Lot 19 Perth City Link
Roe Street, Perth WA 6000

Rev A_May 2025

Ten Principles Report

By:

For:

ERBEN


ERBEN


MJA


PLAN
E
Landscape
Architects


urbii

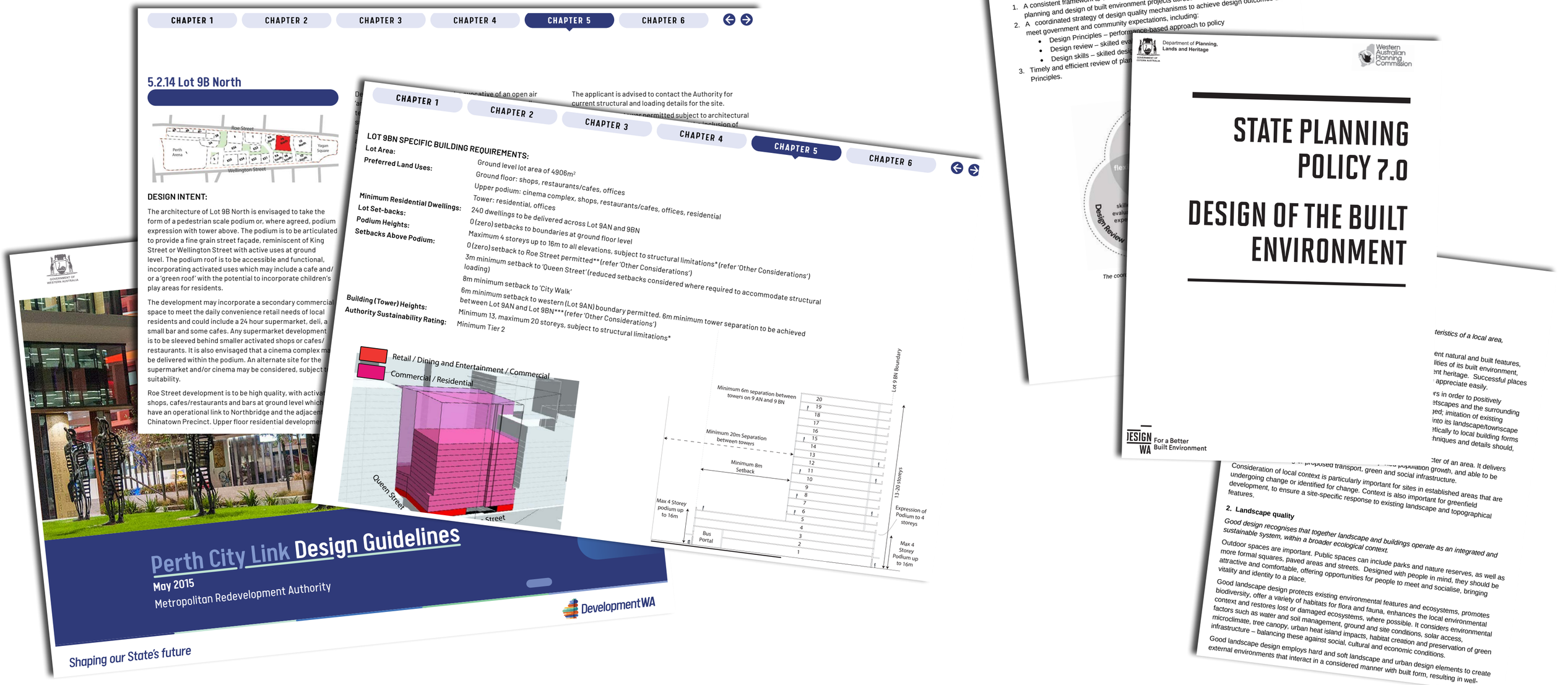

Stantec


talis
consultants


MARSHALL DAY
Acoustics


Full Circle
Design Services

Reference Documentation

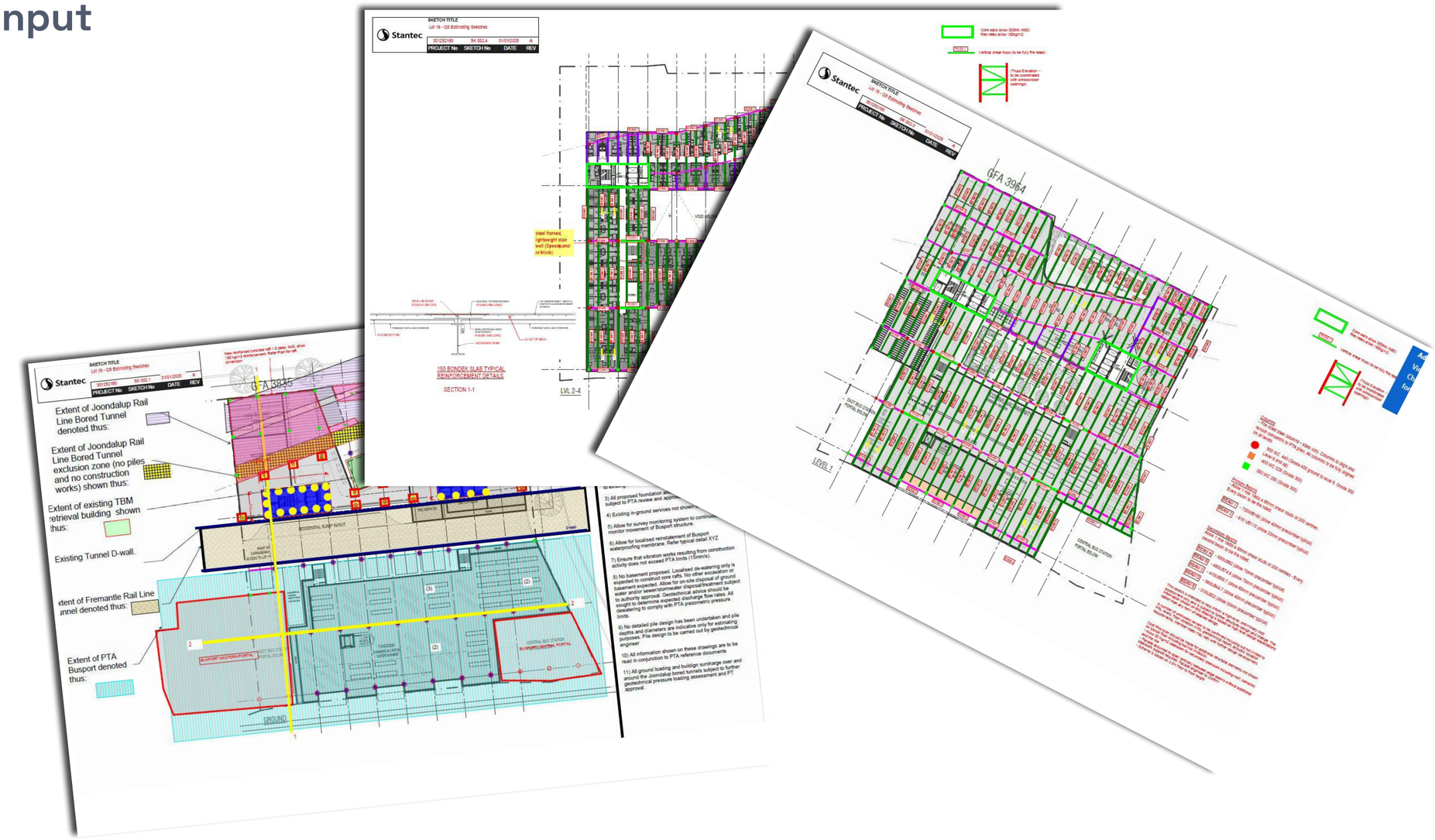


Immediate Engineering Input

Early collaboration with our Structural Consultant has been critical in understanding the complex site conditions.

The consultant was heavily involved with the adjacent ECU proposal, garnering an intimate understanding of the subterranean infrastructure conditions.

We are continuing to work through early design resolution to accurately size structural elements and incorporate them within evolving design.



Stantec

Site Context

The following diagrams step through the proposal’s initial direction along with opportunities and constraints.

Context+ Character_

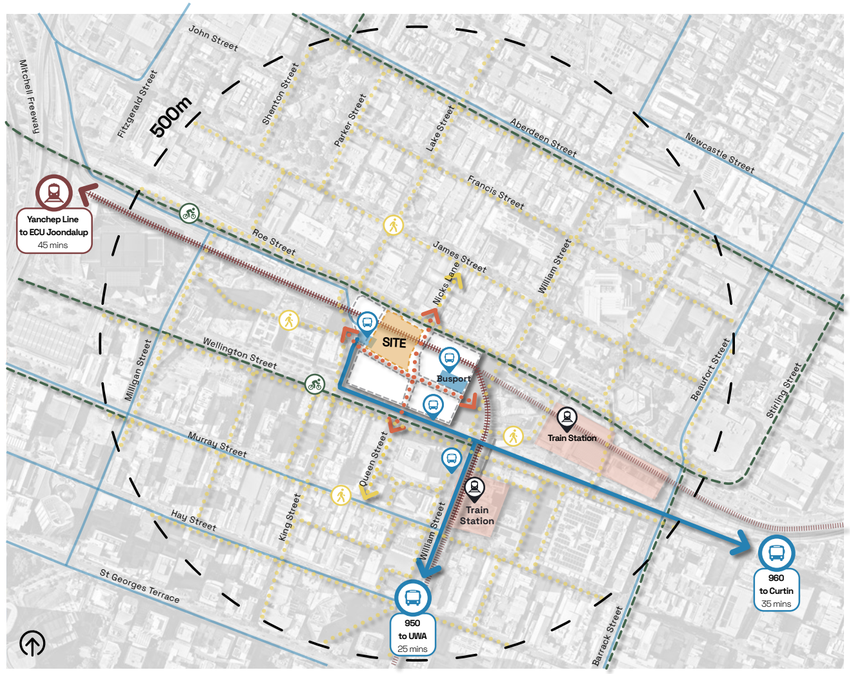
PCL The City's Heart

Urban Structure & Public Realm

Perth City Link is creating an active and vibrant city centre linking the CBD to Northbridge.

The proposal brings a variety of uses supporting this vision including a public facing ground level connects into surrounding existing F&B offerings.

With high-density student accommodation over, will increase activity in the city, helping create a thriving and safe day and night time urban environment.



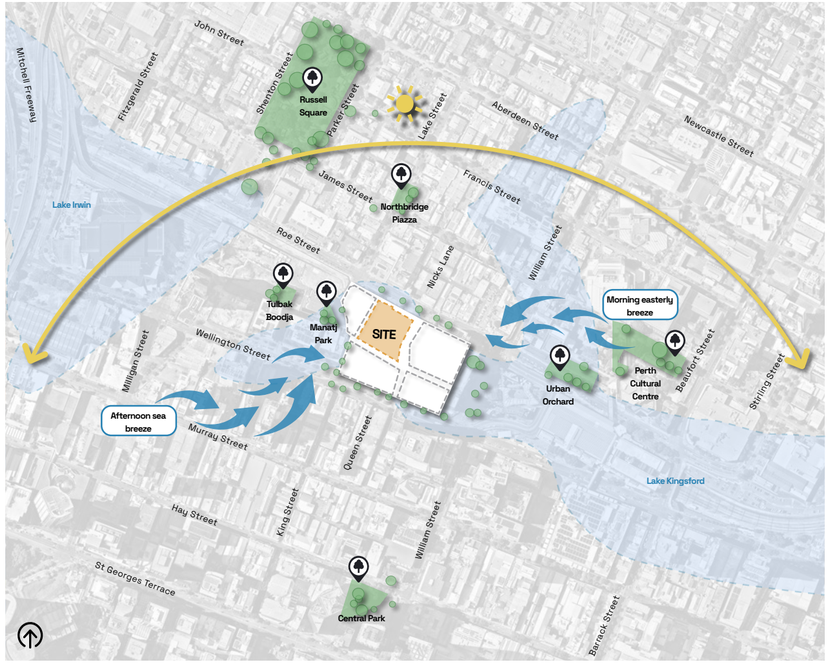
Movement Networks

A highly walkable and centrally located site.

Perth Bus Station is accessible at the base of the proposal and Perth Train Station is a 5 minute walk.

The site is adjacent to ECU City Campus and a single bus or train ride to Curtin, ECU Joondalup and UWA.

The proposal provides opportunity for people to live close to their daily needs, with easy access to educational institutions, social facilities and leisure activities.



Urban Ecology

Site orientation maximises north-east aspect.

Winds cross the site with a morning easterly breeze and afternoon south-westerly sea breeze.

The proposal sits over a former wetland reclaimed from the 1830s for use as housing, parks and market gardens, and is urban infill today.

An evolving precinct.

1977

Perth Entertainment Centre & Wellington St Bus Station complete, initiating an integrated entertainment and public transport precinct.

2015

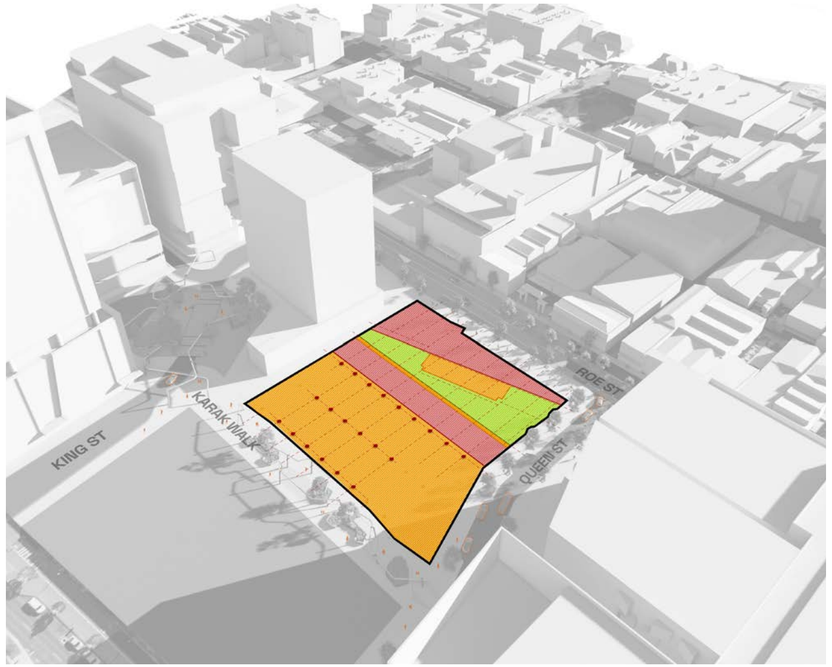
Wellington Street Bus Station demolished, underground bus station under construction. Temporary bus interchange operational along Roe Street. Kings Square buildings under construction.
Fremantle train dive structure complete, reconnecting the city.

2024

Present day with ECU construction underway.

Built Form+ Scale_

Site and structural constraints on built form.

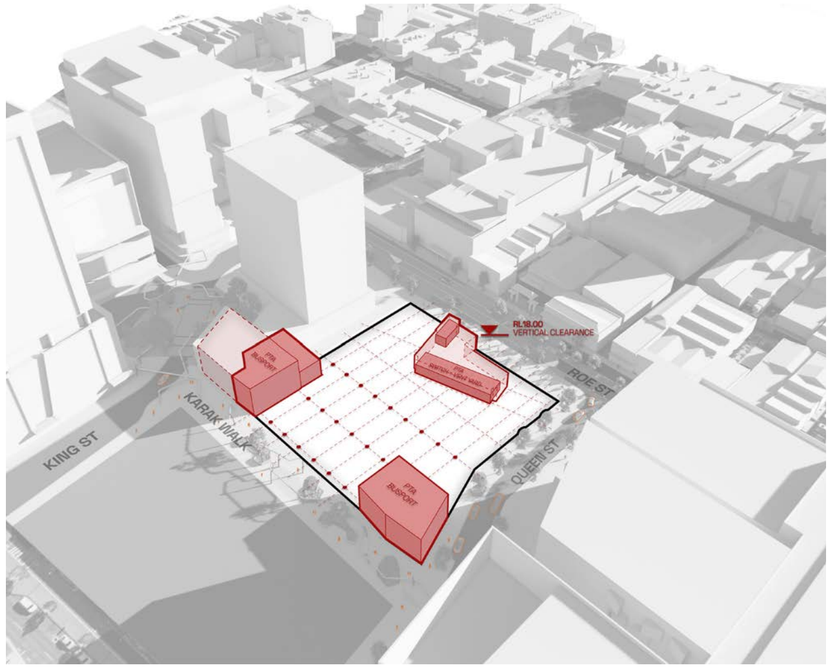


Existing Site Conditions - Below Ground

Existing major PTA infrastructure assets below Ground level (bus portal, railway tunnels) significantly influence the approach to site.

Existing structural piles have been provided to the South, with predetermined loading capacities. Multiple railway lines run below the site, resulting in structural exclusion zones.

The remaining site area is subject to restricted loading to prevent damage to adjacent infrastructure assets.

