

MACQUARIE CENTRE REDEVELOPMENT STAGE 1 CONCEPT DEVELOPMENT APPLICATION

URBAN DESIGN REPORT



MACQUARIE CENTRE STAGE 1 DEVELOPMENT APPLICATION

URBAN DESIGN REPORT

Prepared by Allen Jack+Cottier on behalf of AMP Capital Investors Limited



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04.12.15	1	Stage 1 DA Submission - Test of Adequacy	IH	JV
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Images presented within this report are indicative only and subject to change.

01 EXECUTIVE SUMMARY	5		
PURPOSE OF THE REPORT	6	COMMUNITY OPPORTUNITIES	39
SITE DESCRIPTION	6	PUBLIC ART	39
DEVELOPMENT PROPOSAL	7	TALAVERA ROAD - STREET FRONTAGE	40
VISION	7	WATERLOO ROAD - STREET FRONTAGE	41
02 ANALYSIS	9	TOWERS	42
LOCAL CONTEXT	11	PODIUM GARDENS	43
PLANNING CONTEXT	12	TOWER USES	44
SITE CONTEXT	14	05 IMPACTS	47
ENVIRONMENTAL CONDITIONS	16	DESIRED FUTURE CHARACTER	48
EXISTING ACCESS	17	PUBLIC DOMAIN: ACTIVATION + ACCESS	49
EXISTING CENTRE	18	HEIGHTS, SETBACKS + SEPARATION	50
OPPORTUNITIES + CONSTRAINTS	20	BUILDING ENVELOPES	51
CONSIDERATIONS FOR FUTURE DEVELOPMENT	21	VISUAL IMPACT	52
03 PRINCIPLES	23	SOLAR ACCESS	56
SENSE OF PLACE	26	06 SEPP65 ASSESSMENT	59
APPROACH + MOVEMENT	27	DESIGN PRINCIPLES	60
DIVERSITY + ADAPTABILITY	28	APARTMENT DESIGN GUIDE OBJECTIVES	65
LEGIBILITY	29	07 APPENDICES	71
04 CONCEPT	31	APPENDIX 1 - ENVELOPES FOR APPROVAL	73
SPATIAL RELATIONSHIPS	33	APPENDIX 2 - ILLUSTRATIVE CONCEPT	76
STATION PLAZA	34	APPENDIX 3 - INDICATIVE STAGING	95
HERRING ROAD - STREET FRONTAGE	36		
ATRIUM	37		
RETAIL	38		

01 EXECUTIVE SUMMARY

01 EXECUTIVE SUMMARY

PURPOSE OF THE REPORT

This report has been prepared by Allen Jack+Cottier (AJ+C) on behalf of AMP Capital Investors Limited (AMPC) in support of a Stage 1 Development Application (DA) for the mixed use redevelopment of Macquarie Centre. The Stage 1 DA seeks concept approval for the redevelopment of Macquarie Centre by establishing:

- + Building envelopes and design parameters for future development on the site, including the proposed uses within the podium and tower components.
- + The distribution of floor space across the site.
- + Future pedestrian and vehicle connections to and within the site.

This report supports the proposed future development of Macquarie Centre in relation to urban design, indicative concept design, solar and visual impacts, SEPP65 compliance and architectural drawings.

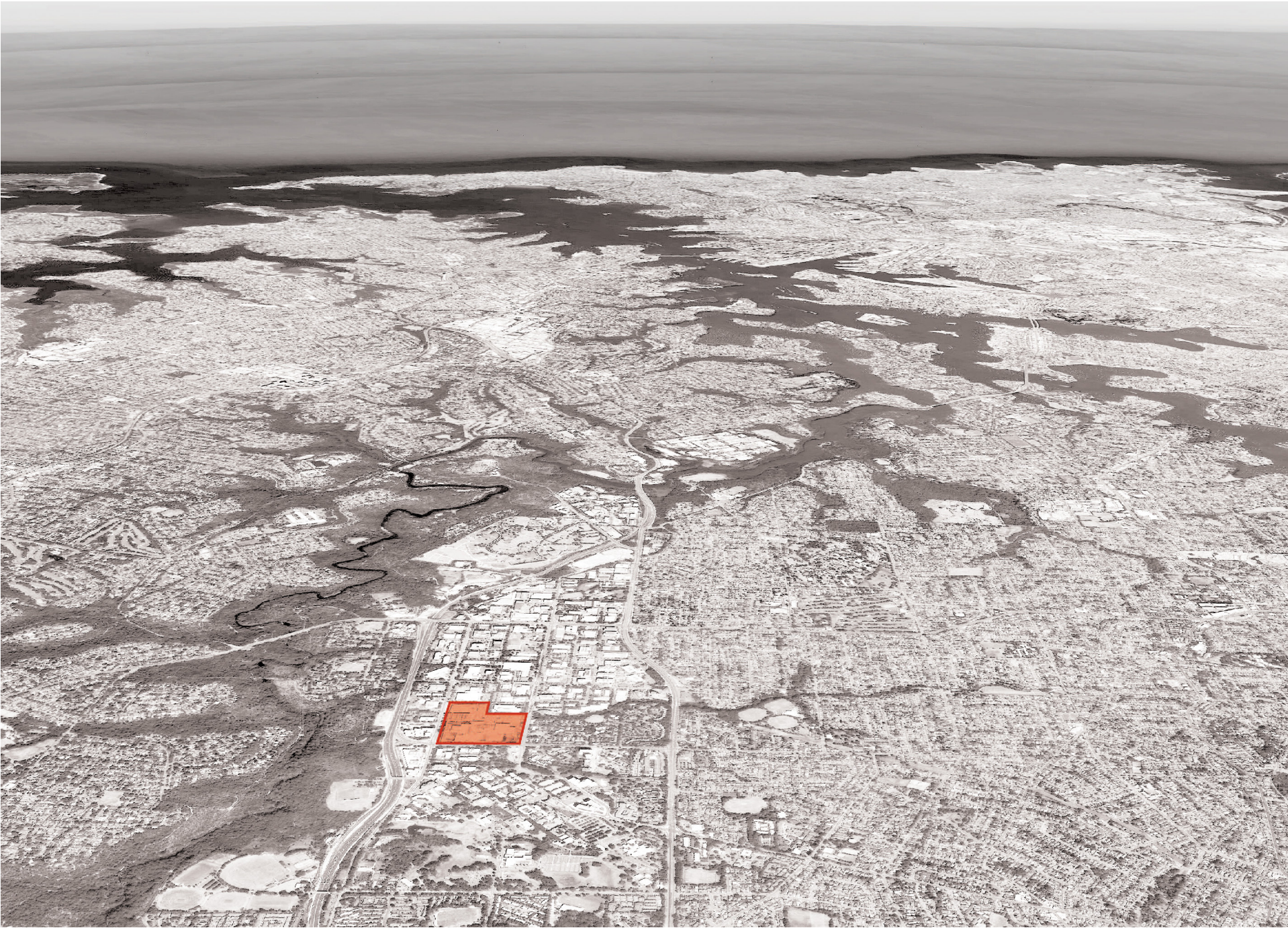
SITE DESCRIPTION

Macquarie Centre is approximately 11.25 hectares in area and is located at the corner of Waterloo Road, Herring Road and Talavera Road, Macquarie Park. The site is legally described as Lot 100 in DP 1190494.

The site is bound by Herring Road to the north west, Talavera Road to the north east, commercial uses to the south east and Waterloo Road to the south west. Located within the Macquarie Park Corridor, the site has excellent access to public transport, situated immediately adjacent the Macquarie University Railway Station and the Herring Road Bus Station. Located between the M2 Hills Motorway and Epping Road, the site also enjoys excellent vehicle connectivity.

Macquarie Centre was originally constructed in 1981. The centre has undergone various stages of redevelopment and extensions. A major refurbishment occurred in 2000, 2003 and most recently in 2014, creating a fresh food court, the addition of a new full line David Jones department store, a second full line supermarket (Coles), a value supermarket (Aldi), with new speciality food and convenience stores. Today Macquarie Centre is the largest shopping centre in NSW and the 8th largest shopping centre in Australia and includes a wide range of retail, entertainment and service offerings.

The shopping centre currently spans five levels accommodating 368 stores, including major retailers such as David Jones, Myer, Target, Big W, Aldi, Coles and Woolworths. The centre also houses a large number of mini major international retails stores including H&M, Zara, Uniqlo, Forever 21, GAP and Sephora. A number of entertainment offerings exist in the centre including a cinema complex and ice skating rink. The site currently has a gross floor area of 170,850m2 and accommodates 4,755 car spaces.



Aerial showing location of Macquarie Centre in relation to the Macquarie Park Corridor and greater Sydney

“Our vision is to transform Macquarie Centre into a world class centre of discovery and innovation where people shop, play, live and work. Macquarie Centre will incorporate quality retail, lifestyle and leisure offers, civic and community uses, as well as commercial, residential and retail components with improved connection to transport infrastructure.”

AMPC - Vision for the Future of Macquarie Centre

DEVELOPMENT PROPOSAL

The Stage 1 DA seeks concept approval for the mixed use redevelopment of Macquarie Centre under s.83B of the Environmental Planning & Assessment Act 1979.

The first stage will seek concept approval only for:

- + Mixed use development to enable a range of land uses. The final mix of land uses will be subject to and determined under the relevant Stage 2 detailed DAs.
- + Building envelopes for the proposed basement, expanded podium and tower forms.
- + The four tower envelopes fronting Herring Road will have maximum heights ranging from 90m and 120m above existing ground level. The building envelope for Tower 1 is of sufficient dimensions to accommodate alternate tower forms.
- + Maximum additional gross floor area (GFA) of 148,000sqm.
- + The new podium along Herring Road will replace the existing structure. This will provide an active frontage with separate pedestrian entries to Herring Road and the creation of a vibrant atrium space.
- + The creation of ‘Station Plaza’ between the train station and shopping centre, framed by active uses and a landmark building known as the “Shard”.
- + The building envelopes for the proposed basement and upper levels of the expanded podium will accommodate a maximum of 2,175 additional car spaces.
- + New vehicle and pedestrian access points.

The Stage 1 DA does not seek approval for :

- + Any works, including demolition, excavation, construction and public domain improvements.
- + The final arrangement of land uses.
- + Layout, mix and number of residential units.
- + A specific number of car spaces (as this will be determined having regard to the final mix of land uses).
- + The design of the building exteriors including façades and roofs.
- + Public domain and landscape design.

Such approvals will be sought via subsequent development applications following receipt of development consent for the Stage 1 DA.

VISION

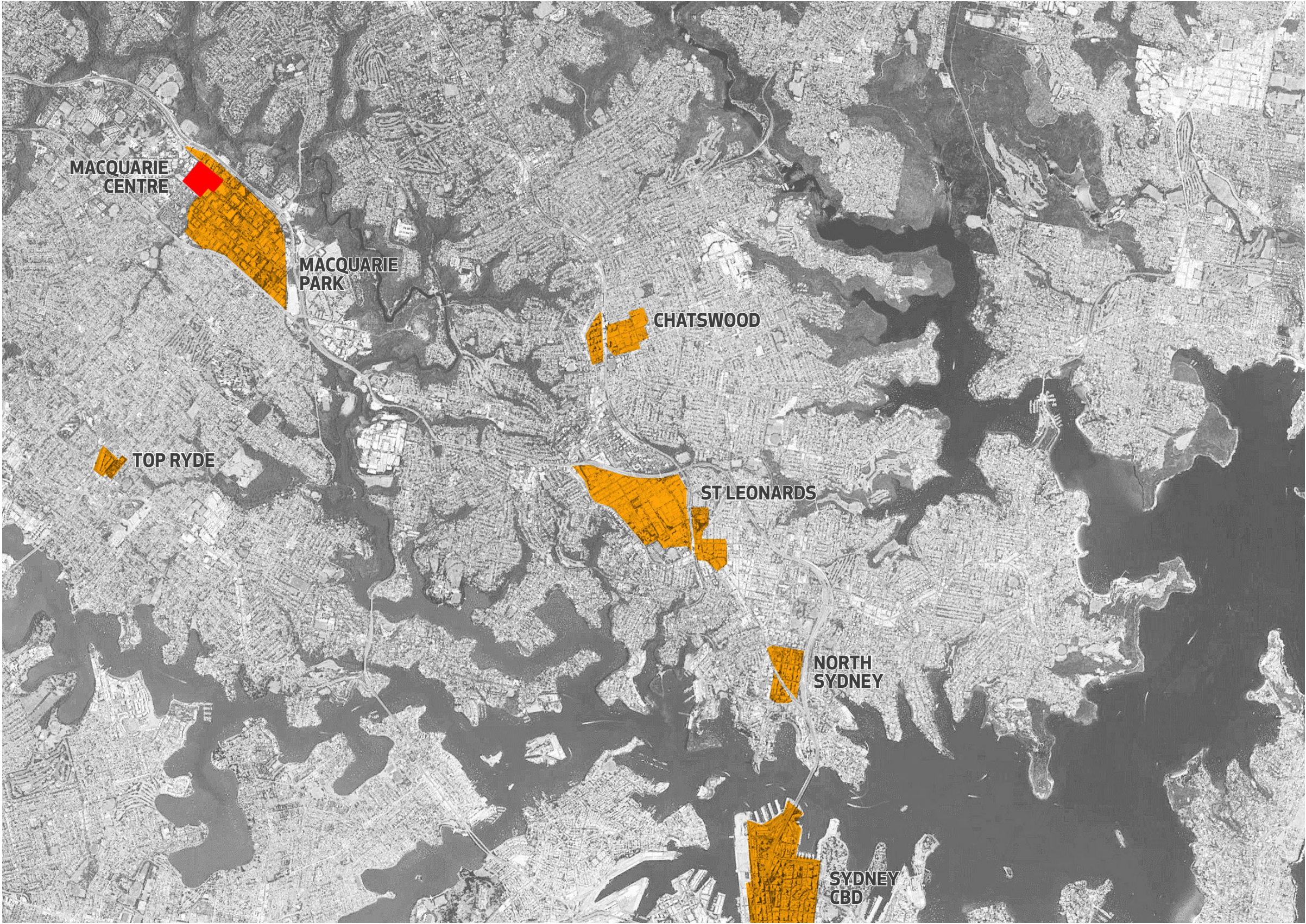
AMPC has been working in consultation with the Department of Planning and Environment and Ryde Council since early 2013 to investigate opportunities for a mixed use development on the Macquarie Centre site in accordance with their long term vision. The vision considers the changing nature of retail, surrounding urban context and planning policies implemented by both the NSW state and local governments.

Key design principles include:

- + Sense of Place
- + Approach and movement
- + Diversity and adaptability
- + Legibility

All of the above work to provide a strong identity for Macquarie Centre and the wider Macquarie Park area. The Stage 1 DA provides the platform to make Macquarie Centre the destination and heart of the wider area enabling opportunities to create landmark places and enhanced environments increasing investment into the wider Macquarie Park. This is consistent with the principles of the NSW Government Macquarie University (Herring Road) Priority Precinct.

02 ANALYSIS



Macquarie Centre, shown in red, in relation to the wider Sydney Context. Significant centres shown in orange





The Site

Macquarie Centre is located within the Macquarie Park Corridor, approximately 15km from the Sydney CBD. It has nearly one kilometre of street frontage along Talavera, Herring and Waterloo Roads combined. It sits amongst a diverse set of surrounding environs including; the Macquarie University campus, existing as well as more recent residential development, a campus style commercial/business area, and the public transport node of the Macquarie University Train and Herring Road Bus Stations.

The immediate context of future development in the Macquarie Park Corridor places emphasis on the nature of development and activation along Herring Rd, to which Macquarie Centre's main pedestrian access connects. The 345m of Herring Rd frontage (355m when measured kerb to kerb) is bookended to the south-west by the intersection with Waterloo Rd and its two train station entries, and to the north east by the overpass entry to the site and the on/off ramps to the M2 motorway from Talavera Rd.

The road network of the Macquarie Park Corridor also generates the orientation of the site, so the Herring Road frontage faces north-west. Herring Rd itself follows a ridge line from Epping Rd to the site, which establishes the topographical context that has driven the operation of Macquarie Centre. The ridge line offers the most suitable grading for pedestrian access to the site and the proximity to the university campus creates a node of activity for public transport and pedestrian movement along and across Herring Road.

Waterloo and Talavera Roads present significant grade changes as they fall away from the ridge line towards Shrimptons Creek. Both street frontages provide pedestrian access to the site as well as the majority of car and service vehicle access points particularly to the lower levels of the existing retail centre.

02 ANALYSIS

PLANNING CONTEXT

A PLAN FOR GROWING SYDNEY

Macquarie Park features significantly in the NSW Government’s metropolitan strategic plan to 2031, *A Plan for Growing Sydney* (December 2014).

This plan identifies Macquarie Park as a strategic centre within the Global Economic Corridor. The plan defines a strategic centre as a priority location that either currently has or is planned to have at least 10,000 jobs. Macquarie Park is envisaged as a major generator of economic growth and one of the main destinations for employment, retail, housing, services and mixed-use.

The following directions are applicable to the site:

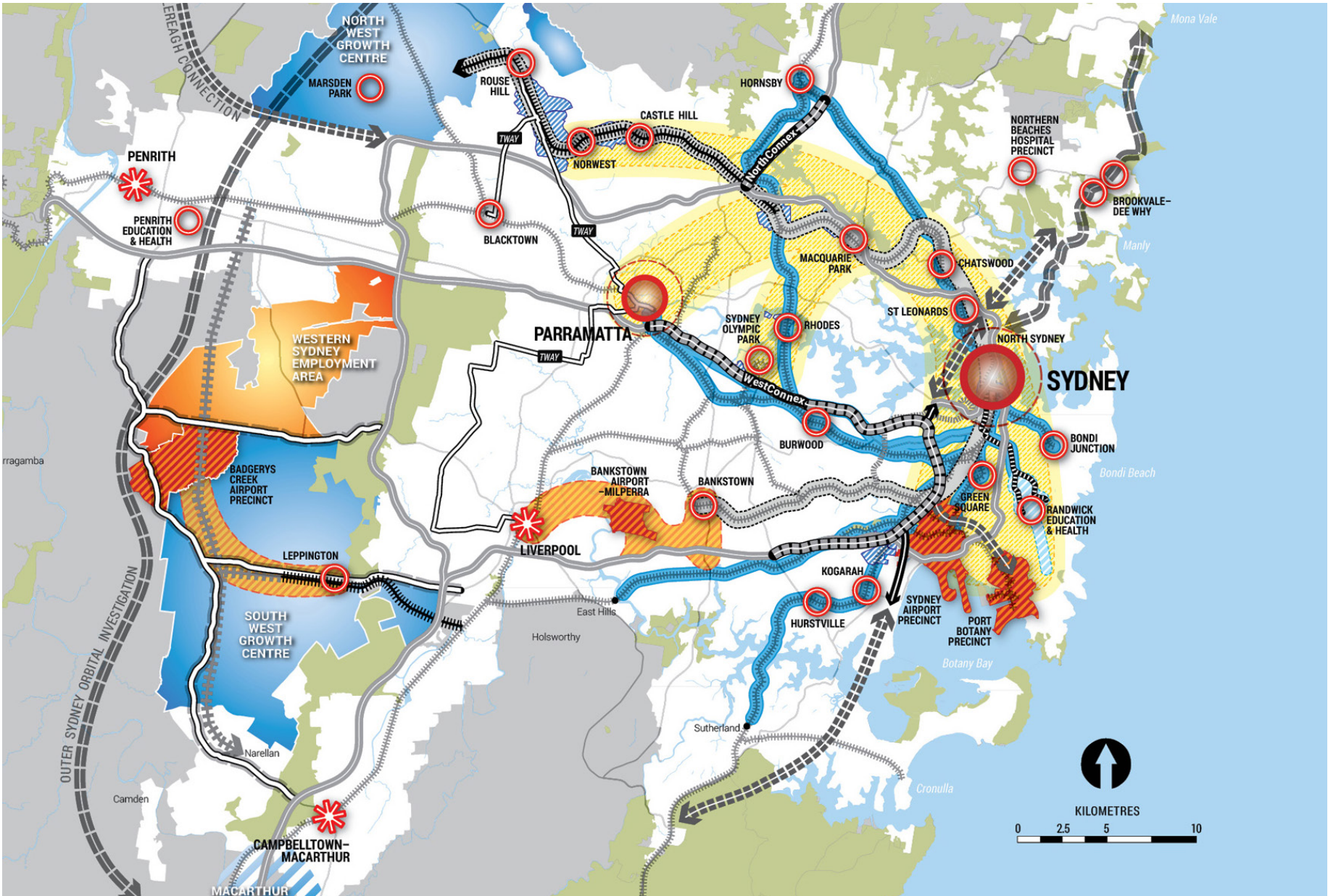
- + Expand the Global Economic Corridor;
- + Accelerate housing supply across Sydney;
- + Accelerate urban renewal across Sydney - providing homes closer to jobs;
- + Revitalise existing suburbs

MACQUARIE UNIVERSITY STATION (HERRING ROAD) PRIORITY PRECINCT

Macquarie Centre is located in the Macquarie University Station (Herring Road) Priority Precinct. It is expected that the Priority Precinct will accommodate an additional 5,800 new dwellings by 2031. The vision for the precinct includes the following:

“By 2031, the Herring Road precinct will transform into a vibrant and walkable transit-oriented centre, vital to the evolution of Macquarie Park. Herring Road will increase the supply and mix of housing to ensure more people can benefit from the diversity of Macquarie Park’s local job market and world-class education opportunities. Building on its existing business, retailing and educational success Herring Road will attract more people to live, study and work in the area”.

The Stage 1 DA is entirely consistent with the vision of the precinct. The Stage 1 DA will enable Macquarie Centre to contribute to increasing the supply and mix of housing within the precinct.



Connecting Jobs & Homes [Source: Figure 4 from A Plan for Growing Sydney]

CBD	Western Sydney Employment Area	Inner West Light Rail	Motorway
Regional City Centre	Global Economic Corridor	CBD & South East Light Rail	Motorway Expansion
Strategic Centre	Transport Gateway	Rail Network	Proposed Motorway Extension
Growth Centre	Enterprise Corridor	Sydney Rapid Transit	Road/Motorway Investigation
Urban Investigation Area	Metropolitan Urban Area	Rail Network Expansion	Transport Investigation
Priority Precinct	Metropolitan Rural Area	SWRL Extension Investigation	
Urban Renewal Corridor	Parks & Reserves	Road Upgrade	
Local renewal opportunities yet to be identified	Waterway	Bus Transit Way	

Refer to Statement of Environmental Effects for more detail



Future Character of Herring Road UAP [Source: Herring Road, Macquarie Park: Urban Activation Precinct Proposal - NSW Department of Planning & Environment]

LOCAL ENVIRONMENTAL PLAN

The principle development controls as set out in the Ryde Local Environmental Plan (LEP) 2014 are described below.

Land Use Zoning

Zone B4 - Mixed use.

The objectives of this zoning are:

- + to provide a mixture of compatible land uses
- + to integrate suitable business, office, residential and other development in accessible locations so as to maximise public transport patronage and encourage walking and cycling
- + to ensure employment and educational activities within the Macquarie University campus are integrated with other businesses and activities
- + to promote strong links between Macquarie University and research institutions and businesses within the Macquarie Park corridor.

The B4 mixed use zoning permits a broad range of land uses. In summary, mixed use development is permissible on the site with development consent.

Height of Buildings

The site is zoned for range of building heights described as metres above ground level:

- + 120m at the corner of Waterloo Road and Herring Road
- + 90 metres at the corner of Talavera Road and Herring Road
- + 65m to the remainder of the site.

Floor Space Ratio

3.50:1 maximum

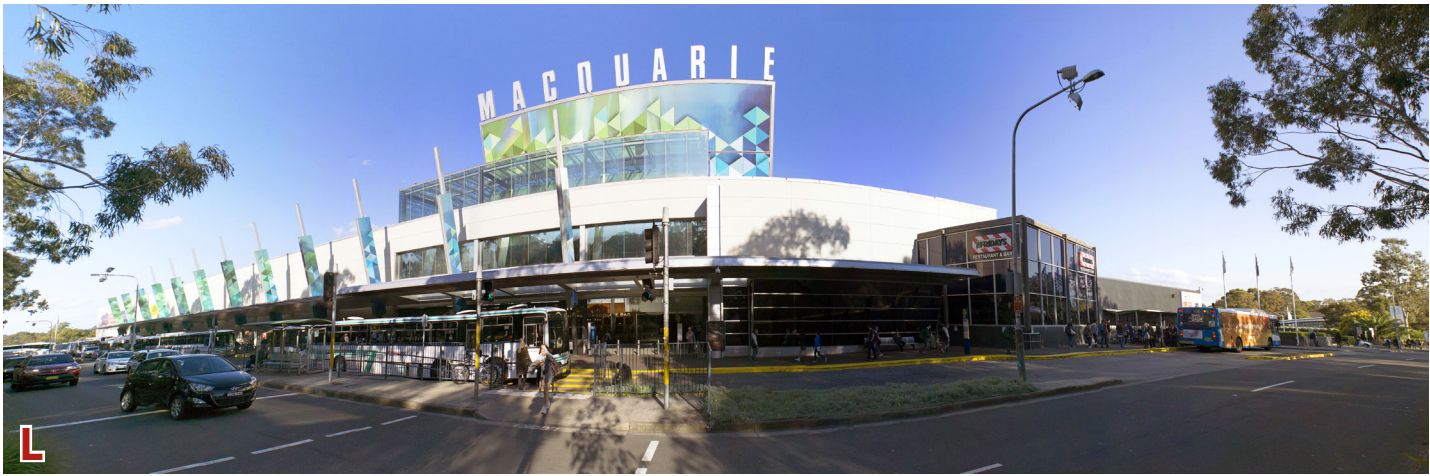
DEVELOPMENT CONTROL PLAN

Ryde Development Control Plan (2014) provides additional controls and design criteria such as setbacks, floor plate and maximum residential and retail car parking rates.

02 ANALYSIS

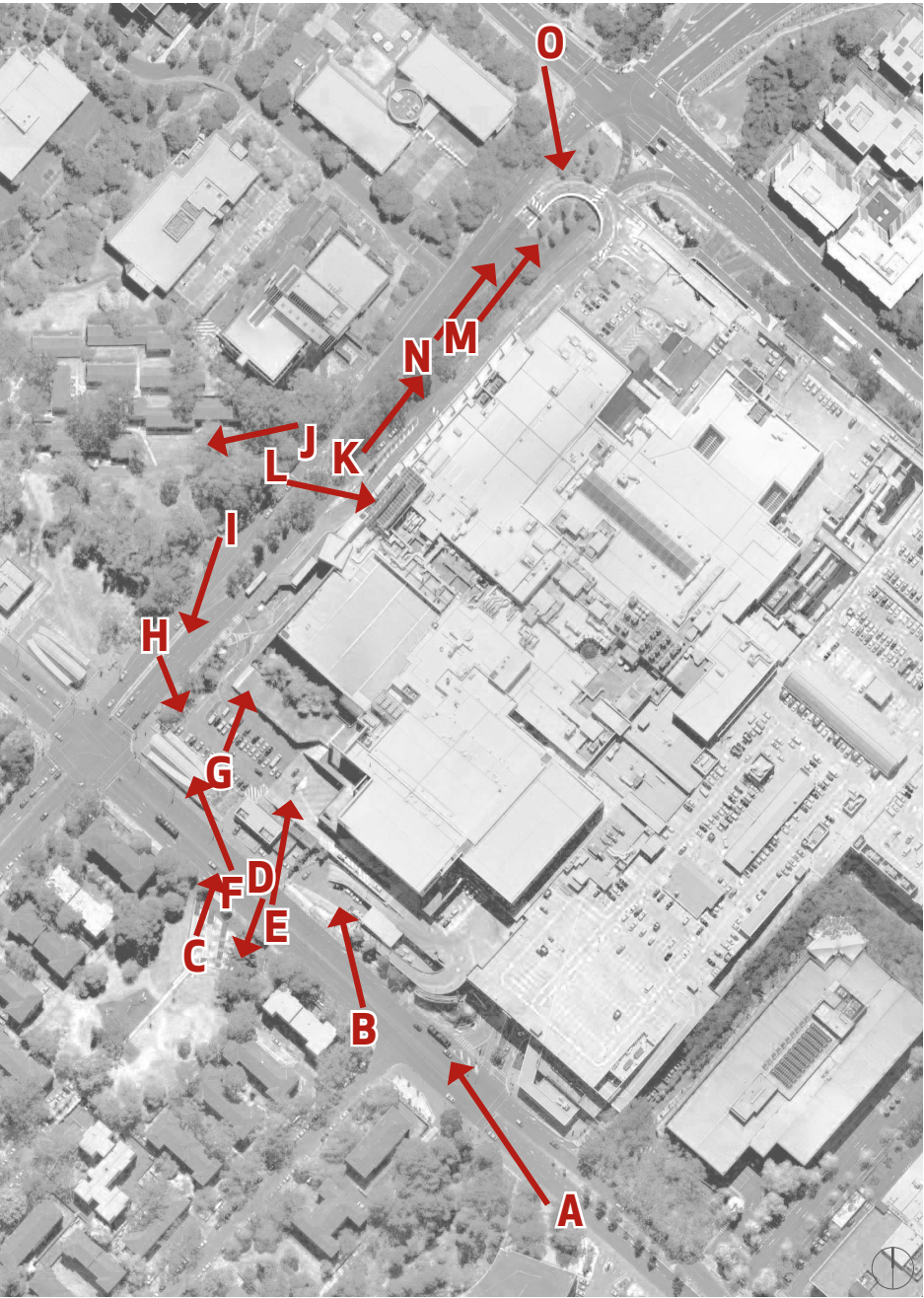
SITE CONTEXT





The context of Macquarie Centre is dominated by large, vehicular transport focussed streets. There is a major railway station located directly adjacent to the site as well as a major bus interchange. These transport nodes connect Macquarie Centre to the Sydney CBD as well as Sydney's Northern and Western metropolitan areas.

Macquarie University Campus is situated directly opposite the site, across Herring Road. This campus is currently characterised by low to medium scale buildings in a bushland setting. The future character of Macquarie University is envisaged as a mixed use, medium to high density campus incorporating educational, commercial and residential uses. The future character of Macquarie Centre connects into the future character envisaged for the greater context of Macquarie Park as a major urban renewal precinct.



02 ANALYSIS

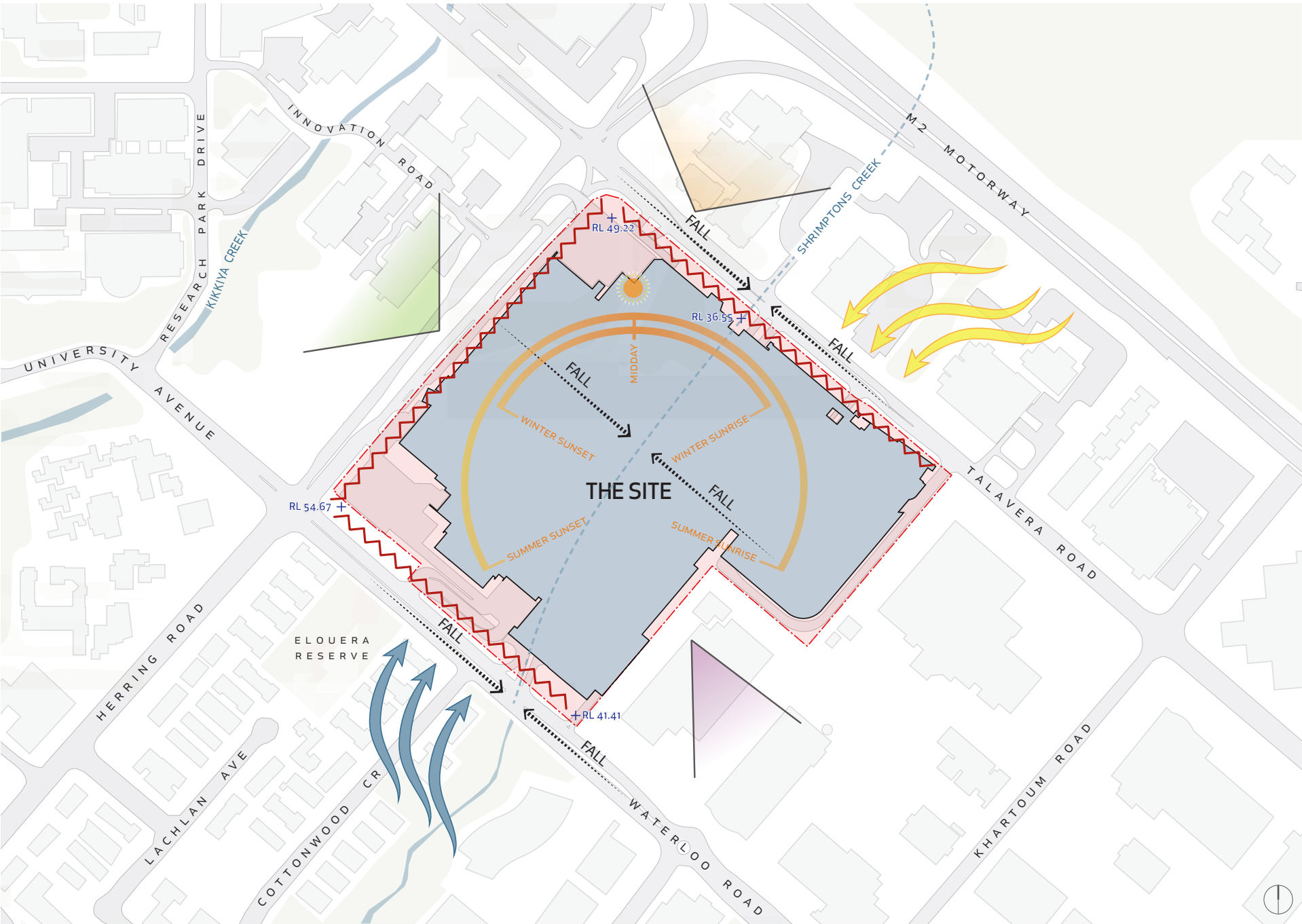
ENVIRONMENTAL CONDITIONS

The existing context of the area allows for good views, solar access and natural ventilation within the site. However, it is necessary to consider the dense urban future context of the area in the proposal to ensure adequate solar access and ventilation into the future. As such, tower positions and orientation have been tested and carefully considered in option studies to create slender towers which enable views and sunlight to be shared with neighbouring sites.

