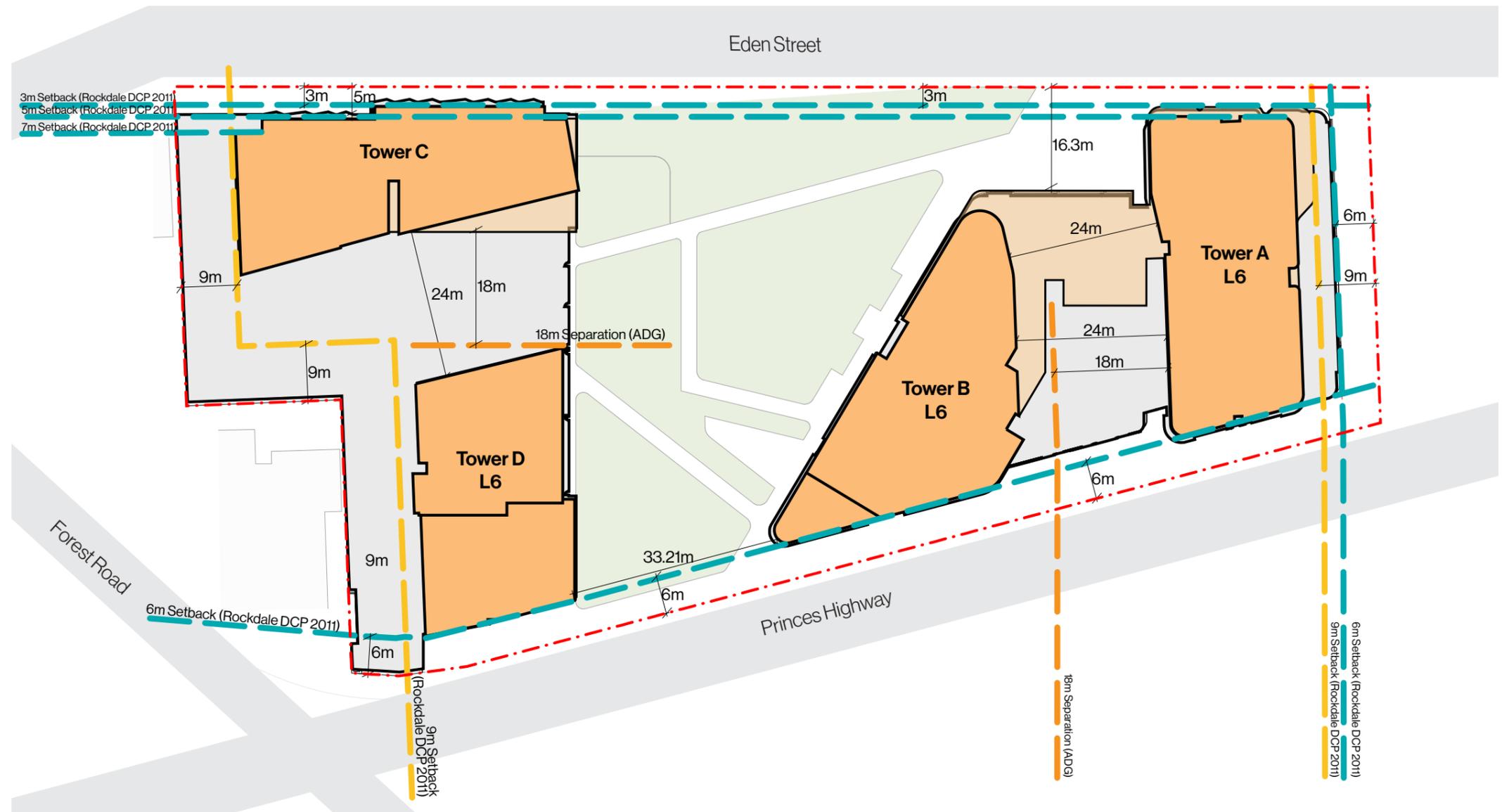
The proposed design complies with building setback requirements, achieving a minimum front setback of 3m, and a minimum setback to the Princes Highway of 6m.

Apartment Design Guidelines

The adjacent diagram demonstrates the compliance of all residential buildings with Part 2F of the ADG regarding building separation, which requires:

- 12m separation between habitable rooms for buildings up to 4 storeys
- 18m separation between habitable rooms for buildings between 5-8 storeys
- 24m separation between habitable rooms for buildings 9 storeys and above.

No screening has been used to achieve required separation, and in some instances building separation exceeds the requirements.



LEGEND

- Site boundary
- Habitable to Habitable Dwelling Setback (ADG)
- DCP Setbacks
- ADG Setbacks

Solar Access to public open space has been achieved and is illustrated in the adjacent diagram.

Rockdale DCP2011

The design response complies with the following DCP Clauses:

- 7.7.2b: The configuration of buildings and structures must ensure that a minimum of 50% of the area of parks and green spaces receive a minimum of 3 hours during lunch hours (12-2pm) on 21 June (mid winter)

Apartment Design Guidelines

The current master plan is compliant with the following applicable ADG requirements:

- 25% of the overall site area to be communal open space
- Development to achieve a minimum of 50% direct sunlight for a minimum of 2 hours between 9 am and 3 pm on 21 June (mid winter).

Solar compliant communal open space is demonstrated in the adjacent diagram and below.

The proposed master plan occupies a site area of 13,440m² necessitating a minimum of 3,360m² (25%) communal open space. The proposed master plan exceeds this minimum, proposing 3,558m² of communal open space.

This site necessitates a minimum of 1,778m² to achieve 50% direct sunlight for a minimum of 2 hours between 9 am and 3 pm on 21 June. The proposed master plan exceeds this minimum, achieving 2,131m².

For more detailed information refer to the DA4000 series in the Architectural Drawing set.



Overshadowing of adjacent properties

The adjacent shadow studies demonstrate that the school located to the south of the site on Forest Road will not be negatively impacted by the proposal.

The hours tested are those which students will be using the open space, and the diagrams indicate that the shadows cast will not impact these times.

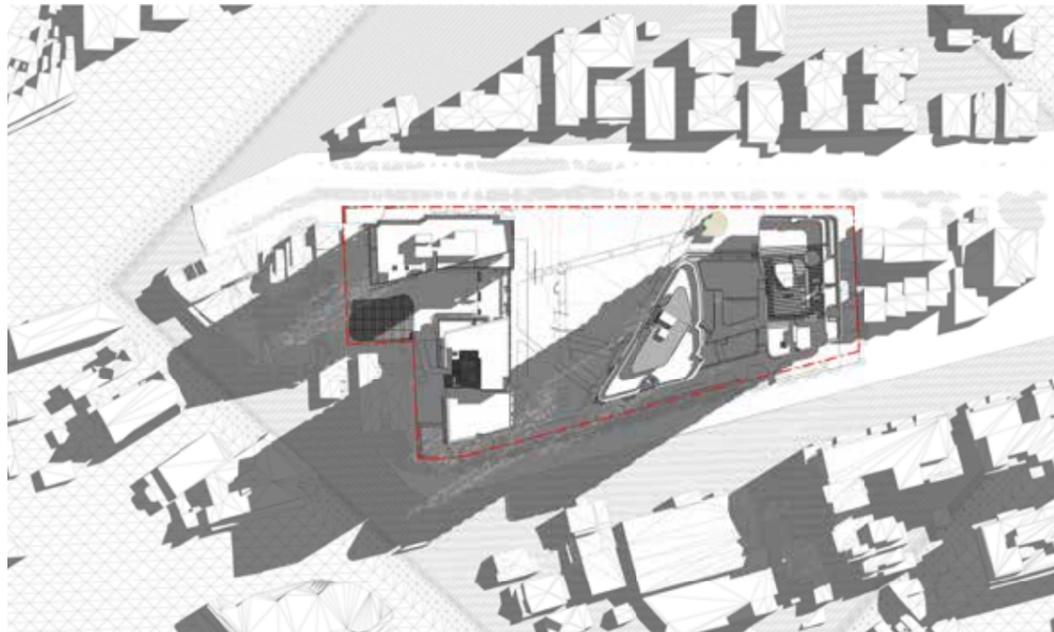
More detail is shown in the Architectural Drawing Set, series DA4500.



21st June 9am



21st June 10am



21st June 11am

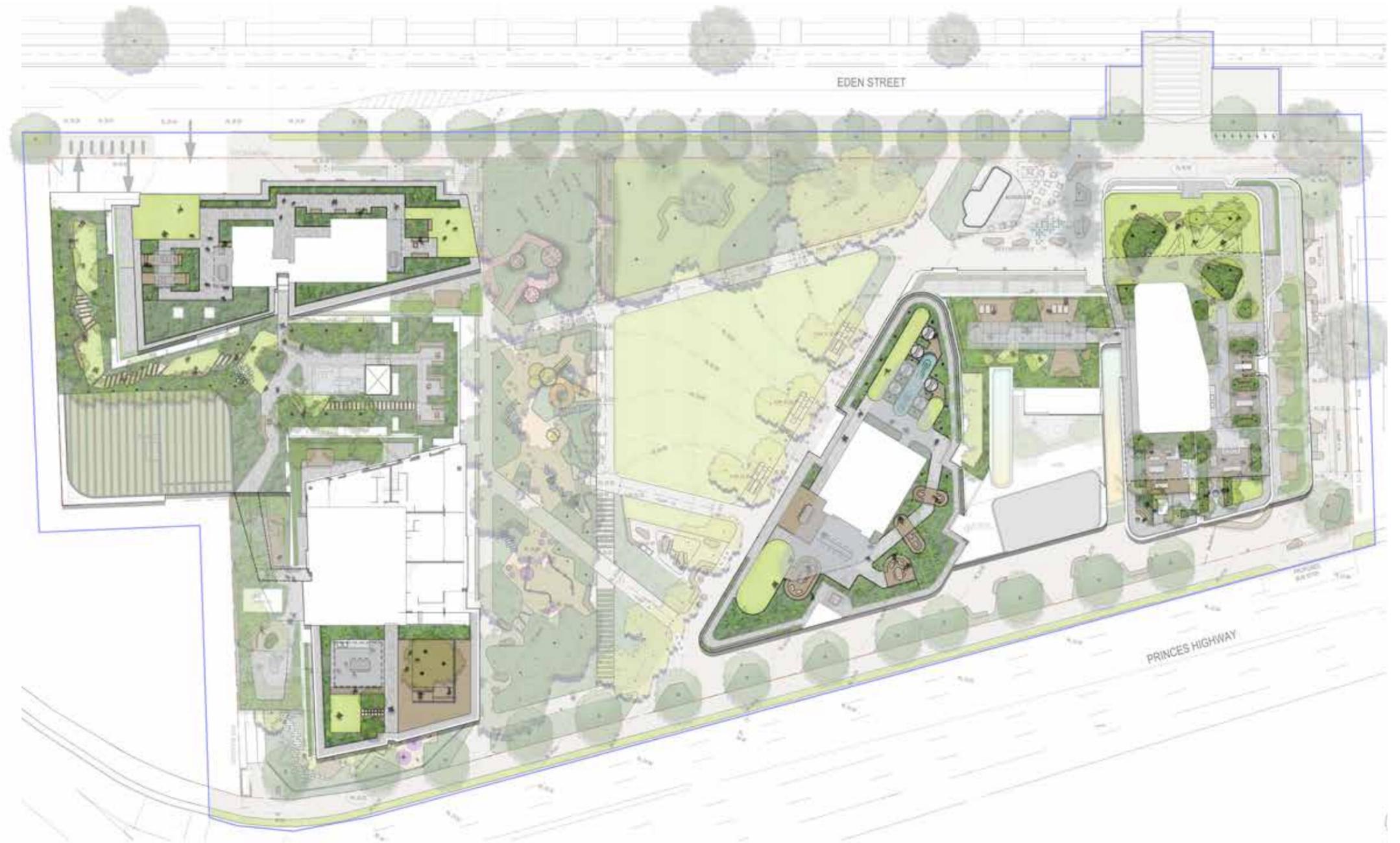
5.6 ILLUSTRATIVE MASTER PLAN

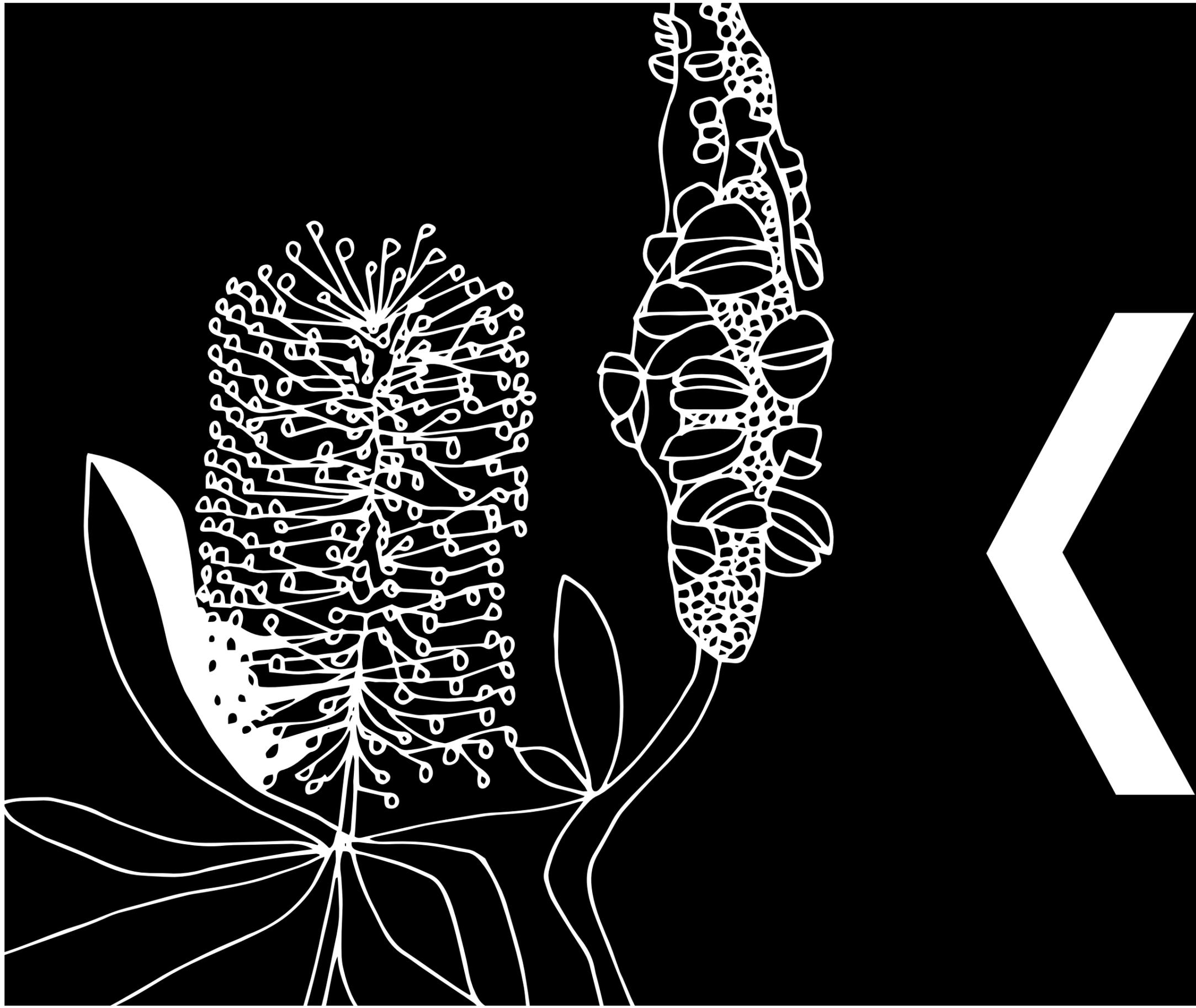
The Arncliffe Redevelopment Precinct will deliver new strata residential, social housing, retail and green open spaces that will offer greater housing choice in Sydney's south.

The proposed Mixed Use precinct incorporates four residential towers arranged around a generous new public park, that will also serve to connect residents and visitors from the Princes Highway, through to activated and accessible retail spaces along Eden Street and on to the amenity of Arncliffe Station.

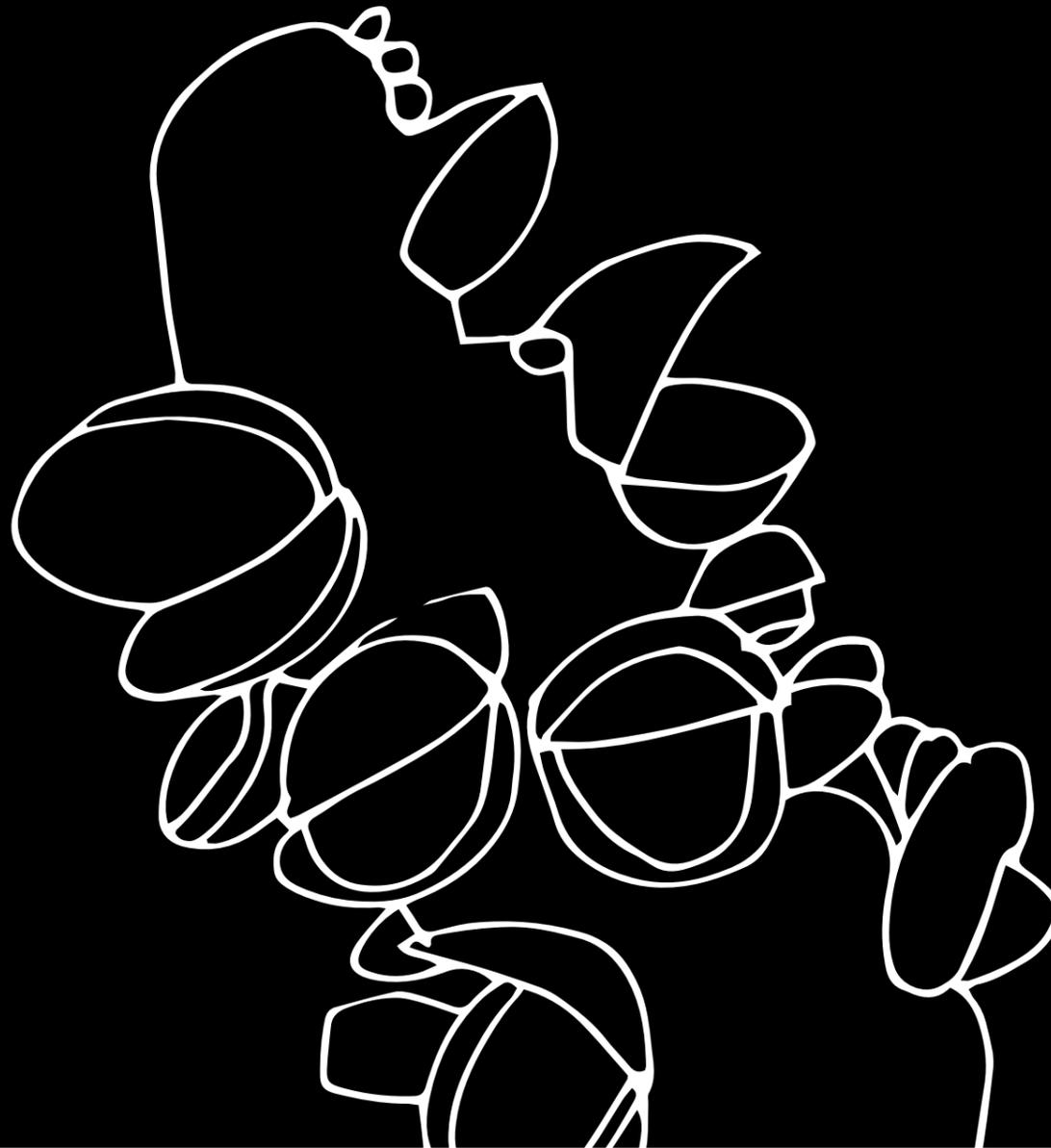
The proposed design integrates an enhanced green network of open and communal space, providing opportunities for recreation and activities, social interaction, connection to the outdoors and the natural environment.

The central open space separates the site into two precincts, which permit the development of form and massing designs that ensure an appropriate fit for the future Arncliffe Town Centre. Each residential tower offers a diverse and contextually-appropriate design, reflecting the diversity of residents and requirements.





6.0 PUBLIC REALM



06

Vision: The Eden Street Precinct will become a place of connection and authenticity which is strongly grounded in community, place and Country.

It will be a place to make friends, to live in close proximity to employment, to schools, to connect with nature and to create a life-long connection with the place.

It will form part of a constructed ecology in which an indigenous planting palette will be curated and nurtured.

6.1 INTRODUCTION

The master plan establishes a framework of distribution and uses in the public realm. The purpose of public domain and open space is to provide opportunities for informal recreation and play, connection to the outdoors and the natural environment as well as places for outdoor dining and social connection.

The public domain in the precinct includes the Eden Street Park, a series of civic spaces, through site link and streetscapes. The public domain caters for residents, local community as well as the wider community who move through and visit the precinct.

The design principles for the public open space is to be:

- Well connected to the Eden Street frontage.
- Located for good sun access.
- Linked through desire lines and view lines to activity areas.
- Interconnected to the public nodes, urban uses and activity areas within the site.
- Flexible for a range of recreational opportunities and larger gatherings.
- A venue for social gatherings and connections.
- Highly active, facilitating play and recreation.



6.2 PUBLIC DOMAIN

Ground Floor: Eden Street and Princes Highway Frontages and Eden Street Park

The range of uses in the public domain extend through the site. Interconnected spaces are provided to play, gather, recreate and dwell.

The Eden Street Park provides the central green heart and gathering space for the community, residents and visitors to the site. The park incorporates a main link and path network which connects the civic spaces and park uses.

The site comprises three key civic spaces act as important nodes in the master plan. These include; the meeting place, the connecting place and the Through Site Link.



A summary of the proposed design

- ① Meeting Place
- ② Water play and seating
- ③ Kiosk / Meeting Place activation
- ④ Through-site link
- ⑤ Informal activity - Lawn area
- ⑥ Play area - Six season theme
- ⑦ Connecting Place
- ⑧ Moving Place

Lower Ground Floor

Eden Street is an important retail and civic street for the precinct and locality. The public domain facing Eden Street is focused on the meeting place, cafe and retail entry and through-site link.

The activated retail laneways extend the public domain through the lower ground level of the site, connecting to the variety of retail uses.

The core park space of Eden Street Park addresses Eden Street and provides a green frontage. The park provides a central gathering space for the site.



A summary of the proposed design

- | | | |
|------------------------------------|---------------------------------|--------------------|
| ① Meeting Place | ④ Through-site link | ⑦ Connecting Place |
| ② Water play and seating | ⑤ Informal activity - Lawn area | ⑧ Moving Place |
| ③ Kiosk / Meeting Place activation | ⑥ Play area - Six season theme | |

Meeting Place

The Meeting Place is a central space in the precinct which connects key uses of the retail and open space.

The Meeting Place contains areas to sit, eat, dwell, play and socialise. The ground plane extends into the retail laneways and park adjacent as a contiguous public realm.

Three tall trees, Hoop Pines, provide shade and act as the green markers to the space. The centre of the space includes an interactive water feature as a focus for informal play.

Along Eden Street, the space is anchored with a kiosk which provides an active use within the meeting place

A summary of the proposed design

- ① Kiosk / Alfresco seating
- ② Water play and gathering
- ③ Abstract banksia paving pattern
- ④ Alfresco area
- ⑤ Retail





Connecting Place

The Connecting Place is another key civic space in the precinct with an emphasis on the connectivity of uses. It addresses the Princes Hwy, retail spaces, through site link as well as nearby lobbies.

The connection between the external space and internal retail spaces reinforces the continuity of the public realm.

A summary of the proposed design

- ① Amphitheatre seating steps
- ② Large group gathering deck
- ③ Abstract banksia paving pattern
- ④ Bike parking
- ⑤ Proposed bus stop relocation
- ⑥ Through site link
- ⑦ Retail





Moving Place

The Moving Place is another key civic space which defines entry to the precinct through park, entry to the lower retail via escalators and to adjacent lobbies.

The Moving Space addresses the key diagonal through link between the Prince Hwy towards Arncliffe Station and is a main entry to Eden Street Park.

A summary of the proposed design

- ① Lower ground retail entry
- ② Large group gathering with BBQ facility
- ③ Abstract banksia paving pattern
- ④ Small group seating





Through-Site Link

The Through Site Link is an important linear space which connects Eden Street to the Princes Highway

The through site link interfaces and activates the adjacent retail entries. It contains places to sit and dwell, ensuring that the space becomes a useful civic space as well as public thoroughfare.

The through site link has a linear artwork along the boundary edge which provides an iconic and dynamic character to the space.

A summary of the proposed design

- ① Active edge with seating
- ② Artwork wall
- ③ Connecting Place
- ④ Retail





Princes Highway Frontage

The Princes Highway frontage creates an important civic presence to the precinct. The streetscape is defined by a row of Brush Box trees located in a planted green spine.

The streetscape frontage provides for linear pedestrian and cycle movement along the Highway, however it also provides the civic spine which to enter the Eden Street precinct.

The streetscape pedestrian environment includes

- 2.5m shared path, separated from the highway with 1.1m planted verge.
- Pedestrian pathway along the building edge which varies in width with a minimum 2.1m width.
- Central planted area with tree planting. Seating have been included facing the pedestrian areas to provide spaces for socialisation within the street environment.



