ARCHITECTURAL REPORT

OCTOBER 2021 | 28 ELIZABETH STREET, LIVERPOOL

TURNER | ALTIS PROPERTY PARTNERS

ACKNOWLEDGMENT

TURNER acknowledges the Gadigal people of the Eora nation where our practice stands, and the lands of other Aboriginal and Torres Straight Islander nations where our team calls home. We pay our respects to elders past, present and emerging.

This project takes place on the land of the Cabrogal people of the Dharug nation, to whom we pay our respects.

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PART 1 _ ANALYSIS
1.0 INTRODUCTION

1.01 PROJECT TEAM

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1.03 EXECUTIVE SUMMARY

1.01 PROJECT TEAM

Client	Altis Property Partners	**Architect**	TURNER
Job No	20089	**Urban Design**	Urbis
File Name	2009_DA Design Report	**Landscape Architect**	Site Image
Document Title	Architectural Design Report	**Urban Planner**	Urbis
Date	23rd July 2021	**Structural Engineer**	Van Der Meer
Status	Development Application Submission	**Services Engineer**	Stantec
		Traffic & Access	PTC
		BCA	BCA Logic
		ESD	Northrop
		BASIX	Stantec
		Aeronautics	AVLaw
		Heritage	Urbis
		Waste	Elephant Foot
		Wind	Windtech
		Civil	Stantec

QUALITY ASSURANCE

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QUALITY CONTROL

This document is for discussion purposes only unless signed and dated by a Director of Turner

Reviewed by:	**Dated:**
James McCarthy	23.07.2021

TURNER

Architecture
Urban Design
Interiors
Environmental Graphics

SYDNEY
L7, 1 Oxford Street
Surry Hills, New South Wales
2010, Australia

LONDON
30 Stamford Street,
London, SE1 9LQ
United Kingdom

Nominated NSW Registered Architect
Nicolas Turner, No. 6695

1.02 TURNER TEAM

James McCarthy
Director

James brings to projects a strong conceptual framework that is underpinned by a wide experience of construction processes and techniques. At Turner, James has worked on a wide range of master-planning and innovative commercial, urban and affordable housing and mixed-use projects.

James believes in creating people focused designs that deliver a sense of place which is inspiring and memorable. James brings a wealth of experience, leading the design and delivery of a wide range of project types including masterplanned communities, medium to high-density apartments, social and affordable housing, retail, aged care, and increasingly, hybrid combinations of these typologies.

James Lauman
Associate

Amy Pacewicz
Senior Project Designer

Stuart Eaves
Senior Designer

Juan Luis Cano
Senior Designer

Joseph Emmi
Designer

1.03 EXECUTIVE SUMMARY

This Architectural Report has been prepared by TURNER on behalf of Altis Property Group as part of the Development Application for 28 Elizabeth Street, to Liverpool City Council.

The proposal seeks to recognise the significance of Liverpool CBD in the metropolitan context and its evolving character by providing modern, high quality commercial and retail spaces on a primary business area. These are provided with a mix of residential units to directly support key workers in the heart of the city.

The site stands 38km from the City of Sydney in the heart of the 'Harbour City', 16km from Parramatta in the 'River City' and 18km from the emerging Aerotropolis in the west. These three metropolitan centres connect with Liverpool via the Sydney train network, with Liverpool Station 7 minutes walk from 28 Elizabeth Street.

Key Metrics

Site Area:	3,609m^2
FSR:	1:10
Proposed GFA (combined total):	35,974m^2
Max. Building Height:	128.275m
Storeys:	33
Residential Units:	312
Residential Floor to Floor Height:	3.1m (Typical)
Parking Facilities:	411 Residential car spaces 100 Commercial car spaces 31 Retail car spaces 65 Com. bicycle spaces 312 Res. bicycle spaces 29 Motorcycle spaces

Liverpool is a historic city centre and one of Sydney's key suburbs. The site at 28 Elizabeth Street is situated in the central hub of Liverpool and surrounded by a mix of commercial, religious and educational uses. Its location is an integral part of the future of the city.

Working closely with our client and consultant team, our aim is to design and build an innovative and iconic tower. We envision this to be home to a community attracted by shared values and aspirations.
A place to meet, work and live.

1.1 STRATEGIC CONTEXT

1.11 Strategic Policy

1.12 Policy Controls

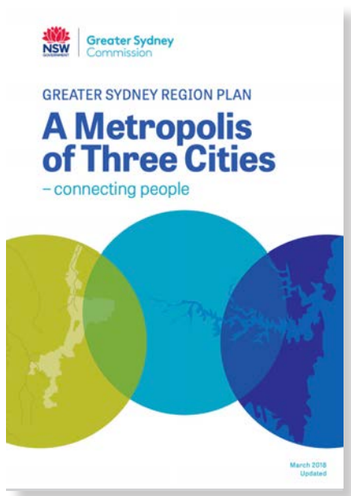
1.13 History

1.14 Metropolitan Context

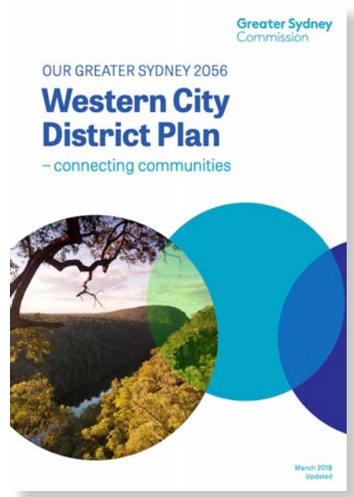
1.11 STRATEGIC POLICY

The propoal aligns with key State and Local policy documents, supporting the growth and long term success of Liverpool.

STATE

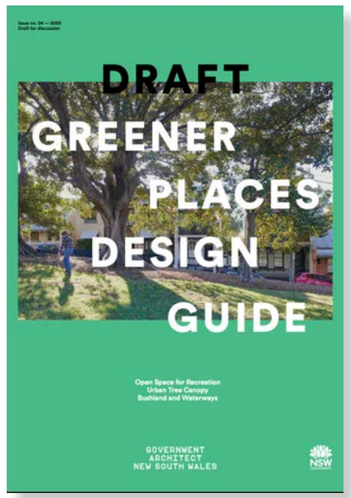


Regional Plan



Western City District Plan

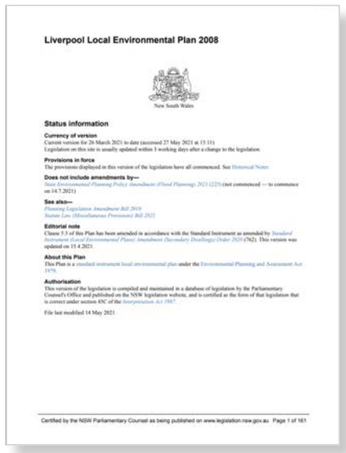
Better Placed



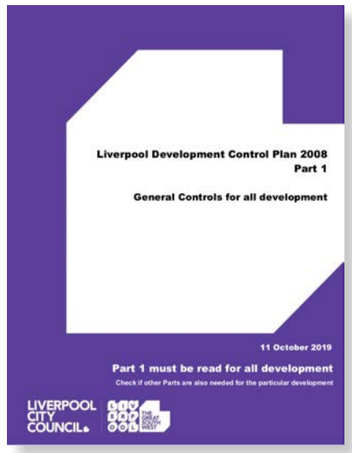
Greener Places

LIVERPOOL

LSPS



LEP



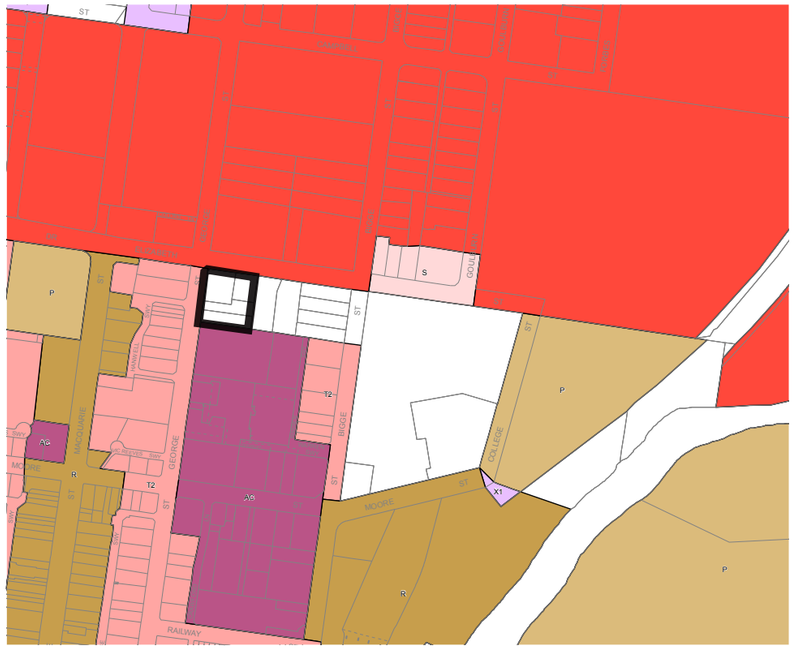
DCP Part 1

DCP Part 4

Public Domain Master Plan

1.12 POLICY CONTROLS

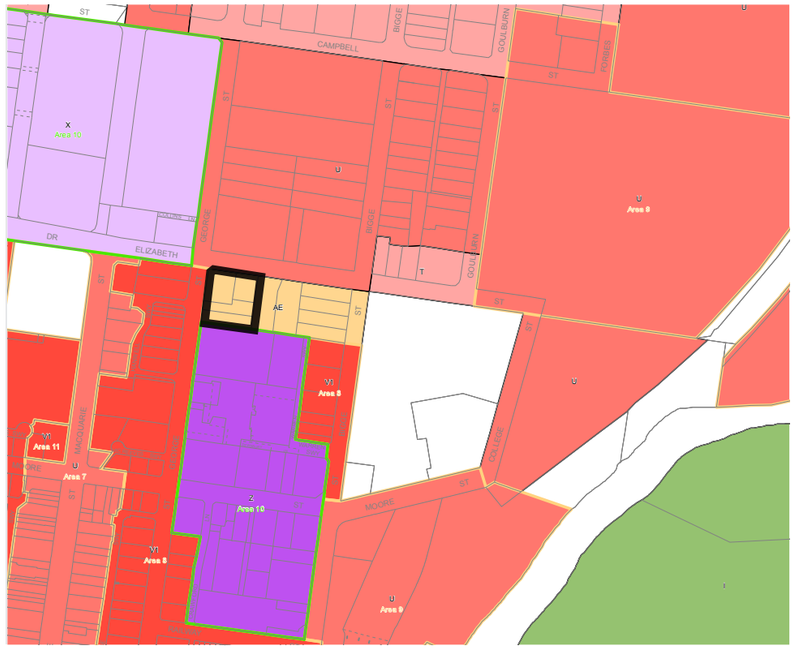
LIVERPOOL LEP CONTROLS



BUILDING HEIGHT

- Site
- 18m
- 21m
- 24m
- 28m
- 35m
- 100m

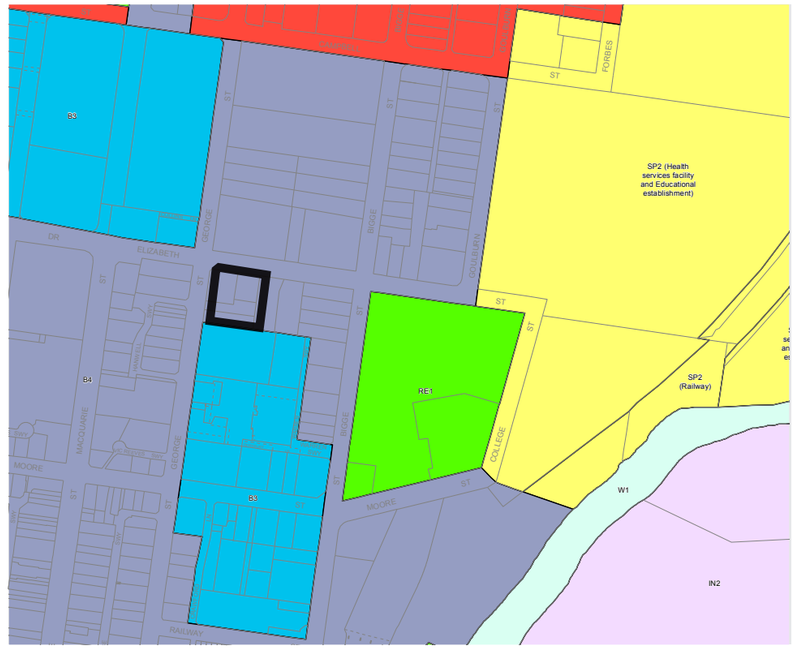
No height limit is established by the LEP. An alternative height limit is set by the PAN-OPS as identified in the Aeronautical Impact Assessment, prepared by AVLaw, at 135.9m.



FLOOR SPACE RATIO

- Site
- 2.0
- 2.5
- 3.1
- 4.0
- 5.0
- 10.0

The site is subject to a maximum FSR of 1:10.0, increasing density and site coverage.



LAND USE ZONE

- Site
- Commercial Core
- Mixed Use
- Public Recreation
- Infrastructure (Health Services)
- High Density Residential
- Light Industrial

The site is subject to a ‘Mixed Use’ designation as part of the Liverpool CBD, supporting a variety of uses.

1.13 HISTORY

Liverpool's urban and recent cultural history is tied to an industrial character and regularised city form.

Pre- European

Pre-European arrival, the area now known as Liverpool was a meeting place on the banks of the Georges River for the Dharug from the west (Woodland Tribe) and Tharawal people from the east (Coastal Tribe). At the time the area was known a 'Gunyungalung' with evidence of indigenous people stretching back at least 40,000 years.

European Arrival

As the British settlers expanded west from port Jackson, Liverpool became a gateway to the south and beyond the southern highlands. The area was described in 1827 by Peter Cunningham as;

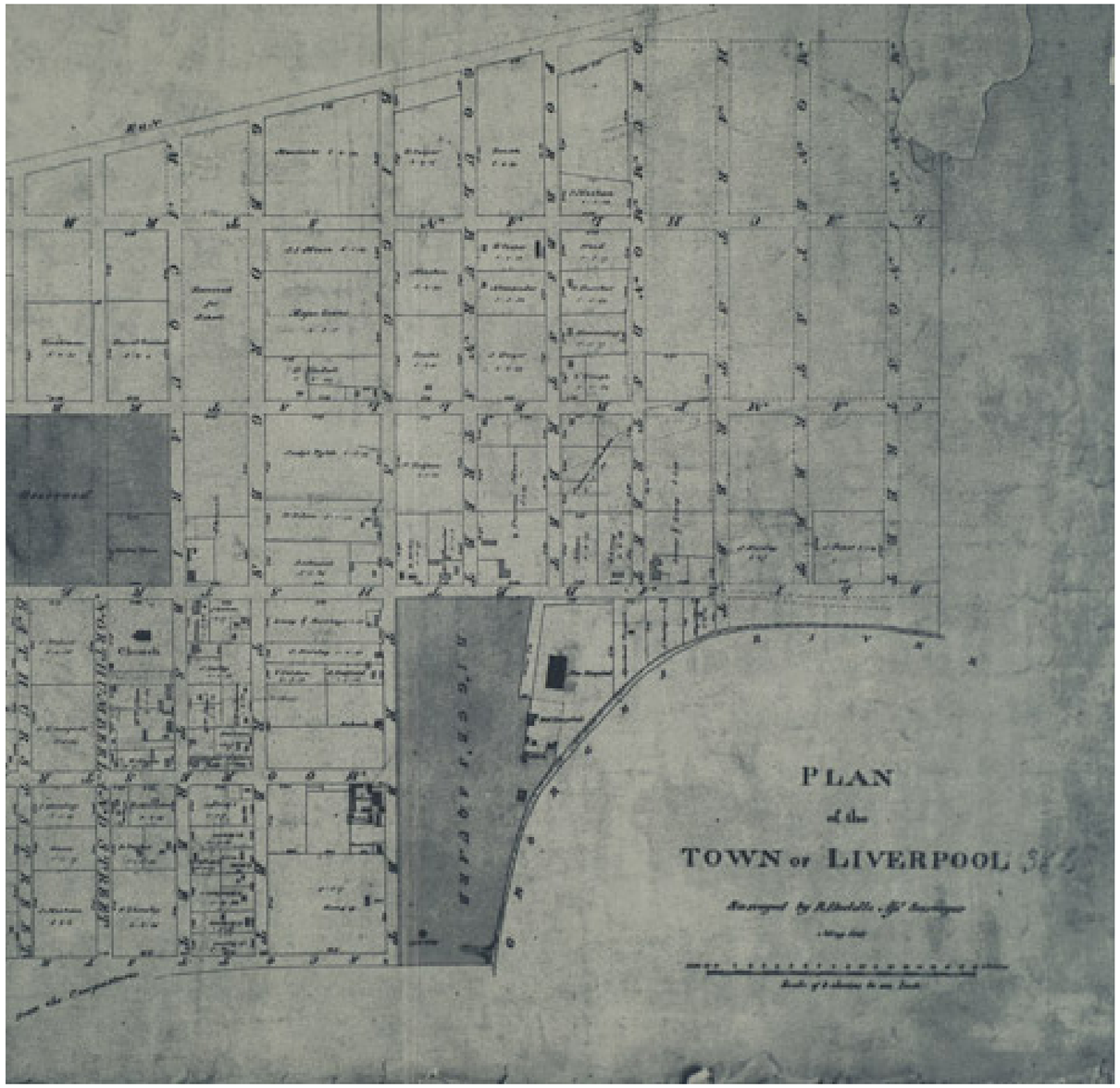
"...a fine-timbered country, perfectly clear of bush, through which you might, generally speaking, drive a gig in all directions, without impediment in the shape of ricks, scrubs and close forest"

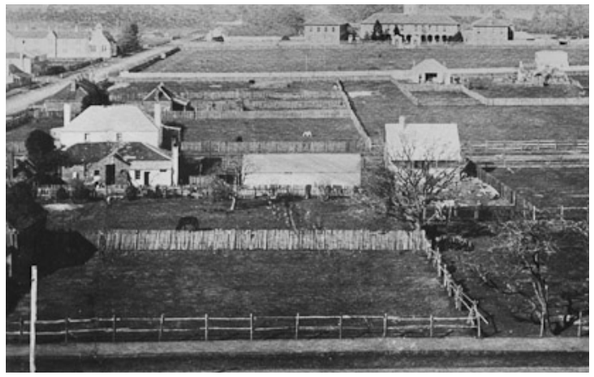
The establishment of Liverpool marked its placed as Australia's fourth oldest town with an urban grid laid out to be filled over time. Early photography (see image top right) shows sporadic buildings on regular lines with the size and form of Liverpool Hospital signifying the importance of the early town.

Modern Era

Over time several industries connected to agriculture and primary processing grew including paper and woollen mills, as raw materials were delivered from the surrounding country before moving on into Sydney. The city has maintained a strong 'blue collar' association with key workers and growing service industries now forming a large part of the workforce.

A large part of the urban grid remains, with built form predominantly low-rise and brick built in the centre. The large Westfield shopping centre is the primary disruptor of the urban fabric, while several more recent residential apartment blocks have emerged around the CBD perimeter to the south.





(left image) Early urban grid of Liverpool centre, (top, right) Project site in foreground, former Liverpool Hospital in background, (middle, right) local wool farmers, (bottom, right) Dharug Landscape, pre-European arrival.

1.14 METROPOLITAN CONTEXT: THREE CITIES

Liverpool is well placed at the fulcrum of the established east and emerging west Sydney.

STRATEGIC LOCATION

Liverpool stands at the meeting point of the growing Central River City and emerging Western Parkland City as a 'Strategic Centre'.

The City's existing CBD is low-rise with broad commercial, retail and service provision supporting the surrounding suburbs. In particular with expected growth around the medical and educational sectors as identified in the 'Metropolis of Three Cities: Regional Plan'.

Neighbouring Strategic Centres of note include Campbelltown-Macarthur to the south, Bankstown to the east and Penrith to the north-west. Each offers a similar scale of commercial and service provision and vary degrees of density.

As the Western Sydney Aerotropolis grows, attracting key STEM educational and industrial institutions, Liverpool is well placed to leverage its position between the east and west. The CBD is expected to expand its offering in terms of accommodation and office space playing both a supporting, and destination role.

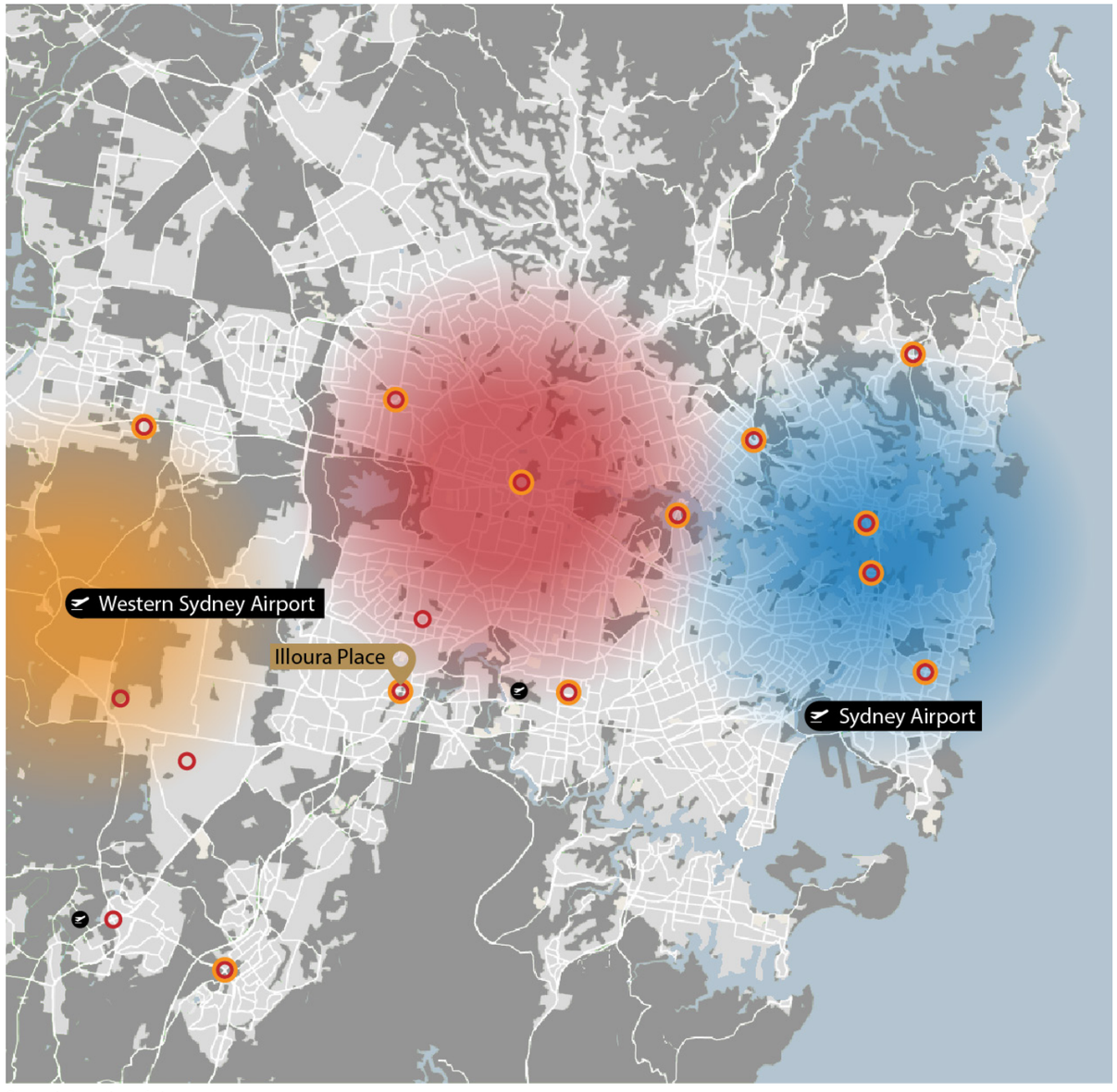
The Royal National Park and Blue Mountains provide a contrast to the urban fabric and form part of Liverpool's specific benefit as a growing strategic centre.

LEGEND

- Project Site
- Health & Education Precinct, Strategic Centre
- Strategic Centre
- International & Domestic Airport
- Local, Domestic Airport

Three Cities:

- Eastern Harbour CBD
- Central River City (Greater Parramatta)
- Western Parkland City



Strategic Location of Liverpool.

1.15 METROPOLITAN CONTEXT: CONNECTIVITY

Existing and future connections expand Liverpool's sphere of influence across the metropolitan region.

METROPOLITAN CONNECTION

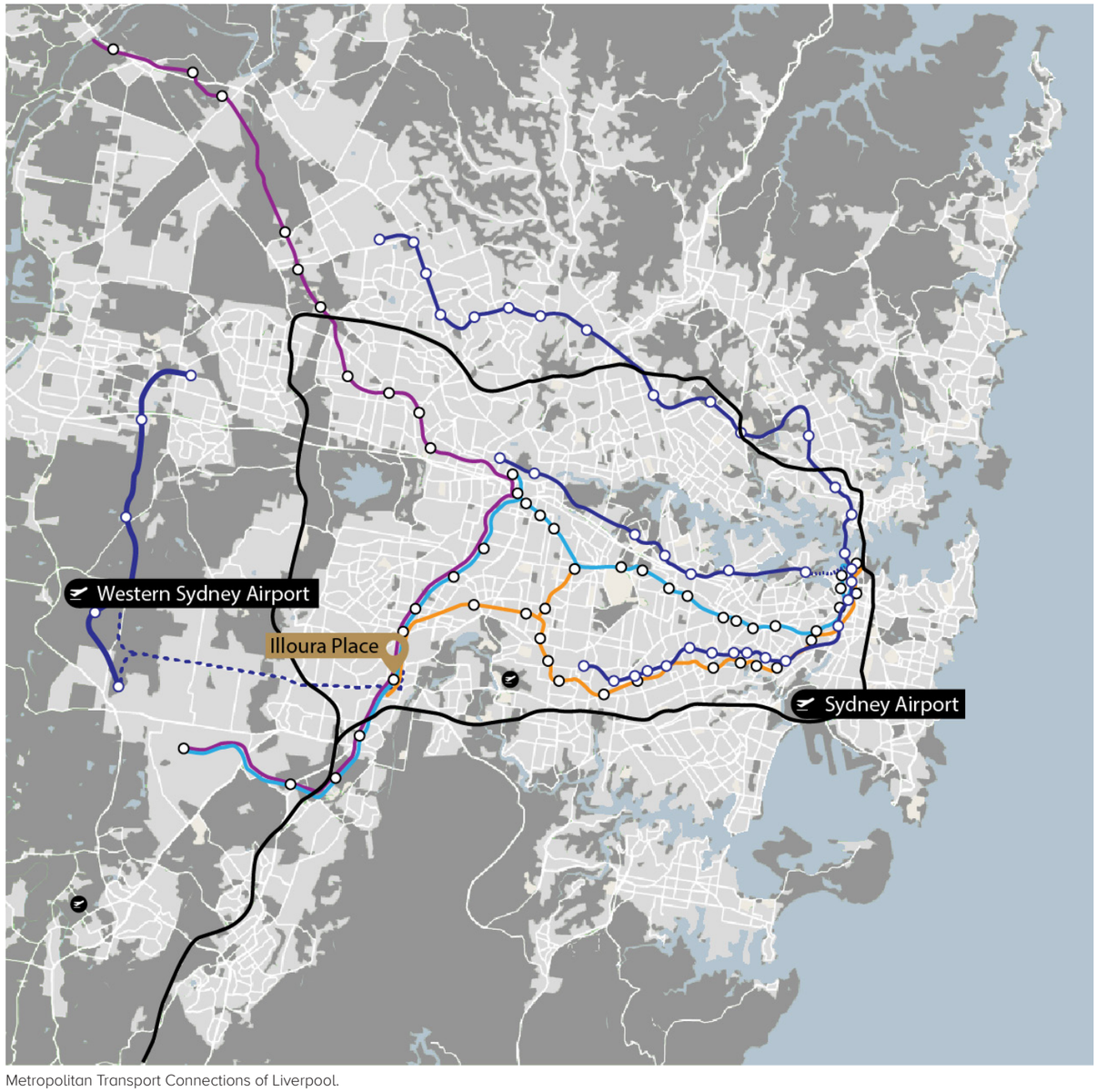
Existing train lines connect Liverpool CBD through to surrounding strategic centres and beyond with a wide employment and commercial pool.

Planned direct future connections aim to ensure the city is well placed as the Western Sydney Aerotropolis grows, offering further air travel both domestically and internationally.

The project site's location is well supported by three train lines, the future 15th Avenue Smart Transit bus route and existing motorway. Train freight routes extending to the Aerotropolis operate nearby supporting a wide range of commercial opportunities.

LEGEND

- Project Site
- 'M' Motorway Ring-road
- Metro Line & Station
- Liverpool Bound Train Lines & Stations
- 15th Avenue (Future Connection)
- International & Domestic Airport
- Local, Domestic Airport



Metropolitan Transport Connections of Liverpool.

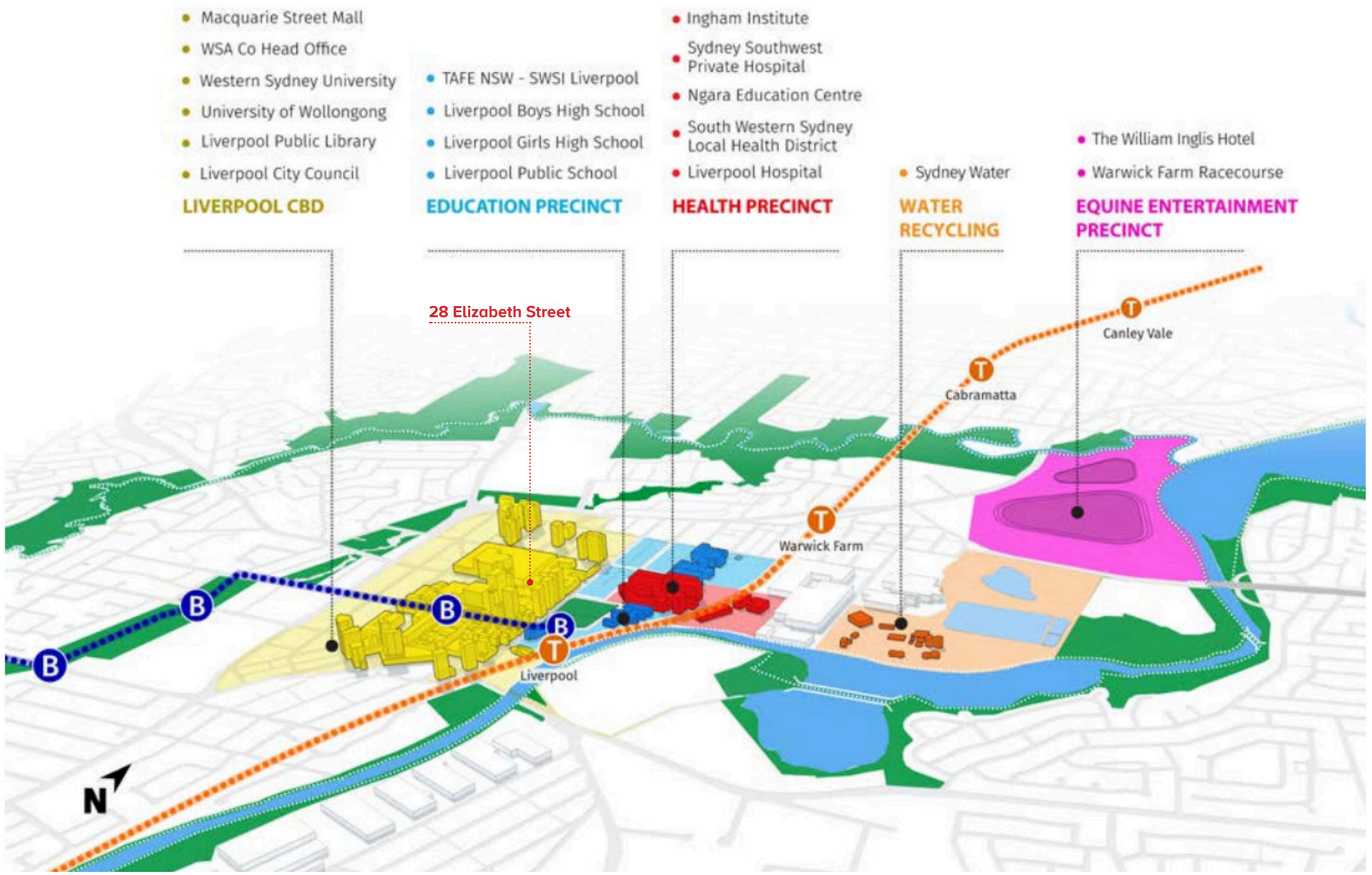
1.16 METROPOLITAN CONTEXT: LIVERPOOL CITY

Education and health precincts will play a leading role in Liverpool's future with a revitalised city centre supporting a diverse commercial offering.