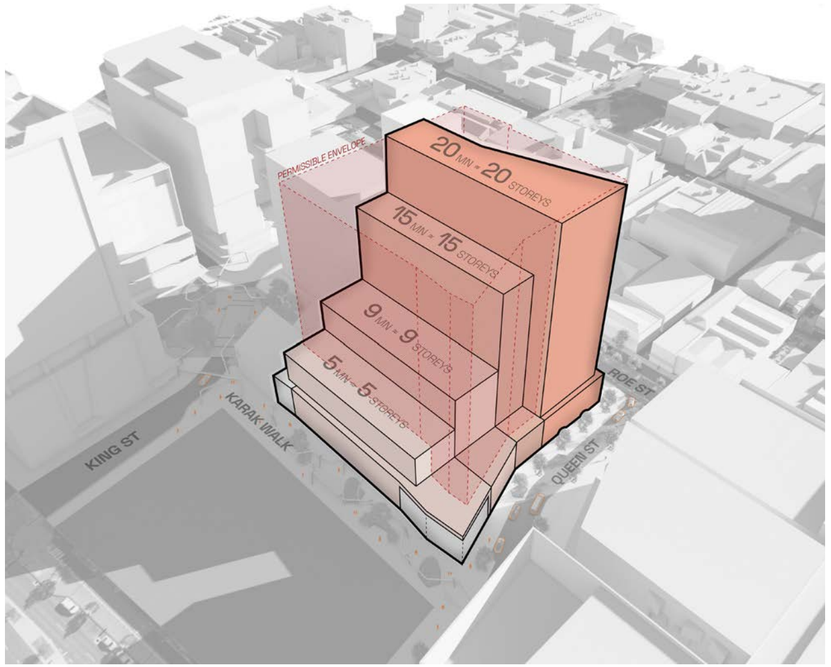


Existing Site Conditions - At or Above Ground

Critical PTA infrastructure assets exist at, or above ground level on the site.

These assets service existing below ground transportation infrastructure and are required to be retained with prescribed clearance zones provided.

Existing assets include two Busport Portals to the South, and a Switch + Vent Yard to the North.

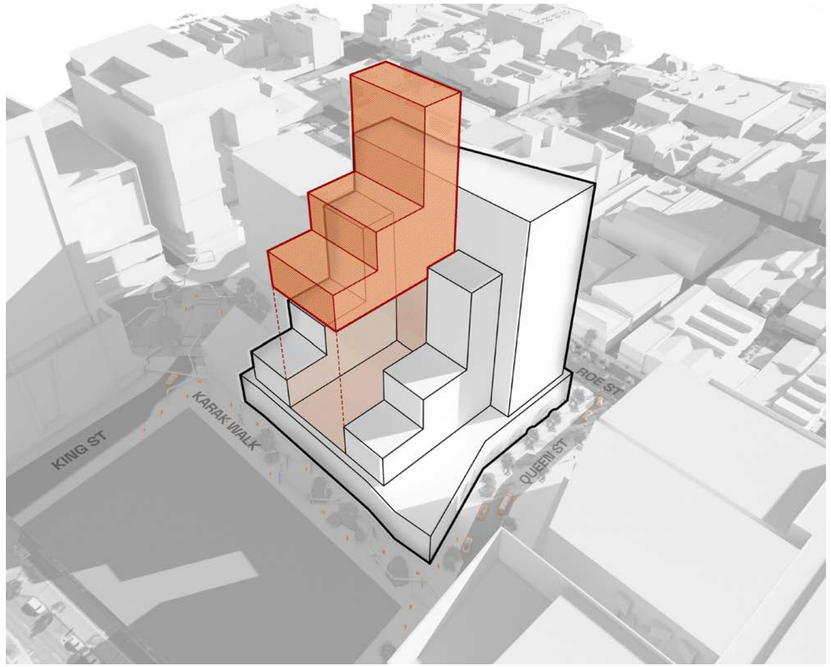


Structural Loading Requirements

The resulting mass represents the permissible planning envelope aligned with the predefined load requirements for the site.

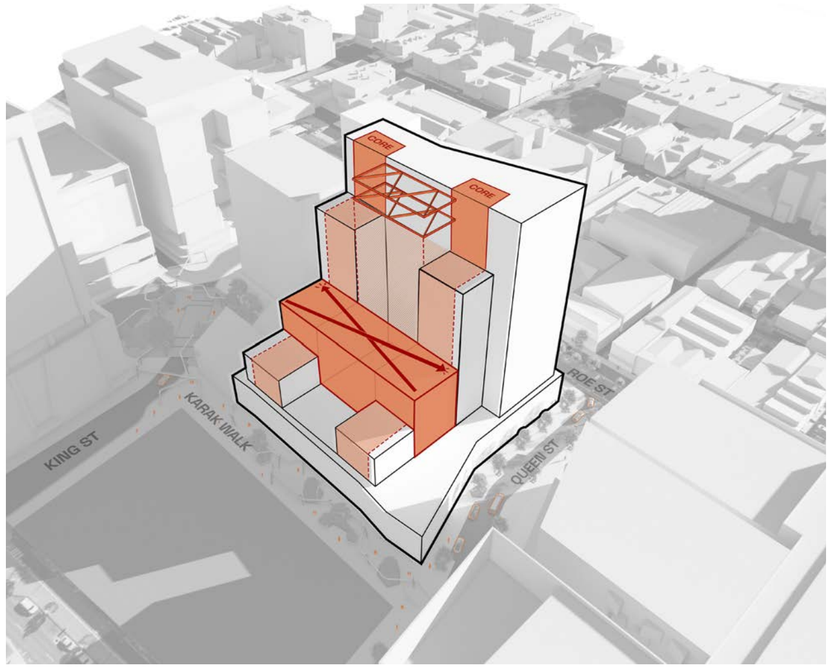
Built Form+
Scale_

Site and structural constraints on built form.



Increasing Facade Perimeter

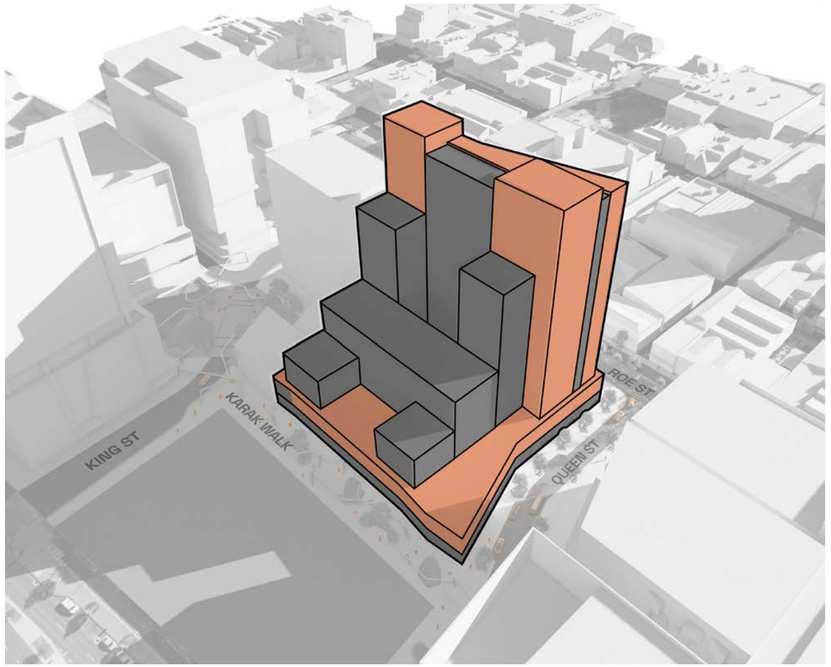
Increasing the facade perimeter through the removal of internal mass.



Integrate Structural System

The East and West portions of the tower floor plates are then structurally braced with the introduction of a perpendicular mass.

Additional feature steel trusses are then integrated into the courtyard void to further assist in structural bracing.



Built Form Articulation

The built form is articulated to break down the overall massing into a series of expressed and recessed elements.

The primary vertical mass is expressed to accentuate the proposals height and relation to it's adjacent neighbours. This language is continued through to the podium to provide an appropriate human-scale interface and reduce the overall perception of bulk and scale. Roof service zones are also designed to be fully integrated into the built form.

Built Form Concept

The following proposal seeks to draw on the rich history of the site and landscape environment.

Rail, Transport & Built Form History

Sheds, Trains, Tracks and Buses

Wellington St train workshops

The post industrial uses for the site are characteristic of an inner urban locale with public and goods transport at it's heart.
This rough warehousing and rusted railway lines have made way over time to the rejuvenated precinct, we see these as an important memory worth linking to within any new proposal.

A transitioning Precinct

Michelides Cigarette factory, Roe St

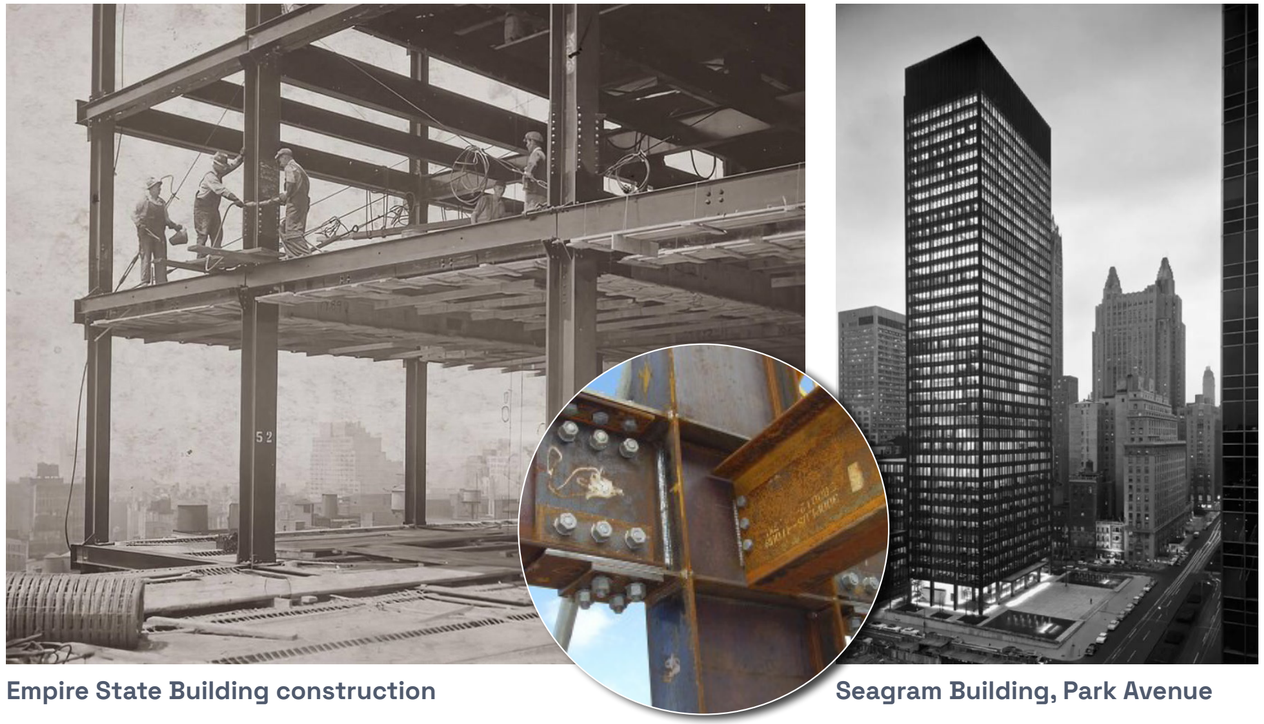
Peters Ice Cream factory

Due to proximity to the Perth Marshalling Yards, the nearby precinct evolved as a manufacturing and commercial hub for the growing City.

Following rail handling relocating to Kewdale, the pleated TVW 7 Entertainment Centre brought entertainment programme to the precinct.

NYC Steel Construction & Contemporary Industrial

The origins of steel framed construction



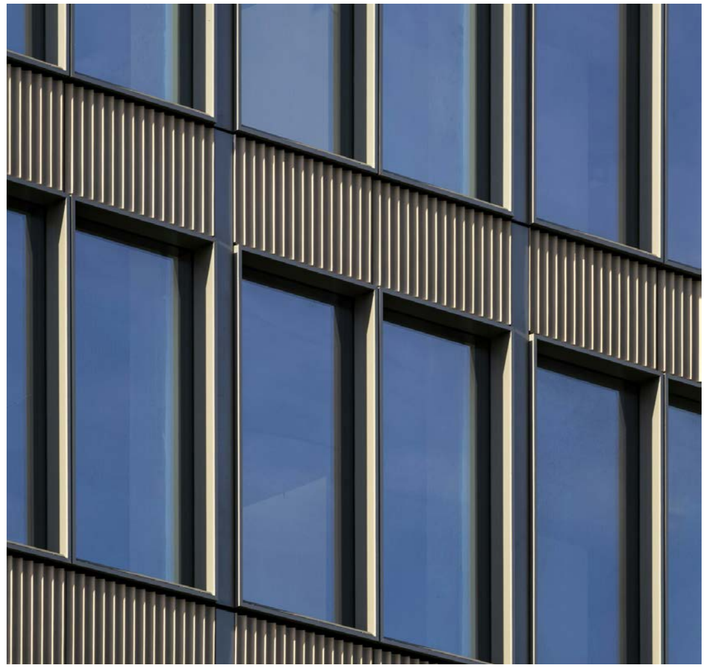
Empire State Building construction

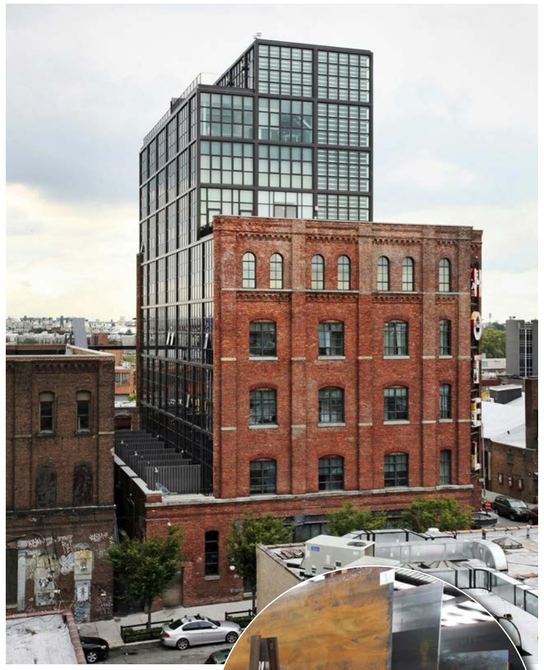
Seagram Building, Park Avenue

Load limitations, due to the underground infrastructure, has lead the proposal's design towards being steel framed. Given this, we looked back to hero projects from NYC and how they used steel frames.

The Mies Van De Rohe Seagram building is of particular interest due to it's position above the Park Avenue tunnel and Grand Central Station marshaling yard.

Contemporary interpretations by Morris Adjimi Architects





Wythe Hotel

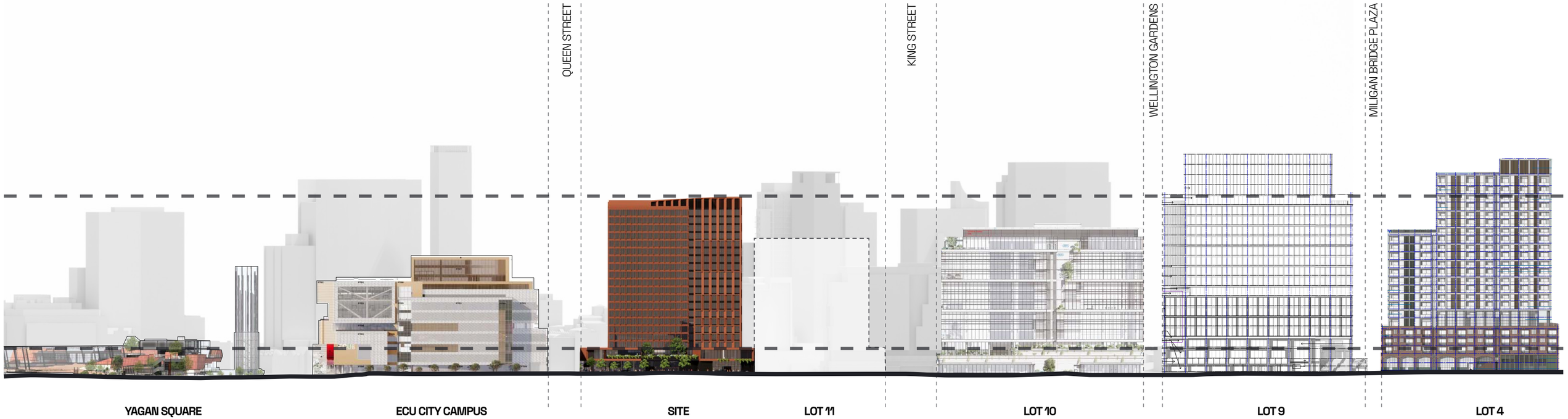
The work of Morris Adjimi Architects in the USA has been referenced through the compositional balance of solid versus glazed and the nuanced expression of apertures.

The acknowledgment of past industrial uses on site and adjacent is read through the divisions of mullions, textures and palette. Roe St PBSA is seeking to reflect these gestures, particularly within the tower elevations.