Eden Street Streetscape

Eden Street is an important retail and civic street for the precinct and locality.

The streetscape is defined by new street tree planting of Tuckeroo along the footpath, as well as planting between newly define parking bays.

The streetscape character is also define by the significant landscape frontage to the precinct including the Meeting Place and Eden Street Park.

Streetscape works also includes a proposed new Zebra crossing which links to the Arncliffe Station through the arcade connection



6.3 EDEN STREET PARK

Public open space at the heart of the precinct.

The Eden Street Park design establishes a clearly defined 4000m² public open space which provides amenity for the residents, local community and visitors alike.

The park provides a variety of uses and opportunities for group and individual recreation and activities, opportunities for social interaction and play, connection to the outdoors and the natural environment as well as simple open lawns for spaces to lounge and relax.

Principles

The design principles for the park are to be:

- Well connected to the Eden Street frontage.
- Located for good sun access.
- Linked through desire lines and view lines to activity areas.
- Interconnected to the public nodes, urban uses and activity areas within the site
- Flexible for a range of recreational opportunities and larger gatherings.
- A venue for social gatherings and connections.
- Highly active, facilitating play and recreation.

A summary of the proposed design

- ① Central lawn
- ② Play area
- ③ Sheltered seating and BBQ
- ④ Seating lounges
- ⑤ Indigenous bushland planting
- ⑥ Tulip tree planting
- ⑦ Existing trees
- ⑧ Park pathway
- ⑨ Bridge connection



Park programming strategies



Exploration and Discovery Play

The play areas are an engaging series of spaces which are located in the shaded canopy of the park alongside the open central lawns.

Discovery play spaces are founded on designing for an integration of physical play, social engagement and sensory development.

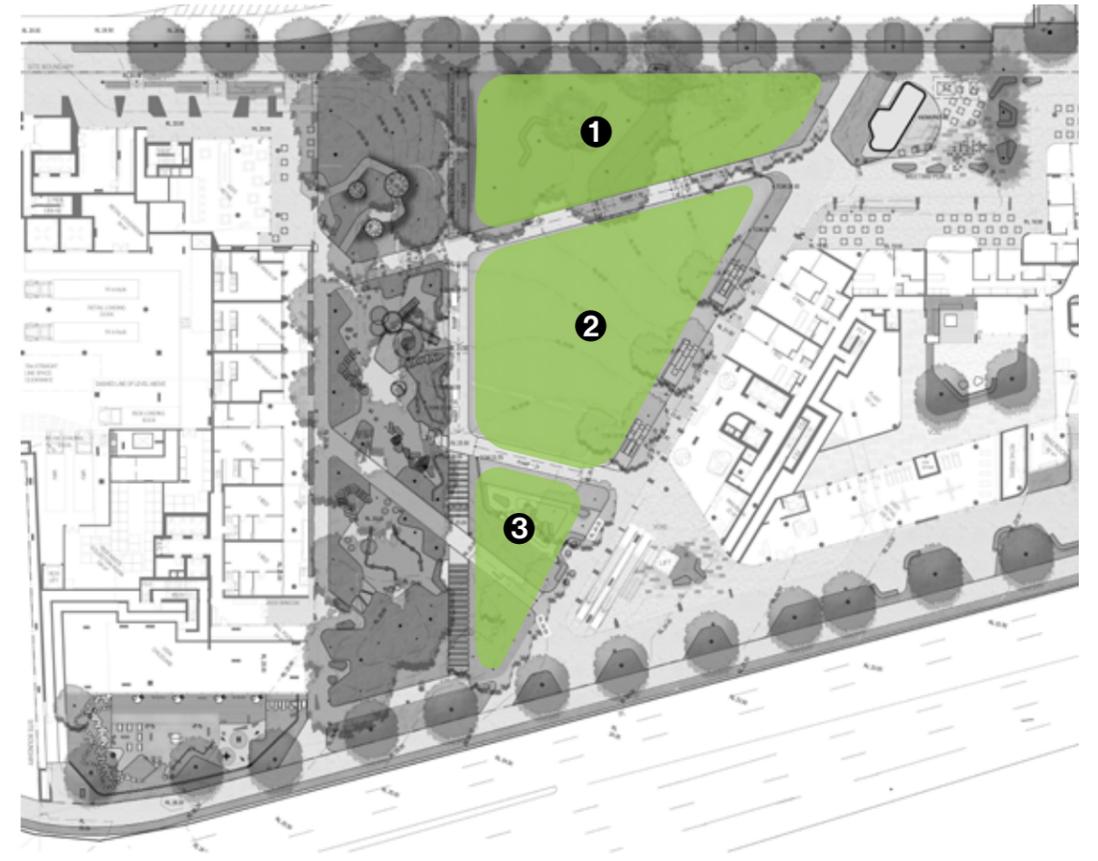
There is also opportunity to connect to Bidgigal Country through play elements and interpretation.

Inclusive play is fundamental to the design of all new play spaces. An inclusive playspace invites people of all ages, abilities and cultures to come together.

Inclusive playspaces are easy to access, easy to move around, provide a range of play options and challenges, and have appropriate facilities in a comfortable environment.

The play spaces at Eden Street Park will be a drawcard for activity. They are located to allow spill out to the lawn areas adjacent as well as connection to the cafe area immediately adjacent.

**Eden Street Play Spaces
500 m²**



Central green spaces

At the heart of the park are the central lawns which provide the forum for informal recreation and gatherings.

The lawns have three different characters from the lower lawn shaded by light and even tree canopy, the middle gently sloping lawn and the upper terraced lawn.

The park circulation defines the lawn areas and facilitate access through the park and to the connecting uses which front the park.

Play spaces and informal seating areas are located alongside the lawns and allow people to spill out to them.

**Park Lawns
1040 m²**

1. Tree shaded lawn
2. Central sloping lawn
3. Terraced lawns

Ecological and planting strategies



Providing opportunities to integrate ecology in the urban environment.

The site is located on the upper slopes of a landform which extends up from Botany Bay to the ridges of Arncliffe.

The site is an eco-tonal vegetation community; straddling Sandstone Woodland to the eastern slopes and the Turpentine Iron Bark Forests to the western slopes. The site is an area which would also include the Eastern Suburbs Banksia which is an important vegetation type to the local area.

The opportunity is to create a 'constructed' ecology

which provides ecological biodiversity to the site as well as benefits the local area. The tree canopy and low level vegetation using a local native plant palette reinforces the identity and connection to the local area.

Native Vegetation Areas
1800 m²



The park plan is embedded with a tree canopy cover strategy to increase shade and reduce heat in urban environments.

Alongside the tree canopy provision the park also includes a Deep Soil area for tree planting on natural ground and allows water infiltration.

The tree planting in the park includes predominantly native tree planting, along with deciduous tree planting along the walkway spine and edge of the lawn areas.

Park Tree Canopy
86 Trees = 2300m² canopy area



6.4 DISCOVERY PLAY SPACE

The play space is an inclusive discovery play area located in the Woodland planting along the south-western edge of the park.

The play space is designed to represent the six seasons of the Bidjigal calendar to help inform the understanding of the place and country.

The play space is a destination activity area in the park. It as a drawcard for the precinct and for the wider community. The play space includes structures and elements to climb, swing, scramble and explore.

Embedded in the play and discovery area is demonstration productive gardens using indigenous food plants. The intention is for this to be place of learning, with links to the adjacent cafe for understanding of food and botanicals.

A summary of the proposed design

- ① Waratah / climb and lookout
- ② Angophora gum / slide
- ③ Wattle / climb
- ④ Lily Pilly / swing
- ⑤ Pea flower / spin
- ⑥ Dianella / tunnel and scramble





6.5 PLANTING

Park Planting

The Eden Street park planting features native which is indigenous to the site using Sandstone Woodland and Eastern Suburbs Banksia Scrub planting palettes.

The planting is an important aspect of the project which connects to the site to the specific place. The native planting increases understanding of the local flora as well as provides important habitat and ecological value.

The understorey planting palette is to be primarily sourced from locally sourced seed and grown material.

Civic Spaces

Civic spaces in the public dmain feature

Liriodendron tulipifera	Tulip trees	Park link
Araucaria cuininghamii	Hoop Pine	Meeting place
Lophostemon confertus	Brush Box	Princes Hwy
Cupaniopsis anacardioides	Tuckeroo	Eden Street



↑ Wallum Banksia, *Banksia aemula*

↖ Flannel flower, *Actinotus helianthi*

← Sydney Sandstone woodland characeter image



6.6 PARK AND STREET TREE PLANTING

Tree Planting		Tree Panting		Street Tree Panting	
Image	Name	Image	Name	Image	Name
	Araucaria cunninghamii Hoop Pine		Eucalyptus gummifera Red Bloodwood		Lophostemon confertus Brush Box
	Liriodendron tulipifera Tulip Tree		Eucalyptus fibrosa Red Ironbark		
	Angophora costata Smooth Barked Apple		Eucalyptus globoidea White Stringybark		

6.7 PARK PLANTING

Native Planting (Small Trees / Shrubs)

Image Name



Banksia aemula
Wallum



Banksia serrata
Old Man Banksia



Callistemon citrinus
Crimson Bottlebrush

Native Planting (Small Trees / Shrubs)

Image Name



Acacia decurrens
Sydney Green Wattle



Acacia parramattensis
Parramatta Green Wattle



Allocasuarina distyla
Scrub She Oak

Native Planting (Small Trees / Shrubs)

Image Name



Angophora hispida
Dwarf Apple



Banksia ericifolia
Heath Banksia



Hakea teretifolia
Dagger Hakea

Native Planting (Small Trees / Shrubs)

Image Name



Leptospermum arachnoides
Paperbark tea tree



Ceratopetalum apetalum
Coachwood



Melaleuca decora
White feather honeymyrtle

6.8 PARK AND ROOFTOP PLANTING

Native Park Panting		Native Park Panting		Rooftop Planting		Rooftop Panting	
Image	Name	Image	Name	Image	Name	Image	Name
	Themada australis Kangaroo Grass		Aristida vagans Spear Grass		Banksia integrifolia Coast Banksia		Leptospermum arachnoides Paperbark tea tree
	Hardenbergia violacea Native Sarsparilla		Kennedia rubicunda Running Postman		Banksia ericifolia Heath Banksia		Callistemon citrinus Crimson Bottlebrush
	Lomandra longifolia Mat Rush		Leucopogon juniperinus Bearded Heath		Hakea teretifolia Dagger Hakea		Lomandra longifolia Mat Rush

6.9 ROOFTOP PLANTING

Groundcovers less than 1m

Image Name



Themeda australis
Kangaroo Grass

Image Name



Lirope muscari
Amethyst

Shrub planting 1-1.5m

Image Name



Echium fastuosum
Pride of Madeira

Image Name



Callistemon
Sweetburst
Bottlebrush

Shrub planting 1.5-2m

Image Name



Syzygium 'Bush Christmas'
Dwarf Lily Pily



Hardenbergia violacea
Native Sarsparilla



Convolvulus cneorum
Convolvulus



Eriostemon myoporoides
Wax flower



Raphiolepis 'Oriental Pearl'
Raphiolepis



Leucadendron 'Safari Sunset'
Protea



Casuarina
Cousin It



Myoporum parvifolium
Myoporum



Rosmarinus officinalis
Rosemary



Westringia 'Blue Gem'
Native Rosemary



Correa alba 'coastal pink'
Correa

6.10 ROOFTOP AND PODIUM PLANTING

Native Planting (Small Trees / Shrubs)		Podium Planting		Podium Planting		Podium Planting	
Image	Name	Image	Name	Image	Name	Image	Name
	Melaleuca styphelioides Prickly Paper Bark		Asplenium nidus Birds Nest Fern		Doodia australis Rasp Fern		Alpina caerulea Ginger
	Persoonia pinifolia		Cyathea australis Tree Fern		Ceratopetalum apetalum Coachwood		Dianella caerulea Dianella
			Acmena smithii Lilly Pilly		Viola hederacea Native Violet		

6.11 MATERIALS PALETTE

Description	Locations
Pavement Types	
Vega Black 	Eden Street Princess Highway Civic Space
Ash Grey Granite 	Eden Street Princess Highway Civic Space
Concrete Insitu Exposed 	Eden Street Park

Description	Locations
Pavement Types	
Porphyry Stone Mix 	Civic Spaces Through Site Link
Porphyry Stone Mix 	Civic Spaces Through Site Link
Porphyry Stone Mix 	Civic Spaces Through Site Link

6.12 FURNITURE PALETTE

Description

Supplier

Pavement Types

Custom Bench



Custom Bench



Custom Lounge



Bench



Seat



MOS URBAN
SERIES EYRE

Description

Supplier

Pavement Types

Bike Hoop



Bin



Bollards



LEDA

Drinking Fountain



BOTTON & GARDINER

6.13 KIOSK

An outdoor cafe activates the Meeting Place.

The unique geometry creates a landmark along the Eden Street boundary. It conceals services and fire egress from the underground car park while also providing shelter.

The kiosk shares its material palette with the awning elements of the north precinct podium.



6.14 DESIGN CRITERIA EVALUATION

Bayside Council Public Domain Plan

Park= 4000sqm

- Provide pathway connections through the park
- Village green grassed area for informal uses
- 70% native new tree

Eden Street

- Street section:
 - + 2.8m Path
 - + 2.4m Street parking and garden parklets with street trees (Minimum 35m³ soil volume per tree and 5sqm garden bed)
 - + 7m carriageway (2 lines)
 - + 3.2m separate cycleway
 - + 1.5m garden bed with street trees
 - + 2.5m (varies) footpath
- Maximise tree canopy

Through Site Link

- 3m Minimum clear path
- Integrate seating to corners and edges
- Integrate access to private developments
- Maintain direct sight line between end of the link

Princes Highway/ 6m set-back

- Maximise Tree planting and pedestrian pathway
- Street section:
 - + 1.1m verge with turf and street lighting
 - + 2.5m shared path
 - + 3.5m Landscape area with Street trees
 - + 2.1m footpath

Bayside Council Development Control Plan

Park= 4000sqm

- Provide 50m frontage along Eden Street (70m provided)
- Provide pathway connections through the park
- Ensure generous landscape area interface to Princes highway with Existing Tree, additional tree planting, garden zones that must incorporate storm water treatment garden
- 50% of the park area to achieve 3 hours sun during lunch time (12pm-2pm) on 21 June

Eden Street

- Street section to comply with Active Frontage:

Through Site Link/ 6m set-back

- 4.5m Minimum clear path
- Provide active Frontage on both side
- Be a clear and direct throughway for pedestrian
- Incorporate CPTED principles

Princes Highway/ 6m set-back

- 6m set-back
- Maximise Tree planting (min 600Lt.)
- Improve Pedestrian and cycle

Bayside West Precincts 2036

4,000sqm public park

- at LAHC site

Princes Highway

- New pedestrian and cycling path along Princes Highway

Eden Street

- Street section upgrades to DCP

Site Wide Tree canopy minimum 25% coverage

GANSW Greener Places

Accessibility

- 2-3 minute walk or 200m distance to local park

Park= 3000sqm min

- High density Area
- Local Play and Recreational opportunities

Site Wide Tree canopy cover = 25%

Key Open Space Metrics

4,000sqm public park

- refer DA 4203 in Supplementary Information

Deep Soil = 7% (941sqm)

- refer DA 4300 in Supplementary Information

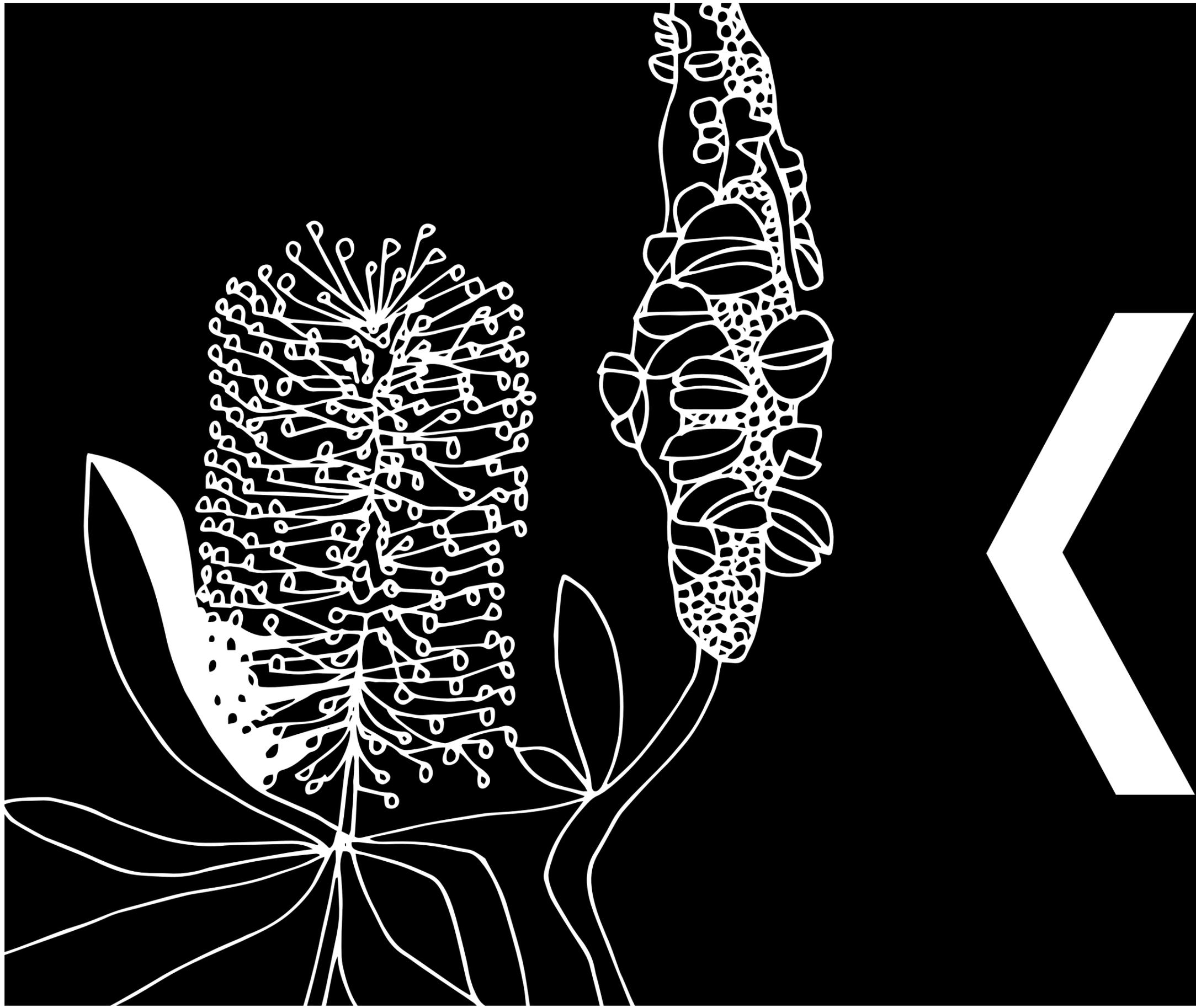
Solar Amenity to Public Park

- RDCP 2011 Part 7 Special Precincts
- refer DA 4204 in Supplementary Information

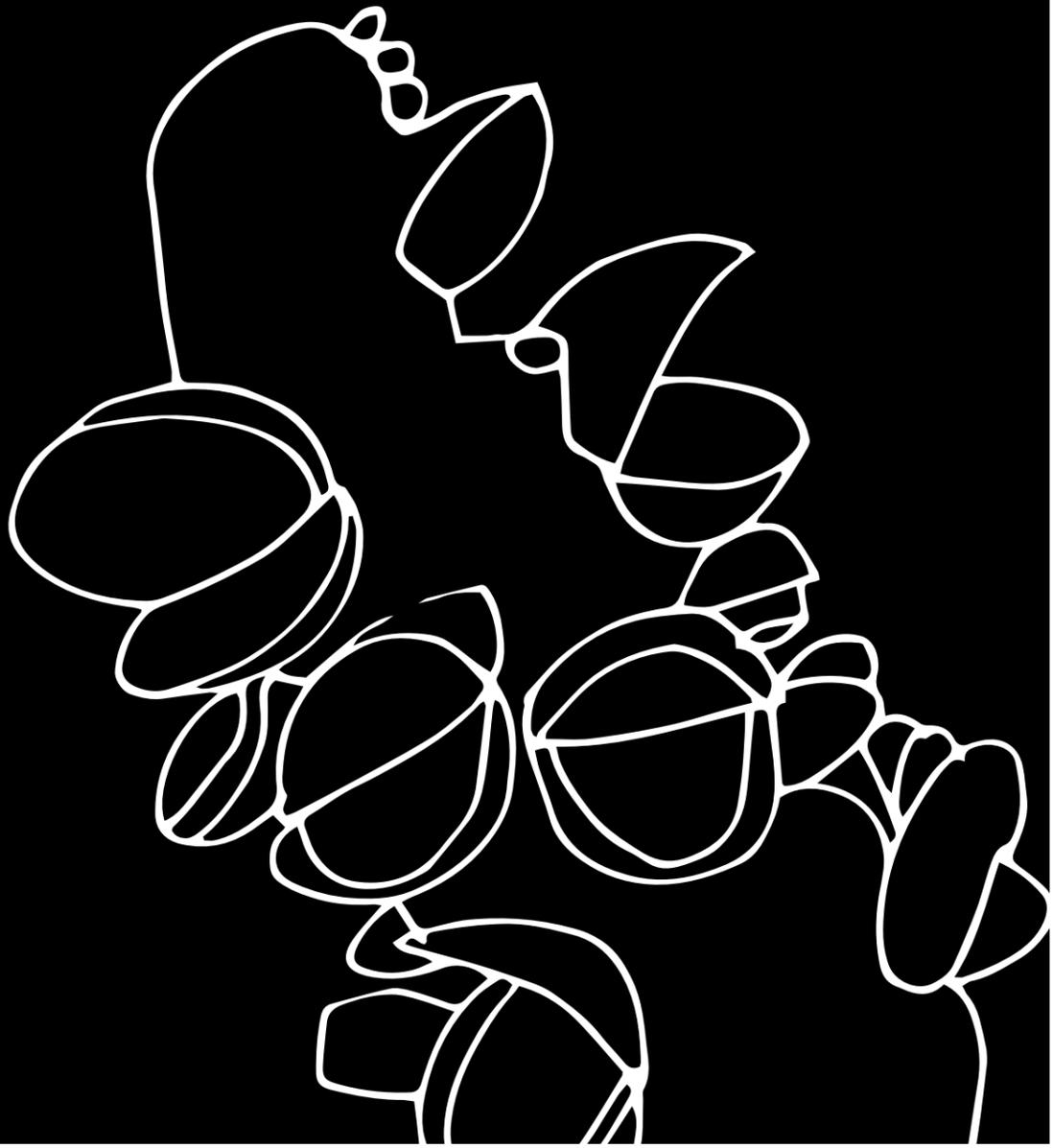
Solar Access to Public Park

- 100% of the park achieves 2 hrs sun June 21 (4,000sqm)
- 86% of the park achieves 3 hrs sun 12pm-3pm June 21 (DCP)
- 62% of the park achieves 4hrs+ sun on June 21
- refer DA 4204 in Supplementary Information

Site Wide Tree canopy cover = 35%



**7.0 NORTH
PRECINCT**



07



7.1 NORTH PRECINCT

Sitting atop the earth base and folded landscape are the sinuous and rounded forms of the light towers, dappled with landscape.

The North Precinct consists of two residential towers atop a 7 storey mixed-use podium.

The ground floors contain retail spaces that will activate Eden Street as per the precinct vision outlined in the DCP.