The site is oriented to the existing street network. The Herring Road frontage faces north-west. There are views to the north-east to the national park, south-east towards Sydney CBD and north-west toward the Macquarie University campus and beyond.

There is a fall across the site which requires careful design consideration to ensure a design solution which appropriately addresses the surrounding context.

The dominant noise sources impacting upon the site are the surrounding main roads: Herring, Waterloo and Talavera roads. The noise impact of these sources can be managed through a number of architectural and design solutions. However, these negative impacts must be considered and design solutions must be balanced in relation to positive impacts including solar access and orientation to views and winds.



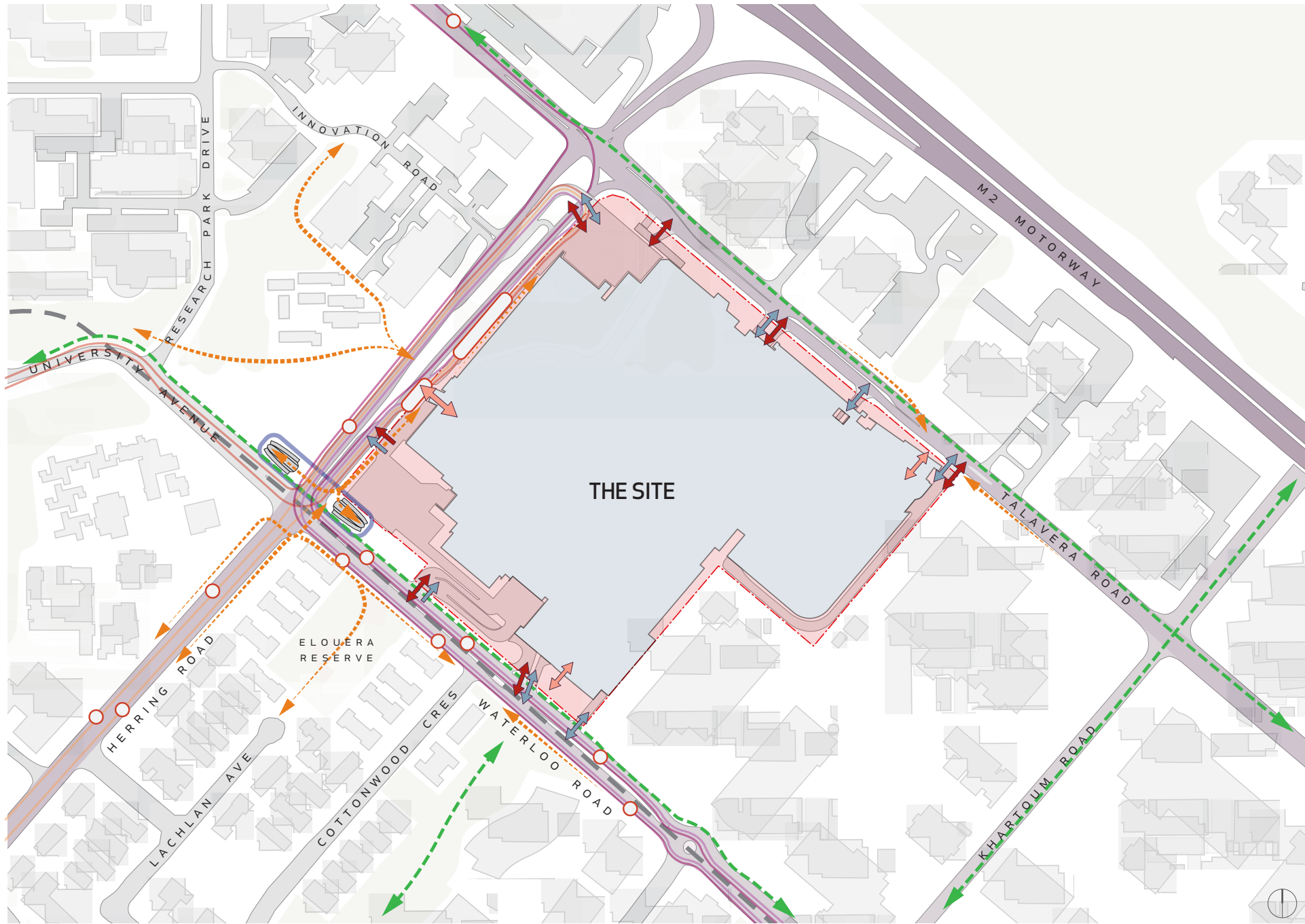
Environmental Conditions

- Macquarie Centre
- The Site
- Site Fall
- Creeks
- Predominant Summer Winds
- Predominant Winter Winds
- Views to Sydney City Skyline
- Views to Macquarie University and Mountains
- Views to National Park and Distance
- Areas Impacted by Noise

EXISTING ACCESS

The site is bounded by regional roads (Herring and Talavera) and a local road (Waterloo). There are several main vehicular entries and exits within the site which impact upon pedestrian access and movement.

There are a number of key pedestrian trajectories which terminate at Macquarie Centre, however key pedestrian access to Macquarie Centre is limited to three locations. The primary access to Macquarie Centre is centrally located on Herring Road. These entry points are separated by some distance, compromising the amenity for pedestrians and prioritising vehicular access to the site.

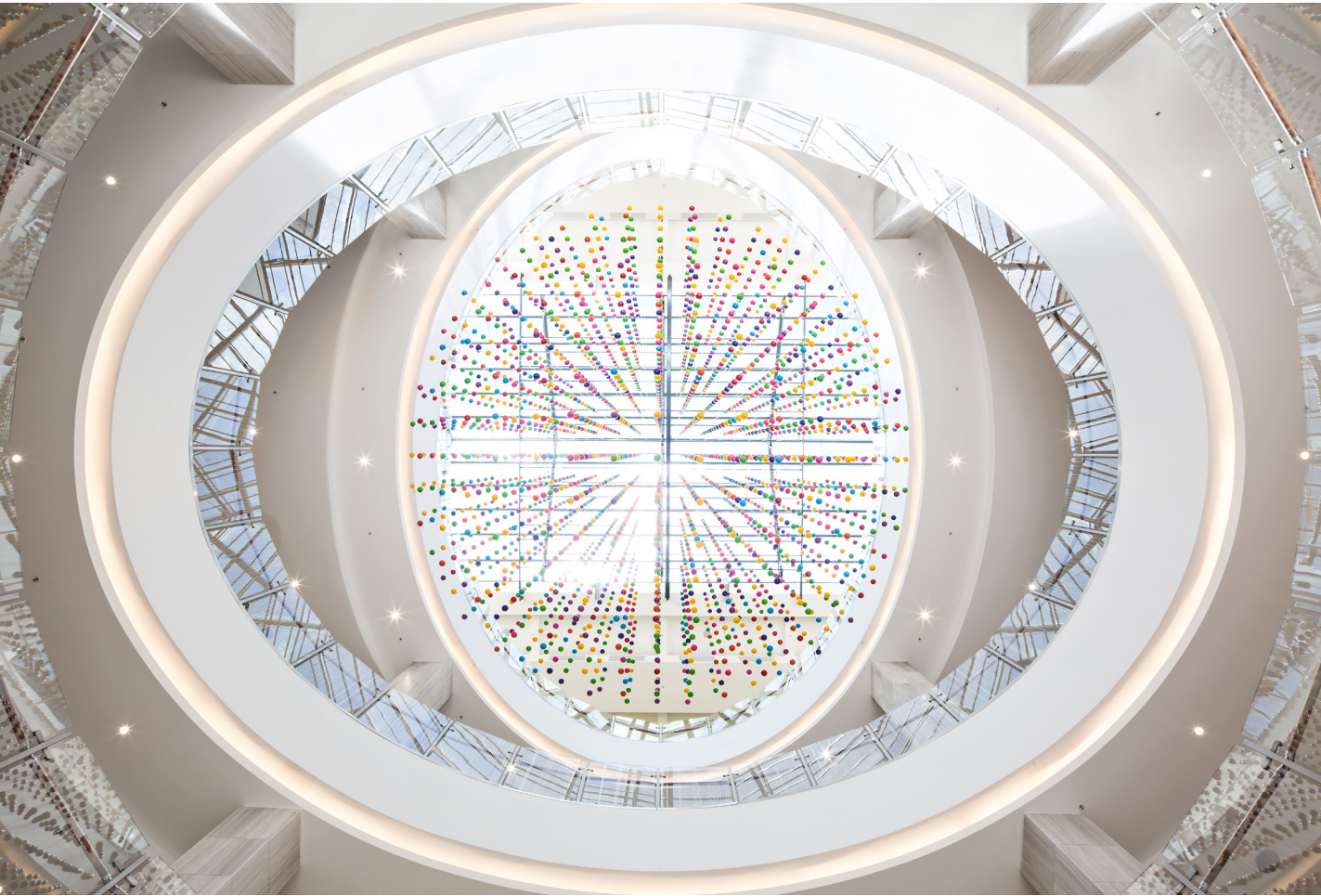


Existing Access

- Macquarie Centre
- The Site
- Railway
- Train Station Entry
- Bus Routes
- Bus Interchange & Stops
- Cycleways
- Pedestrian Routes
- Main Pedestrian Entries & Exits
- Carparking Entries &/or Exits
- Service and Loading Entries &/or Exits

02 ANALYSIS

EXISTING CENTRE





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The shopping centre currently spans five levels accommodating 368 stores, including major retailers such as David Jones, Myer, Target, Big W, Aldi, Coles and Woolworths. The centre also houses a large number of mini major international retailers stores including H&M, Zara, Uniqlo, Forever 21, GAP and Sephora. A number of entertainment offerings exist in the centre including a cinema complex and ice skating rink. The site currently has a gross floor area of 170,850m² and accommodates 4,755 car spaces.

Macquarie Centre has nearly one kilometre of street frontage along Talavera, Herring and Waterloo Roads combined, with Herring Road having a 345m street frontage (355m kerb to kerb) and one 7.5m wide entry to the centre.



02 ANALYSIS

OPPORTUNITIES + CONSTRAINTS

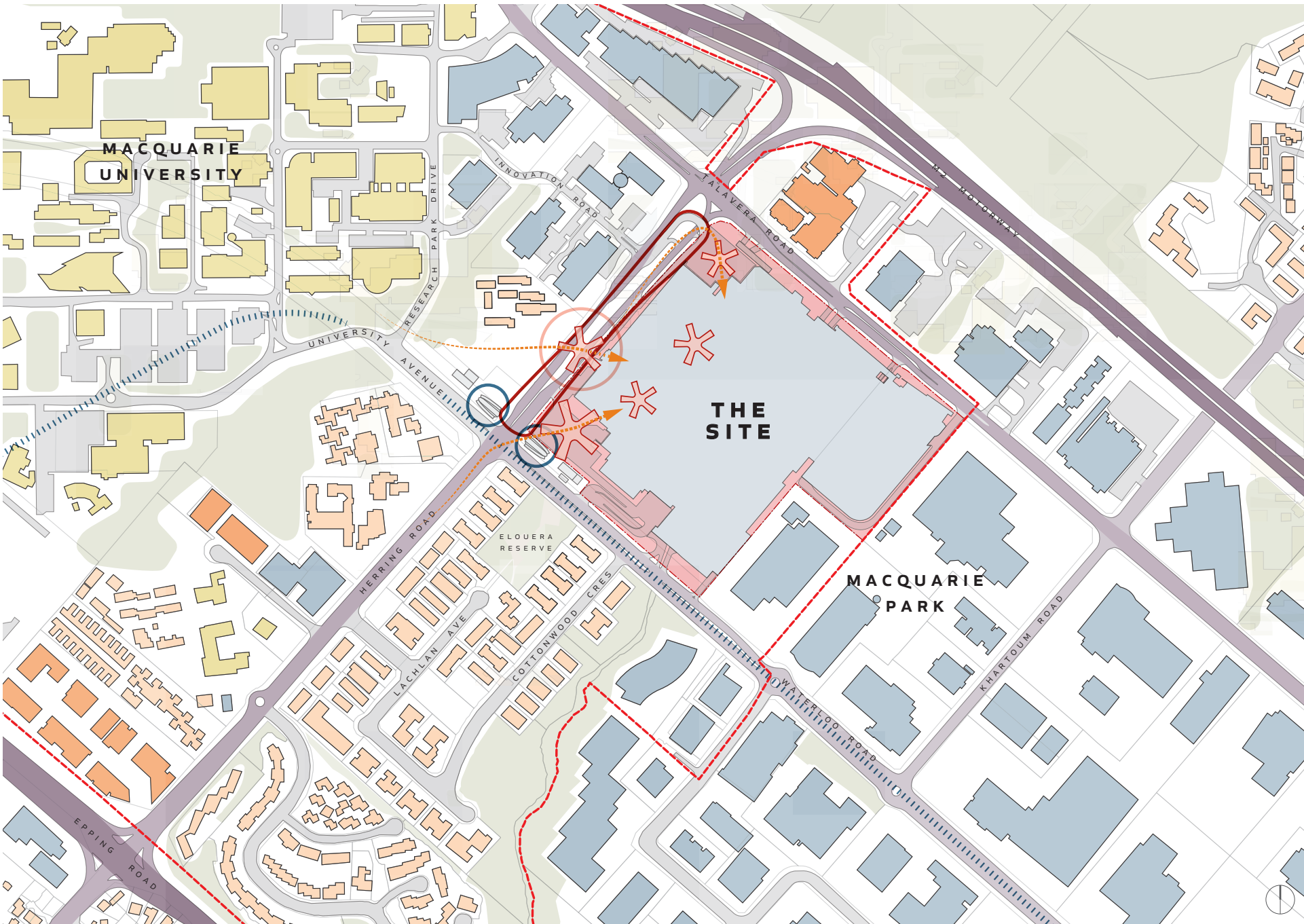
Macquarie Centre sits at the nexus of a changing context and evolving retail environment. The need to diversify, be agile and broaden uses in an increasingly urban environment provides the opportunity to introduce new uses to Macquarie Centre. This change presents the opportunity for Macquarie Centre to become the heart of Macquarie Park.

OPPORTUNITIES

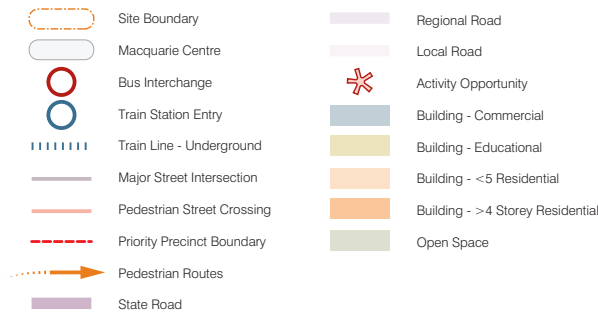
- + Mixed use zone - there is an opportunity to enhance existing uses of the centre and integrate other uses to create vitality. The current primary land usage on site is retail the precinct proposal requires Macquarie Centre to adapt and connect with the future context of the surrounding environment whilst also responding to future retail,dining and entertainment needs.
- + Main roads - make the centre accessible to a wide community and present opportunities to improve and strengthen connections and amenity for the site
- + Bus interchange - connects the centre to the wider Sydney metropolitan region
- + Macquarie University - opportunities to strengthen connections to campus
- + Priority Precinct - amended development controls provide opportunity for increase development within the site and in the surrounding context
- + Traffic signals - provide pedestrian connections to the centre
- + Public transport - rail and bus connections provide direct access for commuters to and from Sydney CBD and wider metropolitan region
- + Community facilities - opportunity as part of becoming a major centre for the region to offer community facilities
- + Activation + access - opportunity to improve street activation and access for pedestrians along street frontages
- + Open space - opportunity to provide new spaces that link into the network of places within the context
- + Connection - improve connections from centre into surrounding context including the railway station
- + Topography - presents opportunity for pedestrian and vehicular access to be separated

CONSTRAINTS

- + Main roads - disconnect and isolate the centre for pedestrians
- + Bus interchange - managing conflicts between pedestrians and traffic
- + Rail reserve corridor - may constrain construction
- + Low scale residential context - current low context constrains possible built form solutions due to overshadowing. Desired future context outlined in Priority Precinct proposal must be considered
- + Site access - conflicts between pedestrian and vehicular access
- + Topography - steep fall across and within site. This may challenge connections and access with regards to legibility. Requires careful consideration to overcoming topographical conditions.



Opportunities and Constraints



CONSIDERATIONS FOR FUTURE DEVELOPMENT



Considerations for Future Development

- Macquarie Centre
- The Site
- Train Station Entry
- Bus Interchange
- Pedestrian Circulation Hub
- Pedestrian Routes
- Retail Carparking Entries &/or Exits
- Service and Loading Entries &/or Exits
- Tower Parking Entries &/or Exits
- State Road
- Regional Road
- Local Road
- Activity Opportunity
- Activation

KEY CONSIDERATIONS

Future of Macquarie Park

- + Transport oriented development
- + Mixed-use development
- + Diversity and urbanisation
- + Increase high density residential population
- + Strong commercial core encouraging employment and investment

Public Domain Improvement

- + Station Plaza
- + Herring Road upgrade
- + Connections to Waterloo and Talavera Roads
- + Develop human scale to create a sense of place and social interaction

Street Activation

- + Transform the suburban mall model
- + Develop connections to the surrounds
- + Provide community spaces/public benefit

Retail Development

- + Preserve retail as the primary use on site
- + Improve spatial legibility and vertical connections
- + Diversify network of spaces and offerings
- + One-stop destination that provides a comprehensive visit
- + Varied and superior dining and entertainment offer
- + Open-air connection to nature
- + Innovation in digital technology

Site Access

- + Improve links to surrounding areas
- + Consider topography and level changes across the site
- + Respect existing requirements
- + Improve existing operations and conflicts
- + Work with existing road network
- + Improve connection to public transport
- + More parking and more legible improved way-finding

Solar Access

- + Orientation of Herring Rd and Macquarie Centre impact solar design considerations
- + Types of public domain spaces to be designed with regard to solar amenity
- + Tower development envelopes oriented to maximise amenity and solar access

03 PRINCIPLES

03 PRINCIPLES

Macquarie Centre is envisaged to become a major centre, the heart, of Macquarie Park. To redevelop Macquarie Centre into this major centre, with a mix of uses, a number of principles to guide the concept needed to be established. The overarching strategy was that these principles would work together to form a new identity for Macquarie Centre.

Guiding design principles include:

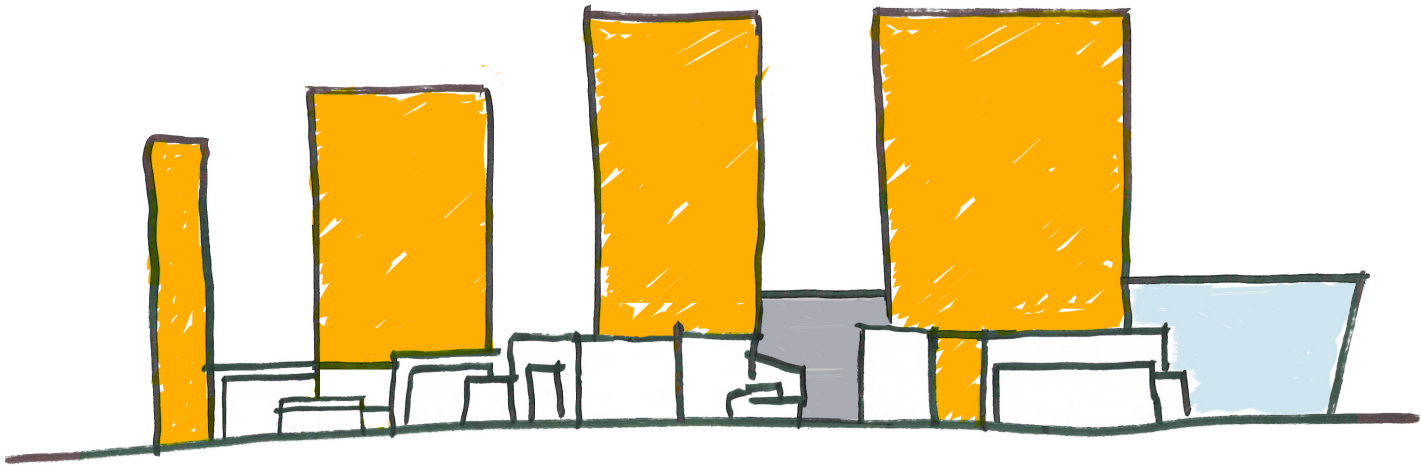
- + Sense of Place,
- + Approach and Movement,
- + Diversity and Adaptability
- + Legibility

These key principles give direction to future design, guiding redevelopment. A sense of place can be created by connecting Macquarie Centre’s existing and proposed places into the network of open spaces in its surrounding context.

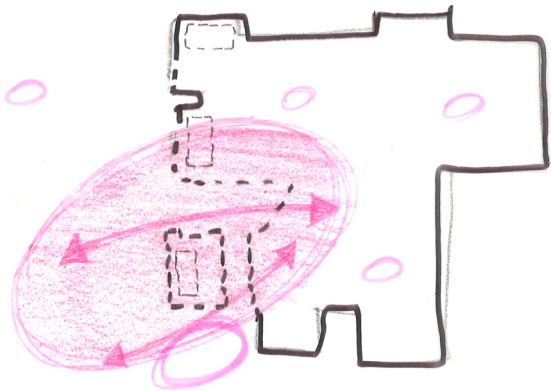
By improving connections, access and movement through the site these places could be given vitality and purpose. By reviewing existing approach and movement patterns around the centre, new connections and frontages can be established. Improved access and activation, which creates a more permeable and approachable environment, means that Macquarie Centre can become an active participant in the context of Macquarie Park, contributing a unique character to the identity of the precinct.

A diverse range of offerings within the centre including living, working, recreation, entertainment, retail, fresh food, food and beverage dining offerings along with community uses and open spaces will not only make the centre a desirable destination for a broad demographic but will allow it to become an important, vital place within the Macquarie Park corridor which services local residents, workers, commuters and the broader community.

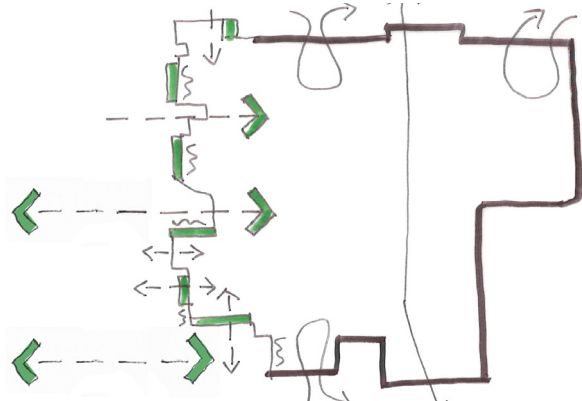
Legibility is critical to creating a successful redevelopment. Improving legibility makes the centre more usable, pedestrian friendly, vibrant, safe and identifiable. This principle can be achieved through improving access to the site as well as vertical connections within it. However, the architectural built form is fundamental to creating a landmark place which is memorable and assists people to orient themselves within a context which is proposed to become a dense, urban centre.



Identity



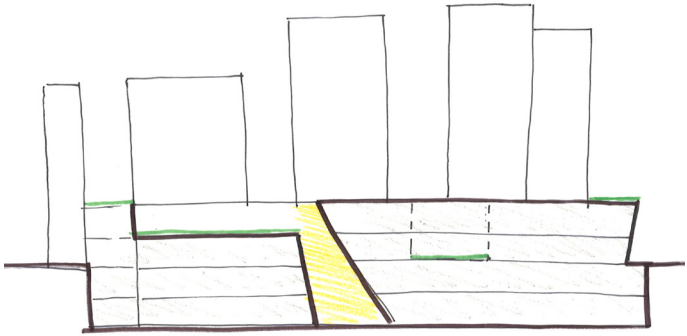
Sense of Place



Approach + Movement



Diversity + Adaptability



Legibility

A New Identity For Macquarie Centre



View of existing bus interchange and main pedestrian entry on Herring Road

SUBURBAN → **URBAN**
DISCONNECTED → **SEAMLESS**



Precinct Vision - Looking North along Herring Road
 [Source: Herring Road Urban Activation Precinct: Planning Report Volume 1. June 2014 by NSW Department of Planning & Environment]

The four key principles which guide the proposal all work together to improve the identity of not only the centre but the Macquarie Park precinct giving it vitality and new purpose. Macquarie Centre can become a destination place, the heart of the Priority Precinct. Substantial public domain provisions, as well as envelopes to provide for characterful built form, enable opportunities to create landmark places increasing the identity and legibility of the area.

Macquarie Centre will be transformed from a suburban, somewhat disconnected place, into a dense urban centre seamlessly connected with its surrounding environment.

The four principles: creating a sense of place; introducing clear patterns of approach and movement; offering a diverse and adaptable range of uses; making an identifiable and legible place guide the approach to redevelopment. It is these guiding principles that ensure that future development of Macquarie Centre is appropriate and significantly contributes to the desired future character of Macquarie Park, in particular the Macquarie University (Herring Road) Priority Precinct.



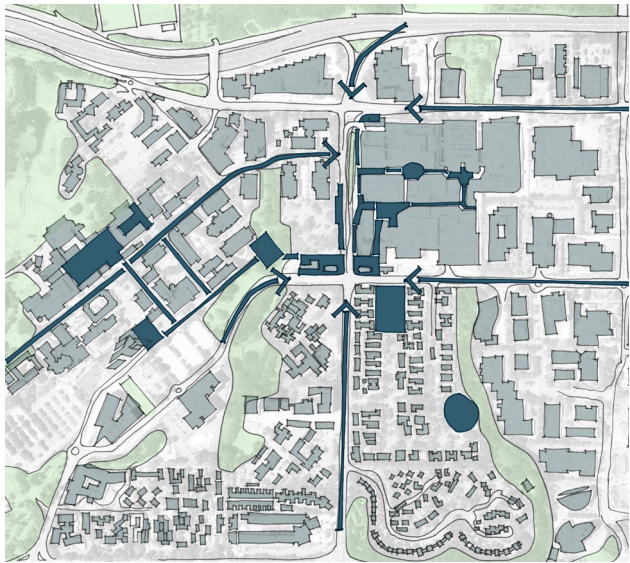
Sanlitun Village, Beijing

03 PRINCIPLES

SENSE OF PLACE

The creation of a sense of place requires varied activities that connect to a diverse group of uses. The expansion includes further retail, dining, entertainment and leisure opportunities. The inclusion of an integrated and improved public realm, civic and community facilities along with the introduction of mixed uses further reinforces a platform for connection and ownership with the community.

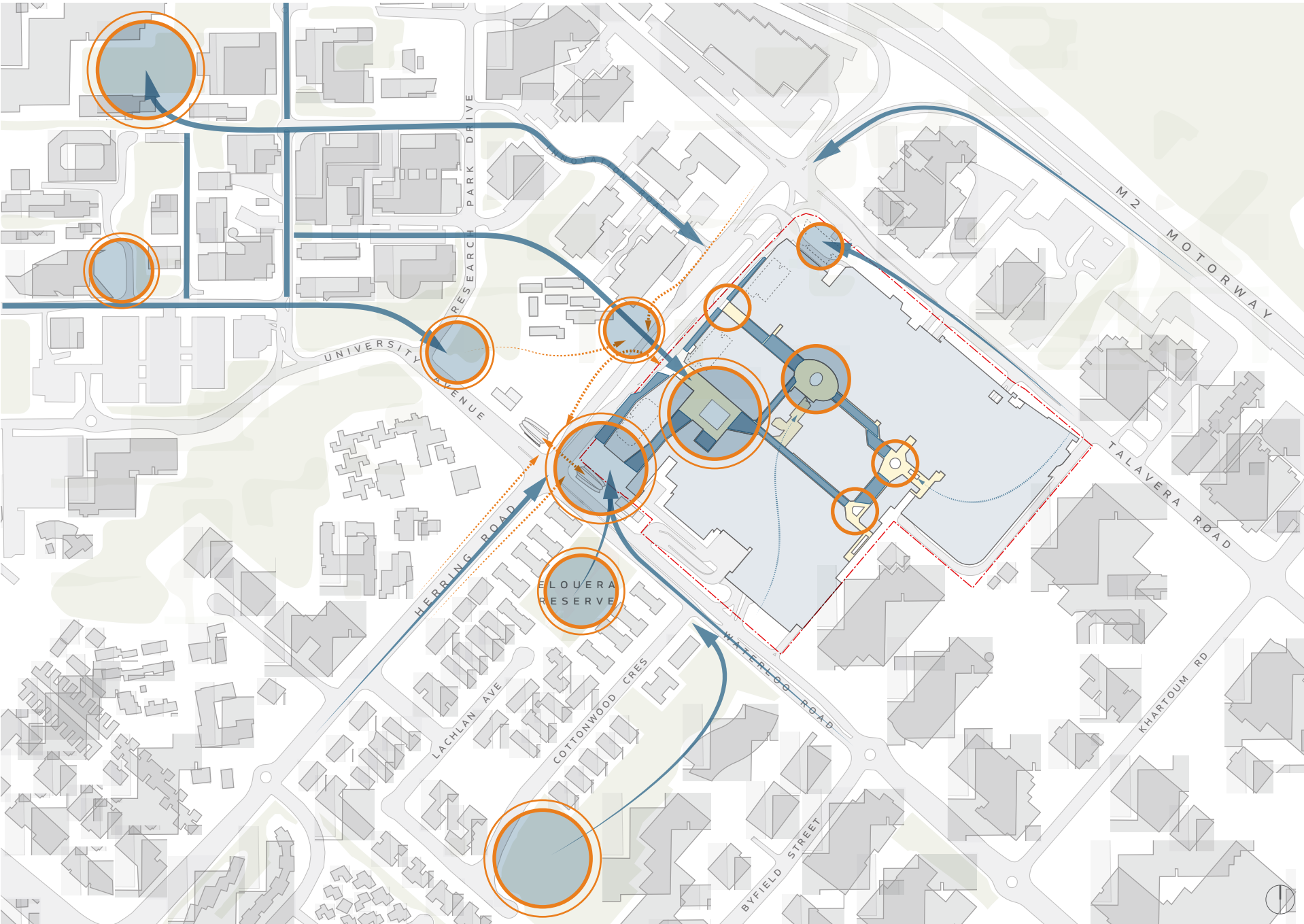
Open spaces are also provided with different characters to appeal to a more diverse population. The contribution of varied blurred internal and external spaces connect with and contribute to the future character of Macquarie Park. Macquarie Centre seeks to position itself as the town centre and heart providing a sense of place for the wider Macquarie Park community.



Network of places connecting to Macquarie Centre



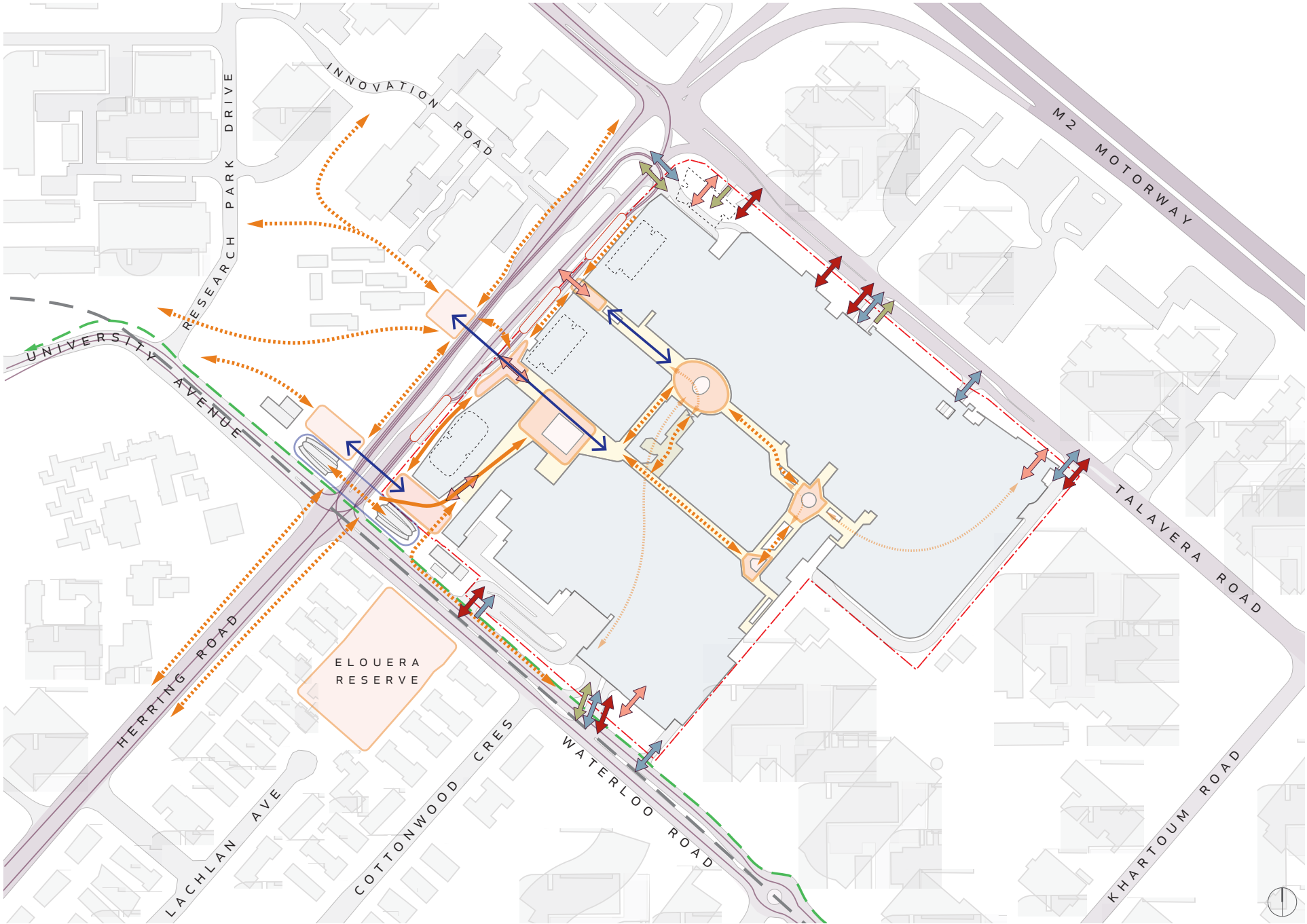
QV Building, Melbourne



Sense of Place

- Site Boundary
- Macquarie Centre
- Major Hubs
- Important Spaces
- Major Circulation
- Local Pedestrian Routes
- Internal Pedestrian Routes

Macquarie Centre is bounded by three streets with a primary pedestrian entry located on Herring Road. The proposal responds to the changing context within the precinct by opening up additional pedestrian entries and focusing on permeability and integration with Macquarie Centre. This allows for opportunities for street activation and address, reshaping the centre so that it is no longer only an internalised experience. Instead Macquarie Centre engages with the street and its surrounding context and contributes to the formation of a positive character in the area. Vehicle entries have also been relocated to reduce conflicts. The creation of open spaces, streetscape and connection to public transport infrastructure improves pedestrian access and visibility from the street shifting the focus away from primarily only vehicle access.