View: Roe Street looking South


View: Roe Street looking South West

View: Queen Street looking West



Long Section
NTS

Roe Street

Concept Analysis

The following analysis seeks to provide greater detail and connection with SPP7.0 Design of The Built Environment

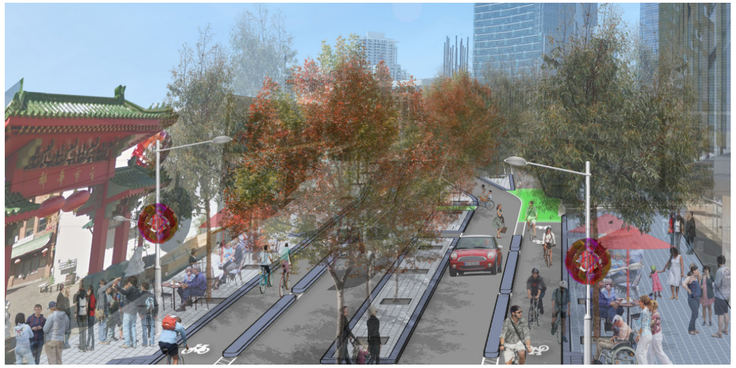
Legibility, Safety, Community_

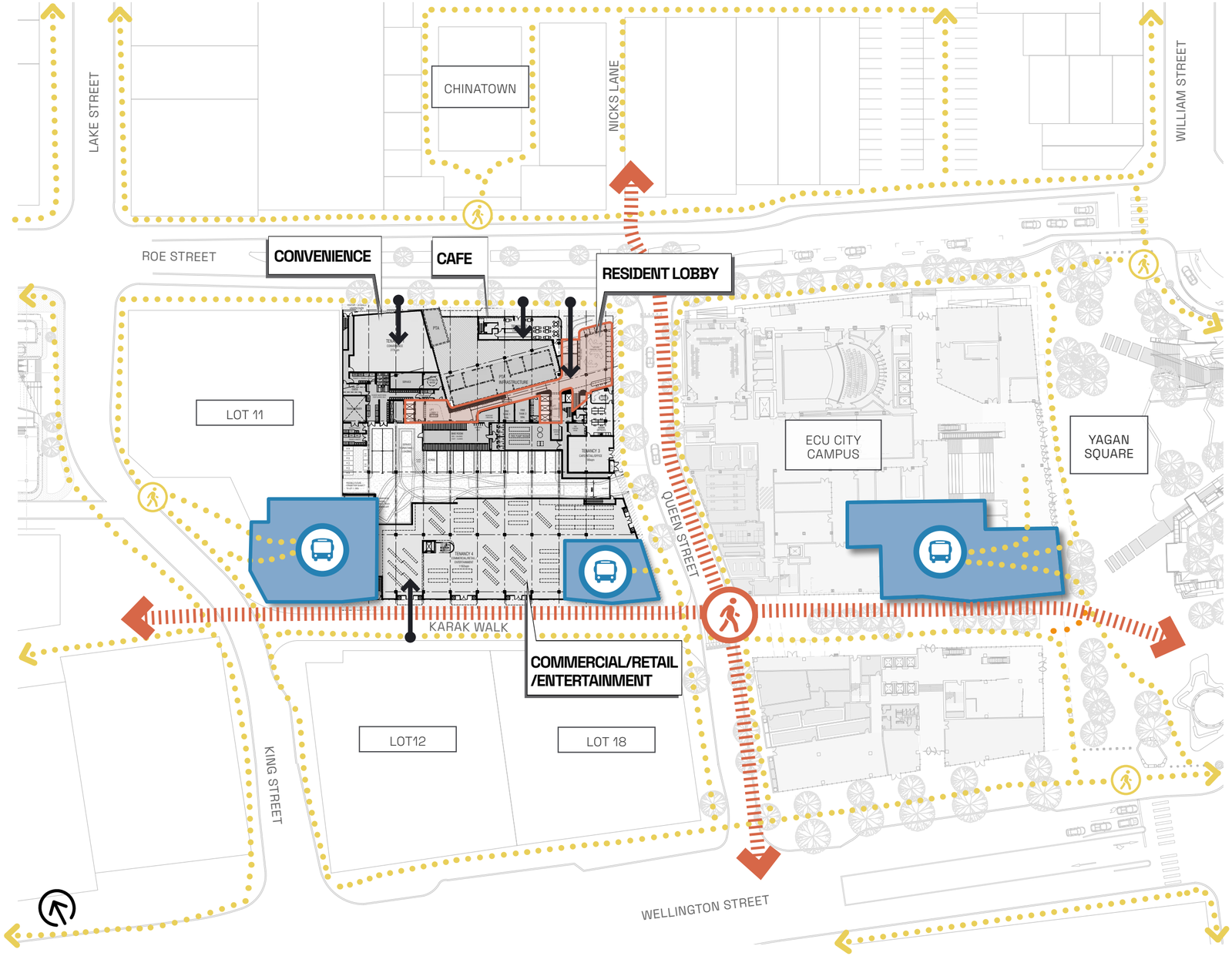
1. Movement
- Pedestrian

Resident lobby is located on the prominent corner of Roe Street and Queen Street, with sightlines to ECU, Nicks Lane, Chinatown.

Well connected to dedicated vehicular, cycle and pedestrian routes along Roe Street increases legibility and safety for residents and visitors, while providing a visible street address.

Karak Walk will be a major pedestrian route reinforced with activated public offerings.





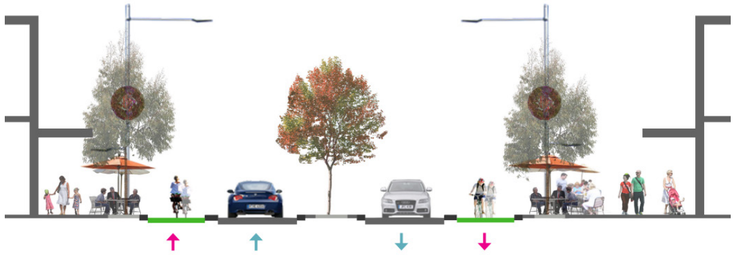
Legibility, Safety, Community_

2. Movement
- Cycling

Dedicated cycle lanes on Roe Street and Wellington Street provide safe and easy access to site.

Conveniently and secure resident bike storage provided to encourage the use of bicycles as a convenient form of transport.

Visitor bike parking provided in convenient and legible locations.



Functionality+
Build Quality_

PTA Consultation -

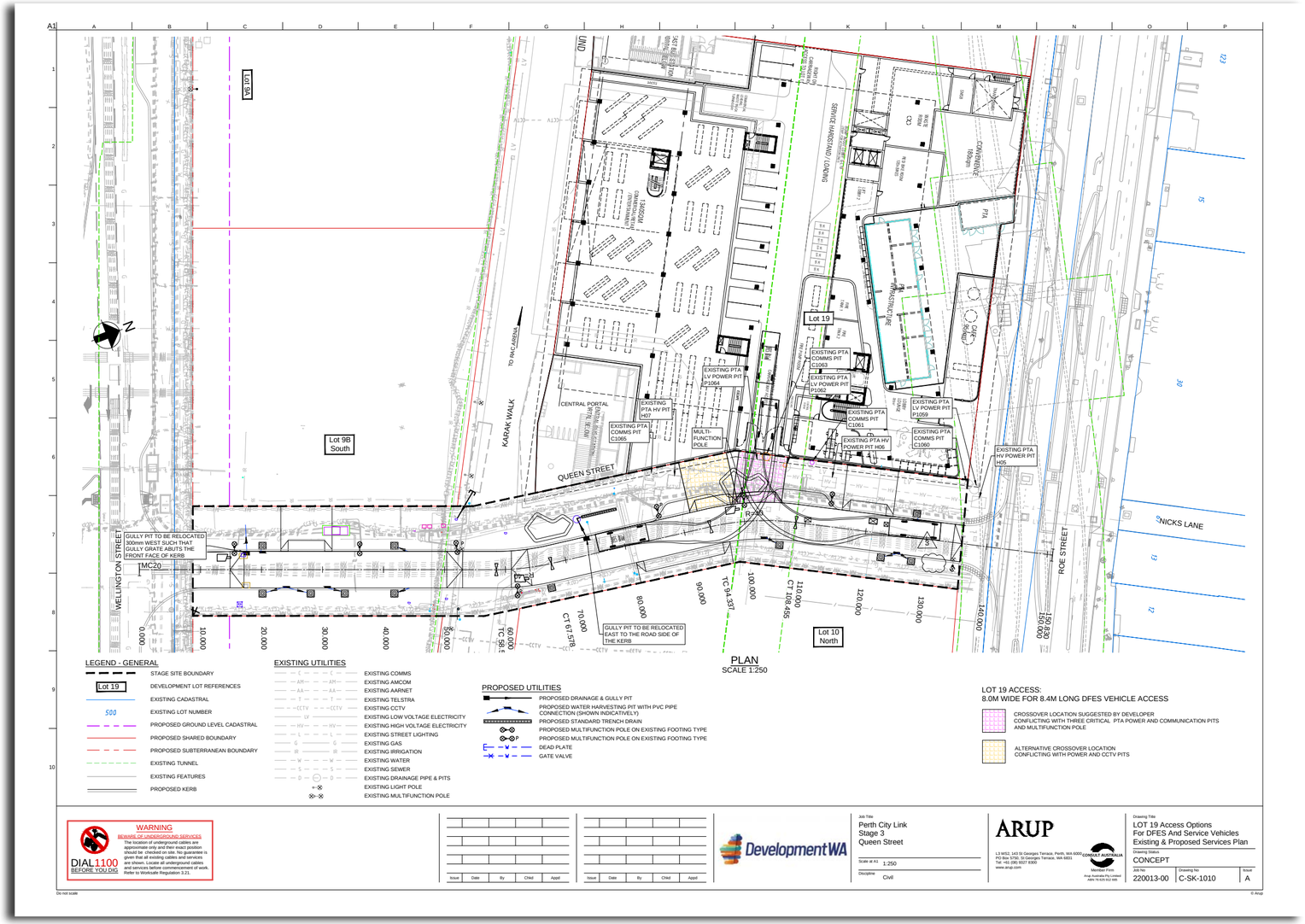
Through DevelopmentWA, we liaised with PTA on vehicle access into our proposal.

PTA raised the following key issues with previously proposed cross-over location:

- Cross-over located on critical load constraint area of the Fremantle Rail Tunnel
- Cross-over located over existing PTA service pits (requiring immediate access during emergencies and closure of cross-over for maintenance)

In response, we redesigned the ground floor to manage PTA, client and operator needs.

This amendment has resulted in a contraction to the commercial offering to Karak Walk, as such we have worked to bolster activation quality to the other street frontages.



ARUP

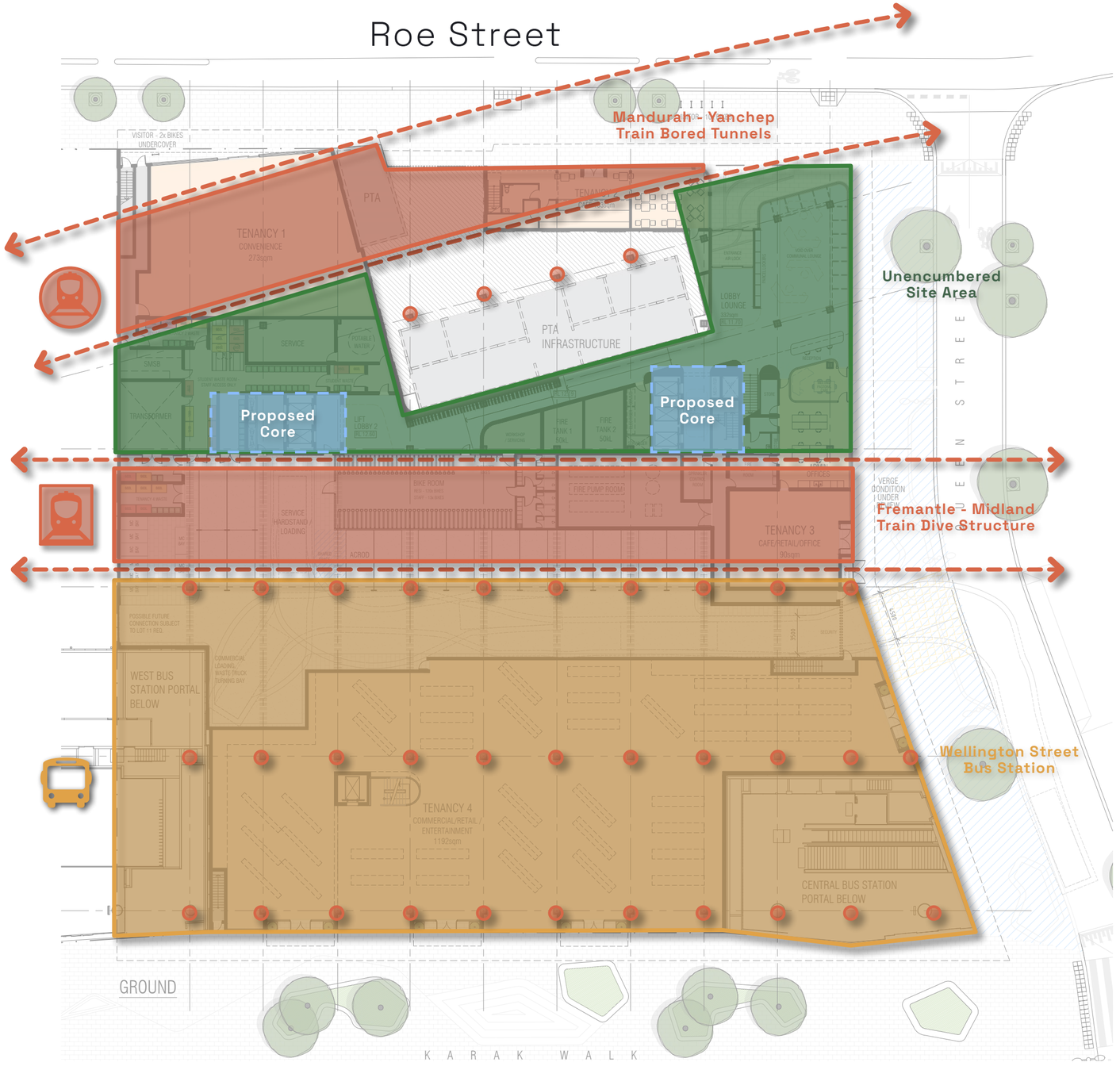
Functionality+ Build Quality_

Legibility, Safety, Community_

Existing Site Constraints -

The site area comprises a number of easements, encumbrances and existing predefined structural load points.

The design seeks to manage the major structural elements, including the core locations within the limited areas available/ identified.



Pedestrian Access & Egress -

The main pedestrian entry is located on the prominent Roe & Queen St corner. The lobby is afforded a generous triple volume void space facilitating maximum interaction with the street and sightliness to ECU.

Both primary lift lobbies are connected to the entry via a single access point to ensure resident safety is overseen by the 24hr reception at all times.

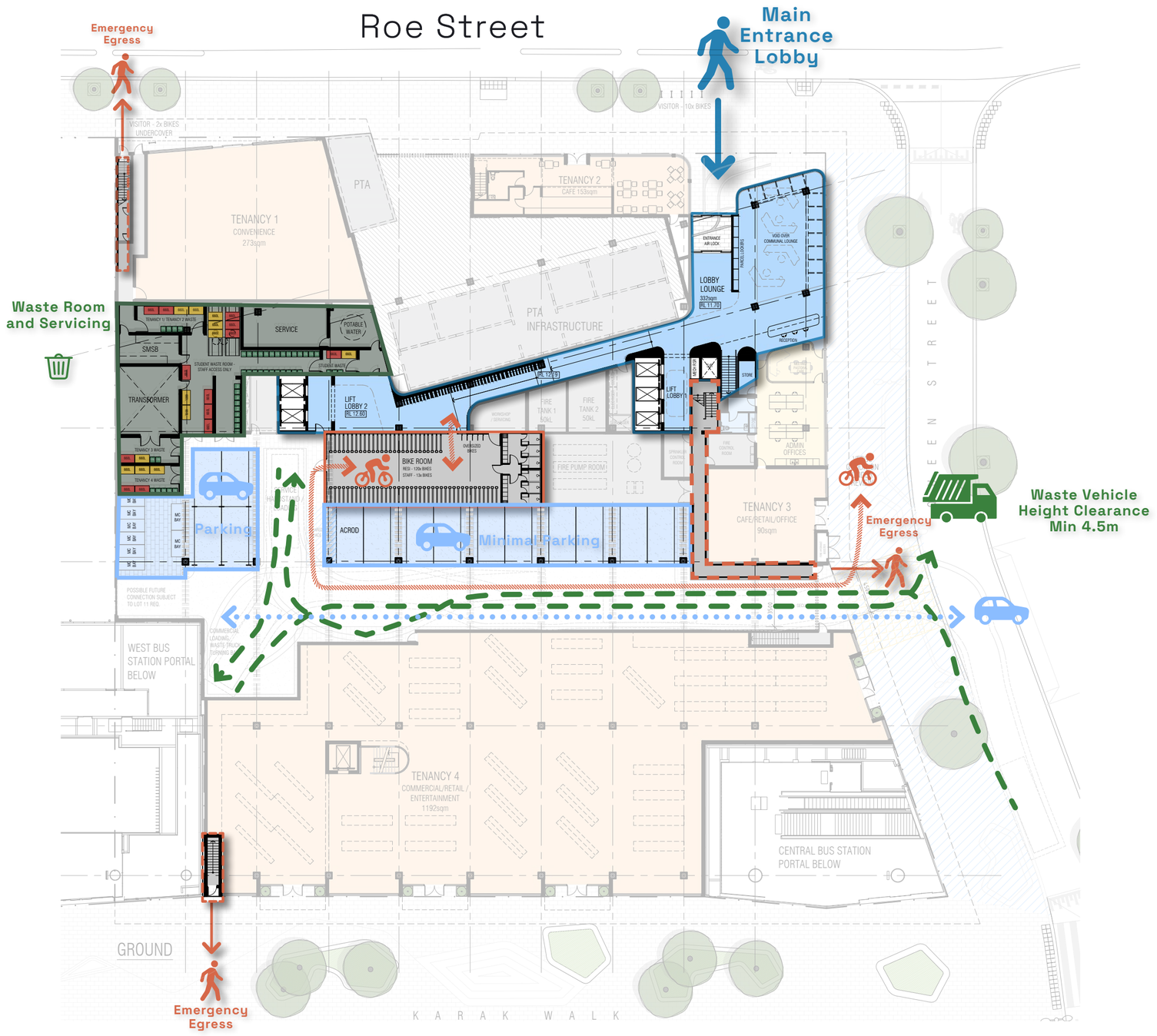
Vehicular Access -

Private car parking is intentionally minimised due to the proposal's proximity to public transport. The limited bays are proposed for drop off pick up, temporary loading and service parking.