STRATEGIC ALIGNMENT

The emerging Western Parkland City aims to bring together the existing centres of Liverpool, Greater Penrith, Campbelltown-Macarthur and the emerging Aerotropolis at Badgery's Creek to the west.

Liverpool CBD will intensify and diversify as the education and health precincts become established. In parallel, an expended CBD will offer increased services and lifestyle options for local communities.



Liverpool Vision as part of the Western Parkland City (Greater Sydney Region Plan: A Metropolis of Three Cities - connecting people)

1.2 URBAN ANALYSIS

1.21 Land Use & Activity

1.22 Local Movement Networks

1.23 Character

1.24 Open Space

1.21 MOVEMENT NETWORKS

The site is well connected locally by foot, public transport and private vehicle, and across the metropolitan region via road and rail.

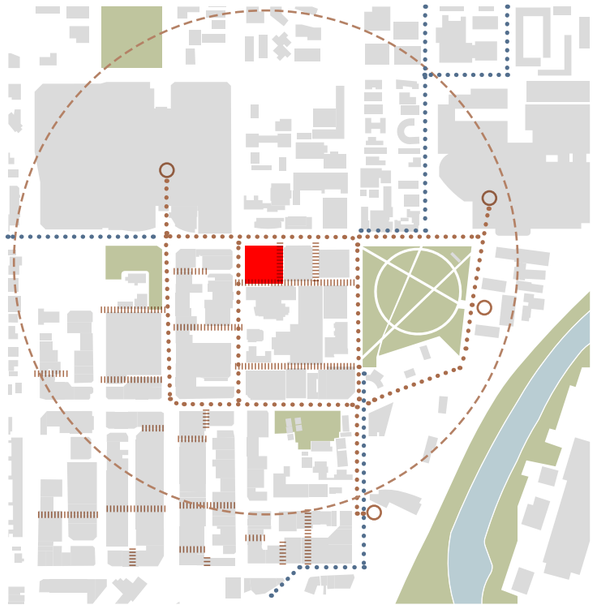
Pedestrian & Bicycle
The existing pedestrian network enables quick access to Bigge Park and Liverpool train and bus stations, all within 400m / 5min walk, as well as a range of retail and employment opportunities.

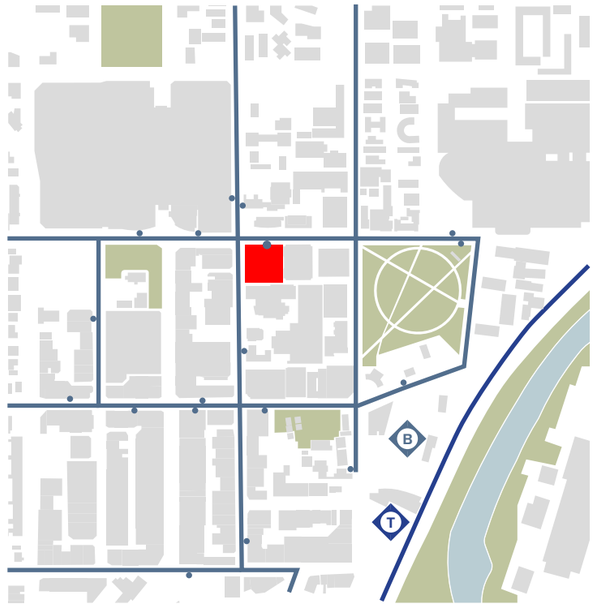
The bicycle network is currently limited and disconnected, but with plans to support new bicycle routes in place along George Street.

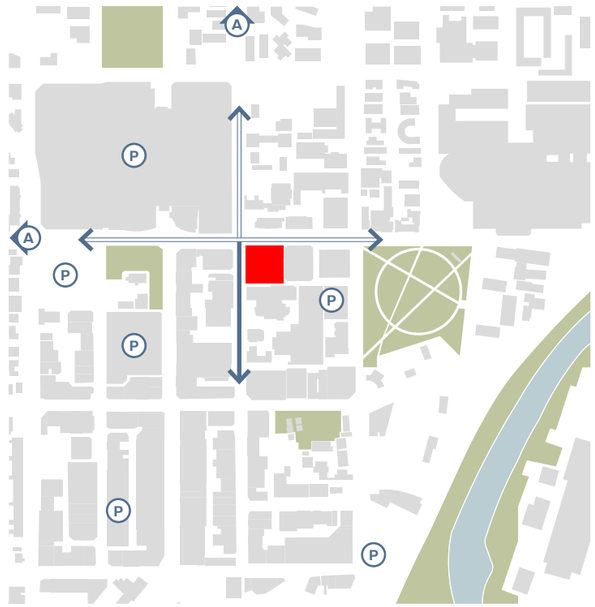
Local destinations within 10km / 35min include both the Royal National Park to the south, and Sydney Parklands to the north-west as key leisure cycle locations.

Public Transport
Bus and train options support a well connected city centre, locally and into the metro region. Several bus stops and Liverpool Bus and Train station are within a 400m / 5min walk of the site.

Vehicular
Liverpool CBD is well served by parking facilities, and connections to the wider metro region via the A38.







PEDESTRIAN & BICYCLE

- Site
- Primary pedestrian route
- Destination
- Proposed connection
- 400m from the Site
- Bicycle Route

PUBLIC TRANSPORT

- Site
- Liverpool Train Station
- Trainline
- Bus Station
- Bus route and Stop

VEHICULAR

- Site
- Two-way road
- One-way road
- To A38 Motorway
- Car Park

1.22 URBAN CHARACTER

A distinct urban grid provides connection to history while density and built form have evolved to support a diverse city centre.

Urban Grain & Grid
The historic urban grid establishes a distinct urban form, believed to have been based on Melbourne's 'Hoddle Grid'. Today, some elements have been lost to large scale developments including Westfield and the Hospital expansion.

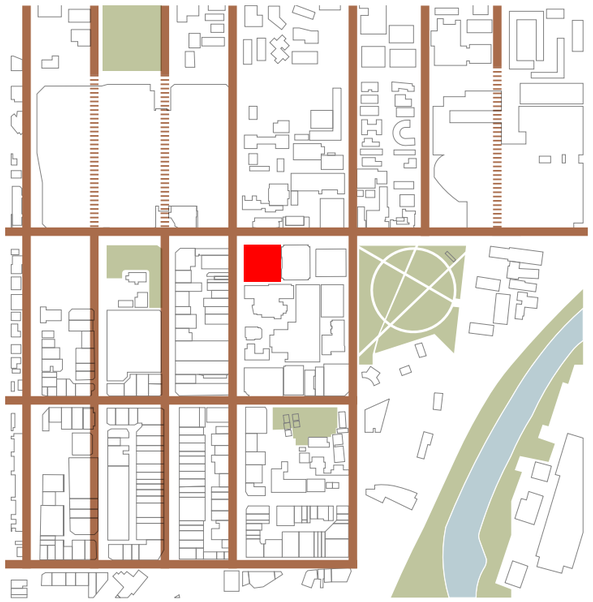
The grid provides a unique opportunity for character, with well defined street edges and view lines.

Within these lines, the built form varies greatly with a diverse mix of architectural styles, from the historic Anglican church, to the monolithic Westfield, to the fine grain Macquarie Mall. In places this creates interest and texture, in others it is disjointed and in need of balance.

Heritage
Liverpool city centre retains a scattering of heritage items, including Bigge Park, the historic grid, religious buildings and small commercial premises. Together these help connect to local and metro heritage and the growth of the wider Sydney region.

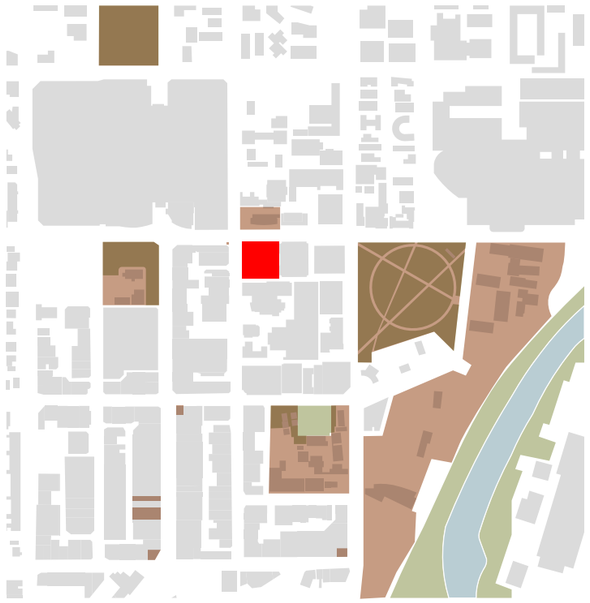
Land Use
A well defined retail core lines Macquarie Mall and into Westfield offering a range of services. Adjacent to this are medium scale commercial offices, several civic buildings signifying the city centres role in the local area operation.

Bigge Park, offers a break in the urban fabric a short distances from George's River which is largely lost in the city centre. The historic hospital, now Liverpool TAFE, provides architectural interest and supports the growing educational offering of Liverpool. To the north is the second key growth opportunity in the city centre with Liverpool Hospital and accompanying medical services.



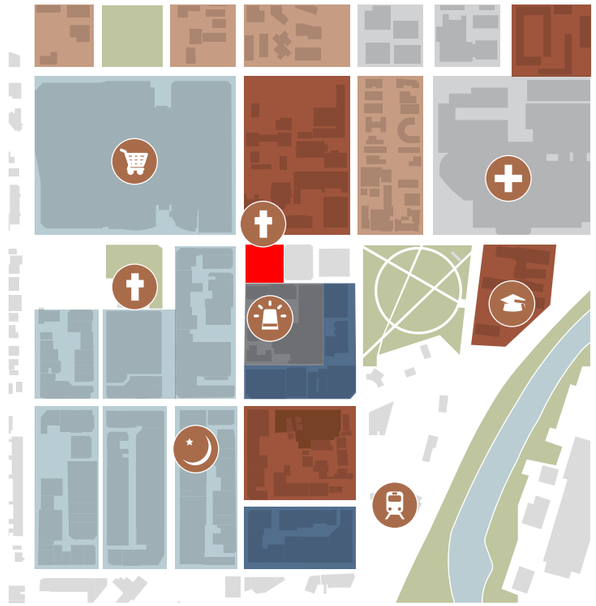
URBAN GRAIN & GRID

- Site
- Heritage grid line
- Former heritage grid line



HERITAGE

- Site
- Heritage item & conservation area



LAND USE

- Site
- Residential
- Education
- Retail
- Commercial
- Medical
- Civic / Authority
- Westfield Shopping Centre
- Liverpool Hospital
- Liverpool TAFE
- Liverpool Police Station
- Liverpool Train Station
- Church
- Mosque

1.23 ENVIRONMENTAL CONDITIONS

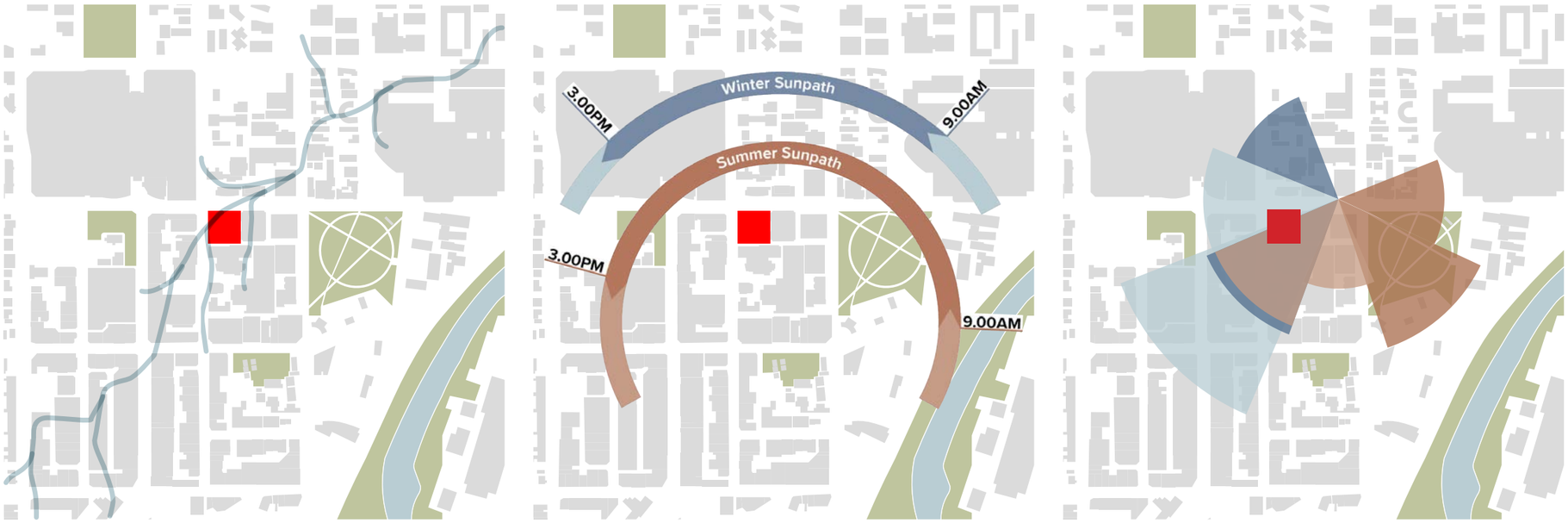
Liverpool is projected to become wetter and warmer for longer over the next 50 years.

Historic Creek
Natural water features have largely been lost within the city centre, with Georges River east of the site and well lined with greenery.

Sun Path & Prevailing Winds
As a generally low-rise city centre with minimal topographical change, there is wide solar and wind exposure across the site throughout the year.

Climate Change
Western Sydney is project to experience considerable warming over the coming decades with higher temperatures and more hot days (those over 35°C). Rainfall is also expected to increase.

Together these changes will increase urban heat island effects, energy and water demand as well as stress on materials and infrastructure.



HISTORIC CREEK

- Site
- Creek

SUN PATH

- Site

PREVAILING WINDS

- Site
- Summer PM
- Summer AM
- Winter PM
- Winter AM

Hot Days
+9.59

Temperature
+1.96°C

Cold Nights
-2.74

Rainfall
+9.24%

CLIMATE CHANGE

Change projected for Liverpool area by 2079 (source: AdaptNSW).

1.3 SITE ANALYSIS

1.31 Site Surrounds

1.32 Site Analysis

1.33 Environmental Conditions

1.31 SITE SURROUNDS

Liverpool city centre is low-rise and relatively low-density, but with multiple key services and infrastructure.

To the east of the site, within a short distance are key growth precincts including Liverpool TAFE and Liverpool Hospital, both supporting the future prosperity of the city.

To the west, Westfield Shopping centre and Macquarie Mall provide a large number of local services and businesses.

Spread across the centre are public transport connections, with a key hub to the south east in Liverpool train and bus station.

Bigge Park and the St Luke's Anglican Church grounds provide green open space and relief from the generally low-rise, relatively low-density town centre.

1.32 ADJACENT BUILDINGS

Key architectural influences include the language and rhythm of All Saints Church, and height datums from 26 Elizabeth Street.

The urban fabric is a mix of architectural quality and vernacular with more recent forms recognising the strategic importance of Liverpool in the westward growth of Sydney.

All Saints Catholic Church, to the immediate north of the site, is heritage listed and offers a key architectural influence for the proposal site, providing a clear language and rhythm. To the east, west and south the built form is low-rise and largely inconsistent in approach to the public realm.

Future changes are expected within the Westfield site, including increases in height and diversification of use.

Immediately to the east, the approved DA of 26 Elizabeth Street offers key datums and interfaces to recognise in any proposals.

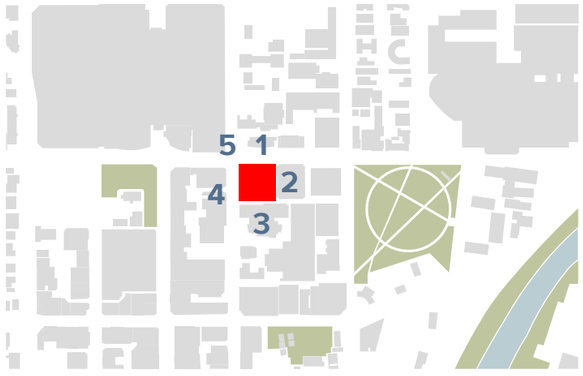
1 All Saints Catholic Church (Heritage Listed)

2 26 Elizabeth Street

3 Liverpool Police Station

4 George Street

5 Westfield Shopping Centre



1.33 KEY SITE VIEWS

The city centre skyline is generally low-rise, with occasional low peaks.

Existing views are either held tightly in the foreground of low-rise buildings, or linear along clearly defined street edges, with few glimpse views in between.

This gives the potential for framed feature elements within the urban fabric, creating interest, navigability and identity.

1 Elizabeth Street, view to east

2 George Street, view to south

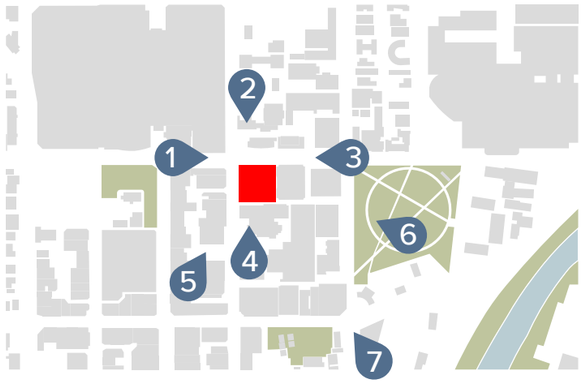
3 Elizabeth Street, view to west

4 George Street, view to north

5 Macquarie Mall, view to north

6 Bigge Park, view to west

7 Liverpool Train Station, view to north-west



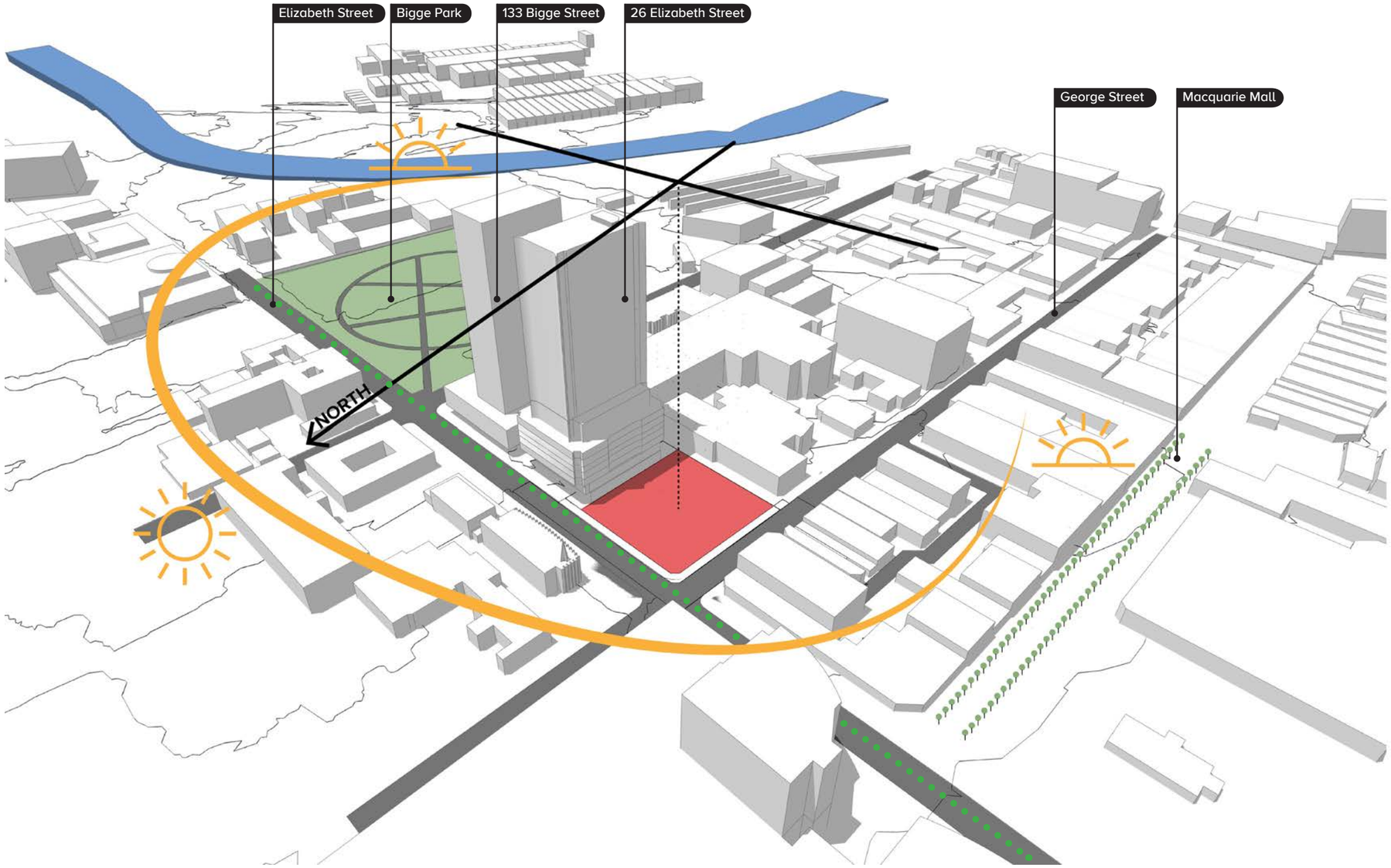
1.34 BUILT FORM & OPEN SPACE

The green grid is disconnected amongst the tight-knit, historic urban grid.

A mixture of architectural styles, generally densely packed within the well defined urban grid creates a tight-knit character of strong street edges. There are few architectural offerings beyond the TAFE and religious buildings, all of which stay below 2-3 storeys.

The street corner location of the Site allows prominence, with a low-rise skyline further offering the opportunity for a significant landmark.

Height limits for the neighbouring lots also allow the potential increased density and the formation of a key new element in the local skyline, signifying the growth of Liverpool city in the metropolitan mix.



LEGEND

- Site
- Green space
- Architectural landmark
- Existing tree lined street
- Proposed tree lined street
- 10 Building height

1.35 SITE ANALYSIS

A prominent corner, the low-rise neighbours and established grid offer the opportunity for distant views, street activation supported by canopy cover and the weaving together of the local urban fabric.

Outlook
The existing built form allows the proposals the opportunity to rise above the skyline to engage with a unique set of long distant views to the surrounding city and countryside, including the Blue Mountains to the west, Royal National Park to the south, Georges River to the east and Parramatta to the north

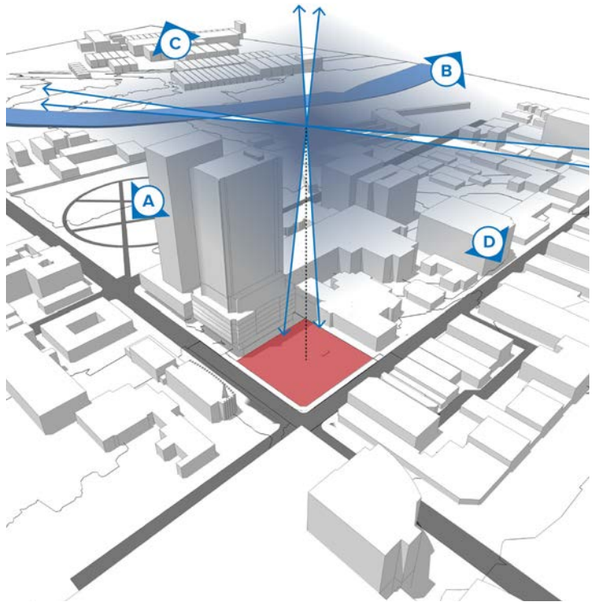
Active Frontages
The existing surrounds of intermittent active frontages along George Street and Elizabeth Street, with large stretches inactive, and in the case of Westfield providing a negative impact on the street scene.

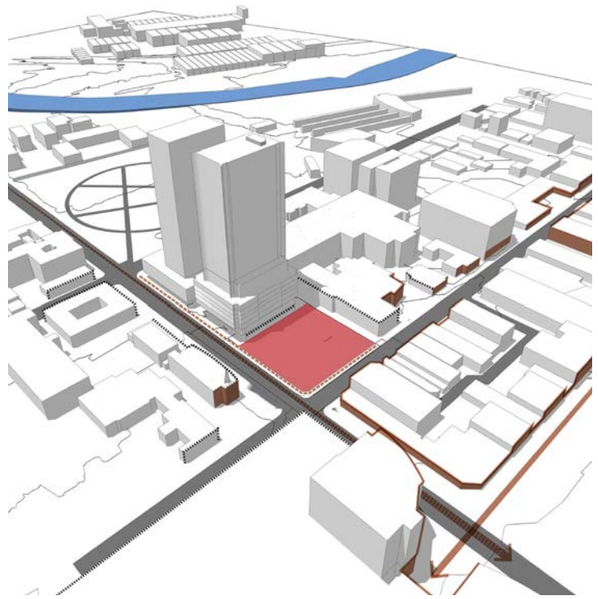
Elizabeth Street, east of George Street, remains inactive with the south-side undeveloped, and north side served by the west facing church and rear of a school.

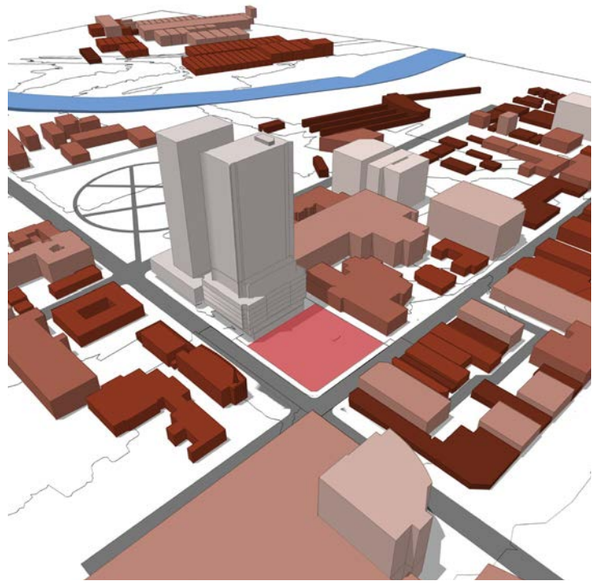
The opportunity, and policy intention to connect Macquarie Mall with Bigge Park via an activated and tree lined Elizabeth Street provides a key opportunity for engagement from the site, expanding the public realm and integrating much-needed canopy cover.

Built Form
The Immediate surroundings are relatively inconsistent in style, height and materiality, with the Catholic church opposite the Site offering a valuable architectural cue and localised urban opening.

Located on a corner, the Site has the opportunity to actively engage with both George and Elizabeth Streets, integrating with a loosely defined datum and completing the established urban grid.







OUTLOOK
- Site
- A North, Parramatta City
- B South, Royal National Park
- C East, George's River
- D West, Blue Mountains

ACTIVE FRONTAGES
- Site
- Active Frontage
- Proposed Active Frontage
- Inactive Frontage
- Primary Active Route
- Proposed Active Route

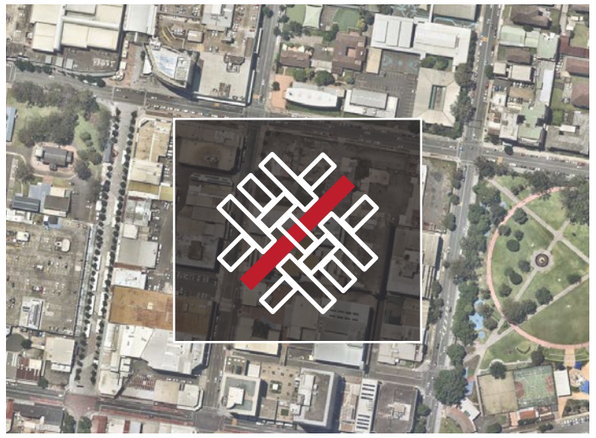
BUILT FORM
- Site
- 1 Storey
- 2 Storeys
- 3 Storeys
- 4 Storeys
- 5-10 Storeys
- 11-15 Storeys
- 15+ Storeys

1.4 KEY DESIGN INSIGHTS

1.41 KEY DESIGN INSIGHTS

Liverpool City centre has a strong foundation of heritage and commercial use, with opportunities to weave together existing and new activity for a vibrant, diverse and resilient future.

Key design insights represent prime takeouts of the urban analysis, identifying opportunities for the proposals to integrate with the urban fabric and support the success of the city centre in the long term.



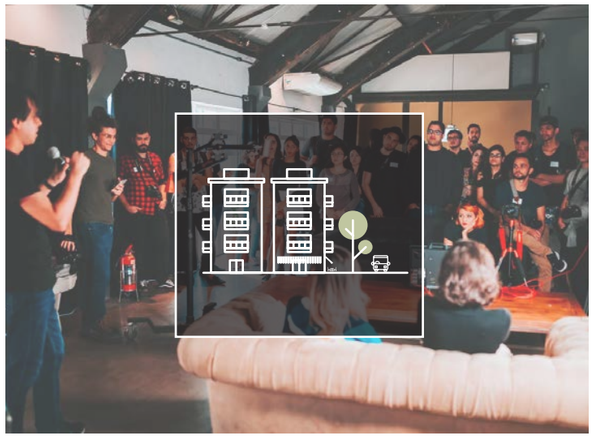
Established urban grid, but incomplete
The site is a historic gap in the tight-knit weave of the historic urban form.

Low-rise, but growing
Typically 3-4 storeys with occasional low-peaks restricting density to support hub services and urban infrastructure, key growth precincts offer the opportunity to increase the skyline.

Active frontages, open spaces, but disconnected
Elizabeth Street offers a key opportunity to connect Macquarie Mall and Bigge Park with a vibrant, green public realm.

Warming environment, but lacking green infrastructure
Increasing temperatures and rainfall will require urban greening and a low-energy, low-water use future.

Strategically connected, but locally distanced
Good public transport with welcoming, connected pedestrian and bicycle infrastructure can facilitate the growth and vibrancy of the CBD with a local identity.



Diverse commercial land-use, but missing community
New residential use will support a vibrant CBD and the diverse commercial offering of key growth precincts.

PART 2 _ PROPOSAL

2.0 BRIEF & VISION

2.01 Design Brief

2.02 Building Users

2.03 Vision

2.04 Design Principles

2.01 DESIGN BRIEF

An iconic landmark, supporting a mixed use development in the heart of Liverpool CBD.

The project brief has been developed with the client, Altis Property Group, through considered analysis of the urban, social and market context of Liverpool City.

The site is recognised as offering a key opportunity to weave together the existing urban fabric, integrate and expand existing local uses and provide much-needed public realm activation with a sustainable long-term vision.

The proposals will support the following objectives:

- Increased urban canopy cover
- An active and engaged ground plane
- High quality PCA grade A commercial space
- A diverse residential offering
- An architectural landmark that provides identity and respect to the heritage of the city centre

Underpinning the proposals will be a robust ESD approach, targeting the following:

- 7 Star NatHERS
- 5.5 NABERS
- BASIX compliance
- Photovoltaic and thermal solar
- End of trip facilities to Green Star 5* standard
- Passive daylight and shading strategies
- Native, drought resistant planting
- Recycled water for irrigation
- Heat pumps for domestic hot water

2.02 BUILDING USERS

Supporting a vibrant CBD, the proposal will integrate with, and expand local land uses as part of an active future urban realm.