Approach + Movement

- | | | | |
|--|-----------------------|--|------------------------------------|
| | Site Boundary | | Retail Carparking Entry & Exit |
| | Macquarie Centre | | Pedestrian Entry & Exit |
| | Railway | | Service and Loading Entries & Exit |
| | Train Station Entry | | Tower Carparking Entry & Exit |
| | Bus Interchange/Stops | | Main Pedestrian Connector |
| | Bus Routes | | Pedestrian Movement |
| | Cycleways | | Spatial Connectors |



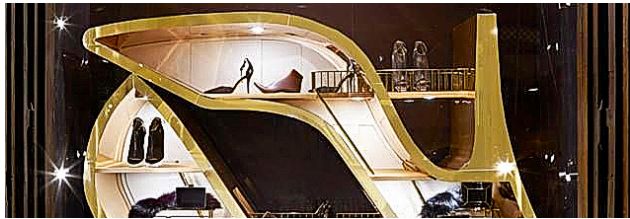
Urbanstrasse 11, Munich

03 PRINCIPLES

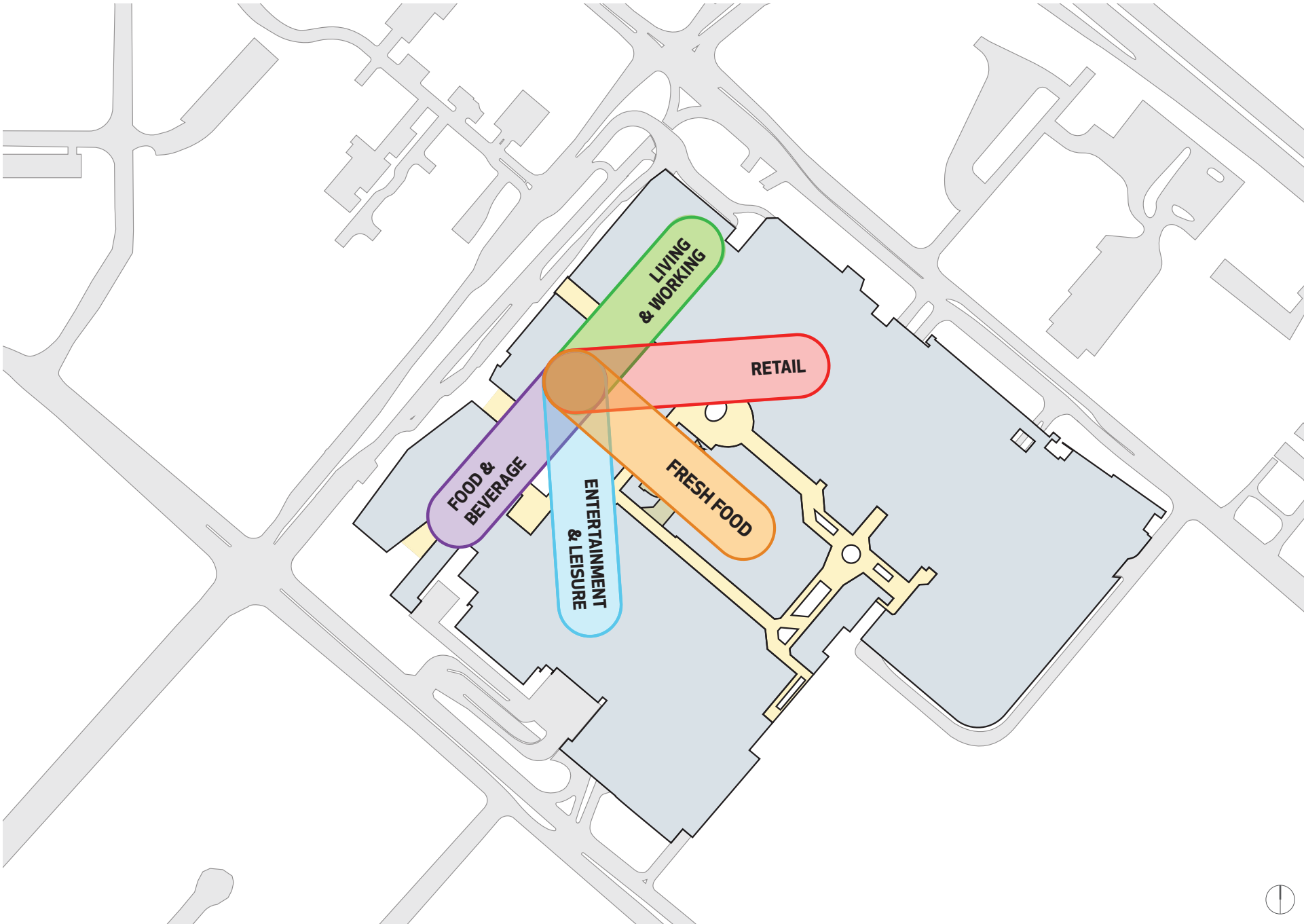
DIVERSITY + ADAPTABILITY

Diversity and adaptability of uses and experiences forms a fundamental part of Macquarie Centre aligning with the future growth and urbanisation of the surrounding context. The creation of a variety of integrated places and uses contributes to the evolving identity of the area. Greater diversity responds to the community and increases activation throughout the day and evening. A series of open and covered spaces provide opportunity for a sense of discovery. By providing a diverse offering that appeals to broader demographics, community ownership and participation is enhanced, creating a greater sense of belonging.

Macquarie Centre can also become a place where people live and work. For these people the centre acts as a base, a starting point from which they spread out into a wider integrated and connected context. For others Macquarie Centre is a destination where people come to shop and dine and for recreation and entertainment.



A diverse range of possible places and activities within Macquarie Centre



Diversity + Adaptability



- Legibility
- Site Boundary
 - Macquarie Centre
 - Pedestrian Movement
 - Connections to Malls Above and Below

The proposed new approach and connection to the urban context is continued with improved legibility within Macquarie Centre. A logical progression of spaces, connection to the external environment and visibility across multiple levels makes Macquarie Centre more legible. Connections are considered within and also to surrounding public transport infrastructure and streets to achieve vibrant, safe and usable places. The creation of unique and expressive forms also assist in legibility making memorable places and distinctive landmarks.



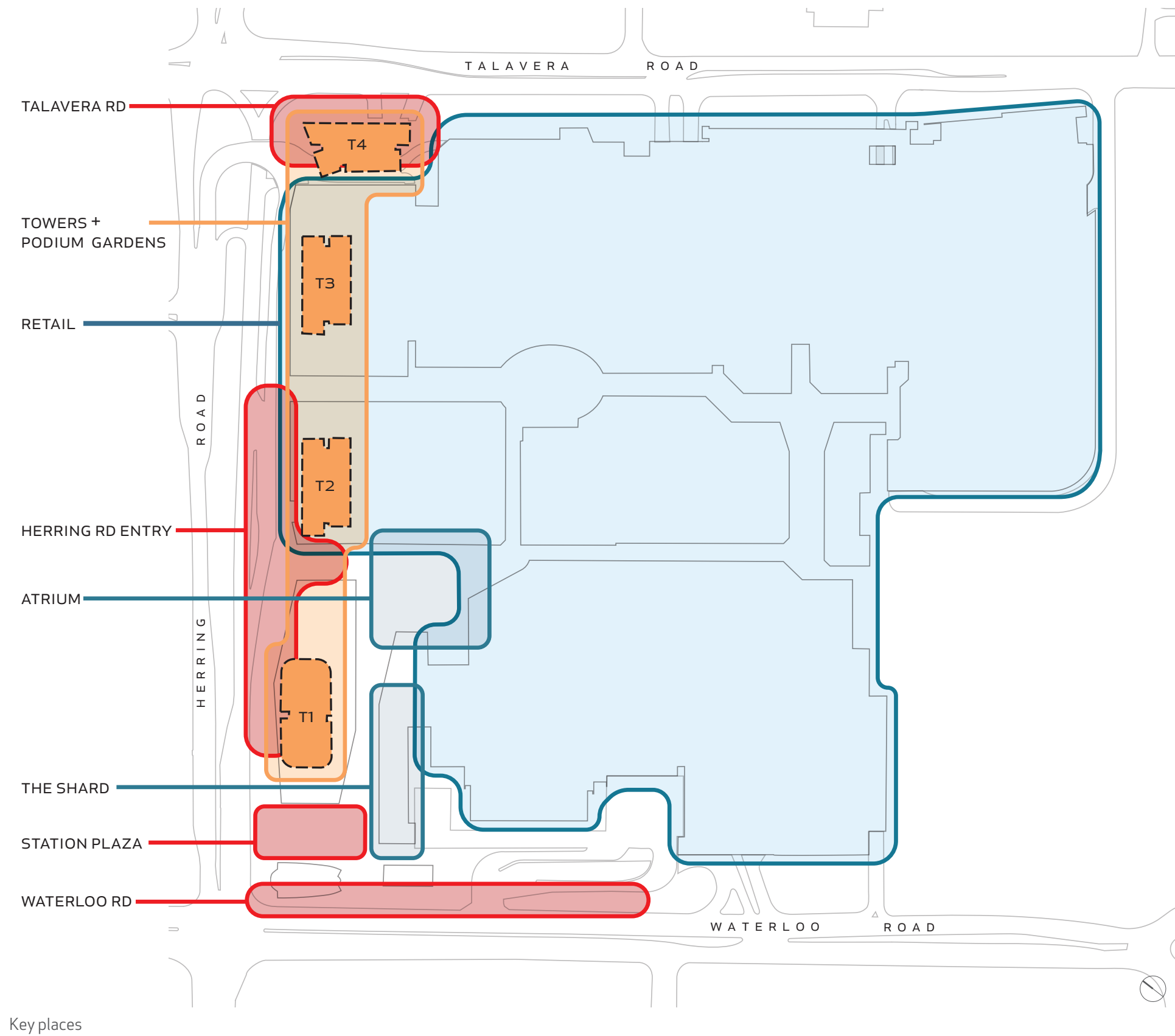
Myer, Bourke Street, Melbourne

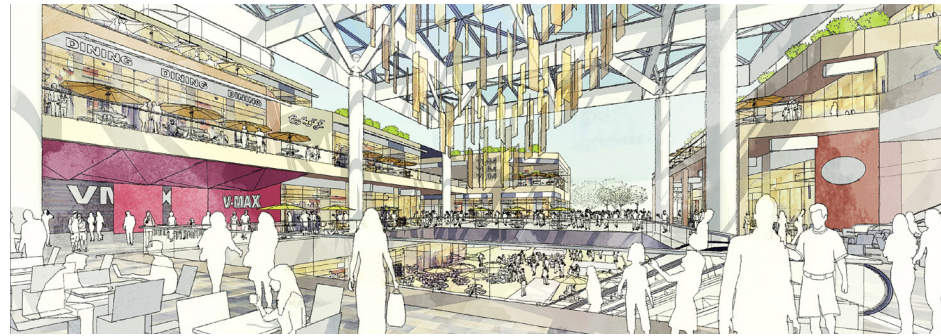


04 CONCEPT

04 CONCEPT

The illustrative concept is comprised of a variety of interconnected places. These places each contribute a unique character to the development which are outlined throughout this chapter.





ATRIUM

The atrium is characterised by a grand space with contemporary and impressive architecture. The atrium connects all levels of the building which is home to a variety of uses. Art and retail activate the heart and soul of this space giving it a unique character. The atrium is the focus of a place connecting transport, retail, community, leisure and entertainment.

Grand, impressive, contemporary



HERRING ROAD

This has the character of a wide pedestrian street. This entryway is framed by informal spaces where the divisions between the outdoor and indoor, natural and built environments are blurred creating opportunities for dining and entertainment.

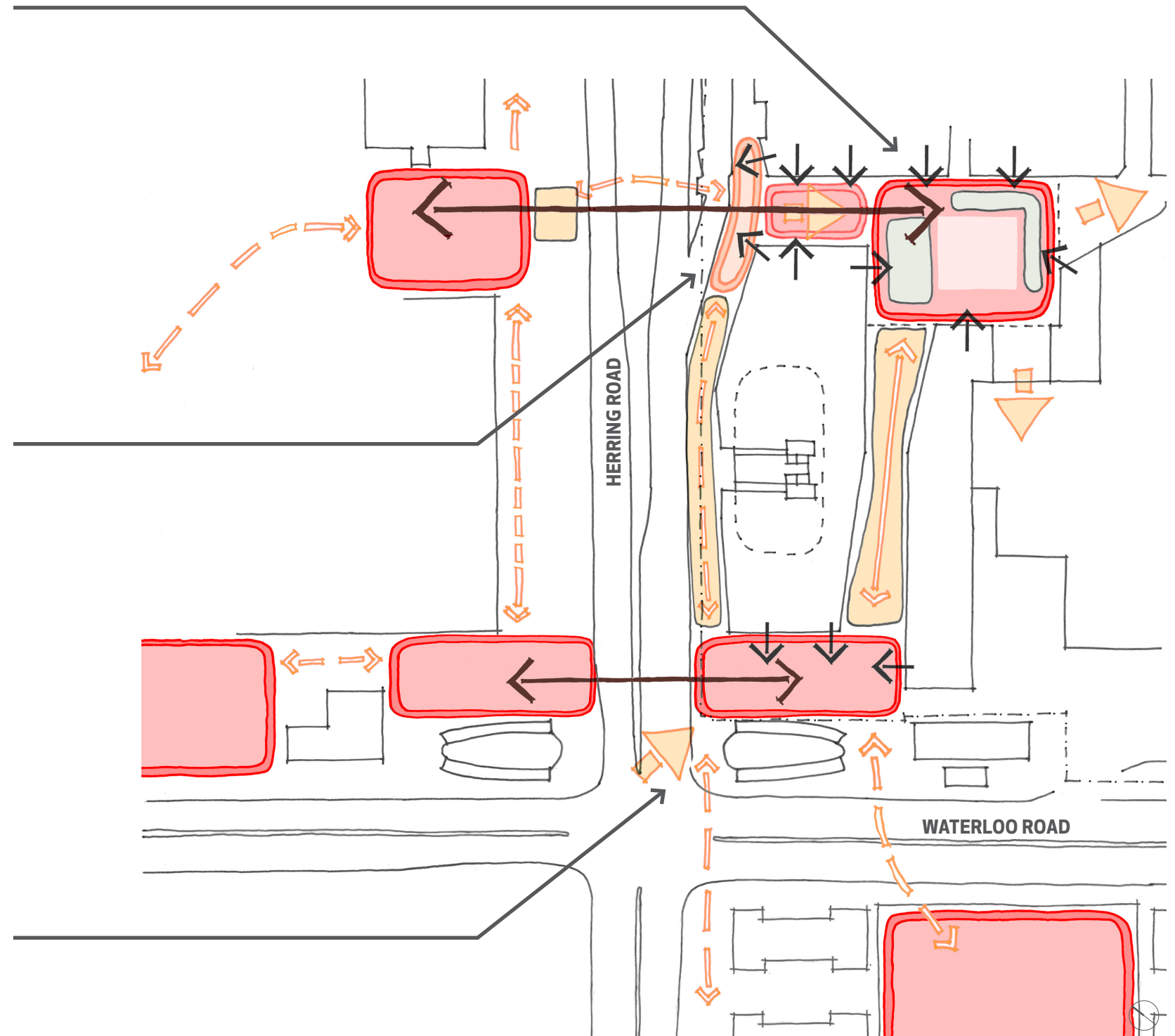
Vibrant, cosmopolitan, eat street



STATION PLAZA

The Station Plaza is an active public place of arrival that acts as a bold identifiable local destination and meeting point. It will be a landmark which contains public art and playful landscaping.

Bold, strong, memorable



04 CONCEPT

STATION PLAZA



View of the Shard and Station Plaza from Herring and Waterloo Road intersection



Station Plaza from north-western side of Herring Road



Bailey Plaza, Cornell University



Customs House, Sydney



View of Station Plaza from Macquarie University

Station Plaza is an active public place of arrival that acts as a bold identifiable local destination and meeting point. It will be a landmark which contains public art and playful landscaping.

Station Plaza is bordered by buildings which define and activate its edge. One building 'The Shard' is situated toward the southern edge of the plaza. The Shard is activated at ground level and forms part of the retail and commercial podium. It is envisaged as a "landmark" building, giving the adjacent Station Plaza a strong and identifiable character. The building extends towards the boundary, addressing Waterloo Road and actively framing Station Plaza.

Whilst the future use of the Shard building has not been confirmed, it is anticipated that it may comprise a diverse mix of retail or civic uses, with an active ground floor addressing Station Plaza. The detailed design of this building would be the subject of a future development application.

Station Plaza benefits include:

- + publicly accessible space (24 hours) adjacent to key transport infrastructure which provides an appropriate urban, connected plaza associated with the train station entry
- + significant improvement to the pedestrian approach to Macquarie Centre from both Waterloo and Herring Road
- + a clearly identifiable entry marker and improved public surveillance opportunities due to the proposed built form and connection to the surrounding context

04 CONCEPT

HERRING ROAD - STREET FRONTAGE

This has the character of a wide pedestrian street. This entryway is framed by informal spaces where the divisions between the outdoor and indoor, natural and built environments are blurred creating opportunities for dining and entertainment.

Herring Road benefits include:

- + increase of entryway width from 7.5m to over 15m. The arcade will be covered by a glazed roof, allowing visual connections to the sky and between multiple active levels of the podium.
- + opportunity for retail and dining uses that can benefit from blurred indoor and outdoor environments.
- + a street like promenade that connects and encourages social interaction opportunities through uses, built form active edges and significantly improved footpaths, landscaping, art and street furniture.
- + an additional entry along Herring Road to increase permeability of Macquarie Centre.



Pitt Street Mall, Sydney



St Margarets, Surry Hills



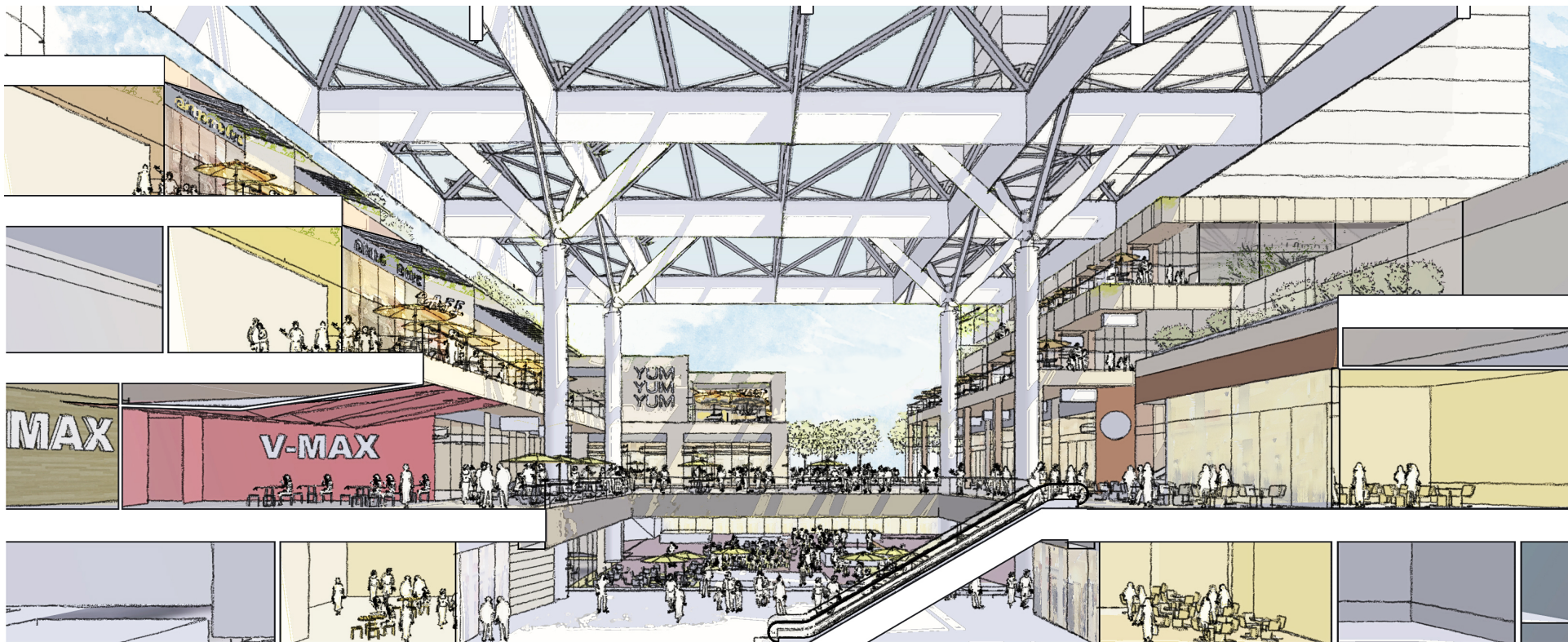
View of Herring Road Entry



View along Herring Road



View of Atrium



Sectional View through Atrium

The atrium is characterised by a grand space with contemporary and impressive architecture. The atrium connects all levels of the building which is home to a variety of uses. Art and retail activate the heart and soul of this space giving it a unique character. The atrium is the focus of a place connecting transport, retail, community, leisure and entertainment.

Atrium benefits include:

- + improved legibility both vertically and horizontally across the site.
- + a large gathering space that connects to a wider network of places both within and outside Macquarie Centre.
- + improved opportunities for extended night time activation.
- + the atrium and open plan built form provide significant connection to the external environment via natural light and visual connection.

04 CONCEPT

RETAIL

Retail is a dynamic and agile environment. The proposal allows for the expansion of further retail opportunities to accommodate the future needs and expectations of both retailers and evolving community amenity desires. The introduction of a retail podium, creating a high street along Herring Road, significantly improves the presentation of Macquarie Centre. This retail podium becomes more integrated into a dense, urban and activated context. There is also the ability for pedestrians to enter the centre from various directions.

The expanded retail improves and broadens the dining offer spanning from restaurants, entertainment and leisure in an environment that allows for visual connection on different levels and blurring of the boundaries between indoor and outdoor and street environments. The design also provides spaces with different characters that become destinations to meet, socialise and for live entertainment.

The centre will be redeveloped to introduce a loop which creates the opportunity to directly link at ground level to Herring Road. This loop streamlines the circulation and continues the series of interconnected places both within the centre and with the outdoor environment.



View of Retail Podium along Herring Road

COMMUNITY OPPORTUNITIES

AMPC is currently investigating opportunities to provide a community facility within Macquarie Centre. The provision of this use and its potential location within Macquarie Centre are subject to future discussions with Ryde Council.

The potential community facilities will be designed with the following principles:

- + Integrated centre with quality facilities for a wide range of activities
- + Creating a sense of place for the community
- + Located in highly visible areas to create effective surveillance over public spaces
- + Easily accessible with access to parking and public transport

PUBLIC ART

The redevelopment of Macquarie Centre presents multiple opportunities for supporting the community of residents, workers, students and visitors to the area, which can be aided by a thoughtful, comprehensive approach to public art.

Public art in this development will serve to:

- + build connectivity between key elements of the precinct
- + create a sense of place, and
- + provide a focus for community, offering public benefit to residents, workers, students and visitors.

The public art strategy for the project will focus on two key forms of intervention, linked to two sites: the Station Plaza and Herring Road approaches. Public art will also play a key role in the retail, commercial and residential zones.



The Concourse, Cultural Centre, Chatswood



Bike Parking + Facilities, Jaarbeursplein, Utrecht



Public Art Installation. Nebulus, Dan Corson



Fengming Mountain Park, Sculptures, Chongqing

04 CONCEPT

TALavera ROAD - STREET FRONTAGE

The corner at Talavera Road and Herring Road will be landscaped to provide a new residential entry plaza to the Tower 4 lobby and residential carparking. The new landscape will include 'green' stairs to provide improved pedestrian access, as well as cascading 'soft' landscaping to accommodate the level change around the corner. Specifically, the improvements indicated include:

- + Landscaping to provide a buffer between the development and Talavera Road;
- + Landscaped entry plaza to Tower 4 to be located at the corner of Herring Road and Talavera Road;
- + Upgrading of existing footpath and
- + A dedicated residential porte cochere and address



Indicative Character of Talavera Road Corner



Landscape Terracing - Central Park, Sydney



Silk, Pyrmont



Indicative Public Domain Plan. Talavera Road Corner



Section A-A

WATERLOO ROAD - STREET FRONTAGE



View of Waterloo Road

Waterloo Road provides substantial vehicular and pedestrian movement through Macquarie Park. In order to improve pedestrian access between Station Plaza and Waterloo Road it is proposed to re-orientate and improve the existing stairs on the south-eastern side of the railway station. Additional soft landscaping treatments including street trees and screen planting will supplement the existing planting in front of the loading ramps. While improving the streetscape along Waterloo Road vital operational components of the centre are maintained.

Proposed conceptual public domain improvements include:

- + New trees and screen planting to supplement landscaping in front of the vehicular ramps;
- + Potential architectural and landscape treatments to be added to the existing building façade;
- + General widening of the existing footpath from approximately 1.2m to 2m along Waterloo Road;
- + Re-orientation of the stairs to provide access to the future Station Plaza; and
- + New paving will be provided around the existing railway station entry structure and services building



Indicative Public Domain Plan. Waterloo Road



Section A-A

04 CONCEPT

TOWERS

The arrangement, orientation and relationships of the towers (where considered residential) have been tested to achieve the optimum level of amenity for residents and visitors to all parts of the development.

- + By locating the towers close to Herring Road, strong address, access and way finding is able to be provided. In the case of Tower 4 the tower form is able to reach the ground plane, contributing strongly to the streetscape of Talavera Road as well as providing a pedestrian and vehicular entry for the development uniquely allocated to the tower usages.
- + There are several view opportunities and the four towers make use of all of them where possible. Whilst city views will be highly valued, capturing the range of view opportunities instils an inherent variety in the residential offering within the development.
- + The orientation of the street grid in the Macquarie Park corridor presents a significant complexity in achieving high quality residential development without proposing building forms that turn or rotate away from it, creating construction complexities and development impacts below. By providing generous separations between the tower forms, solar access to the north-east and north-west facing elevations can be maximised.



Residential over Retail Podium - Balgowlah Village [AJ+C]

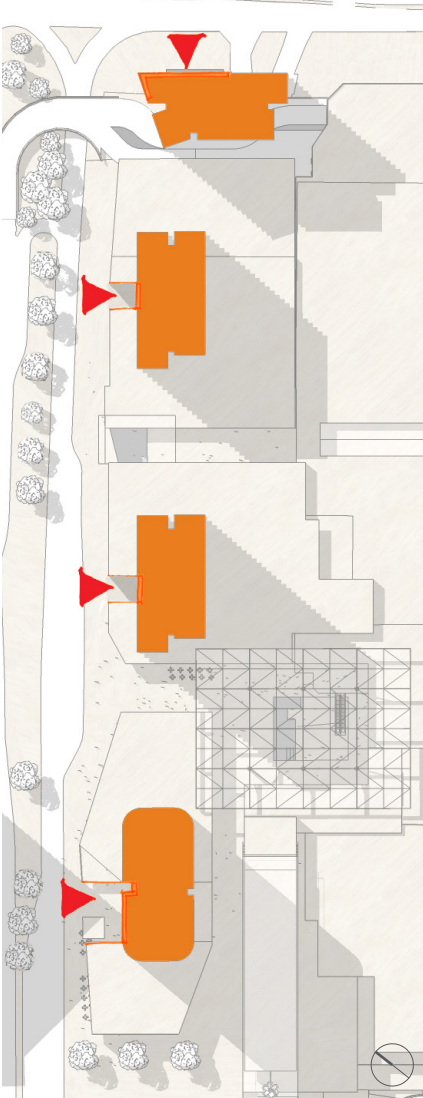


Polaris, North Sydney [AJ+C]

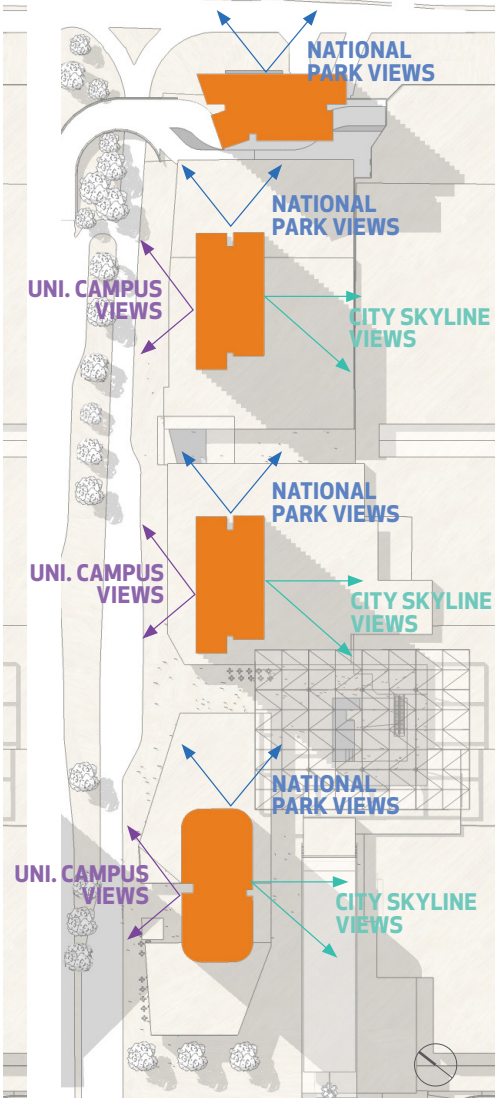


Parramatta Gateway [AJ+C]