Electric share vehicles will be provided for the exclusive use of residents managed through a booking register.

Flexibility for future development is integrated into the design, with provision for access to Lot 11 should it be required by the future land owner.

Waste collection, including internal maneuvering bay, ensures service vehicles enter and exit the site in a forward gear.



Amenity_

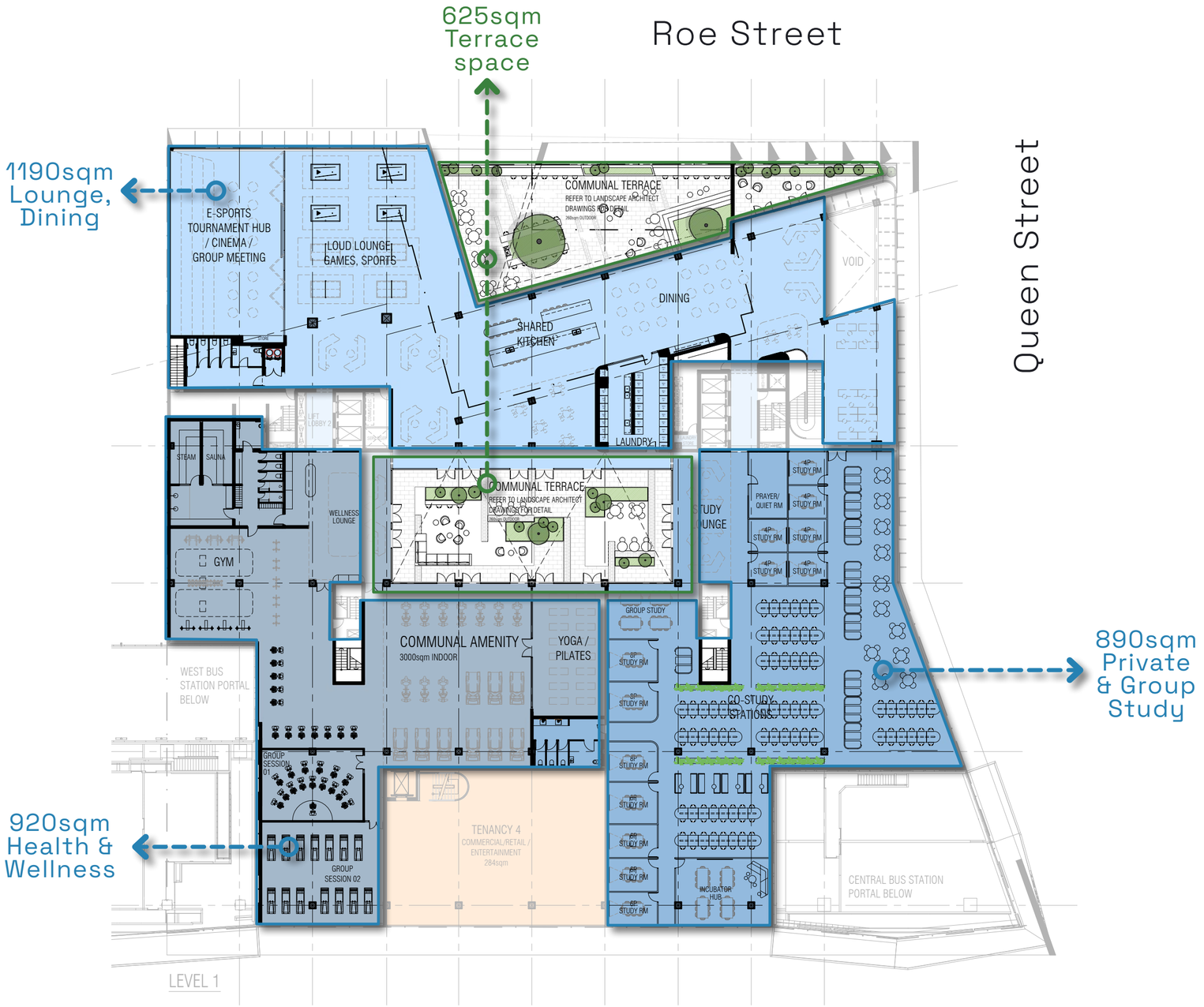
The proposed residential amenity is divided into three distinct zones.

- Lounging, dining & louder uses
- Quiet individual and group study
- Health & wellness

Each space is acoustically managed from the adjacent and ensures a high level of practical amenity for all residents and guests.

The total amenity offering exceeds national accepted standards of 2.5sqm per bed by 1.66% to 3.7sqm per bed excluding all cluster shared facilities within apartments.

Proposed Courtyard Precedent - Village Belle, St Kilda, Victoria



Landscape Quality_

Reference Documentation

Plan E have developed a Landscape strategy for the proposal, including accessible communal terraces and decorative roof gardens.

Amenity_

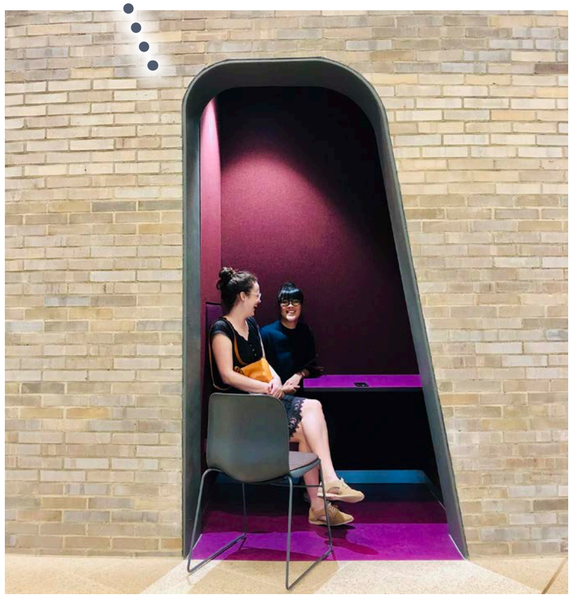
Legibility, Safety, Community_

Residential Amenity

Incidental amenity spaces included on every residential floor.

Three varying sizes and typologies of study nooks, sitting areas and casual meeting spaces are located adjacent to lift cores, primary circulation, and with direct line of sight to operable windows.

These spaces will afford moments of interaction to foster stronger relationships between residents.



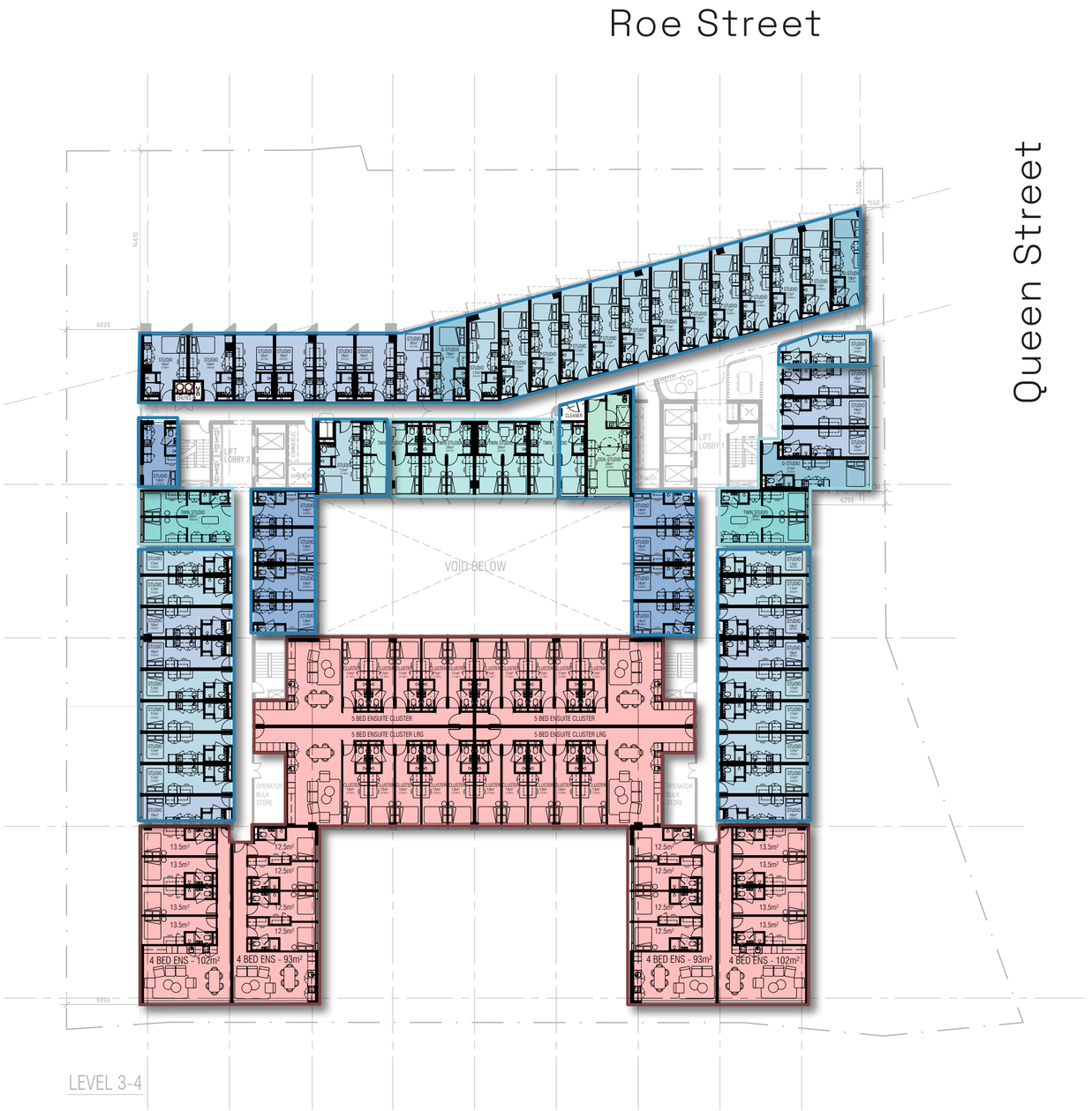
Amenity_

Room Type Diversity -

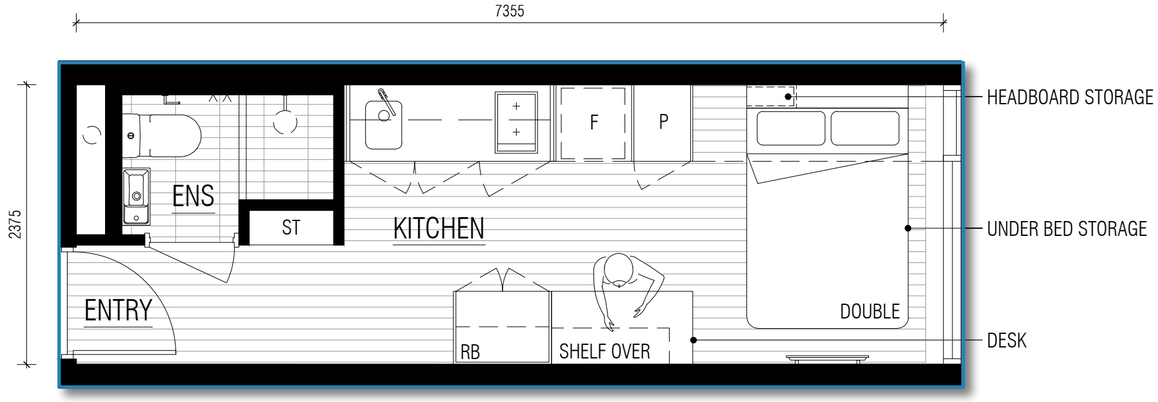
The Client has largely guided the distribution of room typologies based on their pwn experience and operator feedback.

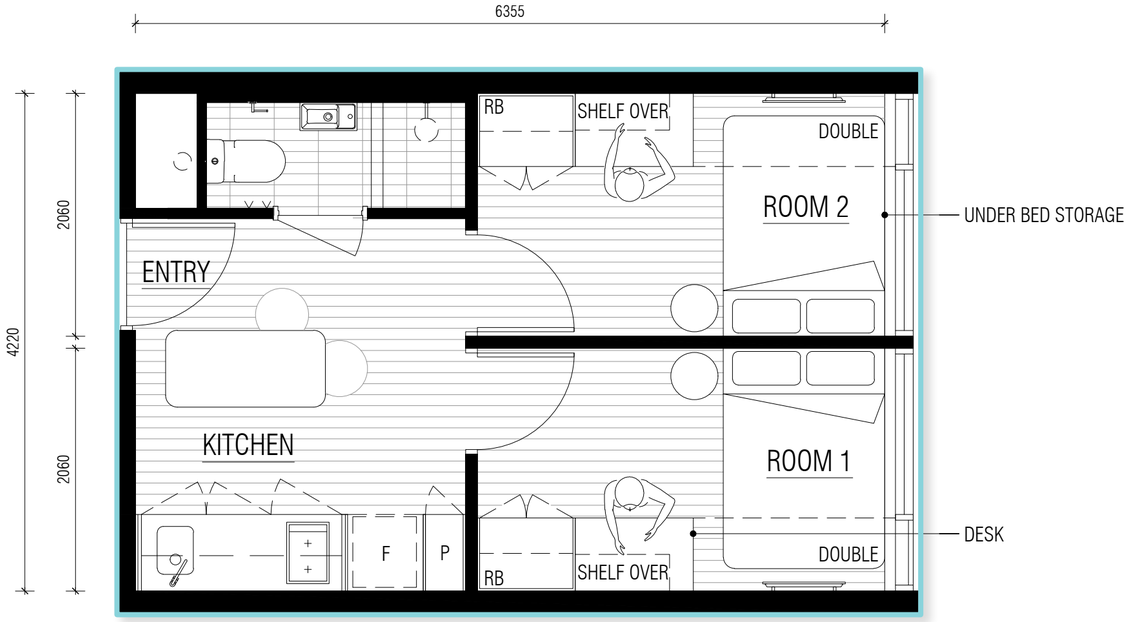
The end user's needs are evolving, as such the proposal is seeking to both maintain parity and exceed these requirements where possible. The inclusion of double beds to all rooms is an example that has necessitated the incremental increase in the room areas.

Proposed Distribution Mix:
- Studio (inc access) - 68%
- Twin Studio - 17%
- Cluster - 15%



Amenity_





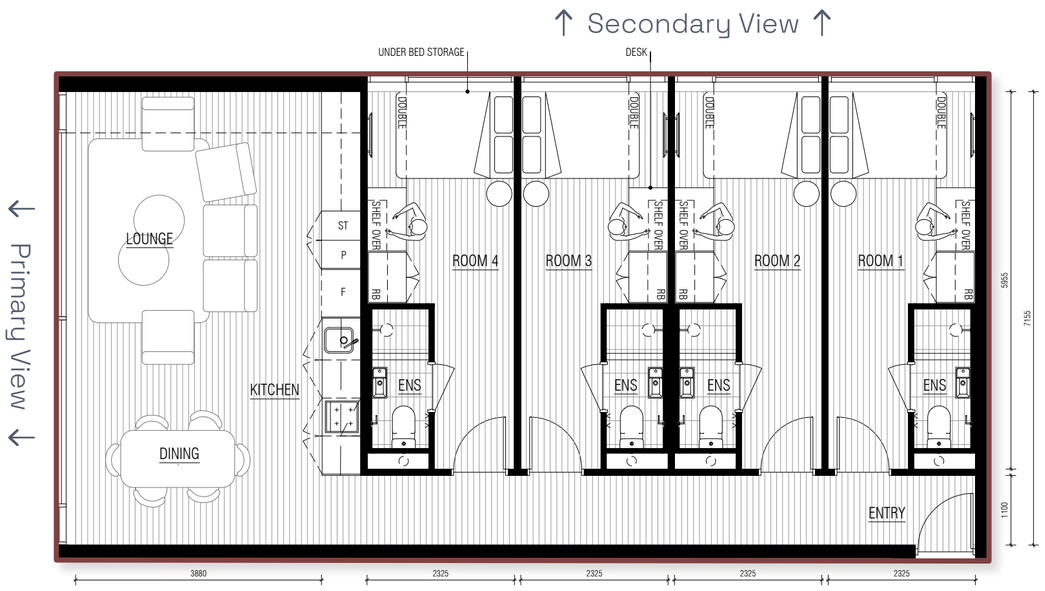
Studio - Typical
Strata - 16.4m²

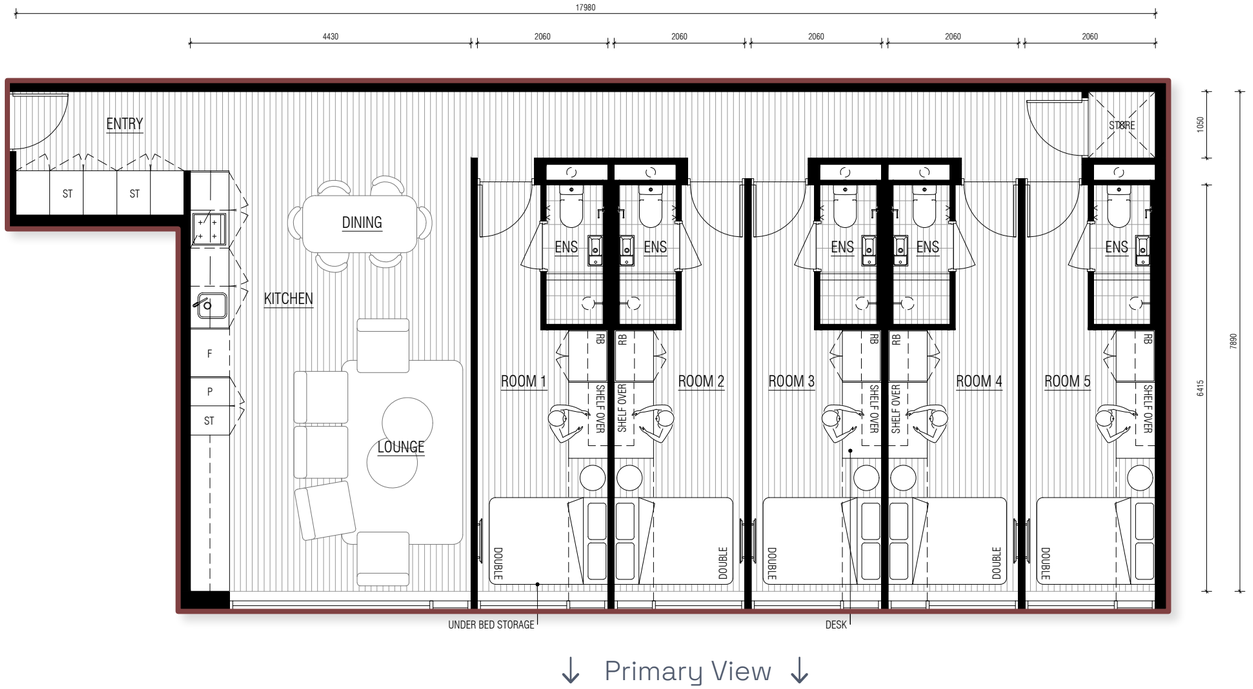
Ensuite, study desk (min 1000mm), robe, and kitchen provided to each studio.