Observation
Macquarie Mall and Westfield are the focus of existing activity, with branches out to the train station to the south-east and education and hospital precincts to the east.

The three lots along Elizabeth Street, between George and Bigge Street offer the opportunity to reinforce and build on one of these branches, providing activation, quality public realm and local identity.

Key to this is recognising the importance of diversity of use to facilitate passive interest, a sense of safety and mutually supporting uses.

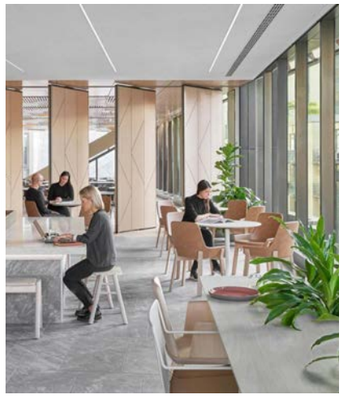
The Proposal
Ground level retail units set alongside an expanded streetscape on both Elizabeth Street and the newly created through-site link will support an active and welcoming interface, integrating the proposals with the existing public realm.

This is further supported by PCA Grade A commercial space above, attracting new business and workers to the area, as well as supporting surrounding local businesses.

The introduction of high quality, mixed scale residential uses specifically for 'key workers', provided with in-house amenity (including pool, gym and common rooms) provides a currently limited use and presence that is vital to the long-term success of the CBD. Residents will provide continuous presence, passive surveillance and support local businesses, with the potential to grow the local community.

RESIDENTIAL

RETAIL / F&B



OFFICE

2.02 BUILDING USERS

Understanding user needs through active engagement to identify potential building facilities.

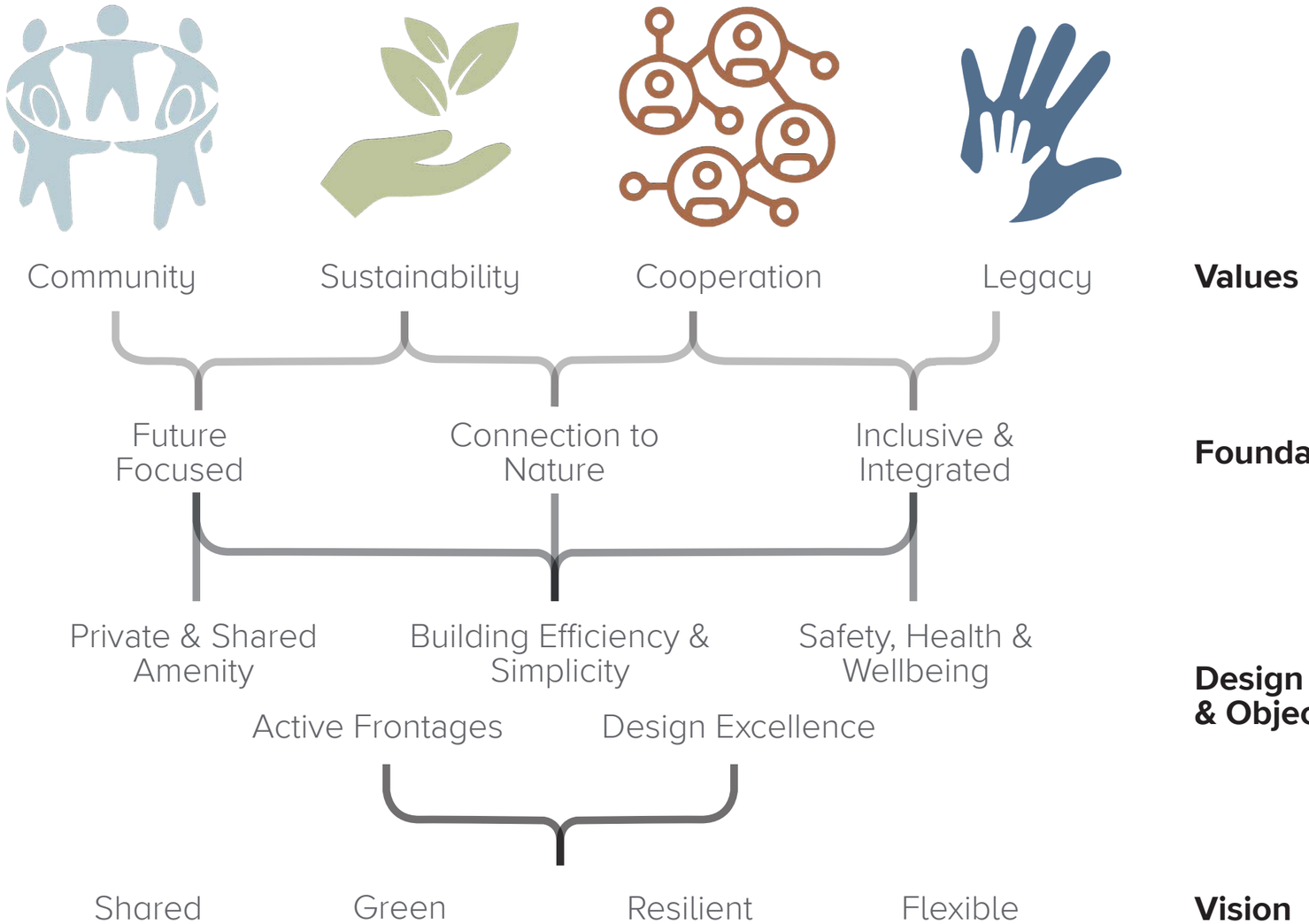
Key Worker Tenant Amenity and Services Survey (summary)
19-Oct-21

Preference key: TOP | MID | BOTTOM

Please select your TOP 7 favourite building amenities you would like to have in an ideal residential building:								**RANKING:**	
BBQ and outdoor dining / terrace	18	7	8	10	43	12	98	2	
Pool	15	6	8	8	48	12	97	3	
Gym	21	6	8	8	47	11	101	1	
Communal kitchen / dining areas	8	1	0	1	12	1	23	14	
Library	11	1	0	4	7	2	25	11	
Communal lounge area	1	0	0	4	10	1	16	16	
Yoga studio	4	1	0	3	9	8	25	11	
Parcel lockers for secure delivery	17	5	7	6	41	11	87	4	
Cool lockers for food deliveries	6	3	4	1	13	8	35	7	
Children's play area / playground	8	0	6	5	8	1	28	9	
Communal working space	2	1	0	2	5	1	11	18	
Quiet working / study rooms	4	0	1	3	10	5	23	14	
Meeting rooms	3	0	1	0	3	2	9	20	
Cinema space	4	2	4	2	15	6	33	8	
Workshop / tool shed area	3	0	1	1	1	0	6	22	
Pet wash area	4	1	0	0	4	2	11	18	
Pet play / exercise area	2	4	3	2	11	3	25	11	
Communal garden	10	5	4	7	23	8	57	6	
Electric vehicle charging station	4	0	1	0	4	4	13	17	
Car washing facilities	16	3	6	7	19	14	65	5	
Secure bike storage and repair station	4	2	0	2	12	6	26	10	
On site Go Get vehicles	3	1	1	0	3	1	9	20	
Please select your BOTTOM 7 least favourite building amenities you would not likely use in a residential building								**RANKING:**	
BBQ and outdoor dining / terrace	2	0	0	0	1	0	3	22	
Pool	5	0	0	1	0	0	6	20	
Gym	1	0	0	1	0	3	5	21	
Communal kitchen / dining areas	10	5	6	5	8	8	42	12	
Library	8	3	3	5	16	10	45	9	
Communal lounge area	10	3	2	4	16	10	45	9	
Yoga studio	8	4	2	6	13	5	38	14	
Parcel lockers for secure delivery	2	0	0	3	3	0	8	19	
Cool lockers for food deliveries	9	0	2	5	15	2	33	15	
Children's play area / playground	5	4	0	1	25	12	47	7	
Communal working space	14	3	5	5	27	7	61	3	
Quiet working / study rooms	12	4	7	2	15	6	46	8	
Meeting rooms	12	5	6	7	27	10	67	2	
Cinema space	13	3	3	5	15	6	45	9	
Workshop / tool shed area	12	6	5	3	18	6	50	6	
Pet wash area	9	1	3	7	28	7	55	5	
Pet play / exercise area	8	0	2	3	24	5	42	12	
Communal garden	3	0	1	1	8	0	13	18	
Electric vehicle charging station	8	5	4	4	30	7	58	4	
Car washing facilities	2	1	1	0	17	2	23	17	
Secure bike storage and repair station	5	0	5	5	7	2	24	16	
On site Go Get vehicles	10	2	6	4	36	11	69	1	

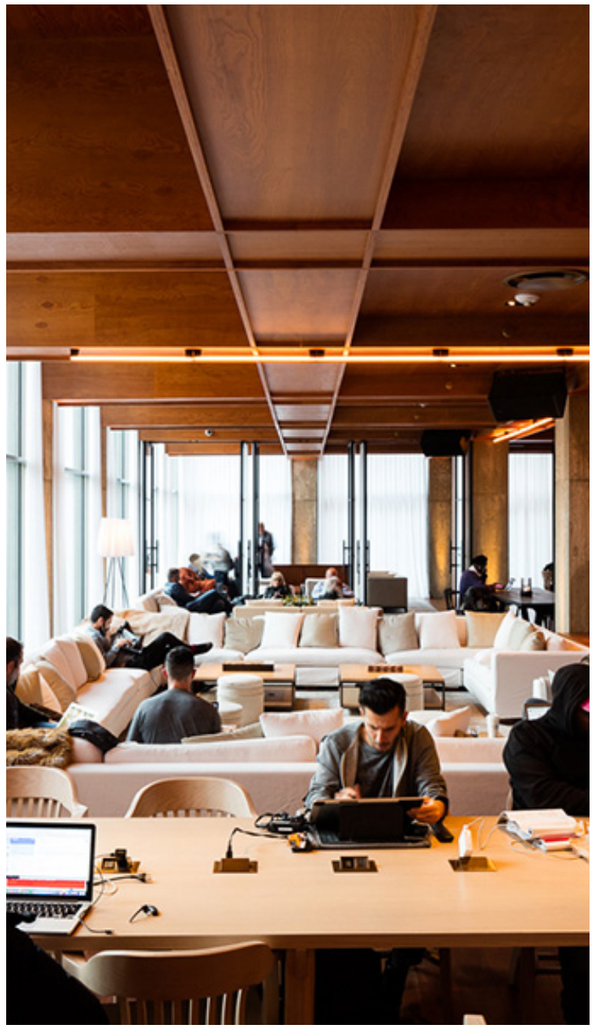
2.03 OBJECTIVES & PRINCIPLES

A vertical community, on a prominent corner, in a culturally vibrant place that respects the past while looking towards the future.

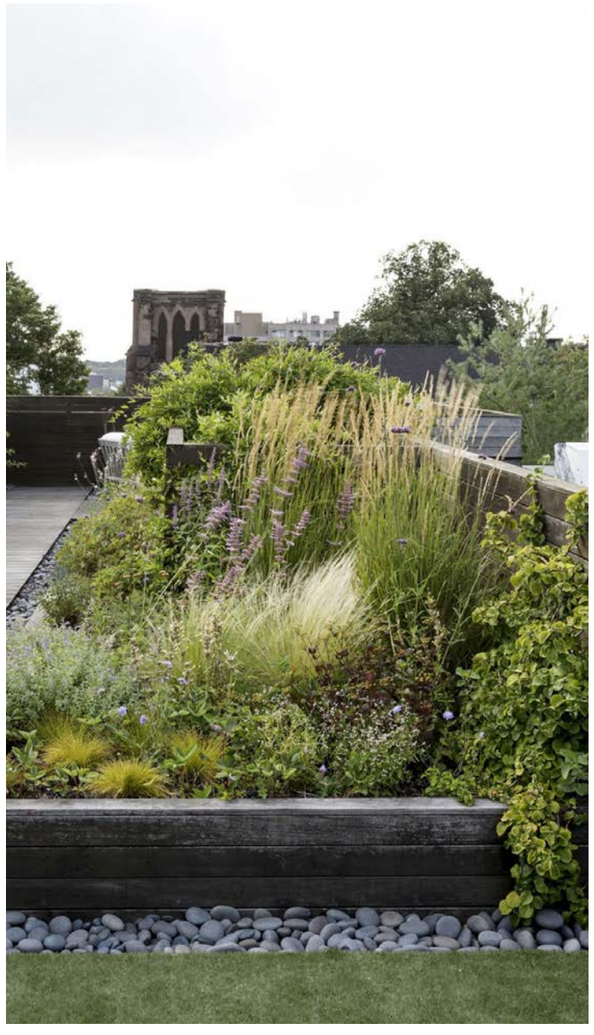


2.04 VISION

Iconic in form, holistic in operation, welcoming to all.



SHARED
Creating spaces for all. From an engaged ground plane along Elizabeth Street and the draw of of the through-site link establishing a new public realm, to the mix of podium top communal spaces supporting social activity and private reflection.



GREEN
Weaving throughout the building providing passive natural shading, framing social spaces and supporting local biodiversity.

RESILIENT
Embedded in the design through low-energy and low-water use operations and passive design strategies.

FLEXIBLE
Loose fit floor plans facilitate ease of change within the commercial and retail spaces, supported by welcoming spill out space to the perimeter, interfacing with the public realm.

2.05 CONCEPT

Interpreting the historic urban grid and later industrial and textile industries through a forward looking architectural legacy, stitching together social and urban fabric for a vibrant future.

2.1 PLACE MAKING & ARCHITECTURE

2.11 Landscape

2.12 Ground Plane

2.13 Key Elements

2.14 Podium Composition

2.15 Podium Interfaces

2.16 Access

2.17 Envelope & Massing

2.18 Massing Realisation

2.19 Form Exploration

2.20 Massing Articulation

2.21 Shadow Analysis

2.22 Programme

2.23 Tower Facade Composition

2.24 Materials

2.11 LANDSCAPE

Framing public and communal spaces, landscaping brings passive animation and biodiversity with native, drought resilient planting for long-term enjoyment.

Landscaping is integral to the frame of key spaces throughout the proposals. From the public realms spaces at ground level, to the communal spaces at level 5, to architectural accenting where two towers meet above Elizabeth Street.

The design approach seeks to create a safe, secure and welcoming place. At ground level, planting is tiered, using large plants to the rear to provide shading and depth, with smaller shrubbery forward of this. This ensures sight lines and a feeling of space is maintained to a backdrop of lush, healthy colour and natural growth.

Across level 5, landscaping creates a range of spaces for residents to enjoy. Open lawns are provided to the north and south areas, while perimeter planting frames views out and strategically located planters protect apartment privacy.

Species selection will focus on natives and drought tolerance to ensure a vibrant and lush landscape is maintained throughout the year. This approach also looks to support local biodiversity and minimise potable water use. In parallel to this, on site rainwater detention will supply irrigation systems.

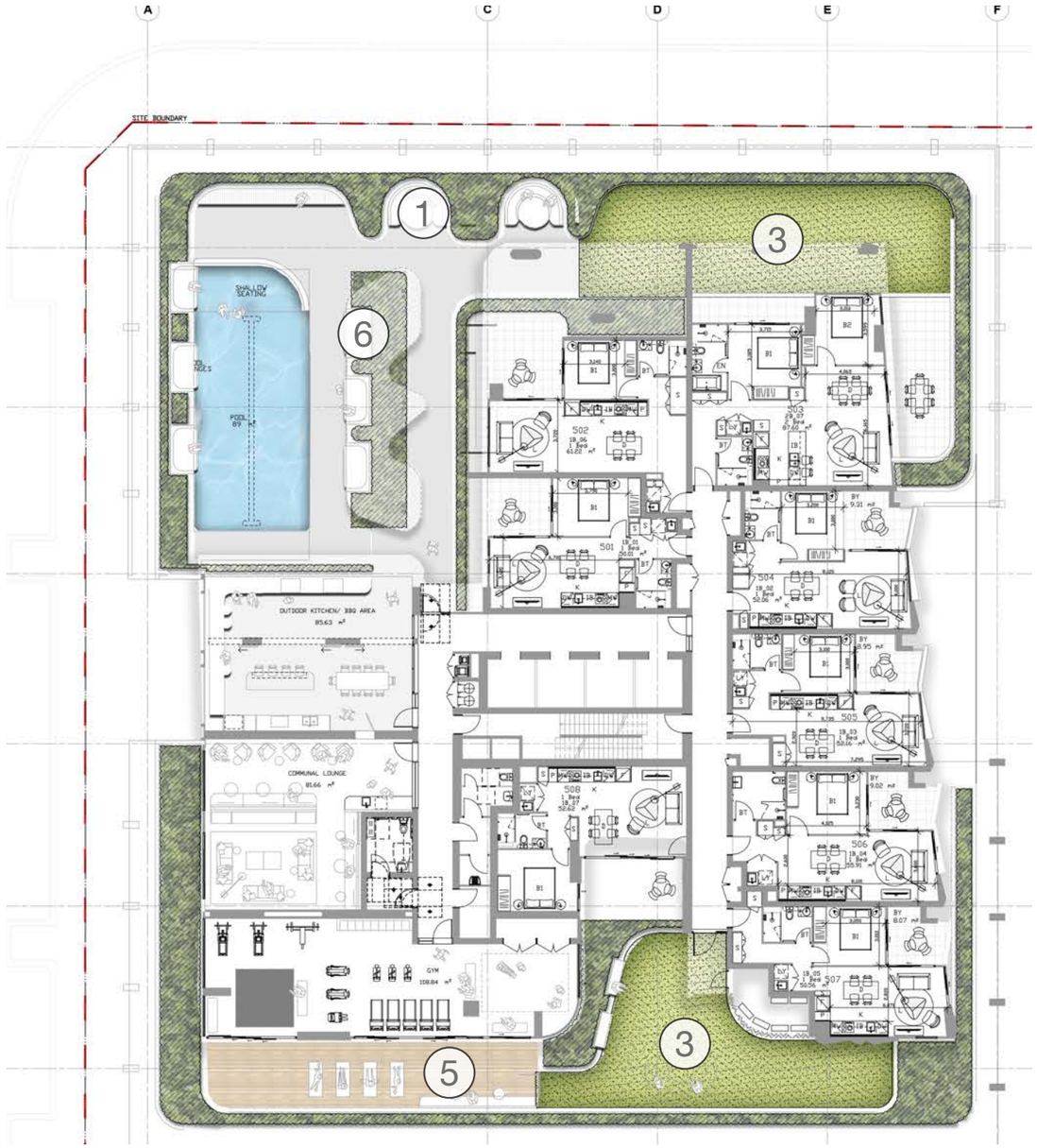
Covered pool seating

Pool

Open lawn area

Yoga deck

Cabana style seating



2.12 GROUND PLANE

Fine grain, activated and green, the ground plane is the key building interface with the public realm.

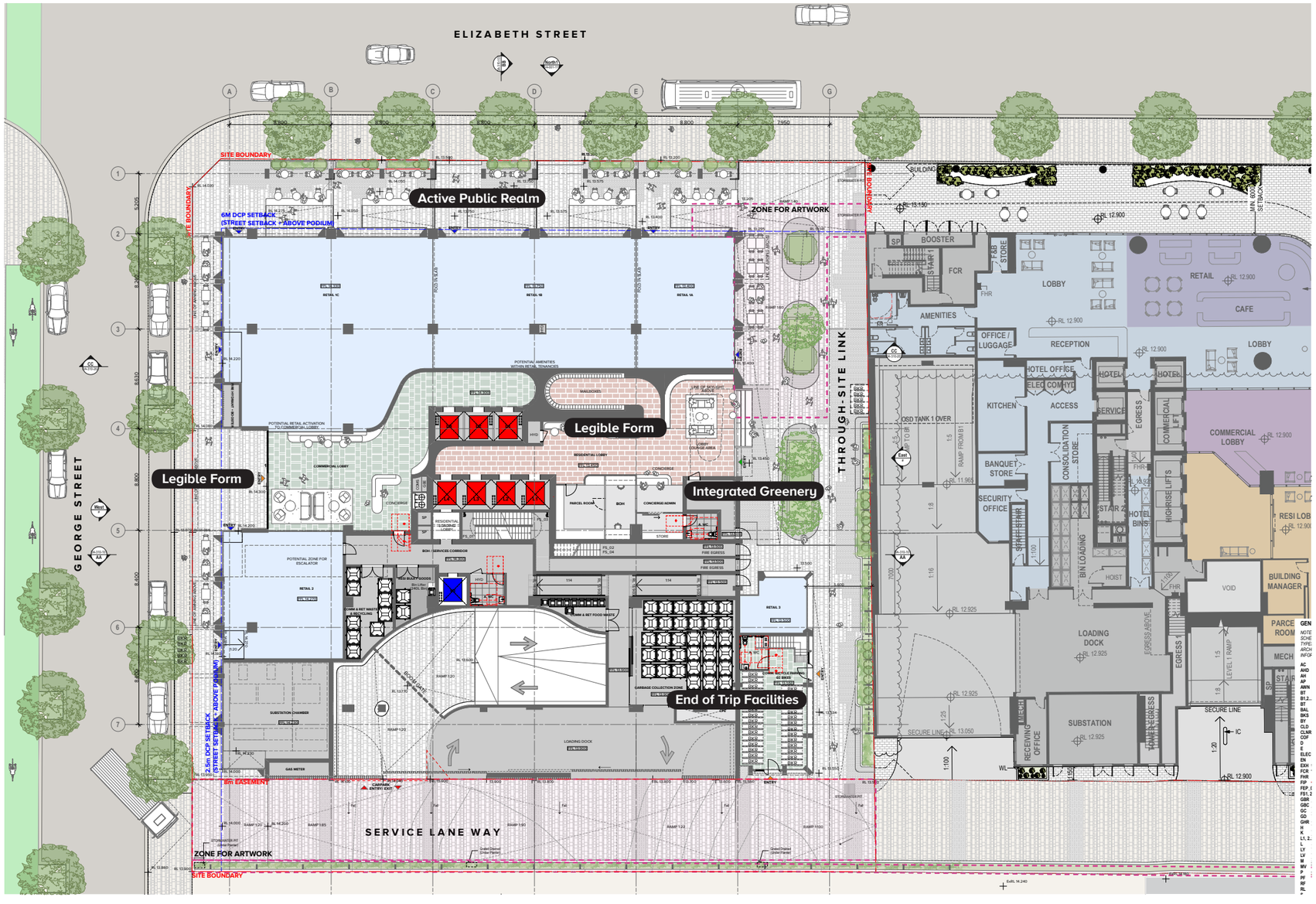
Ground level activation wraps around from George Street to to the through-site link incorporating clearly defined lobby entries, retail displays, spill-out dining space and passive seating.

Elizabeth Street in particular provides an expanded public realm through the ground level setback, framed by greenery and integrated public seating.

Along the eastern boundary, a range of planting and artwork brings passive animation and soft surfacing to a momentary glimpse space with micro-cafe tucked within.

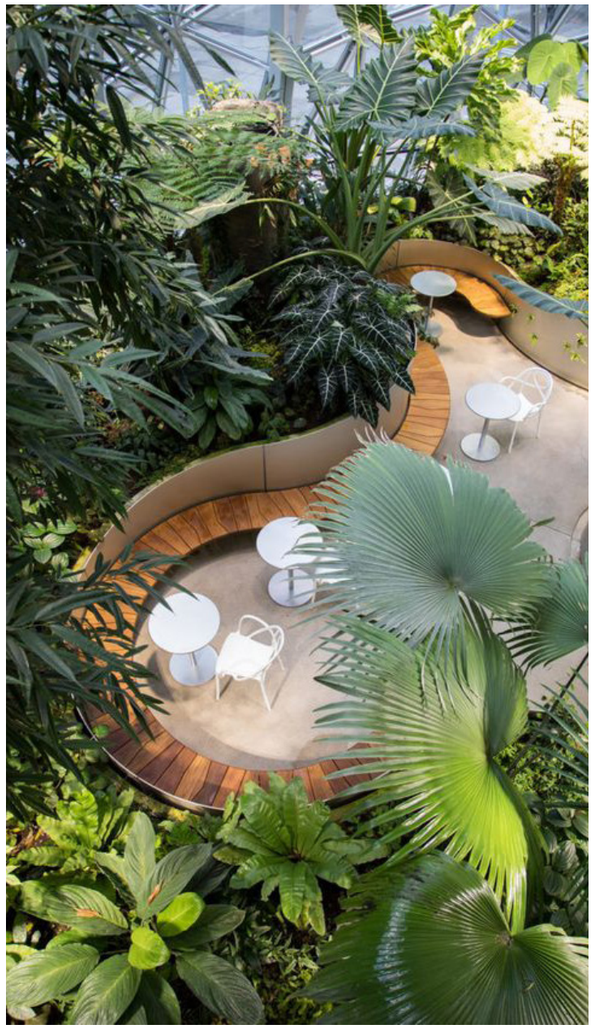
To the southern boundary, the service lane is provided with quality finishes and materials, and minimised opportunities for vagrancy. This also provides a clear and safe entry route for bicyclist to the end of trip facilities.

Together, these elements enable an active and vibrant ground plane, integrating the building with the existing public realm and supporting its future success.

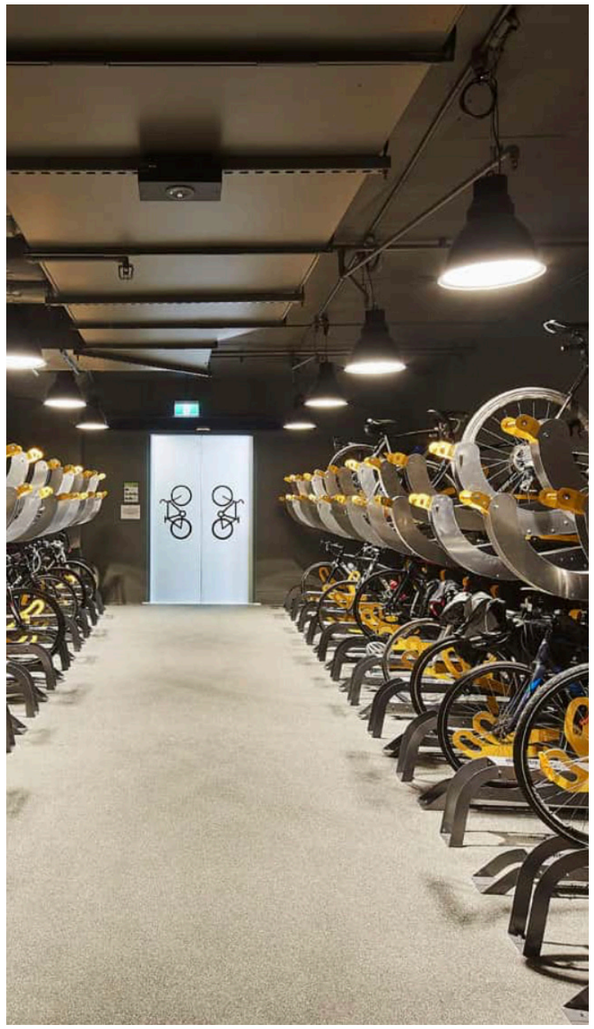


2.13 KEY DESIGN MOVES

ACTIVE PUBLIC REALM
Active frontages are provided to the north, west and east, with defined outdoor dining spaces to Elizabeth Street and Illoura Place.



INTEGRATED GREENERY
Lining Elizabeth Street and the through-site link will be low-level planters of drought resistant native plants, along with feature trees within the laneway and extending the expanding canopy cover of Elizabeth Street.



ACTIVE, LOW EMISSION & PUBLIC TRANSPORT
Ground level end of trip facilities, basement provision for electric vehicle connections and an improved public realm around the existing bus stop support non-private vehicle movement options.

LEGIBLE FORM
Commercial and residential lobbies are clearly defined in the architectural form, providing legibility, weather cover and a safe, welcoming route to entry

2.14 PODIUM COMPOSITION

Designed to stitch together the existing and emerging urban fabric, referencing the church opposite and aligning with key datums.

The podium element is a primary presence in the streetscape, providing building entries, interfaces and opportunities for architectural expression.

A key influence has been taken from the All Saints Catholic Church across Elizabeth Street, establishing points of rhythm, form and scale which the design seeks to respond to.

While horizontal in mass, the regular vertical concrete columns create a feature of interest, encouraging the eye to explore the form, discovering the detail of recessed glazing either side of the columns and experiencing a sense of movement as a passerby, noticing shadows play and perspectives change.

Through extensive design exploration, the proposals aim to form a refined architectural interaction with the church, interpreting the vertical elements around the podium.

At ground level, the recess along Elizabeth Street and through-site link create active public realm additions, served by spill out space and the residential lobby. Together working to support local activation within this proposal.

Generously landscaped podium with dense planted edge to limit urban warming and create a welcoming, vibrant communal space for residents.

Outdoor commercial breakout spaces offer varied work zones with access to natural light, air and greenery.

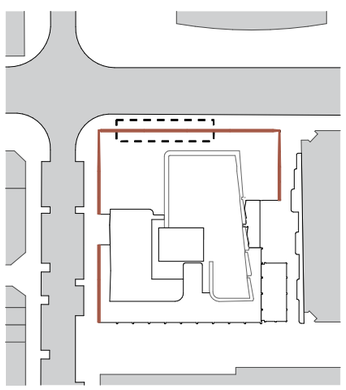
PCA grade A offices with high levels of natural light and flexible floor plates.

Refined primary column with flanking secondary fins echo the architectural notes of All Saints Catholic Church opposite.

Large, full height glazing to retail units providing clear view lines for interest and activity.

Spill-out, weather protected seating areas.

Ground level planting to reduce urban heat, and introduce seating for a welcoming public realm.

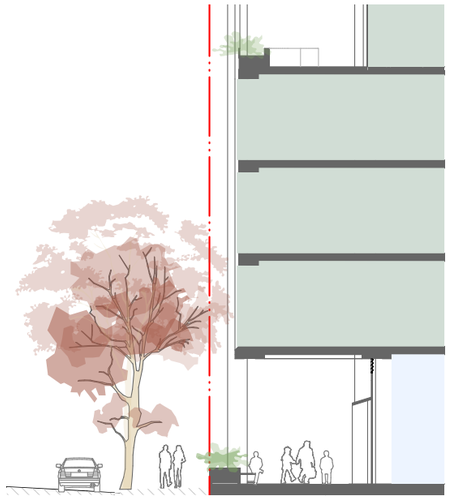


Podium Facade

ALL SAINTS CATHOLIC CHURCH
A key architectural influence, the striking vertical columns with golden glazed parallels create a unique moment in the local street scene.

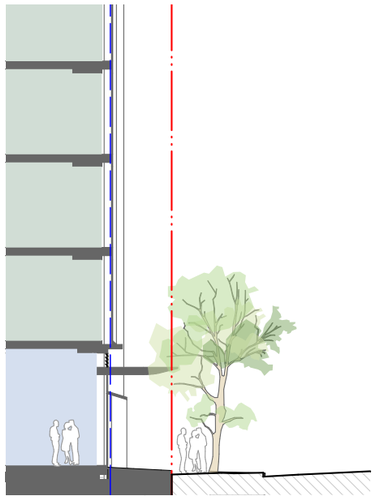
2.15 PODIUM INTERFACES

A fully interfaced ground plane with each frontage integrating with its own, specific public realm.