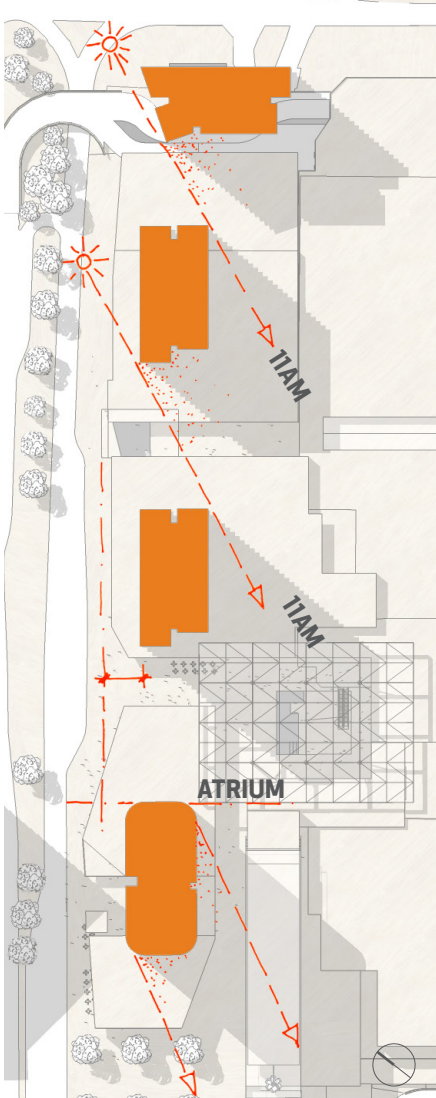
ADDRESS



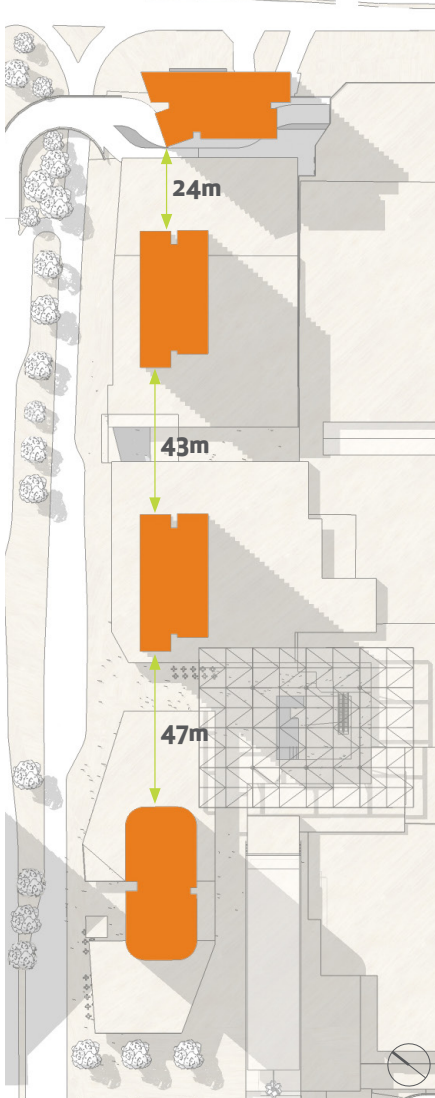
VIEWS



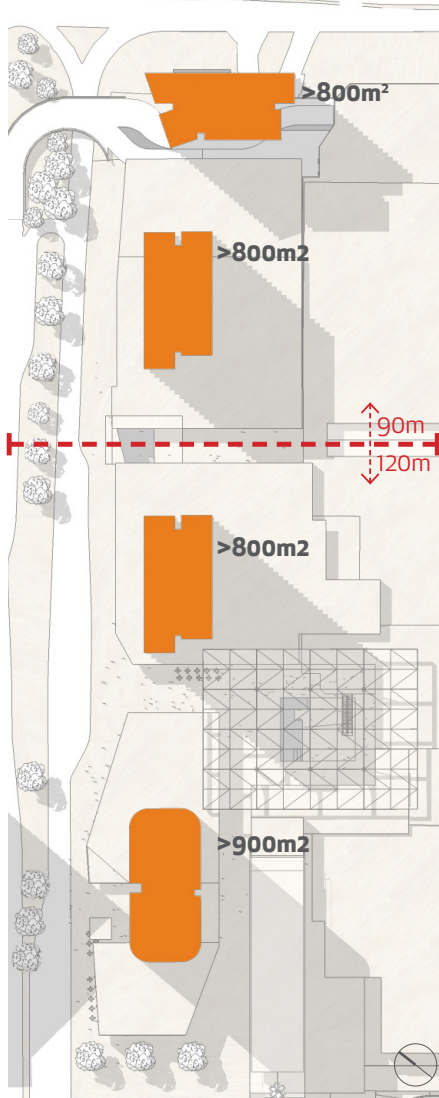
SOLAR ACCESS



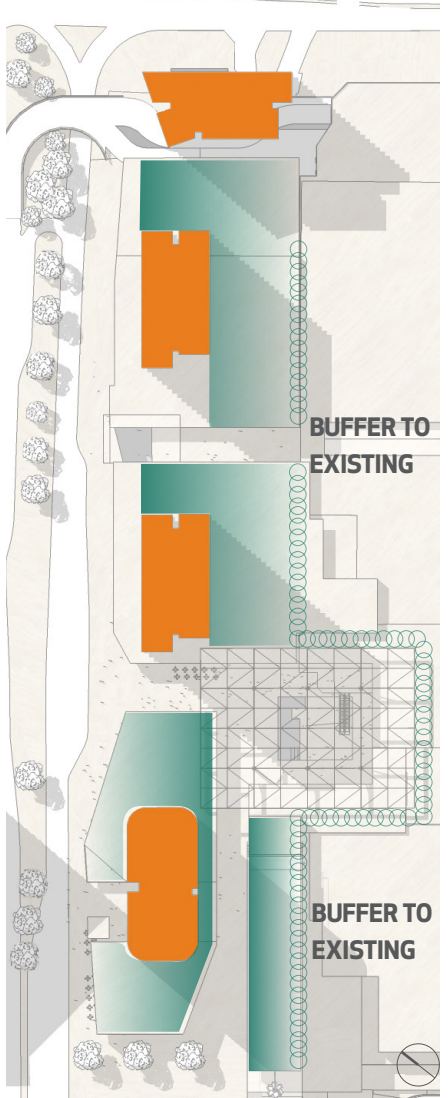
SEPARATION / PRIVACY



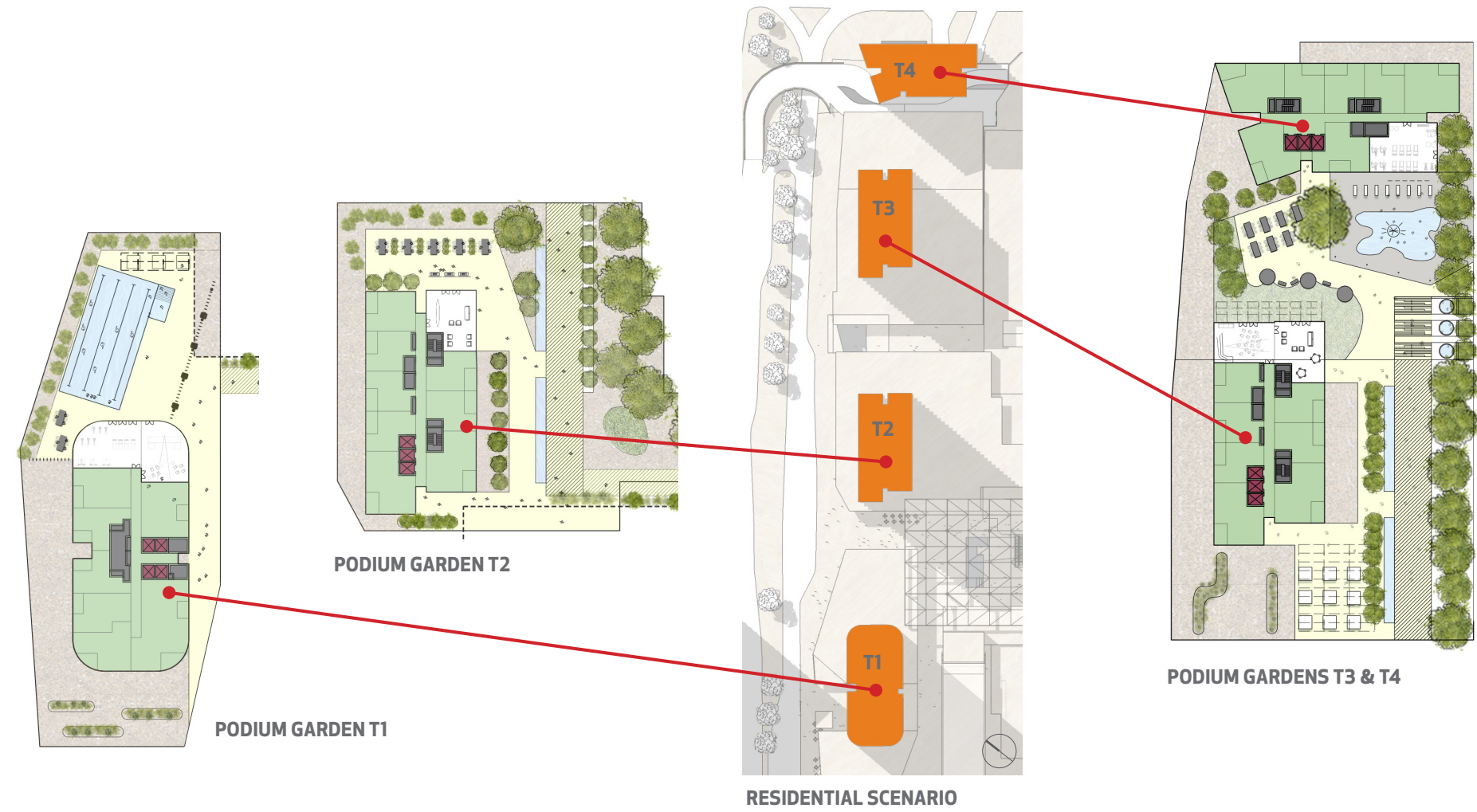
FLOOR PLATES / HEIGHT



AMENITY



Tower Analysis Diagrams

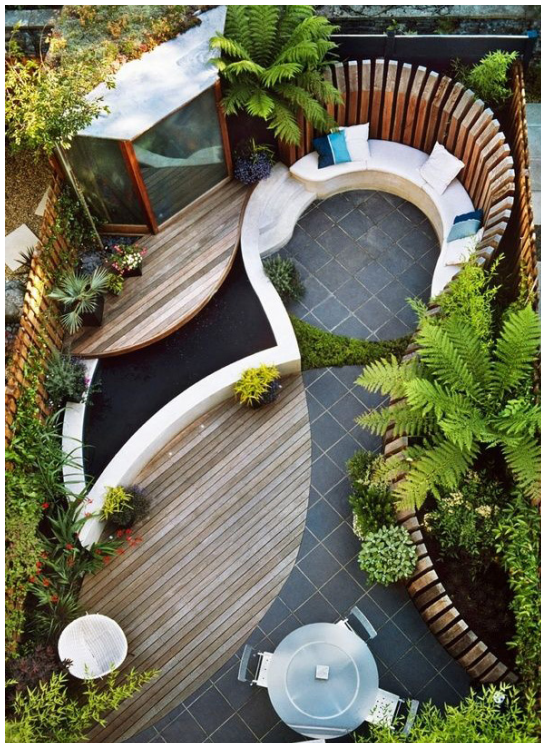


The rooftop podium gardens will provide communal open space for residents, with each tower enjoying a dedicated heart. This gives residents and visitors access to more private spaces that deliver unique amenities.

The gardens on the rooftop are envisaged as lush and diverse, providing a variety of high quality open spaces ranging from private, restful and reflective spaces, to recreational space and communal entertaining spaces.

The gardens benefit from good solar access wherever possible. These gardens are important not only to provide open space for residents but also to provide an important green buffer to the existing roofscape.

The podium gardens transform an otherwise large retail roof into an oasis within a dense urban context.



Characterful Landscape Spaces



Balgowlah Village



Balgowlah Village - rooftop gardens built above retail podium

04 CONCEPT

TOWER USES

RESIDENTIAL APARTMENTS



Parramatta Gateway [AJ+C]

STUDENT HOUSING



Urbanest Haymarket, Student Housing [AJ+C]

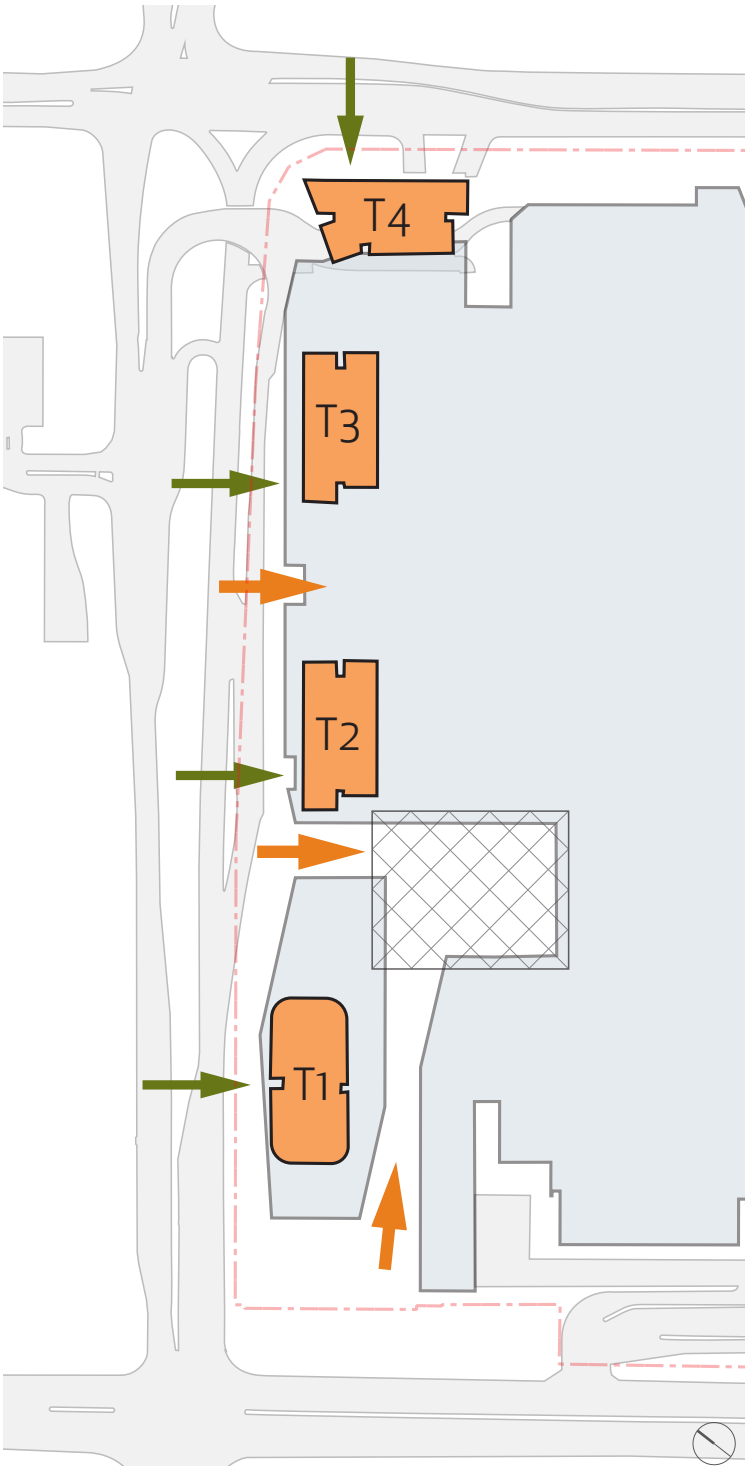
SERVICED APARTMENTS



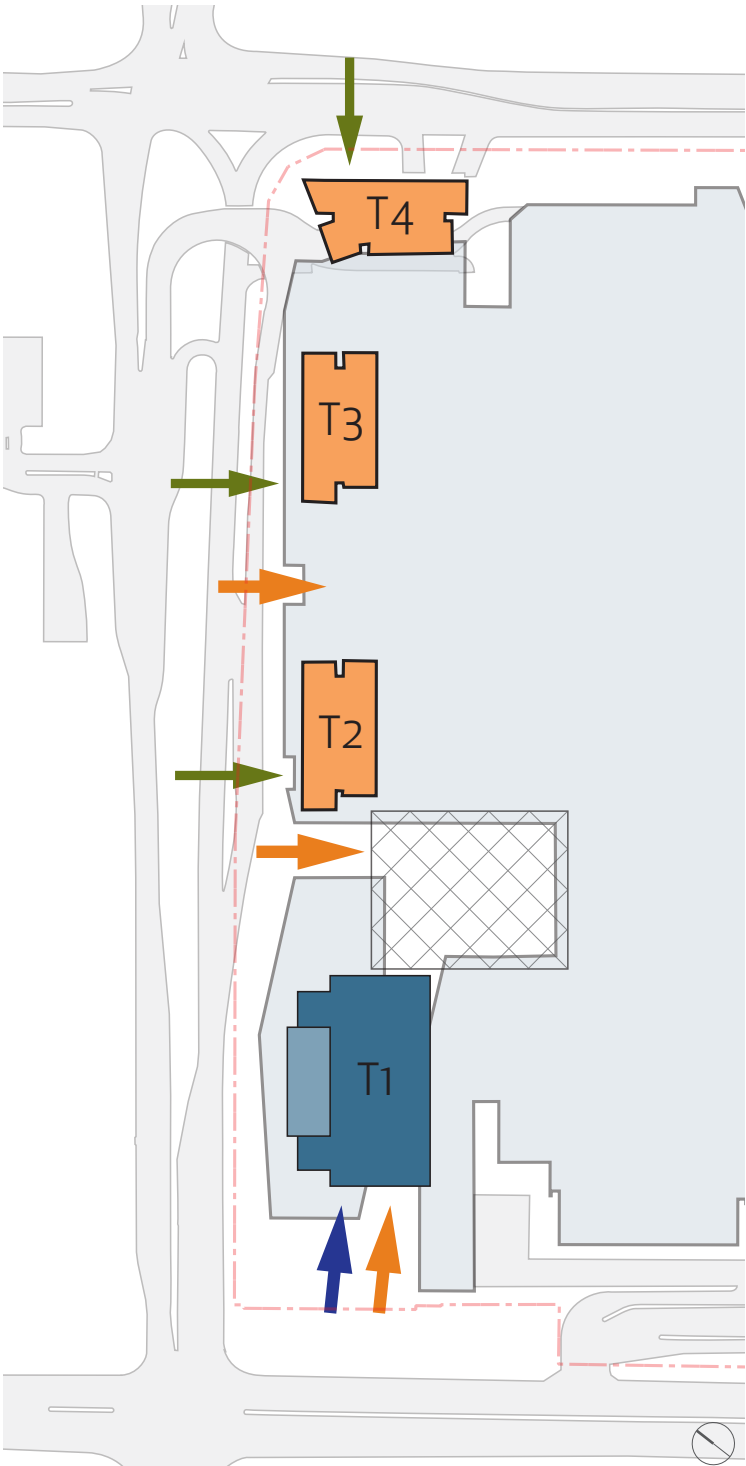
V by Crown, Parramatta [AJ+C]

The proposed building envelopes are flexible and could accommodate a variety of uses within the towers including: residential apartments; serviced apartments or student housing. The proposed building envelope for T1 can accommodate a tower suitable for residential accommodation, serviced apartments or commercial premises.

RESIDENTIAL TOWER SCENARIO



COMMERCIAL TOWER SCENARIO



RESIDENTIAL TOWER SCENARIO



View from Station Plaza

COMMERCIAL TOWER SCENARIO



View from Station Plaza

05 IMPACTS

05 IMPACTS

DESIRED FUTURE CHARACTER

The desired future character, as envisaged by the NSW Government, for Macquarie Park, is of a medium to high density, mixed use, transit oriented precinct. The proposed development is of an appropriate scale, fitting into the future character of the precinct and complies with the applicable height and FSR controls.

Significant population growth is projected into the future with substantial development on sites adjacent to Macquarie Centre. The Ryde LEP (2014) identifies 65m mixed use development on the south-west side of Waterloo Road and up to 120m development on the north-west side of Herring Road.

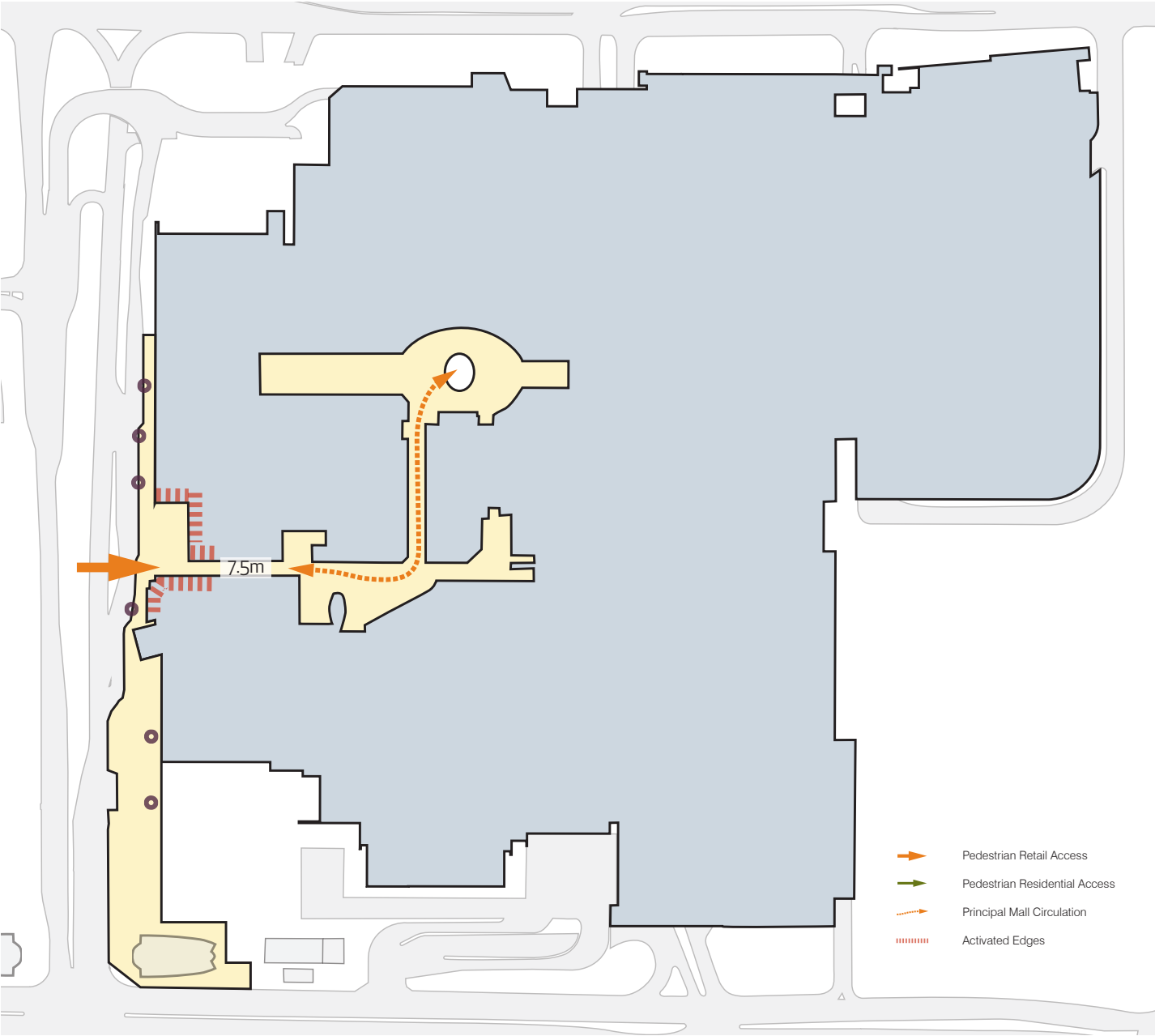


The Macquarie Centre future development as envisaged when situated within the future character of Macquarie Park.
Base image source: Herring Road, Macquarie Park Urban Activation Precinct Proposal (NSW Department of Planning & Environment)

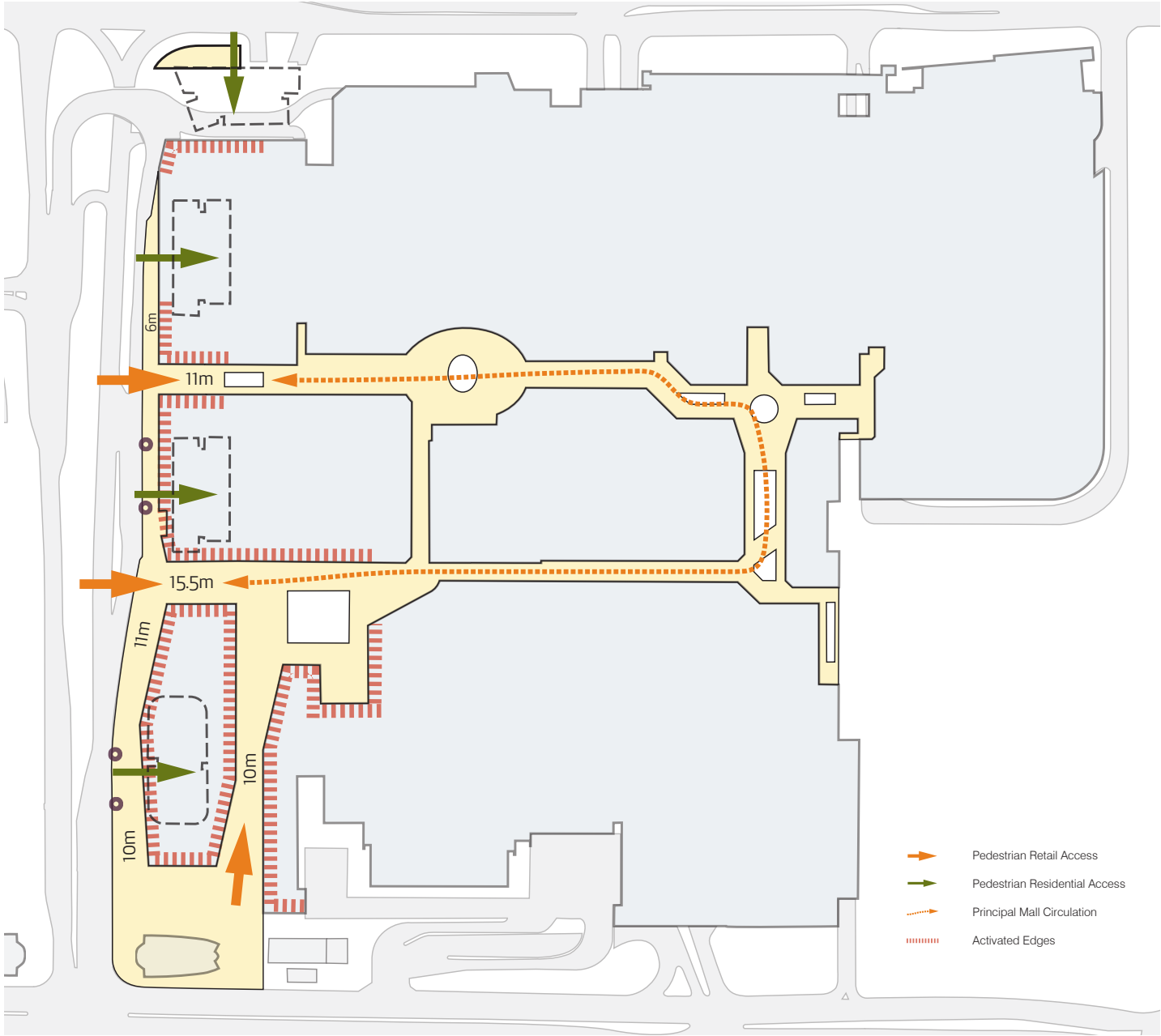
Future street activation and access will be improved with a focus on minimising conflicts and increasing permeability and accessibility of the site for pedestrians.

Street activation is considered to be fundamental to the provision of high quality services for the community and also ensuring the centre can develop its own identity and contribute appropriately to the future character of the precinct.

Herring Road becomes a more pedestrian focussed public domain with increased footpath widths, the inclusion of street furniture and landscaping along with the potential for activated interface uses on the ground plane. The proposal demonstrates a significant shift from the current public domain.



Existing pedestrian movement and access along Herring Road



Proposed pedestrian movement and access along Herring Road

05 IMPACTS

HEIGHTS, SETBACKS + SEPARATION

Detailed building setback and separations information can be found on drawing DA0500, 0501 + 0502 enclosed in the Stage 1 DA submission package (also included in Appendix 1 of this report).

While the current City of Ryde controls indicate a zero setback to site boundaries, setbacks have been established at ground, podium and tower levels to ensure a high quality public domain and amenity for all users. This will benefit the general community using the street frontage along with retail patrons, tower visitors and residents.

- + Towers 3 and 4 cluster together to provide a strong address to the corner of Herring Road and Talavera Road, whilst creating a rooftop private open space with solar access and shelter from adverse wind conditions.
- + Towers 2 and 3 have a generous separation between them, and are appropriately set back from Herring Rd for their height. The entry lobbies are directly from Herring Road creating a strong street address. The towers are also setback above the podium to allow for significant private open space between the towers and the existing rooftops of the centre to the east.
- + Tower 1 has reduced setback from Herring Rd to correlate with a larger retail envelope below and a wider area of public domain improvements along this section of Herring Rd. This change in setback pushes Tower 1 proudly out of alignment with Towers 2 and 3, allowing it to contribute to the strong architectural form that defines Station Plaza and achieve an appropriate separation at the lowest residential levels from the Shard building. Similarly to Towers 2 and 3, Tower 1's entry lobby has good direct access and legibility from Herring Rd.

Separations between tower envelopes have been provided to comply with SEPP65 Apartment Design Guide objectives. As these separations between building envelopes currently comply or exceed minimum ADG separations, when detailed architectural solutions are developed these will be able to achieve ADG minimum separations, ensuring high amenity for residents.

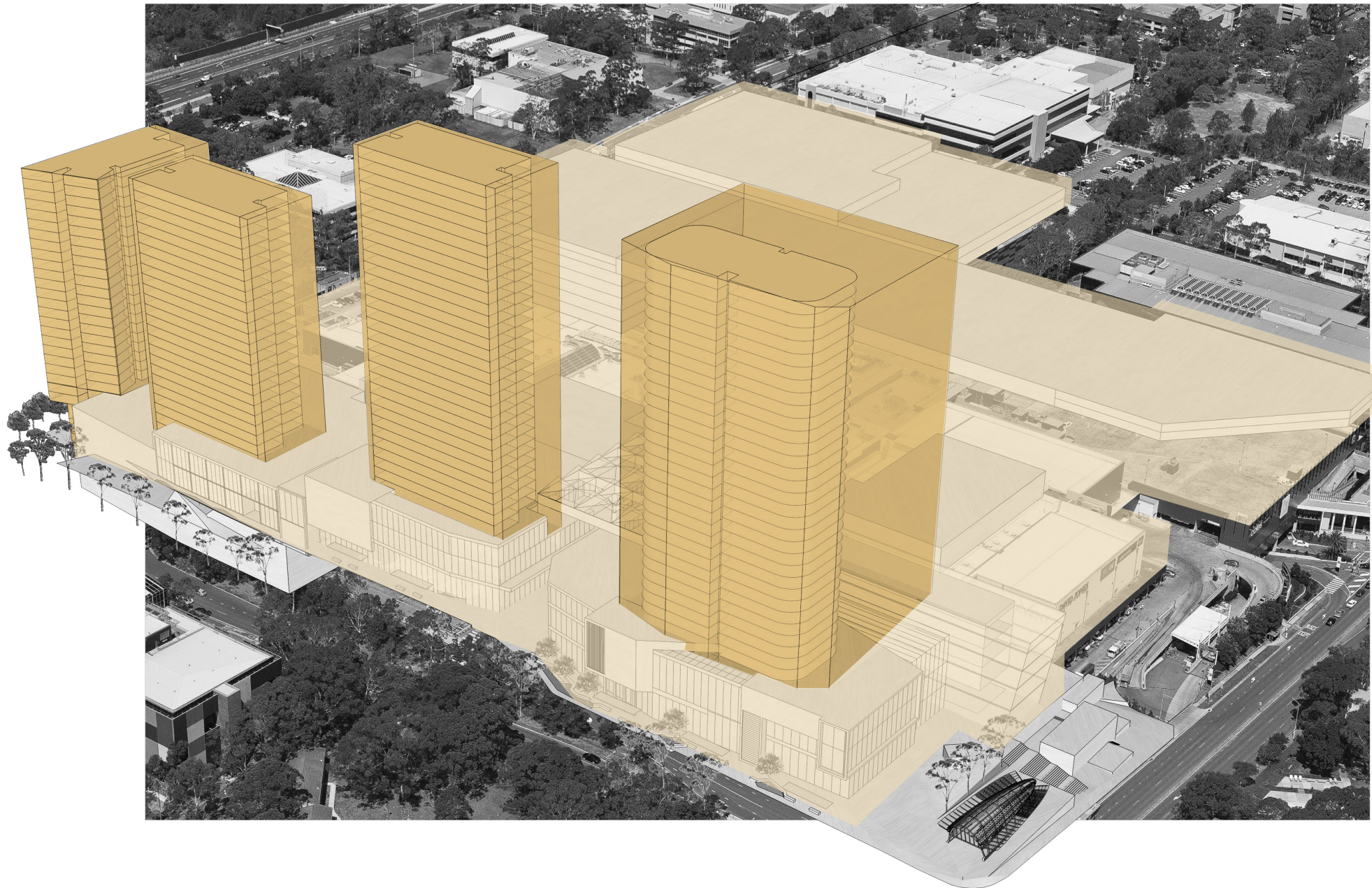
T1 - T2 separation	47m (ADG minimum 24m)
T2-T3 separation	43m (ADG minimum 24m)
T3-T4 separation	24m (ADG minimum 24m)



Heights, Setbacks + Separation

Refer DA0500, 0501 + 0502 for full scale drawings containing dimensioned setbacks (reduced drawings also included in Appendix 1 of this report)

- Boundary
- Macquarie Centre
- Indicative Podium Setback from Boundary
- Indicative Tower Envelope Setback to Podium Edge



Detailed development controls include:

- + building envelopes establishing height and massing of development;
- + setbacks;
- + development yield, which establishes allowable floor space ratio;
- + building separation between new built form on the site

These can be viewed in more detail in the full scale drawing, DA0500, 0501 + 0502, enclosed in the Stage 1 DA submission package (also included in Appendix 1 of this report). These drawings can also be viewed in Appendix 1 of this report.

The tower envelopes have been established using the minimum standards set out in the Apartment Design Guide as a base in order to ensure that compliance can be achieved in future applications.

These building envelopes are oversized to allow for architectural detailing and articulation as well as multiple design solutions, ensuring that a high level of design excellence can be achieved.