Twin Studio - Typical
Strata - 26m²

A robe and desk (min 1000mm) is provided to each room, with shared communal kitchen, dining, lounge, and bathroom amenities.

Amenity_





4 Bed Cluster

Strata (ea bed) - 13.5m^2

Ensuite provided to each room, with shared communal kitchen, dining, and lounge amenities.

Shared communal spaces are configured to prioritise amenity to outlooking primary views.

5 Bed Cluster

Strata (ea bed) - 11m^2

Ensuite provided to each room, with shared communal kitchen, dining, and lounge amenities.

Sustainability_

Residential Amenity

Sun shading devices have been developed in consultation with ESD consultant Full Circle Design Services.

The north façade was identified to receive highest exposure to direct sun.

Effectiveness of sun shading devices has been tested and detailed in the following slide.

Sustainability_

Direct access to sunlight

Window hoods are designed in response to passive solar principles, providing direct sunlight in Winter and reducing direct sunlight in Summer.

Diagrams represent windows in the proposal with the highest exposure to direct north sun.

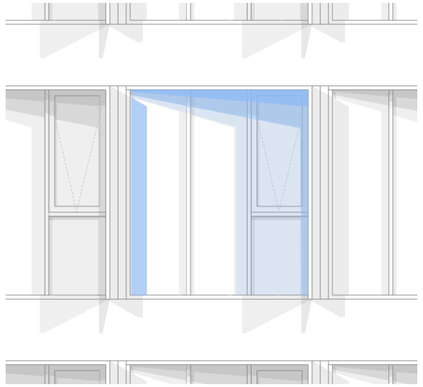
All rooms include operable awning windows opening to a maximum of 120mm, exceeding NCC ventilation requirements.

9am shadow on subject window from shading devices

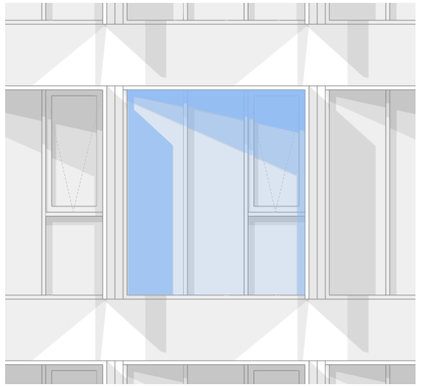
12pm shadow on subject window from shading devices

3pm shadow on subject window from shading devices

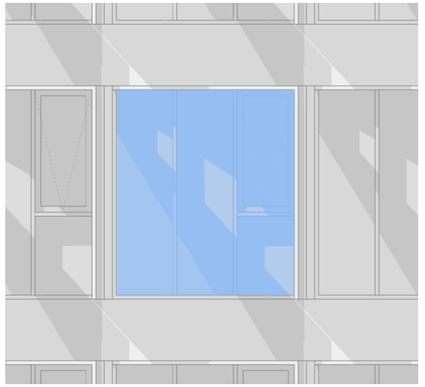
North Facade (eastern side)



Winter Solstice
21 June
7:30am - 3:30pm (8hrs)

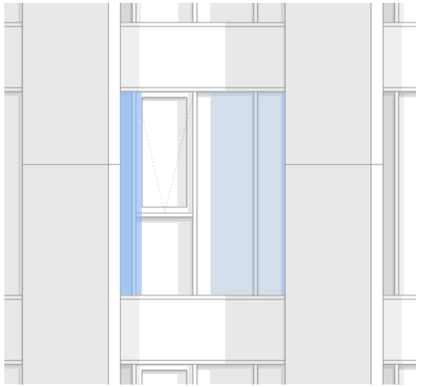


Equinox
21 September
6:15am - 1:45pm (7.5hrs)

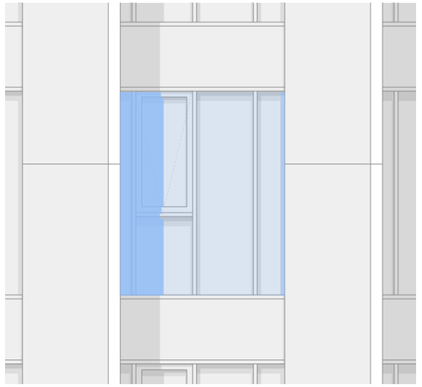


Summer Solstice
21 December
7:30am - 12:45pm (5.25 hrs)

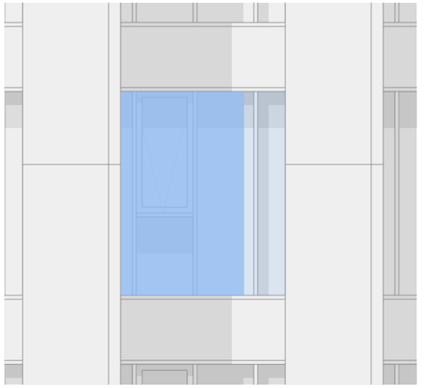
North Facade (western side)



Winter Solstice
21 June
7:30am -3:30pm (8hrs)



Equinox
21 September
6:15am - 2:00pm (7.5 hrs)



Summer Solstice
21 December
8:00am - 1:00pm (5hrs)

Reference Documentation

Working closely with ESD consultant Full Circle Design Services, we are on track to achieve 5 Star Green Star certification.

Sustainability_

This proposal will commit to delivering **5 Star Green Star** sustainability initiatives under the Green Star Buildings rating system.

Certification will be provided by a Green Star Accredited Professional (GSAP).

Green Star Commitment	**5-Stars** (Certified)
Provision of Shared Communal EV Vehicles	**Yes**
Solar PV Renewable Power	**YES**
Waterwise + Native Planting Selections	**Prioritised**
Visitor, staff and resident bike parking	**Yes**
Electrification of all Building Services	**100%**
Walkability and public transport scoring	**100%**

The overall built form strategy integrates solar shading devices to manage solar exposure to North orientated glazing.

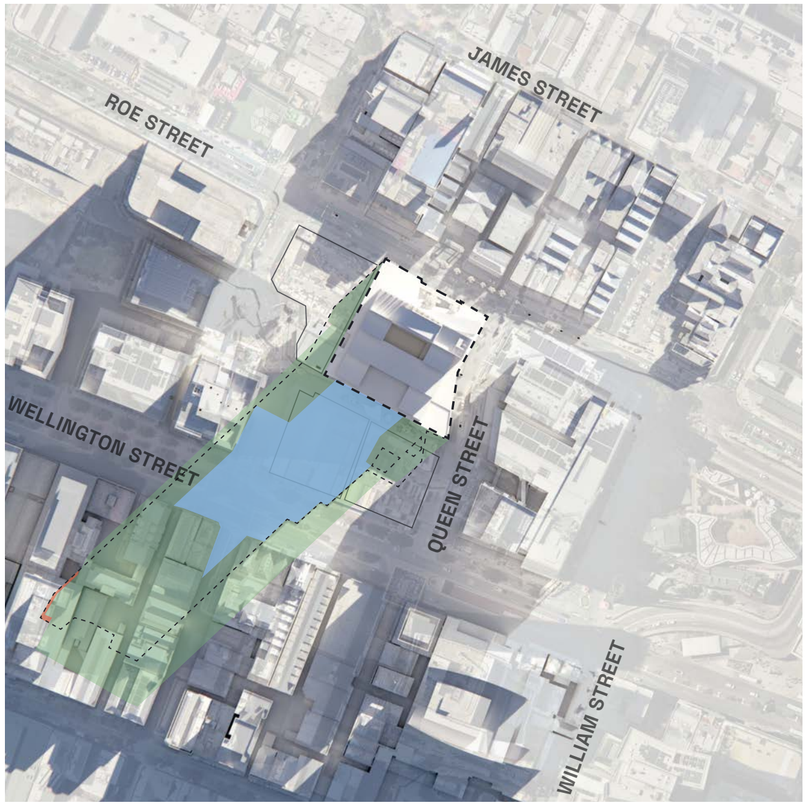
Solar shading devices include feature perforated aluminum window shrouds, and extended expressed hobs with vertical screening facade elements.

View: Roe Street looking South East

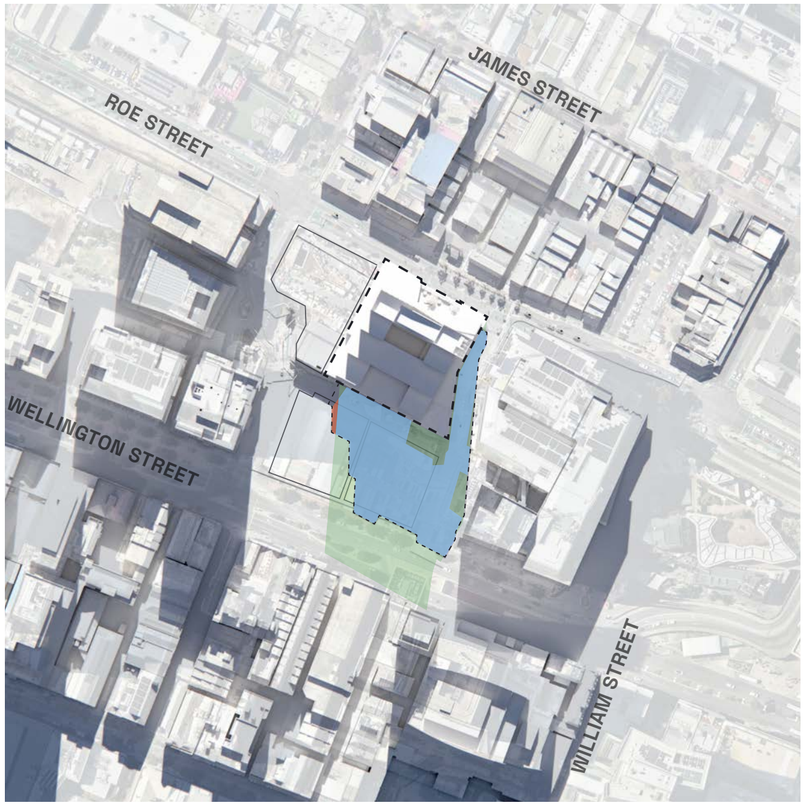
Built Form+ Scale_

Amenity_

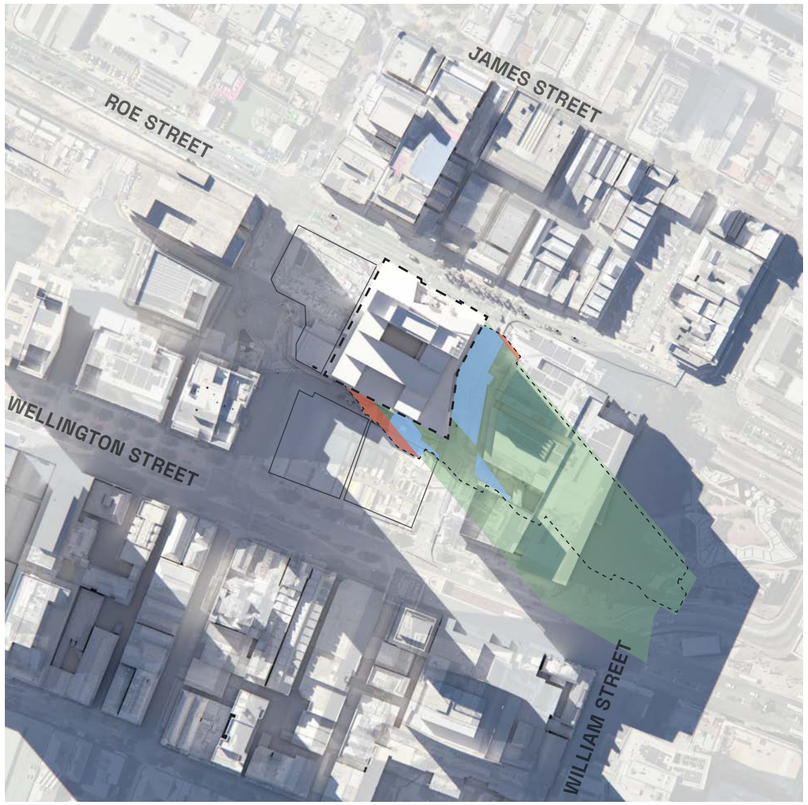
- Compliant envelope shadow
- Proposal shadow envelope
- Proposal shadow impact on public realm/undeveloped sites*
- Proposal shadow beyond compliant envelope



21 June
9am



21 June
12pm



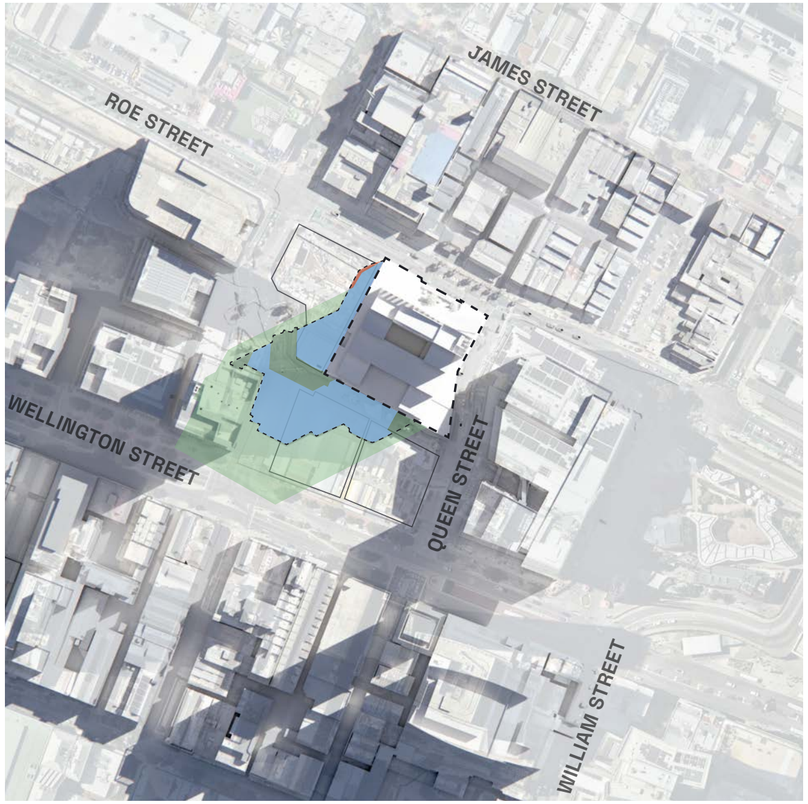
21 June
3pm

*Shadow on rooves and existing shadows excluded

Built Form+
Scale_

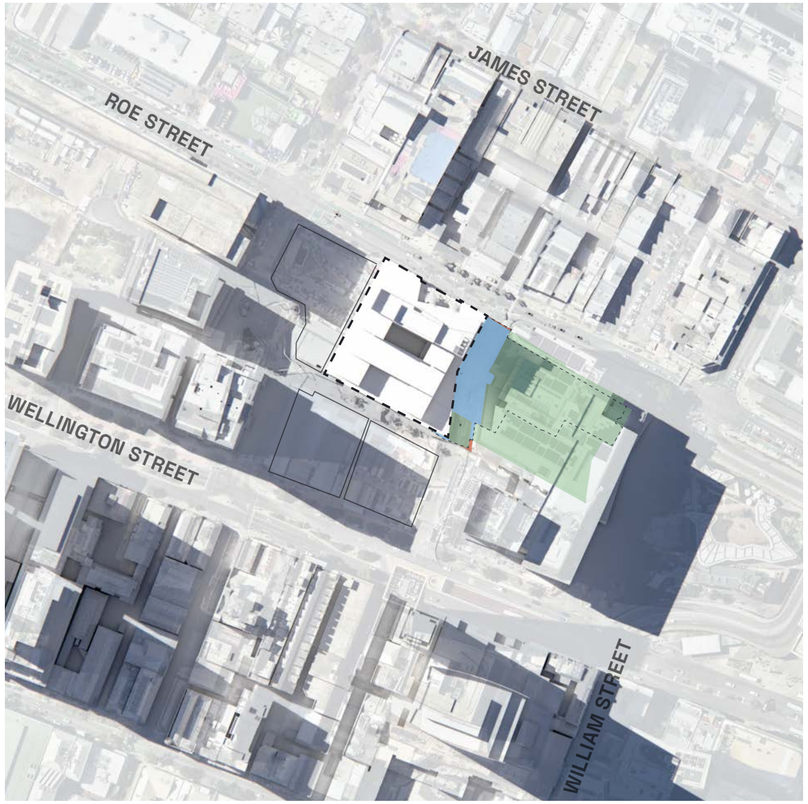
Amenity_

- Compliant envelope shadow
- Proposal shadow envelope
- Proposal shadow impact on public realm/undeveloped sites*
- Proposal shadow beyond compliant envelope