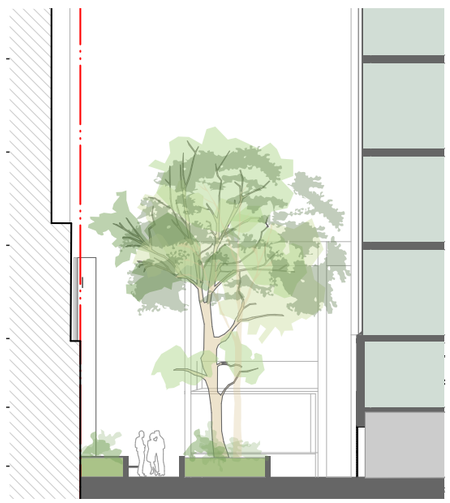
ELIZABETH STREET

Vibrant, street dining



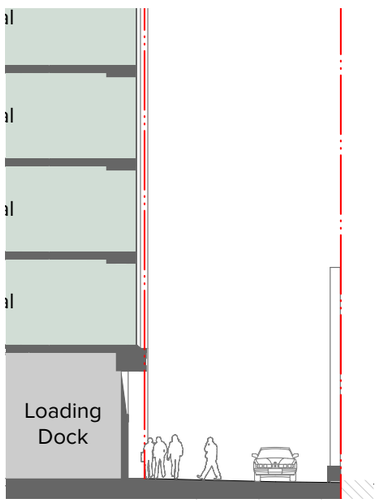
GEORGE STREET

Active street presence

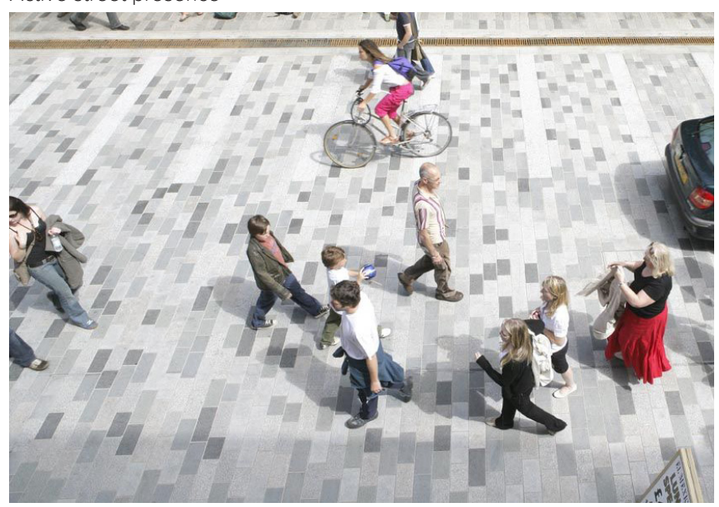


THROUGH-SITE LINK

Discoverable public realm



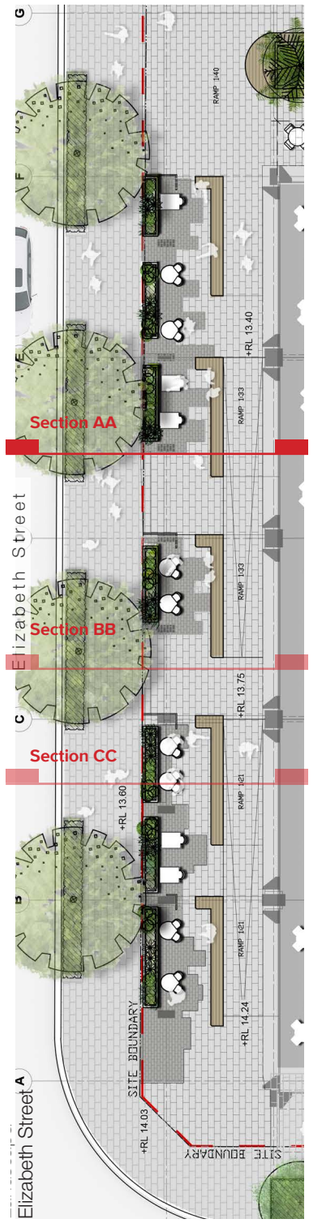
SERVICE LANE



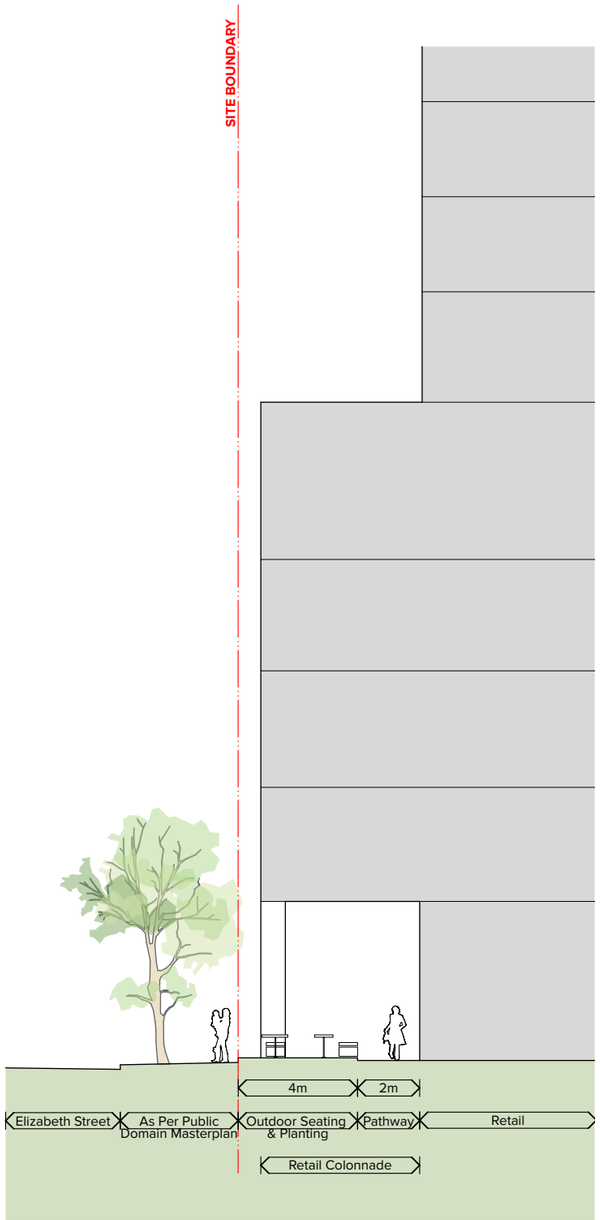
Refined materials and composition

2.15 PODIUM INTERFACES

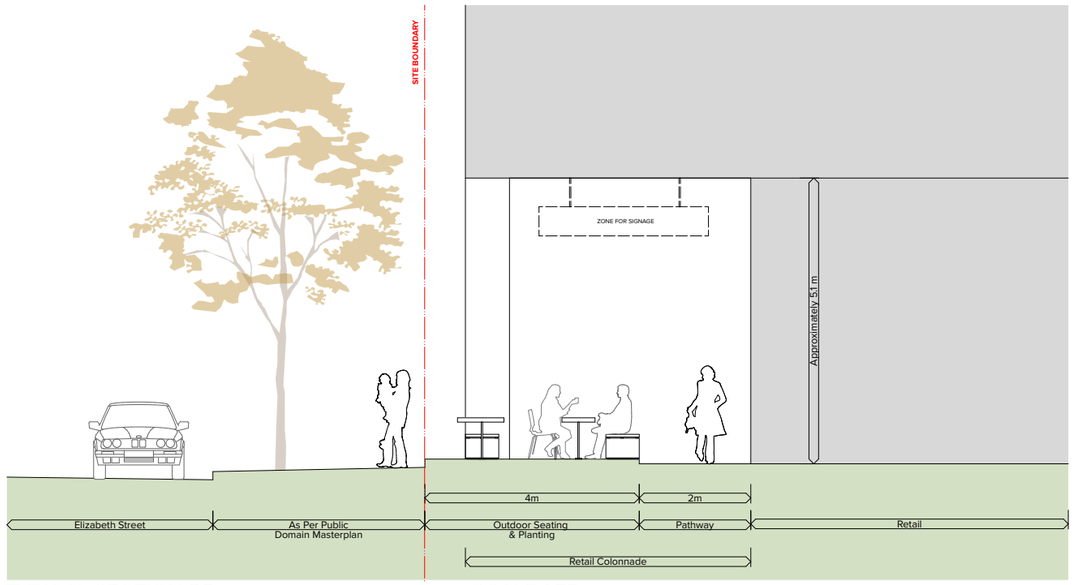
ELIZABETH STREET - THE DINING PRECINCT



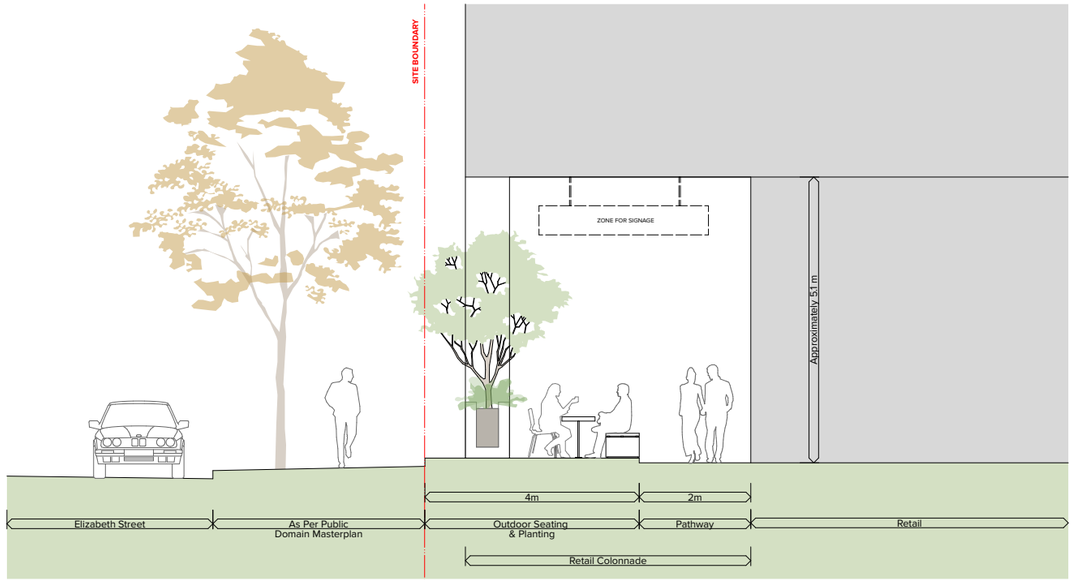
TYPICAL PLAN



TYPICAL SECTION AA | SCALE 1:150



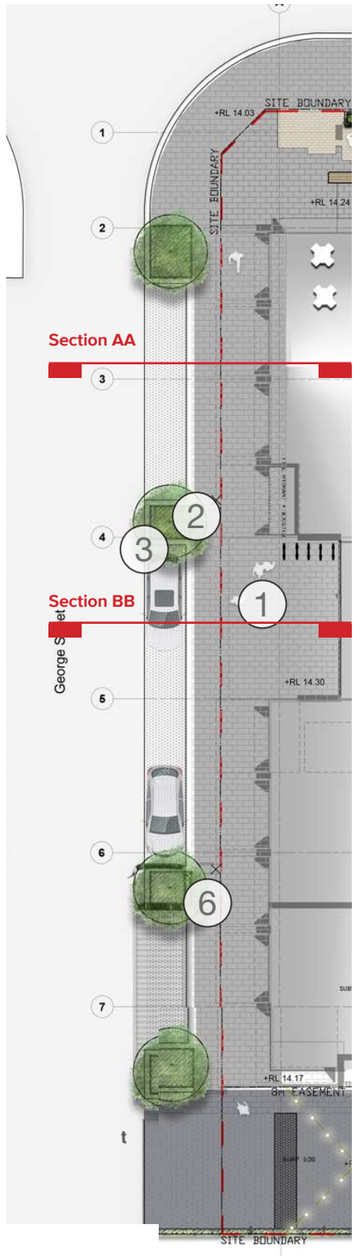
TYPICAL SECTION BB | SCALE 1:75



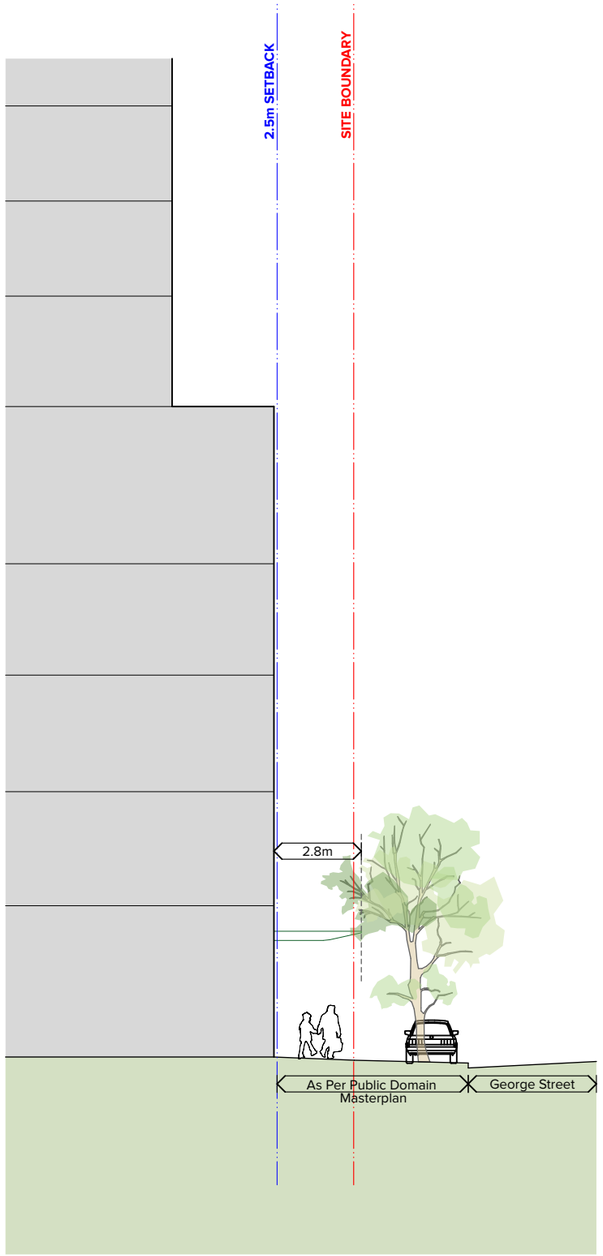
TYPICAL SECTION CC | SCALE 1:75

2.15 PODIUM INTERFACES

GEORGE STREET - THE COMMERCIAL CORRIDOR



TYPICAL PLAN



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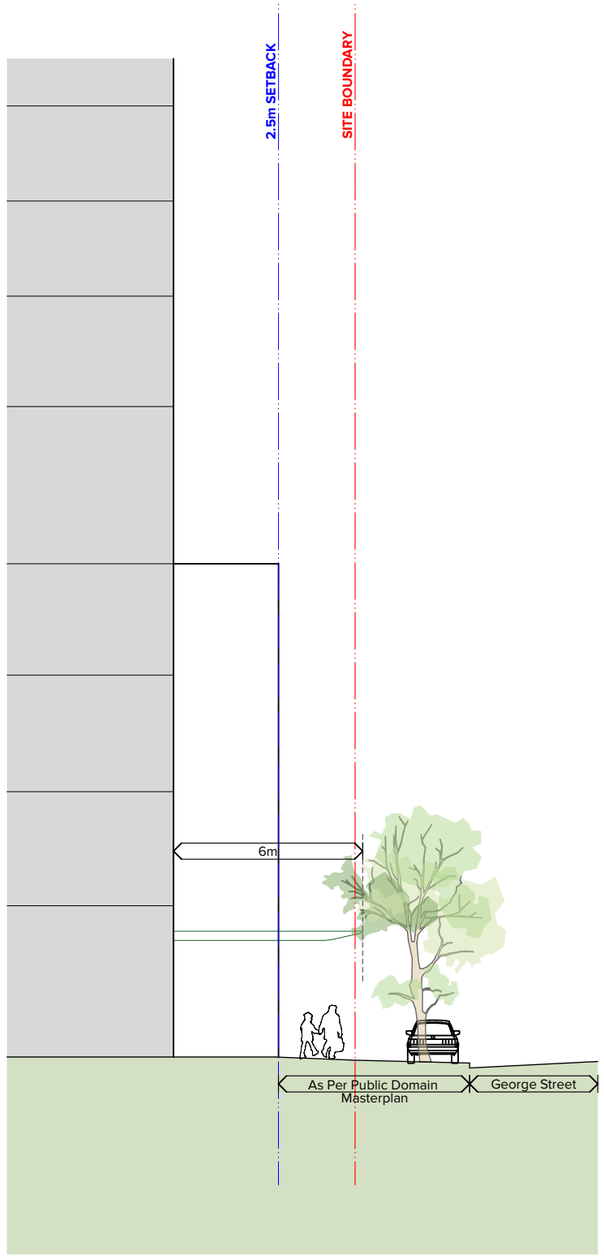

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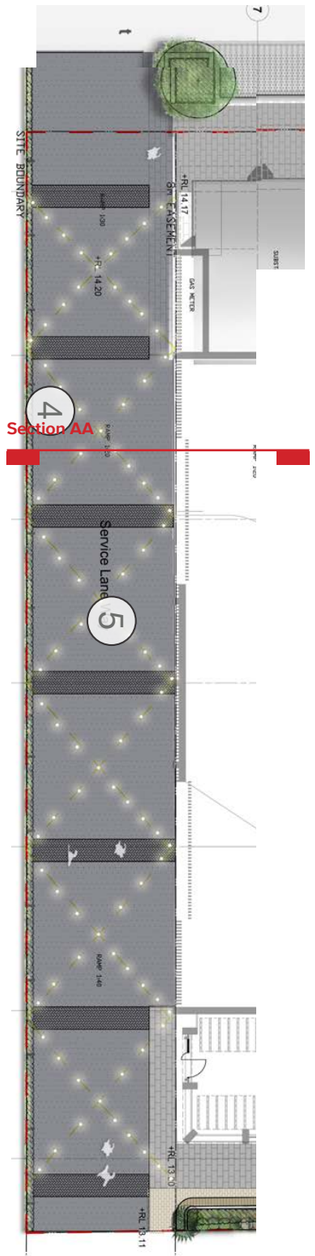
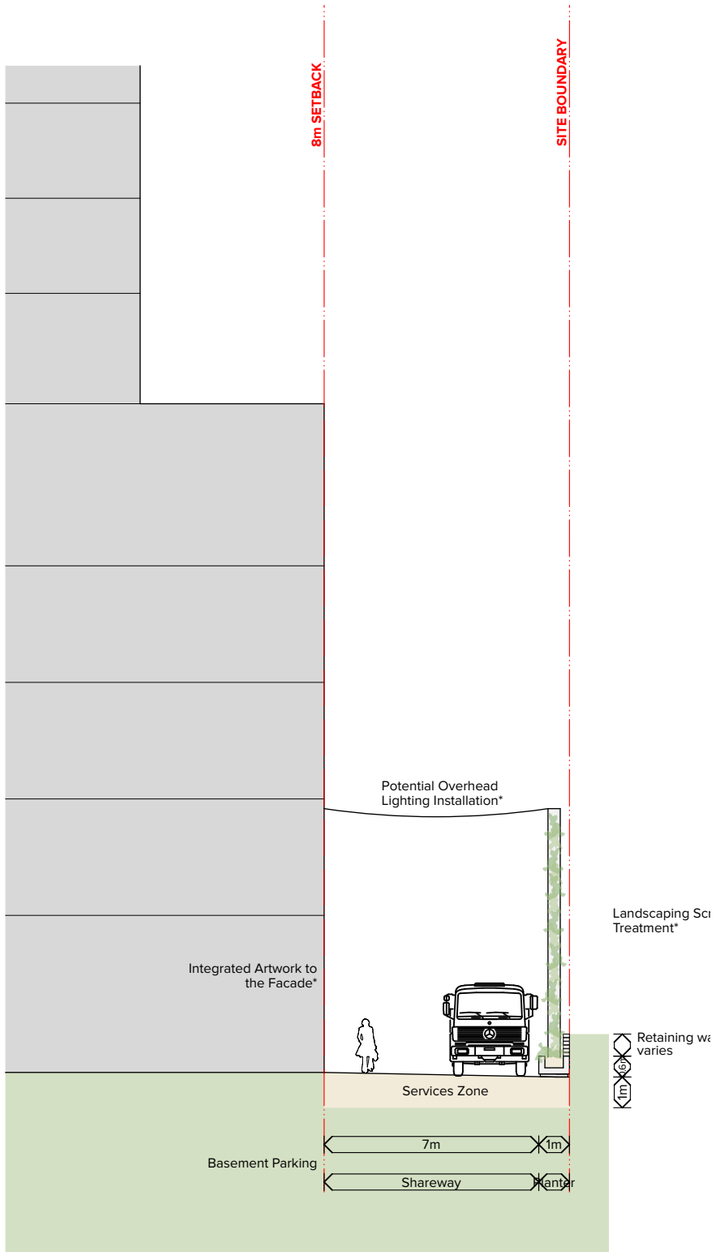
2.15 PODIUM INTERFACES

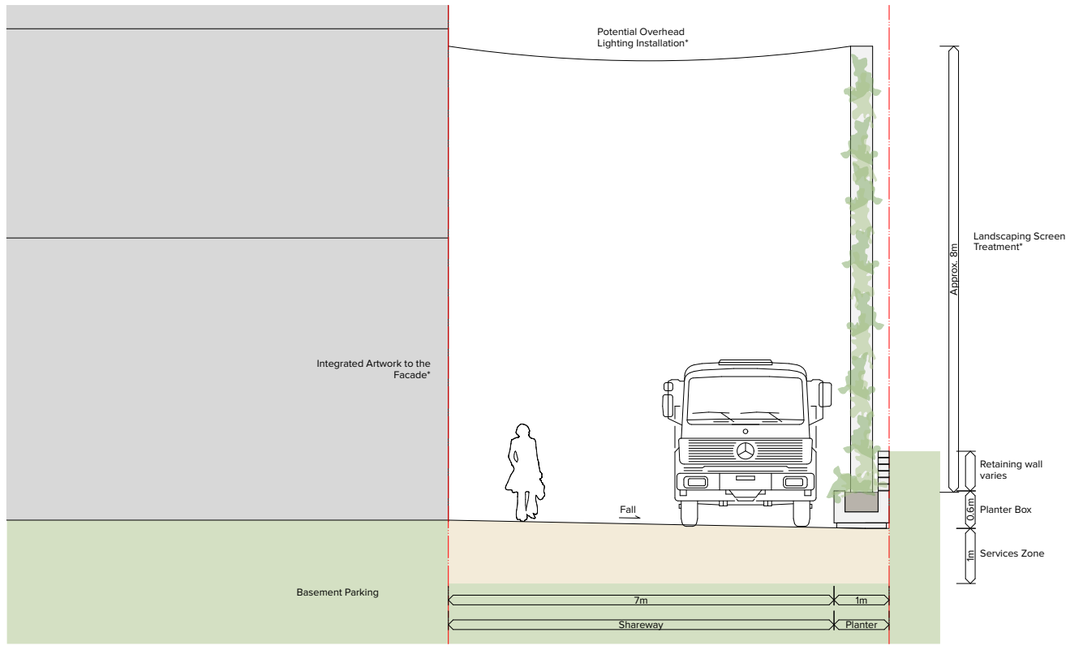
SERVICE LANEWAY - SHAREWAY



TYPICAL PLAN



TYPICAL SECTION AA | SCALE 1:150



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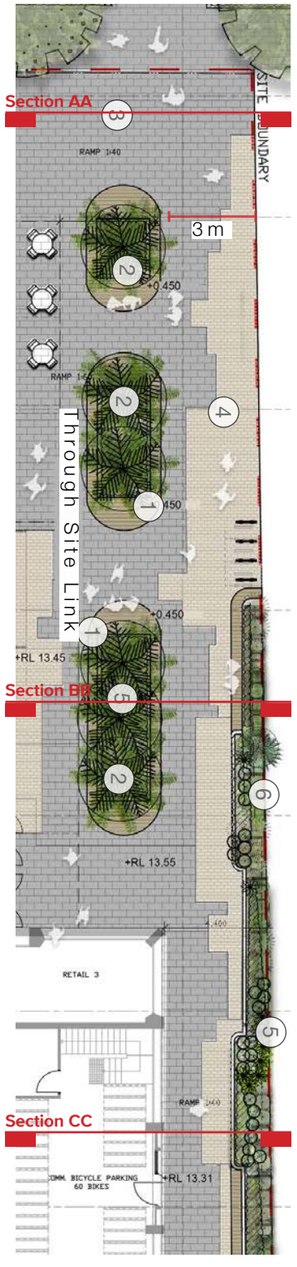
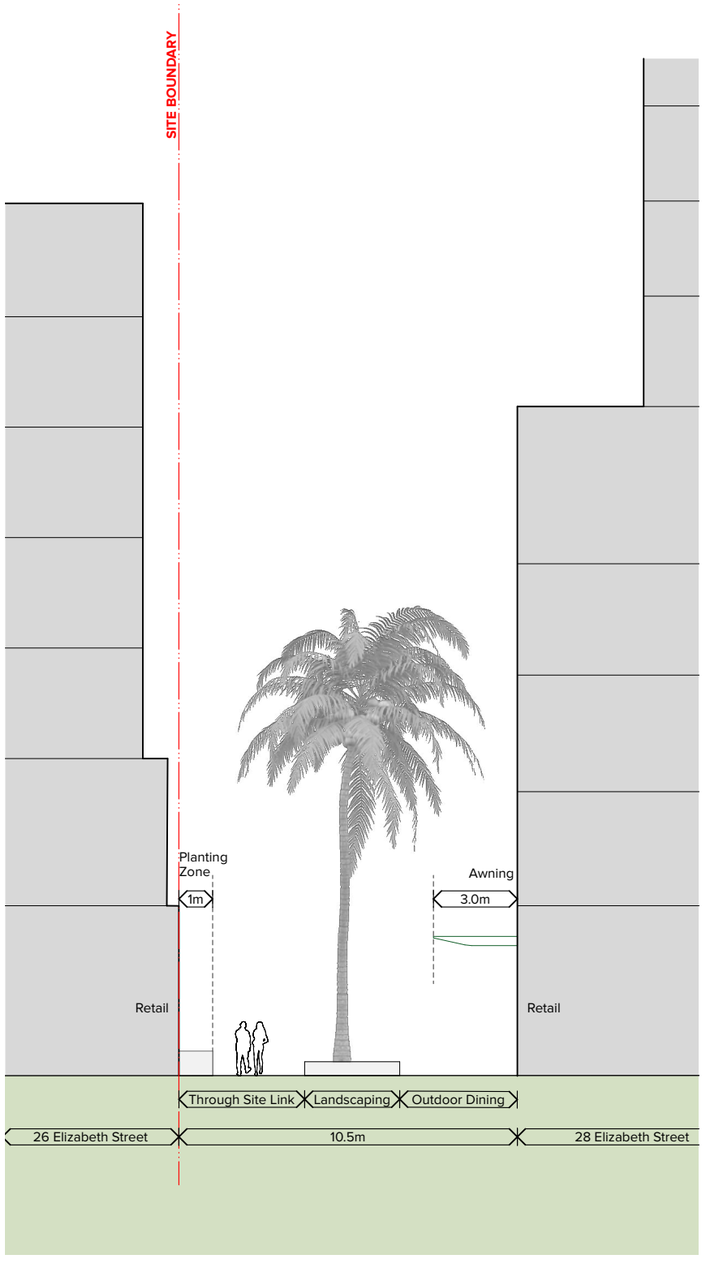
2.15 PODIUM INTERFACES

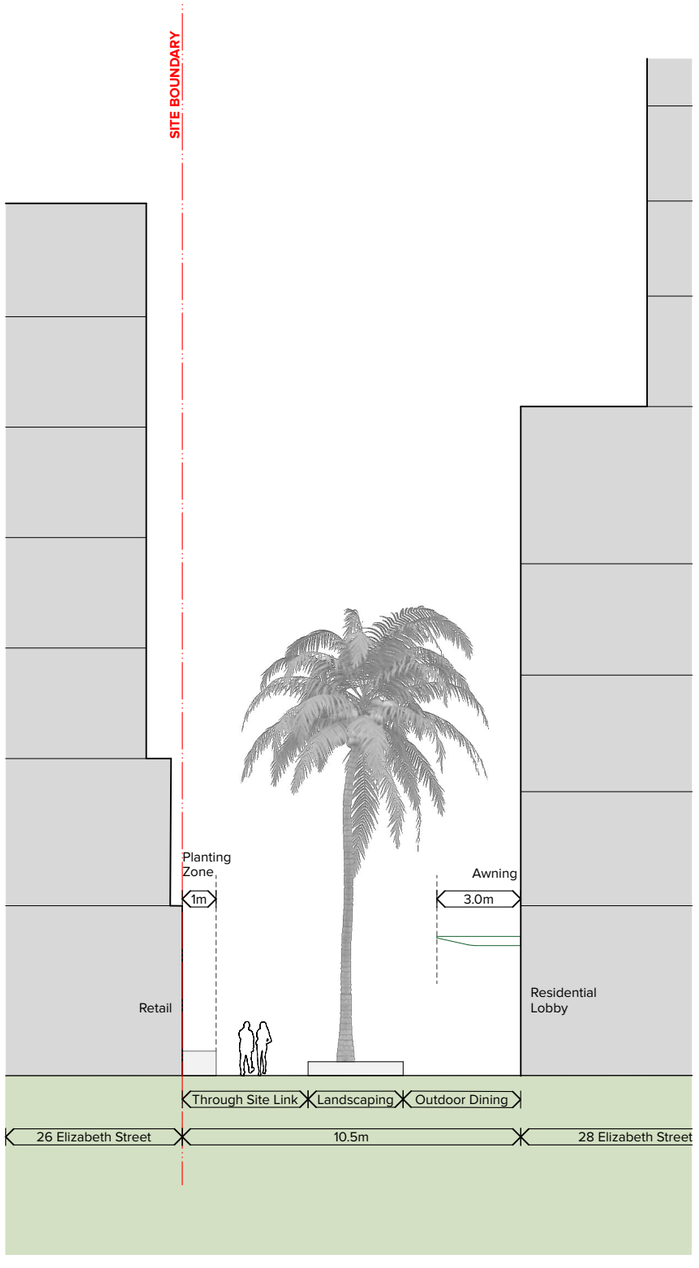
ILLOURA PLACE THROUGH SITE LINK - THE URBAN NOOK



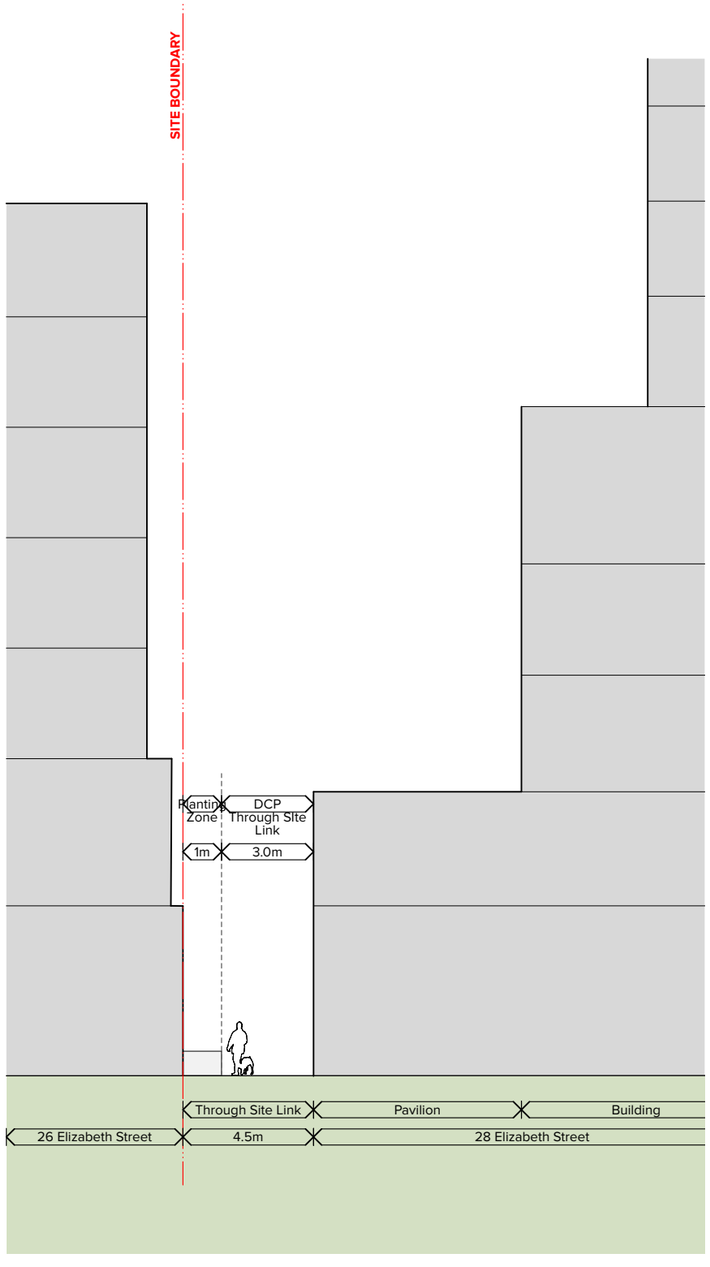
TYPICAL PLAN



TYPICAL SECTION AA



TYPICAL SECTION BB



TYPICAL SECTION CC

2.15 PODIUM INTERFACES

ILLOURA PLACE THROUGH SITE LINK - THE URBAN NOOK

Through Site Link

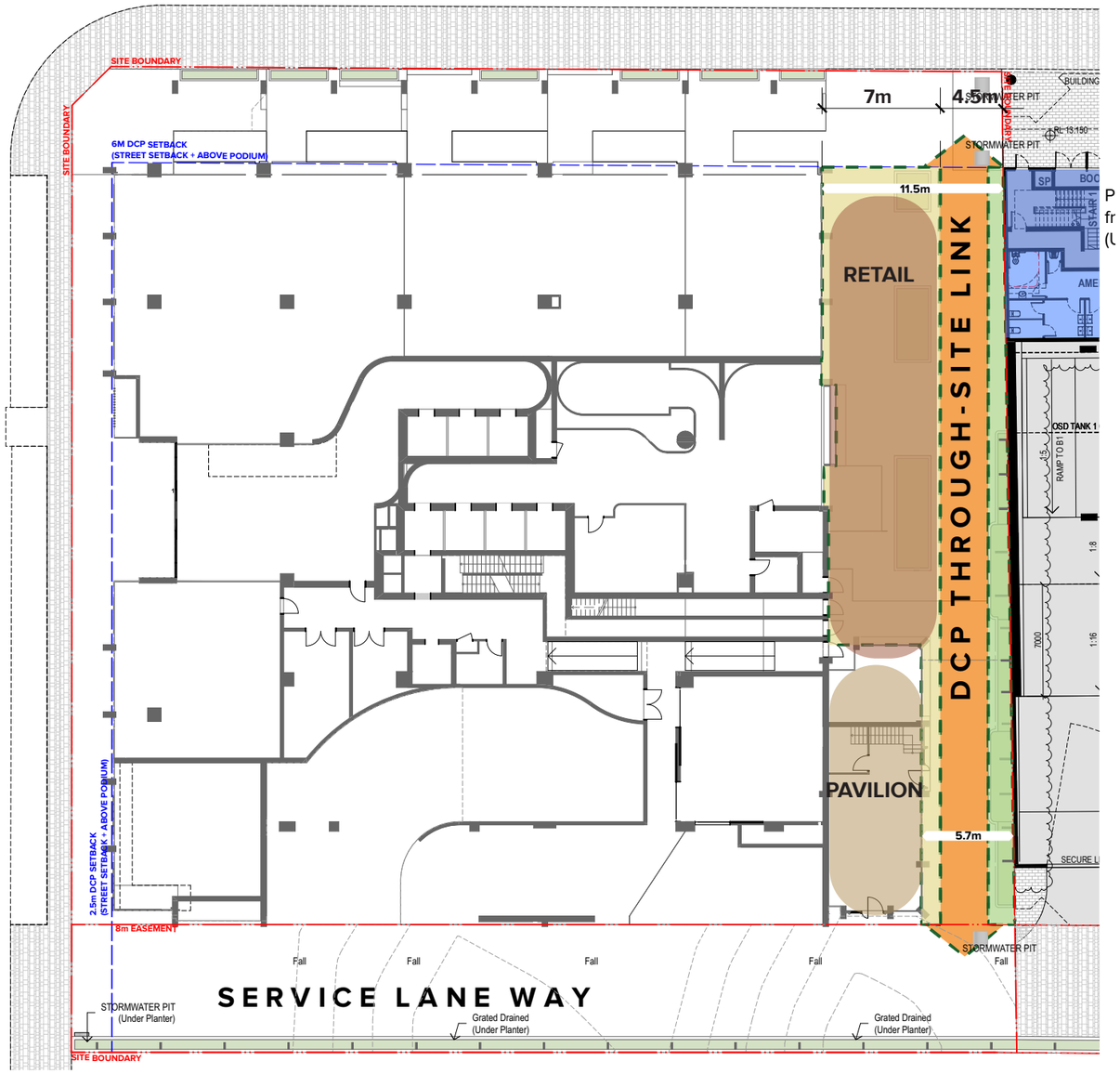
Pedestrian Paths | (Public) Through Site Links must:
a) Be a minimum width of 3m clear of all obstructions.
b) Be open to the sky and to be publicly accessible at all times.
c) Have signage at street entries indicating public accessibility and the street to which the through site link connects.