Development Controls: Building Envelopes

05 IMPACTS

VISUAL IMPACT

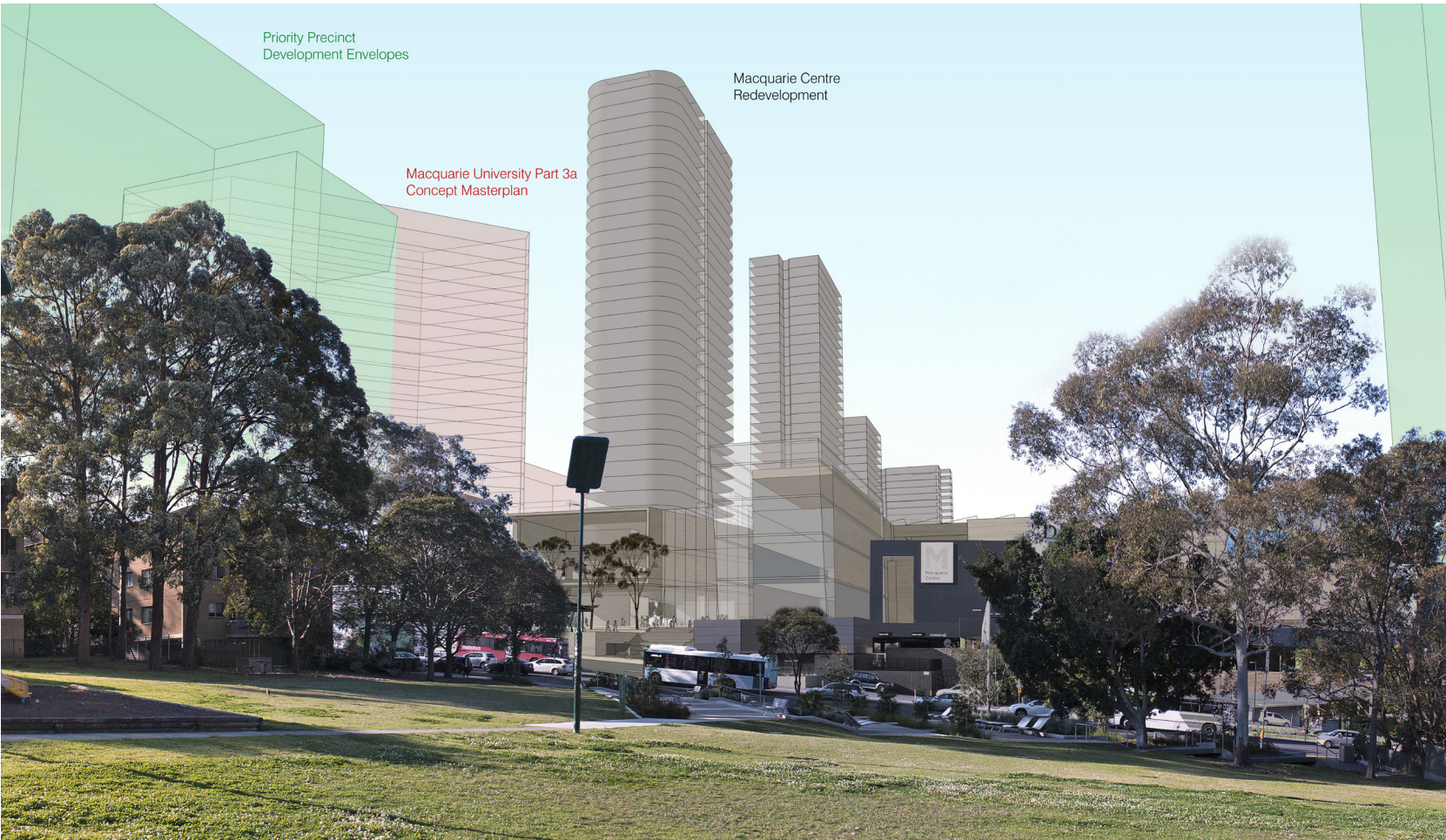
HERRING ROAD LOOKING NORTH



Residential Option



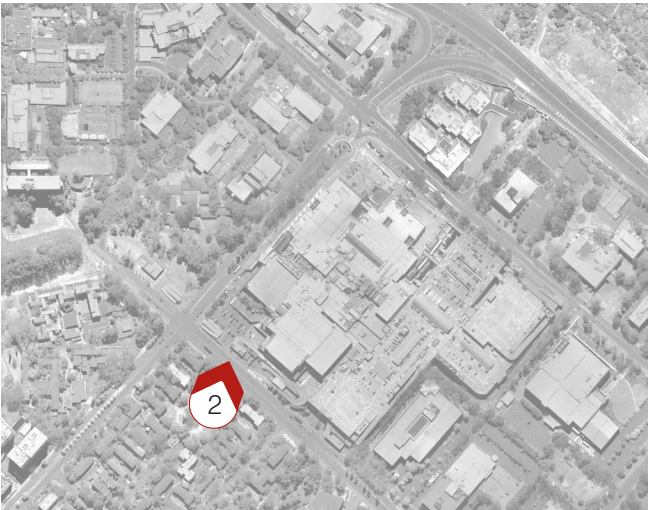
Commercial Option



Residential Option



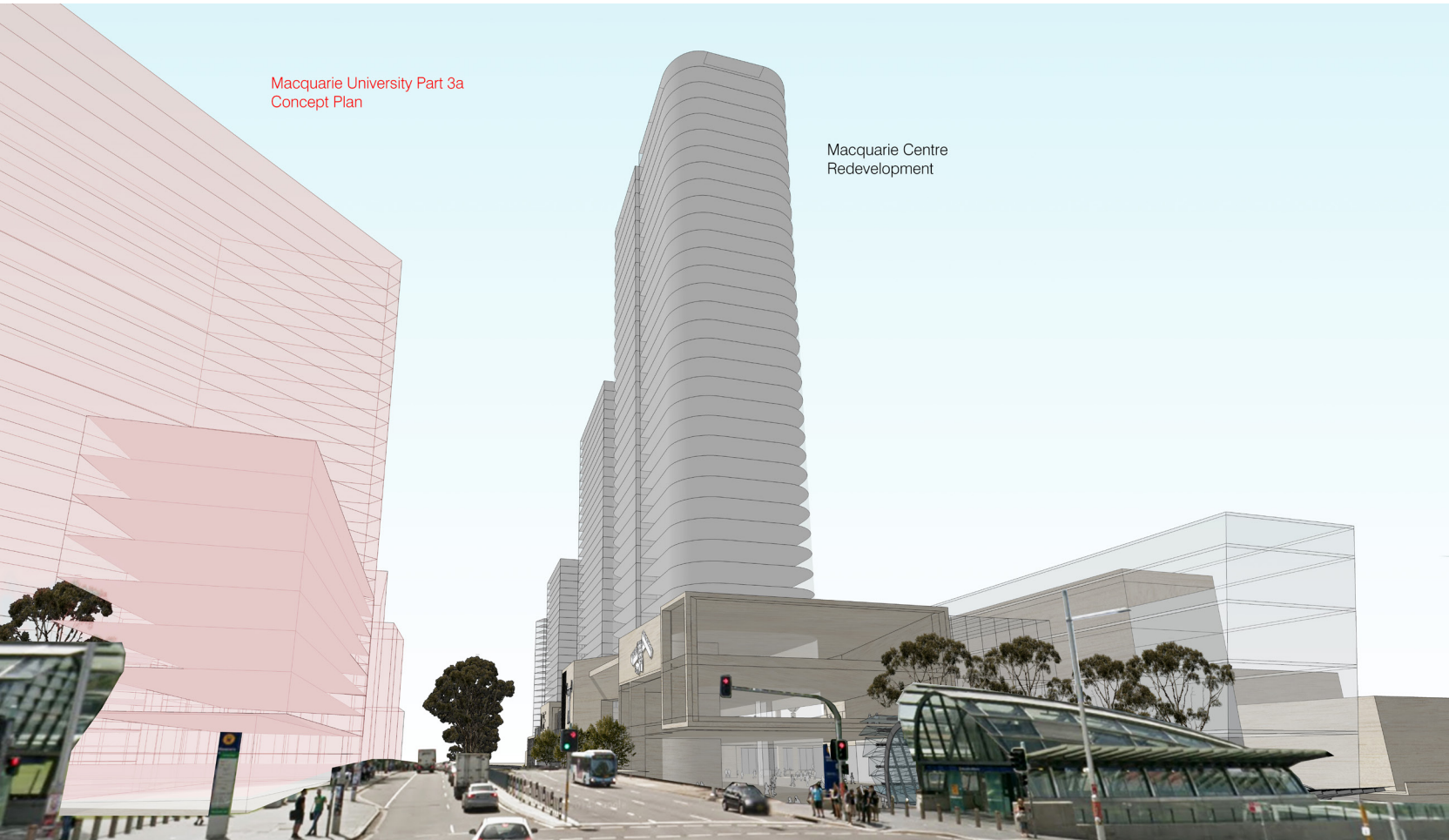
Commercial Option



05 IMPACTS

VISUAL IMPACT

HERRING + WATERLOO ROAD CORNER



Residential Option



Commercial Option

STATION PLAZA + HERRING/TALAVERA ROAD CORNER



Residential Option

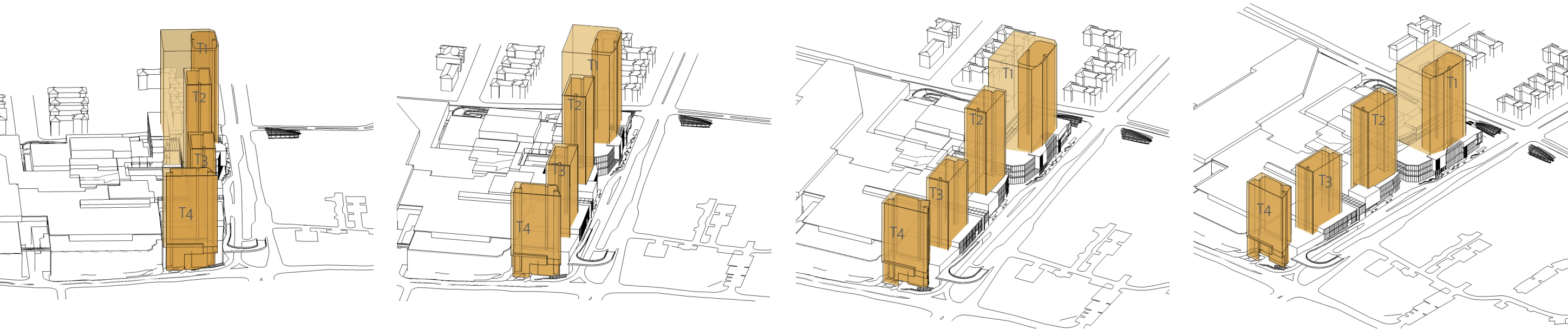


Commercial Option



05 IMPACTS

SOLAR ACCESS



Sun-eye Views

21 June: 09:00

21 June: 10:00

21 June: 11:00

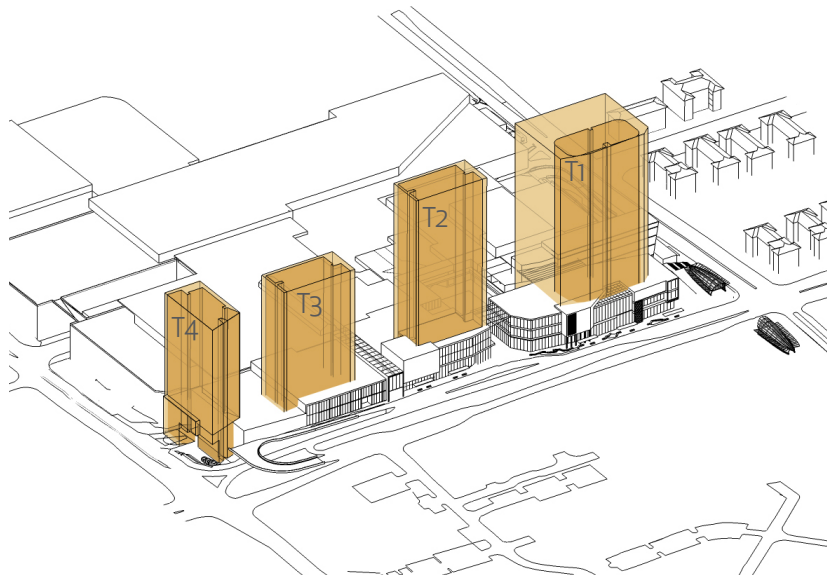
21 June: 12:00



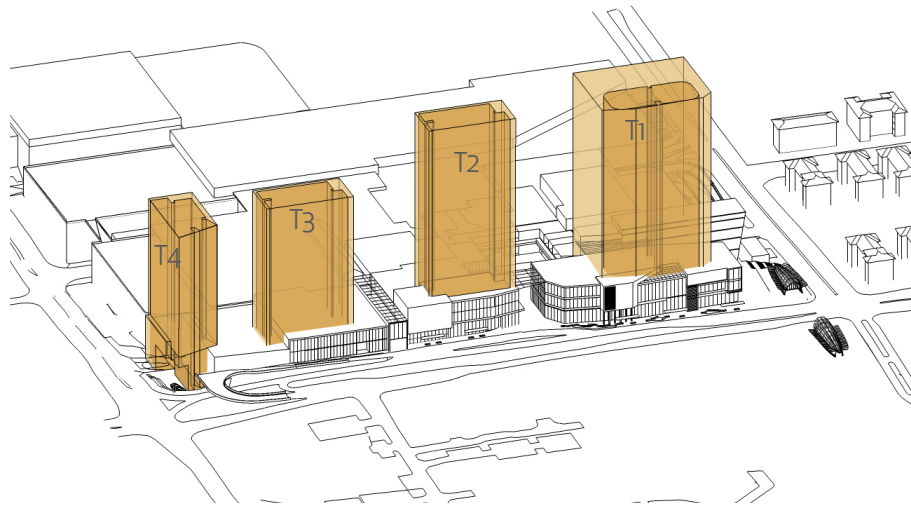
Plan Views

Building envelopes have been located and articulated so as to minimise impact of overshadowing on neighbouring developments whilst optimising solar access to the proposed development.

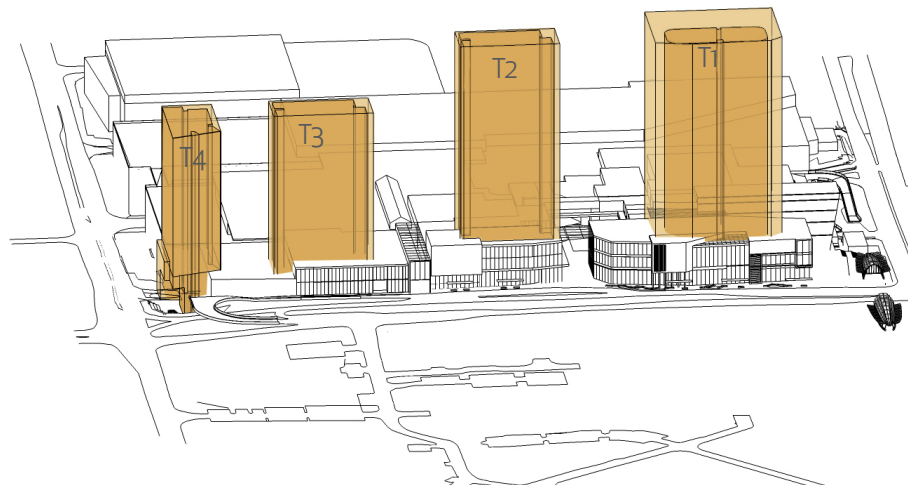
- + The entire Herring Rd frontage receives more than 3hrs direct sunlight on 21 June.
- + The Herring Rd entry receives at least 2.5 hours of direct sunlight on 21 June
- + Station Plaza receives at least 2.5hrs of direct sunlight on 21 June
- + Each tower receives sat least 3 hours of direct sunlight on 21 June to the north-east and north-east façades.
- + The Tower 1 envelope has been located to limit overshadowing of Elouera Reserve to before 12pm on 21 June.



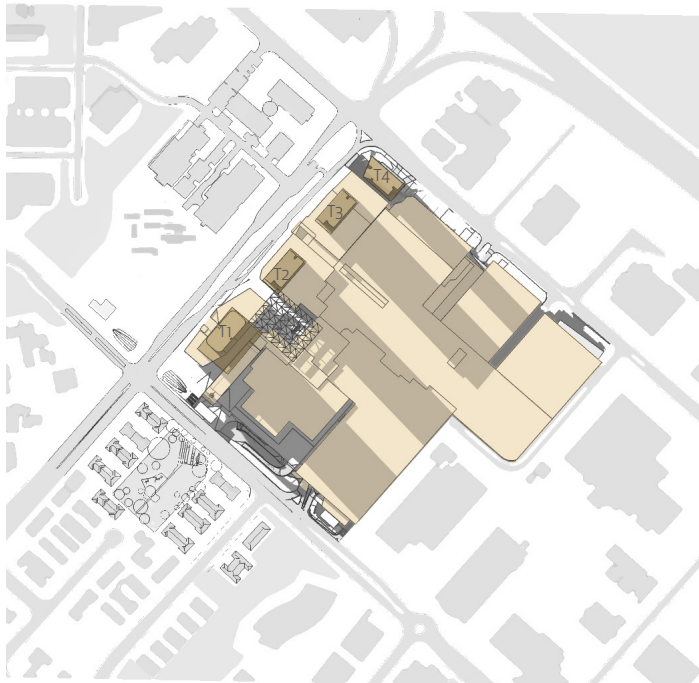
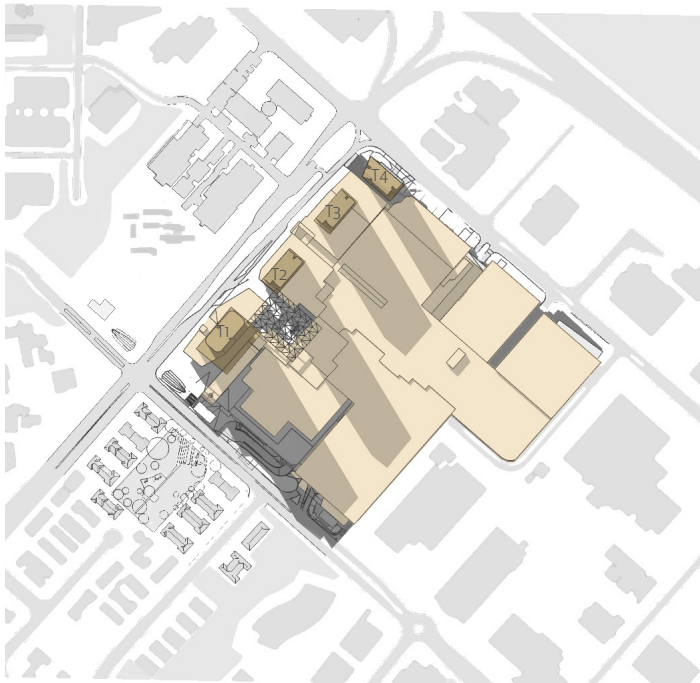
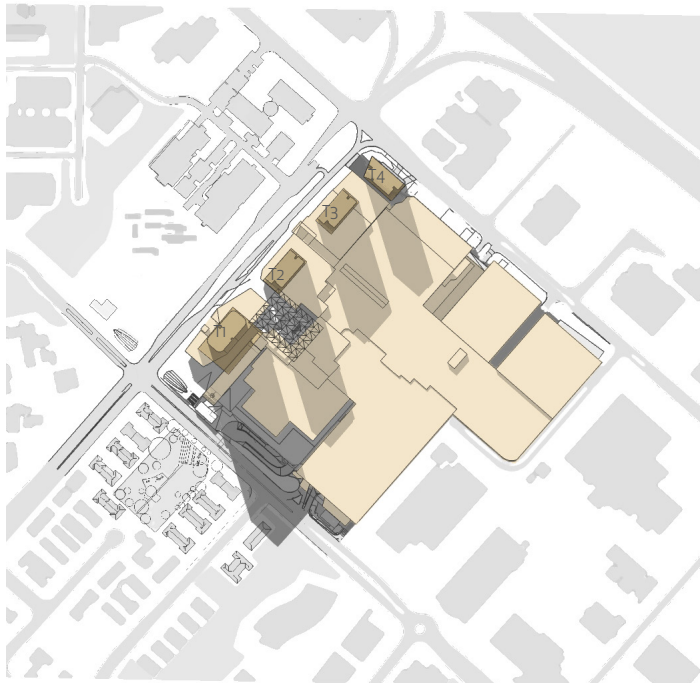
21 June: 13:00



21 June: 14:00



Sun-eye Views



Plan Views

06 SEPP65 ASSESSMENT



JV/MH

18 December 2015

City of Ryde
Planning and Business Centre
1 Pope Street,
Ryde NSW 2112, Australia

Attn:

To the General Manager

RE: **Macquarie Centre Stage 1 DA (12/014)**

Pursuant to Clause 50 (1A) of the *Environmental Planning and Assessment Regulation 2000*, I hereby declare that I am a qualified designer, which means a person registered as an architect in accordance with the *Architects Act 2003* as defined by Clause 3 of the *Environmental Planning and Assessment Regulation 2000*.

I directed the design of the mixed-use apartment development stated above and I confirm that the design is capable of achieving the design quality principles set out in Schedule 1 Design quality principles of the *State Environmental Planning Policy No. 65 – Design Quality of Residential Apartment Development*.

Yours faithfully
ALLEN JACK+COTTIER

Michael Heenan
Project Director
Architect 5264 (NSW)

ARCHITECTURE
URBAN DESIGN
HERITAGE
INTERIORS
GRAPHICS

PRINCIPALS
& NOMINATED
ARCHITECTS (NSW)
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BEIJING
SYDNEY

SEPP 65
DESIGN ASSESSMENT
MACQUARIE CENTRE REDEVELOPMENT
STAGE 1 DA

01. CONTEXT + NEIGHBOURHOOD CHARACTER

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.

Macquarie Centre is located at the corner of Waterloo Road, Herring Road and Talavera Road, Macquarie Park (the site). Being strategically located within the recently gazetted Macquarie University (Herring Road) Priority Precinct, adjacent to the Macquarie University Railway Station and the Herring Road bus interchange, the site provides an excellent opportunity to deliver a genuine mixed use transit-orientated development.

The vision for the Priority Precinct consists of substantial uplift within the Macquarie Park Corridor, dramatically changing the contextual relationship to Macquarie Centre. The site currently offers a wide range of retail, leisure and community services, while the implementation of the Priority Precinct, will enable it to contribute to increasing the supply and mix of housing within the precinct with the development of major tower forms along the Herring Road frontage.

While there is an existing residential and commercial/retail context which will remain and must be considered, it is necessary to take into account the desired future character of the area.

Existing Character

- The site is a developing precinct located within the Macquarie Park Corridor and Herring Road Priority Precinct within the City of Ryde. This precinct is defined by two major roads, Herring Road and Waterloo Road.
- The site is bounded by Herring Road to the north-west, Talavera Road to the north-east and Waterloo Road to the south-west. The site has excellent access to public transport, being located immediately adjacent the Macquarie University Railway Station and the Herring Road Bus Interchange. The surrounds can be summarised as follows:
 - To the north of the site, on the opposite side of Talavera Road comprises a recently completed residential flat building/serviced apartments development in addition to large scale commercial developments;
 - Immediately to the east of the site comprises commercial developments with associated at grade car parking and landscaping;
 - To the south, on the opposite side of Waterloo Road comprises medium density four storey residential flat buildings and public open space known as Elouera Reserve; and
 - To the west is the Herring Road Bus Interchange. Further to the west, on the opposite side of Herring Road is Macquarie University. Macquarie University has concept plan approval for the redevelopment of their site.
 - The centre is situated in close proximity to the M2 Motorway, a major arterial road which connects western Sydney to the CBD and links into other arterial connections linking to the north and south of Sydney's greater metropolitan area and NSW.
 - Photographs of the site and the surrounding development are provided within the Urban Design Report.
- The existing area is characterised by a mix of land uses, architectural styles, often inconsistent, and building types. The predominant building form in the corridor is typically

- large and freestanding, well setback from the streets with large at grade car parks. The buildings generally respond to the street grid however there are some very irregular building forms, and a lack of active street edges.
- Typical land uses within the area include light industrial warehouses, trade centres, residential houses, apartment blocks, retail and substantial commercial developments in the form of medium rise business parks. The area is predominantly characterised by large allotments and low-rise, detached residential buildings generally increasing in height and density towards railway nodes.
- There is some existing redevelopment within the area including mixed use, commercial and residential mid to high-rise developments.
- The site is currently occupied by Macquarie Centre. There is one consolidated building entry on Herring Road which limits connectivity to surrounding context including the Macquarie University Railway Station.
- The adjacent Herring Rd bus interchange accommodates major bus routes connecting Macquarie Centre with the Sydney CBD and western suburbs. Macquarie University Railway Station connects the centre with Chatswood, North Sydney and the Sydney CBD as well as Hornsby and the Central Coast to the north. Future Metro connections are planned which will connect Macquarie with Norwest, Castle Hill and Rouse Hill.
- A free shuttle runs every 15 minutes, connecting Macquarie Centre to the business park.
- Macquarie Centre is identified by the City of Ryde (Local Planning Study December 2010) as a key asset of the Macquarie Park Corridor.

Desired Future Character

- Under the Sydney's new metropolitan strategic plan to 2031 "A Plan for Growing Sydney", Macquarie Park is featured significantly, being at the northern end of the "Global Economic Corridor" and a major generator of economic growth and one of the main destinations for employment. Notably,
- Macquarie Centre is also located in the Macquarie University (Herring Road) Priority Precinct. The vision for the Priority Precinct is for a 'vibrant, mixed use and transit-orientated centre'. The precinct has been identified for growth to maximise existing and planned infrastructure and because of existing market demand for new housing and employment in the area. It could achieve up to 5,800 new dwellings by 2031.
- The Macquarie University Station Precinct includes the interface between two of the main destinations within the Corridor – Macquarie University and the Macquarie Centre. It represents an arrival point to the Corridor, for commuters travelling by both road and rail. The Macquarie University Station will, together with the bus interchange at Macquarie Centre, bring large numbers of students, visitors and workers to the Corridor each day.
- The University Campus contributes to the diversity of the Precinct. Together with opportunities for active retail frontages provided by Macquarie Centre, the Macquarie University Station Precinct will have a unique urban character.
- Public open spaces within the Precinct are also diverse and unique, including public parks and the corridors of Shrimptons Creek and Kikkiya Creek. Around the train stations, public squares are provided to facilitate ease of pedestrian movement and to provide a meeting place within the public domain. These form part of a wider network of improved pedestrian links that integrate new and existing open spaces. Among those new public spaces will be Herring Road, where there will be public domain improvements that combine with active building frontage.

Proposal

- The proposal is a Stage 1 Development Application seeks concept plan approval for the redevelopment of Macquarie Centre.
- The proposed building envelopes have been informed by concept layout planning for the proposed future intended uses.
- The podium will bring services and amenity to the local community. The proposal represents a re-invention of the existing centre to improve public domain connections and public open space provisions both on the site and in the wider precinct.
- The existing centre and proposed development contributes a diverse range of uses for the community, generating a point of interest. The development will assist to enliven the existing area and generate increased pedestrian activity along road networks and transport corridors.
- As the centre is situated within the heart of the Priority Precinct. It is envisaged that in the future, Macquarie Centre will be situated within a high-rise mixed-use context. The envelopes identified for approval are slightly larger in volume (not height) than the concept layouts in order to allow articulation, balconies and potential design changes over the life of the project.

02. SCALE + BUILT FORM

Good design achieves a scale, bulk and height appropriate to the existing or desired future 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.

Desired Future Character

- The area is expected to accommodate diverse uses, with the flexibility to change over time. These include:
 - Retail at Macquarie Shopping Centre with active shopfronts facing streets and public areas
 - Commercial and entertainment development at upper levels of the Macquarie Centre and sites to the east
 - Significant buildings at the gateway to Macquarie University
 - A mix of uses along Herring Road supporting the commercial corridor and the university (such as student housing, hotel/serviced apartments, conference facilities, entertainment and community uses/student services)
- The visual character of the precinct is important as it contains the two major entry points into Macquarie Park: by road, the intersection of Epping Road and Herring Road, and by rail the intersection of Herring Road and Waterloo Road.

Proposal

- The proposed development is set out in accordance with the controls set by the City of Ryde Council’s **Local Environmental Plan (2014)**. The building height is to be a maximum 120 metres at the corner of Waterloo Road and Herring Road, 90 metres at the corner of Talavera Road and Herring Road, and 65 metres for the balance of the site.
- The proposed building envelope has been designed to be generous enough to allow for architectural detailing in addition to the area required to achieve the stipulated FSR. This has been done as is recommended in the Apartment Design Guide 2B “A building envelope should be 25-30% greater than the achievable floor area to allow for building components that do not count as floor space but contribute to building design and articulation...”. The envelopes have been tested to ensure that they can accommodate the proposed GFA.
- Building mass is articulated to achieve discrete built forms to reduce the perceived bulk of the development. Each tower is separated to form an individual building to reduce bulk of development.
- Sight lines to proposed public open space and new through site vistas help connect surrounding streets, improve visual permeability and increase depth of existing views.
- Large separations between residential towers and narrow floor plates preserves view opportunities for surrounding sites whilst optimising solar access and view opportunities outwards from the site.
- The proposed upgrade relates to the existing centre through aligning with existing levels and parapet heights. This redevelopment will improve the current condition of the building.
- The built form is configured to create a large landscaped plaza at the train station entry building (called Station Plaza) located on the corner of Herring Road and Waterloo Road. This connected centralized plaza provides a sense of address for the site, with bold architectural forms on two sides and connections to the train station and public space network outside the site.
- Station Plaza leads to a number of entry forecourts; one facing Waterloo Road from the Station Plaza, and two along Herring Road. These open spaces establish a development concept that allows for variety in scale and form of the development whilst enabling each tower lobby to be aligned with the street frontage, taking advantage of its own street address.
- A variety of building setbacks are therefore proposed along the street frontages to Herring Road, Talavera Road and Waterloo Road, consistent with the desired future character of the precinct.

03. DENSITY

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

- This application proposes a permissible density, in accordance with densities set out in the City of Ryde **Local Environmental Plan 2014**. Refer to Statement of Environmental Effects for detailed information.
- The proposed building envelopes will make a substantial contribution to the public domain through the provision of public open space in the form of Station Plaza which provides an open space which links to the neighbouring infrastructure and transport.
- The proposed development includes opportunities for work by inclusion of commercial and retail spaces as well as community amenity through the provision of non-residential uses.
- The proposed density will benefit the public by enabling the proposed building to better respond to the future character of a lively town centre. The yield will allow for a high-quality design outcome and demonstrate investment in the precinct. In this location, a well-designed mixed use development will attract greater investment to the area. Additionally, increased height will aid in the identification of the centre as a local landmark.
- High densities are also considered to be sustainable within this area as they are supported by the site’s proximity to:
 - Employment
 - The CBD
 - Transport
 - Public Open Space
 - The sites situation within the Herring Road Urban Activation Precinct

04. SUSTAINABILITY

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

- Detailed design is subject to future development application.
- The envelopes are designed to allow for sustainable design including passive building design through the use of shallow floor plates, maximising opportunities for natural ventilation and orientation ensuring optimal solar access to apartments.
- The envelopes can allow for a variety of building systems to enable choice in selection of insulation and building materials with regards to passive thermal design, waste, use of sustainable materials and reuse/recyclability of materials.
- A Preliminary Waste Management Plan has been prepared. This establishes a strategy for recycling and managing waste.
- An Ecologically Sustainable Development Strategy has been prepared. This establishes the overarching sustainability strategy.

05. LANDSCAPE

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, provides for practical establishment and long term management.

Existing Character

- The site currently accommodates the Macquarie Centre. It is predominantly comprised of hardstand, bituminous and concrete ground cover for car parking along with the retail centre, with minimal existing natural features within the site boundary.

Proposal

- The landscape concept for the redevelopment of Macquarie Centre aims to create a contemporary, functional and aesthetically pleasing landscape that seamlessly blends with the built form.
- The redevelopment will see the creation of a new ‘civic’ space (Station Plaza) which will connect the existing rail station on the corner of Herring Road and Waterloo Road to the new redeveloped Macquarie Centre and provide much improved access from Macquarie University. It will be both a transitional space as well as a place where people can meet and gather. As well as providing amenity for residents, it will also provide a new flexible public space that can be used for community events, outdoor seating associated with ground floor retail and will become the entry forecourt to a ‘landmark’ building.
- Public domain improvements on Herring Road including street planting will allow for activated retail frontages that re-imagine this road as a new public space with outdoor dining and entertainment. This includes new entries to Macquarie Centre and allows for lobby entries to residential buildings that have a strong address and legibility.
- At the corner of Talavera Road and Herring Road, a landscaped entry plaza will create a private and very unique residential entry point within the development. It will serve as the pedestrian access to Tower 4, but also provides a vehicle entry for all towers and allows residential access to the communal open spaces above.
- Residents will have access to private open space in addition to extensive roof-top communal open space for recreation and the enjoyment of residents. This is provided in terraced spaces between landscape features distributed across three separate roof top terraces at levels 5, 6 and 7, creating a variety of spaces for residents.

06. AMENITY

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

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 service areas, and ease of access for all age groups and degrees of mobility.

Proposal

- The development will provide for a mix of units and sizes providing a variety of dwelling options for a range of people.
- A proportion of units will be provided which will be designed to the requirements of AS 4299-1995 Adaptable Housing as well as units which are designed to meet the Universal Design standards.
- Residents will benefit from provisions within the development for storage and other modes of transport parking, including bicycles.
- Good amenity will also be provided through communal open space for the use of residents. This communal open space will provide a variety of opportunities including passive and active recreation as well as communal facilities appropriate to a variety of age groups and users.
- Additional amenity, including recreation and entertainment will be provided within the Macquarie Centre development. Non-residential uses provided to ensure convenience and amenity for residents as well as the community.
- Good street address is critical for the amenity of residents to give a sense of address and character. Due to the commercial restrictions in mixed use developments it can be difficult to locate lobbies close to streets. This constraint has been dealt with by situating tower envelopes close to street frontages and integrating these locations with the new public spaces and to minimise detrimental impact to non-residential uses below.
- Building envelopes allow for quality private open space for residents.
- Building envelopes do not restrict development, it will be possible for interior corridors to have access to daylight and natural ventilation, with views out of the building to improve both amenity and sustainability.
- The orientation of building envelopes allows the building to open up to surrounding views of Macquarie University, Lane Cove National Park and the Sydney CBD. Separation of building envelopes, as well as size and orientation, has been considered in relation to solar access and ventilation. These envelopes can accommodate tower forms with good amenity.
- The proposed residential tower envelopes are setback from boundaries to protect amenity for neighbouring developments. The proposed tower envelopes are also separated internally from one another in excess of the dimensions set out in the Apartment Design Guide to ensure privacy for residents and maximise amenity to apartments, communal open space and public open space.

07. SAFETY

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 building envelopes are situated such that address to the street can be carefully designed to ensure safe access to and egress from the building by ensuring direct sight lines to lobbies from the street.
- The thresholds between public, communal and private areas will be clearly defined to ensure a sense of ownership and legibility between the public and private domains. In keeping with the desired future character of the area (to provide a visually open interface between public and private) a strong, legible, visual connection will be retained between the two domains.
- Retail frontages will provide lighting to the area at night, passive surveillance of the street and opportunity for night-time activation. These premises will have access from the street.
- The development will have clearly demarcated entry zones to street frontages, with direct sight lines to residential entrance lobbies which will enhance the activation of the street and provide passive lighting.
- Apartment buildings will overlook the landscaped public space providing passive surveillance of the open space areas.
- Subject to future development application the development can be designed to avoid blind corners and hidden spaces.
- Access to each building and individual apartments will be coordinated with a security key system.
- Secure parking for residents will be located within the basement with clear and direct lift access to the apartments. The entrances to the parking areas are to maximise street activation and surveillance.

08. HOUSING DIVERSITY + SOCIAL INTERACTION

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, providing opportunities for social interaction amongst residents.

Proposal

- The redevelopment of Macquarie Centre will provide opportunities for housing choice and diversity. The communal open spaces, retail uses and commercial uses, and public open space will encourage social interaction amongst residents and the community.
- The ground floor address and interface of the buildings can be carefully designed to enhance street activation and frontage.
- The proposed development will create opportunities for families in the surrounding neighbourhood to move within the area when their family needs change.
- A variety in sizing, aspect and outlook within apartment types will result in some price differentiation.
- Dedicated residential communal spaces provided on the rooftops will support the communal life of the building. These spaces typically have direct access from lift arrival lobby and are more intimate in nature than the public open space provided at street level in the plazas.

09. AESTHETICS

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

Proposal

- The detailed design and aesthetics of the built form is subject to a future development application. However, the intent of the aesthetics will be to:
 - Further develop and articulate the massing strategy for the site through the application of varying architectural languages;
 - Respond to contextual opportunities and constraints including orientation, internal planning configuration, views to and from the site and to maximize residential amenity;
 - De-formalise the usual rigid and repetitive facades in multi-unit residential development through articulation and patterning of feature horizontal and vertical components and elements;
 - Use a material and colour palette that appropriately reflects the desired character of the proposed development and context and to breakdown the mass of the building yet maintain a limited palette for cohesion over the whole.