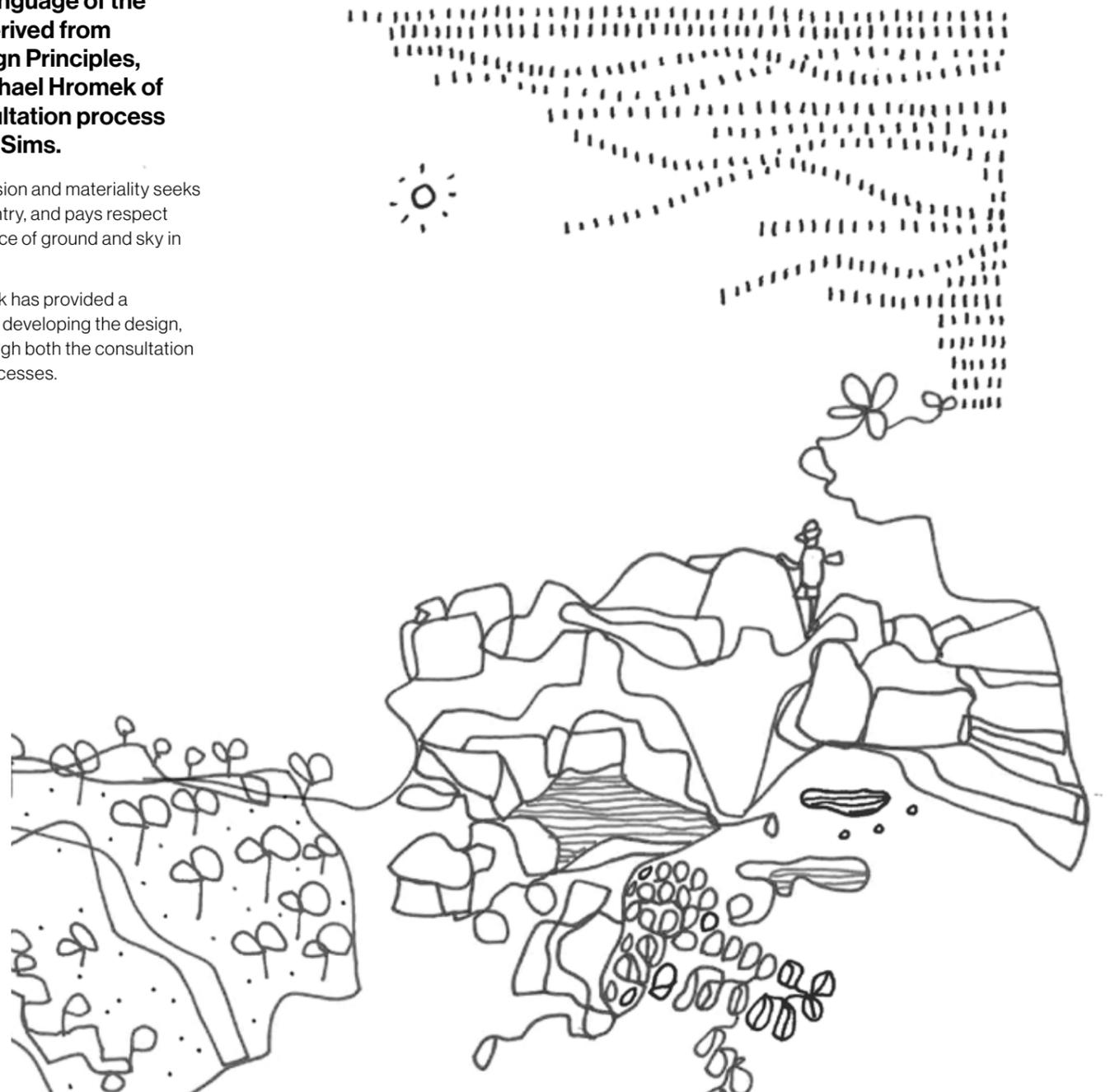
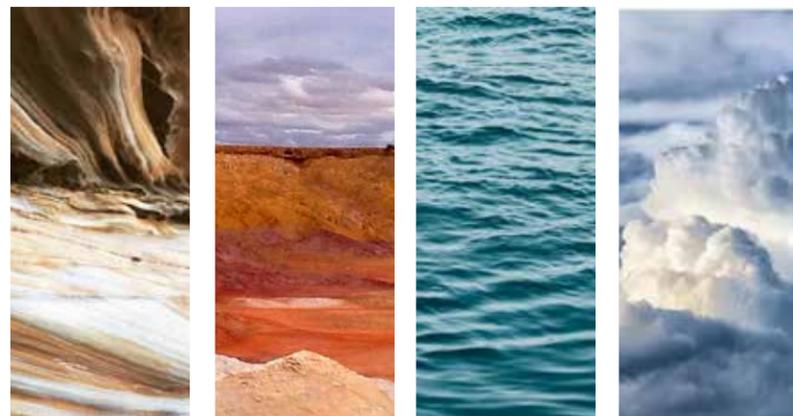
The architecture is characterised by strong civic gestures to the open spaces - a consistent street wall to the new park, 'meeting place', Princes Highway and Eden Street, and generous double-height colonnades at entrances.

A retail kiosk with a distinct sculptural identity punctuates the western edge of the 'Meeting place'.

The architectural language of the North precinct is derived from the Aboriginal Design Principles, developed with Michael Hromek of WSP, and the consultation process with Auntie Yvonne Sims.

The project's form, expression and materiality seeks to connect the site to Country, and pays respect to the traditional significance of ground and sky in Bidjigal lore.

This interpretive framework has provided a conceptual benchmark for developing the design, and has been refined through both the consultation and design excellence processes.





7.2 DESIGN VISION

Form and massing

The north precinct consists of two connected figures, sculpted to their contexts.

Podium form

The northern-most figure (under tower A) presents a continuous form to the northern boundary and projects forward toward the Arcade. The second floor is set back to through-site link to mitigate the perception of bulk and improve solar access. The southern-most figure (under tower B) has a continuous facade that is splayed to define the edge of the new public park.

To the Princes Highway side, these two figures sit side-by-side, separated by a light well providing ADG required separations between upper-storey apartments, forming a consistent street wall in line with the DCP.

The two podium figures are unified by a common parapet height and floor levels - delivering the street wall desired in the DCP. Rounded corners reduce wind speeds at ground level.

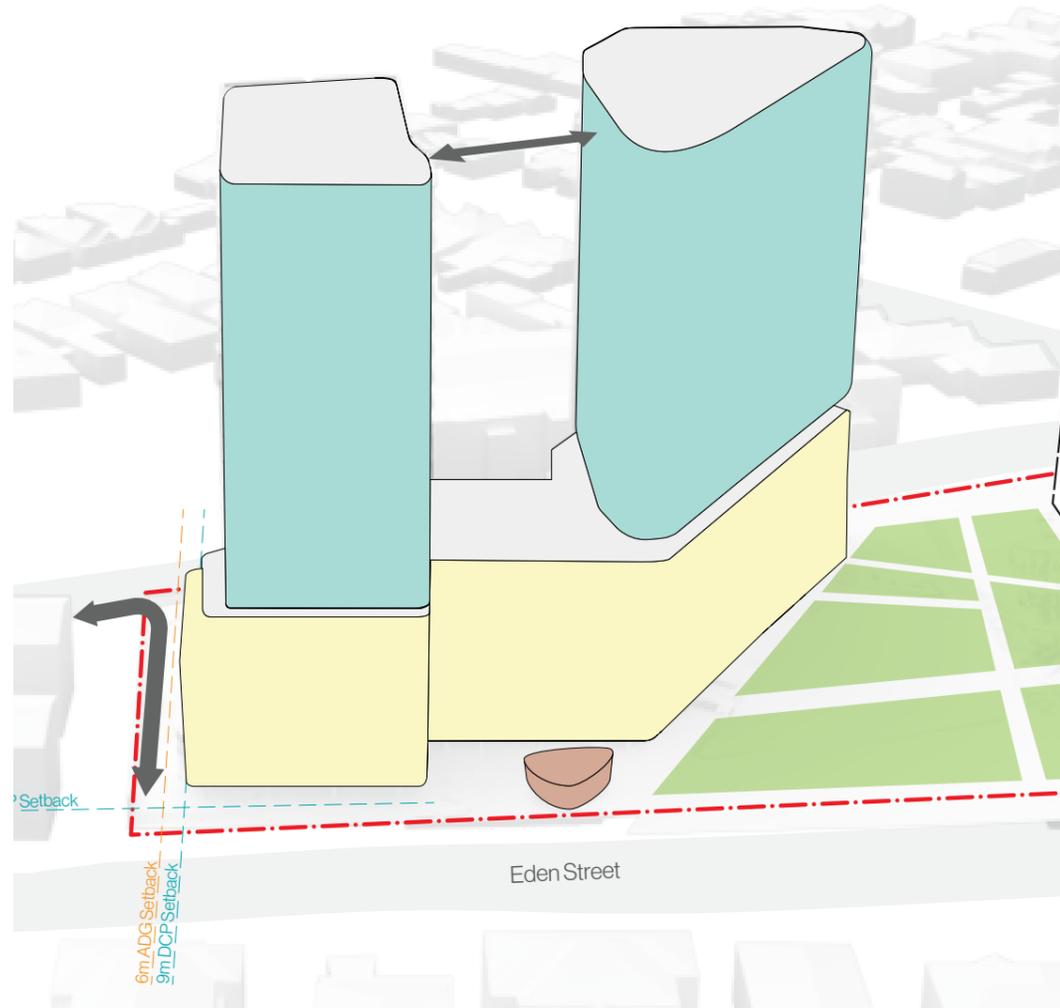
Retail entrances at Eden Street and Princes Highway are double-height, and set back behind a public colonnade which offers a generous public threshold and shelter from the elements.

Tower A

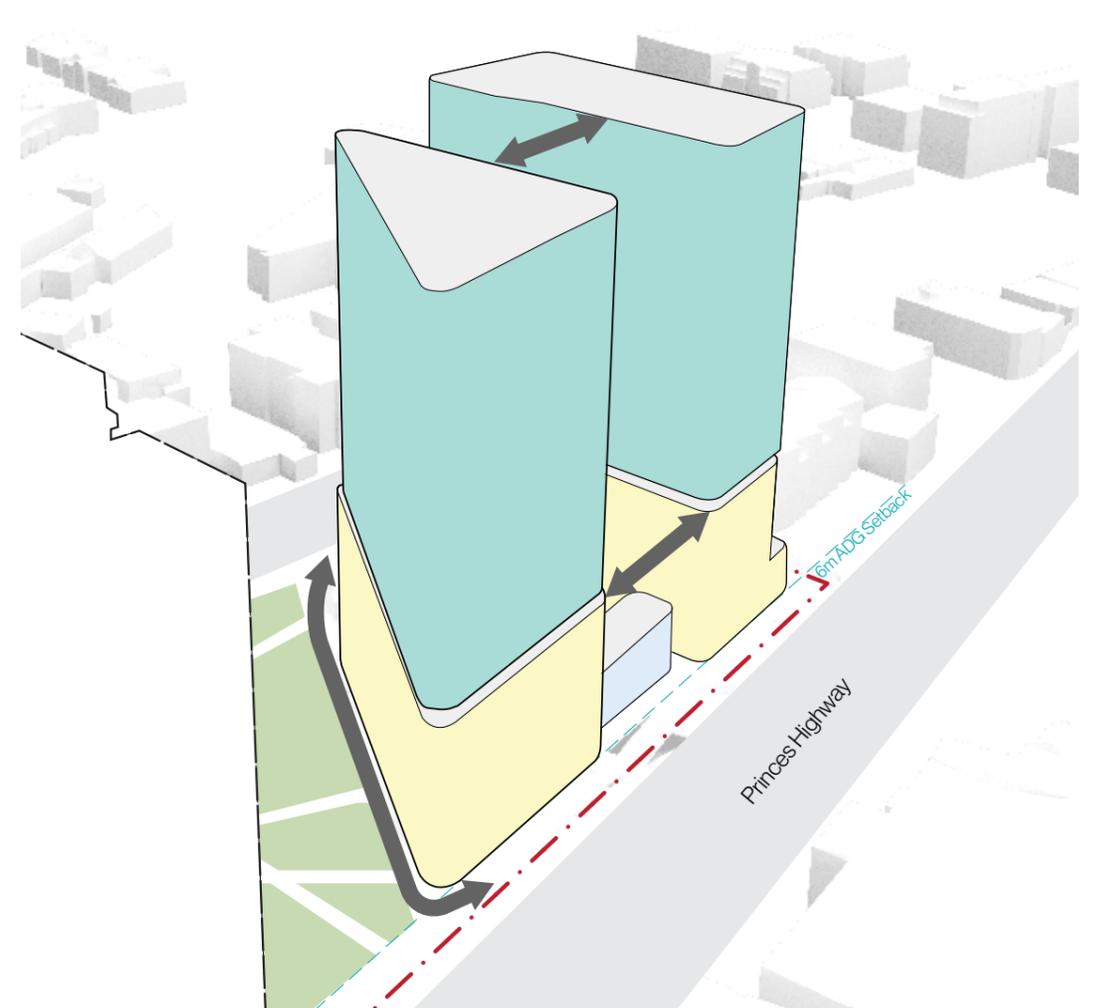
The tower is set back from the northern boundary to ensure a sensitive interface between the building, the through-site link and neighbouring buildings. A setback from Eden Street reduces the perceived bulk of the tower from the proposed town centre.

Tower B

The tower has been splayed in line with the podium below, reinforcing the alignment to the new public park. A recessed floor is expressed between towers and podium where there are no upper level setbacks.



Response to Eden Street



Response to Princes Highway

Formal modulation

Techniques of formal modulation have been used to mitigate the perceived bulk of the building figures - creating a formal composition fine-tuned to place and human scale.

Podium A

The northern-most figure in the precinct is sculpted with curved corners to reduce bulk and wind speeds. The folding language is reinforced by a curved recess, which divides the facade facing onto Eden Street into two parts.

Tower A

The tower envelope adopts a similar technique of formal modulation to the podium. It is divided vertically into four façades. These elements run past the roof to create the impression of a lightweight skin and protect the communal open space from high speed winds.

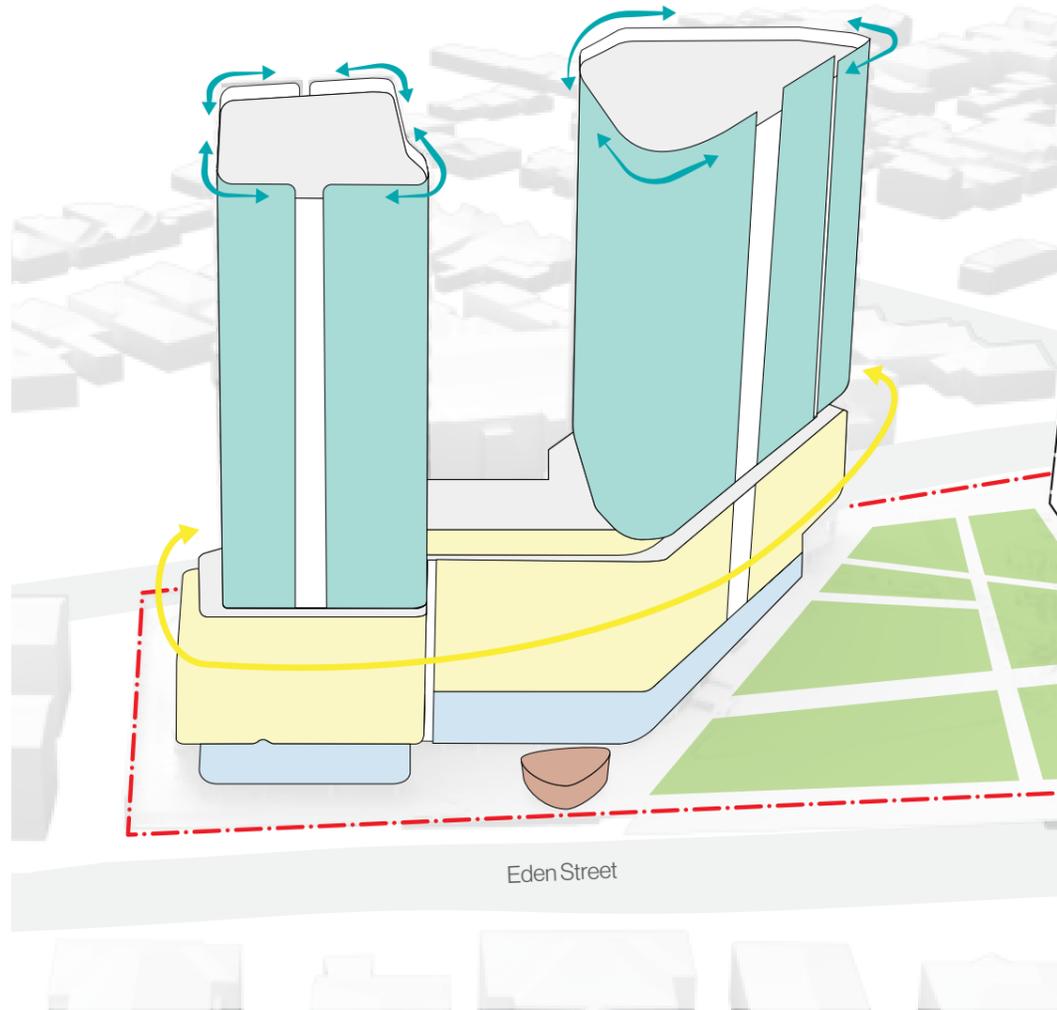
Podium B

The ribbon-like form of the podium is split part of the way along the park facade. This reduces the length of the wall facing the park, while allowing the frame to continue around the corners of the podium.

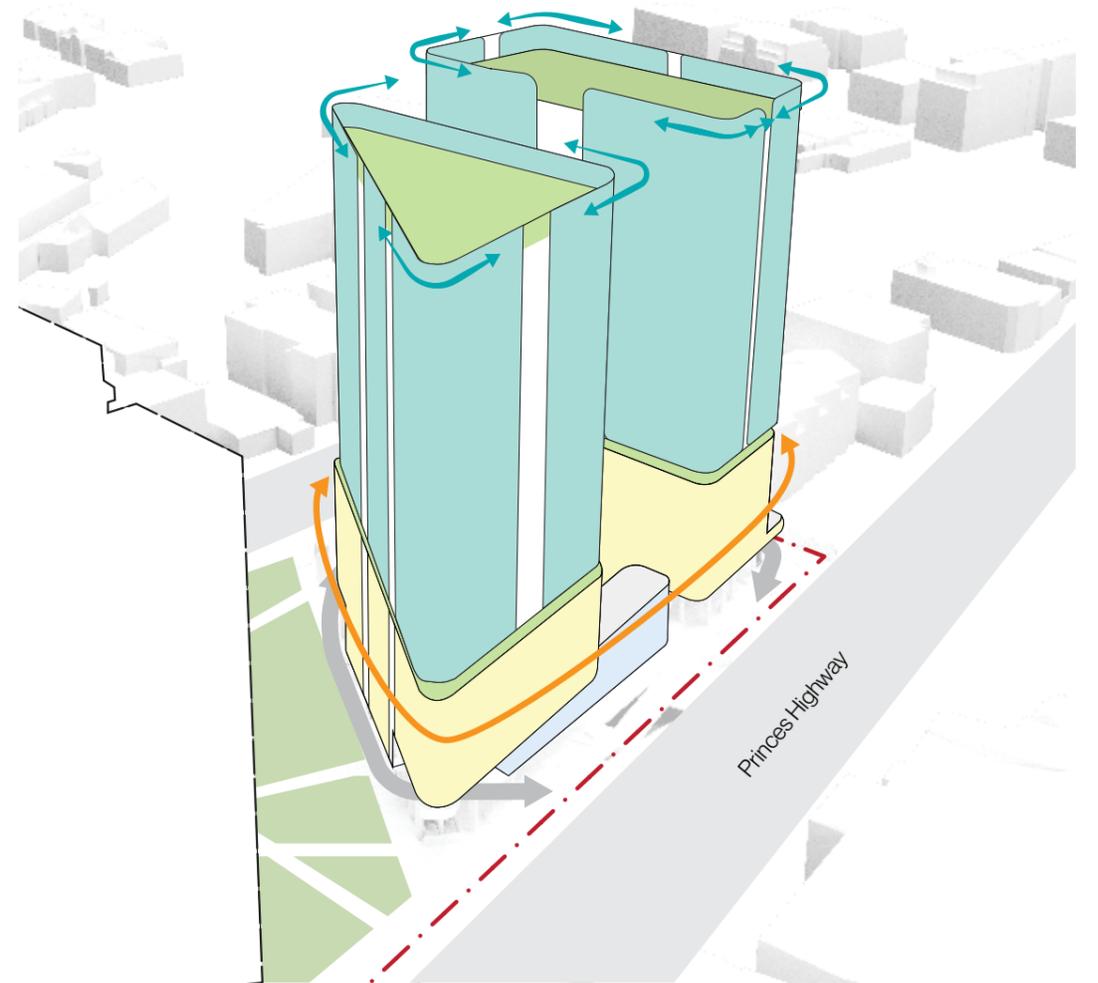
Tower B

The original form has been broken down through the use of recessed vertical slots running the full height of the building. The slots will further reduce the perceived bulk of tower by articulating the building as an amalgam of different parts.

Expressed frames that run the full height of the building further emphasise the deconstruction of the original figure.



Response to Eden Street



Response to Princes Highway

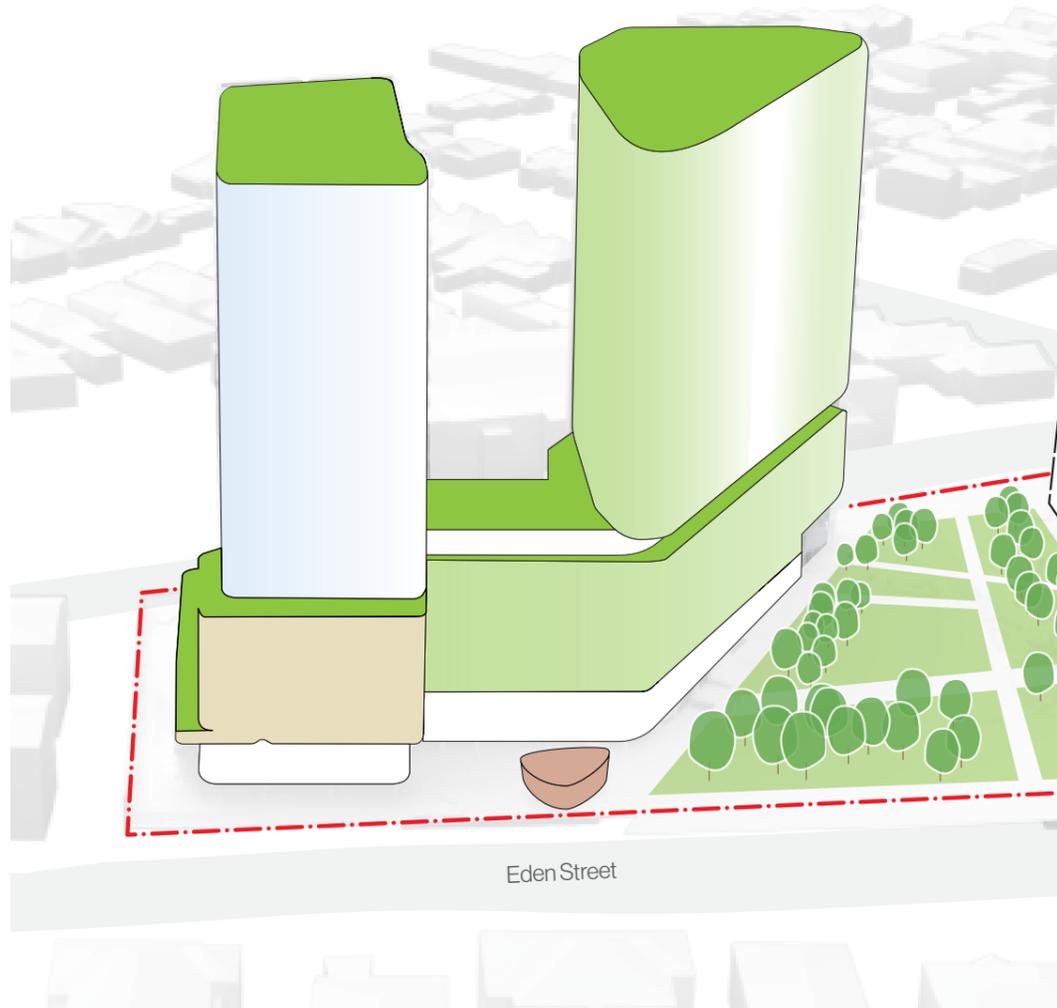
Material concept

The design of the two building figures has been guided by a material concept stemming from the interpretive approach to connecting with Country.

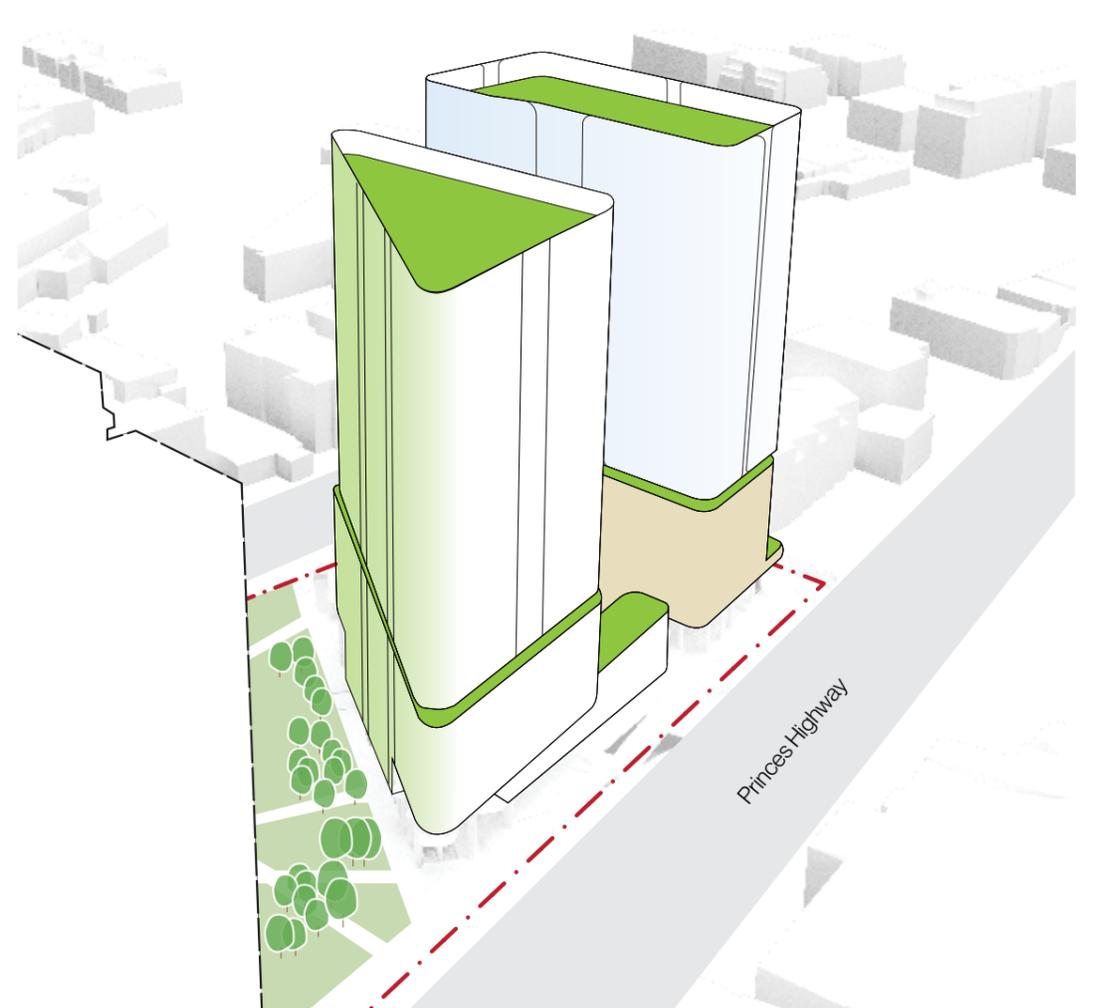
The two podiums are conceived as grounding elements, and have been arrived at through the abstraction of local geomorphic patterns. By contrast, the two towers are conceived as lighter elements connecting with air and water.