LEGEND

3m wide Through Site Link

7m wide Extension of Through Site Link
- Retail trade out zone and residential lobby extension

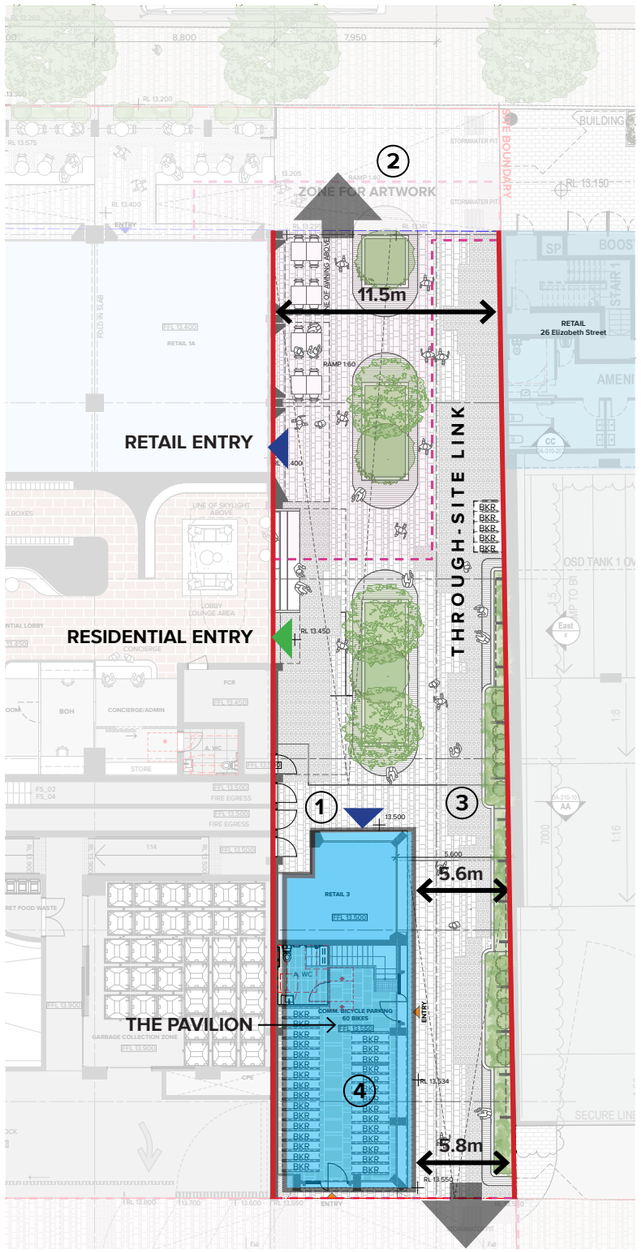
1m - 1.6m Extension of Through Site Link
- Landscaping zone and seating

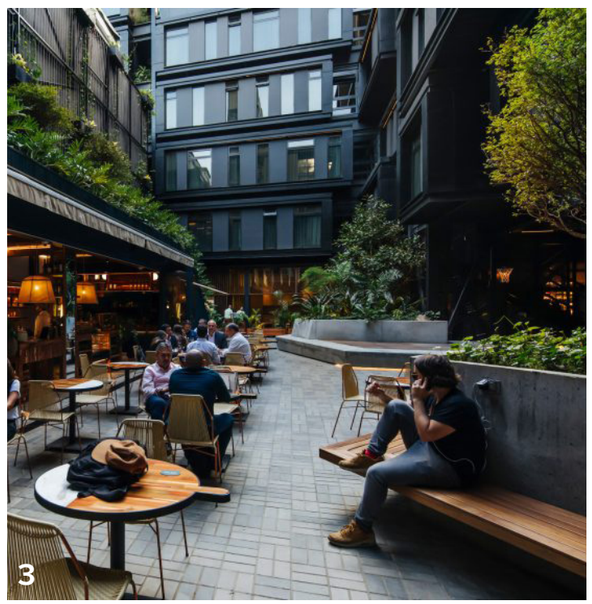


Ground Level

2.15 PODIUM INTERFACES

ILLOURA PLACE THROUGH SITE LINK - THE URBAN NOOK





MEMORABLE IDENTITY

2.16 ACCESS

Access is provided from all sides, supporting active and welcoming interfaces.

Pedestrian Access

Public movement

Through site movement

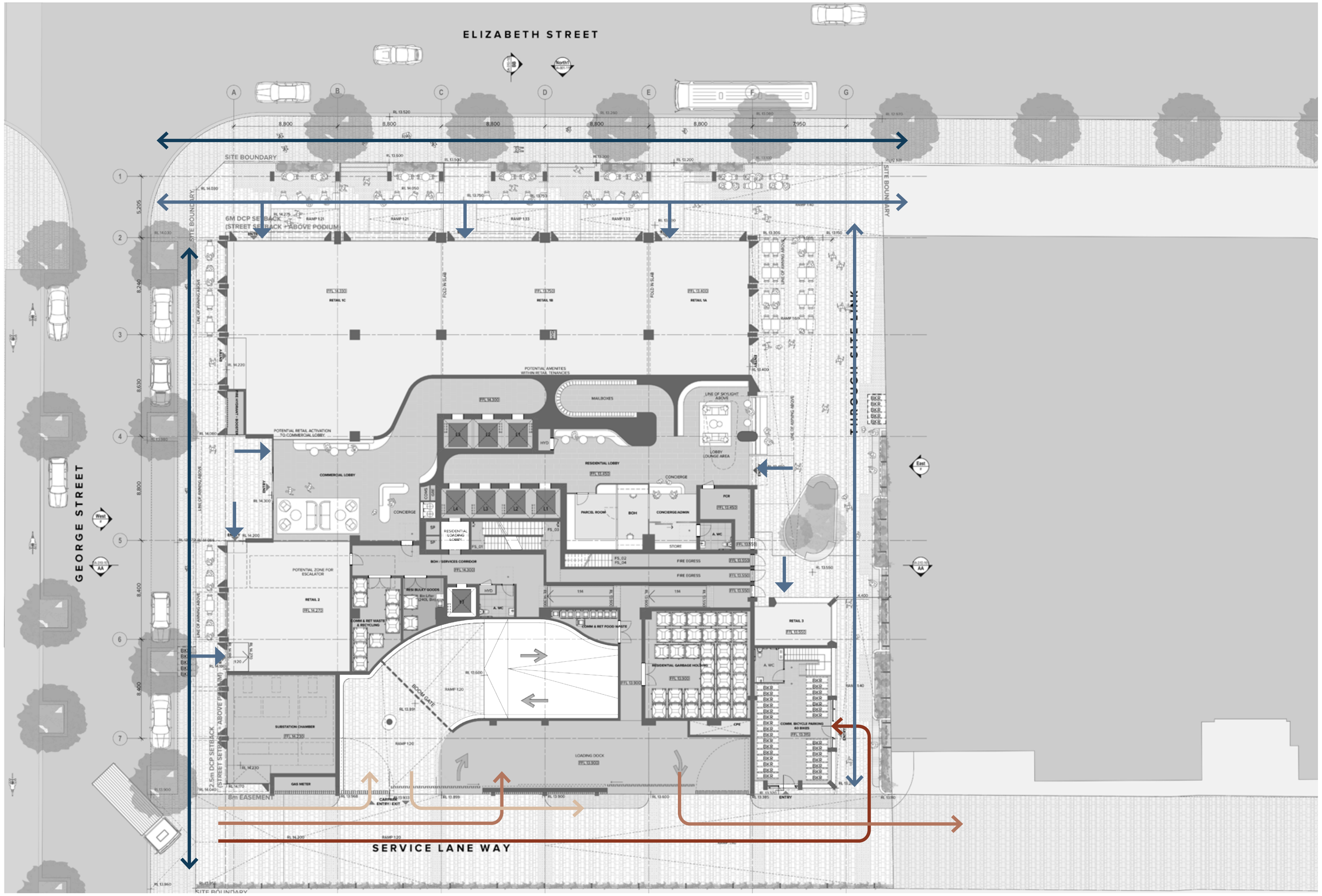
Building entry

Vehicular Access

Bicycle

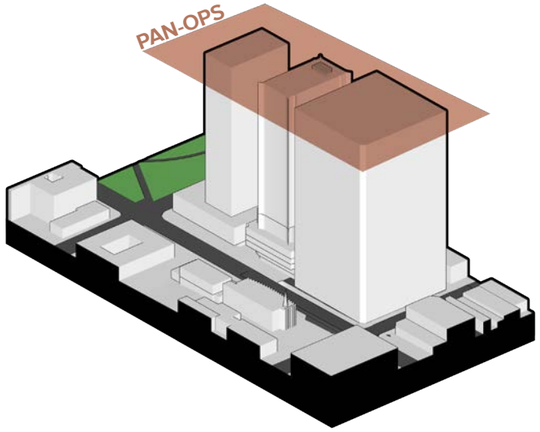
Waste & delivery

Car parking (retail, commercial, residential)

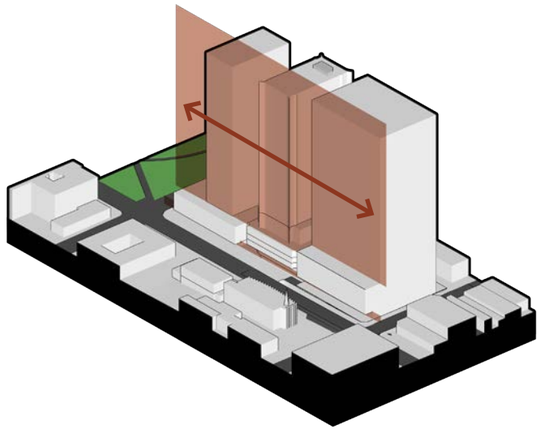


2.17 ENVELOPE & MASSING

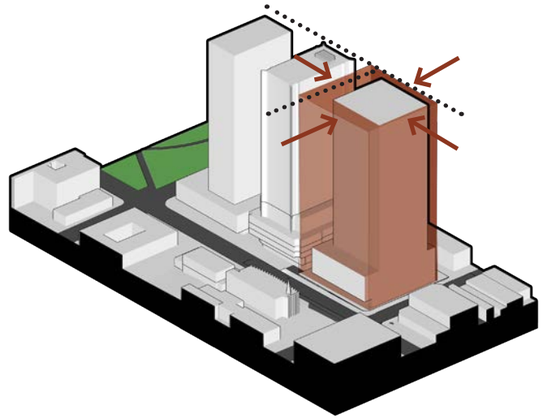
Sculpted by place, the architecture connects to heritage, community and context through form and materials.



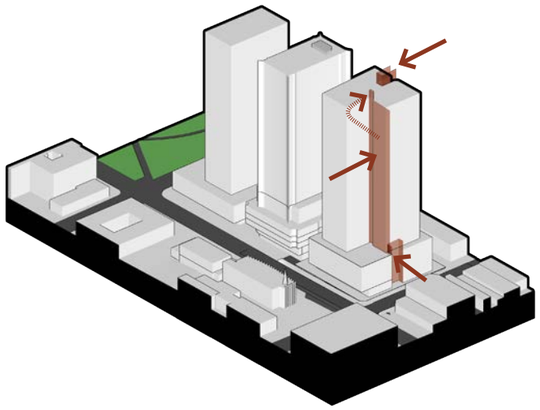
Height Limit
Established by the PAN-OPS at 128.1m and 130.8m.



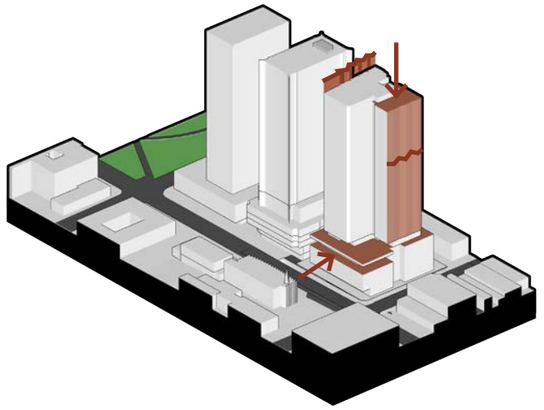
Neighbouring Built Form Context
26 Elizabeth Street has received approval and establishes a series of podium and ground datums.



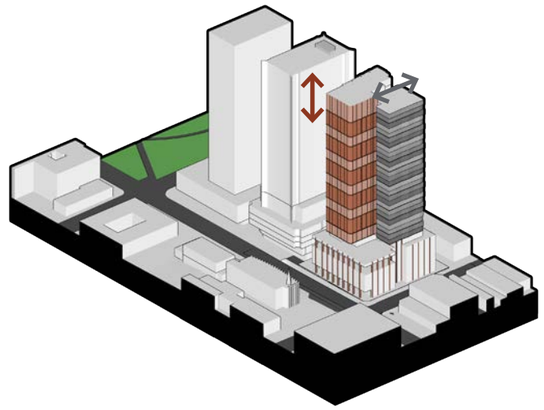
ADG, LEP and DCP Policy Setbacks
Ground and upper level setbacks further define massing limits.



Two Distinct Towers
Refinement creates two slender tower forms that both come to ground via podium indentations.



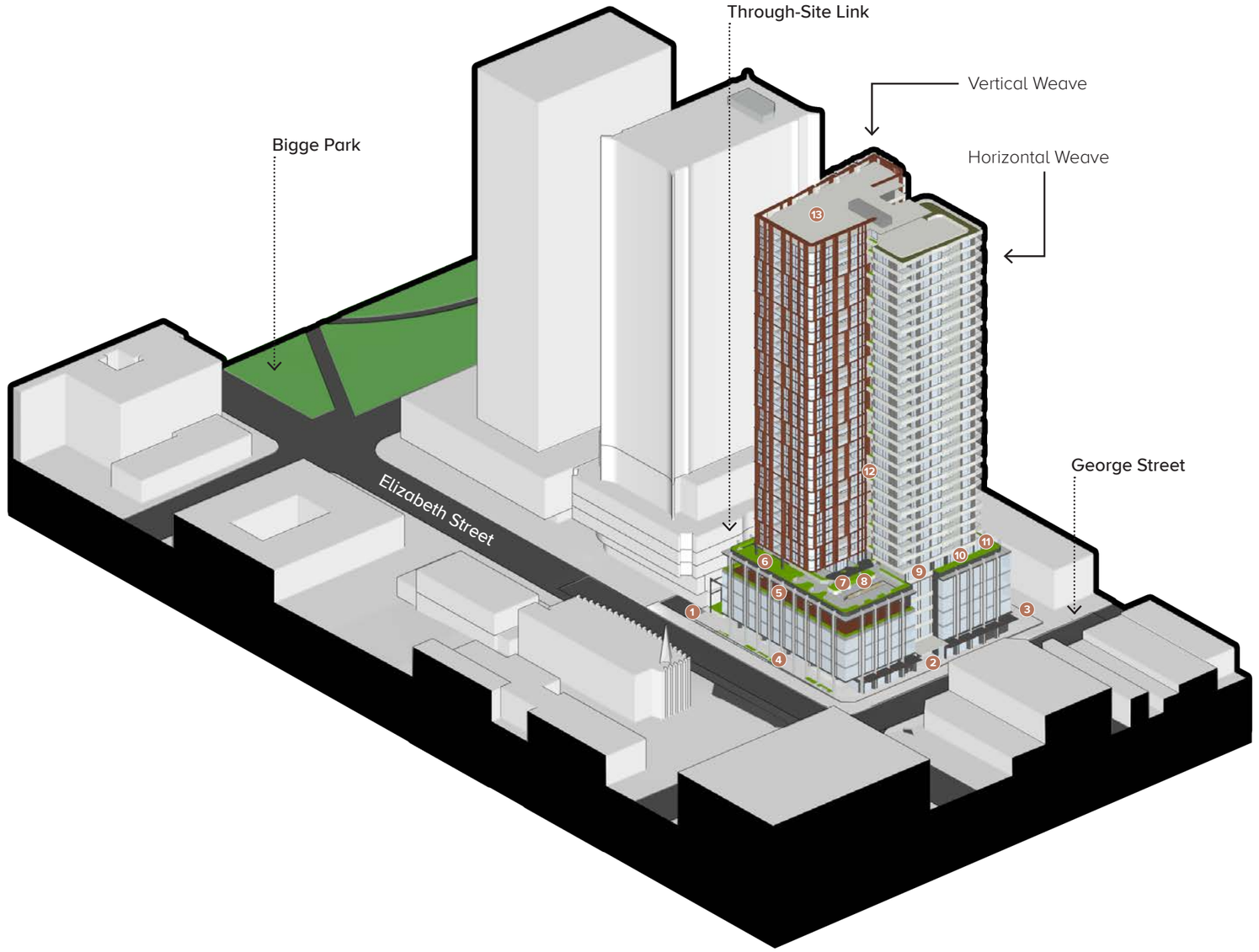
Form Development
Internal planning infromed by orientation provides daylight access and views out through a variety of spaces across the proposals.



Facade Articulation
Refinement of the architectural form provides urban interest, texture and identity.

2.18 MASSING REALISATION

Establishing an urban benchmark, with active public realm, communal spaces and landmark architecture.

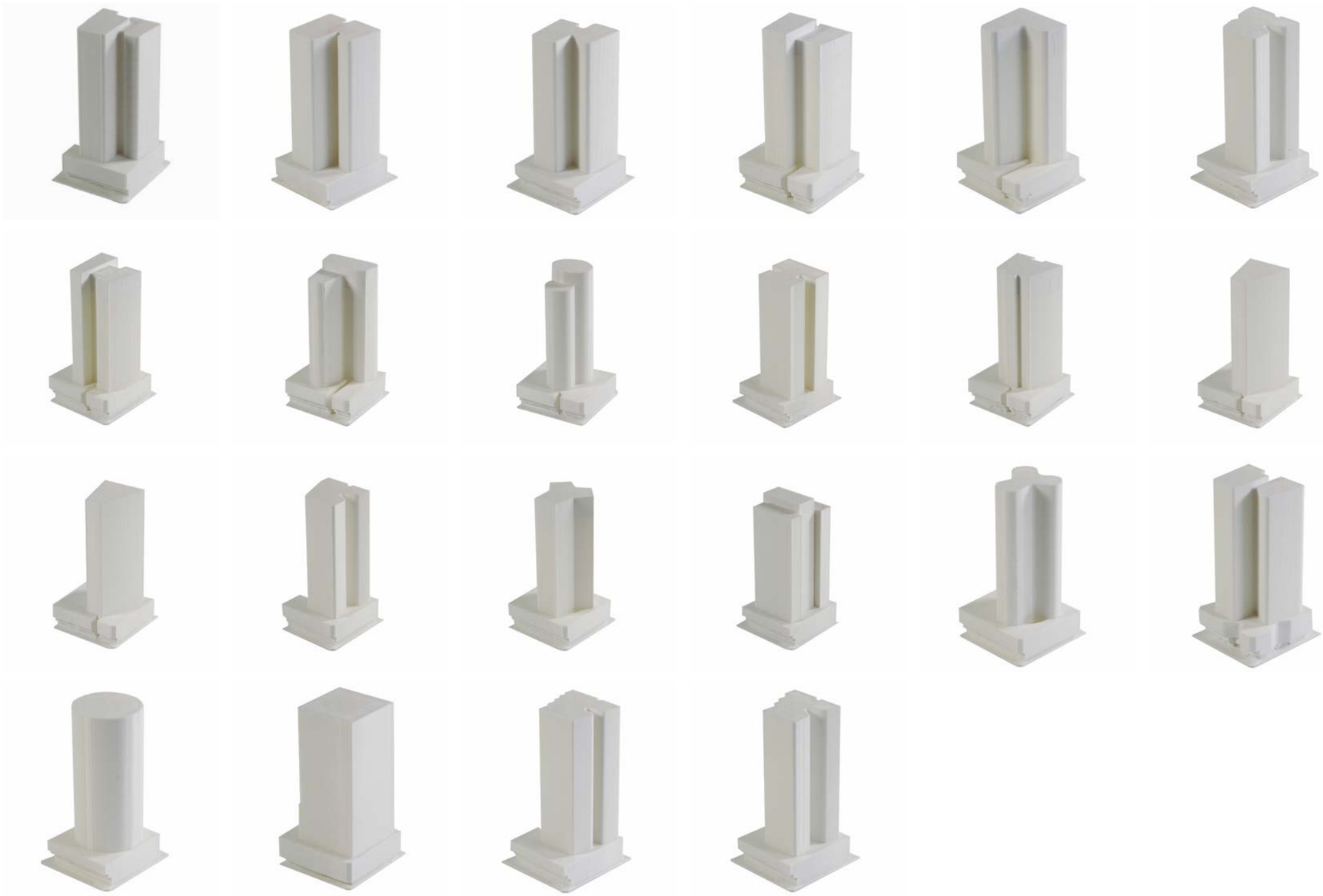


LEGEND

1 Residential Entry
2 Commercial Entry
3 Service & EoT Access
4 Ground Plane setback with street planting and outdoor dining
5 Commercial outdoor breakout spaces
6 Communal lawn
7 Communal BBQs
8 Pool with solar thermal heating
9 Communal living and kitchen rooms
10 Residential gym
11 Outdoor yoga deck
12 Recessed facade planting
13 Photovoltaics

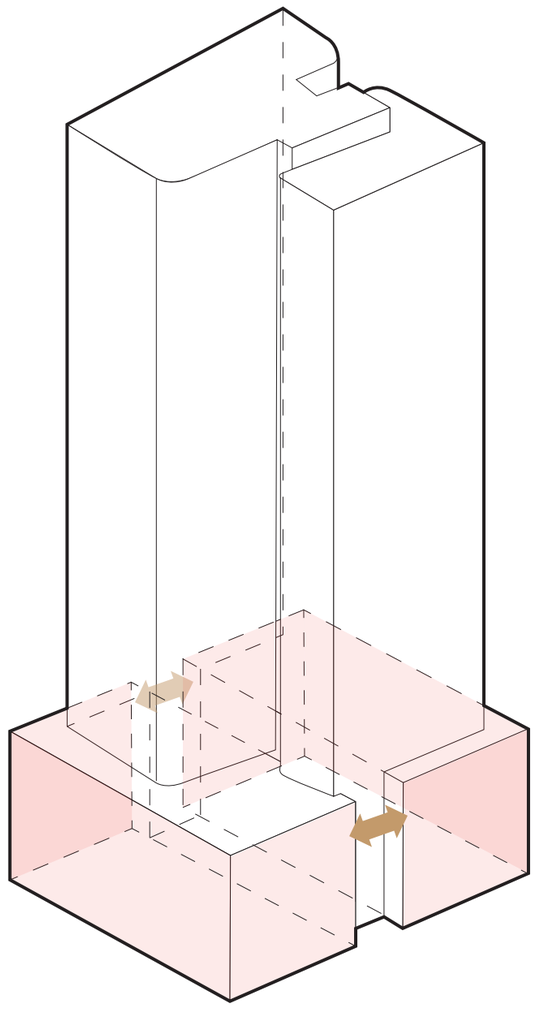
2.19 FORM EXPLORATION

Alternative massing options explored orientation, scale, interaction with neighbouring forms and functionality.

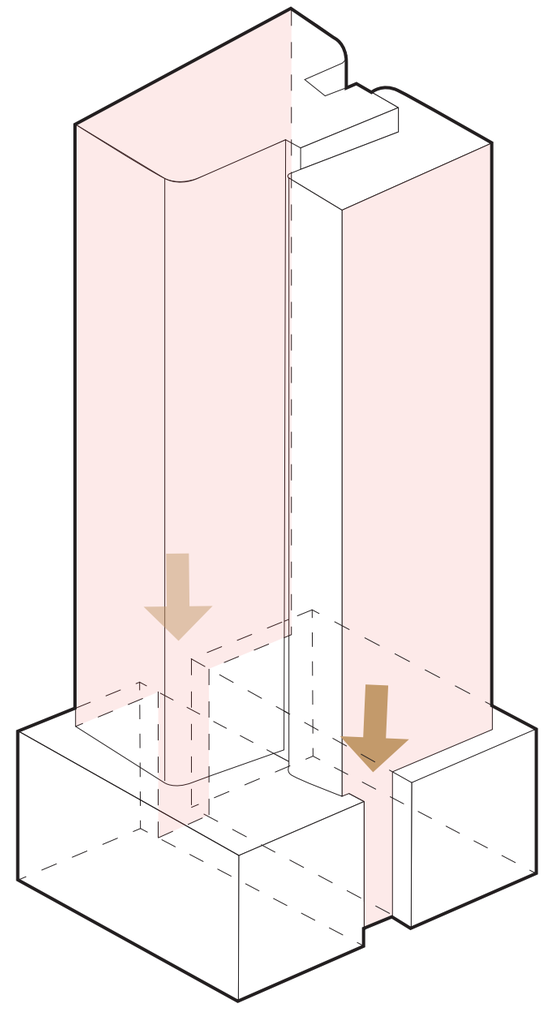


2.20 MASSING ARTICULATION

Distiction and connection of tower massing to podium massing.