SEPP 65
COMPLIANCE TABLE
MACQUARIE CENTRE
REDEVELOPMENT
STAGE 1 DA

Reference	Item Description	Can comply?
PART 1	IDENTIFYING THE CONTEXT	
1A	APARTMENT BUILDING TYPES	✓
	The proposed development consists of: a mixed use podium, containing a variety of uses including retail, commercial, entertainment and community uses; and four tower envelopes with potential to incorporate buildings suitable for residential apartments, student housing, serviced apartments and one tower envelope (T1) which could accommodate a commercial tower.	
1B	LOCAL CHARACTER AND CONTEXT	✓
	The proposed development responds and contributes to its context. The desired future character of the area is of a strategic centre (Priority Precinct) and is set out by the Department of Planning & Environment NSW in their Planning Report <i>Herring Road Urban Activation Precinct: Planning Report</i> (June 2014). The proposed development has been considered in relation to a variety of scales, from the local, neighbourhood context to the larger metropolitan, strategic context. Refer Urban Design report.	
1C	PRECINCTS AND INDIVIDUAL SITES	✓
	Macquarie Centre is an individual site, situated within a wider Priority Precinct which is currently undergoing significant change. It is important to respond to the desired future character of the precinct as it is changing in order to appropriately deal with context into the future.	
PART 2	DEVELOPING THE CONTROLS	
2A	PRIMARY CONTROLS	✓
	Proposed building envelopes are situated within complying development controls. Building separation, setbacks, depths and orientation have been tested within the proposed envelopes.	
2B	BUILDING ENVELOPES	✓
	This proposal seeks approval for building envelopes defining the three dimensional form of future buildings. Refer to Architectural Drawing DA0500,0501 + 0502.	
2C	BUILDING HEIGHT	✓
	Building height is limited to 120m, 90m, or 65m across the relevant parts of the site.	
2D	FLOOR SPACE RATIO	✓
	Floor space ratio is set according to Ryde Council LEP.	
2E	BUILDING DEPTH	✓
	The proposed envelope is suitable for a range of possible future uses. Building depth will be limited by use and is subject to a future development application.	
2F	BUILDING SEPARATION	✓
	Building envelopes enable compliant building separation. In some cases building separation may exceed minimums set out in the Apartment Design Guide.	
2G	STREET SETBACKS	✓
	Towers are setback from the street above podium level.	
2H	SIDE AND REAR SETBACKS	✓
	The residential tower forms sit within a large block of single ownership. Tower and podium envelopes consider overshadowing of neighbours and visual privacy as well as street activation in relation to the future character of the area.	

APARTMENT DESIGN GUIDE OBJECTIVES

Ref	Item Description	Can objective be achieved?
PART 3	SITING THE DEVELOPMENT	
3A	SITE ANALYSIS	
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	✓
	Building envelopes have been developed with consideration of key relationship to existing site conditions and prevailing character of the existing context and desired future character. Built form can satisfactorily respond to site conditions and context. Detailed design subject to future development application.	
3B	ORIENTATION	
Objective 3B-1	Building types and layouts respond to the streetscape and site while optimising solar access within the development	✓
	Building envelopes have been established to accommodate built form which responds to solar access. Detailed design subject to future development application. Refer Urban Design Report.	
Objective 3B-2	Overshadowing of neighbouring properties is minimised during mid winter	✓
	Building envelopes are slender to reduce impact of overshadowing to neighbouring properties. Detailed design subject to future development application.	
3C	PUBLIC DOMAIN INTERFACE	
Objective 3C-1	Transition between private and public domain is achieved without compromising safety and security	✓
	The illustrative concept plans indicate that secure building entries for residential towers be located on street frontages to maximise visibility. Building envelopes are designed such that apartments can overlook common open space and public domain, enabling opportunities for passive surveillance. Detailed design subject to future development application. Refer Public Domain Design Report submitted with this application.	
Objective 3C-2	Amenity of the public domain is retained and enhanced	✓
	This application seeks approval for building envelopes which intend to improve the current public domain and amenity provisions of the site. Detailed design of public domain treatments subject to future development application. Refer Public Domain Design Report submitted with this application.	
3D	COMMUNAL AND PUBLIC OPEN SPACE	
Objective 3D-1	An adequate area of communal open space is provided to enhance residential amenity and to provide opportunities for landscaping	✓
	The proposed development is mixed use. Communal open space for residents is situated on the podium rooftop. Residents will also benefit from upgrades and improvements to Macquarie Centre and its surrounding public domain. Detailed design of communal space gardens subject to future development application. Refer Public Domain Design Report submitted with this application.	
Objective 3D-2	Communal open space is designed to allow for a range of activities, respond to site conditions and be attractive and inviting	✓
	Detailed design of communal open space and landscape is subject to future development application. However, it is envisaged that communal open space on podium rooftop would provide for a range of activities. This location would maximise solar access and amenity, making the space attractive and inviting.	
Objective 3D-3	Communal open space is designed to maximise safety	✓
	As indicated in the illustrative plans, communal open space for residents is intended to be separated from public domain by situating it on the podium rooftop. This would make the space secure and private. Detailed lighting and safety design is subject to future development application.	
Objective 3D-4	Public open space, where provided, is responsive to the existing pattern and uses of the neighbourhood	✓
	The public open space is located to connect into the existing street pattern. Proposed public domain would connect into the existing station and bus interchange. The vision for the public domain has been established with reference to Macquarie University and desire lines for commuters. Detailed design	

Ref	Item Description	Can objective be achieved?
	subject to future development application.	
3E	DEEP SOIL ZONES	
Objective 3E-1	Deep soil zones provide areas on the site that allow for and support healthy plant and tree growth. They improve residential amenity and promote management of water and air quality	✓
	The proposed development is mixed use. The existing development has 100% site coverage. Storm water will be managed within the site and deep planting zones will be provided on structures. Detailed design will be subject to future development application.	
3F	VISUAL PRIVACY	
Objective 3F-1	Adequate building separation distances are shared equitably between neighbouring sites, to achieve reasonable levels of external and internal visual privacy	✓
	Building envelopes are designed to accommodate built form that complies or exceeds separation requirements. Detailed design outlining additional visual privacy measures subject to future development application.	
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	✓
	Building envelopes are designed to accommodate a variety of discrete open spaces, visually and physically distinct. The illustrative concept plans indicate that the communal open space is physically removed from the public domain by being located on the podium rooftop. It is possible for future design to comply. Detailed design describing separation of apartment's private open space from communal space is subject to future development application.	
3G	PEDESTRIAN ACCESS AND ENTRIES	
Objective 3G-1	Building entries and pedestrian access connects to and addresses the public domain	✓
	Building entries are located along street frontages to enable street activation and address, with direct connection to the surrounding public domain. Detailed design of entries and lobbies, particularly with regards to address and way finding is subject to future development application.	
Objective 3G-2	Access, entries and pathways are accessible and easy to identify	✓
	Accessible design has been considered with regards to this application where applicable. Detailed design is subject to future development application.	
Objective 3G-3	Large sites provide pedestrian links for access to streets and connection to destinations	✓
	Direct access to public domain and transport infrastructure has been considered with this application where applicable, particularly with regards to making the site more permeable and linking into existing desire lines. Detailed design for public domain provisions is subject to future development application. Refer chapter 04 'Concept Design' and chapter 05 'Proposal' of the Urban Design Report.	
3H	VEHICLE ACCESS	
Objective 3H-1	Vehicle access points are designed and located to achieve safety, minimise conflicts between pedestrians and vehicles and create high quality streetscapes	✓
	Location of vehicle access points has been considered to reduce or minimise impact of additional traffic on existing traffic conditions. Refer to Architectural Drawings for locations of types of vehicular access points. Refer to DA0502 for location of vehicle access.	
3J	BICYCLE AND CAR PARKING	
Objective 3J-1	Car parking is provided based on proximity to public transport in metropolitan Sydney and centres in regional areas	✓
	The proposed development is mixed use. Car parking provisions are balanced between retail, commercial and residential uses and vehicle parking figures are subject to future development application.	

APARTMENT DESIGN GUIDE OBJECTIVES

Ref	Item Description	Can objective be achieved?
Objective 3J-2	Parking and facilities are provided for other modes of transport	✓
	Parking provisions can enable parking for alternative modes of transport including bicycle transport. This application does not seek approval for these numbers. Detailed design is subject to future development application.	
Objective 3J-3	Car park design and access is safe and secure	✓
	Can comply. Detailed basement and carpark design is subject to future development application.	
Objective 3J-4	Visual and environmental impacts of underground car parking are minimised	✓
	The proposed development is mixed use and forms part of an upgrade to an existing development. Car parking layouts have been rationalised to improve efficiency where applicable to minimise excavation requirements. Impact of protrusion of carparks can be mitigated through a variety of measures including landscaping and screening. Detailed design would be subject to future development application.	
Objective 3J-5	Visual and environmental impacts of on-grade car parking are minimised	✓
	This application seeks concept approval only for building envelopes for the proposed basement, expanded podium and tower forms. The existing centre contains both on-grade and above ground car parking, much of which does not form part of this application. Impact of relevant portions of existing and proposed on-grade carparking can be mitigated through a range of screening devices and landscaping. Improvements proposed are described in the Urban Design report and detailed design of such strategies would form part of a future development application.	
Objective 3J-6	Visual and environmental impacts of above ground enclosed car parking are minimised	✓
	The illustrative plans indicate that in some locations the above ground car parking will be skinned by development or concealed so as to reduce detrimental visual impact from street frontages. Where this is not possible, it would be possible to minimise visual impact by providing screening measures in the form of screening devices and landscaping. Detailed design will be subject to future development application.	
PART 4	DESIGNING THE BUILDING	
4A	SOLAR AND DAYLIGHT ACCESS	
Objective 4A-1	To optimise the number of apartments receiving sunlight to habitable rooms, primary windows and private open space	✓
	Can comply. Building envelopes have been tested to ensure that floor plate layouts can achieve optimum solar access. Detailed apartment and floor plate layouts will be subject of future development applications.	
Objective 4A-2	Daylight access is maximised where sunlight is limited	✓
	Can comply. Detailed design subject to future development application.	
Objective 4A-3	Design incorporates shading and glare control, particularly for warmer months	✓
	Can comply. Detailed design subject to future development application.	
4B	NATURAL VENTILATION	
Objective 4B-1	All habitable rooms are naturally ventilated	✓
	Building envelopes are designed to take advantage of natural ventilation. Detailed design of floor plates and apartment layouts subject to future development application.	
Objective 4B-2	The layout and design of single aspect apartments maximises natural ventilation	✓
	Detailed design of floor plates and apartment layouts subject to future development application.	
Objective 4B-3	The number of apartments with natural cross ventilation is maximised to create a comfortable indoor environment for residents	✓
	Detailed design subject to future development application.	

Ref	Item Description	Can objective be achieved?
4C	CEILING HEIGHTS	
Objective 4C-1	Ceiling height achieves sufficient natural ventilation and daylight access	✓
	Detailed design subject to future development application.	
Objective 4C-2	Ceiling height increases the sense of space in apartments and provides for well proportioned rooms	✓
	Detailed design subject to future development application.	
Objective 4C-3	Ceiling heights contribute to the flexibility of building use over the life of the building	✓
	Detailed design subject to future development application.	
4D	APARTMENT SIZE AND LAYOUT	
Objective 4D-1	The layout of rooms within an apartment is functional, well organised and provides a high standard of amenity	✓
	Detailed design subject to future development application.	
Objective 4D-2	Environmental performance of the apartment is maximised	✓
	Detailed design subject to future development application.	
Objective 4D-3	Apartment layouts are designed to accommodate a variety of household activities and needs	✓
	Detailed design subject to future development application.	
4E	PRIVATE OPEN SPACE AND BALCONIES	
Objective 4E-1	Apartments provide appropriately sized private open space and balconies to enhance residential amenity	✓
	Detailed design subject to future development application.	
Objective 4E-2	Primary private open space and balconies are appropriately located to enhance liveability for residents	✓
	Detailed design subject to future development application.	
Objective 4E-3	Private open space and balcony design is integrated into and contributes to the overall architectural form and detail of the building	✓
	Detailed design subject to future development application.	
Objective 4E-4	Private open space and balcony design maximises safety	✓
	Detailed design subject to future development application.	
4F	COMMON CIRCULATION AND SPACES	
Objective 4F-1	Common circulation spaces achieve good amenity and properly service the number of apartments	✓
	Building envelopes and development yield take these requirements into account. Detailed design subject to future development application.	
Objective 4F-2	Common circulation spaces promote safety and provide for social interaction between residents	✓
	Detailed design subject to future development application.	

06 SEPP65 ASSESSMENT

APARTMENT DESIGN GUIDE OBJECTIVES

Ref	Item Description	Can objective be achieved?
4G	STORAGE	
Objective 4G-1	Adequate, well designed storage is provided in each apartment	✓
	Detailed design subject to future development application.	
Objective 4G-2	Additional storage is conveniently located, accessible and nominated for individual apartments	✓
	Detailed design subject to future development application.	
4H	ACOUSTIC PRIVACY	
Objective 4H-1	Noise transfer is minimised through the siting of buildings and building layout	✓
	Can comply. Building location and separation allows for noise transfer reduction between buildings. Detailed design of acoustic separation between apartments subject to future development application.	
Objective 4H-2	Noise impacts are mitigated within apartments through layout and acoustic treatments	✓
	Detailed design of acoustic separation between apartments and apartment layout subject to future development application.	
4J	NOISE AND POLLUTION	
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	✓
	Built forms are located along main roads. Noise and pollution impacts can be minimised through architectural detailing and layout design subject to future development application.	
Objective 4J-2	Appropriate noise shielding or attenuation techniques for the building design, construction and choice of materials are used to mitigate noise transmission	✓
	Detailed design subject to future development application.	
4K	APARTMENT MIX	
Objective 4K-1	A range of apartment types and sizes is provided to cater for different household types now and into the future	✓
	Detailed layout plans and apartment design subject to future development application.	
Objective 4K-2	The apartment mix is distributed to suitable locations within the building	✓
	Detailed layout plans and apartment design subject to future development application.	
4L	GROUND FLOOR APARTMENTS	
Objective 4L-1	Street frontage activity is maximised where ground floor apartments are located	N/A
	Not applicable	
Objective 4L-2	Design of ground floor apartments delivers amenity and safety for residents	N/A
	Not applicable	
4M	FACADES	
Objective 4M-1	Building facades provide visual interest along the street while respecting the character of the local area	✓
	Can comply. Detailed façade design subject to future development application.	
Objective 4M-2	Building functions are expressed by the facade	✓
	Can comply. Detailed façade design subject to future development application.	

Ref	Item Description	Can objective be achieved?
4N	ROOF DESIGN	
Objective 4N-1	Roof treatments are integrated into the building design and positively respond to the street	✓
	Can comply. Detailed roof design subject to future development application.	
Objective 4N-2	Opportunities to use roof space for residential accommodation and open space are maximised	✓
	Can comply. Podium rooftop space is intended to be used for residents' communal open space. Detailed roof design subject to future development application.	
Objective 4N-3	Roof design incorporates sustainability features	✓
	Can comply. Detailed roof design subject to future development application.	
4O	LANDSCAPE DESIGN	
Objective 4O-1	Landscape design is viable and sustainable	✓
	Can comply. Detailed landscape design subject to future development application. Refer Public Domain Design Report for vision.	
Objective 4O-2	Landscape design contributes to the streetscape and amenity	✓
	Detailed landscape design subject to future development application. Refer Public Domain Design Report for vision.	
4P	PLANTING ON STRUCTURES	
Objective 4P-1	Appropriate soil profiles are provided	✓
	Detailed landscape design subject to future development application.	
Objective 4P-2	Plant growth is optimised with appropriate selection and maintenance	✓
	Detailed landscape design subject to future development application.	
Objective 4P-3	Planting on structures contributes to the quality and amenity of communal and public open spaces	✓
	Planting on structures will be designed in collaboration with landscape specialists to ensure appropriate provisions for planting. Detailed landscape design subject to future development application. Refer Public Domain Design Report for vision.	
4Q	UNIVERSAL DESIGN	
Objective 4Q-1	Universal design features are included in apartment design to promote flexible housing for all community members	✓
	Can comply. Floor plate and apartment layouts subject to future development application.	
Objective 4Q-2	A variety of apartments with adaptable designs are provided	✓
	Can comply. Floor plate and apartment layouts subject to future development application.	
Objective 4Q-3	Apartment layouts are flexible and accommodate a range of lifestyle needs	✓
	Can comply. Floor plate and apartment layouts subject to future development application.	

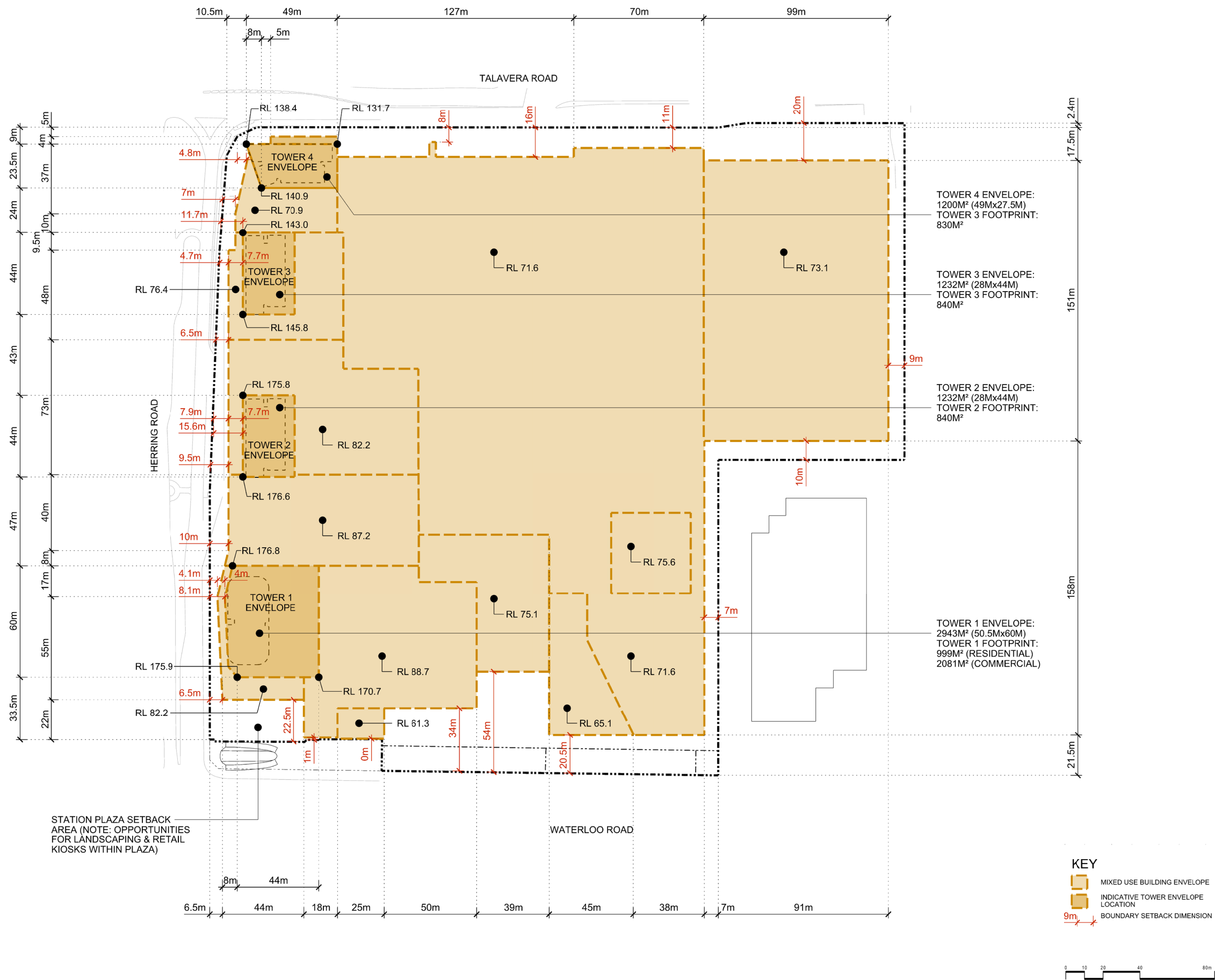
Ref	Item Description	Can objective be achieved?
4R	ADAPTIVE REUSE	
Objective 4R-1	New additions to existing buildings are contemporary and complementary and enhance an area's identity and sense of place	✓
	The proposed development intends to improve the existing character and amenity of Macquarie Centre. This will form part of future centre of the Macquarie University station precinct and develop the Macquarie Park Corridor into a region with a distinct character and sense of place. Detailed architectural design is subject for future development application.	
Objective 4R-2	Adapted buildings provide residential amenity while not precluding future adaptive reuse	N/A
	Not applicable. The existing building is not being adapted to accommodate residential uses.	
4S	MIXED USE	
Objective 4S-1	Mixed use developments are provided in appropriate locations and provide active street frontages that encourage pedestrian movement	✓
	Macquarie Centre is an existing retail provider, delivering entertainment, recreation and shopping needs to the community. The proposed improvements and additions will improve active street frontages by providing additional entries, improved public domain, residential lobbies with street address and improved access to public transport.	
Objective 4S-2	Residential levels of the building are integrated within the development, and safety and amenity is maximised for residents	✓
	The proposed built form establishes a retail podium with residential accommodation in tower form above. Residential lobbies can be clearly defined along street frontages, separate from retail and commercial uses. Built form envelopes have been established to maximise amenity and safety for residents and other users. Detailed design is subject to future development application	
4T	AWNINGS AND SIGNAGE	
Objective 4T-1	Awnings are well located and complement and integrate with the building design	✓
	Detailed design is subject to future development application	
Objective 4T-2	Signage responds to the context and desired streetscape character	✓
	Detailed design is subject to future development application	
4U	ENERGY EFFICIENCY	
Objective 4U-1	Development incorporates passive environmental design	✓
	Detailed design is subject to future development application	
Objective 4U-2	Development incorporates passive solar design to optimise heat storage in winter and reduce heat transfer in summer	✓
	Detailed design is subject to future development application	
Objective 4U-3	Adequate natural ventilation minimises the need for mechanical ventilation	✓
	Detailed design is subject to future development application	
4V	WATER MANAGEMENT AND CONSERVATION	
Objective 4V-1	Potable water use is minimised	✓
	Detailed design is subject to future development application	
Objective 4V-2	Urban stormwater is treated on site before being discharged to receiving waters	✓
	Detailed design is subject to future development application. Refer Stormwater Management Design report.	

Ref	Item Description	Can objective be achieved?
Objective 4V-3	Flood management systems are integrated into site design	✓
	Detailed design is subject to future development application. Refer Stormwater Management Design report.	
4W	WASTE MANAGEMENT	
Objective 4W-1	Waste storage facilities are designed to minimise impacts on the streetscape, building entry and amenity of residents	✓
	Detailed design is subject to future development application. Refer Preliminary Waste Management Plan.	
Objective 4W-2	Domestic waste is minimised by providing safe and convenient source separation and recycling	✓
	Detailed design is subject to future development application. Refer Preliminary Waste Management Plan.	
4X	BUILDING MAINTENANCE	
Objective 4X-1	Building design detail provides protection from weathering	✓
	Detailed design is subject to future development application.	
Objective 4X-2	Systems and access enable ease of maintenance	✓
	Detailed design is subject to future development application.	
Objective 4X-3	Material selection reduces ongoing maintenance costs	✓
	Detailed design is subject to future development application.	

07 APPENDICES

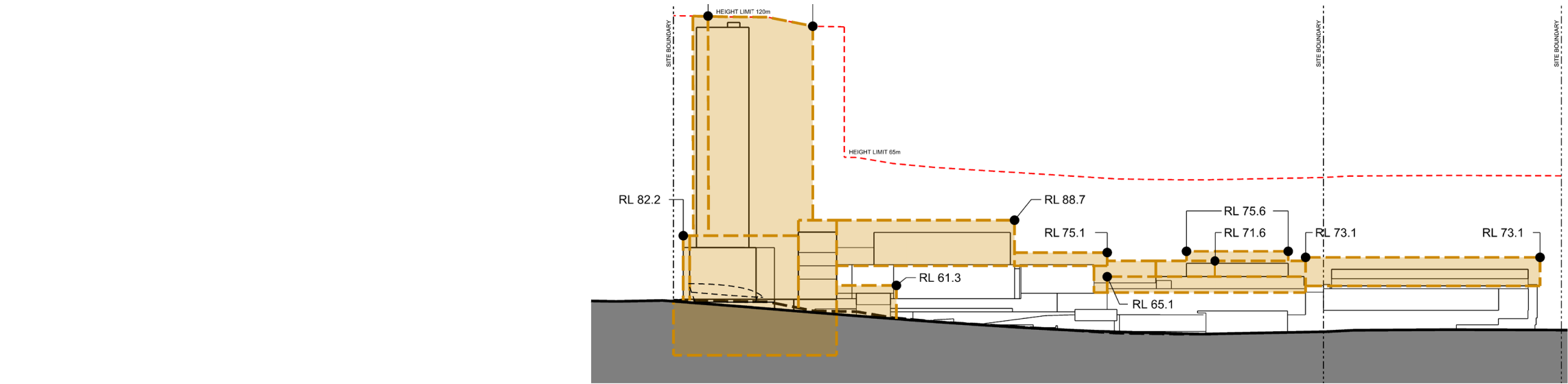
07 APPENDICES

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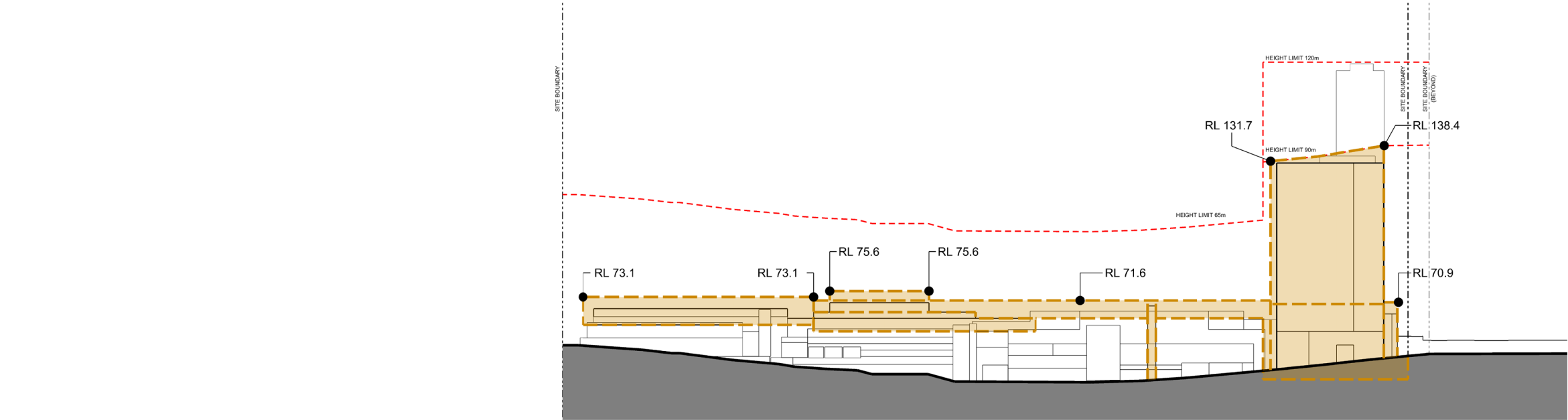


07 APPENDICES

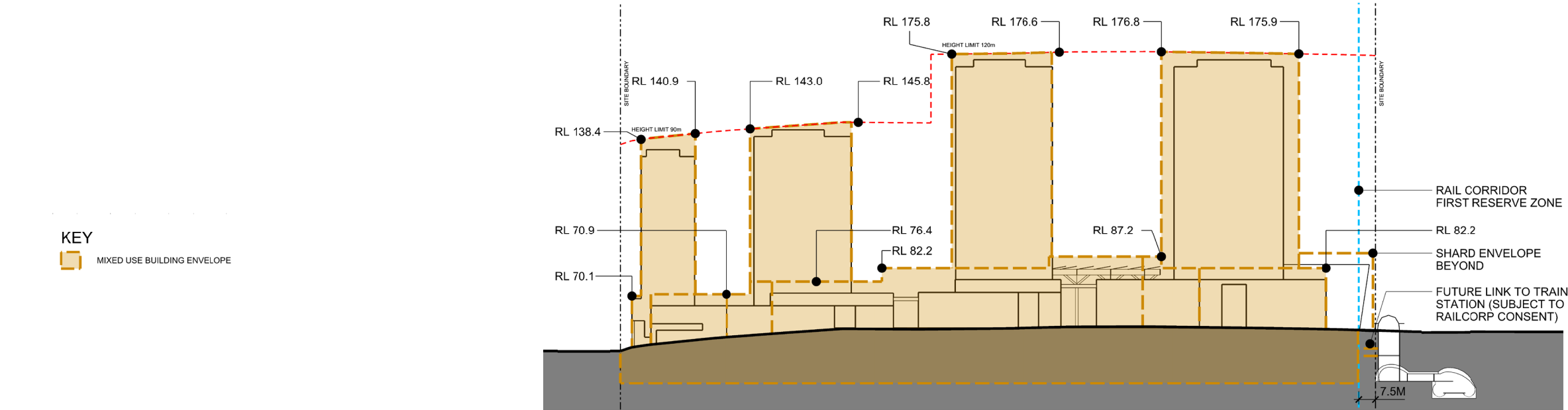
APPENDIX 1 - ENVELOPES FOR APPROVAL



1 WATERLOO ROAD ELEVATION
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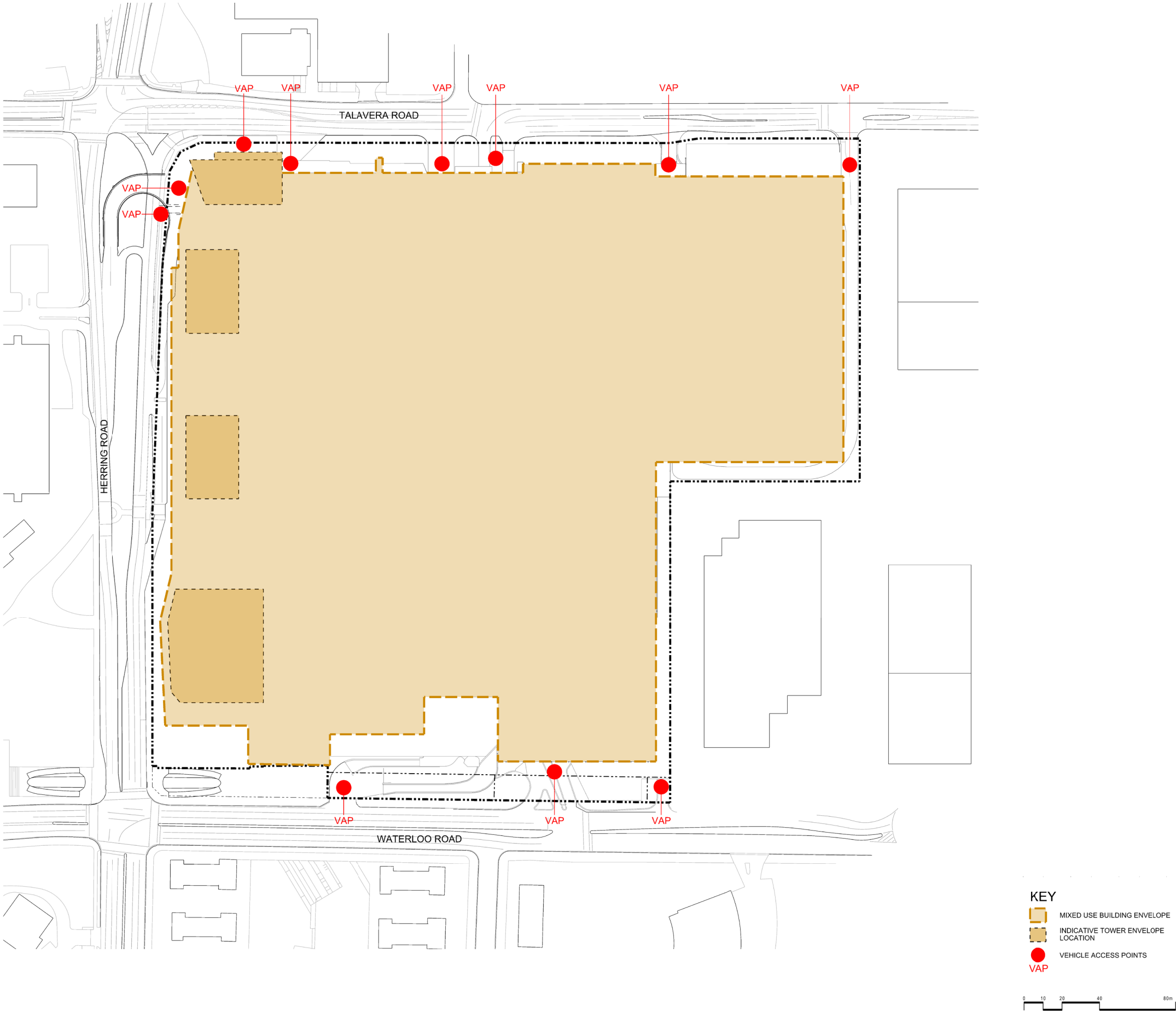


2 TALAVERA ROAD ELEVATION
1:1500



1 HERRING ROAD ELEVATION
1:1500

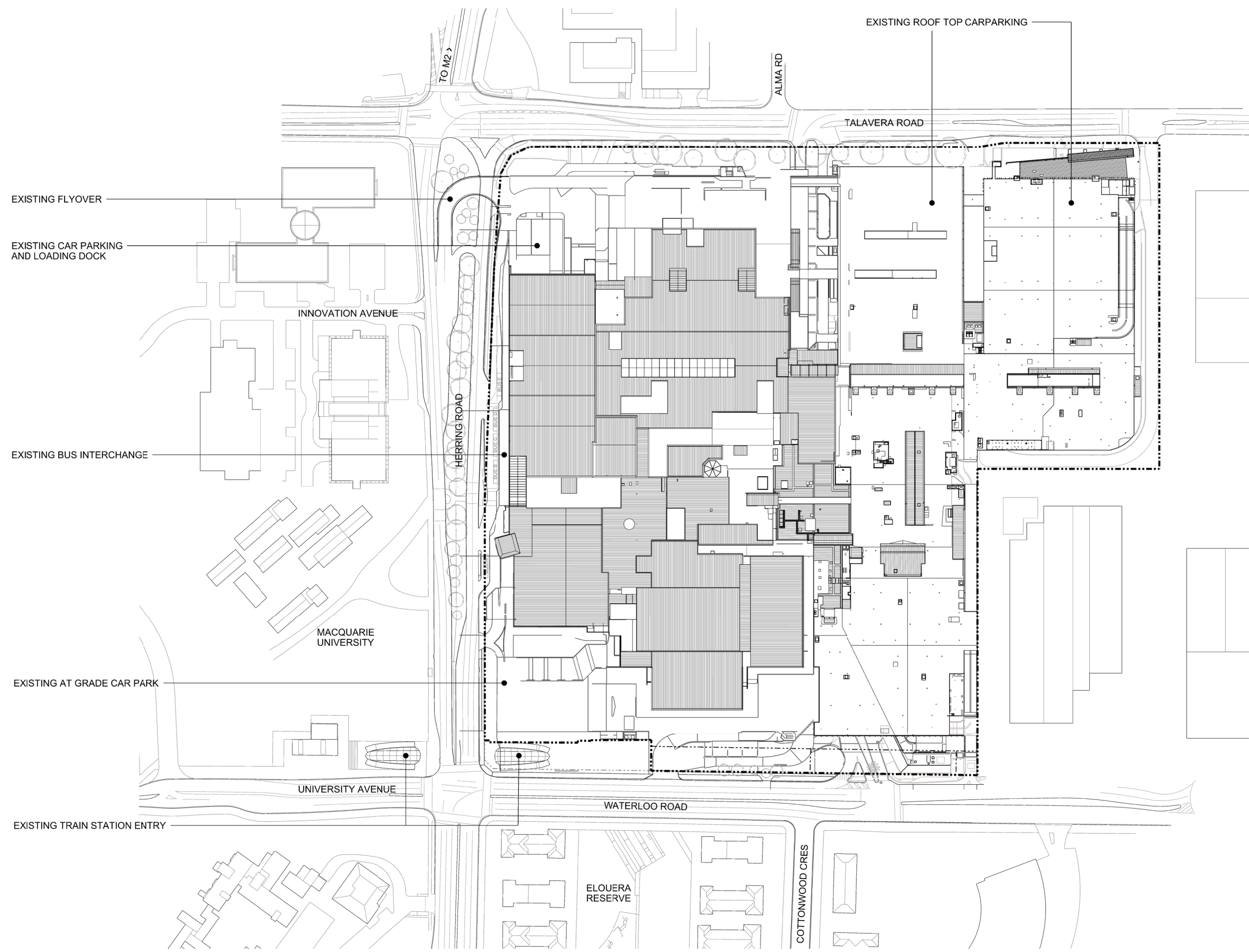
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MIXED USE BUILDING ENVELOPE