Building B blurs the distinction between edifice and ground. The design integrates dense planting into the facade to reinforce the connection to the park.

Both buildings facilitate the re-greening of the urban environment through rooftop communal open space. The result is a vegetated crown set behind the upper parapet of each tower.



Response to Eden Street



Response to Princes Highway

Expression

Variation in the architectural expression reinforces the unique identities of the two buildings.

Podium A

Podium A is articulated as an eroded frame reminiscent of eroded Sydney Sandstone prevalent in the area - a way of celebrating Country's identity through formal similitude. The colonnade at the Eden Street entrance is set back from the facade line to further emphasise the singularity of the floating form.

Tower A

The membrane-like facades are divided horizontally by expressed metal fins that establish a sense of scale. The number of subdivisions was designed to relate to context - more frequent subdivisions at Eden Street in response to the finer grain, pedestrian scale of the street, and fewer at Princes Highway.

Podium B

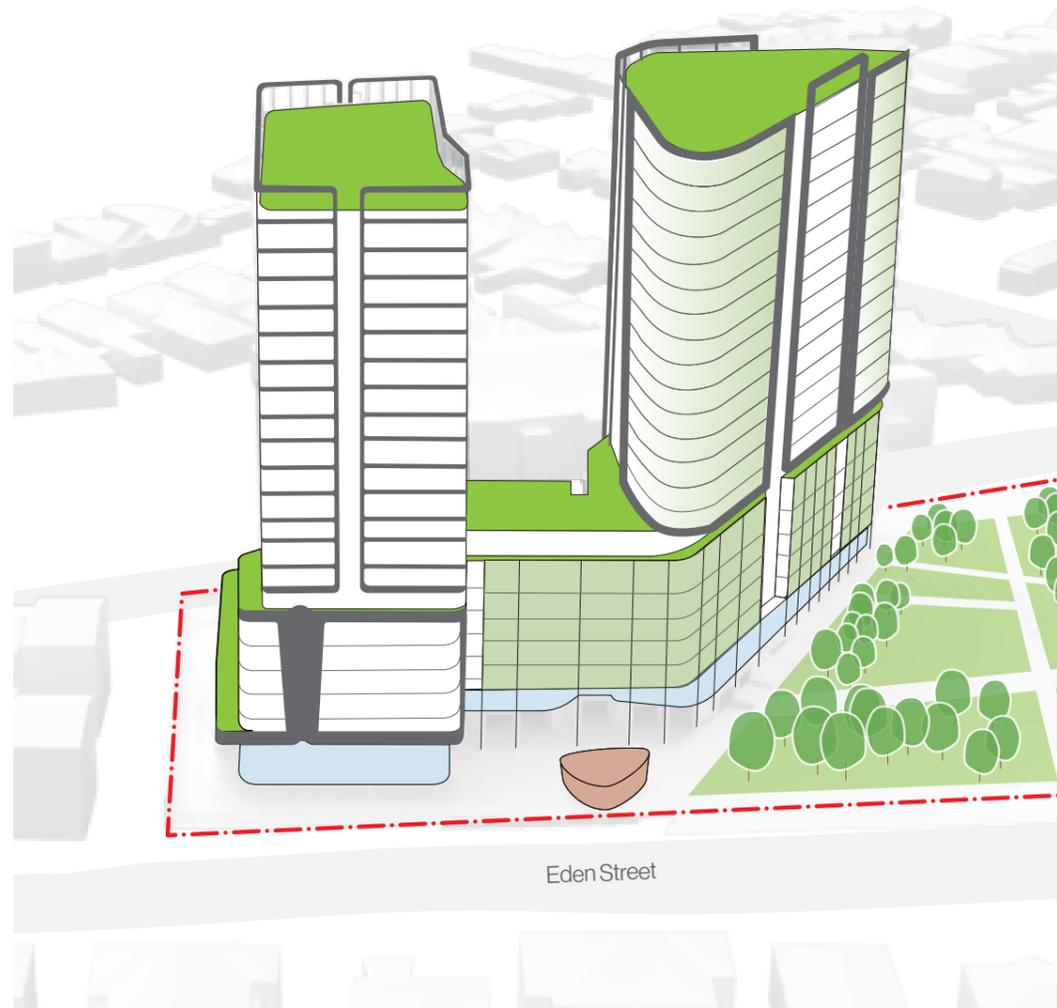
Podium B is a continuous gridded precast concrete facade - contrasting the singularity of the Podium A frame. The grid hits the ground at the meeting place and moving place as a colonnade that defines the edges of these public open spaces. Alternating planters up the facade will soften the regularity of the grid, and conceptually link the podium to the park.

Tower B

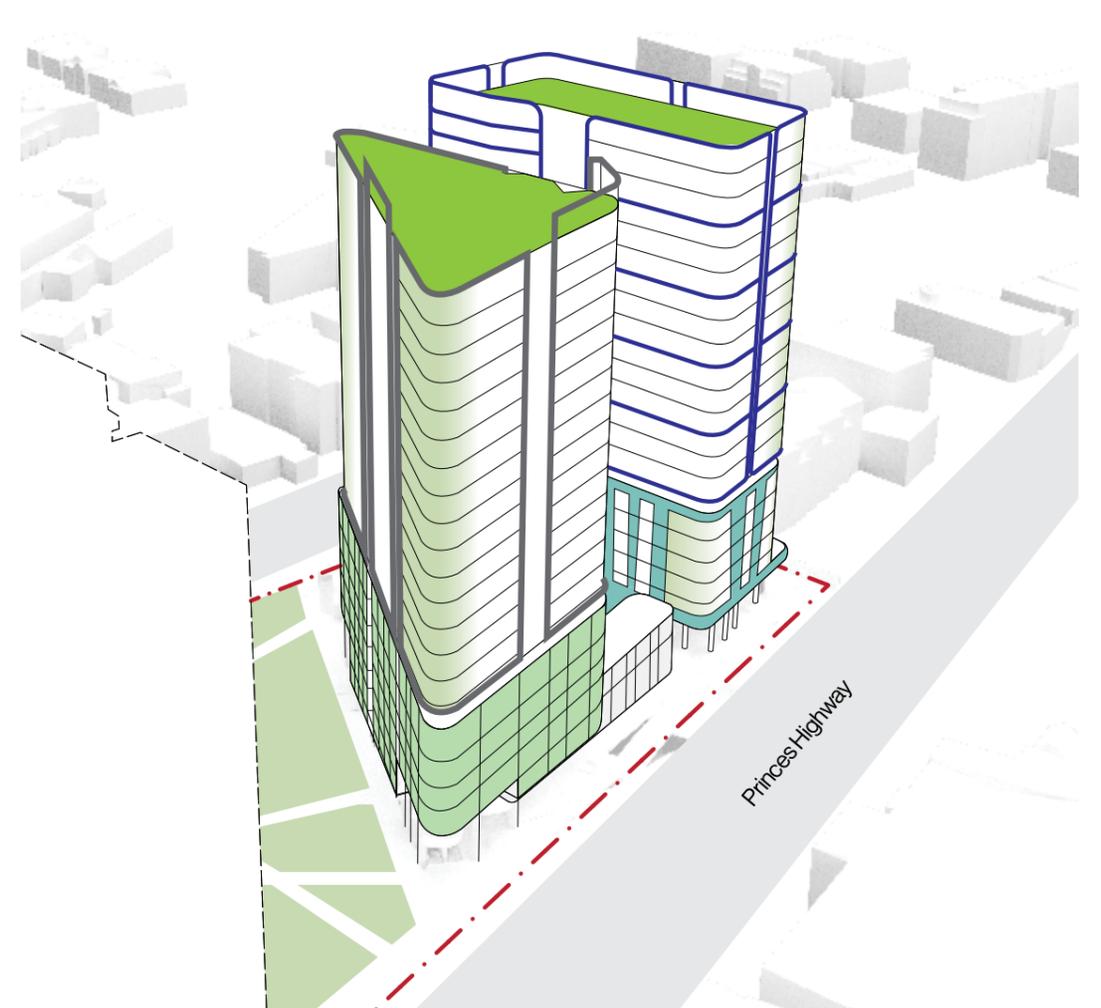
While full height frames will emphasise the vertical subdivision of the original form, expressed slabs at each level will provide horizontal articulation. The horizontality of the expressed slabs will be further emphasised by planter boxes, which tie the tower to the podium.

Rooftops

Both buildings are crowned by fine metal shade structures, designed to improve amenity for users of the rooftop communal space.



Eden Street



Princes Highway



7.3 GROUND FLOOR INTERFACE

Activating the Public Realm

A building in the round - the ground floors of Buildings A and B have been shaped to maximise activation to the public domain.

Retail uses have been concentrated to Eden Street, the meeting place and Princes Highway interfaces to create an inviting and activated public realm. The ground floor retail is arranged to form arcades that connect the meeting place, through-site link and moving place.

Other facades, such as that facing the through-site link, are transparent so that internal activity can be seen from outside.



The lower ground retail arcades form a highly permeable ground plane, encouraging activity and engagement along the main frontages of the Princes Highway and Eden Street.

The arcades connect the Moving Place, Through-Site Link and Meeting Place. They offer vibrant and inviting spaces and the amenity of retail premises for both residents and visitors.

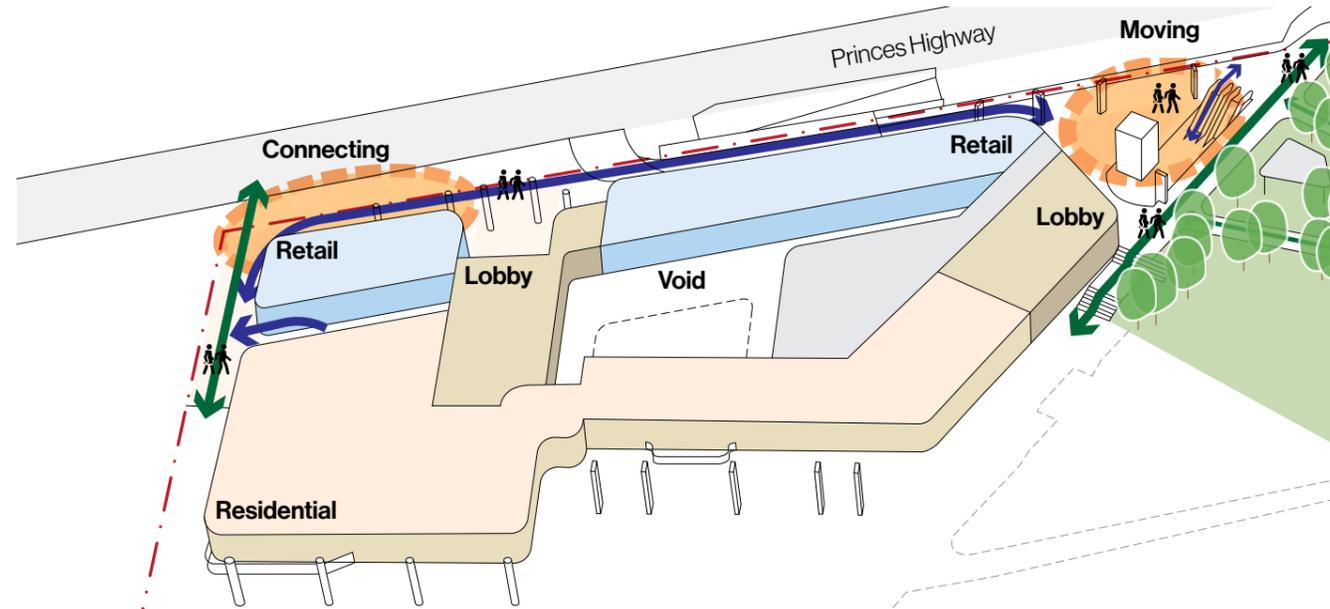
A central retail spine runs parallel with the Princes Highway, facilitating active, safe and atmospheric frontages along this key thoroughfare.

This arcade is lit from above by an embracing, open-air void, creating a light and sculptural space, a grand entrance and a sense of arrival.

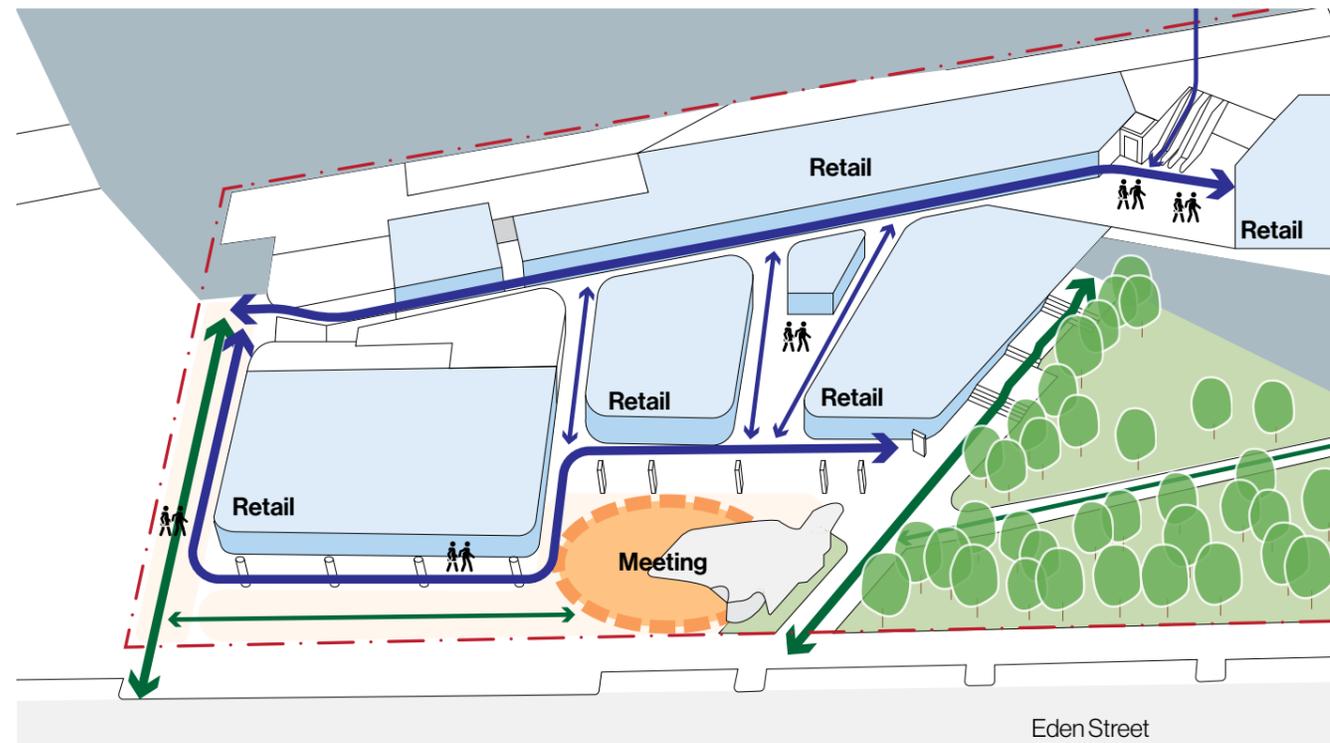
Similarly, a vibrant and highly permeable retail core interfaces with Eden Street, creating an extension of the future Arncliffe town centre.

Entry from Eden Street is centred around a Meeting Place, and is directed along a linear open-air void, which provides a connection to the wider setting and a sympathetic, permeable threshold between the retail spaces and the outdoors.

The arcades also provide a recessed point of entry to the residential towers above.



Upper Ground



Lower Ground



Escalator to meeting place / Interior perspective



Retail arcade void / Interior perspective

- Legend**
- Site Boundary
 - Civic Space
 - Retail
 - Residential

Lower Ground Floor Plan

The lower ground level of the North Precinct contains retail tenancies connected to Eden Street by a series of internal arcades.

The arcades create a permeable and activated ground plane that connects the 'Meeting Place', 'Moving Place' (via escalators) and through-site link along the northern boundary.



Upper Ground Floor Plan

The upper ground level of the North Precinct contains retail tenancies opening onto Princes Highway - introducing activity to this currently uninviting area for pedestrians.

By creating a consistent street wall activated by retail, the new proposal re-oriens the site's uses back to the public domain.

At the southern corner of the precinct, a new open-air escalator allows visitors to access the retail arcades - providing an alternative route through the site that will increase retail and employment offerings in Arncliffe.

Vehicular entry to the basement car park is located in a slip lane along Princes Highway. By pulling vehicular access off the building, more facade is available for activation - helping to ensure that Arncliffe's new town centre is attractive and vibrant.

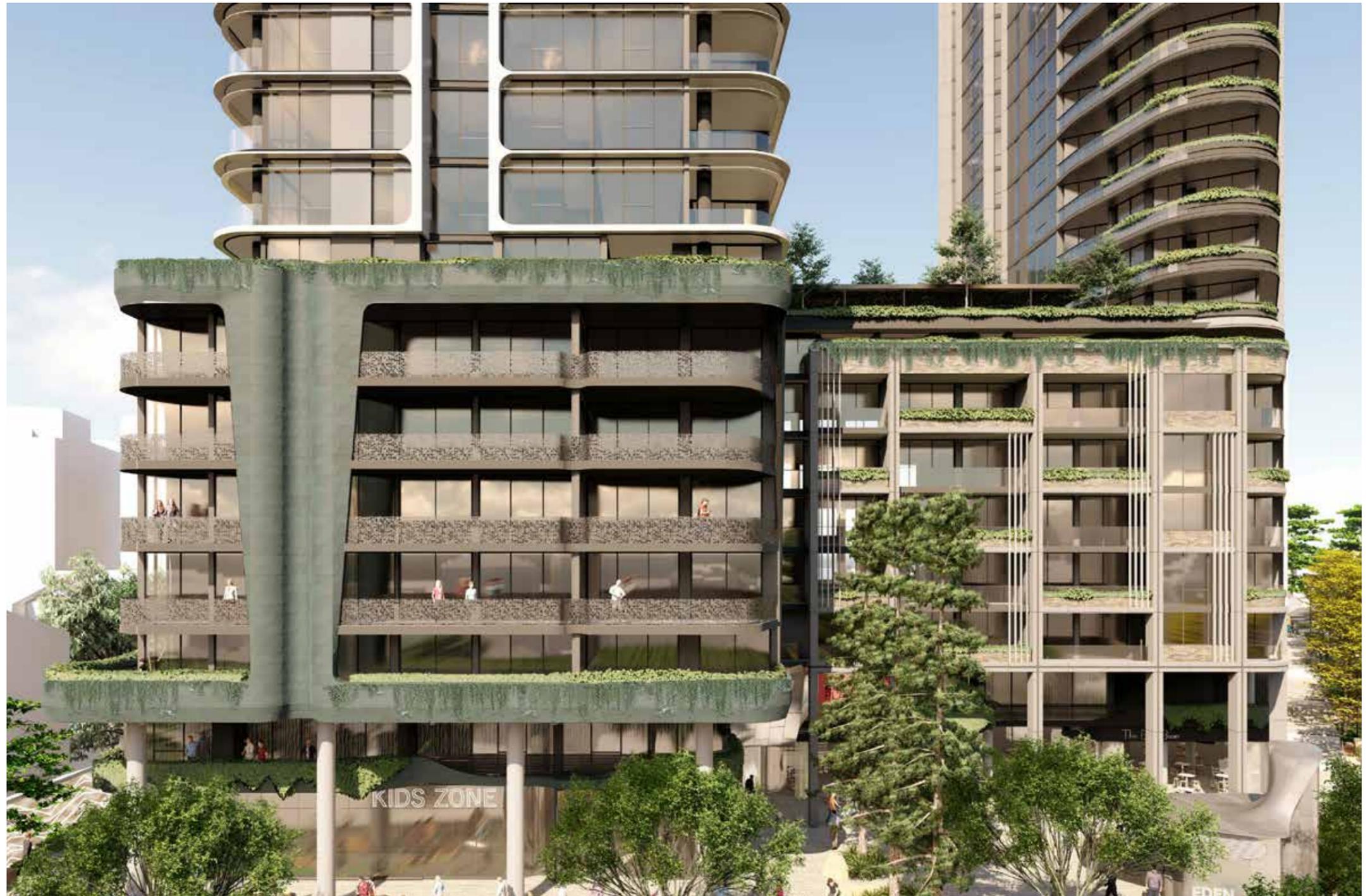


7.4 RESIDENTIAL PODIUM

Design concept

Two floating figures - forming a ribbon in the round, shaped to its adjacencies - presenting permeable, activated facades to the public realm.

The podium - containing 5-6 storeys of apartments over retail - establishes a consistent street wall to Eden Street, Princes Highway and the new park.

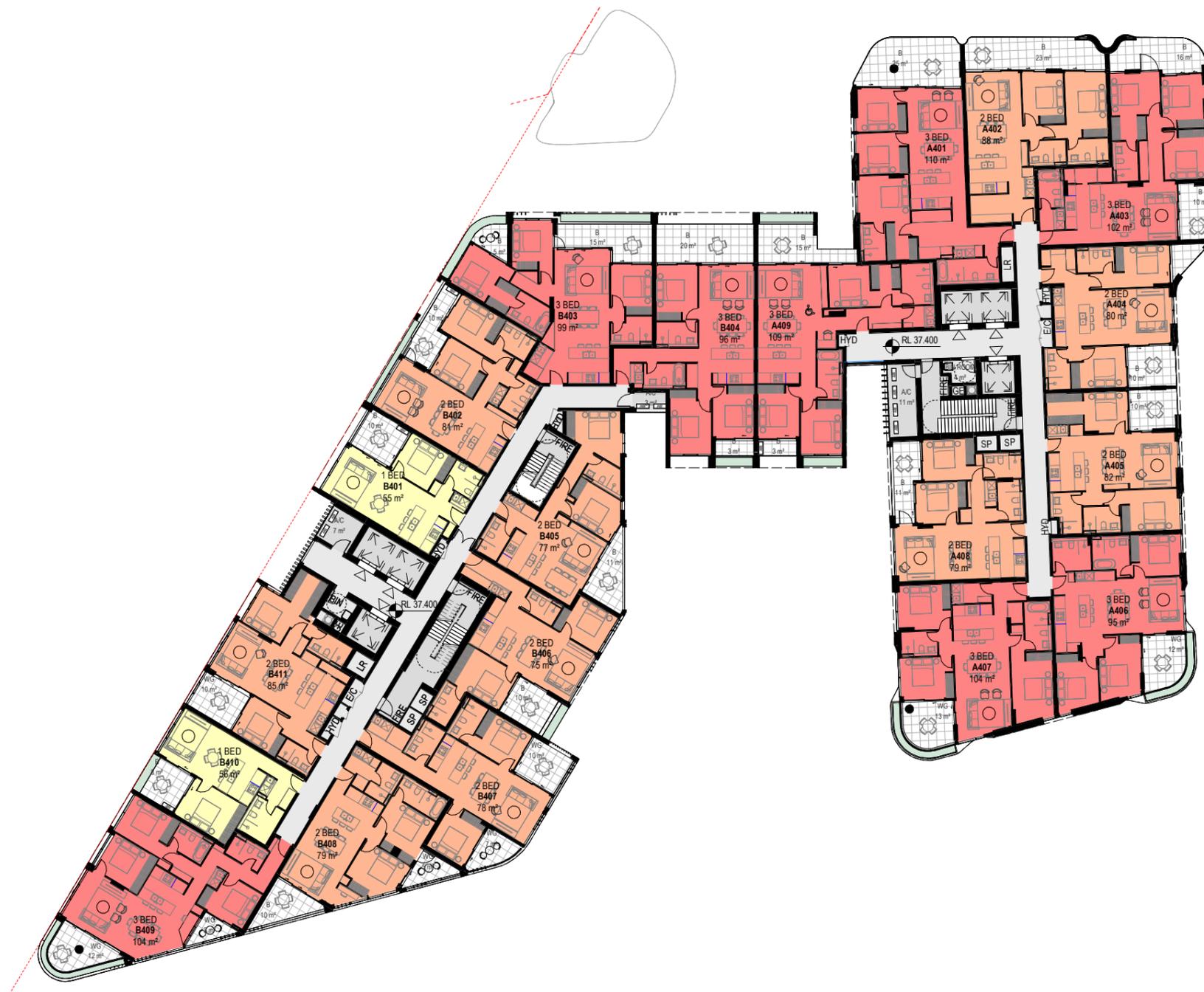


Residential space planning principles

One of the primary principles guiding the design of the north precinct was to ensure that these buildings have no back - they present as buildings in the round, actively engaging with the public domain that surrounds them.