21 September
9am

21 September
12pm



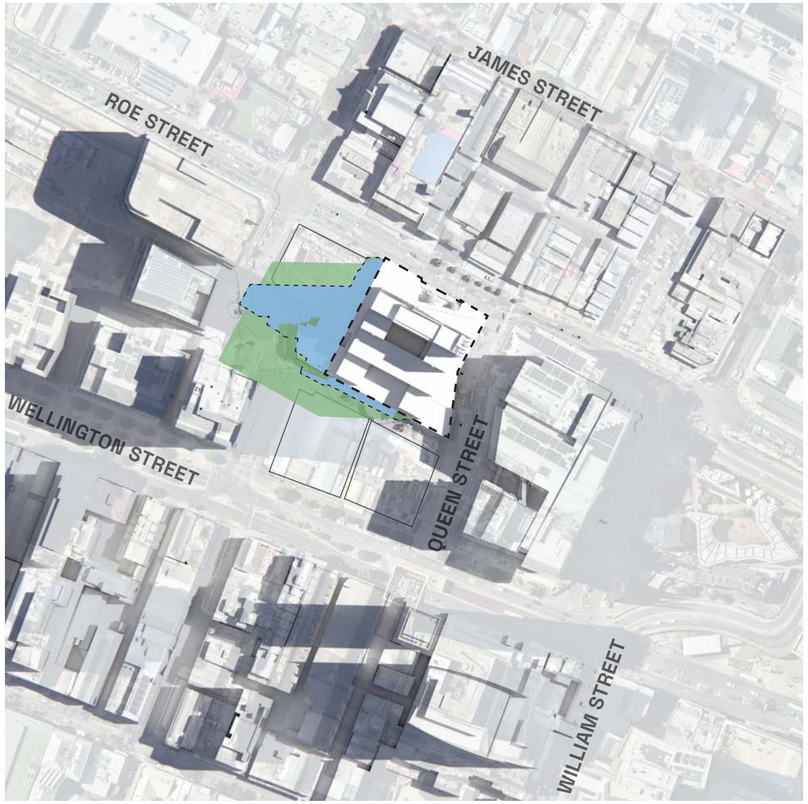
21 September
3pm

*Shadow on rooves and existing shadows excluded

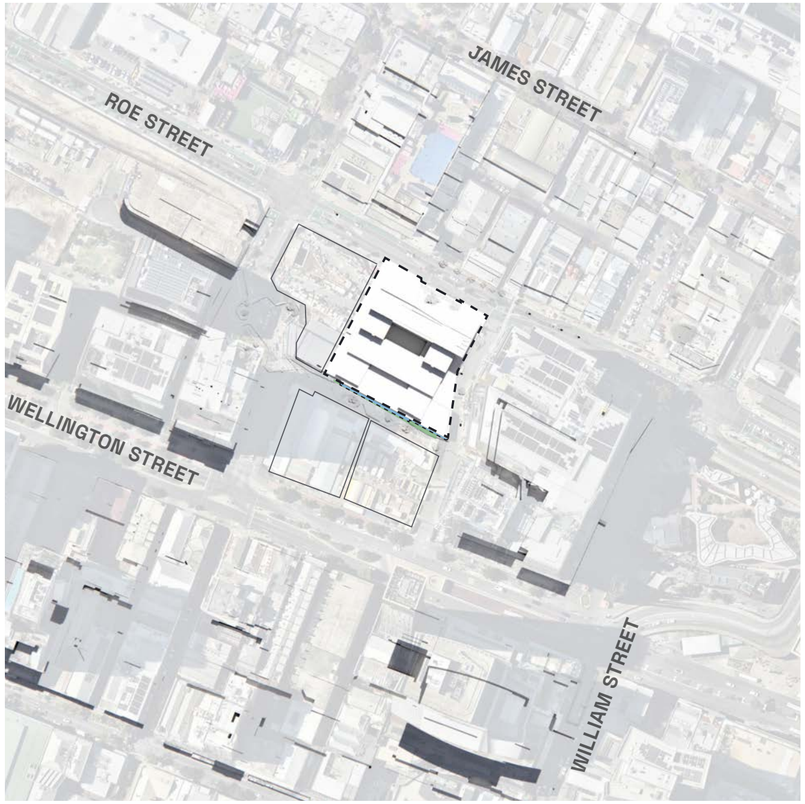
Built Form+
Scale_

Amenity_

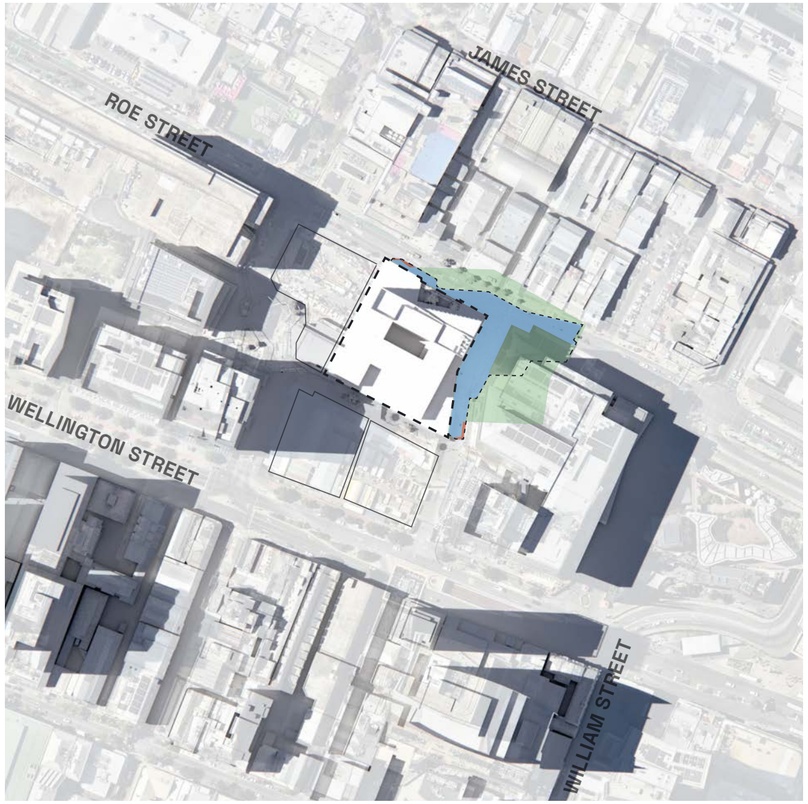
- Compliant envelope shadow
- Proposal shadow envelope
- Proposal shadow impact on public realm/undeveloped sites*
- Proposal shadow beyond compliant envelope



21 December
9am



21 December
12pm



21 December
3pm

*Shadow on rooves and existing shadows excluded

Amenity_

Legibility, Safety, Community_

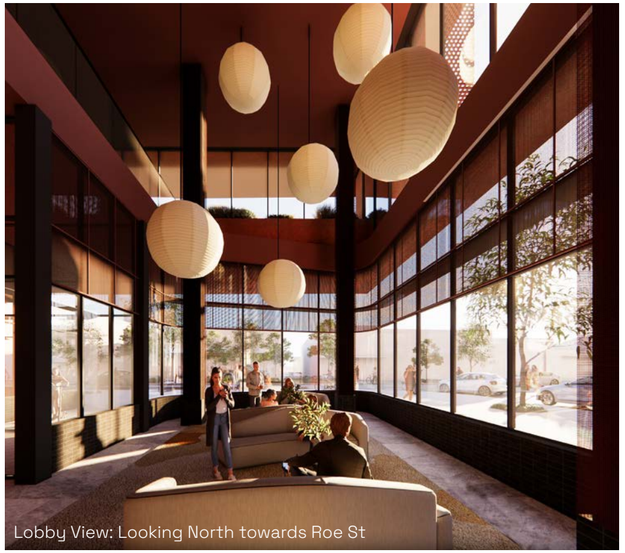
Ground Floor Amenity - Internal

The proposal is connecting to the street and precinct through active hospitality venues, affording a public face to the building and an additionally, informal study space for residents.

The voluminous lobby has clear sightlines to the street and facilitates impromptu interaction between residents, venue for pop up stalls or events. The lobby will be a space to wait for friends or in between classes at ECU.

Cafe View: Roe Street looking North towards the China Town gates

Lobby View: Looking South Towards Wellington St



Lobby View: Looking North towards Roe St

Amenity_

Legibility, Safety, Community_

Ground Floor Amenity - External

Proposal is sleeved with active edges, and public uses.

Roe Street program includes a cafe, convenience store and entrance to the residential lobby and lounge area.

Cafe View: Roe Street looking North towards the China Town gates

View: Roe Street cafe and lobby

View: Roe Street convenience store

Amenity_

Legibility, Safety, Community_

The proposal addresses all three street frontages as the mass steps down from Roe Street to Karak Walk.

Activated uses proliferate within the podium including opportunities for large format entertainment operators linking Yagan Square to Manatj Park F&B.


View: Queen Street, Central Bus Portal


View: Karak Walk looking North


View: Karak Walk Pedestrian Scale

Legibility,
Safety,
Community_

Aesthetics_

Public Art

Public art consultant will be engaged following DA submission, providing an opportunity for engagement with local and indigenous artists as the design develops.

The intention is for public art to be included in areas that are viewed from higher locations, beyond street level.

Locations identified for public art opportunities are diagrammed on the following page.

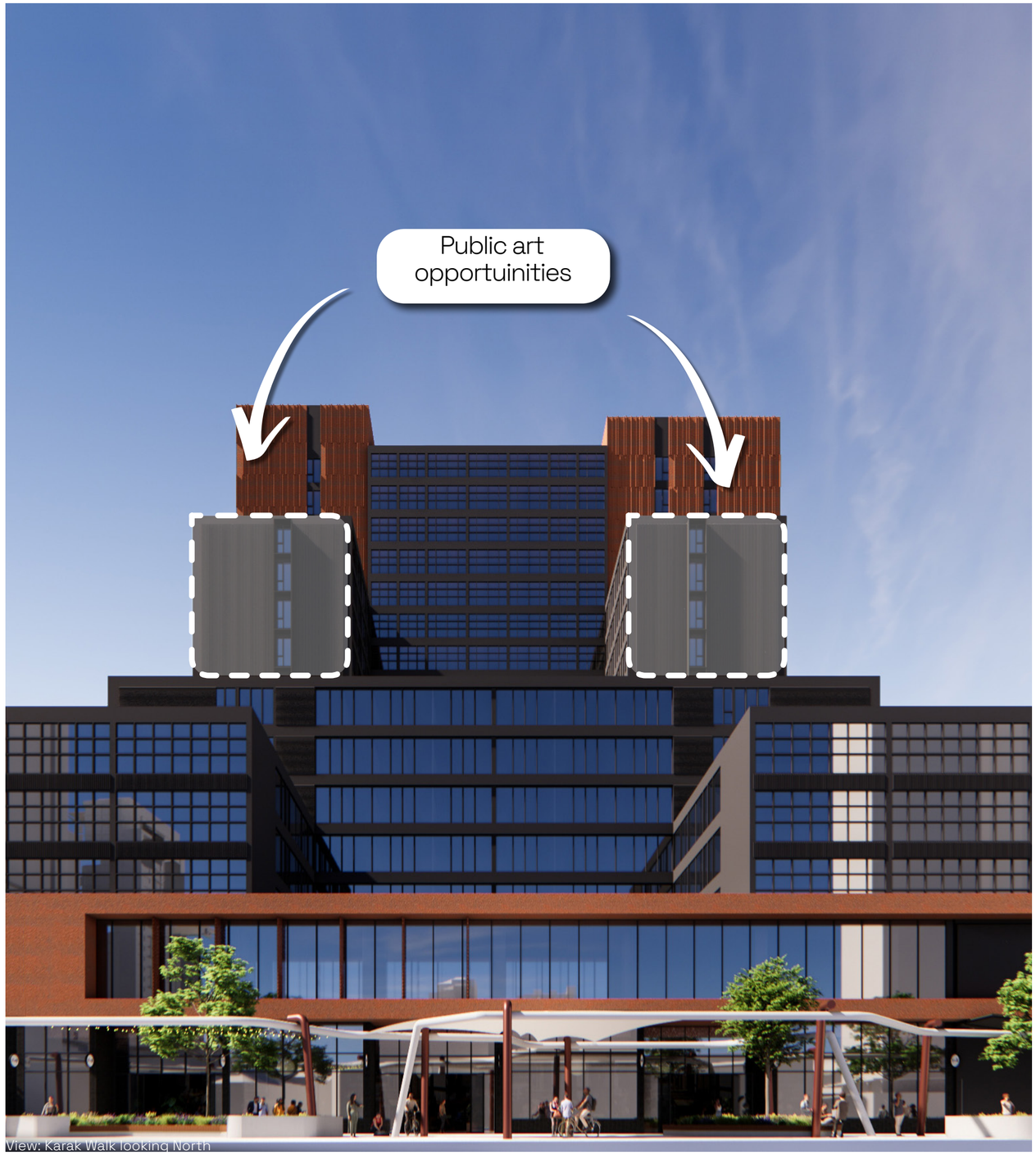

Jade Dolman


ROA


Stormie Mills


Kambarni

View: Roe Street looking South East

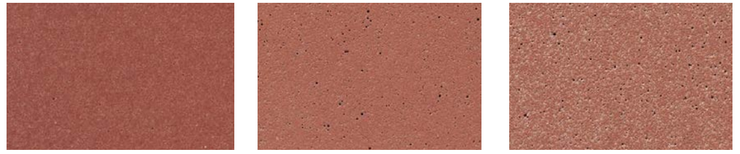


View: Karak Walk looking North

Aesthetics_

Exterior finishes

Boardering Perth CBD and Northbridge, a robust material selection appropriate for the proposal's highly urban environment is required. Facade treatment selected to be hard wearing, fade resistant and aesthetically pleasing.

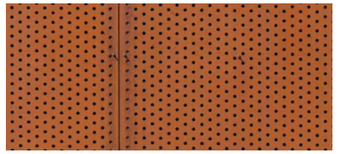
1

Glassfibre reinforced concrete with texture/colour variation

2

Glazing

3

Charcoal powder coated cladding

4

Perforated sun screening

5

Corrugated charcoal powder coated facade cladding

6

Matt charcoal subway tiles to stall risers

View: Queen Street looking West

Design Guidelines

The following table details the proposal's design response to Perth City Link Design Guidelines Objectives and Acceptable Development Criteria.

Perth City Link Design Guidelines and Responses

Name	Design Objective	Acceptable Development Criteria	Project compliance	Design Response
Cityscape	"Buildings make a positive contribution to the city skyline when seen at a distance and from approaches to the Perth CBD. Public domain and streets contribute to the landscape quality and character of surrounding areas providing positive interfaces, vibrant environments and strong visual and physical linkages between buildings and public spaces."	"• Streets, landscape and built form within the Project Area appropriately respond to the character and role of adjacent areas and streets within Perth City Link as well as in the adjacent CBD and Northbridge. • Tower elements of taller buildings are spaced to reflect the broader rhythm and spacing of towers within the city skyline breaking up the massing of building when viewed from a distance. • Buildings address internal streets as well as external streets, including Wellington Street, Roe Street, 'King Street', 'Queen Street' and 'City Walk' with activated frontages at street level."	Compliant	Compliant with all acceptable development criteria
Design Excellence	"Buildings and public realm demonstrate the 'Principles of good design' as defined by the Better Places and Spaces Policy and the Authority's design excellence strategy. Developments are designed in accordance with the Scheme Principles outlined in Chapter 2 of the Central Perth Redevelopment Scheme."	"• All new buildings and major additions (as determined by the Authority) are to be designed by Registered Architects. • All areas of public open space are to be designed by Registered Landscape Architects, or an Authority approved Designer. • Building and public realm designs are to demonstrate the 'Principles of good design' as defined by the Better Spaces and Places Policy including innovation and creativity, functionality and build quality, efficiency and sustainability and responsiveness to context. • Developments achieve the Scheme Principles as defined in Chapter 2 of the Central Perth Redevelopment Scheme by creating places for people, facilitating critical mass, demonstrating quality design, encouraging diversity, facilitating connectivity and designing for environmental integrity."	Compliant	Compliant with all acceptable development criteria
Key views and access	"Maximise legibility and visual linkages between the CBD and Northbridge, along 'City Walk' [Karak Walk] and to and from other prominent features with clear line-of-sight between activity points and major entries to and within Perth City Link. Perth City Link is designed to support pedestrians, cyclists and public transport users by promoting strong linkages to public transport and creating clear connections to other movement networks."	"• 'Primary Views' (as identified at Figure 6) represent major movement corridors through and around the site. These corridors signify key sightlines which will assist with wayfinding through the site, as well as preserving views and directing people to public spaces or destinations. Views are to be protected and maintained through setbacks and architectural treatment, with buildings offering visual permeability through the built form. • 'Terminating Views' (as identified at Figure 6) identify landmark buildings which are to be designed as significant architectural elements, act as wayfinding totems and create a terminating vista when approaching the Project Area. These locations should feature buildings that demonstrate exemplary design quality. • Buildings are designed to maximise visual permeability at street level. • Major entries to the site are marked through distinctive built form, through stepping built form back or providing generous access through or between buildings, in the form of arcades or unrestricted pedestrian passageways. • Infrastructure and movement network supports existing and future public transport routes and provides legible and accessible connections within Perth City Link for pedestrians, cyclists and public transport users to bus, train and light rail services."	Compliant	•One of the proposal's boundaries is along the Roe Street primary view. Zero setback podium reinforces this major movement corridor. • 'Terminating views' not applicable to this site. • Visual permeability at ground level with extensive full height windows and glass doors linking tenancies with street. • Distinctive access to site with recessed entries to tenancies. • Strong movement linkages are reinforced along adjoining movement networks along Karak Walk, Queen Street and Roe Street.
Land Use	"To provide a sustainable and vibrant land use mix throughout Perth City Link which achieves an appropriate balance of land uses across each site, Precinct and the Project Area as a whole to meet the needs of the community and assist in creating an activated and revitalised Perth. To deliver a significant residential component which will assist in increasing the population living in the inner city, promoting a revitalized city centre and facilitating the success of the commercial, retail, dining and entertainment land uses delivered in the Project Area."	"• A mix of permanent residential dwellings, hotel rooms and serviced apartments are to be provided within the Project Area in order to achieve a critical mass of people to generate a vibrant and successful inner city. Minimum requirements for each site are specified in Chapter 5 of these guidelines. Where approved by the Authority, dwelling numbers may be reallocated amongst sites, subject to demonstrating how the overall minimum dwelling requirements under the Design Guidelines will be delivered within the Project Area. • Ground floor development is to incorporate active land uses such as retail, dining and entertainment and residential / commercial lobbies, with residential and commercial uses located on upper levels. Uses within buildings abutting streets and other public spaces to incorporate 'active' ground floor uses that promote surveillance of the street and visible indoor activity. • A diverse range of residential, retail, commercial, education, cultural and leisure options are to be provided to meet community needs and to create opportunities for all types of people to live, work, play and visit the Project Area. • Land uses are to support day and evening activation, seven days a week. Mixed-use developments are to be delivered on each site, incorporating a variety of uses which promote daily and year-round activation."	Compliant	• Program type of student accommodation helps achieve critical mass ambitions of Design Guidelines. • Ground floor uses incorporate design guidelines preferred active land uses. • Tower is design guidelines preferred use residential. Student accommodation program type delivers a significant residential component which will assist in increasing the population living in the inner city. • Building program support 24 hour activation and use.