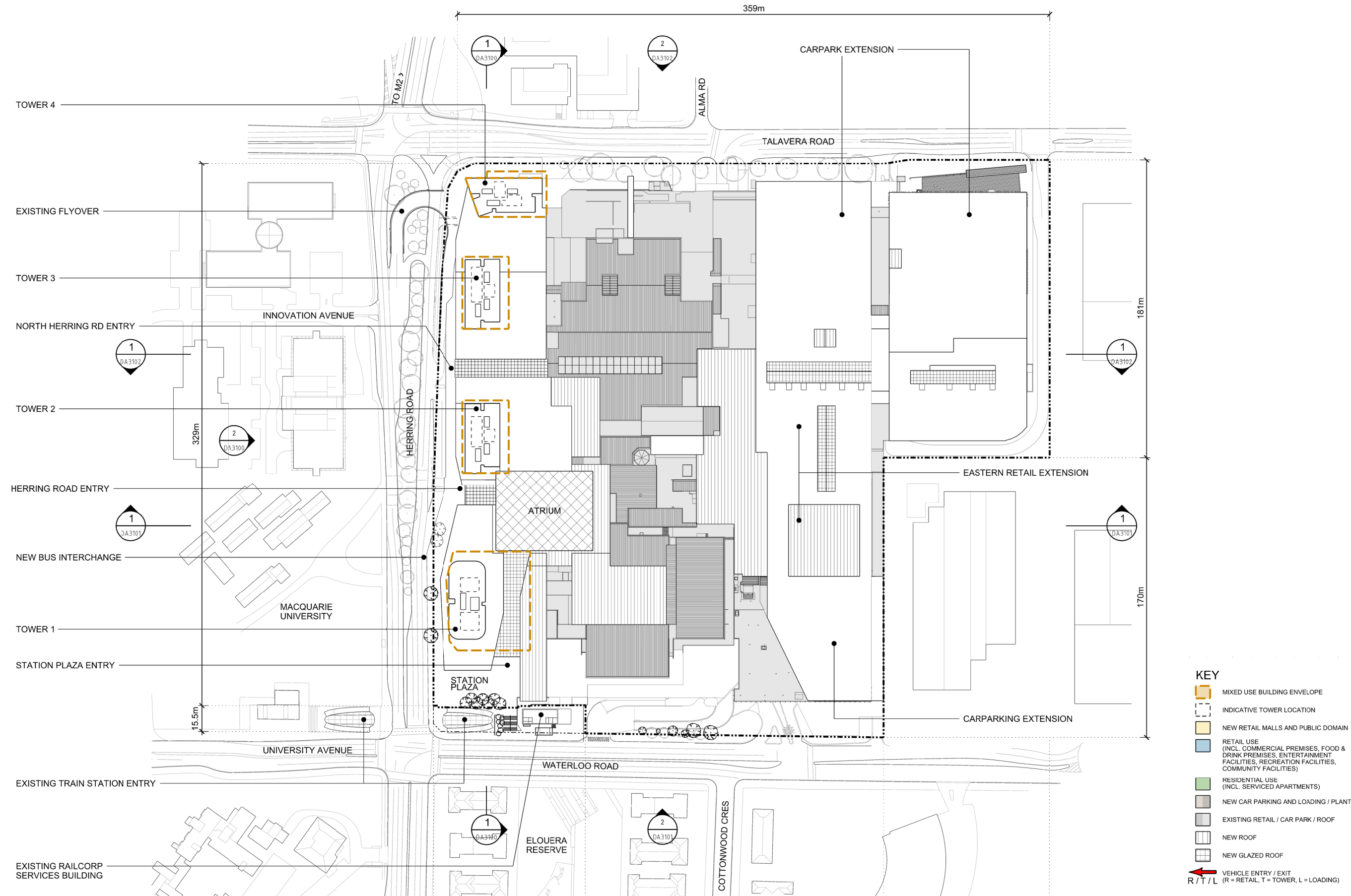


07 APPENDICES

APPENDIX 2 - ILLUSTRATIVE CONCEPT

EXISTING SITE PLAN

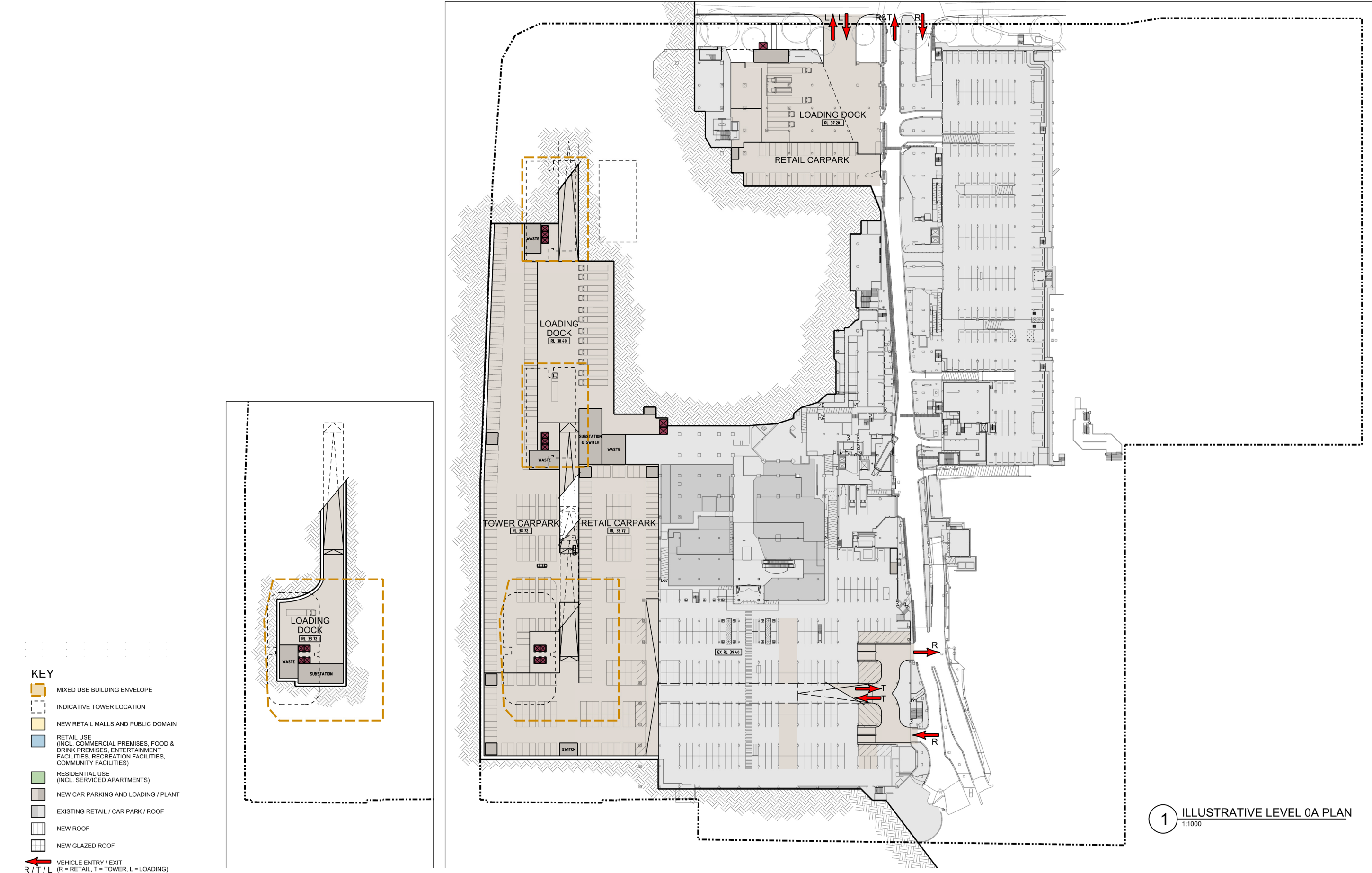


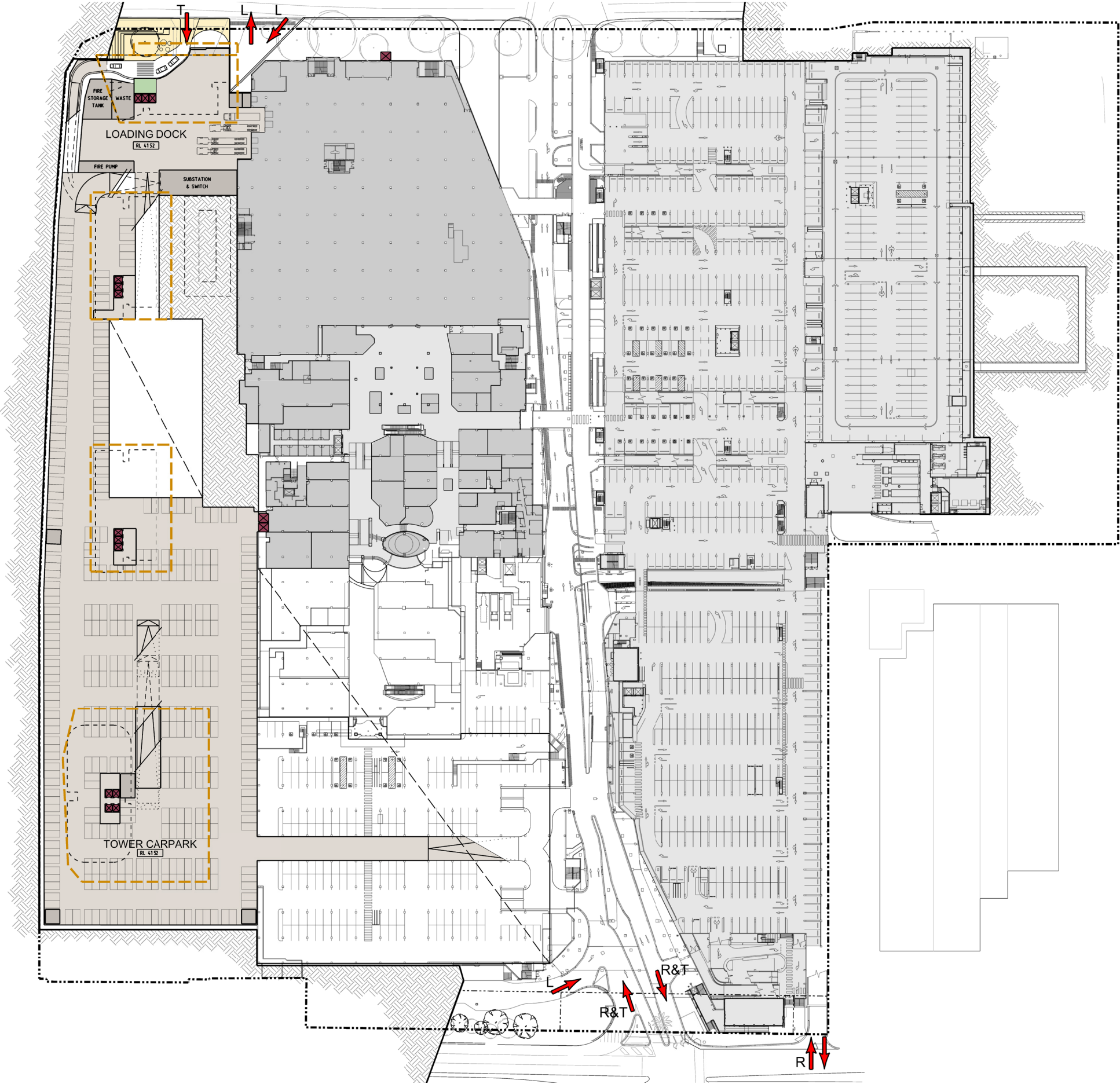


07 APPENDICES

APPENDIX 2 - ILLUSTRATIVE CONCEPT

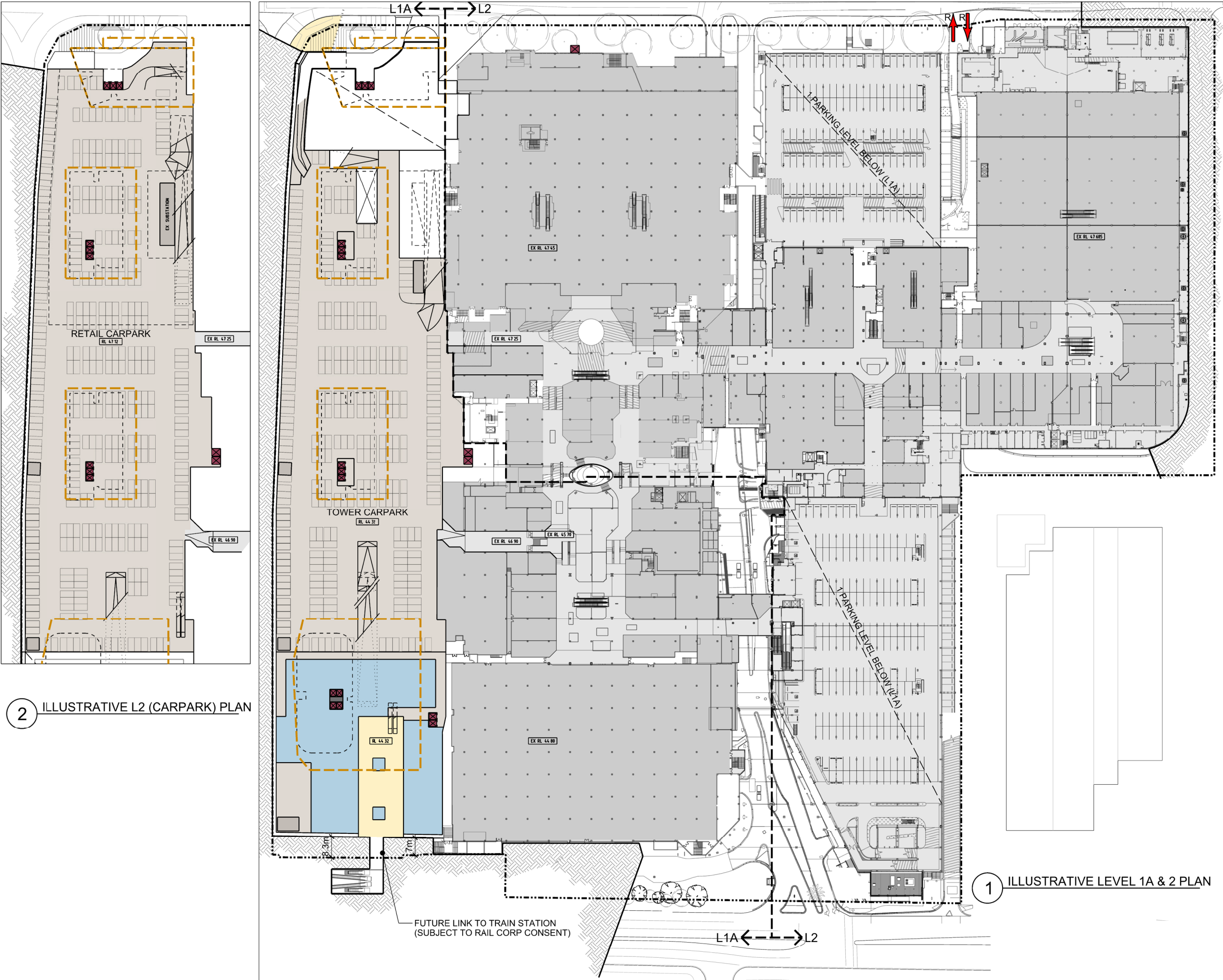
LEVELS 0 + 0A

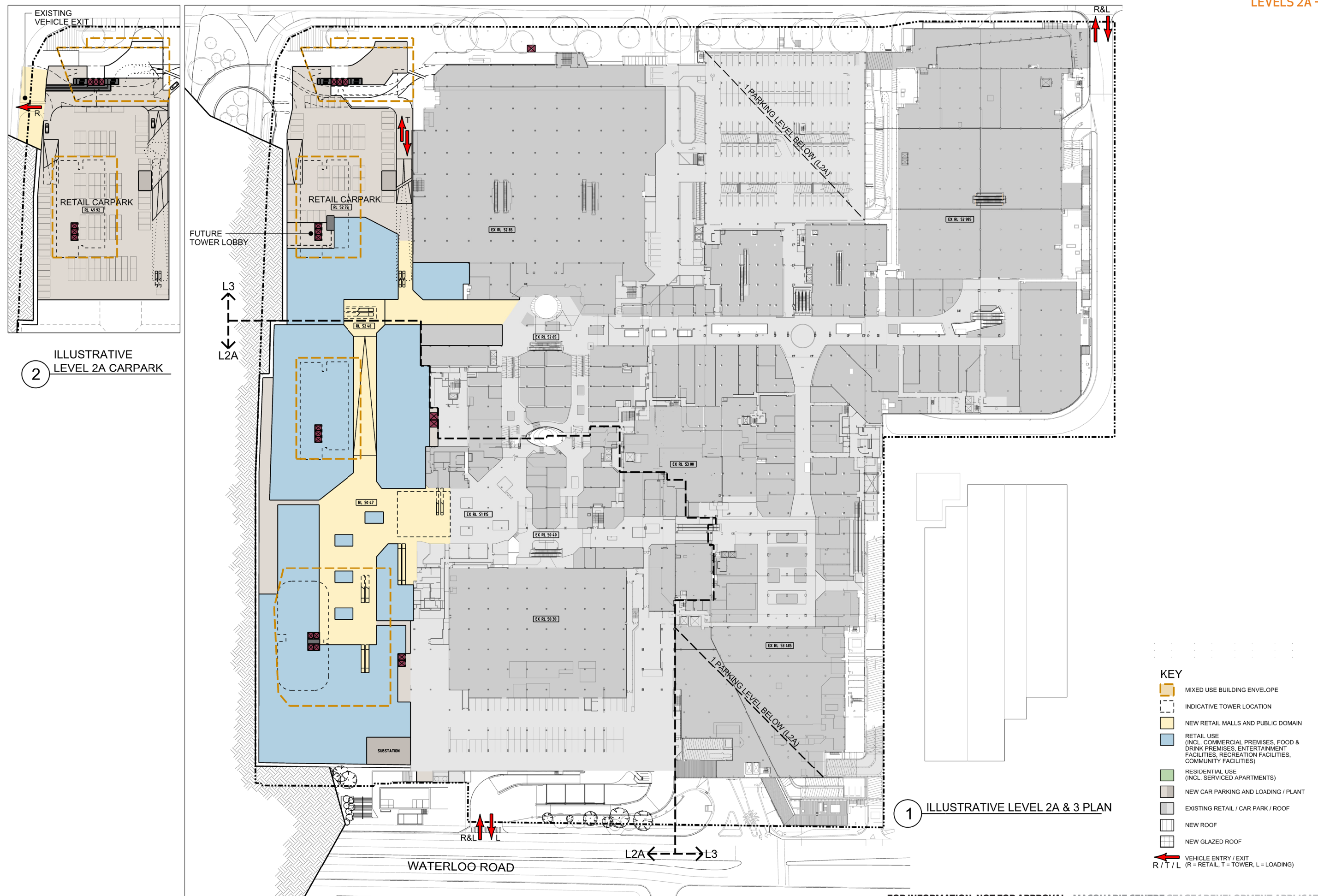




KEY

- MIXED USE BUILDING ENVELOPE
- INDICATIVE TOWER LOCATION
- NEW RETAIL MALLS AND PUBLIC DOMAIN
- RETAIL USE (INCL. COMMERCIAL PREMISES, FOOD & DRINK PREMISES, ENTERTAINMENT FACILITIES, RECREATION FACILITIES, COMMUNITY FACILITIES)
- RESIDENTIAL USE (INCL. SERVICED APARTMENTS)
- NEW CAR PARKING AND LOADING / PLANT
- EXISTING RETAIL / CAR PARK / ROOF
- NEW ROOF
- NEW GLAZED ROOF
- VEHICLE ENTRY / EXIT (R = RETAIL, T = TOWER, L = LOADING)

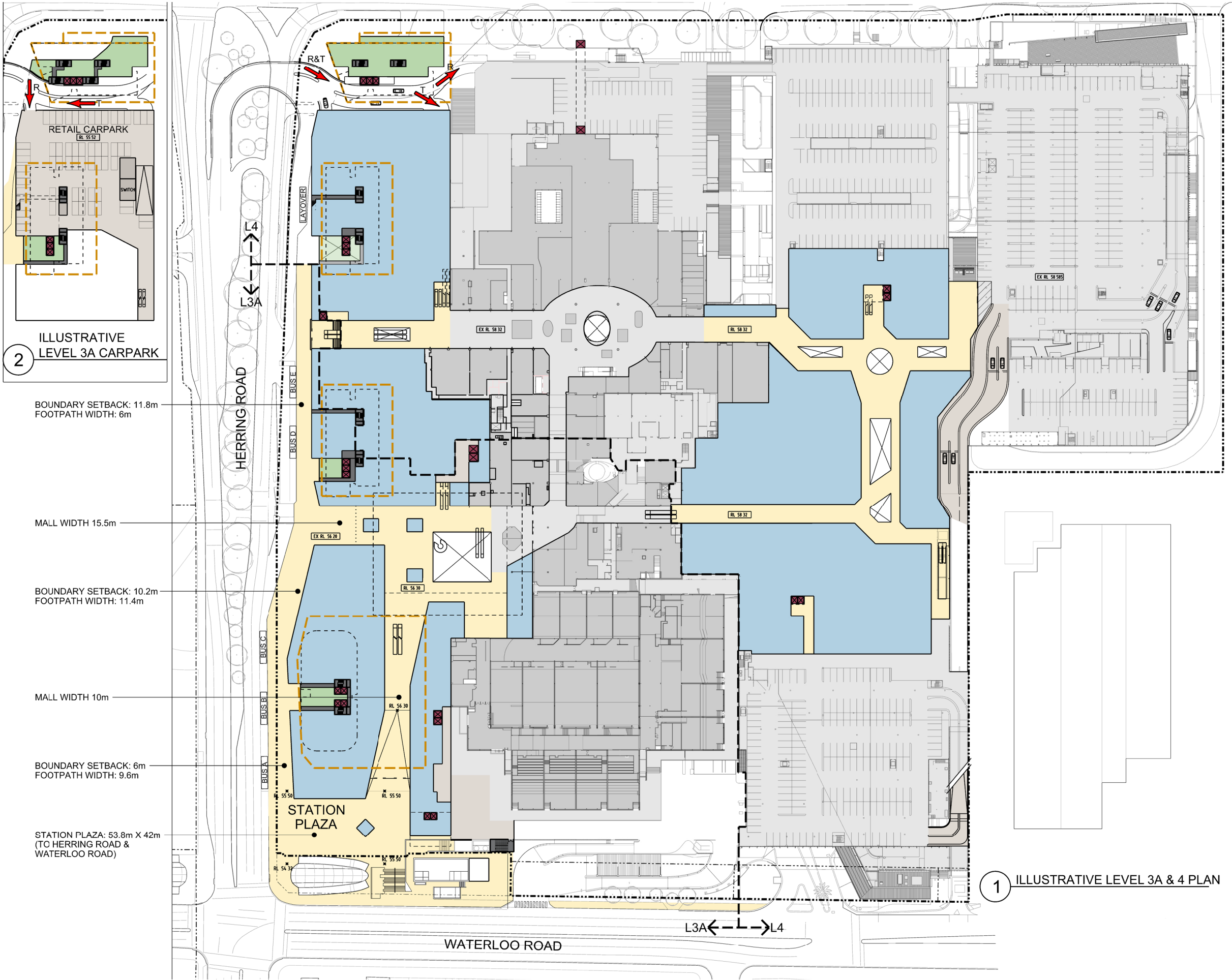




07 APPENDICES

APPENDIX 2 - ILLUSTRATIVE CONCEPT

LEVELS 3A + 4 - RESIDENTIAL TOWER OPTION



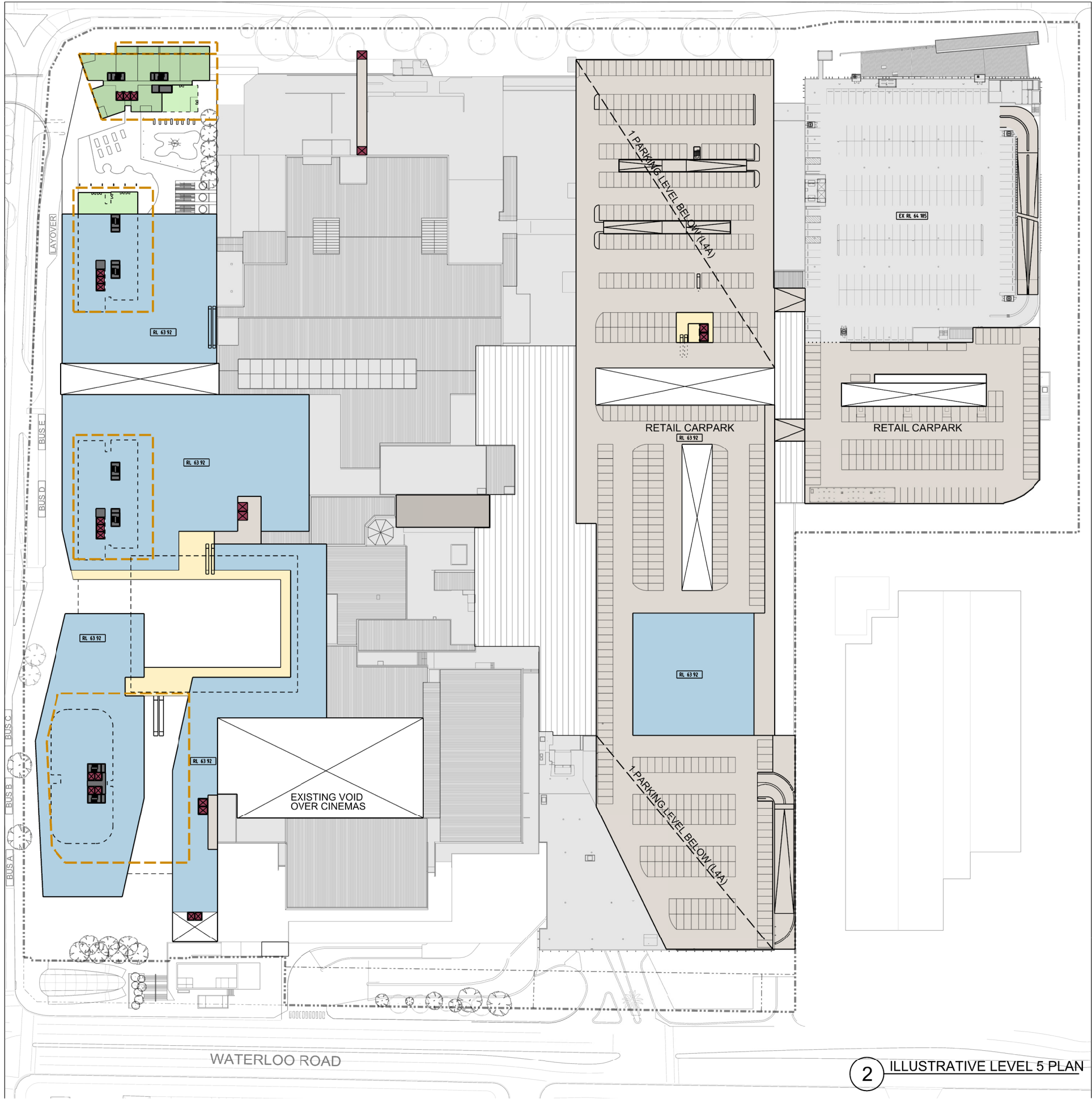
07 APPENDICES

APPENDIX 2 - ILLUSTRATIVE CONCEPT

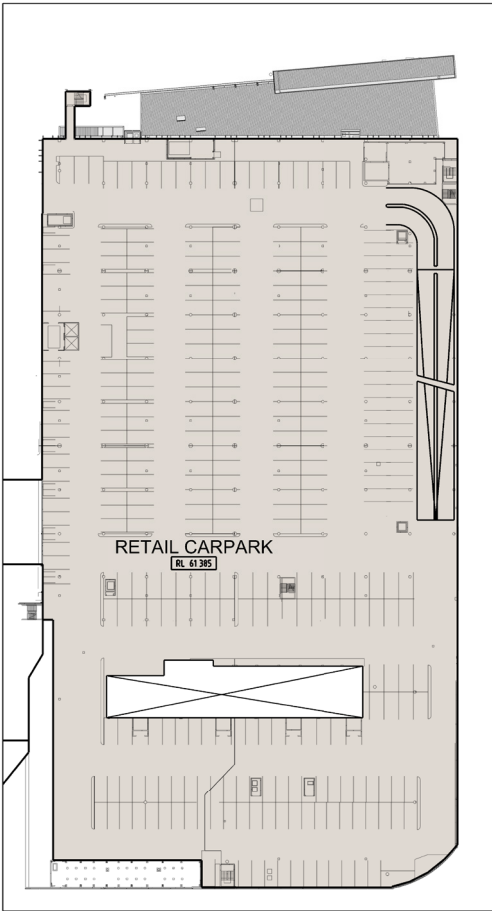
LEVELS 4A + 5

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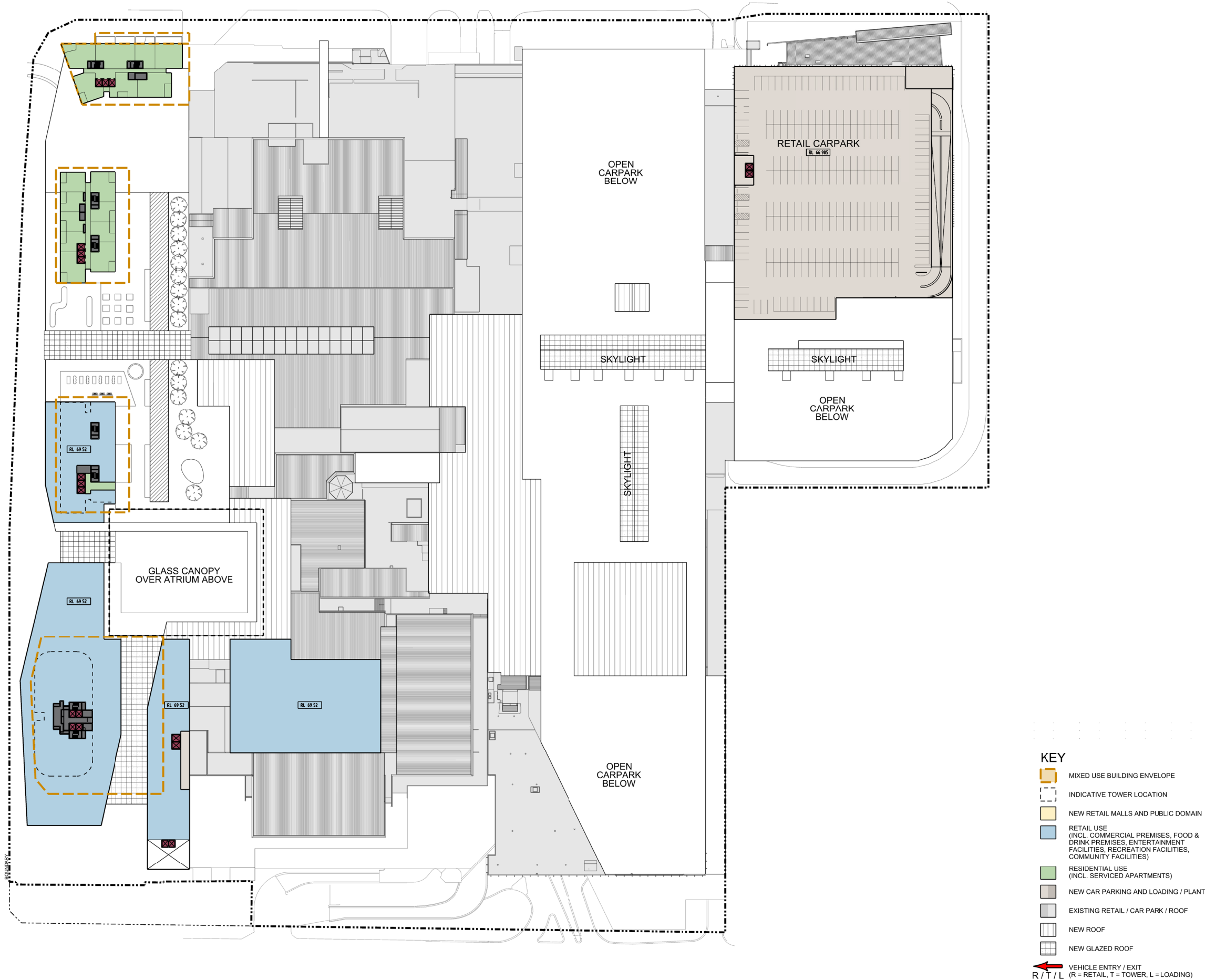
- MIXED USE BUILDING ENVELOPE
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2 ILLUSTRATIVE LEVEL 5 PLAN