Apartments are arranged to face Eden Street and Princes Highway in order to present active facade up the building.

Building cores have been located to to maximise northerly aspect for apartments. In the case of Building B, the core registers on the west facade as a vertical slot - adding articulation along the long western wall. Corridors are naturally-lit at the lift lobby.



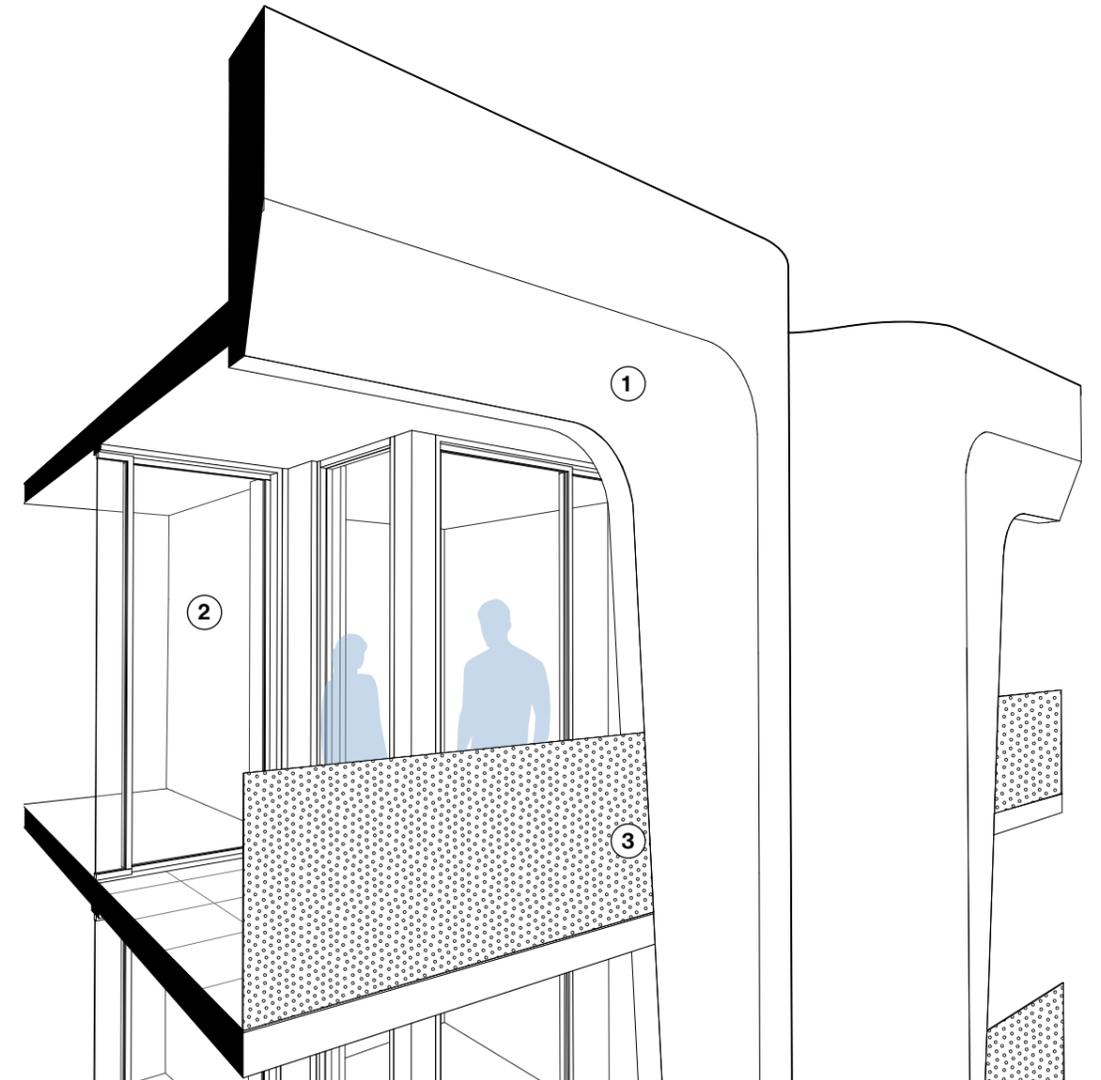
Podium A Facade Design

The facade has been configured to maximise amenity and reinforce building identity, while reducing heat gain.

The Eden Street facade of the podium under Tower A consists of deep balconies recessed within the larger, zinc-clad form. These apertures control heat load on the large glass sliding doors by providing shading to the north and west.

To the through-site link and Princes Highway, glazing area is controlled to minimise heat load in summer and cold-bridging in winter.

Additional measures for achieving thermal comfort and minimising environmental impacts are detailed in Integreco's BASIX specification.



Podium Facade / Sectional perspective

- 1 Zinc-clad frame
- 2 Full-height sliding doors from living and bedrooms to balcony
- 3 Perforated metal balustrades for privacy

Podium A Materiality

The tower and podium are conceived as metal and glass forms.

The teal zinc of the podium frames complements the smoke grey metal fin elements expressed up the tower facade. Balustrades are to be perforated metal.

Grey glass will ensure a high degree of transparency while offering solar protection.

While characterised by differing approaches to elemental articulation, the selected material palette unifies the tower and podium into a coherent composition with a unique identity.



Teal Zinc to the upper storeys



Off Form Concrete to columns at the Ground Levels



Glass bricks at ground floor



Perforated metal to the podium balconies



Grey Glass to all residential apartments

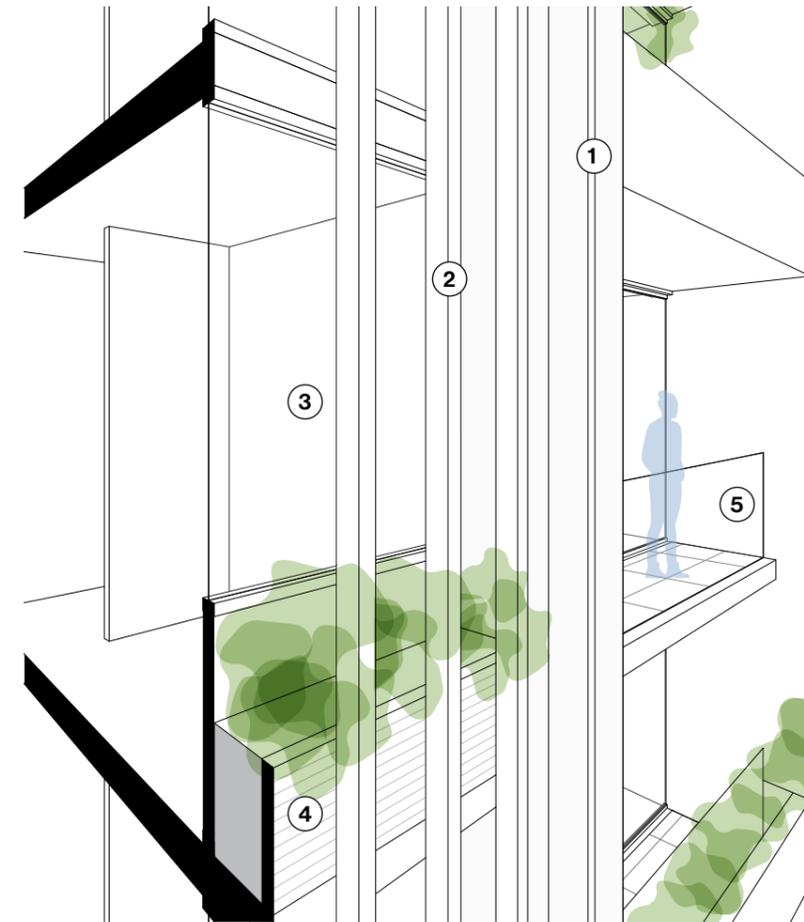
Podium B Facade Design

The regular grid of the podium under Tower B maintains a consistent expression of its interpretive relationship to ground while proffering a clear strategy for mitigating exposure to the elements and maintaining internal comfort.

Like the adjacent podium, deep balconies offer amenity while also mitigating heat gain in the middle of summer.

Planters up facade conceptually link the podium to Country by figuratively blurring the distinction between object and landscape. The proposed green facade would enhance the environmental performance for interior comfort by providing a vegetated outlook for residents and a means of filtering the pollution of the Princes highway - further contributing to the sense of environmental comfort and overall wellness of occupants.

Additional measures for achieving thermal comfort and minimising environmental impacts are detailed in Integreco's BASIX specification.



Podium Facade with planter box / Sectional perspective

- 1 Precast concrete frame/colonnade
- 2 Aluminium batten screen
- 3 Vision glass
- 4 Brick-faced planter box
- 5 Glass balustrade

Podium B Materiality

The selection of precast concrete connects the expression of the building conceptually to the earth, while offering a high-quality finish to civic spaces.

The inherent plasticity of the material also offers opportunities for fine edge detailing - helping to ensure that the proposed building relates to the human scale.

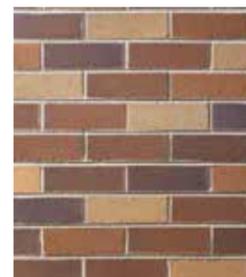
Glass balustrades recede from the edge of the building to ensure that the precast concrete frame is the dominant architectural feature.

Brick infill is used at planter boxes to add texture and reinforce the conceptual relationship to ground.

Planters up the facade further embellish the composition and reinforce the podium concept.



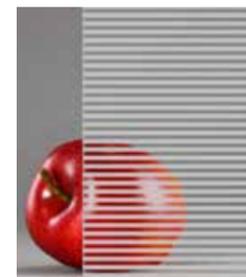
Precast concrete frame



Brick infill at planter boxes



Clear glass



Fritted glass at balustrades for privacy

7.5 TOWER A

Design concept

A fine, light, and shimmering veil perched on an eroded plinth, holding a green crown.

The transparency of the skin conceptually responds to importance of sky and water, linking elements of Country to the architectural expression.

Tower A is light and refined - characterised by a transparent skin with an expressed sunshading system, which wraps around the tower at the corners in four parts.



Residential space planning principles

The apartments are organised around a central corridor. The building core has been located on the fin-facing facade to maximise northerly aspect for apartments. The corridor is naturally-lit at the lift lobby to create a friendly and inviting space.

At the building's short edges, apartments are oriented to the streets. This ensures activity is visible from the public realm - contributing a sense of activation and passive surveillance.

Filed corners and corner balconies are designed to reduce the wind tunnel effect.



Facade Design

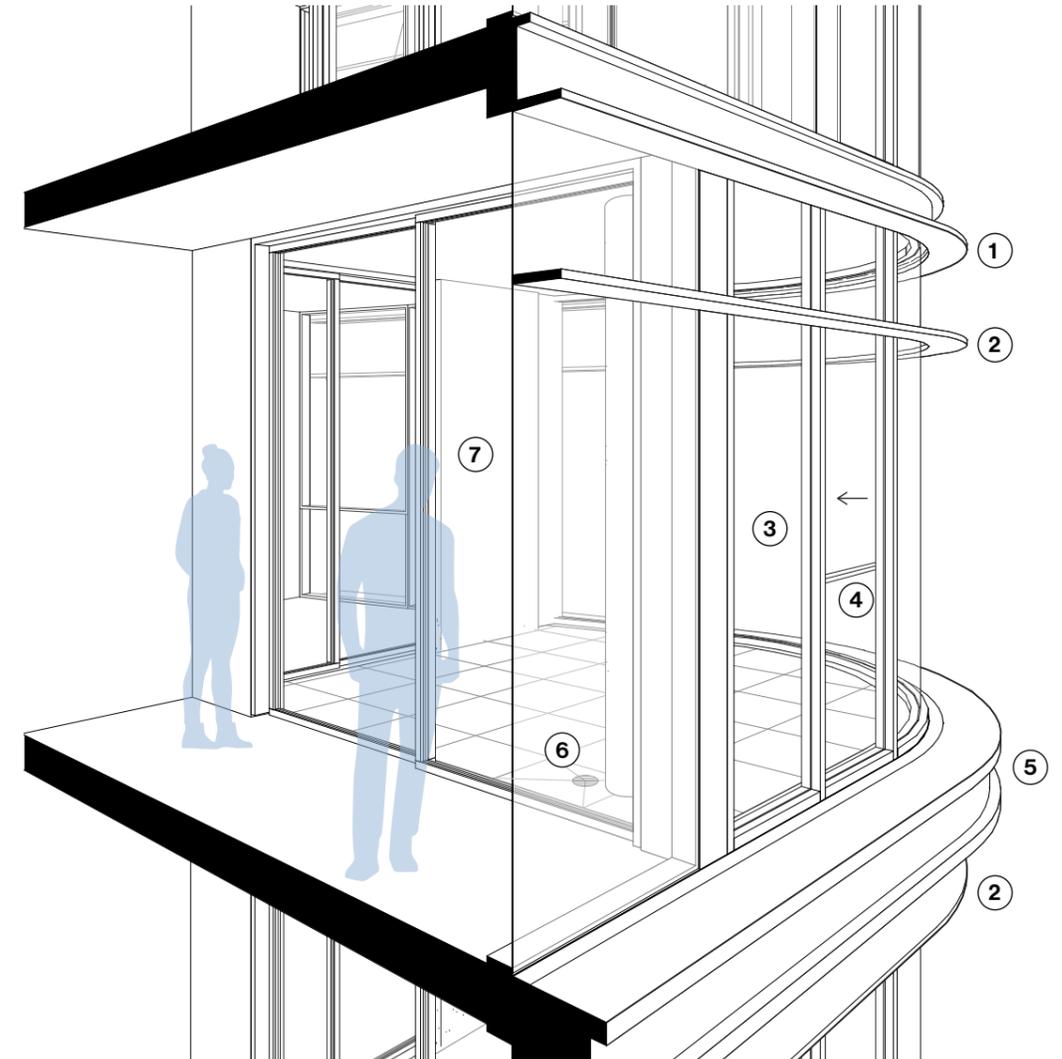
While Tower A's expression relies on achieving a highly transparent facade, the articulation of the key architectural elements is designed to ensure the facade performs environmentally.

The facade consists of Low-E glass spanning between slabs with operable windows to allow users to naturally ventilate their spaces without mechanical assistance.

The extended metal fins at each slab provide a horizontal shading device to reduce solar heat load on the glass.

Recessed balconies at the building's corners not only reduce wind speeds. They provide habitable areas that are deeply shaded.

A technical description of additional measures for achieving thermal comfort and minimising environmental impacts is provided in Integreco's BASIX specification.



Tower Facade and Winter Garden / Sectional perspective

- ① Folded metal cladding to slab edge (profile 1)
- ② Intermediate sunshade
- ③ Full-height sliding glazing to winter garden (50% operable)
- ④ Balustrade to winter garden
- ⑤ Folded metal cladding to slab edge (profile 2)
- ⑥ Outdoor tile finish with rainwater outlet for drainage
- ⑦ Outdoor concrete material finish to walls

Materiality

The tower is conceived as metal and glass form that is highly transparent and light.

The smoke grey metal fin elements expressed up the tower facade complement the teal zinc of the podium. Balustrades are to be glass.

Grey glass will ensure a high degree of transparency while offering solar protection.



Smoky grey metal to the tower fins



Grey Glass to all residential apartments

Communal Open Space

The communal open space for Tower A is provided over three levels. Each level provides different amenity and quality of spaces for the residents.

The Communal Open Space on the rooftop provides three areas. The northern area includes mounded artificial turf and seating areas with a variety of informal seating opportunities.

The eastern and southern areas have defined seating for gathering, dining and socialisation.

The communal open spaces on the lower podium levels provide quieter spaces for sitting and relaxation.



Roof architecture

A fine metal shade structure has been designed to improve amenity for users of the rooftop communal space.



7.6 TOWER B

Design concept

Tower B blurs the distinction between ground and building, with green facades acting as an intermediary between the restored topography and elevated gardens on the roof.

Comprising a triangular tower resting on a curvilinear podium, the building defines the northern edge of the new public park.

Where Tower A sought to present a highly transparent, airy expression, Tower B is dappled with landscape to create a green interface with the park.

As such, Tower B's design is derived conceptually from the question of how to connect more directly with the restoration of Country - which it seeks to do through architectonic interpretation and the figural and literal expansion of landscape up the building.



Residential space planning principles

The Building B tower is a triangular plan oriented to the splay of the park. It largely aligns with the footprint of the podium below.

The floorplate is organised around a central corridor, with a lift lobby pushed to the western facade. Apartments are oriented orthogonally to the long west facade.

The arrangement of the core on the west facade maximises northerly aspect for apartments. This also enables the lift lobby to be naturally lit.

Apartments at the corners are oriented to face Eden Street and Princes Highway - presenting an active facade up the building.



Facade Design

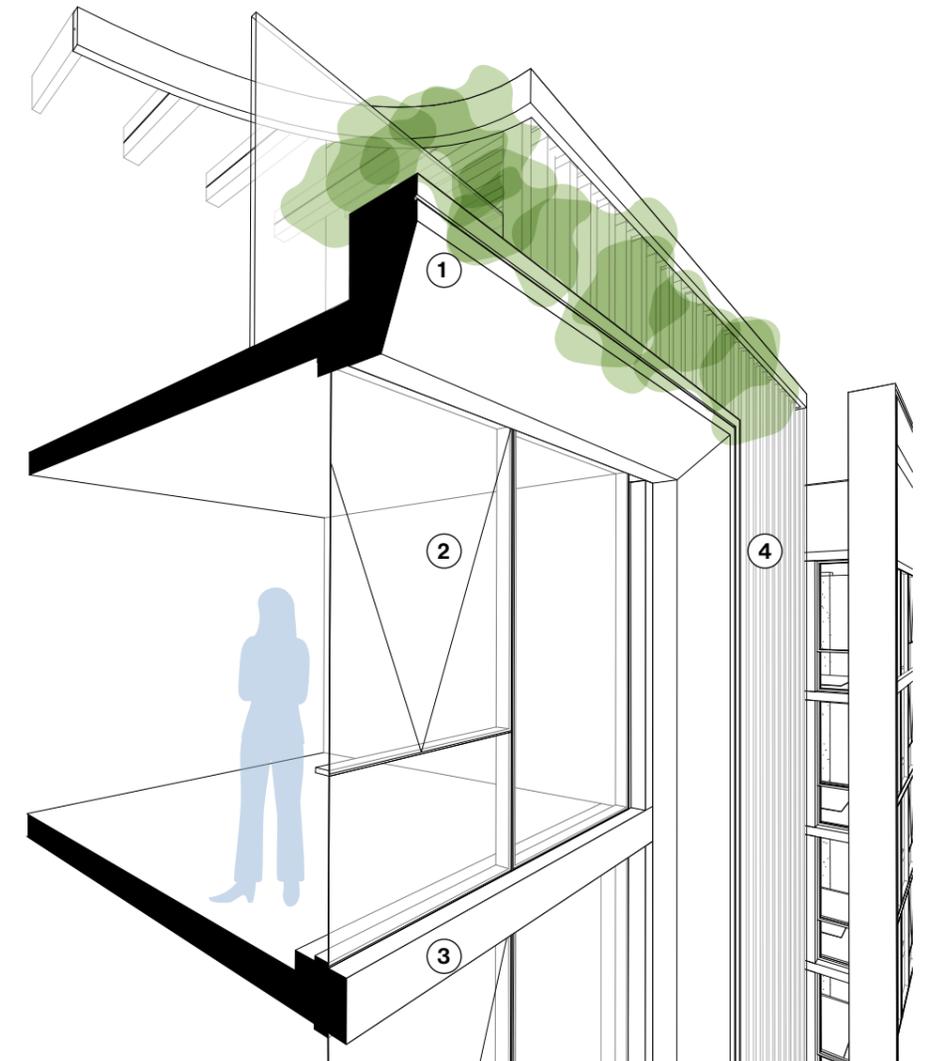
Environmental performance is a central feature of the architectural expression of Tower B.

Balconies are recessed into the facades. At the north-western corner, long linear balconies provide added amenity for residents while also providing additional shading of the facade line.

Operable windows enable residents to naturally ventilate their apartments without the need for mechanical assistance.

The tower continues the extension of landscape up the facade, with planters at open balconies. This contributes visual relief for residents and visitors alike, while also helping to improve air quality.

A technical description of additional measures for achieving thermal comfort and minimising environmental impacts is provided in Integreco's BASIX specification.



Tower Facade and parapet / Sectional perspective

- ① Finely detailed precast concrete parapet
- ② Operable glazing (awning window)
- ③ Folded metal slab edge cladding
- ④ Batten screen to lift lobby

Materiality

While characterised by differing approaches to elemental articulation, the selected material palette unifies the tower and podium into a coherent composition with a unique identity.

The key element binding the two figures is the expression of form-framing elements comprised of precast concrete elements.

The selection of precast concrete connects the expression of the building conceptually to the earth, while offering a high-quality finish to civic spaces. The inherent plasticity of the material also offers opportunities for fine edge detailing - helping to ensure that the proposed building relates to the human scale.

Fritted glass balustrades recede from the edge of the building behind a finely detailed and dark fascia. This ensures that the precast concrete frame is the dominant architectural feature.

Planters up the tower's facade at selected balconies further embellish the composition and reinforce the podium concept.



Precast concrete frame



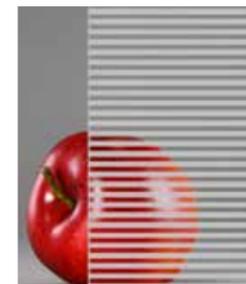
Brick infill at planter boxes



Black metal at slab edges



Clear glass



Fritted glass at balustrades for privacy

7.7 ROOFTOP OPEN SPACE

Communal Open Space

The communal open space for Tower B is provided at the rooftop level.

The Communal Open Space on the Tower B rooftop provides a distinctive character focused on series of garden 'rooms' enclosed by verdant planting.

The northern area includes linear spaces of artificial turf and seating areas with a variety of informal seating opportunities.

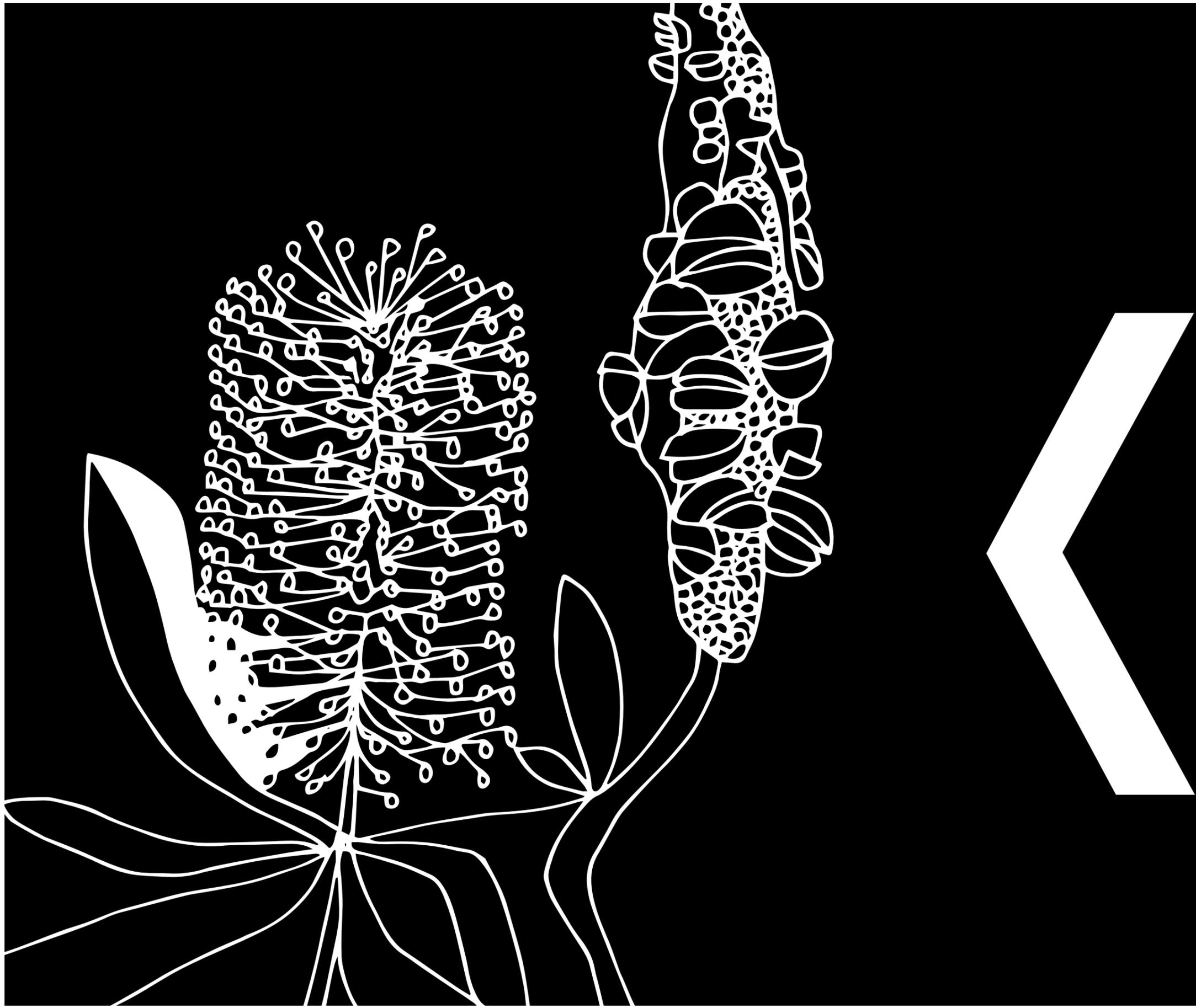
The eastern and southern areas have defined seating for gathering, dining and socialisation which are enclosed by vegetation.