Perth City Link Design Guidelines and Responses

Name	Design Objective	Acceptable Development Criteria	Project compliance	Design Response
Dwelling Diversity	Residential developments shall provide a range and variety of dwelling sizes and types to support a variety of demographic backgrounds and evolving accommodation needs of residents in the Project Area.	"• Compliance with the Authority's Policy on Affordable and Diverse Housing. • Compliance with the Authority's Policy on Adaptable Housing."	Not applicable	Policy applies to permanent residential developments.
Sustainability	Perth City Link will incorporate best practice in urban sustainability with sustainable design elements integrated into the fundamental design, construction and management of individual buildings and the public realm.	"• Buildings and public open space will be designed to achieve Australian excellence for environmental sustainability through innovative design, construction and management. • Development is to be designed to reduce dependence on car use through promoting alternate modes of transport and providing opportunities to live, work and play within the Project Area. • Compliance with the Authority's Policy on Green Buildings with all development sites meeting the requirements of Tier 2 sites"	Compliant	• Commitment to 5 Star Green Star certified • Minimal car parking. Secure and convenient bike parking available for residents and commercial.
Streets	"Streets are welcoming spaces that give priority and comfort to pedestrians and are accessible to all. Streets are safe, promote walking and cycling, enable a vibrant community, are attractive to visitors and are of high quality and enduring design."	"• Streets are accessible and designed to prioritise key movements of pedestrians and cyclists with traffic calming to ensure vehicle movement is appropriately managed and consistent with the standards detailed in Figure 7. • Street trees, vegetation and landscaping deliver a high quality street character and provide shade and cooling. • Footpaths are designed to facilitate pedestrian movements, alfresco dining, accommodate street furniture, cycle parking and landscaping. • Continuous pedestrian awnings are provided to all primary streets and to activated frontages of secondary streets, except where identified under Chapter 5 of these guidelines. • Built form maintains continuity and alignment of the street, ensuring building frontages extend to the front boundaries of streets, physically define the space of the street and provide a sense of enclosure. • Way finding signage assists pedestrian and cyclist directional movement. The way finding signage or urban markers are built into the public realm through both landscape and built form elements. • Where developments are built to boundary and / or continuous awnings are provided for the length of the building frontage, vent points within buildings and awnings are to be integrated into the development to assist in the dispersion of gas should a gas leak occur from below ground infrastructure."	Compliant	• Vehicle access off Queens Street as per Figure 7 of the Design Guidelines. • Street trees, vegetation and landscaping deliver a high quality street character and provide shade and cooling. • Continuous pedestrian awnings are provided to all primary streets and to activated frontages of secondary streets • Built form maintains continuity and alignment of the street with nil setbacks • Consistent signage strategy for tenancies on ground floor

Perth City Link Design Guidelines and Responses

Name	Design Objective	Acceptable Development Criteria	Project compliance	Design Response
Public Open Space	"POS is designed to be fit for purpose, flexible and adaptable, meeting the needs of visitors, local residents and workers while facilitating social interaction. POS design is high quality, durable and sustainable and appropriate to its context in the Project Area and city centre."	"• Design of POS is informed by a Place Activation Strategy demonstrating the role of the POS in the context of the network of POS within Perth City Link and surrounding areas accommodating a range of uses and activities that are complementary within this city location. • POS is to be flexible and adaptable with power and water connections and storage provided to allow for a variety of uses and/or events. • Temporary use of suitable public spaces for alfresco dining is encouraged to activate the POS while maintaining pedestrian through connections and retaining flexibility to cater for events and activities. • POS provides opportunities for pedestrian access through the site as well as being a key destination in itself. • Opportunities for shade and weather protection through built or landscaped elements are incorporated into the site. • Key view corridors are reinforced through landscape design and grading of levels. • High quality hard and soft materials with low embodied energy, high recycled content, local provenance, high durability, long service life and low maintenance are used for landscape features, with the potential to incorporate local and regional materials to strengthen the urban character of the site. • Planting design and selection will be suitable to the Perth climate and generally employs low water use and low maintenance varieties, with consideration of adequate provision of shading and access to sun as required in the summer and winter months. • Planting installed to achieve a 25 percent tree canopy at 5 year maturity. • Trees are selected and located to minimise the penetration of tree roots into below-ground service infrastructure and buildings. A minimum tree root zone of 5m2 is to be provided. • Where appropriate, water for irrigation of landscaped areas is supplied from the Project Area through on-site stormwater and/or grey/black water retention and treatment. • Infrastructure for irrigation, maintenance and servicing of the public open spaces shall be consolidated and located to ensure ease of access but also to minimise the impact on the function, view corridors and aesthetics of the public open space. • Sustainable design of landscape incorporates measures to reduce ongoing maintenance, life cycle cost, minimise associated infrastructure requirements and integrate with the surrounding environment. • A Place Management Plan is to be provided, outlining agreed roles and responsibilities with regard to ongoing maintenance, management and activation of the space. • A report prepared by a qualified Access Consultant is to be provided, demonstrating compliance with the requirements of the Disability Discrimination Act 1992 and relevant Australian Standards. • Crime Prevention Through Environmental Design (CPTED) principles are embedded in POS design."	Compliant	No POS on site • Boundary condition has been considered and selection appropriate for durability. • Shade and weather protection is incorporated with continuous awnings on ground floor. • Refer Landscape Architect Report for species selection.
Public Art	Public art and interpretative elements are integrated within Perth City Link responding to its location, functions, history and indigenous and non-indigenous culture for the local community and visitors. Public art is integrated within the Development Application phase of all places or spaces within Perth City Link.	• Consistency with the Authority's Perth City Link Public Art Strategy.	Compliant	• Public art consultant to be engaged. • Elevations highlight proposed elevated locations for public art integration.
Safety	All developments are safe and secure for residents, workers and visitors and contribute to the safety of the public realm.	"• A report, prepared by an accredited Crime Prevention Through Environmental Design (CPTED) consultant, will be required to be submitted as part of the Development Application to confirm developments have been designed in accordance with CPTED Report Criteria: 1. Design principles of CPTED. 2. City of Perth's Planning Policy 'Designing out Crime'; and/or 3. Western Australian Planning Commission 'Designing out Crime Planning Guidelines'."	Compliant	• Secure after hours access control for residents • Passive surveillance from podium communal areas and residential rooms on to adjacent street • 24 hour use/activation
Solar Access	Developments are designed to minimise overshadowing impacts on the adjacent public realm and maximise sky views for pedestrians.	"• Maintain minimum levels of solar access into the public realm on 1 September as shown in Figure 8 (demonstrated through the submission of shadow diagrams). • Consider the impact of adjacent development on the public realm. The cumulative impact of shadow from all development should minimise impact on the public realm in accordance with Figure 8."	Compliant	• Building does not overshadow public realm (as per Fig. 8) • Tower form steps down to the south with bulk of structure pushed to the north, reducing overshadowing on southern lots.

Perth City Link Design Guidelines and Responses

Name	Design Objective	Acceptable Development Criteria	Project compliance	Design Response
Wind	Developments are required to minimise the impact of wind on the overall amenity of the public realm.	"• Design buildings and POS areas to take into account prevalent climactic conditions to achieve appropriate comfort levels for preferred land uses and surrounding public realm, particularly at ground and podium roof level: > Stationary long term refers to activities where people remain in the same location for 15 minutes or more e.g. alfresco areas, cafes, theatres and recreational playgrounds. Stationary long term acceptable criteria as outlined in Table 1 is to be achieved within Perth City Link for areas of POS and alfresco dining. > Stationary short term refers to activities where people remain in the same location for between 5 and 15 minutes e.g. window shopping, waiting in plazas and building entrances and is the minimum desirable target. Stationary short term acceptable criteria as outlined in Table 1 is to be achieved within Perth City Link along Primary Frontages (as defined in Figure 9) and on accessible podium and building roofs. > Walking refers to activities where people are neither in constant motion nor remain in the same location, like walking or cycling. Walking acceptable criteria as outlined in Table 1 is to be achieved within Perth City Link along Secondary Frontages (as defined in Figure 9) and areas in which people will be walking. • Engage a qualified wind consultant to undertake wind tunnel and / or computer model testing during Development Application and working drawings stages to avoid induced winds in the public realm. • A report, prepared by a qualified wind consultant or suitably qualified engineer, will be required to be submitted as part of any Development Application to confirm compliance with the acceptable environmental wind conditions. • Integrate wind amelioration strategies into the building design from Development Application stage to meet the relevant pedestrian comfort criteria for activity set out in Table 1. Use of 'add-ons' such as screening or landscaping to provide direct wind amelioration will only be accepted as a tool to fine tune the design at working drawings stage."	Compliant	• RWDI engaged. Wind Report submitted as part of DA package. • Recommended wind amelioration strategies incorporated. • Karak Walk POS is protected from wind downdraft with tower stepping design • Tower setback from podium level and stepping design ameliorates downdraft on street level

Perth City Link Design Guidelines and Responses

Name	Design Objective	Acceptable Development Criteria	Project compliance	Design Response
Built Form	"Building designs will embrace new environmental sustainability initiatives with innovative design that responds to site context. Buildings will be detailed and articulated on podium and street level to create a human scale pedestrian environment to break up long horizontal facades and provide visual interest. Buildings are to generate interesting, innovative and creative architectural expression through built form."	"• Maintain view corridors as shown in Figure 6. • Building design responds to the building's role in the wider cityscape and provides a transition from CBD to Northbridge streetscapes while providing a positive interface with the surrounding built form and public realm. • Building facades are to consider the alignment and proportion of neighbouring buildings and fit appropriately into the site and its context. • Developments on corner lots are to provide a legible and memorable experience. The developments are to acknowledge the intersection of the adjoining streets through their position and massing on the site. • Commercial tower floor plates are to be designed having regard for building bulk and scale. • Windows and glazed areas at ground level are to be clear with protection of windows from the sun or for privacy achieved instead through architectural devices and passive solar design. A high quality, innovative, imaginative and cohesive palette of materials are incorporated into the building design. • Modulation of facades into no greater than 30m sections between distinct design elements. • Lift over-run and plant structures are to be incorporated into the roofscape as an integral component of the building design. • Developments provide a universally accessible environment as an integral component of each building. • Provide functional private open space for individual dwellings in the form of balconies or an appropriate alternative, using an innovative design response. • Residential apartments are to be designed so that living areas and balconies have access to northern daylight and winter sunshine wherever possible together with natural cross-ventilation. • Provide appropriate shading to windows to minimise solar heat gain, considering orientation. • Common internal corridors shall have access to natural light and, wherever fire regulations permit, access to natural ventilation."	Compliant	• Primary view corridor long Roe Stret maintained and strengthened with zero setback podium. • Long horizontal facades broken up with visual interest, building articulation and architectural expression. • Consistent podium awning height with a secondary lower awning at human scale. • Roe Street and Queen Street intersection is softened with glass lobby facade at ground level. Proposal's architectural language is legible and memorable. • Windows and glazed areas at ground level are clear with protection of windows from the sun through awnings. A high quality, innovative, imaginative and cohesive palette of materials are incorporated into the building design. • Modulated facades with distinct design elements create a pedestrian environment and break up long horizontal facades. • Lift over-run and plant structures are incorporated into roof scape as an integral component of the building design with appropriate screening. • Integrated universal accessibility throughout building design. UATs provided in all communal amenities. • Communal area courtyard and terrace on Level 1, and a Roof terrace incorporated for resident use. • Residential apartments designed with access to daylight and winter sunshine wherever possible together with natural ventilation. • Building orientation and shading devices on windows minimise solar heat gain • Common internal corridors have access to natural light and access to natural ventilation.
Podiums	"Developments will exhibit a 'fine-grain' and 'human scale' character at podium and street level to ensure a quality street edge, the preservation of view corridors, reduce building bulk and massing and present a human scale to the adjacent pedestrian environment. Podium roofs are to be designed as accessible, functional and usable spaces for use by building residents and/or workers."	"• Building (podium) elements may occupy an entire development site, subject to publicly accessible circulation and connection spaces being provided and compliance with structural requirements for rail and bus tunnel structures below. Tower setbacks to podium elements are to be applied to all storeys above podium level, except where otherwise agreed by the Authority. • Podium facades will provide a fine-grained articulation of the architecture to create an interesting base for the towers above. • Development will provide a human scale to the adjacent public realm with height transition through podium design and setbacks to towers above. • Podium roofs are to be designed to provide accessible, functional and usable areas which respond to climactic conditions including 'green roof' access to northern sun where possible, while promoting surveillance of the street below. • Podium roofs to incorporate quality design elements and materials to ensure an appropriate outlook from towers above. • Podium and tower roofs should be designed to conceal unsightly rooftop plant equipment from view, and incorporate plant and lift overruns as an integral part of roof design."	Variation	• Podium roof is not accessible due to extent of roof design and safety issues related to student accommodation. Podium roof is designed with decorative green roof, providing a pleasant outlook for residents. While not accessible, the green roof provides visual amenity and interest. • Stepping tower roofs are designed to include decorative green roof terraces. • Compliant with all remaining Acceptable Development Criteria.

Perth City Link Design Guidelines and Responses

Name	Design Objective	Acceptable Development Criteria	Project compliance	Design Response
Setbacks	"Building setbacks will provide strong urban street spaces that create a sense of place, attract people into Perth City Link and ensure a level of privacy and inter-connectedness between buildings and the public and private domain. Towers are proportioned and separated to integrate with the existing Perth skyline whilst maintaining important view corridors and minimising overshadowing of neighbouring buildings and the public realm."	"• Except where necessary to allow sight lines through the site or to cater for alfresco areas, buildings should generally be located at a zero setback at ground level. • Buildings are designed to create a sense of openness and sky views along pedestrian routes. • Position and orient the tower element(s) to assist in wind amelioration to promote the use and enjoyment of the public realm and provision of accessible, functional and usable podium roofs. • Position the towers to integrate into the skyline and break up massing in accordance with Section 2.1.1 'Cityscape' of these guidelines. • Buildings optimise solar access to living areas and private open space. • Provide at least 20 meters spacing between towers (except where a reduced separation is permitted under Chapter 5 for a specific site) to secure outlook, daylight access and privacy."	Variation	• Buliding is generally located at a zero setback at ground level. • Tower massing broken up with stepping form to northern boundary - reducing overshadowing impacts to southern lots and creating sense of openness and sky views along Karak Walk and Roe Street pedestrian routes. • Building orientation to north east optimises solar access to living areas. • Wind downdraft to adjacent street public realm is ameliorated with stepping tower design and tower setbacks from podium. • Minor setback variation to Karak walk Level 2-4 and Queen St Level 2-19, to facilitate logical structural layouts. Overshadowing diagrams included in submission show negligible impact.
Bulding heights	Building heights conform to cityscape requirements, with articulated expression of height at key points to maintain view corridors, maintain human scale to pedestrian areas and achieve solar access to the public realm within Perth City Link.	"• Podium heights should relate to the width of the adjacent streets and comply with structural requirements of any rail and bus structures below ground. • Comply with maximum and minimum building heights as detailed in Chapter 5. • Maximum building heights are only permitted where all development criteria are met."	Compliant	• Podium height relates to width of adjacent streets and complies with structural requirements. • Podium and tower comply with building height.
Roof form	Roof forms are to form an integral aspect of the overall building design and create visually distinct elements which contribute positively to the city skyline.	"• Incorporate plant and lift overruns as an integral part of roof design. • Design to conceal unsightly rooftop plant and equipment from view. • Incorporate elements such as solar or wind collectors into an innovative building design. • New towers are to be designed to contribute positively to the skyline through distinctive shaping of the roof and upper floors of the building. • Incorporate external lighting and signage to accentuate the roof as part of an innovative, high quality building design. • Incorporate green roofs with accessible, functional and usable space."	Compliant	• Architectural expression of the stepping built form tower with integrated decorative roof gardens positively contributes to a distinctive city skline. • Screened plant decks conceal rooftop plants and equipment from view • Stepping tower roofs are designed to include decorative green roof terraces. • Accessible roof terrace and mini lounge included for residents. • Solar PV incorporated subject to roof infrastructure.