Podium Massing - Addressing the Street Front

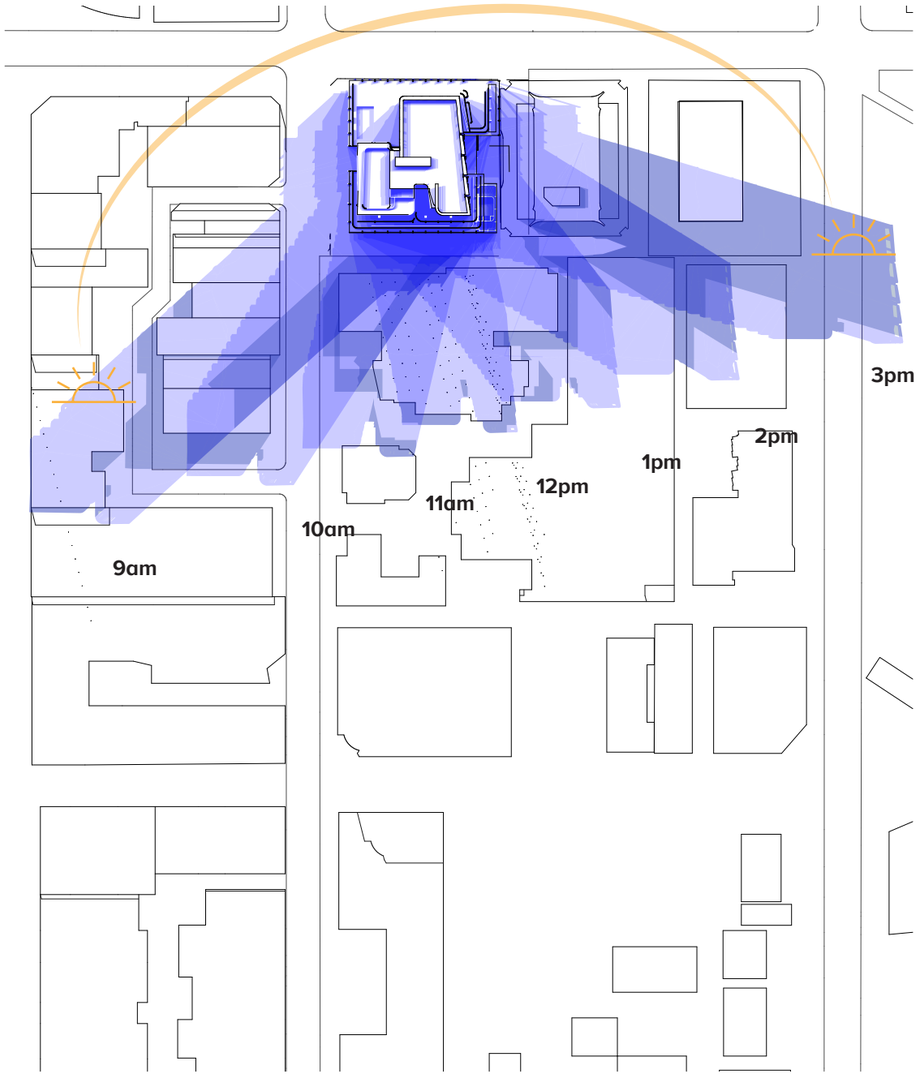


Tower Massing - Comes to the Ground

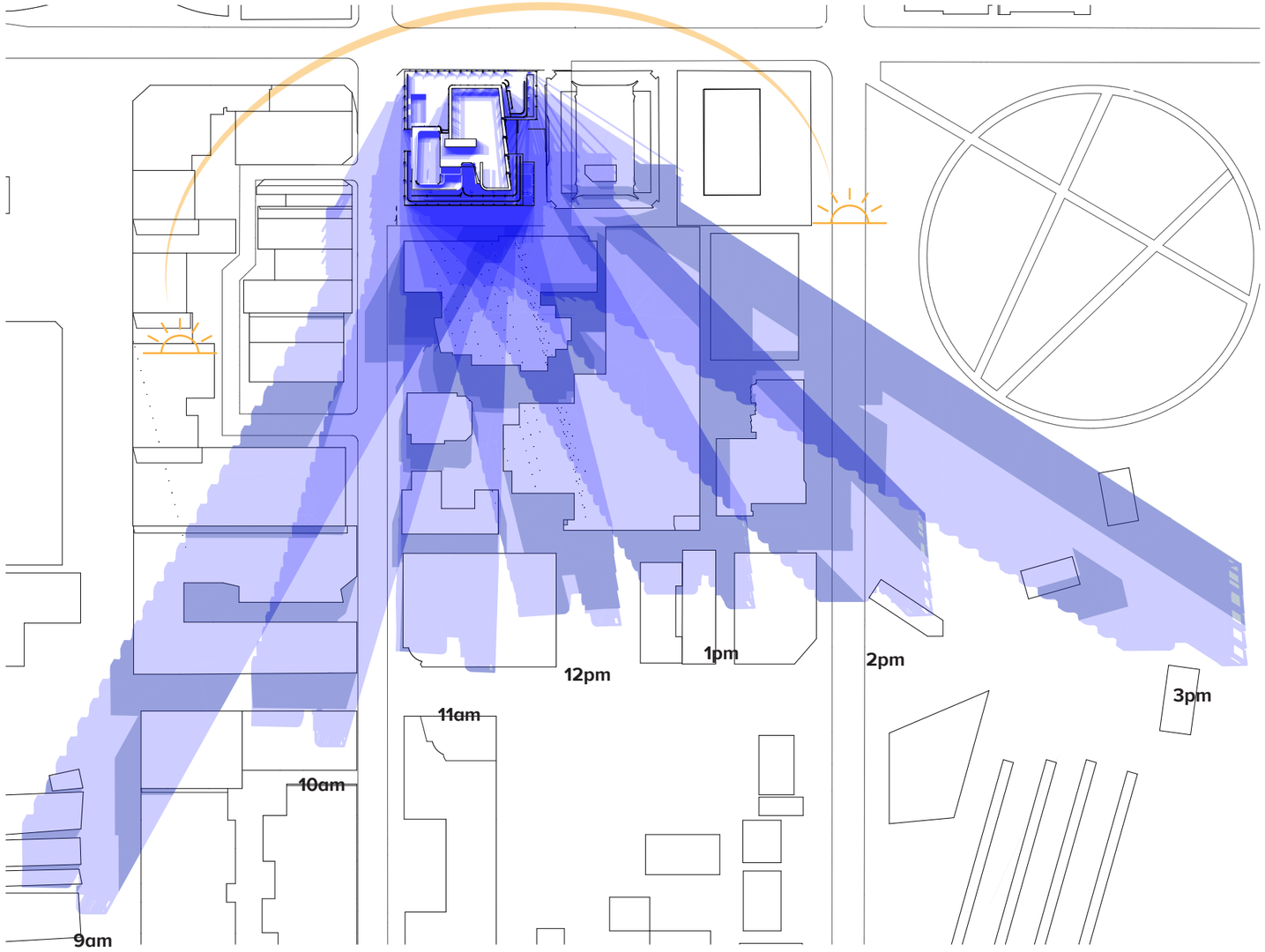
ICONIC IN FORM

2.21 SHADOW ANALYSIS

Balancing solar orientation as part of a passive design strategy and minimising shadow impacts.



SUMMER: December 21st 9am = 3pm



WINTER: June 21st 9am = 3pm

2.22 PROGRAMME

A mixed use building of mutually beneficial spaces working together to create a new, local, active place.

—

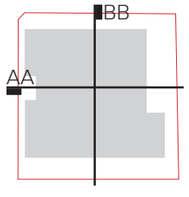
Residential L.6-33
Mixed size apartments
Accessible units

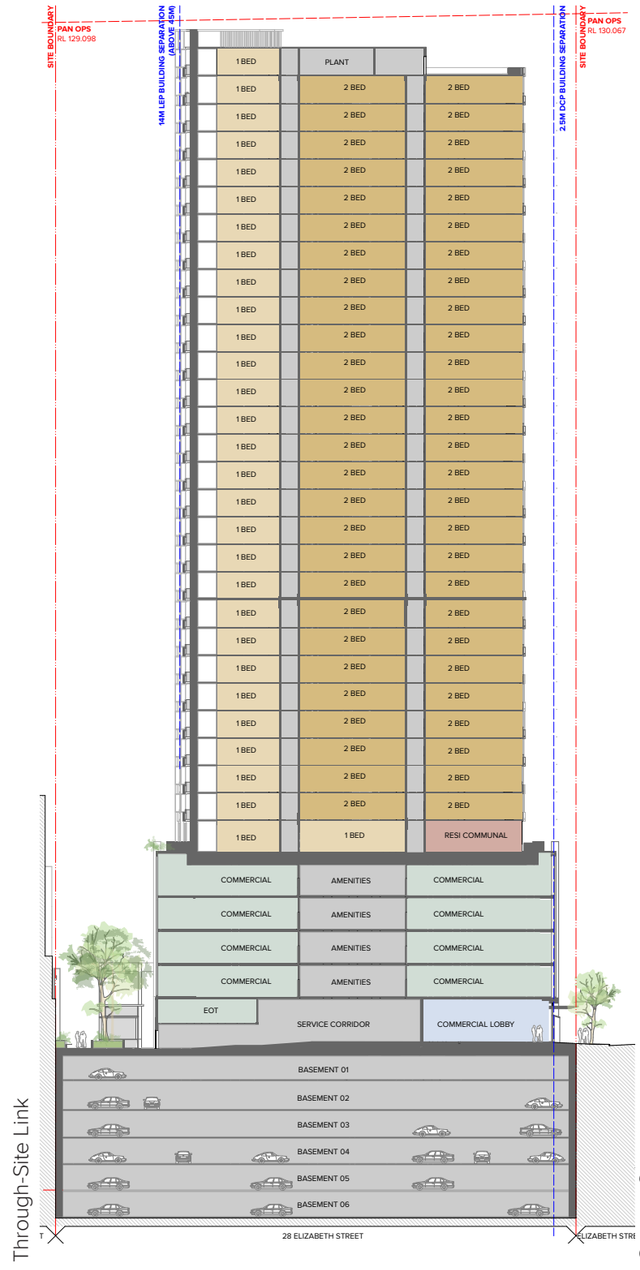
Communal L.5
Gardens
Pool & Changing Rooms
Dining / Event Rooms
Study / Library

Commercial L.1-4
Grade A office
Flexible floor plates
Outdoor break-out spaces

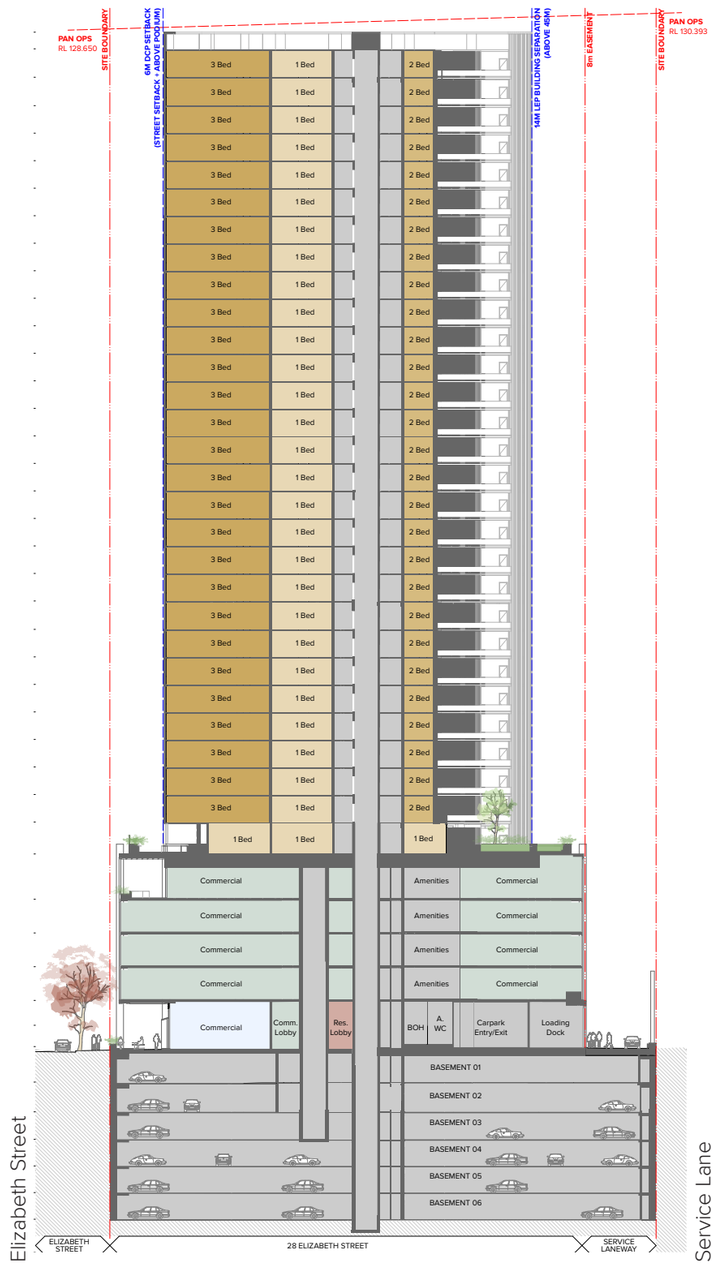
Ground Plane
Active public realm
End of trip facilities
Lobby entries
Loading Dock
Basement entry
Public art & landscaping

Basement
Car-Share
Motorbike Parking
Car Parking (EV Ready)
Bicycle Parking





Section AA



Section BB

2.23 TOWER FACADE COMPOSITION

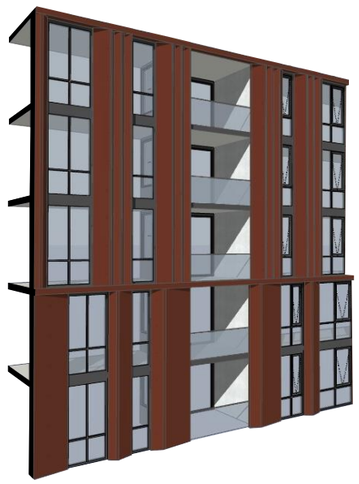
Each facade interprets the conceptual weave, providing a specific identity and creating architectural interest.

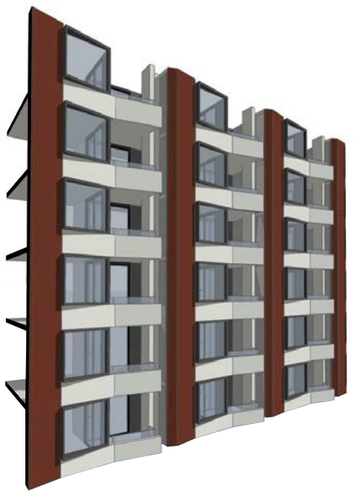
Western Tower
A pale concrete banded spandrel wraps the floor plate, weaving in and out along a horizontal axis, with setback darkened cladding and glazing system above.

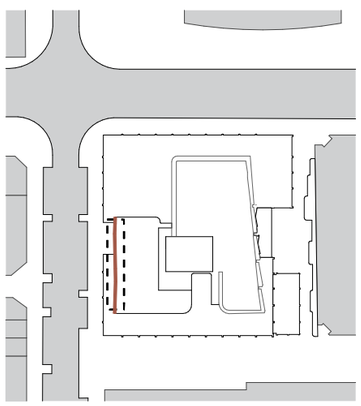
Eastern Tower
Two distance weaves are articulated to recognise the different character spaces of each facade.

Facing north, a deep earthen red cladding folds on the vertical axis, subtly moving, pushing and pulling, with distinct occasional horizontals providing definition.

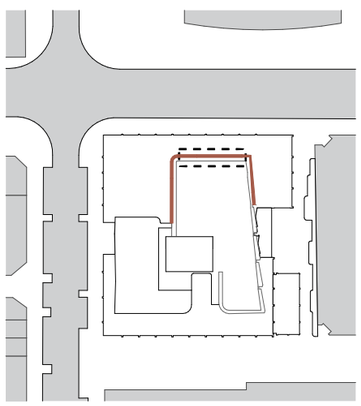
To the east, the white and red entwine, with a bold verticality expressed, viewed only in the acute in a glimpse between 26 and 28 Elizabeth Street. Gently moving between the red verticals, are white balustrades and a flared accent.



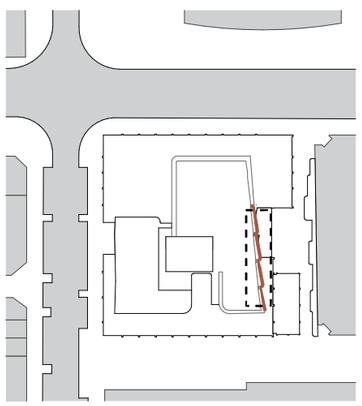




Typical Western Facade



Typical Nortern Facade

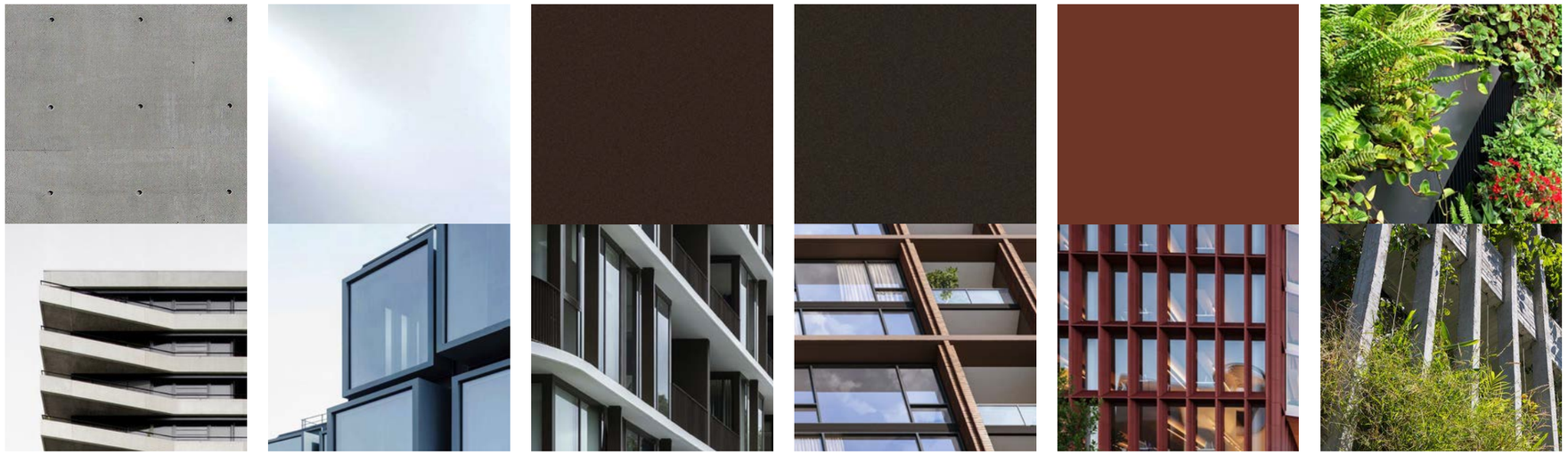


Typical Eastern Facade

2.24 MATERIALS

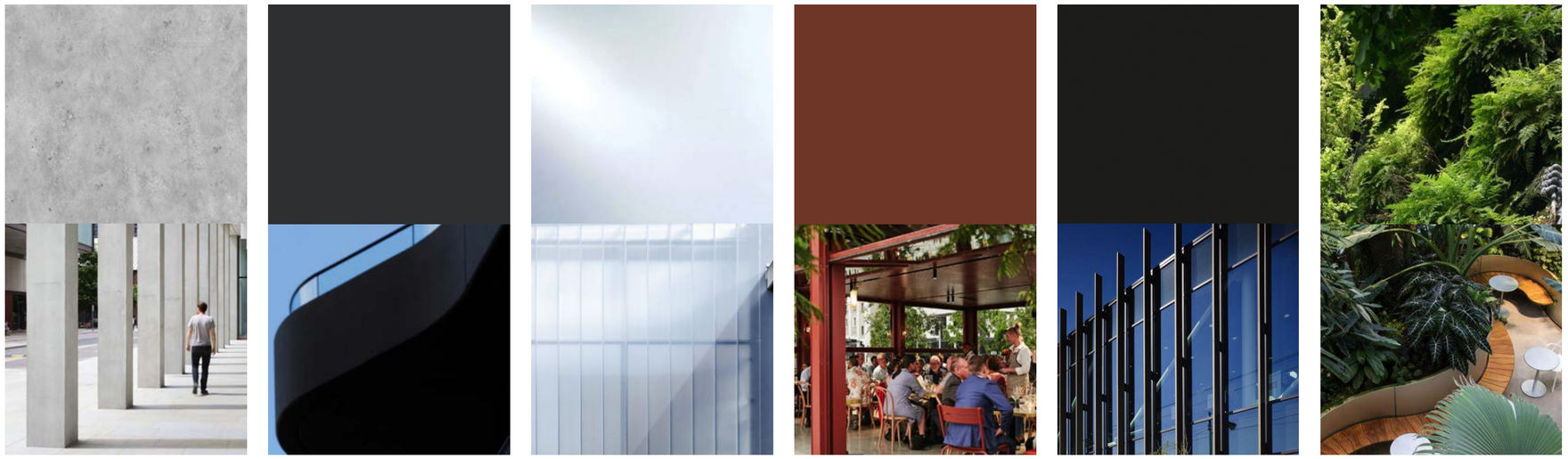
A distinctive palette looks to provide a new identity, with connection to place and nature.

Tower
East and west elements meet along a vertical planted recess. Horizontal concrete banding with black powder coated cladding and glazing to one side, vertical red cladding and recessed glazing to the other.



Podium
Commercial and retail spaces are provided with full height, black framed glazing, concrete columns and planting lining break-out spaces.

To the rear, black powder coated gates and louvres are articulated to denote service and plant zones.



LEGACY 2.3

2.31 Social

2.32 Environmental

2.33 Public Art

2.31 SOCIAL LEGACY

Layout and material choices are driven by the comfort, health and wellbeing of each user group to create a long-lasting, welcoming place of life.

Residential
Creating a safe, comfortable and welcoming environment is a key design driver for the residential elements, supporting community through a range of unit sizes and communal facilities.

This approach starts from ground level with the through-site link acting as the primary residential entrance.

Generous planting along the eastern wall and outdoor dining and cafe frontages with their outdoor dining space create a passively animated, visible and attractive space of identity.

As part of this, a clear line of sight is maintained from the entrance of the through-site link, through to the glazed lobby front. Inside, a lounge area offers a safe and welcoming space for guests or neighbours to meet, where concierge and postal room are available.

At level 5, a range of facilities aim to support community life, including:

- Swimming pool (with solar thermal heating)
- BBQ area
- Lawn and seating areas
- Communal lounge, dining and kitchen facilities
- Gym and outdoor yoga deck
- Communal and private reflective spaces

Within the apartments above, natural daylight and cross ventilation have been optimised through orientation and layout to support the health and wellbeing of residents who can enjoy expansive views across the city.

Commercial
A clear, legible recess marks the commercial entrance from George Street, with secure lobby and concierge within. Level 1 to 4 above have then been designed to enable flexibility for the occupant through centrally located amenities and a regular open plan structure, with excellent natural daylighting on all sides.

At level 4, a large north facing terrace is also provided for breakout space, shading and a break in the architectural form.

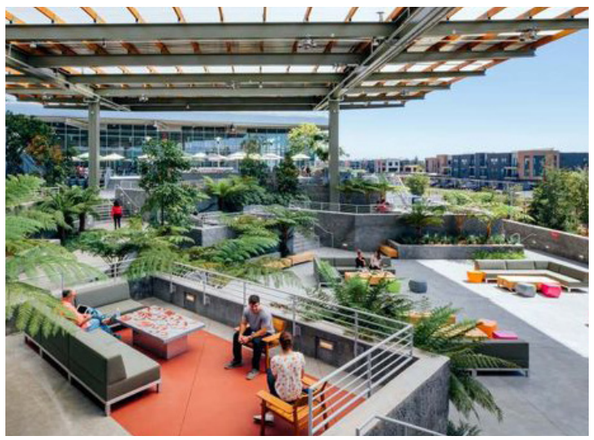
Swimming Pool & BBQ area

Communal Lounge, dining and Kitchen

Gym & Yoga Deck

Street Presence

Flexible, naturally lit commercial space



Office breakout spaces

2.32 ENVIRONMENTAL LEGACY

An holistic design approach seeks to minimise energy and water use, integrating greenery to support sustainable work and lifestyle choices.

Central to the project brief is the importance of sustainability and long term legacy. This is inclusive of all users and the environment in which the project will stand.

Environmental certifications will capture a number of elements, with further project features also provided to support the legacy imperative. These will include:

- Providing landscaping and canopy cover at ground and communal levels
- Considered material choices to reduce waste, VOC off-gasing and preferencing recycled content where appropriate
- Provision for electric vehicle parking
- Energy efficient lifts
- Waste separation
- Rainwater harvesting through detention tanks for landscape irrigation
- 85kW photovoltaic array

Residential
Key ESD targets for the residential elements are NatHERS 7* and NABERS energy 5.5* as well as BASIX and Section J compliance.

This will be achieved through various strategies, including:

- Passive daylighting and ventilation
- Separated waste and recycling collection facilities
- Solar thermal heating to the swimming pool
- Air source heat pumps and high energy efficiency appliances
- High efficiency water fixtures and fittings
- Targeted 50-60% glazing to wall ratio
- High performance single and double glazing
- Elimination of domestic gas cooking

Commercial
Levels 1-4 will target PCA Grade A standard and NABERS energy 5.5* through the provision of the following:

- End of trip facilities including bicycle storage, showers and lockers at ground level
- Outdoor breakout spaces
- Energy efficient lighting and natural daylighting

Efficient electrical appliances

Photovoltaics

Landscaping and rainwater harvesting

End of Trip facilities

Low emission and electric vehicle parking

Canopy cover

PART 3 _ COMPLIANCE

3.0 SEPP 65 PRINCIPLES

3.00 DEP Comments & Response

3.01 Context & Neighbourhood

3.02 Built Form & Scale

3.03 Density

3.04 Sustainability

3.05 Landscape

3.06 Amenity

3.07 Safety

3.08 Housing, Diversity & Social Interaction

3.09 Aesthetics

3.00 DEP COMMENTS & RESPONSE

DEP PANEL RECOMMENDATIONS 30.09.2021

4.1. Context	Panel commends the architects, landscape architects and the developer for a thorough presentation and achieving a good design outcome for the site. Panel encourages the applicant to strive for design excellence through the detail design stages of the development.	Noted.
	The Panel recommends the applicant liaise with the neighbouring development (i.e., 26 Elizabeth Street) to develop a cohesive public domain across the precinct, which will help provide a more positive urban outcome. Panel recommends the applicant to pursue a consistent design and materiality language across the two sites and the precinct.	Noted. Coordination in underway and ongoing between the adjacent landowners. 26 Elizabeth Street is exploring some opportunity to open up their north-western corner for a potential retail activation with the through-site-link. It is the intention of these landowners to achieve a consistent high quality public domain with a coherent use of materials and finishes, landscaping, lighting and Public Art. Options for event ready uses such as plug-and-play are being explored. Collectively this network of sites and laneways has the potential to greatly enhance the public domain offering for this strategic part of Liverpool CBD.
	Panel supports the applicant's proposal for the commercial entry off George Street and retaining the Elizabeth Street frontage for more active uses (i.e., commercial / cafes, restaurants etc.).	Noted.
	Panel recommends the applicant consider further the design of the southern laneway by reducing the tensions between the proposed locations of End of Trip (EOT) facility, through site link and the substation. Panel recommends the applicant to consider relocating the bin room to the basement and reorganise the EOT facility to potentially reside where the bin storage is, to increase the width of the through site link. The small retail opportunity (café?) potentially can sit in the through-site link space – but with its narrow axis into the space, maximising the width and visibility of the through-site-link.	Public spaces are successful when they are loved and used. For that to occur they need to be carefully programmed and to avoid ambiguity or blank facades. Great streets will surprise and delight, and offer a variety of uses that collectively allow for all-day activation. Therefore it is the desired outcome of this proposal to create a series of intimate and varied laneways that offer a refuge and variance from the surrounding rigorous street grid. They deliberately create a street edge alignment and façade height datums that reflects the secondary hierarchy of the through site link. The placement of the retail unit at the southern end of the laneway allows for 2 sides of this space to be activated, rather than just the western edge. In response to the panel's comments, the southern portion of the through-site-link has been widened from 4.4m to approx. 5.7m (Glass line to the boundary). Therefore the retail unit can still be accessed from 2 sides, further adding to it's commercial viability. The retail unit will continue to have good sightlines back to Elizabeth Street. This further widening of the through-site-link has been achieved without needing to relocate the bin holding room. We note that this width is almost double the 3m DCP requirement
	Panel recommends the developer / proponent ensure the design integrity of the project is maintained throughout the entire process (until the Occupation Certificate is obtained) by guaranteeing the employment of the design team (Architect, Landscape Architect, Urban Designers, all their consultants).	Noted.
4.2. Built Form + Scale	The Panel recommends the design include a rooftop communal terrace (or lounge) which could be accessed by the residents of the building. The applicant should provide a kitchenette, an accessible toilet (WC) and a shade structure for the rooftop communal areas.	In response to the conversation with the panel, the applicant has further embraced the sustainability of this proposal, and included additional solar panels to the Level 33 rooftop. These solar panels are in addition to those already proposed on the adjacent rooftop at Level 34. This extent of solar panels will have a meaningful impact for the energy use of the development. Due to the small footprint of the tower roofs and the need for plant, services and solar panels, there is insufficient space to fit a communal terrace without it being compromised. Any communal space at this high level would suffer from extreme wind conditions that would limit it's comfort and use. The proposal has instead deemed it more worthwhile and effective to place a large collection of communal facilities together at the Level 05 podium where there is a balance of indoor and outdoor spaces for the enjoyment of the residents.
	Panel notes that the proposed End of Trip (EOT) facility and commercial tenancy (i.e., towards the southern end of the through site link) narrows the width of the through site link from 10.5m to 4.4m. Panel recommends the applicant to consider increasing the width of the through site link towards the southern end and requires the applicant to consider accommodating the EOT facility within the building outline (see recommendation in 4.1 Context).	The southern portion of the through-site-link has been widened from 4.4m to up to 5.7m (Glass line to the boundary). This width is almost double the 3m DCP requirement, and allows for a clear sight line from Elizabeth Street all the way to the rear service lane. The adjacent EOT facilities and retail unit are predominantly glazed, and offer an activated and permeable façade that blurs the line between inside and outside and further adds to the perceived width this space. The through site link offers a highly landscaped public space. It balances the need for safety and sightlines with that of the desired intimacy that this new network of lanes can offer.
	Panel questions recommends the proponent investigate whether the substation could be relocated to an alternate location (e.g., consider locating the substation in the basements with appropriate treatments), which will free an important corner of the site for commercial activation.	Investigation has been undertaken with Endeavour Energy for alternative locations for the substation within the development . It is important to note that relocation is restricted due to the easement requirements from the street edge to the substation, and the extent of the Council services easement under the full width of the rear service lane.

3.00 DEP COMMENTS & RESPONSE

		The site is small and there is a limited amount of street edge or frontage to locate services plus car park/ loading dock entry requirements. Relocation of the substation to the corner of the through site link would compromise the successful activation of south-east corner of the site. There is no benefit in locating the substation in the basement as there would still be a requirement for hatches to be located directly above the substation, plus clearances and unobstructed façade openings would need to allow for the cranage and future replacement/ maintenance of the kiosks - any associated area above the hatches would have an even greater negative effect to façade alignment and façade activation. The proposed substation location has been carefully integrated into the façade so that it appears consistent with the remaining retail frontage to George Street. The proposal includes a playful arrangement of louvres to the substation that integrates a dynamic weaving pattern which is a strong theme used through-out the façade design intent.
	Panel notes that the applicant proposes an indented access to the commercial lobby off George Street. Panel recommends the applicant further considers CPTED principles while designing the indent to ensure sight lines and general safety of pedestrians. For example, the indent could be half the depth it currently is.	Refer to section 3.11 of the Turner Design Report, which covers Crime Prevention Through Design. This section of the report, along with the sections related to Public Domain Design, outline how Turner has carefully considered surveillance, ownership, lighting, and view lines. The Commercial lobby is a large space with a wide opening to George Street and a generous internal height. It is fully glazed to George Street. The glazing line is only marginally inset from the remaining retail façade along this street. The step in the façade signifies the change in use, and reflects the hierarchy of the uses along this street edge which assists with intuitive wayfinding. The inset allows for a covered external area outside the entry to the commercial lobby which is of an appropriate scale for the large amount of commercial area in this building. The proportion of width to depth at the inset to the commercial lobby means that there are clear sight lines always. Therefore we do not think there are any CPTED issues at this location and Turner believes that the proposed design is an appropriate and well considered outcome.
	Panel notes that the applicant has incorporated a mix of solid versus glazed facades for the residential tower, which is positive. Panel recommends the applicant use double glazing to improve the overall energy & climate response of the building.	The design team has proposed a building that is cognisant of it's location in Western Sydney which experiences extremes in temperature differences during the year. This is not just a standard glass tower with flat facades. Instead this is a building that has depth and layering to the facades, and a deliberate high proportion of solid to glazing. All building façades have been accessed by Stantec as part of the BASIX requirements accordingly.
		Double glazing will be used extensively within this project to ensure adequate prevention of both heat gain and hear loss and in order to achieve an average of 7 star Nathers across the project. Particular attention has been achieved to the glazing on the western façade, which has more than 50% solid façade, double glazing and louvres where appropriate. Turner believes that the proposed design is an appropriate and well considered outcome.
	Panel recommends the applicant develop detailed 1:20 sections, 3D / CGI's to work out the functionality of the through-site-ink and all critical changes in public domain (at least 3 per frontage). The Panel requires the applicant to develop interface sections to study the relationships of the proposed level changes, public domain and building edges in detail.	A series of typical public domain sections have been provided as part of the Architectural Design Report. These sections indicate the widths and alignments for the various street and laneway facades, and are complemented by detailed plans and precedent imagery. The scale and detail of these sections is deemed appropriate to communicate the design intent of the public domain.
4.3. Density	The Panel supports the density being proposed on site.	Noted
4.4. Sustainability	The Panel notes that the applicant proposes a 60kW array for the PV panels which will be used to power all energy uses for the common/ communal areas. Panel recommends the applicant to explore additional spaces where PV could be incorporated (e.g., the shade structure at rooftop terrace).	Noted. Additional solar panels have been located on the Level 33 rooftop. These solar panels are in addition to those already proposed on the adjacent rooftop at Level 34. This extent of solar panels will have a meaningful impact for the energy use of the development. This will increase the array to 85kW.
	Panel recommends the applicant use double glazing for all residential & communal windows	*Double glazing will be used for selected windows as required by BASIX. Refer to BASIX report.*
4.5. Landscape	The Panel notes there are multiple level changes along Elizabeth Street. Panel recommends the applicant to consider a uniform gradient within the public domain & remove the fixed seating and seating areas, preferring lose furniture and a more open and consistent footpath area.	The site is not flat. The pavements to both George Street and Elizabeth St follow the existing levels in the public domain. While the fall is gentle, it unfortunately is too much for tables and chairs in a dining precinct to be usable and comfortable. We also need to have several points of level DDA access into the retail units to allow for flexibility in use and subdivision. Therefore we are required to manipulate the surface the streetback to ensure the quality of it's future use. The extent of fixed seating is minor, and the majority of the seating is loose and removable. The setback area has been envisaged as an extension of the public domain, will multiple points of entry, clear sightlines and a consistency of materials, paving, and lights. This publicly accessible area has also considered wind mitigation to allow for comfort levels while seated, and to make sure this can succeed as a vibrant dining precinct that has the potential to reinvigorate Elizabeth Street throughout the day.