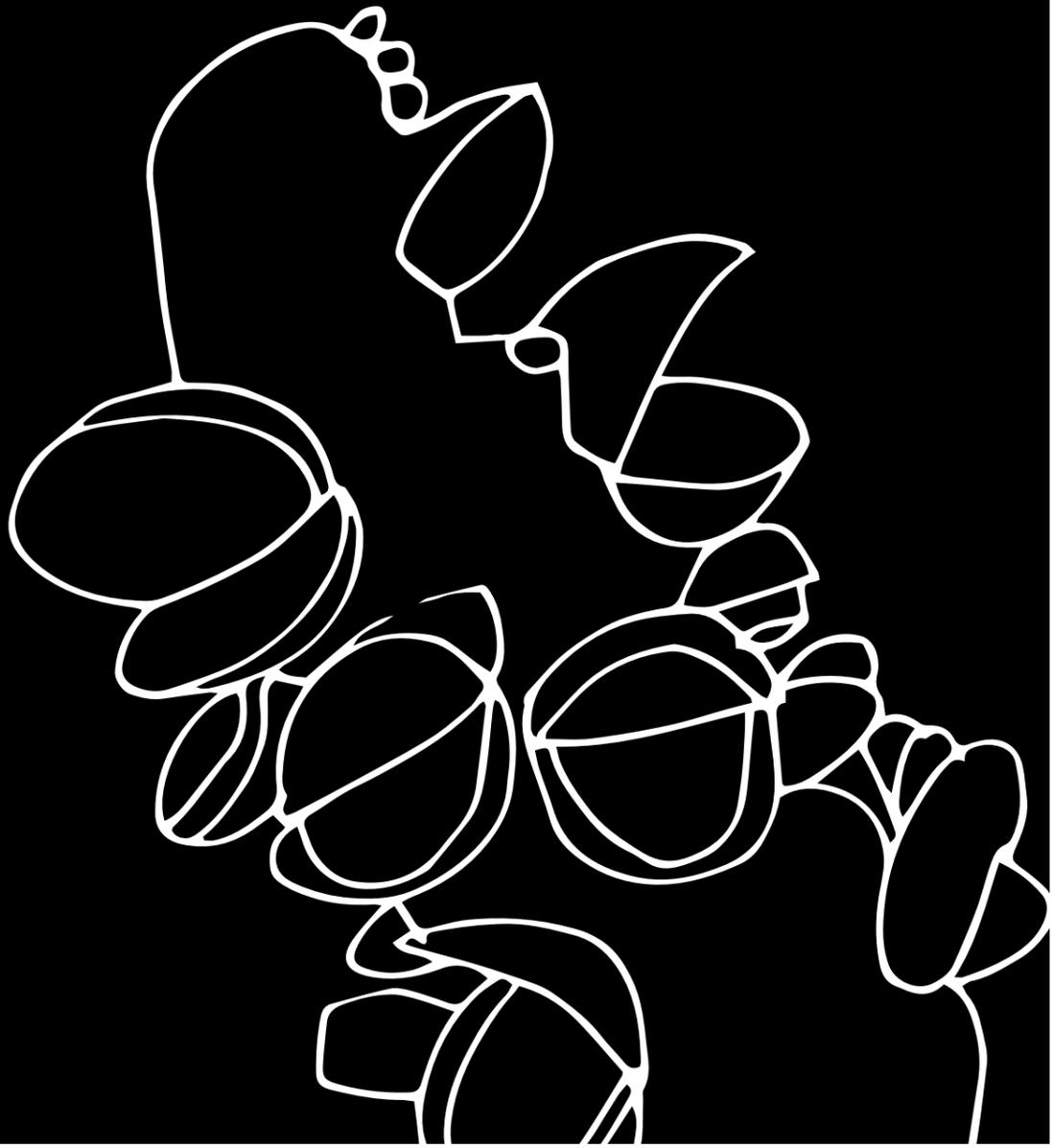
Roof architecture

Tower B has a large communal open space on roof. A permeable pergola provides shade, while the continuation of the facade past the roof level protects the COS from wind.

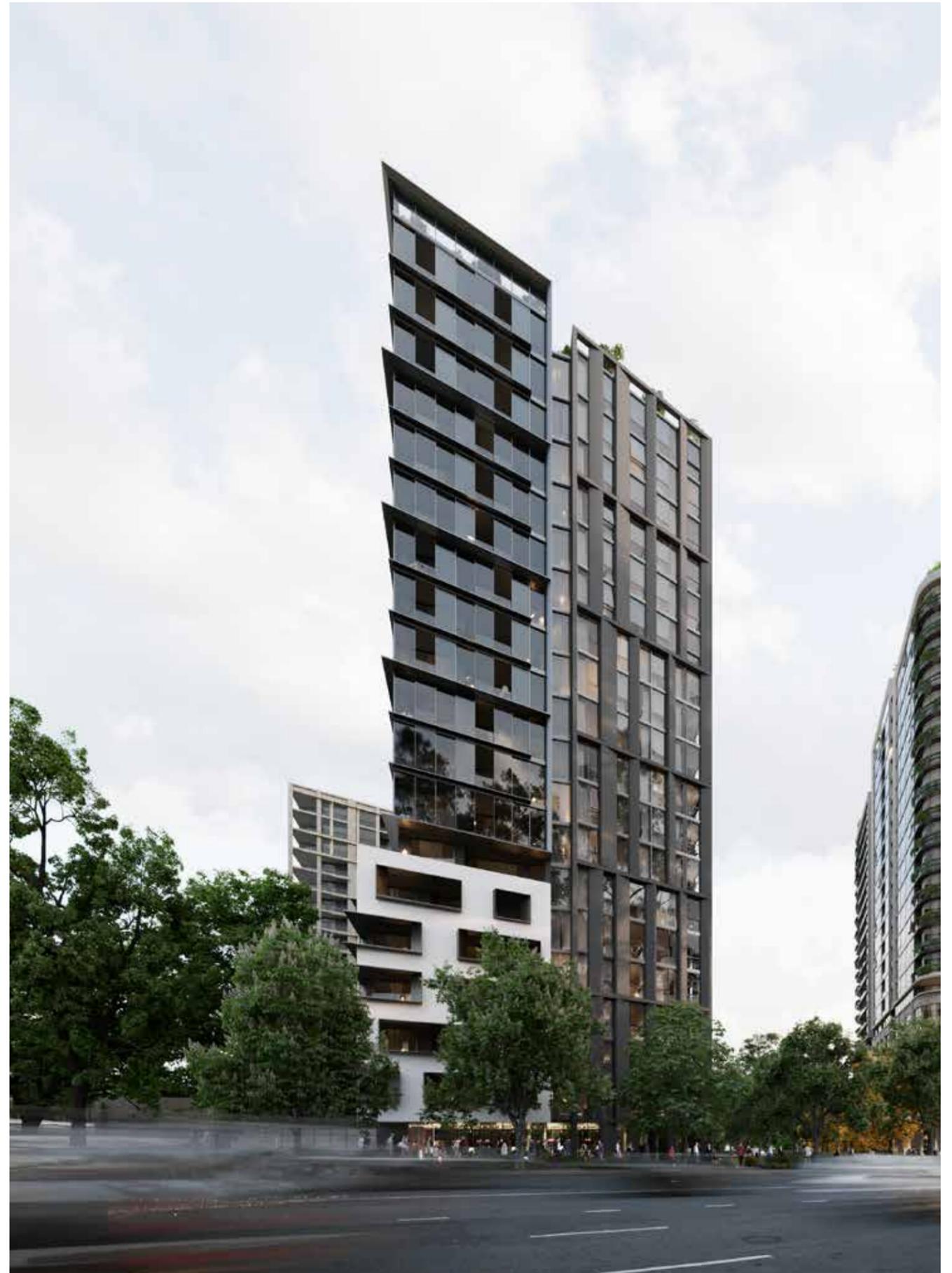




**8.0 SOUTH
PRECINCT**



08



8.1 SOUTH PRECINCT

Two sentinels locked in context, invoking the memory of the now lost eastern suburbs banksia scrubland.

The South Precinct consists of two residential towers - one private, the other by LAHC - at the south western edge of the new park.

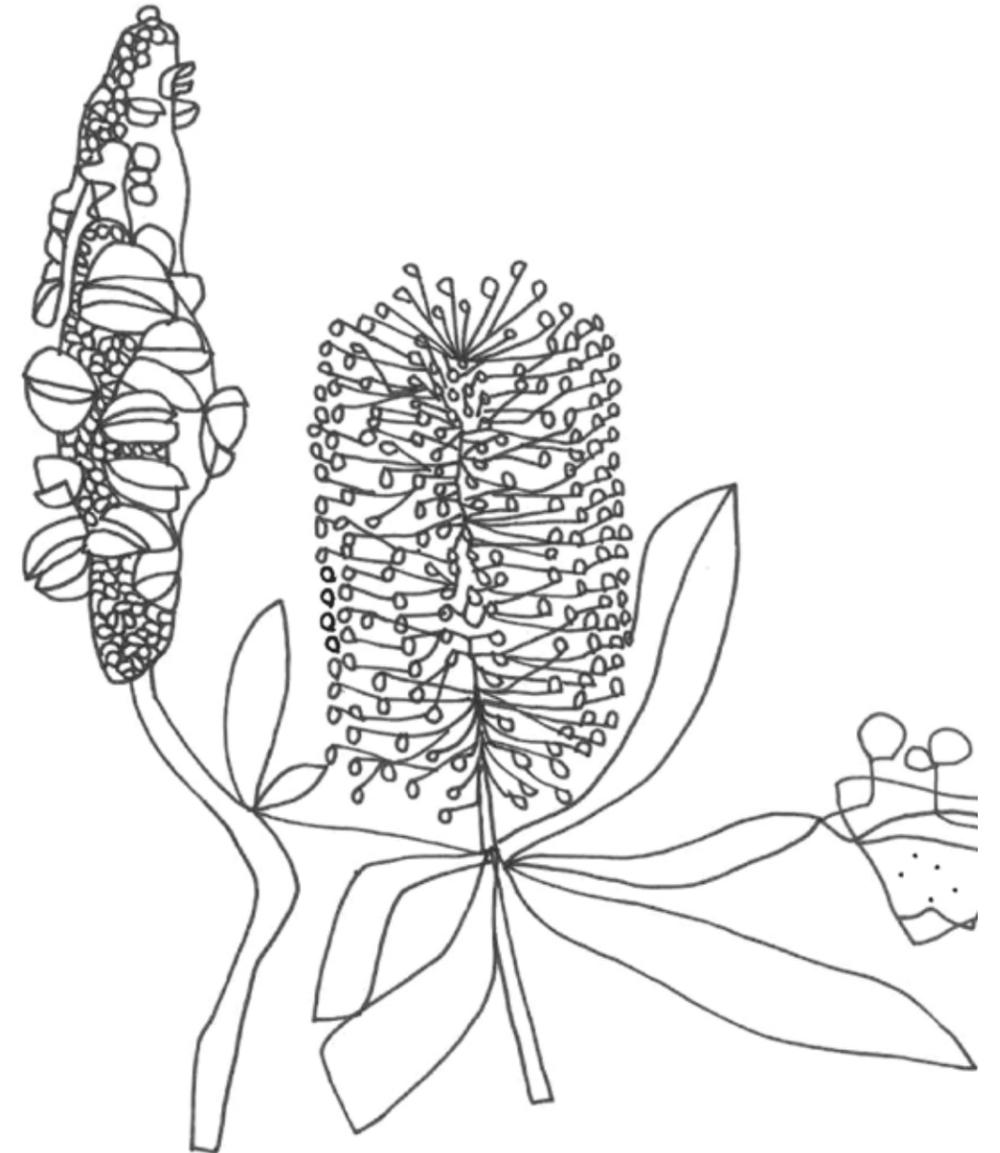
The architecture is more volumetric than the north precinct - pertaining to the concept of 'two sentinels locked in context'. Whereas the Northern Precinct podium presented a consistent street wall to the new Park and surrounding context, the Southern Precinct offers a more varied approach to form.

The two tower figures are connected at ground level by a row of town houses, that contribute a more domestic scale to the park's edge.

The architectural language of the South precinct is derived from the Aboriginal Design Principles, developed with Michael Hromek of WSP, and the consultation process with Auntie Yvonne Sims.

The project's form, expression and materiality seeks to connect the site to Country, and pays respect to the traditional significance of the eastern suburbs banksia scrubland. The life-cycle of the banksia flower provided immense inspiration for the development of the proposal.

This interpretive framework has provided a conceptual benchmark for developing the design, and has been refined through both the consultation and design excellence processes.





8.2 DESIGN VISION

Form and massing

The south precinct's interface with the park consists of two podium figures and a grounded tower linked by a 2-storey residential annex.

The southern-most podium figure (partially under Tower D) relates to the scale of the Tower C podium - establishing a datum to the new park. The podium figure terminates before Princes Highway, allowing the tower to return to the ground at the corner of the park.

Townhouses

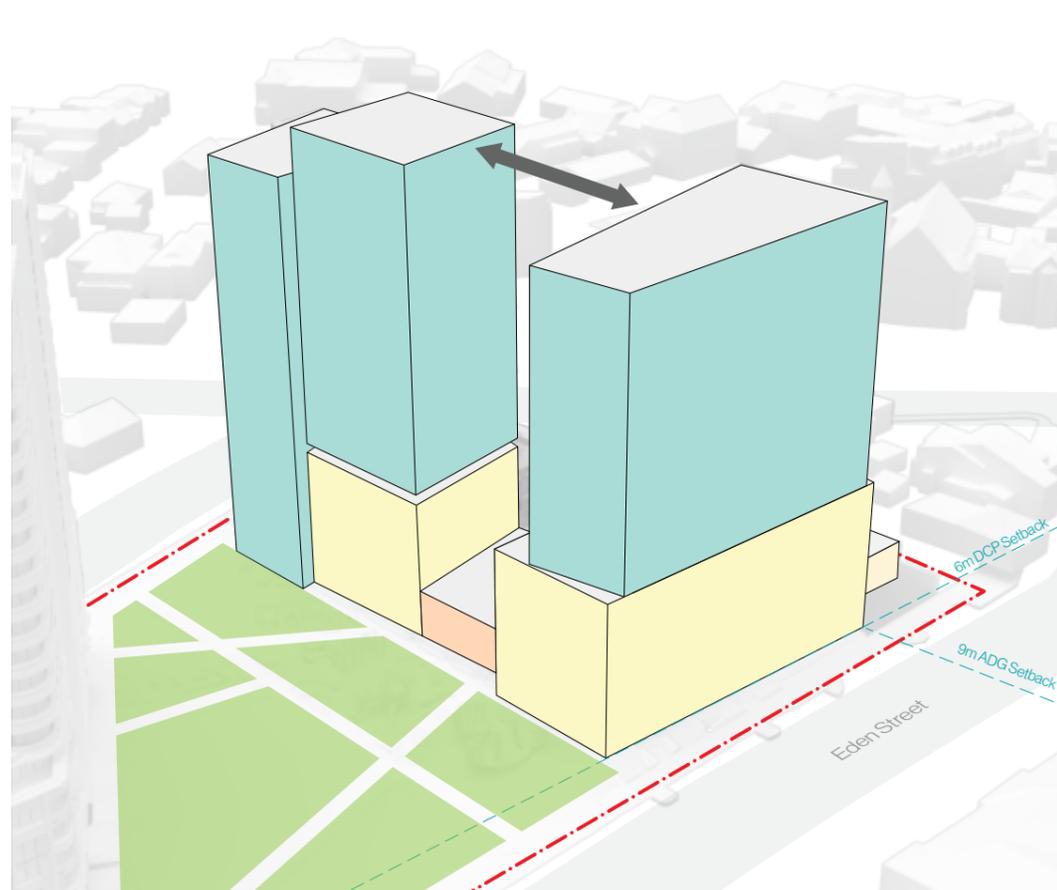
A two-storey annex links the podium figures. It contains two-storey apartments with ground floor gardens facing the park. These apartments conceal the carpark and service areas, providing activation and passive surveillance of the open spaces.

Tower C

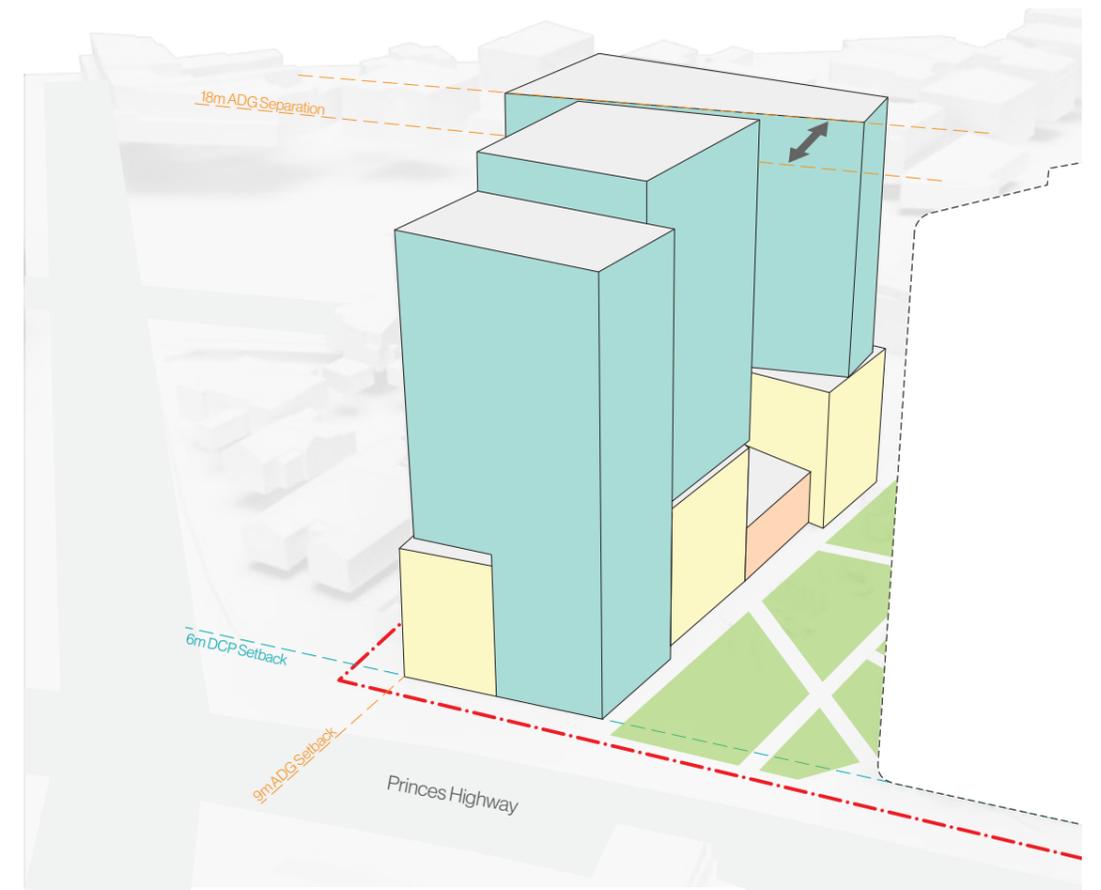
The tower largely mimics the shape of the podium. Tower setbacks are provided at the park and the southern boundary to reduce the bulk of the building to the public domain and the neighbouring properties. A single-storey gap is articulated between the podium and the tower to further reduce the apparent bulk of the development where setbacks have not been deployed.

Tower D

The tower is divided into three inhabited vertical volumes of varying height. The relationship of these forms to the podium is defined by their location - the tower on the corner of the park meets the ground, whereas the other two sit on top of the podium in order to present a more sensitive scale to adjacent development.



Response to Eden Street



Response to Princes Highway

Material concept

The design of the two building figures has been guided by a material concept stemming from the interpretive approach to connecting with Country.

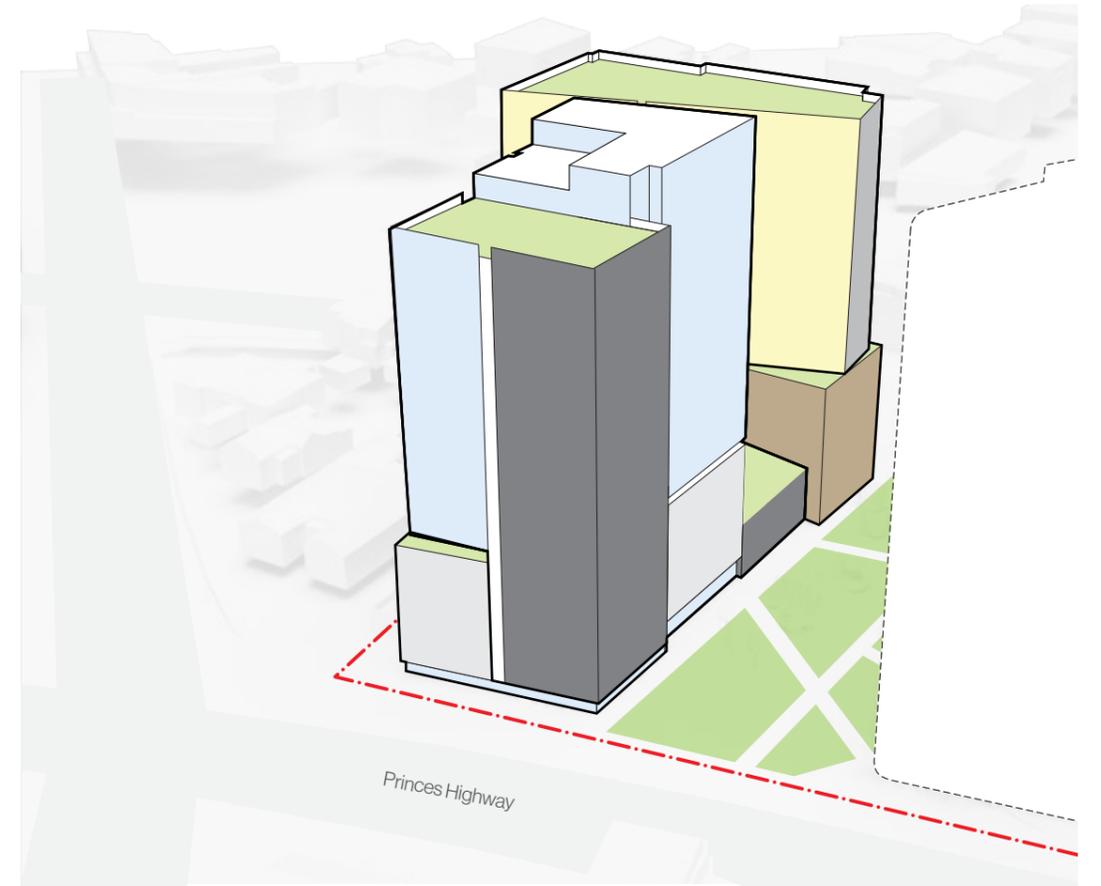
The design of two main building is guided by material and elemental abstractions of the banksia.

Tower C adopts the golden colour of the banksia flowers, whereas Tower D's dark concrete facade evokes the dark greys of the Infructescence once the flowers have been shed.

The towers are grounded by podiums which have been assigned earthen materials - brick and concrete.



Eden Street



Princes Highway



Formal modulation

Techniques of formal modulation have been used to mitigate the perceived bulk of the building figures - creating a formal composition fine-tuned to place and human scale.

The townhouses between buildings C and D offer a significant change in scale along the southern edge of the park.

The corners of the site are bookended by retail loggias, which offer a deep threshold between public and private space.

Podium C

The Eden Street facade of Building C is stepped in and out to reduce the bulk of the building. The podium steps down at the southern edge, providing a sensitive interface to the adjacent lot.

Tower C

The tower is divided into a largely regular grid containing window openings and balconies. The grid protrudes past the primary facade.