Perth City Link Design Guidelines and Responses

Name	Design Objective	Acceptable Development Criteria	Project compliance	Design Response
Active edges	"Buildings will provide a high level of permeability by incorporating pedestrian connections between development sites with lanes and passages ensuring excellent pedestrian access to the main public spaces and buildings within Perth City Link. Developments are to activate street frontages, lane frontages and public open spaces to create a vibrant, diverse, interactive and safe urban environment."	"• Maintain activation of buildings at ground floor level adjacent to internal streets and areas of public open space, consistent with Figure 9. > Primary frontages achieve a minimum of 80% street level activation. > Secondary frontages achieve a minimum of 50% street level activation. • All buildings are to be built to the edge of the property boundary, unless otherwise prescribed under Chapter 5. • All buildings are to incorporate multiple at grade pedestrian access points. • Ground level frontages may be activated through a variety of uses such as the provision of shop fronts, lobbies, operable doors and windows to cafes and restaurant entry doors. All glazed areas at ground level are to be visually transparent and non-reflective to promote interaction and surveillance between indoor and outdoor environments. • Upper level frontages may be activated through a variety of uses such as communal terraces, private balconies and/or windows which overlook streets and public open spaces. • Incorporate uses in podiums facing POS that will assist in passive surveillance of these spaces. • Ground floor parking is sleeved with active land uses. • Garage doors, car park entries and service areas will be integrated into building design and service areas screened from view. • Buildings are to incorporate innovative and creative design elements including entry canopies to accentuate entrances and provide a sense of identity to buildings and as points of orientation to the building. • A fine grain of permeability is to be achieved between, and where possible, within the building blocks. • Fencing to ground floor area facing streets or public open spaces shall be visually permeable to facilitate passive surveillance of the public realm. • Continuous awnings are to be provided to all primary streets and to activated frontages of secondary streets. • Provide visual and physical connections between the street and lobby spaces. • Inactive uses and expanses of blank walls at ground floor level are to be avoided. • Private open space within multiple dwelling sites shall be provided in the form of balconies or an appropriate alternative using an innovative design response to meet the following minimum criteria [see pg 42 of DGs]"	Compliant	All Acceptable Development Criteria achieved
Overlooking and views	Development will be designed to protect the amenity of residents, access to natural light and views and privacy through building design, setbacks and orientation.	"• Locate living areas, windows and private open spaces to minimise the potential for overlooking of adjacent private spaces. • Incorporate windows that overlook streets and other public spaces, especially at lower levels or podiums, to provide passive surveillance to the public realm. • Maximise views of the river, city or hills at upper levels through the location of windows and amenities. • Windows are to be designed (size, height and position) to minimise overlooking into private spaces and dwellings. • High quality screening measures shall be provided to living areas (external and internal) to prevent casual surveillance of adjoining lots. • Visual privacy measures are incorporated to protect residents' ability to carry out private functions within all rooms and private open spaces without compromising views, outlook, ventilation and solar access or the functioning of internal and external spaces."	Compliant	• Windows overlook Roe Street, Karak Walk and Queen Street, providing passive surveillance to public realm surrounding the proposal. • Residential rooms run the length of the north, east and south tower edges, with maximised views to hills, city and river. • Screening is designed into the facade as appropriate.
Universal Access	Development shall provide a universally accessible environment as an integral component of each building.	"• A report prepared by an accredited access consultant shall be submitted as part of any Development Application to demonstrate that all development proposals comply with the access obligations of the Disability Discrimination Act 1992 and all applicable Australian Standards. • Compliance with the Authority's Policy on Adaptable Housing."	Compliant	• DDA room included on all residential floors. • Universal accessibility is incorporated into the overall design. • Policy on Adaptable Housing applies to permanent residential developments, and is not applicable to this proposal. • Universal Access statement will be prior to building permit
Acoustics	Ensure all developments are designed and constructed to incorporate high performance acoustic attenuation measures and materials protecting the amenity of residents from the effects of noise and vibration associated with the inner city environment of Perth City Link.	Compliance with the Authority's Policy on Sound Attenuation.	Compliant	Marshall Day Acoustics DA Report included in DA submission.

Perth City Link Design Guidelines and Responses

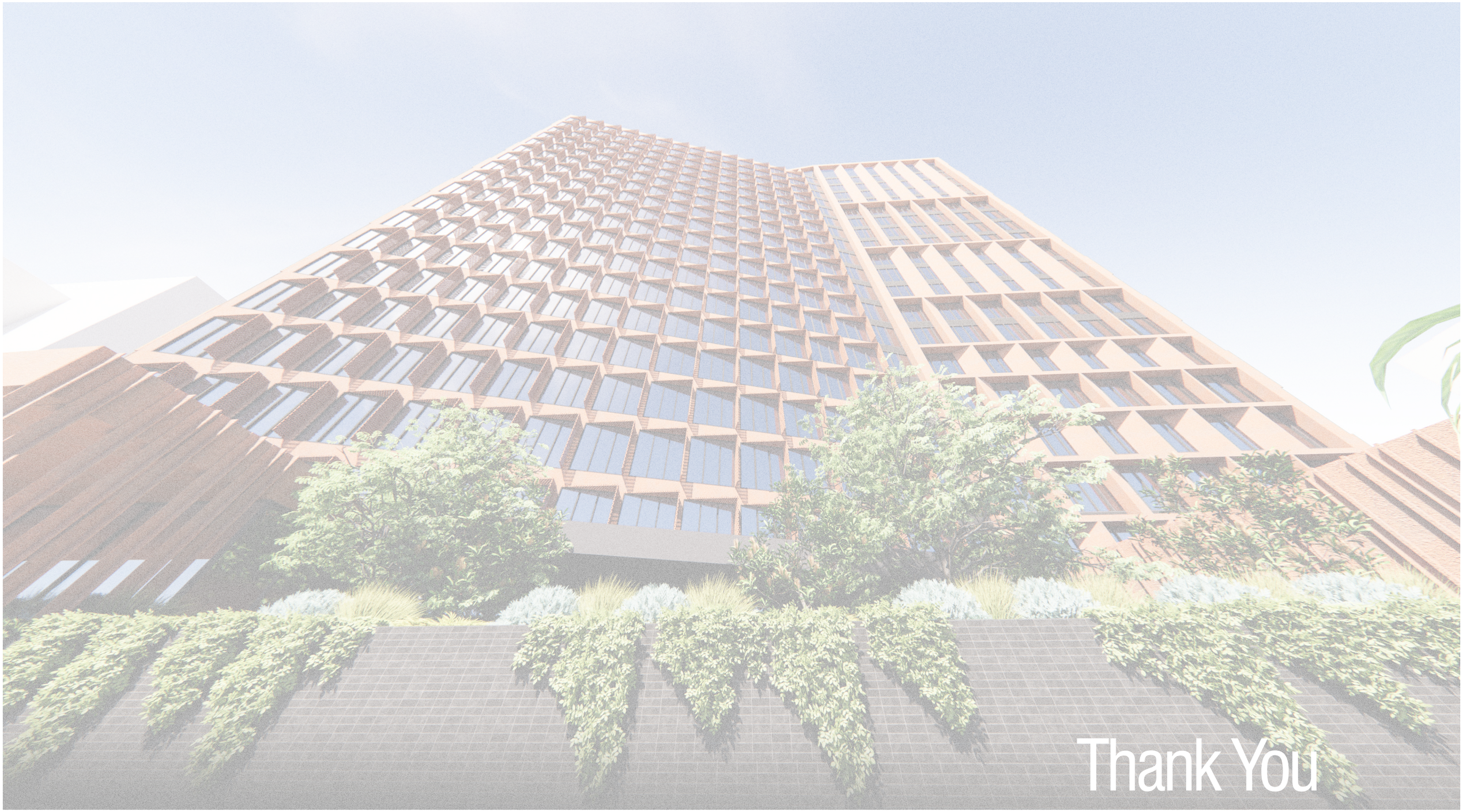
Name	Design Objective	Acceptable Development Criteria	Project compliance	Design Response
Signage	Signage is planned and integrated into the design of all new development to contribute to a sense of place and avoid visual clutter.	"• Incorporate creative building signage designs to help foster individual neighbourhood character. • Use signage to visually enhance street vitality, using corporate logos on the top of high rise buildings to add architectural interest and diversity to the skyline. • An overall signage strategy is to be submitted as part of any Development Application to demonstrate the building signage has been designed as an integral component of the building design. • Compliance with the Authority's Policy on Signage and the Authority's Policy on Additional Structures."	Compliant	• Consistent integrated signage strategy for all tenancies on ground floor. • Indicative signage locations identified in elevations. • Specific signage strategy subject to separate future application.
Car Parking	"Provide safe parking for residents and workers whilst limiting the number of car bays provided and promoting the utilisation of alternative modes of transport. Minimise the provision of ground level and above ground car parking and visual impact within developments and ensure parking structures are not visible from the public domain. Consider the potential for a Precinct-wide parking agreement where deemed appropriate by the Authority and the Department of Transport."	"• Parking shall be provided in accordance with the following table [Page 49 of DGs]: > Tenants: Perth Parking Policy > Residential: Maximum parking bays of 1 bay per dwelling, with averaging of residential bays across dwellings within a development considered where deemed appropriate by the Authority and where it can be demonstrated that there is no detrimental impact on design or traffic movement. Additionally, scooter/motorbike parking may be provided at a maximum rate of 1 bay per 10 car bays of the total parking bays permitted. > Visitor: Not required. • Pedestrian access to underground parking shall be provided within buildings and not within the public realm. • Provide well considered pedestrian access from the car park to lobbies, foyers and individual apartment entrances. • Design parking areas to assist with orientation, including directional signage. • All parking areas are to be designed in accordance with AS2890.1 and are to be well lit, safe and secure. • All non-residential parking bays are required to be licenced by the Department of Transport in accordance with the Perth Parking Management Act 1999. • Residential bays for Affordable Housing Units are to be provided at the same rate as bays for standard dwellings, unless otherwise agreed with the Housing Authority. • Provide alternative methods of parking to achieve greater efficiency from parking areas including shared use of parking bays between different land uses and the provision of 'car pooling' bays to decrease overall parking provision. • A Parking Management Plan is to be prepared and submitted as part of any Development Application proposing car parking. The plan is to detail the allocation, management and operation of any parking areas associated with the development. • Below ground car parking to be provided where site engineering permits, with multi-level basement parking considered subject to resolution of access, environmental and licensing matters. • Sleeve ground floor parking structures behind active uses, such as cafes / restaurants, shops and small scale offices. • Where parking is proposed to floors above ground level it shall be sleeved behind other uses such as offices and / or single aspect residential to primary frontages (as identified in Figure 9) or screened using innovative external wall detailing, patterning and/or vegetation (green wall) to diversify the building façade to secondary frontages. • Rooftop parking is to be avoided."	Compliant	Compliant with all acceptable development criteria

Perth City Link Design Guidelines and Responses

Name	Design Objective	Acceptable Development Criteria	Project compliance	Design Response
Bike Parking	Developments are required to provide safe and secure bicycle storage and end-of-trip facilities to encourage alternative methods of transport to the private motor vehicle.	"• Provide secure bicycle parking and end of trip facilities in accordance with the table [pg. 51 of DGs]: >Commercial: secure bike storage for 10% of building staff (1 person/15sqm). - There must be a minimum of two female and two male showers, located in separate changing rooms, for the first 10 bicycle parking bays. Additional shower facilities to be provided at a rate of one male and one female shower for every 10 bicycle parking bays; and - Changing areas are to be provided with secure lockers at 1 for each bicycle, including / in addition to drying areas / racks; and - A minimum of 1 space per 750m2 of NLA. Located and signed near the main public entrance to the building. > Residential: Bicycle parking facilities for multiple dwellings, short-stay accommodation and serviced apartments shall be provided at a minimum of 1 bay for every three units. Note: Multiple dwelling residential developments are not required to provide end of trip facilities (showers/lockers/changing facilities). • Bicycle parking facilities are to be designed, located and constructed in accordance with the Australian Standards. • Changing rooms must be secure facilities capable of being locked and located adjacent to the showers in a well lit area. • Lockers should be well ventilated and be of a size sufficient to allow the storage of cycle attire and equipment. • The end of journey facilities are to be located as close as possible to the bicycle parking facilities. • Bicycle parking and end of trip facilities are to be provided in a safe, secure and accessible location, with a clear path of travel to the facilities. Where facilities are not provided at ground level, a separate lift or clearly marked access path will be provided for cyclists to upper or lower levels (including basement parking areas), minimising opportunity for conflict between cyclists, vehicles and pedestrians."	Variation	• Residential bike parking is provided in a safe and secure bike cage at a ratio of more than 1 park per 10 beds. Based on operator feedback for this program type, 10% bike parking is sufficient. The proposal is also located in close proximity to central train station and bus ports. • Bike parking composition will include space for private bikes and operator provided shared bikes. • Compliant with all remaining acceptable development criteria.
Vehicle Access	Ensure that the parking location, access and circulation does not dominate streetscapes, compromise pedestrian or cyclist safety or create conflict between pedestrians, cyclists and/or other vehicle movements.	"• A Traffic Impact Assessment compiled by a qualified traffic engineer is to be submitted as part of the Development Application. The report should make reference to the location of the primary and secondary frontages identified at Figure 9 and identify the main vehicle, bicycle and pedestrian routes through Perth City Link in accordance with Figure 7. • Vehicle access is to be designed as an integral component of the development and incorporate into the design treatment of the streetscapes. Integrated vehicle access gates should not detract from the architectural character of the streetscape or the visual quality of the buildings. • A Service and Delivery Access Plan is to be provided as part of the Development Application. The plan is to detail the use of any loading areas, including reversing vehicle movements and management."	Compliant	• Narrrow vehicle access off secondary frontage of Queen Street mazimises active edges. • Integrated vehicle access garage doors maintains building architectural language and does not detract from the architectural character of the streetscape.

Perth City Link Design Guidelines and Responses

Name	Design Objective	Acceptable Development Criteria	Project compliance	Design Response
Building Services	"Ensure that services and related hardware required for the function of buildings are located and designed to minimise impact on the amenity of buildings and the public realm and are designed to meet changing needs over time. Ensure that servicing, delivery and waste management is planned and co-ordinated as an integral component of the design, development and management process."	"• Where site engineering permits, developments are encouraged to be designed to facilitate below ground building service infrastructure and service and delivery access to minimise impact on the amenity of the public realm and maximise activation at ground level. • Street level service and delivery access is to be provided within the development site and integrated into the design of the development with minimum activation of frontages being achieved in accordance with Figure 9. • Infrastructure including fire booster hydrants, power transformers, gas and water equipment is to be wholly contained within development lots and fully integrated into the development to minimise any visual impact on streetscape. • Air conditioning units must be appropriately screened from the street and adjacent buildings and must not be located where they will be visible above the roof line of buildings. • All piped and wired services are to be concealed from public view. • Where possible, provide outdoor clothes drying areas to minimise the need for clothes dryers (and therefore reducing energy consumption). Outdoor clothes drying areas should be screened from view of public areas such as the street, footpaths, or from outside Perth City Link. • Commercial utility and waste storage areas shall be screened from view of public areas and sensitive uses such as residential apartments. • Connection points for all services are to be clearly marked in a way that is consistent with the architectural treatment of buildings. • The visual impact of services should be minimised. Where public visibility by service authorities is not explicitly required, services are to be screened or concealed from public view. Fire booster cabinets are to be screened from public view or integrated within the design to minimise visual impact. • A Waste Management Plan is to be prepared in conjunction with the City of Perth and submitted as part of the Development Application. Refuse storage and collection facilities are to comply with the requirements of the City of Perth. • Ensure that on-site waste management and hygienic storage facilities are considered in design, taking into account the need for easy access for drop off and collection, that limits pedestrian and vehicle disruption. • Plan kitchens and waste storage / collection areas to allow sorting of waste for recycling purposes. • Consider installing internal waste chutes in residential apartments to facilitate and encourage recycling. • Provide secure and accessible facilities for mail delivery and parcel drop off. • Compliance with the Authority's Policy on Additional Structures."	Compliant	• Below ground infrastructure and servicing not permittable on this site. • Infrastructure including fire booster hydrants, power transformers, gas and water equipment are located internally to maximise public amenity and street frontage at ground level • Air conditioning units are located on the roof level and screened from the sides and above. • Commercial utility and waste storage areas are located internally, with access off the back of house/ parking area. • Any street facing service doors are integrated into the building's architectural language and clearly labeled. • Internal waste chutes for refuse and recycling are provided on every residential floor. • Secure and accessible parcel lockers are provided in the ground floor communal lounge adjacent to entrance lobby and reception. • Waste Management Plan attached to DA submission details waste management. • All piped and wired services are to be concealed from public view. • Outdoor clothes drying not appropriate for this building typology. Mechanical dryers will be provided.
Storage	All residential apartments are provided with adequate storage facilities.	"• All residential units are to be provided with an external store room with a minimum area of 4m2 and a minimum internal dimension of 1.5m and minimum height of 2.2m. • Storage facilities are to be located external to the dwelling. • Storage facilities can incorporate space for bicycle parking; these stores should have a minimum dimension of 2.2m, a minimum height of 2.2m and an internal area of at least 5m2. • Provide well lit, safe and secure storages for each development."	Not applicable	Student accommodation is temporary and furnished.


Thank You