3.00 DEP COMMENTS & RESPONSE

	Panel notes that the proposed tree planting on the podium / upper levels are being considered within planters. Panel recommends the applicant to ensure adequate soil volume / soil depth for the palms and other tree plantings being proposed on slab (please provide detail on planters including soil quality, volume, depth, watering & drainage & care regime). The Panel requires the applicant to develop sections through the proposed planters to identify the depth / volume for each.	Noted. Sufficient soil depths have been provided as per the ADG requirements. Refer to the detailed section though the podium that show the combination of significant setdowns, and raised planters that offer more than adequate soil volumes and soil depth.
	The Panel notes that the applicant provides a mix of communal facilities on Level 5. However, the interface between the communal areas and residential apartments is not ideal. The Panel strongly recommends the applicant to consider removing Apartments 501, 502, and 508 to provide an additional community room / flexible space that would enable resident to hold small functions / gatherings for events like weddings, birthday parties, religious gatherings etc, within the building. The Panel noted the Philip Room of Tao Gofers' award winning Sirius Apartments as a good example.	Two types of flexible community room have been provided on Level 5. The communal lounge would enable the residents to hold small indoor functions while the outdoor kitchen and covered BBQ area will enable the residents to also have gatherings. The size and scale of these spaces is appropriate for the likely gatherings of residents and their family and friends. It is worth noting that this is a mixed-use development with a large dining precinct proposed at ground floor to George St, Elizabeth Street and along the through site link. This potentially diverse food and beverage offering within the building will allow residents access to a range of dining and function spaces that further compliment those provides on the communal Level 5. The extent and type of communal facilities proposed is based on the resident's surveys carried out by the applicant at similar developments. There was a strong preference in these surveys for a focus on outdoor type facilities such as the pool, covered dining area and BBQ facilities. The gym was also an important feature for the key worker demographic due to their non-standard working hours. The size and type of spaces provided is tailored to the known needs to the key worker population. Refer to the extracts from the survey within the design report.
	Panel recommends the applicant provide detail wind studies to prevent wind shear especially on footpath areas on Elizabeth & George Streets and the through-site-link as a result of the residential towers being proposed on either side. Panel requires the applicant to incorporate adequate measures to mitigate the effects of downdraft wind effects to these areas.	Refer to the Wind Report by Windtech. The proposal has integrated the findings and recommendations from this report.
	Panel recommends the applicant consider additional treatments along the southern laneway to improve the visual amenity at ground level and for the commercial floor spaces looking towards the service lane / police station (e.g., vertical screens, panelling, public art, etc.).	The proposal has included for a planted screen along the full length of the south side of the laneway. This planting will soften the interface with the police station and other uses. It will green the service way and offer a consistent edge to the new streetscape. The public domain offering includes high quality paving, fixtures and fittings, and lighting. The proposal will allow for the service lane to be event ready with plug-and-play facilities that offer flexibility in it's use. The building has been designed 'in the round', with equal emphasis being placed on all facades. The 4 levels of commercial space along the southern elevation are fully glazed and allow for passive surveillance of the laneway below. The proposal includes for a large end-of-trip facility that is accessed directly from the rear laneway. This EOT facility will be fully glazed and will have a high quality fitout that further activates the laneway. The proposal has integrated a dynamic weaving pattern into the louvred facades to the services area and loading dock / car park entry. The Public Arts Strategy seeks to create a precinct wide network of art installations that include consideration of locations in the rear service laneway which will offer visual activation at all times of day. Collectively the above list of elements will create an interesting and inviting laneway that will benefit the public domain. Please see CGI below, incorporating further artistic treatments to the southern lane and substation.
		
4.6. Amenity	The Panel notes some residential units on Level 5 (501, 502, and 508) will have poor amenity. The Panel recommends the applicant to consider appropriate measures to reduce noise impacts to the residential apartments on Level 5 and the units on the immediate levels above. Also, refer to the note above.	Refer to the detailed section drawings of the podium which are included in this application. Please also refer to tenant survey carried by Altis on page.30 of the Architectural Report. Turner would note that it is not just the podium level units that need to be considered when resolving privacy and

3.00 DEP COMMENTS & RESPONSE

		acoustic concerns beside the pool area. It is often the units on the levels directly above that have the greatest need for privacy and acoustic treatment. Simply adding more communal facilities in the location of units 501, 502 and 508 may have the end result of further impacting on the privacy of the units overhead. The proposal already provides an extensive amount of communal facilities at Level 5, and this extra area is not seen as necessary. Therefore it is deemed more impactful if the design of the podium allowed for sufficient privacy to ALL adjacent apartments. The proposed podium level apartments have a large setback from the pool and other active uses, and have an 1800mm high fence and a planted buffer. There is a large awning/canopy adjacent to the pool area that allows for solar shading to the seating beside the pool, but also blocks view lines from the pool to adjacent apartments. This is complimented a series of large trees with substantial soil depth that will grow to form a green screening between the active shared uses and privacy terraces and apartments. The design has carefully considered these challenges and provided an appropriate and workable outcome.
4.7. Safety	The Panel recommends the applicant to ensure the safety of the residents on all active frontages and consider CPTED principles throughout the design. Refer to the note above on the commercial entry space.	Refer to section 3.11 of the Turner Design Report, which cover Crime Prevention Through Design. This section of the report, along with the sections related to Public Domain Design, outline how the proposal has carefully considered surveillance, ownership, lighting, and view lines.
4.8. Housing Diversity + Social Interaction	The Panel supports the overall mix being proposed on site.	Noted.
	The Panel recommends the applicant to include an additional community room that can reserved for smaller functions / events by the residents – refer to the note on this above.	Refer to above
4.9. Aesthetics	The Panel notes that the applicant proposes a diverse mix of material and fenestration detailing for the podium / tower. The Panel supports the overall materiality of the site and the inspirations that are drawn from the context.	Noted.
	Panel recommends the applicant to consider public art as part of the development and liaise / seek approval from Council's Public Art Officer for the project.	Refer to the Public Arts Strategy which forms part of the application.

3.01 CONTEXT & NEIGHBOURHOOD

REQUIREMENT

Good design responds and contributes to its context. Context is the key natural and built features of an area, their relationship and the character they create when combined. It also includes social, economic, health and environmental conditions.

Responding to context involves identifying the desirable elements of an area's existing or future character. Well-designed buildings respond to and enhance the qualities and identity of the area including the adjacent sites, streetscape and neighbourhood.

Consideration of local context is important for all sites, including sites in established areas, those undergoing change or identified for change.

PROPOSAL

The site stands on the edge of the existing retail core to the west, with the traditional high street of Macquarie Mall adjacent to Westfield Shopping centre. To the east are Bigge Park, Liverpool Hospital and Liverpool TAFE. To the south are the central transport hub and institutional facilities.

The emerging context, facilitated by Liverpool DCP and Public Domain Masterplan, seek to connect these key areas via several routes. Elizabeth Street and George Street are two of these, meeting at the corner of the proposal site and offering the opportunity for an expanded and activate public realm.

The proposal aims to fully engage with this urban context, responding to the evolving streetscape, activity and social mix.

Running east-west, Elizabeth Street will stand as a primary Boulevard, tree lined and with street setbacks underlining its importance and the opportunity for outdoor street dinning. George Street, running north-south, will grow as a secondary retail and commuter street. Again with setbacks supporting increased use and activation.

Working with the existing and emerging contexts, the proposal will support the long term attraction and identity of Liverpool as a strategic centre in western Sydney.

28 Elizabeth Street, Proposed View of Elzabeth Street frontage and through-site link.

3.02 BUILT FORM & SCALE

REQUIREMENT

Good design achieves a scale, bulk and height appropriate to the existing or future desired character of the street and surrounding buildings.

Good design also achieves an appropriate built form for a site and the building's purpose in terms of building alignments, proportions, building type, articulation and the manipulation of building elements.

Appropriate built form defines the public domain, contributes to the character of streetscapes and parks, including their views and vistas, and provides internal amenity and outlook.

PROPOSAL

The massing, form and articulation seek to respond to the surrounding built form, align with key datums and establishing the corner site as a landmark in the CBD.

From the approved 26 Elizabeth Street scheme, to the unique form of the All Saints Church opposite to the north, the architecture of the proposal recognises the existing and emerging urban fabric taking cues from both elements.

At the ground plane, materials, awnings, activation, landscaping and placement of entries work together to support a vibrant and interesting addition to the streetscape.

The podium pays respect to the architectural language of All Saints Church through the rhythm and slender form of columns. The proportions of the columns and massing of the podium give human scale to the lower portion of the proposal, integrating with the surrounding future fabric.

At ground level the north face of the proposals is setback 6m and 2.5m setback from George Street. The through-site link along the eastern boundary exceeds the minimum 3m DCP requirement for the majority of its length, all three spaces working to shape the building and foster an active and attractive public realm. Above the podium, the tower is also set back 6m from the north, 8m from the south and 12m from the east within DCP and ADG requirements ensuring full massing compliance.

This building separation from the adjacent 26 Elizabeth Street the east, and Liverpool Police Station to the south forms an effective island site, able to engage on all sides to each specific immediate context.

The design approach of the tower has been to sculpt two slender vertical elements to reduce bulk and overshadowing. The language of the facades is then further emphasised by the differeing architectural experssion of each of the two parts.

28 Elizabeth Street, Proposed View from north-east.

3.03 DENSITY

REQUIREMENT

Good design achieves a high level of amenity for residents and each apartment, resulting in a density appropriate to the site and its context.

Appropriate densities are consistent with the area's existing or projected population. Appropriate densities can be sustained by existing or proposed infrastructure, public transport, access to jobs, community facilities and the environment.

PROPOSAL

Liverpool city centre has engaged in the strategic opportunity of Western Sydney Aerotropolis masterplan, connected via the 15th Avenue bus way and extended train line.

Together with local growth, the nature and urban form of the CBD is evolving to provide new retail and commercial facilities, and importantly, introduce new residential uses. This aims to create a vibrant origin and destination place of activity, with uses of mutual benefit.

The proposals are fully in keeping with the mixed use intentions of the LSPS and DCP, supporting an integrated urban fabric. This supports and strengthens existing public transport networks, as well as commercial, retail and entertainment offerings.

The proposals will provide 312 residential units, with a mix of 136 1 bed, 128 2 bed and 48 3 bed units, as well as commercial and retail floor space.

The ground plane has taken a considered approach to distributing activity, entries and servicing through each frontage to efficiently integrate the proposals.

28 Elizabeth Street, Proposed View from north-west.

3.04 SUSTAINABILITY

REQUIREMENT

Good design combines positive environmental, social and economic outcomes.

Good sustainable design includes use of natural cross ventilation and sunlight for the amenity and liveability of residents and passive thermal design for ventilation, heating and cooling reducing reliance on technology and operation costs. Other elements include recycling and reuse of materials and waste, use of sustainable materials, and deep soil zones for groundwater recharge and vegetation.

PROPOSAL

The project brief takes a clear ESD driven approach, requiring PCA Grade A, NatHERS 7* and NABERS 5.5* along with BASIX and Section J compliance for the various elements of the building.

From first principles, the design seeks to optimise passive strategies, including solar access to living rooms and private open spaces above and beyond ADG requirements. Operable windows are provided to every habitable room, and apartments are arranged to maximise natural ventilation opportunities.

The facade design further supports a passive approach, targeting a 50-60% glazing to wall ratio to balance daylight access while restrict solar heat gain.

Operationally, the proposals are provided with a 85kW solar array on the roof, and a solar thermal system to heat the pool at level 5. Waste is to be separated for all user groups with separated collection rooms in the basement and ground level. Lower energy heat pumps will provide hot water to apartments, who are also supplied with water and energy efficient fixtures and appliances.

In further support of a sustainable approach, extensive landscaping is designed for the ground plane and level 5 in compliment to the range of communal rooms and spaces. Recycled rainwater will supply landscaping, while the communal facilities have been designed to host a range of indoor and outdoor activities to support the residential community in a safe and welcoming environment.

Within each level, common spaces will be provided with natural ventilation and daylight access to a layout that minimises single linear runs of corridor to create semi-private spaces.

These features, and those further detailed in the accompanying ESD reports work together to minimise energy and water consumption and reduce the operation impact of the proposals.

28 Elizabeth Street, Proposed Elevations, (left) West elevation to the through-site link, (right) East elevation to George Street.
(Not to scale)

3.05 LANDSCAPE

REQUIREMENT

Good design recognises that together landscape and buildings operate as an integrated and sustainable system, resulting in attractive developments with good amenity. A positive image and contextual fit of well-designed developments is achieved by contributing to the landscape character of the streetscape and neighbourhood.

Good landscape design enhances the development's environmental performance by retaining positive natural features which contribute to the local context, co-ordinating water and soil management, solar access, micro-climate, tree canopy, habitat values, and preserving green networks.

Good landscape design optimises usability, privacy and opportunities for social interaction, equitable access, respect for neighbours' amenity, and provides for practical establishment and long-term management.

PROPOSAL

Landscaping has been integrated in harmony with the architectural approach across the proposals, providing relief and animation in communal spaces, while framing views and providing privacy.

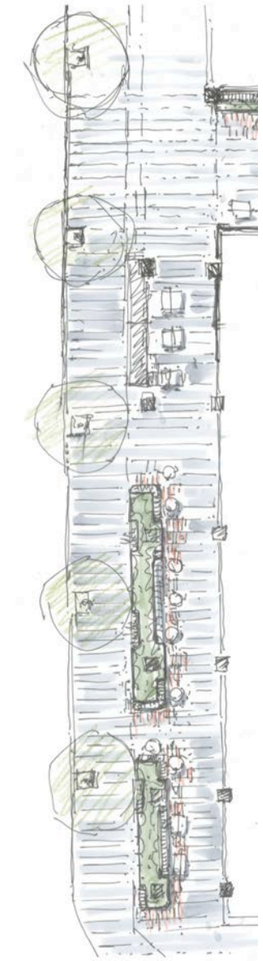
At the ground plane, planting is provided along Elizabeth Street to compliment the street trees planned along the Council foot path.

To the north east corner of the site, planting will frame the entry to the through-site link and residential entrance, lining the east boundary in ground integrated with public seating and hung planters above. A feature tree will provide shading and identity at the heart of the link, marking the residential lobby.

Above, the podium creates a green oasis with planting to the full perimeter of the communal level for privacy and softening the outlook across the city. A mixture of dense planters, trees and low level shrubbery will provide interest and depth while also supporting biodiversity and shading.

Stretching up the proposals, as the dual-towers meet, planters will provide a green thread through the weave of the facade, whilst adding to the outlook of the common lift lobby at every residential floor.

Below, as part of the architectural form of the podium, the fourth floor is recessed to form a breakout terrace for the commercial uses. As above, the perimeter will be lined with planters, softening the view and providing passive animation to the space.



Concept Sketches by SiteImage.

3.06 AMENITY

REQUIREMENT

Good design positively influences internal and external amenity for residents and neighbours. Achieving good amenity contributes to positive living environments and resident wellbeing.

Good amenity combines appropriate room dimensions and shapes, access to sunlight, natural ventilation, outlook, visual and acoustic privacy, storage, indoor and outdoor space, efficient layouts and services areas and ease of access for all age groups and degrees of mobility.

PROPOSAL

From the outset, the quality of environment for each user group has been a key design driver. From building separation, to orientation and the adoption of passive strategies. Each approach contributing to the privacy, amenity and enjoyment of the proposals.

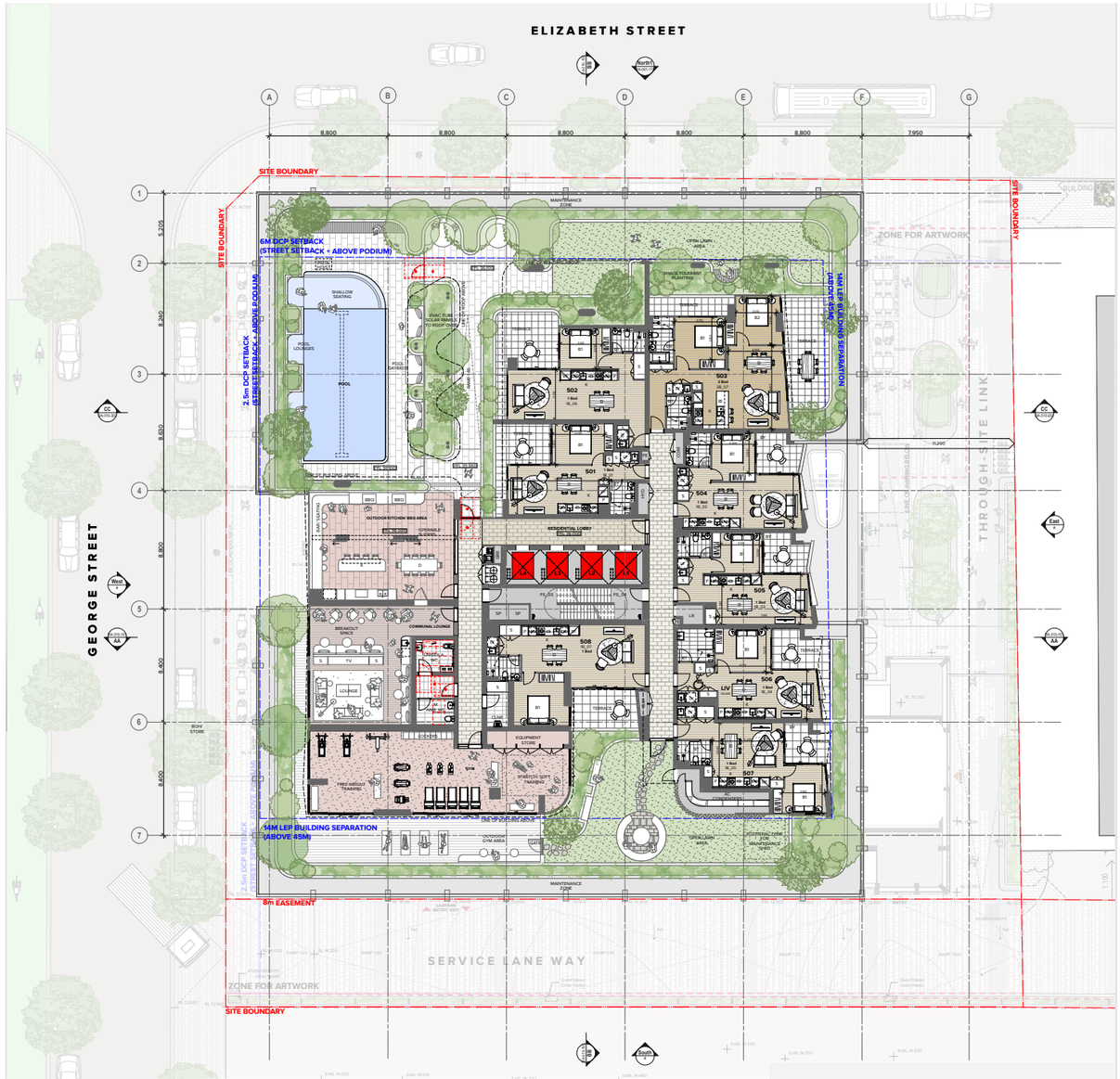
As described previously, the massing has been informed by solar access, cross ventilation and outlook, in parallel to working with the urban context.

Internally units are laid out with regular room shapes and dimensions to support ease of use and adaption. Unit depths seek to further support enjoyment of use by optimising the effectiveness of natural daylighting and ventilation.

As part of the unit mix, 20% are provided to Silver universal design standards, and 10% as adaptable to support a range of resident needs. This is part of a unit mix of 1, 2 and 3 bedroom units informed by local demographic trends.

Each unit has been designed to minimise acoustic transmission laterally and vertically, with complimentary room types positioned adjacent to one another where possible, and acoustic treatments provided to compartment divisions. Storage forms part of this strategy, aiding space division, while providing valuable amenity to residents with additional dedicated storage spaces located in the residential basement levels.

At level 5, communal facilities have been arranged to support accessibility and the enjoyment of a range of activities while respecting the privacy residents at this level and above. The north facing lawn, seating, BBQs and pool areas support socialising while the south facing yoga deck and gardens support personal, reflective spaces. Internally the gym connects to the yoga deck, with views eastwards and is separated from residential uses by circulation and storage spaces. Adjacent, the communal living room, dining and kitchen spaces compliment the north facing social spaces as well as working from home and study needs.



28 Elizabeth Street, Proposed Level 5 Floor Plan.
(Not to scale)

3.07 SAFETY

REQUIREMENT

Good design optimises safety and security within the development and the public domain. It provides for quality public and private spaces that are clearly defined and fit for the intended purpose. Opportunities to maximise passive surveillance of public and communal areas promote safety.

A positive relationship between public and private spaces is achieved through clearly defined secure access points and well-lit and visible areas that are easily maintained and appropriate to the location and purpose.

PROPOSAL

The ground plane acts as the key interface with the public realm. Uses and entries have been strategically located to balance enjoyment, activation and safety.

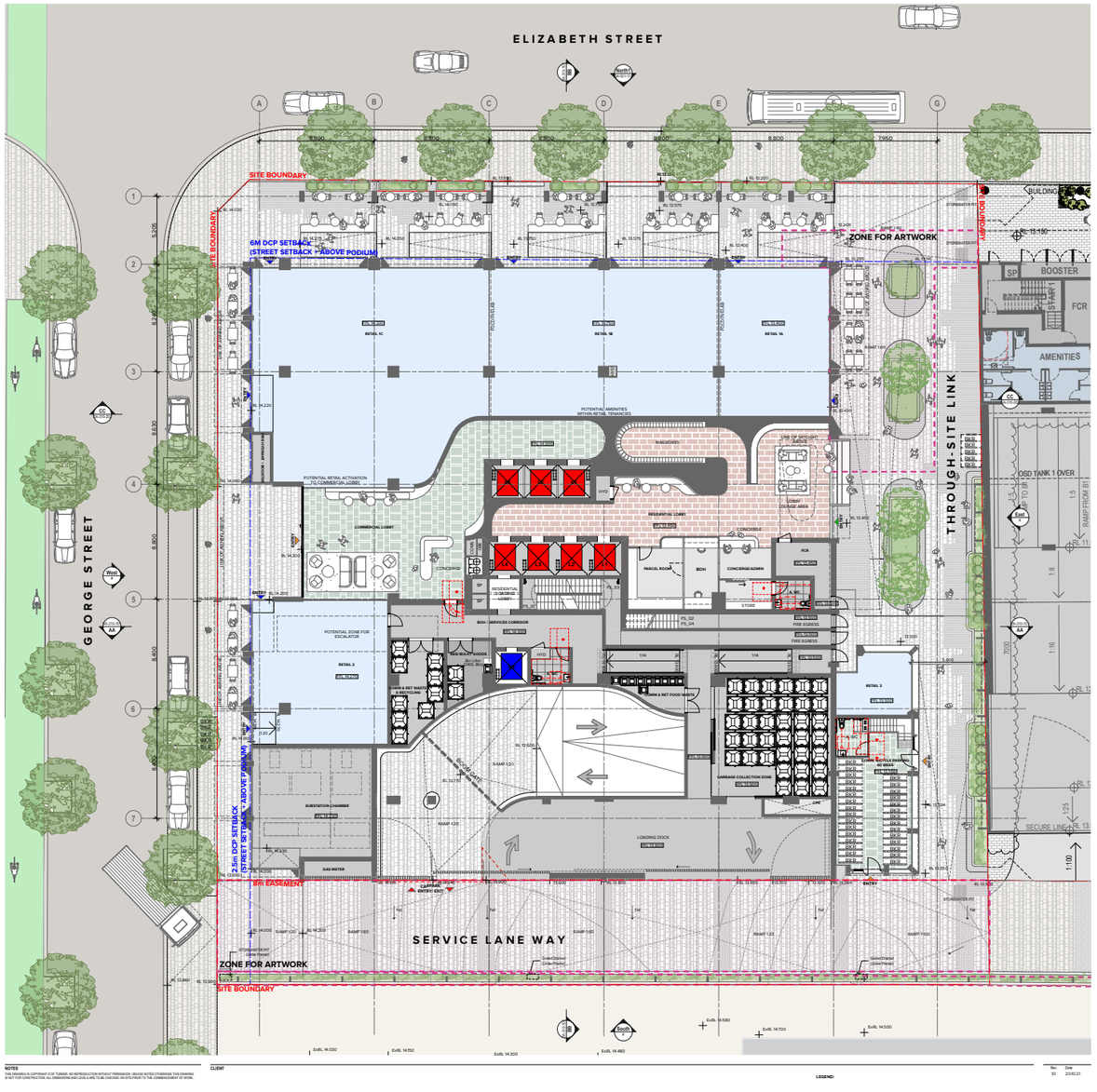
Both residential and commercial lobby entries are clearly defined in the architectural form, with clear sight lines from the public domain, lighting and views into the space through to lift lobbies. Concierge facilities are also offered in both lobbies to further support the safety and comfort of each user group through passive presence and surveillance.

Clear sight lines, lighting and a considered facade design further support the safety and security of the ground plane interfaces, avoiding recessed hidden spaces and opportunities for vagrancy. Planting, integrated seating and active frontages support a passive presence and encourage positive occupation of space.

The extensive glazed facades to the retail and commercial podium levels provide multiple passive surveillance opportunities and maintain presence across these areas.

Communal spaces, located at level 5 are accessible only by secure entry with safety features provided around the swimming pool and perimeter of the level.

Basement and service entry will also be by secure access controlled gates, ensuring user groups have a clear point of entry and use area without interfering in adjacent users.



28 Elizabeth Street, Proposed Ground Plane Floor Plan.
(Not to scale)

3.08 HOUSING, DIVERSITY & SOCIAL INTERACTION

REQUIREMENT

Good design achieves a mix of apartment sizes, providing housing choice for different demographics, living needs and household budgets.

Well-designed apartment developments respond to social context by providing housing and facilities to suit the existing and future social mix.

Good design involves practical and flexible features, including different types of communal spaces for a broad range of people and providing opportunities for social interaction among residents.

PROPOSAL

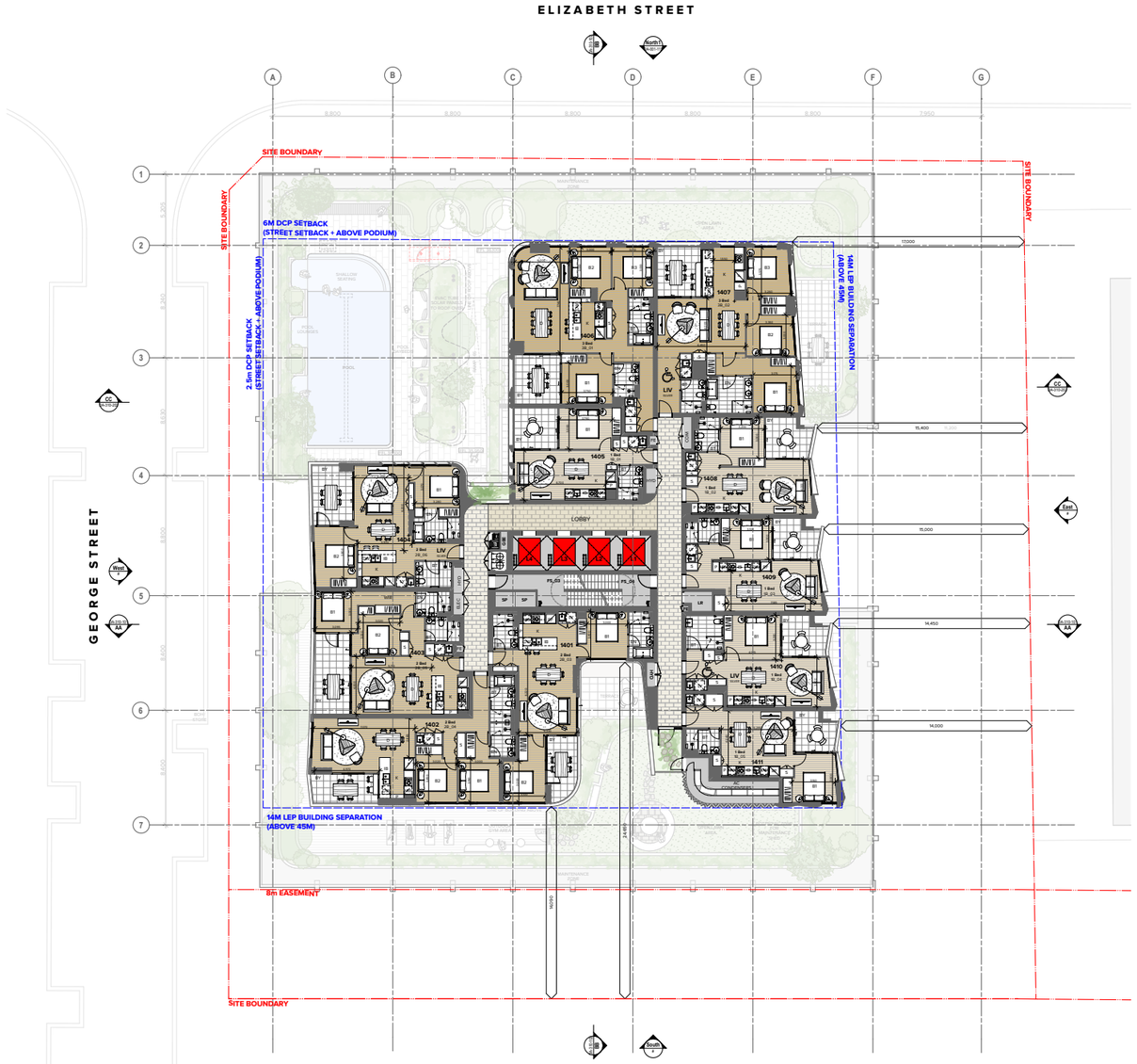
A range of unit sizes have been provided including 1, 2 and 3 bed apartments. All with well sized bathrooms and kitchens, supported by ADG compliant private open spaces and internal dimensions.

The mix of units has been designed to suit the local demographics, supported by a range of community spaces at podium level.

Within the 312 apartments, 20% are provided to silver universal living standard, and 10% as adaptable to support a diverse group of residents.

At level 5 a gym and communal lounge with kitchen are provided. Externally, a pool, yoga deck, open lawn and secluded reflective garden have been integrated with generous landscaping.

The communal spaces have been designed and laid out to support a range of activities at any one time, from social events around the BBQ and pool, to study and work in the communal living room, to private reflective moments in the gardens and yoga space.



28 Elizabeth Street, Proposed Typical Residential Floor Plan.
(Not to scale)

3.09 AESTHETICS

REQUIREMENT

Good design achieves a built form that has good proportions and a balanced composition of elements, reflecting the internal layout and structure. Good design uses a variety of materials, colours and textures.

The visual appearance of a well designed apartment development responds to the existing or future local context, particularly desirable elements and repetitions of the streetscape.