Tower D

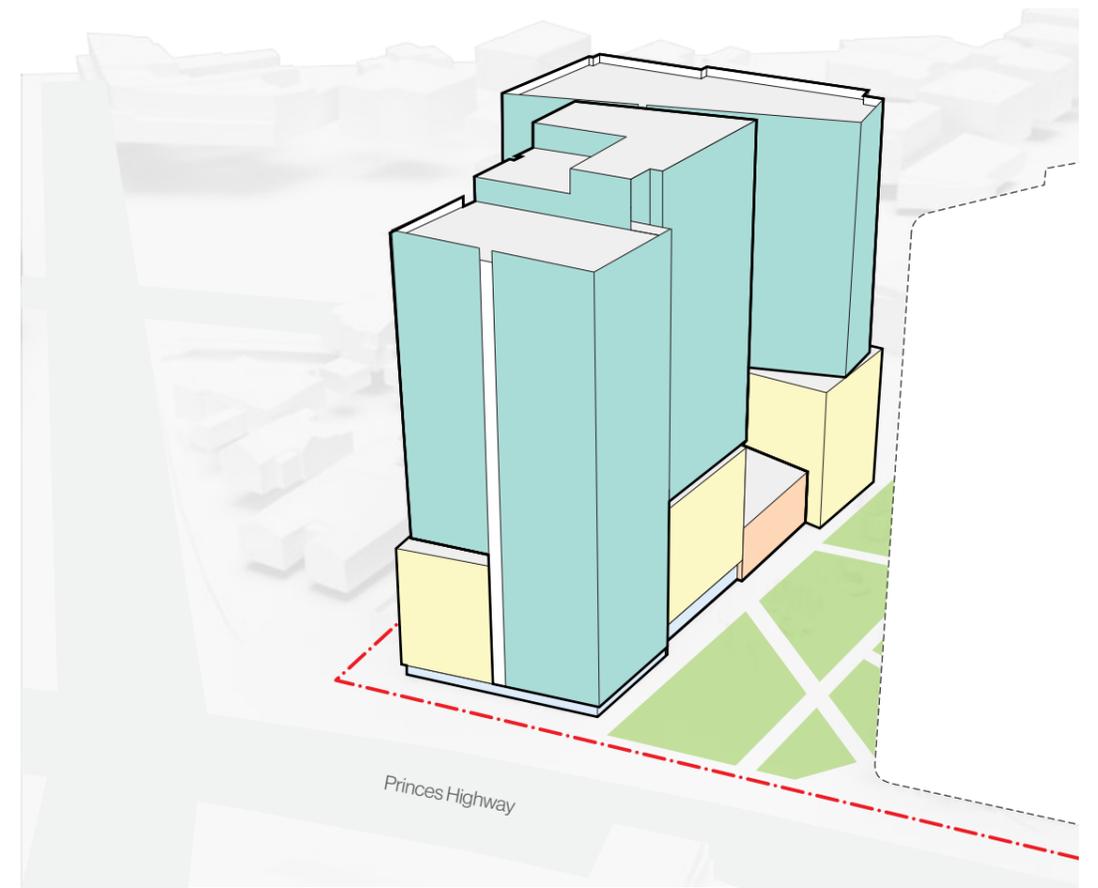
Vertical slots are used between the primary volumes.

The central habitable volume is divided through the expression of horizontal spandrel extensions at every three storeys.

Large frames envelope the remaining two volumes of the tower so as to establish an architectural dialogue with Tower B. The framing of this portion of the tower volume facilitates the expression of an open corner. Cantilevering balconies create a feathered edge to the north - capturing sunlight for residents while offering a lightweight expression in contrast to the heaviness along Princes Highway.



Response to Eden Street



Response to Princes Highway

Articulation and Expression

Variation in the architectural expression reinforces the unique identities of the two buildings.

Podium C

The brick podium under Tower C is punctuated by large vertical openings that relates to the colonnade at the ground floor. The shift in scale between the large openings in the brick walls and the fenestration creates a highly articulated facade that complements the rhythm of Podium B's structural grid.

Tower C

Tower C has a large west-facing facade that requires protection from the afternoon sun. Folded metal solar shades are distributed across the facade grid to reduce the solar gain from the western sun. Variation in the height of sunshades is used to break the uniformity of the grid.

Podium D

The podium under Tower D presents a diverse and articulated facade to the new park and Princes Highway - with extruded hoods framing a highly varied fenestration pattern reminiscent of the open valves of local banksia cones.

While the majority of windows are designed to service a single storey, a two-storey valve is articulated at the northern-most corner of the podium facing the park - further developing the banksia reference.

Tower D

The central habitable volume is further divided with intermediate vertical elements providing sunshading to the east and west.

The scale of this facade strategy complements the scale of the spandrel distribution on Tower A - forming two bookends to the precinct along Princes Highway.



Eden Street



Princes Highway





8.3 GROUND FLOOR INTERFACE

Activating the Public Realm

The design of the ground floor of the south precinct is driven by the desire to activate facades facing Eden Street and Princes Highway.

Two loggias at the corners to bookend the site and create permeable, deep thresholds between private and public domain. These undercover, colonnaded spaces house retail uses which will activate the site's corners.

In the centre of the site, where retail would struggle without high levels of pedestrian foot traffic, townhouses provide active uses that conceal the back of house, loading docks and parking areas. Residential uses at the ground floor will activate the edges of the park at different times of day and provide passive surveillance of the public spaces outside of retail hours.

Space planning principles

Vehicular access to the site via Eden Street is consolidated to the southern boundary to reduce any potential conflicts with pedestrians. This strategy has been used to ensure active and transparent frontages are maximised around Buildings A and B.

Access to residences is directly off the public domain - ensuring the through-site connections are actively used by residents. The interface between public and private realms is managed through private front gardens - a space which can be personalised by residents to create a more engaging and vibrant precinct.





Town House Concept

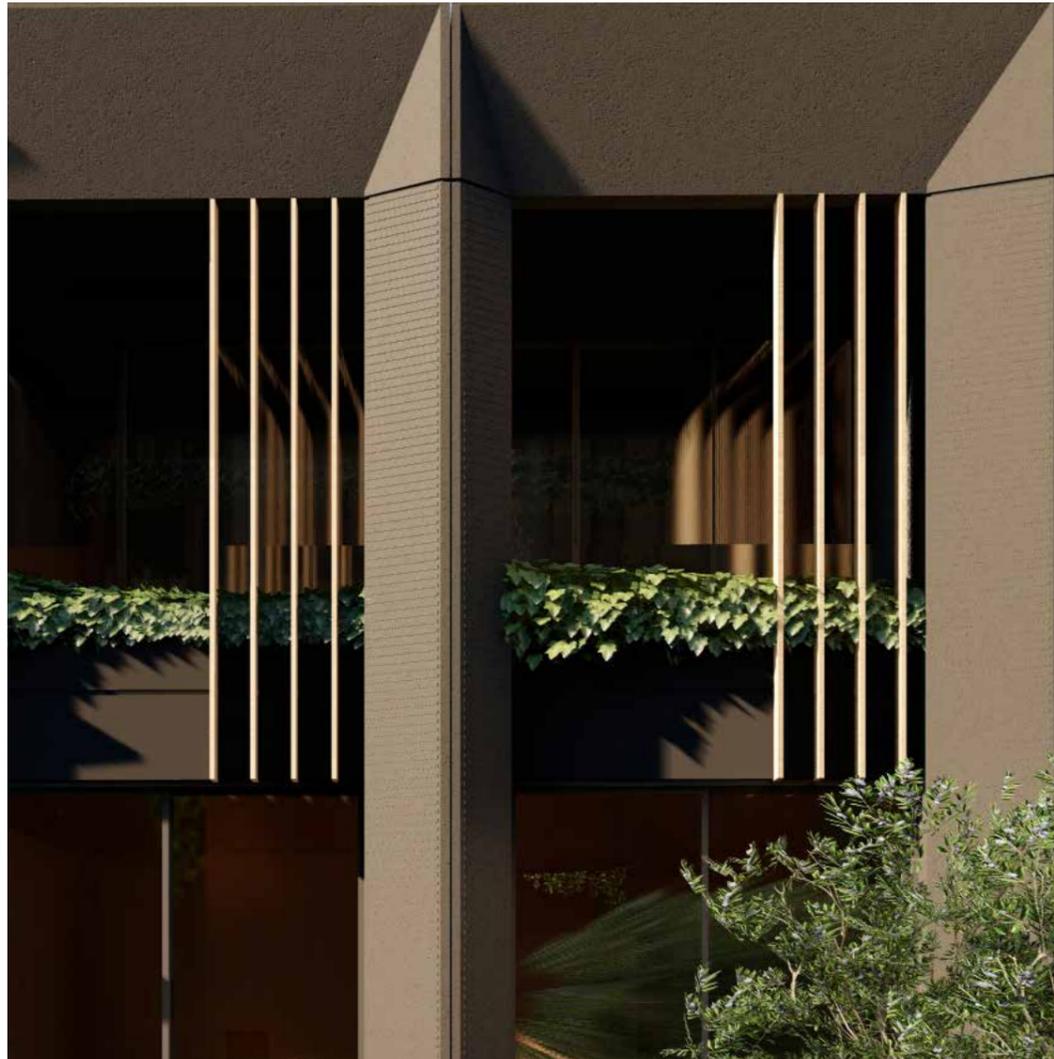
The two-storey apartments consist of regularly-spaced double-height pilasters terminating at a heavy entablature.

The trabeated expression is internally subdivided by vertical battens which proffer sunshading to the upper floors and reinforce the verticality of the primary articulation.

At ground floor, private front gardens provide a threshold between the townhouses and the public park. The result is a soft transition between public and private realms that also enables different uses to activate the park's perimeter at different times of day.

Town House Materiality

The townhouses have been designed to match the precast corner volume of the tower. A formliner will be nominated to give texture at ground floor, adding a sense of tactility at the human scale.



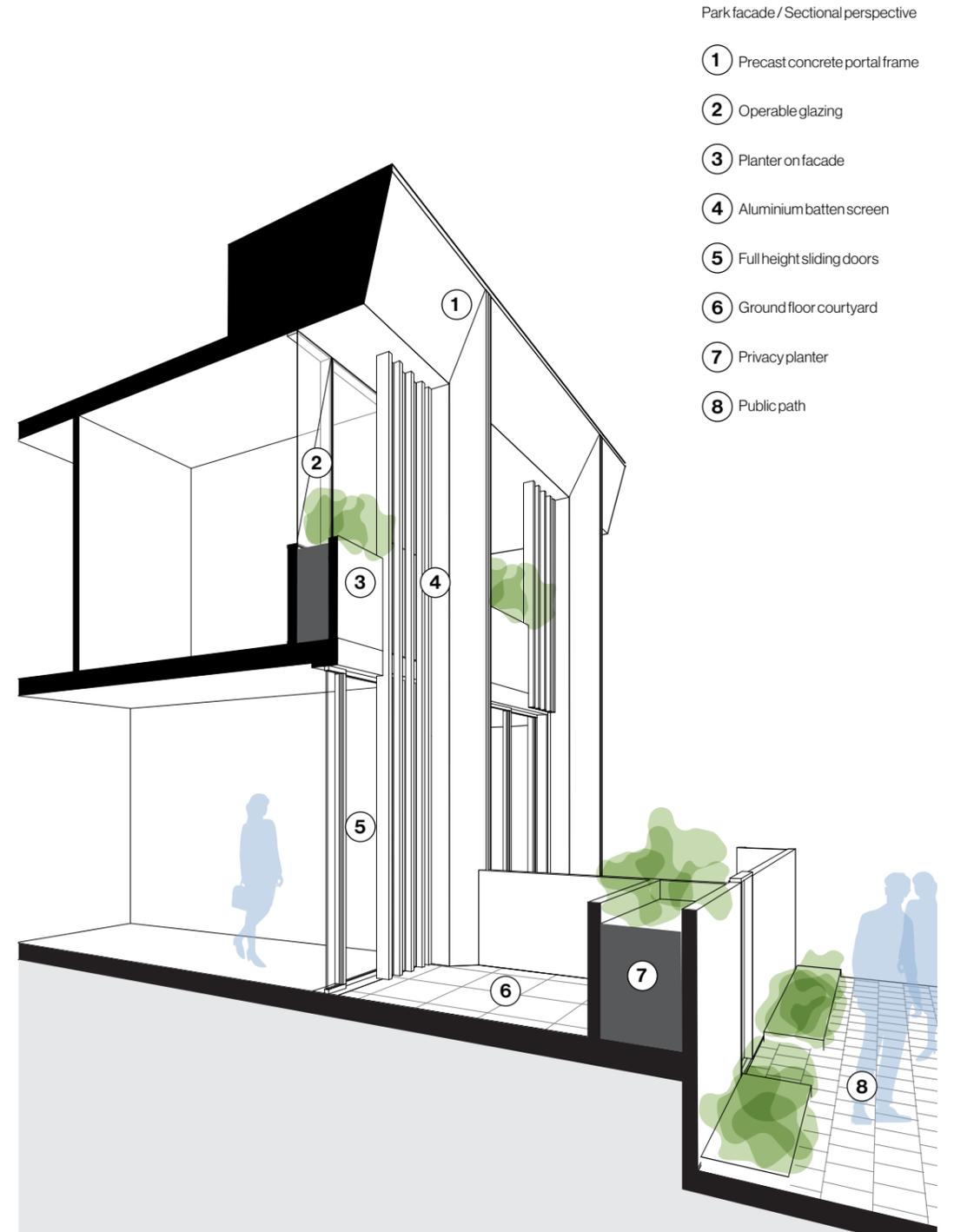
Black concrete with aggregates



Black metal details



Grey glass



Park facade / Sectional perspective

- ① Precast concrete portal frame
- ② Operable glazing
- ③ Planter on facade
- ④ Aluminium batten screen
- ⑤ Full height sliding doors
- ⑥ Ground floor courtyard
- ⑦ Privacy planter
- ⑧ Public path

Childcare Centre

The proposal incorporates a 240 m² childcare centre at the bottom of Building D, accommodating 40 children. The centre opens out onto an outdoor space, part of which lies below the tower above - offering a high degree of visual privacy. The outdoor space will be a minimum 280 m² and will be surrounded by a 1.8 metre high fence for privacy and security.

Key figures

Internal area:	240 m ²
Number of children:	40
Internal area per child:	6 m ²
Outdoor area:	280 m ² min.
Outdoor area per child:	7 m ²



8.4 TOWER C

Design concept

Tower C is characterised by a distinctive facade system that offers residents high levels of thermal comfort without the need for air conditioning, while ensuring the quality of internal spaces is not compromised.

The open sunshades are designed to invoke the lifecycle of the banksia flower. The openings are reminiscent of the open valves of banksia cones that have gone to seed. The chosen colour of the shades invokes the golden buds of the banksia flower.



Residential space planning principles

Apartments are arranged around a central corridor. Services and vertical circulation are pulled inside to maximise apartments along facade. A centrally located window ensures that corridor is naturally light and ventilated.

Where feasible, living areas have been located at the facade line to create an active, vibrant facade up the building.

Balconies have been located at corners to reduce wind tunnel effect. The northern facade consists of balconies that provide shading.



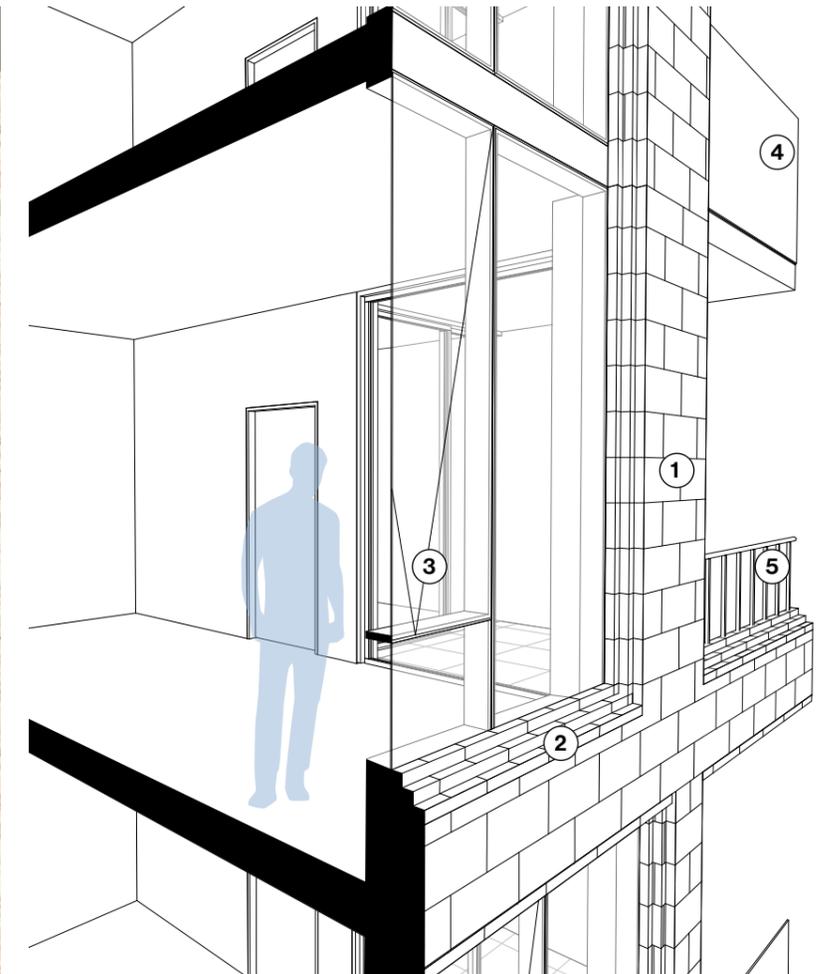
Podium Facade Design

The configuration of masses, elements and openings is responsive to local environmental conditions - maximising internal comfort without compromising amenity.

One of the key constraints defining the facade expression for Building C is the lack of air conditioning. This meant that the building envelope would need to work much harder to achieve similar levels of comfort - and ensure equity of environmental quality for LAHC residents.

To reduce heat load, the podium is designed as a brick volume with deep recessed balconies offering shade to the living spaces.

A technical description of additional measures for achieving thermal comfort and minimising environmental impacts is provided in Integreco's BASIX specification.



Podium Facade / Sectional perspective

- ① Brick facade
- ② Corbel detail to perimeter of openings
- ③ Operable windows (awning window)
- ④ Painted upstand to balcony
- ⑤ Bronze-coloured metal balustrade

Podium Materiality

Brown dry pressed bricks create a sense of mass with punctured openings. While the application of material is consistent across the podium, varegation will be achieved through the use of a brick mix. The subtle changes in colour will offer a lightness to this otherwise heavy material.

Bronze tinted glass complements the brown tones of the brick, and provides a high performance thermal solution.

Painted concrete upstands and bronze-coloured metal balustrades sit recessed in the large openings, reinforcing the podium's stereotomic language.



Varegated brick podium



Upstands in bronze-coloured applied finish



Bronze-coloured metal balustrades



Bronze perforated metal for balustrades



Bronze-tinted glass

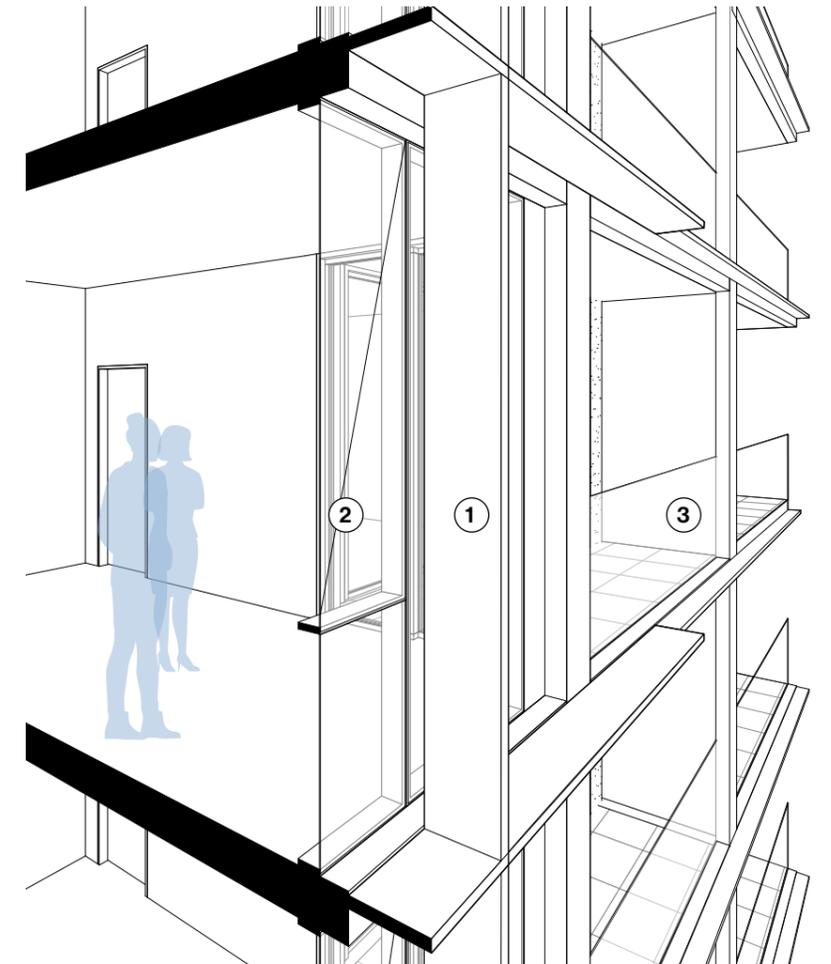
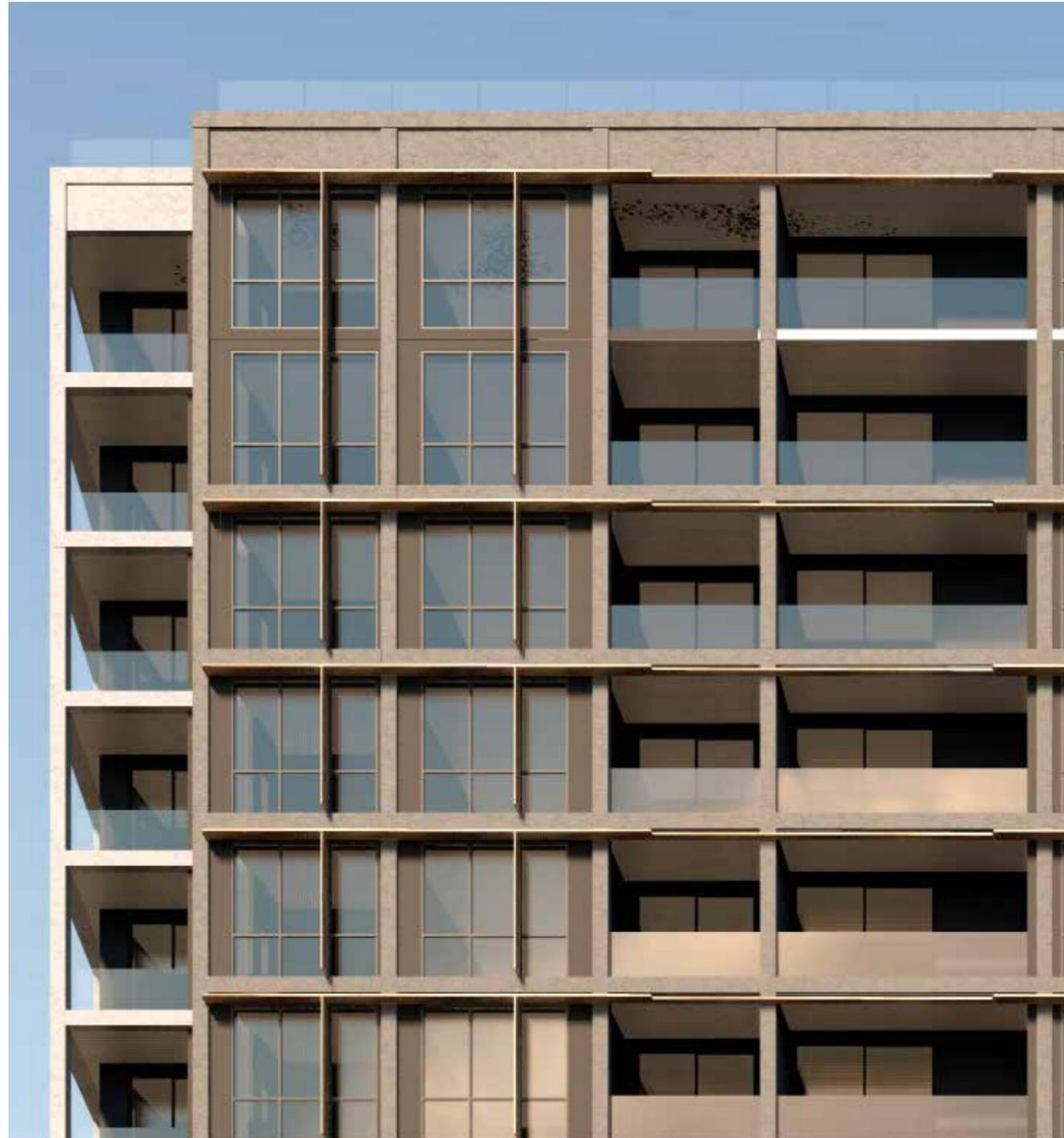
Tower Facade Design

The configuration of masses, elements and openings is responsive to local environmental conditions - maximising internal comfort without compromising amenity.

One of the key constraints defining the facade expression for Building C is the lack of air conditioning. This meant that the building envelope would need to work much harder to achieve similar levels of comfort - and ensure equity of environmental quality for LAHC residents.

To reduce heat load, the tower is designed with folded metal sunshades over the full-height glazed facade. The folded sunshades have been calibrated to the building's orientation to maximise the efficient use of materials to achieve the desired reduction in solar heat gain. The result is a precinct defining, unique and identifiable architectural expression that offers residents uninterrupted district views without compromising on environmental performance.

A technical description of additional measures for achieving thermal comfort and minimising environmental impacts is provided in Integreco's BASIX specification.



Tower Facade / Sectional perspective

- ① Perforated metal sunshade
- ② Operable windows (awning window)
- ③ Glass balustrade to balcony

Tower Materiality

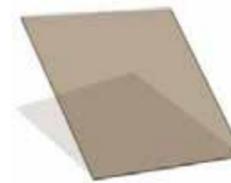
The defining element of the tower is its perforated metal sunshades to reduce heat gain on glazing. Full height glass and glass balustrades recede behind the frame while ensuring district views are retained for all residents.



Gold Perforated metal for sunshades



Dark concrete with aggregates



Bronze-tinted glass

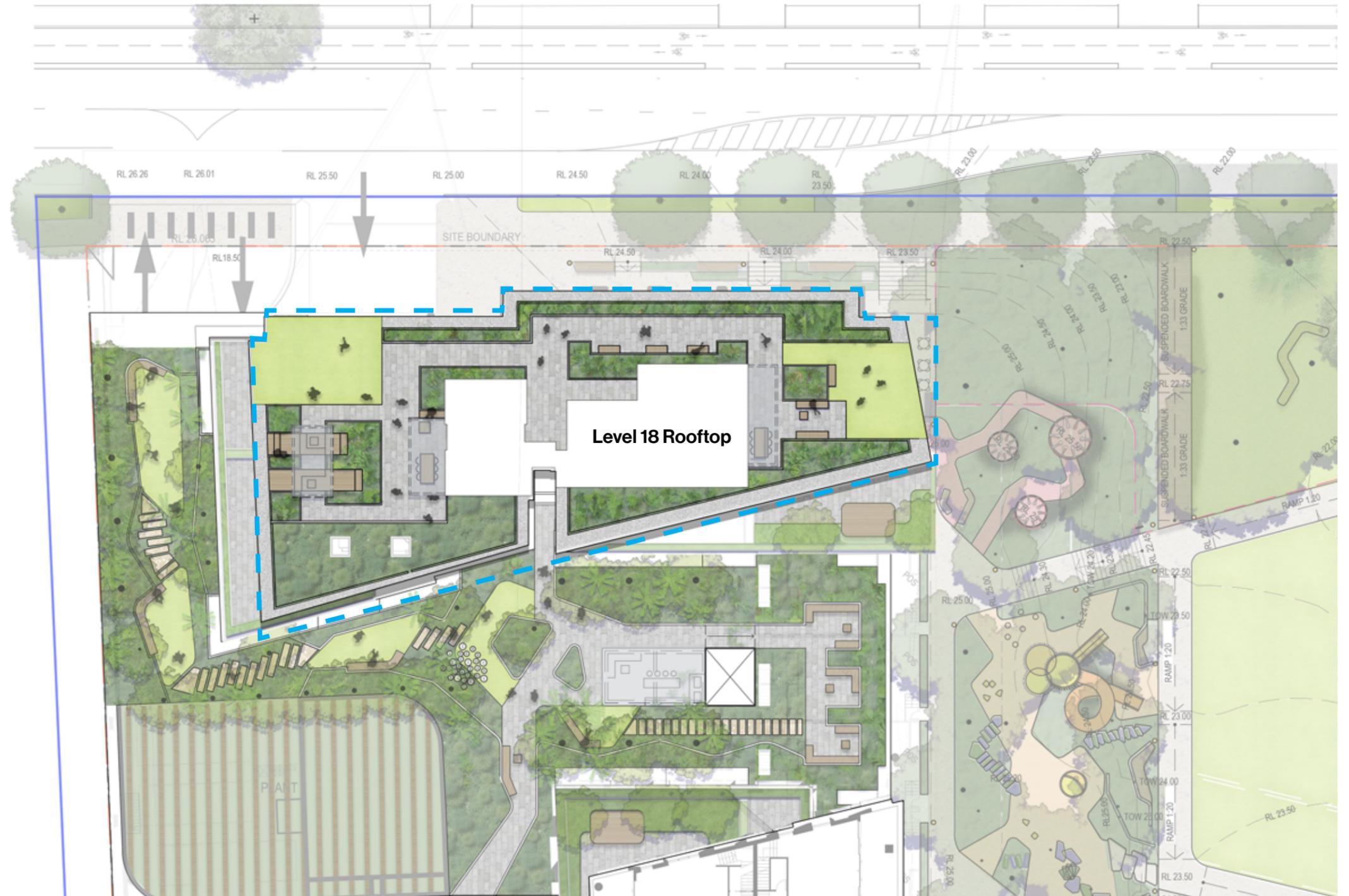
Communal Open Space

The communal open space for Tower C is provided at the rooftop level as well as on the adjacent Level 2 rooftop.

The Communal Open Space on the Tower C rooftop provides a series of garden 'rooms' enclosed by verdant planting.

The east and west area include spaces of artificial turf and seating areas with a variety of informal seating opportunities. Within both sides are defined seating areas for gathering, dining and socialisation.

The Level 2 rooftop area is a shared Communal Open Space with Tower D. Refer to page 173 for plans.



Roof architecture

A low horizontal roof with cantilevering pergolas at either end provides shelter to the rooftop communal open space. The roof conceals building services. It is set back from the Eden Street facade to minimise its visibility.

Glass balustrades are set behind the parapet so as not to disrupt the rhythm or proportions of the grid.



8.5 TOWER D

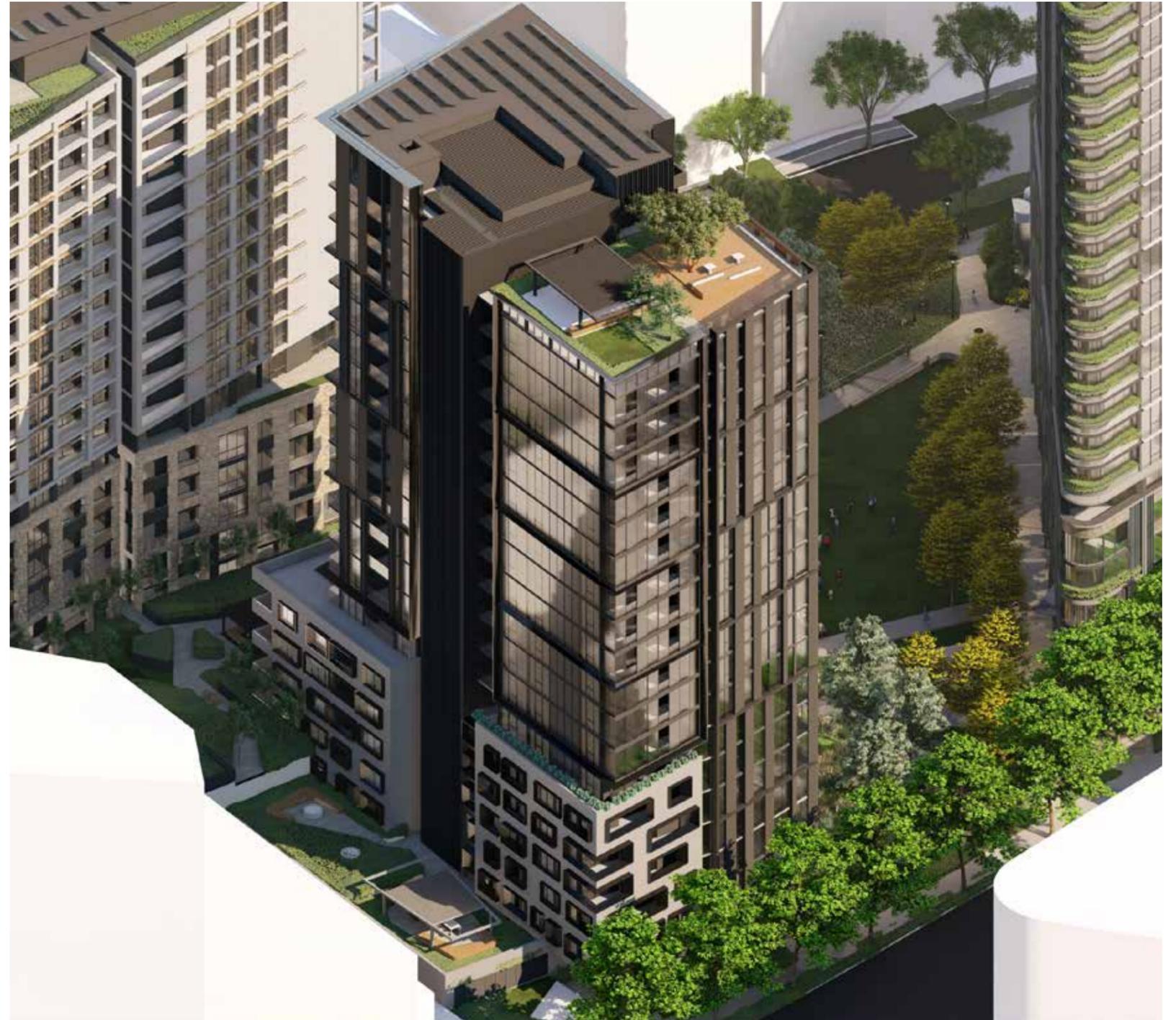
Design concept

Tower D marks the south-eastern edge of the precinct with a monumental gesture.

The tower consists of three volumes clustered around a circulation and services core. These discrete figures have distinct identities responsive to their surroundings.

The building presents a full-height residential volume at the corner of the park and Princes highway, framed on either side by a six-storey podium. It is the only element in the precinct to break from the podium-tower typology - creating an urban marker at the site's south-eastern edge.

The tower's architectural language evokes banksia cones in line with the project's connecting with Country framework - with dark grey tones and expressed sunshade 'valves'.



Residential spatial planning principles

The floor plate is organised around a central corridor. The south-facing core to ensure maximum number of apartments are oriented to the sun.

Living spaces are predominantly located at the facade line to create an active facade. Bedrooms are mostly set back with balconies to provide privacy.

Balconies are located on the corners of the building facing the park to reduce wind tunnel effect.



Podium Facade Design

Building D's podium is designed with high levels of shading to glazed openings in order to achieve comfortable internal environments.

Two architectural languages have been deployed to increase variation in the facade - a principle arrived at through the design excellence process with the SDRP.

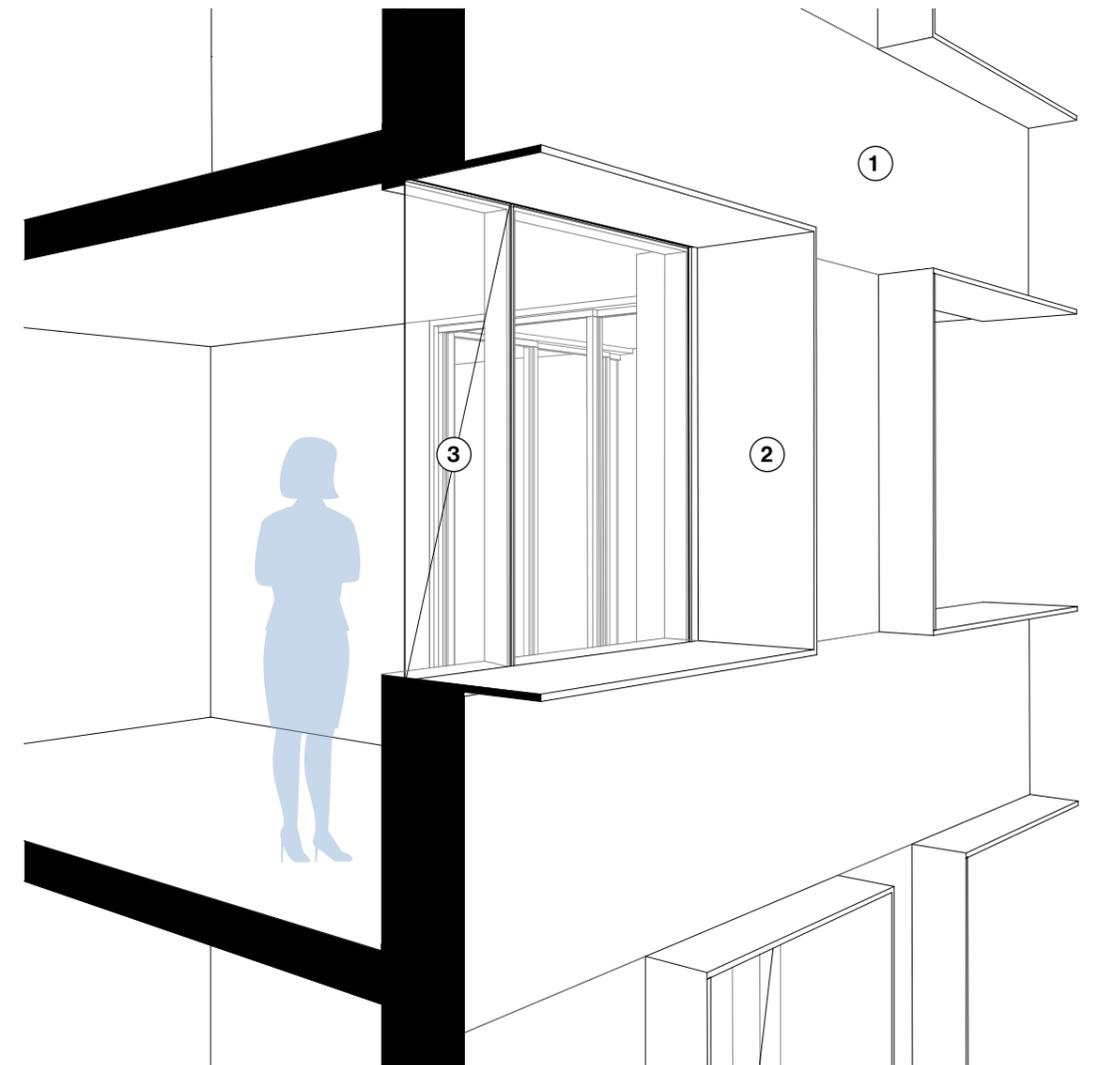
The northern-most corner of the podium is characterised by an abstracted composition of punched openings, whose outline is accentuated by 360 degree dark metal hoods. These hood, reminiscent of the open valves of banksia cones, extend beyond the facade line to increase shading to these part-height openings.

Deep set balconies provide additional shading while also contributing high degrees of amenity.

The corner facing Princes highway and the park, on the other hand, is characterised by large vertical precast fins providing shade to full-height glazing - described in the tower facade design section below.

Operable windows allow residents the opportunity to naturally ventilate their apartments without mechanical assistance.

A technical description of additional measures for achieving thermal comfort and minimising environmental impacts is provided in Integreco's BASIX specification.



Podium Facade with sunshades / Sectional perspective

- ① Precast concrete facade
- ② Painted 360 degree window hood for shading
- ③ Operable glazing (awning window)

Podium Materiality

The lowest podium figures are light textured concrete, which offsets the black concrete of the tower.

Fine black metal extrusions emphasize the openings punched in the tile-clad wall - bringing the colour palette of the towers and podium into dialogue.



Textured concrete to podium



Black metal details



Framed windows



Grey glass

Tower Facade Design

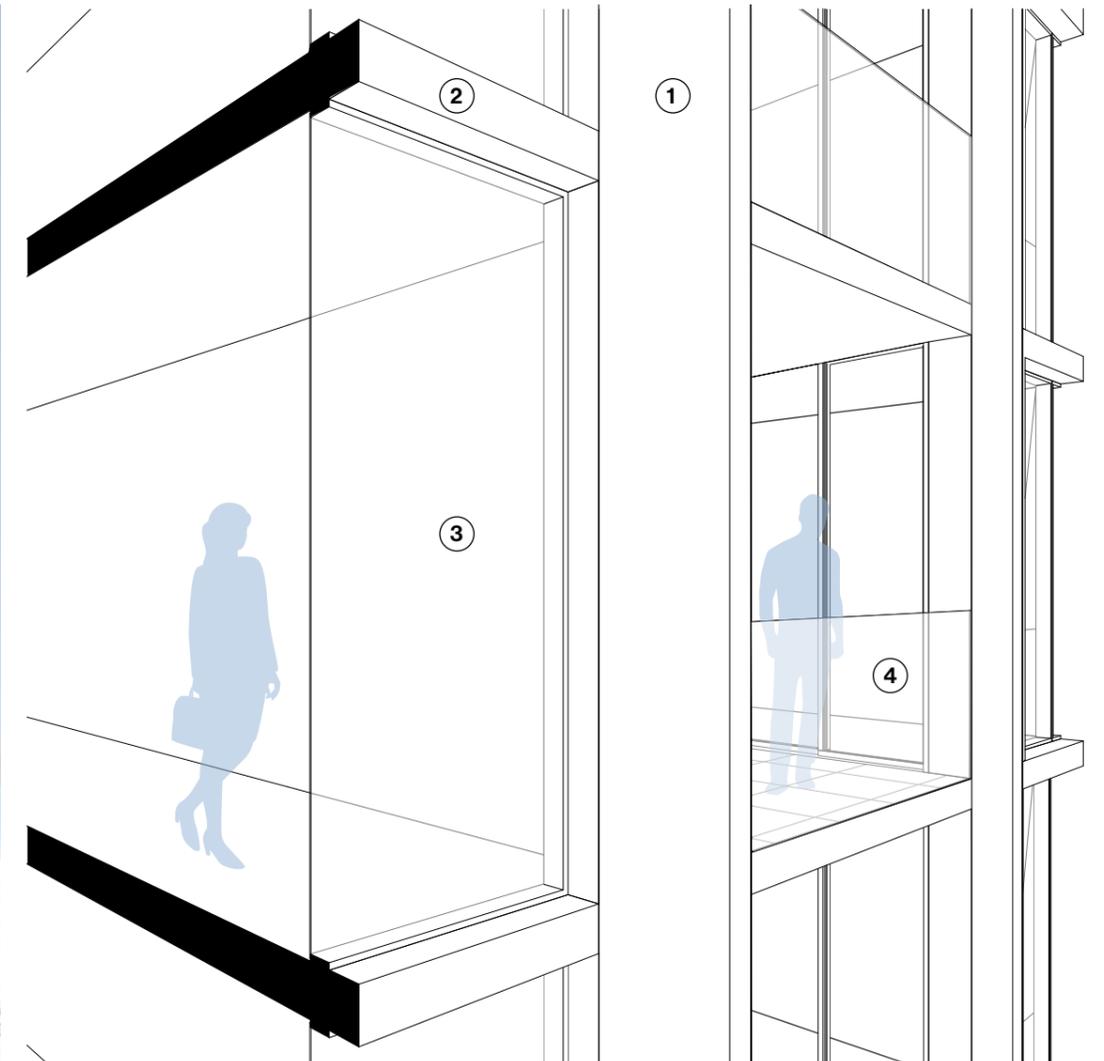
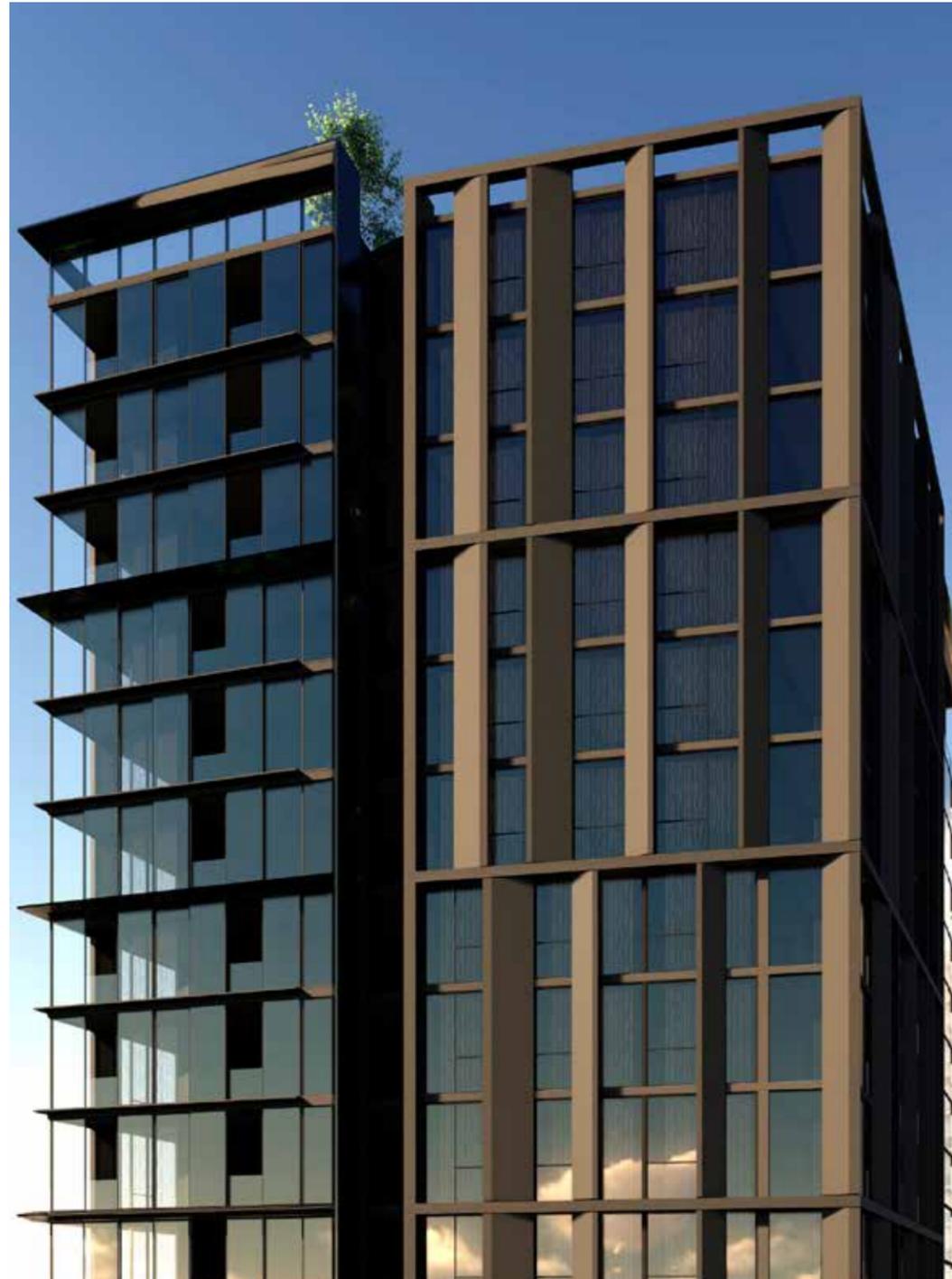
While offering a highly varied architectural expression, the design of Tower D has been derived through the implementation of key environmental design principles.

The most distinctive feature of the tower's facade is the expression of vertical precast concrete sunshades on the corner facing Tower B, which permit district views while protecting dwellings from the low eastern sun. Recessed balconies provide further protection while also offering amenity.

Extended spandrels at the slab levels of the other two volumes provide additional shadings to the glass facade.

Low-E grey glass has been nominated to further improve thermal comfort, while operable panels offer residents the opportunity to manage cross ventilation without the addition of air conditioning.

A technical description of additional measures for achieving thermal comfort and minimising environmental impacts is provided in Integreco's BASIX specification.



Podium Facade with sunshades / Sectional perspective

- ① Precast concrete sun shade
- ② Precast concrete slab edge
- ③ Full height glazing
- ④ Glass blustrade

Tower Materiality

The expression of separate volumes has been reinforced by material expression.

At the corner of the new public park and Princes Highway, a dark concrete precast corner is applied to reinforce the relationship between the tower volume and the ground.

By contrast, glass volumes at periphery have expressed horizontal shading comprising finely detailed metal fins suspended at slab level.



Black metal details



Black concrete with aggregates



Grey glass

Communal Open Space

The communal open space for Tower D is provided over two levels. The communal open space character for this tower.

The Communal Open Space on the Tower D rooftop provides a distinctive character focused on series of garden 'rooms' enclosed by verdant planting.

The Communal Open Space on the rooftop provides a contained series of spaces with seating and gathering opportunities.

The communal open spaces on the lower podium Level 2 provide quieter spaces for sitting and relaxation.



Communal Open Space

The Level 2 rooftop is a shared communal space between Tower C and Tower D.

The communal open space on the lower podium level provides spaces for sitting and relaxation, with a central area for group seating and shelter alongside a small informal discovery play space.

The communal space at this level is focussed on providing a series spaces for respite and quiet seating within a planted and green environment.

The space is shared between the two towers adjacent and will have secure access points at entries.



Roof articulation

The portion of the tower facing Princes Highway steps down to create a rooftop communal open space. Plant is contained by the higher volume and is sleeved behind penthouse apartments. The lift overrun is contained within this volume to ensure PANS-OPS compliance.





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