PROPOSAL

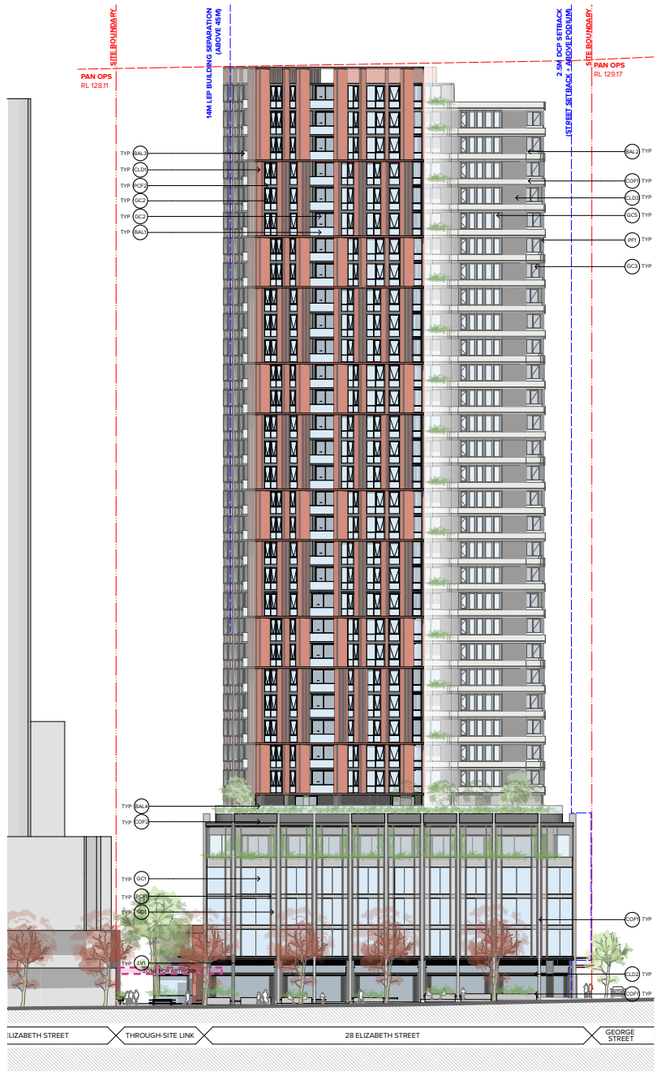
The architectural language has been inspired by local cultural and urban heritage.

Conceptually, the well defined historic urban grid and wool processing trade has inspired patterns within the facade to provide depth and interest in the built form.

The dual-towers have adopted two specific but complimentary material palettes, emphasising their slender proportions.

To the podium below, a more regular form reflective of the ground footprint reinforces the urban grid. Here, influence is taken from the immediate context through the rhythm of All Saints Church opposite. The Church stands as a significant architectural feature in the local area. While not significant in mass, its gentle bowed facade and simple expressed columns have a big impact on the streetscape. The proposals have been directly influenced by this, seeking to reference the architectural facade at 28 Elizabeth Street.

Across the architectural form, landscaping is used to accent public and communal spaces. Signifying moments of interest and social activity while supporting a contextual and integrated urban architecture.



28 Elizabeth Street, Proposed North Elevation.
(Not to scale)

3.1 CRIME PREVENTION THROUGH DESIGN

3.11 CRIME PREVENTION THROUGH DESIGN

3.11 CRIME PREVENTION THROUGH DESIGN

Response to crime prevention through environmental design (CPTED), NSW Police Service.

OBJECTIVE / PRINCIPLE	RESPONSE
5.1 Surveillance Placing people, activities and physical features in ways that maximises the ability to see what is happening in an area discourages anti-social behaviour, as perpetrators do not want to be seen.	
Clear sight lines between public and private places.	Ground level lobbies and entrances are located to give clear sight lines from public spaces, supported by appropriate lighting, encouraging passive surveillance. In addition, entrances are fully glazed to allow sight lines through to lift lobbies.
Effective lighting of public places.	Appropriate lighting will be provided to all entry and communal areas to support a safe and secure environment.
Landscaping that makes places attractive, but does not provide offenders with a place to hide or entrap victims.	Landscaping has been designed to have depth in a tiered form to support clear sight lines whilst establishing a lush green environment capable of supporting biodiversity. These principles are carried across both public and communal spaces.
5.2 Access control The use of fences, security devices and locks to restrict access, increases the effort required to commit an offence and therefore reduces the potential for it to happen.	
Clear sight lines between public and private places.	Clear sight lines are maintained from public space through to controlled access points for each user group and basement entry point.
Public spaces which attract, rather than discourage people from gathering	Active frontages, with outdoor dinning space are provided to the north, east and west facades. These are complimented by landscape, street furniture and fully glazed facades to facilitate a destination and discovery environment and encourage passive surveillance. To the south, quality materials, clear sight lines and a facade design that excludes recesses aims to minimise opportunities for vagrancy whilst enabling an efficient and safe operational space.
Restricted access to internal areas or high-risk areas (like car parks or other rarely visited areas). This is often achieved through the use of physical barriers.	A secure gated entry is provided to the basement for all user groups to restrict access and support a safe environment. The basement is then separated by a secure line between user groups.
5.3 Ownership Areas that are well protected and look as if they are owned and cared for, gives an impression that it is harder to conduct anti- social behaviour. Cared for areas also reduce the level of fear within the community.	
Design that encourages people to gather in public space and to feel some responsibility for its use and condition	Active frontages described at ground level are designed to support a positive and engaged public realm, framed by planting and animated by people. The outdoor dining spaces are a key component, extending implied ownership across the public realm.
Design with clear transitions and boundaries between public and private space	Public and private spaces are clearly delineated through controlled entry points.
Clear design cues on who is to use space and what it is to be used for. Care is needed to ensure that territorial reinforcement is not achieved by making public spaces private spaces, through gates and enclosures.	Publicly accessible spaces are to be open 24/7 as required by DCP controls, and ensuring public use is unimpeded. Public spaces are designed to be open with clear sight lines and passive surveillance.
5.4 Maintenance Spaces that are well maintained and where any evidence of anti-social behaviour is promptly removed reduces levels of satisfaction for those performing anti-social activities and reduces fear in the community.	
Space management strategies include: • Activity coordination; • Site cleanliness; • Rapid repair of vandalism and graffiti; • The replacement of burned out pedestrian and car • Park lighting; and • The removal or refurbishment of decayed physical elements.	Materials and spaces are designed to minimise maintenance needs, and maximise longevity. An on site management team will also ensure repairs are carried out in a timely manner and spaces kept clean and presentable, including waste removal, landscaping and communal space care.
Natural Surveillance	
• To encourage natural surveillance from and to surrounding land uses • To encourage natural surveillance by encouraging legitimate land use • To provide clear sight lines for pedestrian movement	Natural and passive surveillance is facilitated through clear sight lines, attractive spaces, public seating integrated with landscaping and active frontages at ground level. In communal and common spaces, natural light, clear sight lines and well maintained spaces encourage a safe and secure environment. Full height glazing at ground level further supports opportunities of surveillance, with balconies and apartment orientations above level 5 supporting passive observation of the spaces below.

Lighting

- To provide appropriate lighting for activities after dark
- To encourage the use of appropriate light fixtures
- To encourage the appropriate location of lighting

All lighting will meet relevant Australian Standards, including AS1158, AS1680 and AS2890.

This will be specified appropriate to each location to ensure good visibility, minimising shadows and respecting privacy and amenity.

Motion sensors, low energy fittings and solar energy are part of an underlying ESD approach and will be implemented where appropriate to the safety and security of a space.

Signage

- To provide clear and readily available signage
- To provide signage in appropriate locations

Clear and legible signage will be provided in accordance with the relevanct Australian Standards across the proposals. This includes, wayfinding, safety and brand signage.

Location and placement will ensure visibility is maintained with appropriate assisting typologies, such as Braille included where appropriate.

Landscaping

- Create aesthetically pleasing but safe environments
- Create easy to maintain and vandal resistant areas
- Reinforce natural surveillance and sight lines

Landscaping will be configured to support clear sight lines while framing spaces and supporting a well maintained and welcoming environment.

Planters are located to provide privacy and protection of amenity, whilst deterring opportunities for graffiti and damage.

The configuration and species selection will support longevity and growth to reinforce the above approach.

Land Use

- To promote natural surveillance and minimize illegitimate activities
- To create a mix of activities which will result in greater level of natural surveillance around the clock

Uses have been configured to be mutually beneficial in terms of activation, entry and enjoyment. They work to distribute activity around the public realm in a safe and secure manner, with the southern service lane providing passive surveillance from Liverpool Police station as well clear site lines from public space.

Building Design

- To integrate public buildings with public space
- To use buildings to support natural surveillance
- To reduce vandalism and graffiti
- To reduce safety problems

The proposals have been designed to provide an active, welcoming and safe environment through the following:

- Clear sight lines from public spaces through to points of entry and public use.
- Avoiding the creation of unseen spaces.
- Coordinated entries, landscaping, street furniture and use to maintain the above whilst facilitating passive surveillance.
- Distribute uses and entries around the site to facilitate the above.
- Minimise blank facades, and where required, integrate and position adjacent to active spaces.
- Incorporate effective and appropriate lighting strategies to support the above.

Entrapment

- To reduce the risk of attack by hidden persons
- To eliminate the possibility of entrapment
- To ensure the suitable location of facilities

The ground plane and communal level have been designed to ensure clear sight lines are established and maintained throughout, with recesses and hidden spaces avoided.

Maintenance

- To ensure regular maintenance and repairs are undertaken
- To discourage graffiti and vandalism
- To install features that are vandal resistant

Materials have been selected for longevity and to minimise maintenance needs. A maintenance programme will also be formulated for all user group areas to ensure checks and repairs are carried out in a timely manner.

The design of public and communal spaces supports passive surveillance, minimises hidden spaces and uses landscaping to deter opportunities for vandalism and vagrancy.

3.1 ADG OBJECTIVES

3.11 Response to ADG Objectives

3.11 RESPONSE TO ADG OBJECTIVES

3A SITE ANALYSIS [P.47]

COMPLIES

Objective 3A-1
Site analysis illustrates that design decisions have been based on opportunities and constraints of the site conditions and their relationship to the surrounding context.

Complies
- See site analysis drawing DA-010-013.
- Further investigation and analysis of the built form, heritage and environmental conditions have been undertaken in this and accompanying consultant reports.

3B ORIENTATION [P.49]

Objective 3B-1
Building types and layouts respond to the streetscape and site while optimising solar access within the development.

Complies
- Site conditions along with existing and emerging urban contexts have informed the massing and site layout.
- Building uses have been arranged to provide mutual benefit in terms solar access.
- The primary form of the tower has been strongly influenced by solar access and cross ventilation.

Objective 3B-2
Overshadowing of neighbouring properties is minimised during mid-winter

Complies
- The building form seeks to minimise overshadowing of its neighbours, and aligns with emerging neighbours to the immediate east.

3C PUBLIC DOMAIN INTERFACE [P.51]

Objective 3C-1
Transition between private and public domain is achieved without compromising safety and security

Complies
- The site setbacks and form facilitate an ‘island’ site, accessible from every frontage.
- Consideration has been given to site lines, lighting, activation, materials, safety and security.
- Opportunities for passive surveillance and mutually beneficial uses have been incorporated.
- Each lobby is provided with clear site lines of, and through the entry to points of vertical circulation.
- Active uses are provided adjacent to entry lobbies, and manned concierges are provided within.

Objective 3C-2
Amenity of the public domain is retained and enhanced

Complies
- The extant public realm is limited by a derelict site and limited activity.
- The proposals seek to provide active uses to three of four sides with quality materials, planting and lighting to support a vibrant and interesting destination.
- Site lines and movement routes have been considered to enable enjoyment of place, with opportunities for vagrancy and hidden spaces minimised.
- Service entries and facilities have been strategically located in line with relevant regulations whilst holistically integrating within the public realm strategy.
- Please refer to architectural drawing DA-110-009 Ground Plan, and the Landscape package by Site Image for further information.

3D COMMUNAL AND PUBLIC OPEN SPACE [P.55]

Objective 3D-1
An adequate area of communal open space is provided to enhance residential amenity and to provide opportunities for landscaping.

Design Criteria
– Communal open space has a minimum area equal to 25% of the site.
– Developments achieve a minimum of 50% direct sunlight to the principal usable part of the communal open space for a minimum of 2 hours between 9 am and 3 pm on 21 June (mid-winter).

Complies
- Level 5 has been provided with a range of internal and external communal spaces to support residential amenity and encourage social activity.
- This includes a lawn and seating area, BBQs, swimming pool, gym and yoga deck and communal lounge, dining and kitchen facilities.
- At ground level, the through-site link has been provided with landscaping, seating and spill out dining space from the retail units to further enhance the amenity of residents.
- The external combined spaces meet the area and solar access requirements.
- Please see architectural drawings DA-110-009, DA-110-015, DA-730-001 and DA-730-002 for further information.

Objective 3D-2
Communal open space is designed to allow for a range of activities, respond to site conditions and be attractive and inviting.

Complies
- The external communal spaces have been designed to support both social and private, reflective activities.
- Spaces are provided with landscaping, seating, shading and access to the adjacent internal facilities.

Objective 3D-3
Communal open space is designed to maximise safety.

Complies
- Level 5 podium is accessible only to residents through a secure lobby and lift entry.
- Necessary safety features are provided around the swimming pool area, with planting and glazed windbreaks providing protection from the podium edge.

Objective 3D-4
Public open space, where provided, is responsive to the existing pattern and uses of the neighbourhood

Complies
- The ground plane has been configured to support Council public realm objectives, providing active frontages, planting and visibility to internal spaces.
- Building alignments are within relevant setbacks and in keeping with the emerging urban fabric.

3F VISUAL PRIVACY [P.62]

Objective 3F-1
Adequate building separation distances are shared equitably between neighbouring sites, to achieve reasonable levels of external and internal visual privacy

Complies
- Building elements have been located to respect required setbacks and separation distances to ensure adequate privacy and daylighting are achieved.
- Refer to architectural package for further information.

Objective 3F-2
Site and building design elements increase privacy without compromising access to light and air and balance outlook and views from habitable rooms and private open space

Complies
- Designs have ensured outlook, solar access and privacy needs are met as required.

3G PEDESTRIAN ACCESS AND ENTRIES [P.66]

Objective 3G-1
Building entries and pedestrian access connects to and addresses the public domain

Complies
- All building entries are provided with clear site lines, are publicly accessible and integral to the public realm composition.

Objective 3G-2
Access, entries and pathways are accessible and easy to identify

Complies
- All entries are clearly legible in the architectural form, and are easily accessible.

Objective 3G-3
Large sites provide pedestrian links for access to streets and connection to destinations

Complies
- The proposals reinforce the street edge with active frontages, expanding the public realm through setbacks and a new through-site link.

3H VEHICLE ACCESS [P.68]

Objective 3H-1 –
Vehicle access points are designed and located to achieve safety, minimise conflicts between pedestrians and vehicles and create high quality streetscapes

Complies
- Vehicular parking and service access have been coordinated along the southern boundary, accessed from the service lane.
- The lane is provided with quality materials and clear site lines from the public street.

3J BICYCLE AND CAR PARKING [P.71]

Objective 3J-1
Car parking is provided based on proximity to public transport in metropolitan Sydney and centres in regional areas

Complies
- Refer to drawings DA-110-001, DA-110-002, DA-110-003 DA-110-004, DA-110-005 for parking provisions.

Objective 3J-2
Parking and facilities are provided for other modes of transport

Complies
- Parking spaces are provided for private cars for each user group (residential, retail and commercial) including visitors, electric vehicles and motorbikes. Dedicated bicycle parking spaces are also provided for commercial occupants at ground level, and for residents within storage cages through out the lower basement levels.

Objective 3J-3
Car park design and access is safe and secure

Complies
- Basement entry will be by secure gate entry, with user groups separated within the basement by secure gates.

Objective 3J-4
Visual and environmental impacts of underground car parking are minimised

Complies
- Basement levels will not rise above ground level ensuring there is no visible impact.

Objective 3J-5
Visual and environmental impacts of on-grade car parking are minimised

N/A

Objective 3J-6
Visual and environmental impacts of aboveground enclosed car parking are minimised

N/A

4A SOLAR AND DAYLIGHT ACCESS [P.79]

Objective 4A-1
To optimise the number of apartments receiving sunlight to habitable rooms, primary windows and private open space

Design criteria –
Living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 2 hours direct sunlight between 9 am and 3 pm at midwinter in the Sydney Metropolitan Area and in the Newcastle and Wollongong local government areas – A maximum of 15% of apartments in a building receive no direct sunlight between 9 am and 3 pm at midwinter

Complies
- 91% of apartments receive solar access to living rooms and private open spaces for 2hrs between 9am and 3pm in mid-winter.
- 9% of apartments receive no-direct sunlight between 9am-3pm in mid-winter.

Objective 4A-2
Daylight access is maximised where sunlight is limited

Complies
- Daylight has been maximised to all units while balancing an efficient glazing to wall ratio.

Objective 4A-3
Design incorporates shading and glare control, particularly for warmer months.

Complies
- Glazing types will be specified appropriate to each orientation with low-e coatings and SHGC factors incorporated.

4B NATURAL VENTILATION [P.83]

Objective 4B-1
All habitable rooms are naturally ventilated

Complies
- All habitable rooms are provided with operable windows to 5% of the floor area for natural ventilation.

Objective 4B-2
The layout and design of single aspect apartments maximises natural ventilation

Complies
- Apartment depths and layouts are designed to maximise natural ventilation.

Objective 4B-3
The number of apartments with natural cross ventilation is maximised to create a comfortable indoor environment for residents

Design criteria – At least 60% of apartments are naturally cross ventilated in the first nine storeys of the building. Apartments at ten storeys or greater are deemed to be cross ventilated only if any enclosure of the balconies at these levels allows adequate natural ventilation and cannot be fully enclosed – Overall depth of a cross-over or cross through apartment does not exceed 18m, measured glass line to glass line

Complies
- 63% of apartments up level 9 achieve cross-ventilation.
- Unit depths are in line with ADG requirements.

4C CEILING HEIGHTS [P.87]

Objective 4C-1
Ceiling height achieves sufficient natural ventilation and daylight access

Design criteria – Measured from finished floor level to finished ceiling level, minimum ceiling heights are:
– Habitable rooms: 2.7m
– Non-habitable: 2.4m
– For 2 storey apartments: 2.7m for main living area floor; 2.4m for second floor, where the area does not exceed 50% of the apartment area
– If located in mixed use area: 3.3m for ground and first floor to promote flexibility

Complies
- 2.7m ceiling height will be provided to all habitable areas, apart from some localised mechanical and hydraulics services requirements at the kitchen area. Any associated 2.4m ceiling zone will be minimised.

Objective 4C-2
Ceiling height increases the sense of space in apartments and provides for well-proportioned rooms

Complies
- Apartments at level 5 are provided with increased ceiling heights to increase a sense of volume aligned with additional outdoor private open space.

Objective 4C-3
Ceiling heights contribute to the flexibility of building use over the life of the building

Complies
- Floor-to-floor heights through out the podium levels range from 5.2m at ground to 3.8m across commercial levels aiding in flexibility of space.

4D APARTMENT SIZE AND LAYOUT [P.89]

Objective 4D-1
The layout of rooms within an apartment is functional, well organised and provides a high standard of amenity

Design criteria
1. Apartments are required to have the following minimum internal areas:
– Studio: 35sqm
– 1 bedroom: 50sqm
– 2 bedrooms: 70sqm
– 3 bedrooms: 90sqm

The minimum internal areas include only one bathroom. Additional bathrooms increase the minimum internal area by 5m each

A fourth bedroom and further additional bedrooms increase the minimum internal area by 12sqm each 2. Every habitable room must have a window in an external wall with a total minimum glass area of not less than 10% of the floor area of the room. Daylight and air may not be borrowed from other rooms

Complies
- Apartment sizes meet and where possible, exceed ADG requirements.

Objective 4D-2
Environmental performance of the apartment is maximised

Design criteria –
Habitable room depths are limited to a maximum of 2.5 x the ceiling height

– In open plan layouts (where the living, dining and kitchen are combined) the maximum habitable room depth is 8m from a window

Complies
- Apartment depths to the primary living are generally satisfy ADG requirements.

Objective 4D-3
Apartment layouts are designed to accommodate a variety of household activities and needs

Design criteria
– Master bedrooms have a minimum area of 10m^2 and other bedrooms 9m^2 (excluding wardrobe space)
– Bedrooms have a minimum dimension of 3m (excluding wardrobe space)
– Living rooms or combined living/dining rooms have a minimum width of 3.6m for studio and 1 bedroom apartments and 4m for 2 and 3 bedroom apartments
– The width of cross-over or cross-through apartments are at least 4m internally to avoid deep narrow apartment layouts

Complies
- Habitable and non-habitable rooms satisfy and where possible, exceed ADG requirements.

4E PRIVATE OPEN SPACE AND BALCONIES [P.92]

Objective 4E-1
Apartments provide appropriately sized private open space and balconies to enhance residential amenity Design criteria

1. All apartments are required to have primary balconies as follows:
– Studio: 4sqm
– 1 bedroom: 8sqm, 2m deep
– 2 bedrooms: 10sqm, 2m deep
– 3 bedrooms: 12sqm, 2.4m deep
– The minimum balcony depth to be counted as contributing to the balcony area is 1m

2. For apartments at ground level or on a podium or similar structure, a private open space is provided instead of a balcony. It must have a minimum area of 15sqm and a minimum depth of 3m

Complies
- Private open spaces satisfy and where possible exceed ADG requirements.
- Apartments at level 5 satisfy the additional spaces requirements of a minimum 15sqm, and where possible exceed this.

Objective 4E-2
Primary private open space and balconies are appropriately located to enhance liveability for residents

Complies
- Balcony orientations have orientated to emphasis outlook and solar access.
- All balconies open directly from living areas, and where possible also from bedrooms.

Objective 4E-3
Private open space and balcony design is integrated into and contributes to the overall architectural form and detail of the building

Complies
- Balcony forms are integral to the architectural language of the facade.

Objective 4E-4
Private open space and balcony design maximises safety

Complies
- All relevant regulatory requirements have been satisfied in balcony design.

4F COMMON CIRCULATION AND SPACES [P.97]

Objective 4F-1
Common circulation spaces achieve good amenity and properly service the number of apartments

Design criteria
– The maximum number of apartments off a circulation core on a single level is eight
– For buildings of 10 storeys and over, the maximum number of apartments sharing a single lift is 40

Complies
- Common circulation spaces are provided with two sources of natural light, and are naturally cross ventilated.
- The circulation space layout minimises the number of units operable of each section.

Objective 4F-2
Common circulation spaces promote safety and provide for social interaction between residents

Complies
- Common circulation spaces provide safe, secure and legible areas with northerly outlooks with planting adjacent to lift waiting areas.

4G STORAGE [P.101]

Objective 4G-1
Adequate, well-designed storage is provided in each apartment

Design criteria
– In addition to storage in kitchens, bathrooms and bedrooms, the following storage is provided:
– studio: 4m3
– 1 bed: 6m3
– 2 beds: 8m3
– 3 beds: 10m3
At least 50% of the required storage is to be located within the apartment

Complies
- Apartments are provided with adequate storage with a min. 50% achieved within units, and the remaining allocation located in secure, dedicated storage cages within the basement.

Objective 4G-2
Additional storage is conveniently located, accessible and nominated for individual apartments

Complies
- Additional storage within the basement is dedicated within residential parking areas in secure cages.

4H ACOUSTIC PRIVACY [P.103]

Objective 4H-1
Noise transfer is minimised through the siting of buildings and building layout

Complies
- Apartment types typically stack vertically to ensure complimentary rooms are above one another, minimising opposing uses and noise transmission.
- Floor plans have been laid out to further provide complimentary room uses adjacent to each other where possible.

Objective 4H-2
Noise impacts are mitigated within apartments through layout and acoustic treatments

Complies
- Storage and circulation spaces are located where possible to further aid acoustic separation.
- Dividing walls will be provided with appropriate treatments to meet acoustic separation standards.
- Refer to Acoustic report as prepared by Renzo Tonin and Associates for further information

4J NOISE AND POLLUTION [P.105]

Objective 4J-1
In noisy or hostile environments the impacts of external noise and pollution are minimised through the careful siting and layout of buildings

Complies
- Residential uses are raised from ground level, to begin at level 5, away from external noise sources.

Objective 4J-2
Appropriate noise shielding or attenuation techniques for the building design, construction and choice of materials are used to mitigate noise transmission

Complies
- Level 5 is provided with ample landscaping and perimeter raised glazing to mitigate wind and noises sources.
- Glazing and external wall specifications will support acoustic protection of apartments.

4K APARTMENT MIX [P.107]

Objective 4K-1
A range of apartment types and sizes is provided to cater for different household types now and into the future

Complies
- A range of unit types and sizes are provided, include 1 bed, 2 bed and 3 bed apartments.
- Adaptable and living apartments are provided in support of DCP requirements.

Objective 4K-2
The apartment mix is distributed to suitable locations within the building

Complies
- Apartment types are distributed across the floorplate.

4L GROUND FLOOR APARTMENTS [P.109]

Objective 4L-1
Street frontage activity is maximised where ground floor apartments are located

N/A

Objective 4L-2
Design of ground floor apartments delivers amenity and safety for residents

N/A

4M FACADES [P.111]

Objective 4M-1
Building facades provide visual interest along the street while respecting the character of the local area

Complies
- Active frontages are provided to George and Elizabeth Street, and extended into the through-site link.
- Frontages are articulated with quality materials to encourage activity and integrated with the existing and emerging public realm.

Objective 4M-2
Building functions are expressed by the façade

Complies
- The architectural language has been designed to provide legibility of the user group within.
- Lobbies are clearly legible in this language, marked by breaks in massing.

4N ROOF DESIGN [P.113]

Objective 4N-1
Roof treatments are integrated into the building design and positively respond to the street

Complies
- Datums are established at key heights in the proposals to align with contexts and provide scale and legibility.

Objective 4N-2
Opportunities to use roof space for residential accommodation and open space are maximised

Complies
- Level 5 is provided with a range of community facilities. See drawings DA-110-015 for further information.

Objective 4N-3
Roof design incorporates sustainability features

Complies
- Level 33 roof is provided with a 85kW photovoltaic array.
- Level 5 is provided with drought resistant planting, rainwater capture for irrigation and solar thermal panels for swimming pool heating.

4O LANDSCAPE DESIGN [P.115]

Objective 4O-1
Landscape design is viable and sustainable

Complies
- Landscaping has been specified for the current and changing climate of Liverpool with a range of species supporting biodiversity.
- Rainwater capture systems have been incorporated to reduce potable water use, and supply irrigation.

Objective 4O-2
Landscape design contributes to the streetscape and amenity

Complies
- Landscaping at ground level has been designed to support the public realm experience. Planting lines the eastern boundary of the through-site link, softening the border with the neighbouring site.
- Planting has also been designed along Elizabeth Street to provide a break in the urban street scape, while providing animation to the street front.
- Refer to the Landscape package as prepared by Site Image for further information.

4P PLANTING ON STRUCTURES [P.116]

Objective 4P-1
Appropriate soil profiles are provided

Complies
- Soil profiles have been specified as designed by qualified landscape architects in line with ADG requirements.

Objective 4P-2
Plant growth is optimised with appropriate selection and maintenance

Complies
- Refer to the Landscape package as prepared by Site Image for planting selections.

Objective 4P-3
Planting on structures contributes to the quality and amenity of communal and public open spaces

Complies
- Planting at level 5 is a key component of creating a welcoming and comfortable space. Scale and species type have been located to provide shading, soften environment and provide privacy and separation where necessary.

4Q UNIVERSAL DESIGN [P.118]

Objective 4Q-1
Universal design features are included in apartment design to promote flexible housing for all community members

Complies
- 20% of apartments are designed to meet Silver level universal design standards.

Objective 4Q-2
A variety of apartments with adaptable designs are provided Adaptable housing should be provided in accordance with the relevant council policy

Complies
- 10% of apartments have been provided for future adaptation.

Objective 4Q-3
Apartment layouts are flexible and accommodate a range of lifestyle needs

Complies
- Layouts are designed to provide simple, regular room forms for ease of use and adaption.

4R ADAPTIVE REUSE [P.120]

Objective 4R-1
New additions to existing buildings are contemporary and complementary and enhance an area's identity and sense of place

N/A

Objective 4R-2
Adapted buildings provide residential amenity while not precluding future adaptive reuse

N/A

4S MIXED USE [P.122]

Objective 4S-1
Mixed use developments are provided in appropriate locations and provide active street frontages that encourage pedestrian movement

Complies
- The site is located within a mixed use, city centre location.
- Active street frontages are provided to three of four boundaries; Elizabeth Street to the north, George Street to the east and the through-site link to the west.
- All setback requirements have been supported, expanding the public realm into the site.

Objective 4S-2
Residential levels of the building are integrated within the development, and safety and amenity is maximised for residents

Complies
- Residential access is provided by a dedicated, safe and clearly legible entry from the through-site link with clear site lines from Elizabeth Street.
- Concierge is provided at ground level as a further safety and lifestyle support offering.
- Each unit is provided with a private secure entry.
- Car park access is via a secure and clearly legible entry point with a secondary secure line within the basement separating commercial and residential uses.

4T AWNINGS AND SIGNAGE [P.125]

Objective 4T-1
Awnings are well located and complement and integrate with the building design

Complies
- Awnings have been integrated into the facade design and provided along active street frontages where appropriate.

Objective 4T-2
Signage responds to the context and desired streetscape character

Complies
- Signage positions and extents will be incorporated into the ground level articulation.
- Specific signage designs will be submitted as a separate DA application.

4U ENERGY EFFICIENCY [P.127]

Objective 4U-1
Development incorporates passive environmental design

Complies
- Building orientation, articulation and massing have been formed to support passive solar access, natural cross ventilation and outlook.

Objective 4U-2
Development incorporates passive solar design to optimise heat storage in winter and reduce heat transfer in summer

Complies
- Facade projections, eaves and balcony positions work to support passive shading during mid-day in summer, minimising heat gain.

Objective 4U-3
Adequate natural ventilation minimises the need for mechanical ventilation

Complies
- All habitable rooms are provided with operable windows for natural ventilation.
- Cross ventilation strategies required at lower levels are extended through to upper levels.

4V WATER MANAGEMENT AND CONSERVATION [P.129]

Objective 4V-1
Potable water use is minimised

Complies
- Rainwater capture systems are provided for landscape irrigation, reducing potable water use.
- Efficient fixtures and fittings are provided throughout commercial and residential uses to further reduce potable water use.

Objective 4V-2
Urban storm water is treated on site before being discharged to receiving waters

Complies
- Storm water treatment is provided as described in the Storm Water Management Report prepared by Stantec.

Objective 4V-3
Flood management systems are integrated into site design

Complies
- On site detention tanks are provided within the basement.

4W WASTE MANAGEMENT [P.131]

Objective 4W-1
Waste storage facilities are designed to minimise impacts on the streetscape, building entry and amenity of residents

Complies
- Waste storage areas are located in dedicated rooms within the basement and ground level.
- Waste collection is to occur within the loading dock, accessed from the rear service lane.
- Waste chutes are provided at each residential level, along with separate glass collection bins.

Objective 4W-2
Domestic waste is minimised by providing safe and convenient source separation and recycling

Complies
- Each apartment is to be provided with under-counter separate bins for landfill and recycling, with glass further separated in communal recycling bins accessed at each level from the common hallway.

4X BUILDING MAINTENANCE [P.133]

Objective 4X-1
Building design detail provides protection from weathering

Complies
- Building materials and components have been designed appropriate for the current and changing climate of Liverpool.

Objective 4X-2
Systems and access enable ease of maintenance

Complies
- Suitable access for cleaning and maintenance has been designed for all appropriate areas.

Objective 4X-3
Material selection reduces ongoing maintenance costs

Complies
- Applied finishes have been minimised where possible to reduce maintenance.
- Materials and finishes will be specified for their longevity and minimal maintenance requirements.

PART 4 _ DESIGN
4.0 ARCHITECTURAL DRAWINGS

4.01 Plans

4.02 Sections

4.03 Elevations

4.04 Yield

4.05 LEP Amendments

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