1 ILLUSTRATIVE LEVEL 4A PLAN



07 APPENDICES

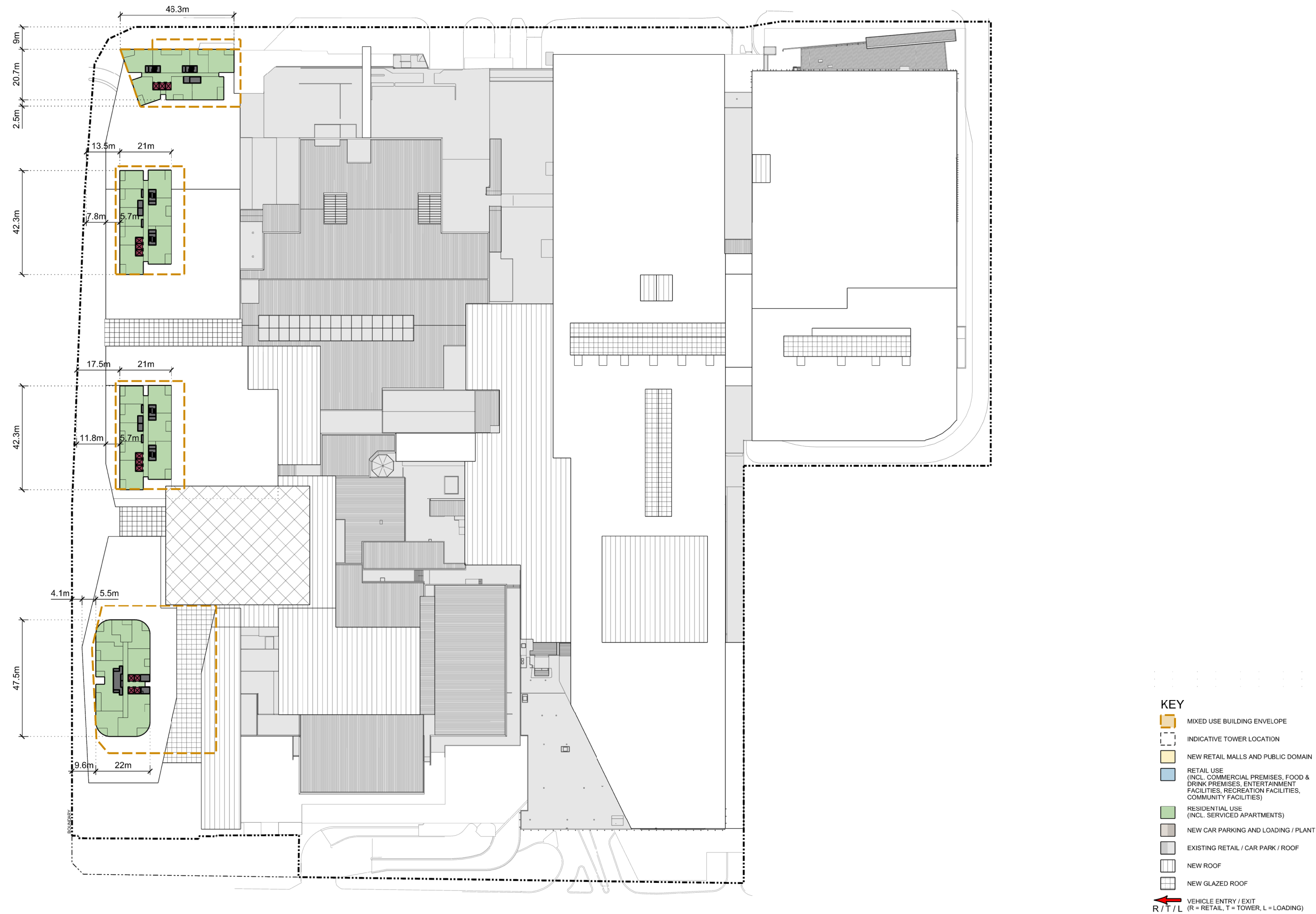
APPENDIX 2 - ILLUSTRATIVE CONCEPT

LEVEL 7



KEY

- MIXED USE BUILDING ENVELOPE
- INDICATIVE TOWER LOCATION
- NEW RETAIL MALLS AND PUBLIC DOMAIN
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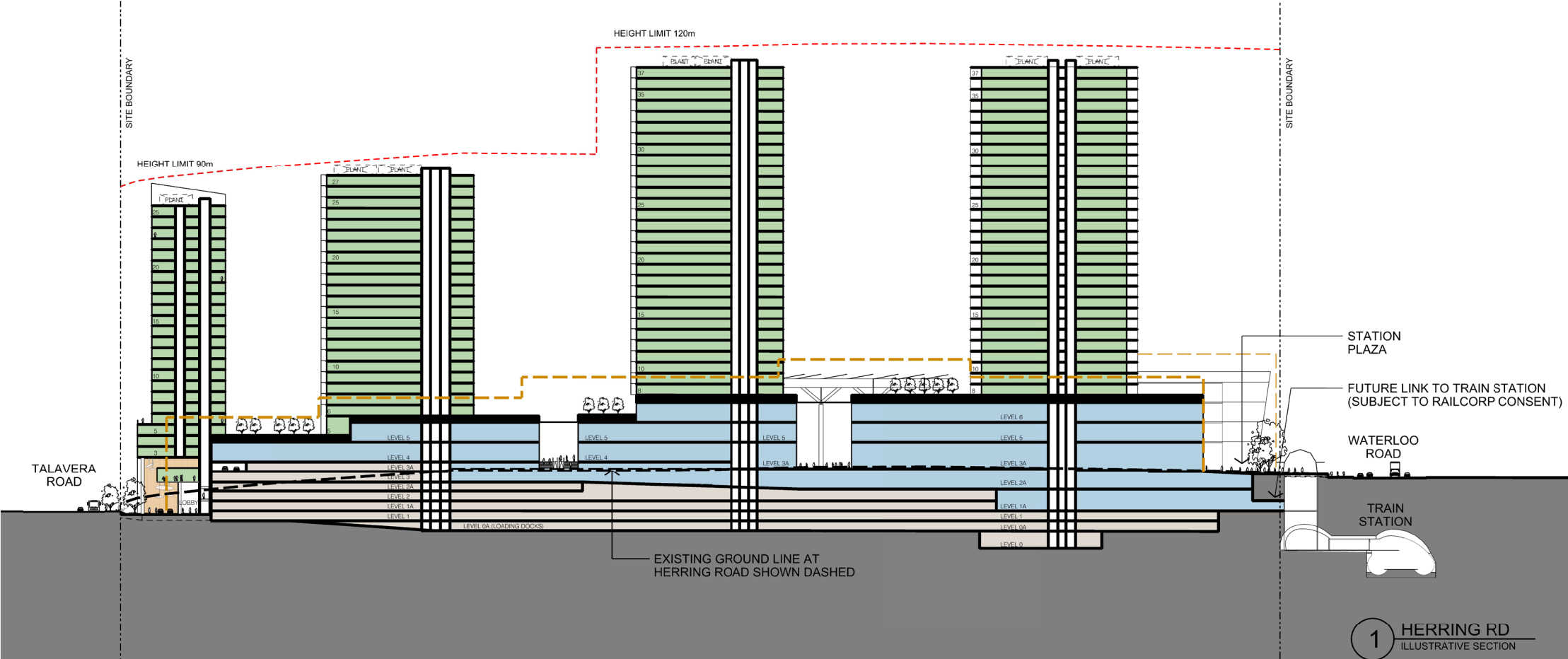
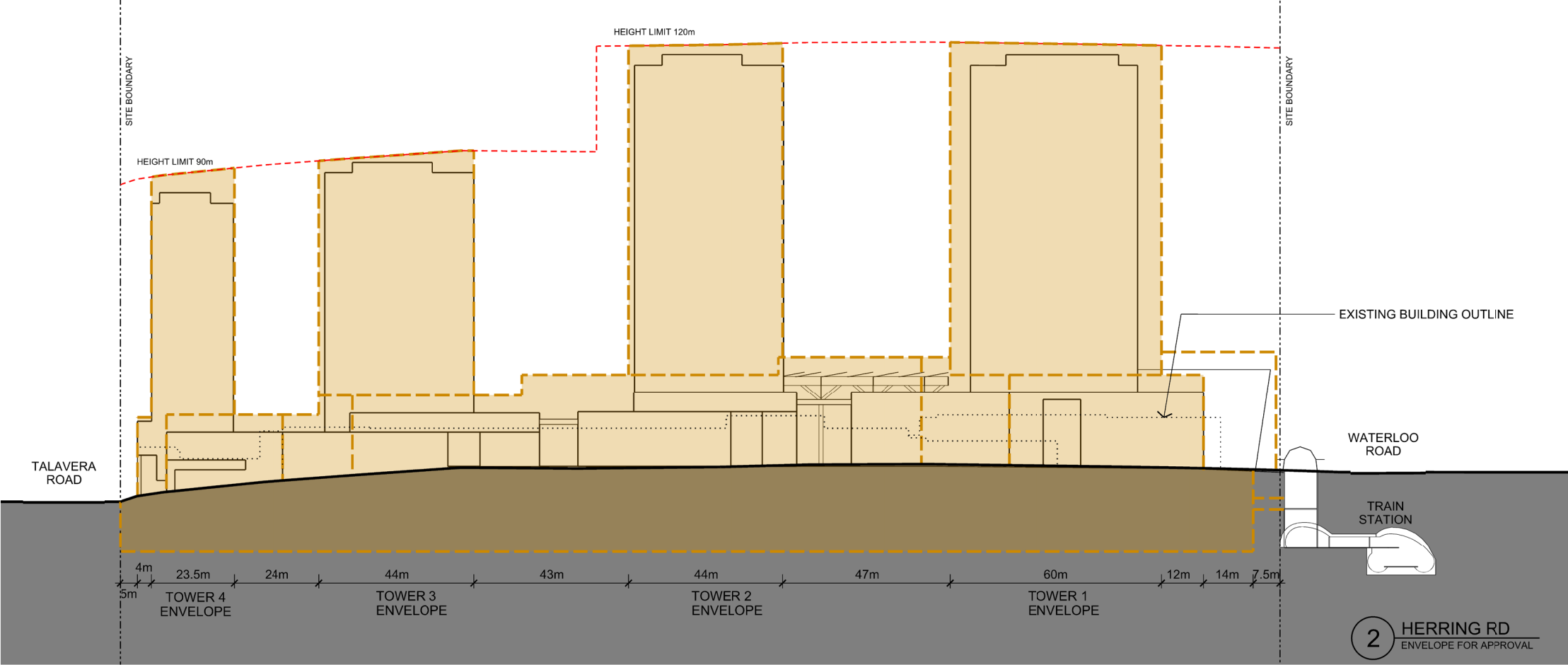


07 APPENDICES

APPENDIX 2 - ILLUSTRATIVE CONCEPT

TOWER LEVELS (TYPICAL) - COMMERCIAL TOWER OPTION



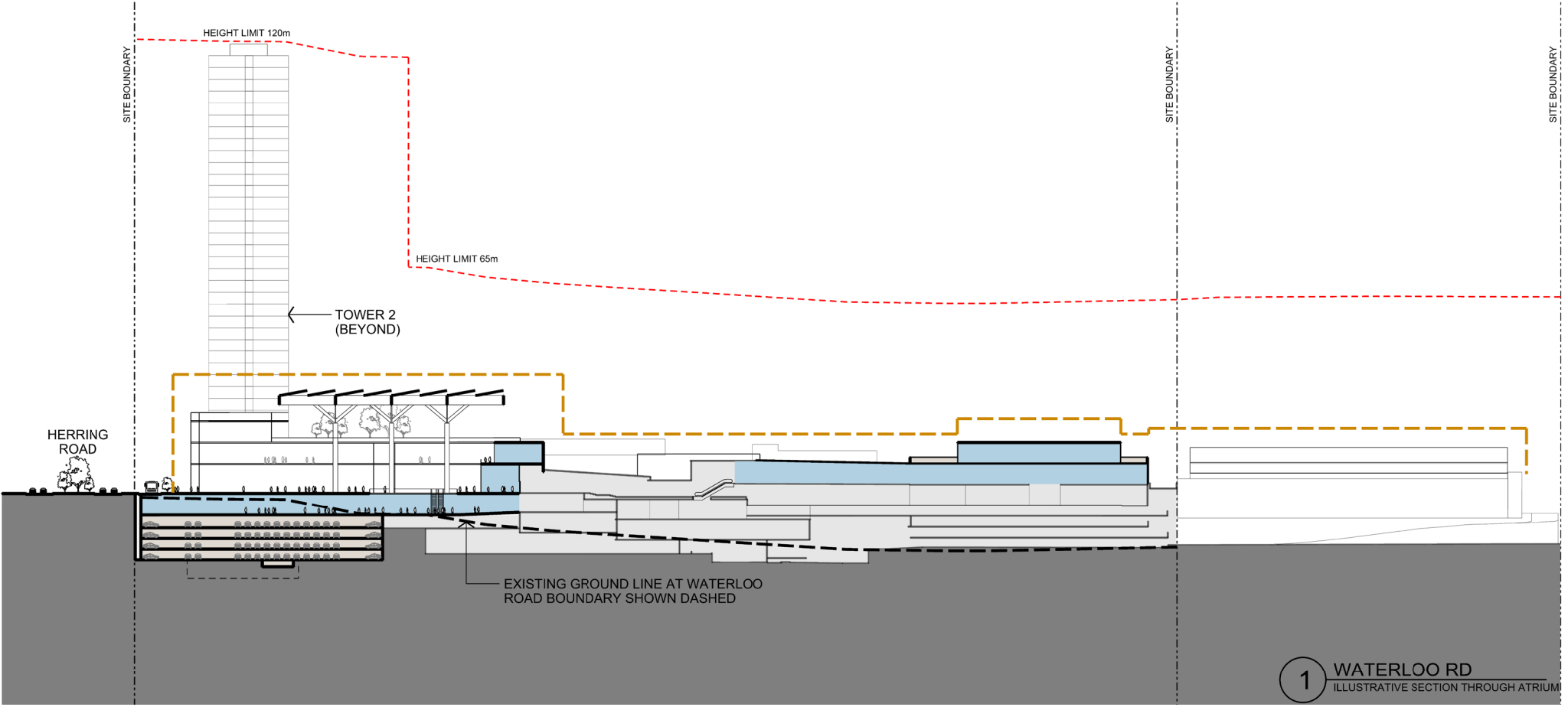
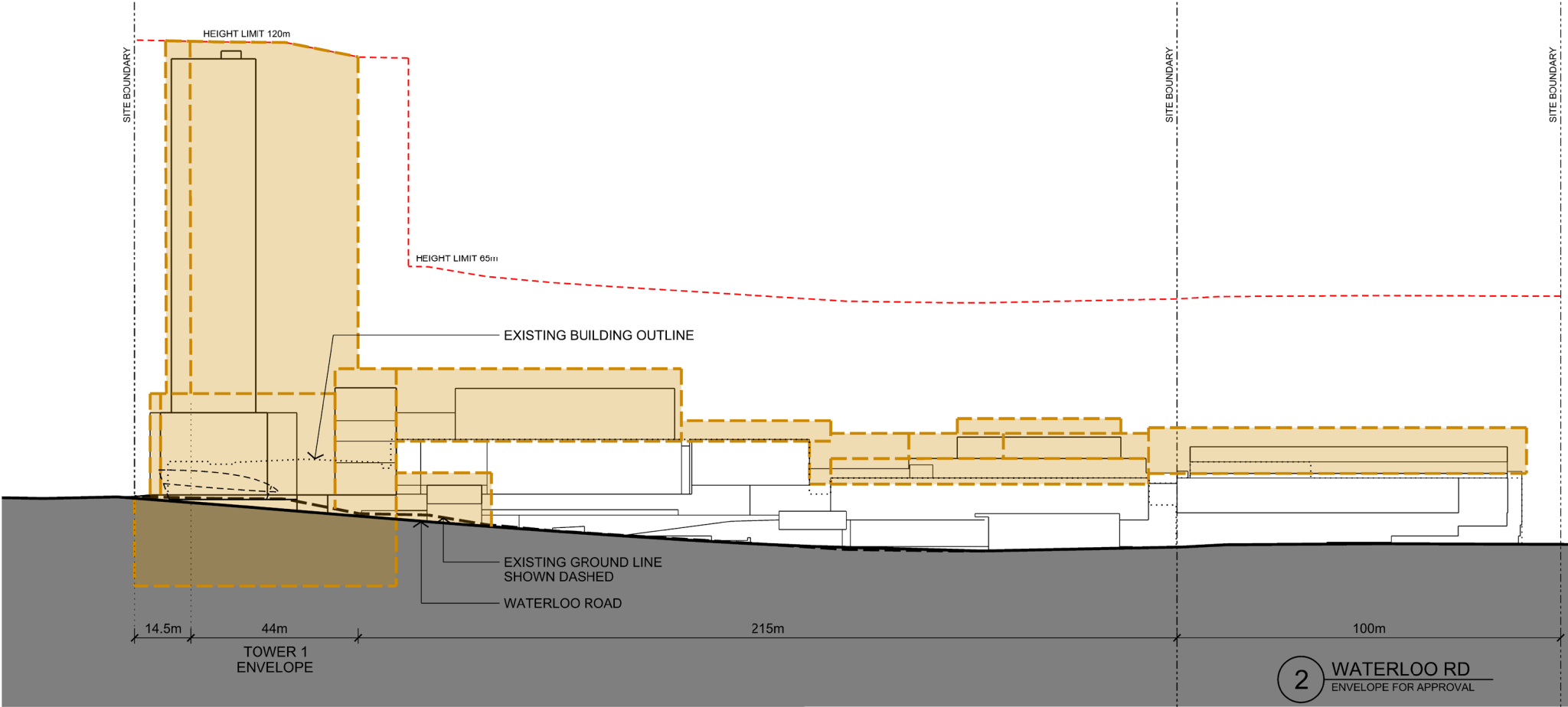


- KEY**
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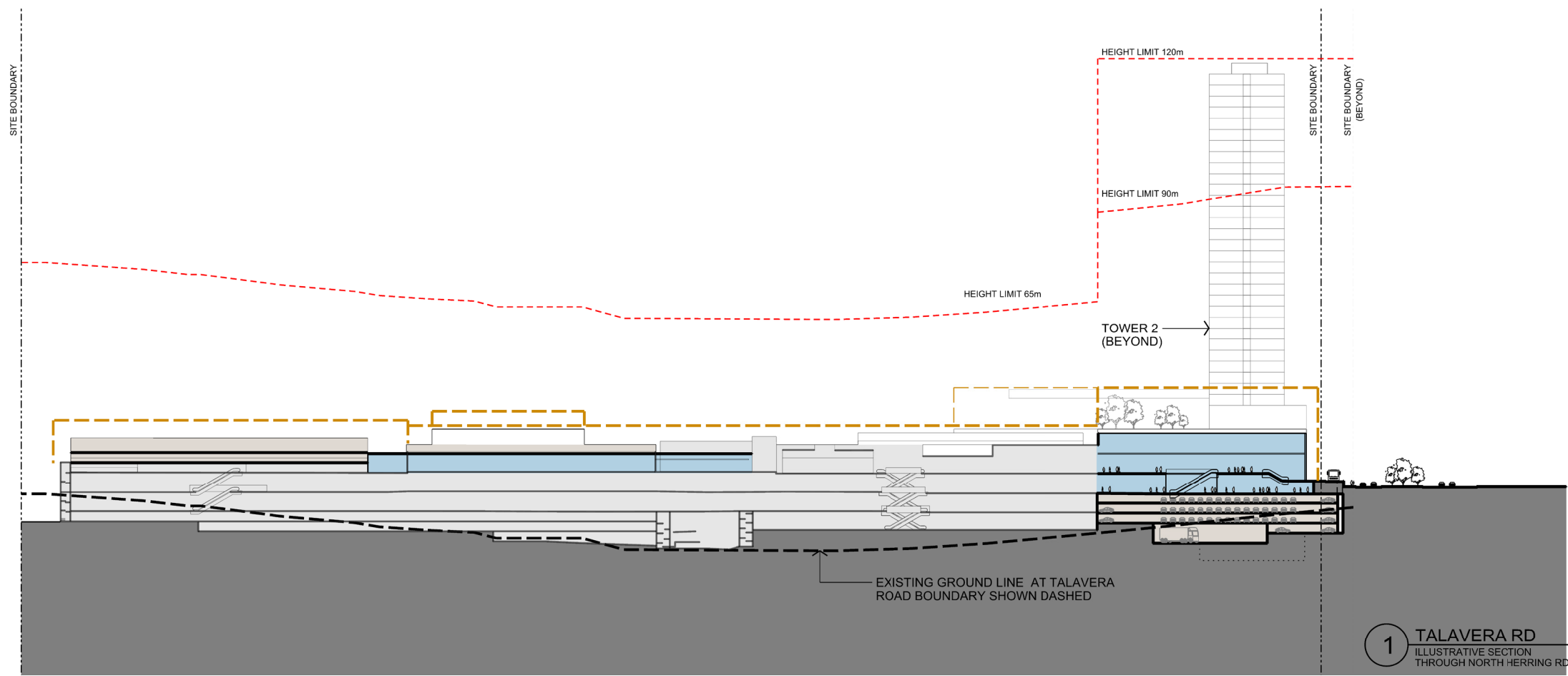
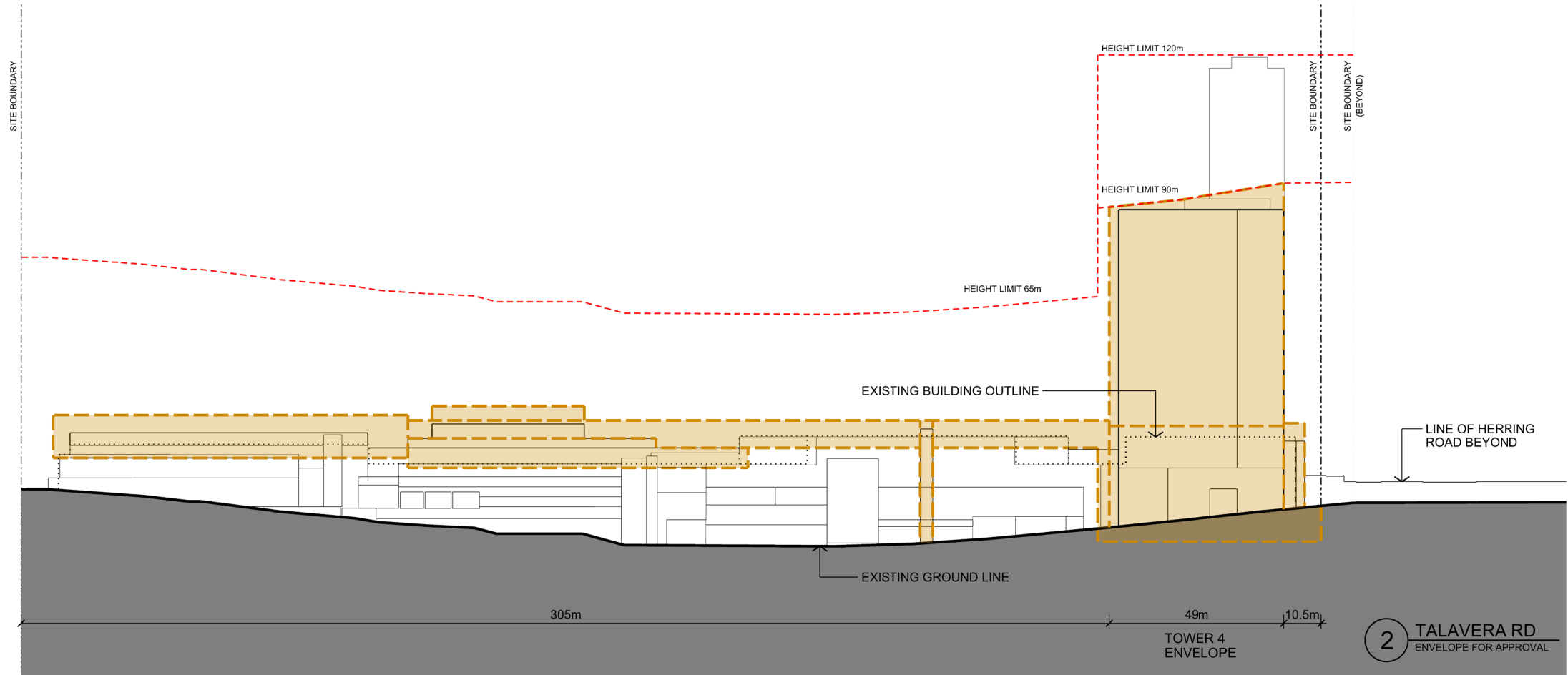
07 APPENDICES

APPENDIX 2 - ILLUSTRATIVE CONCEPT

WATERLOO ROAD ELEVATION + SECTION



- KEY
- MIXED USE BUILDING ENVELOPE
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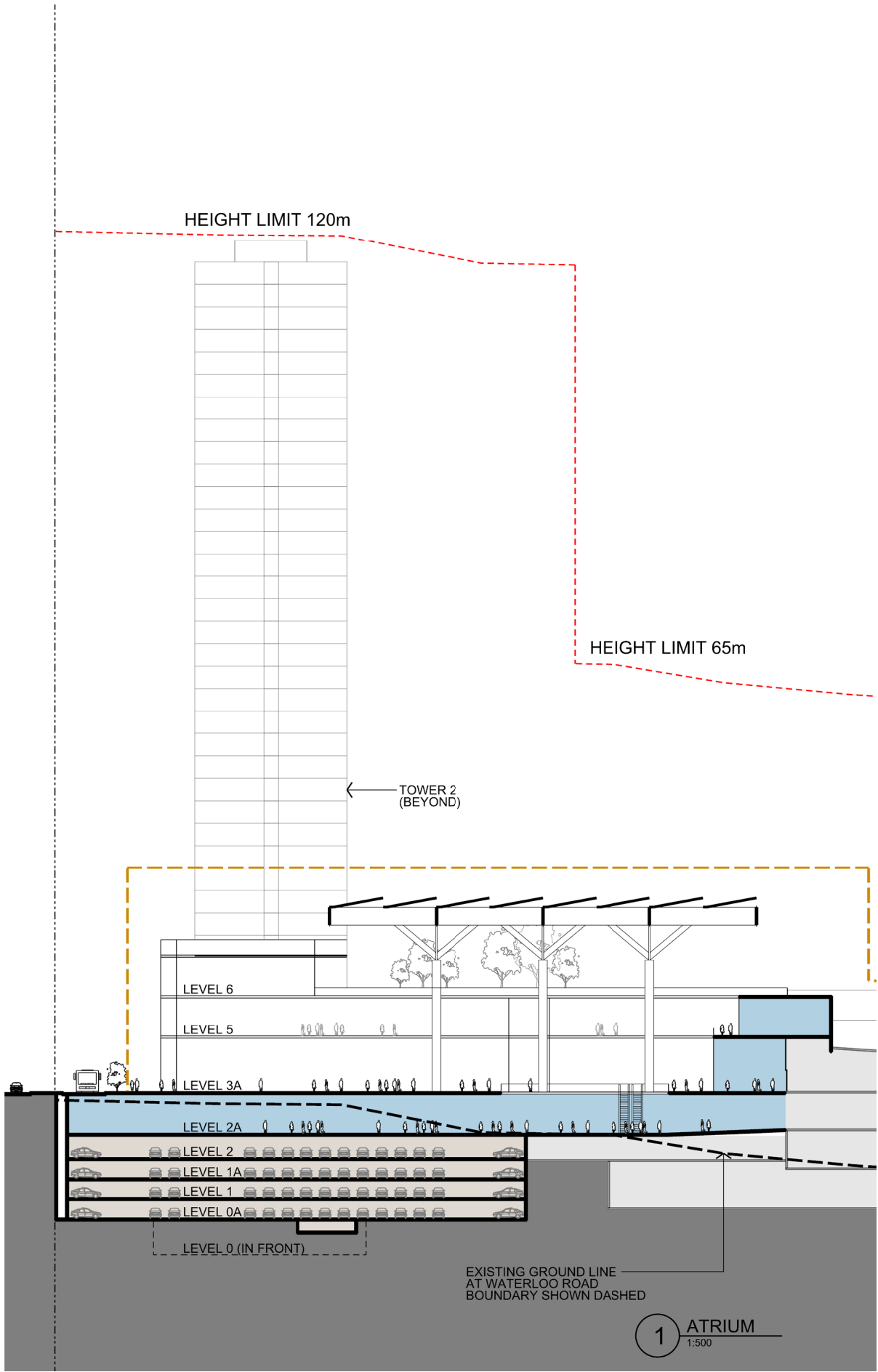
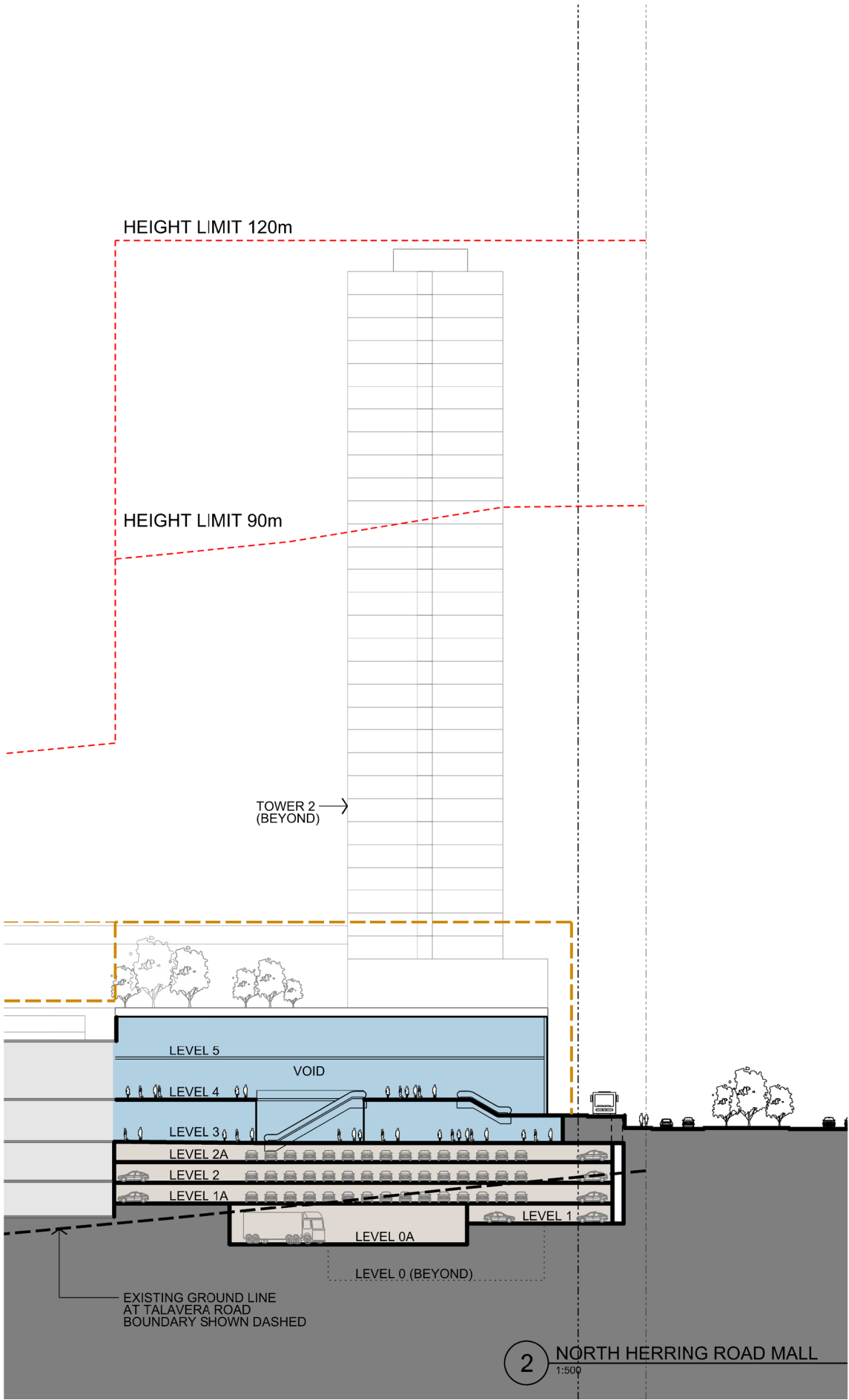
07 APPENDICES

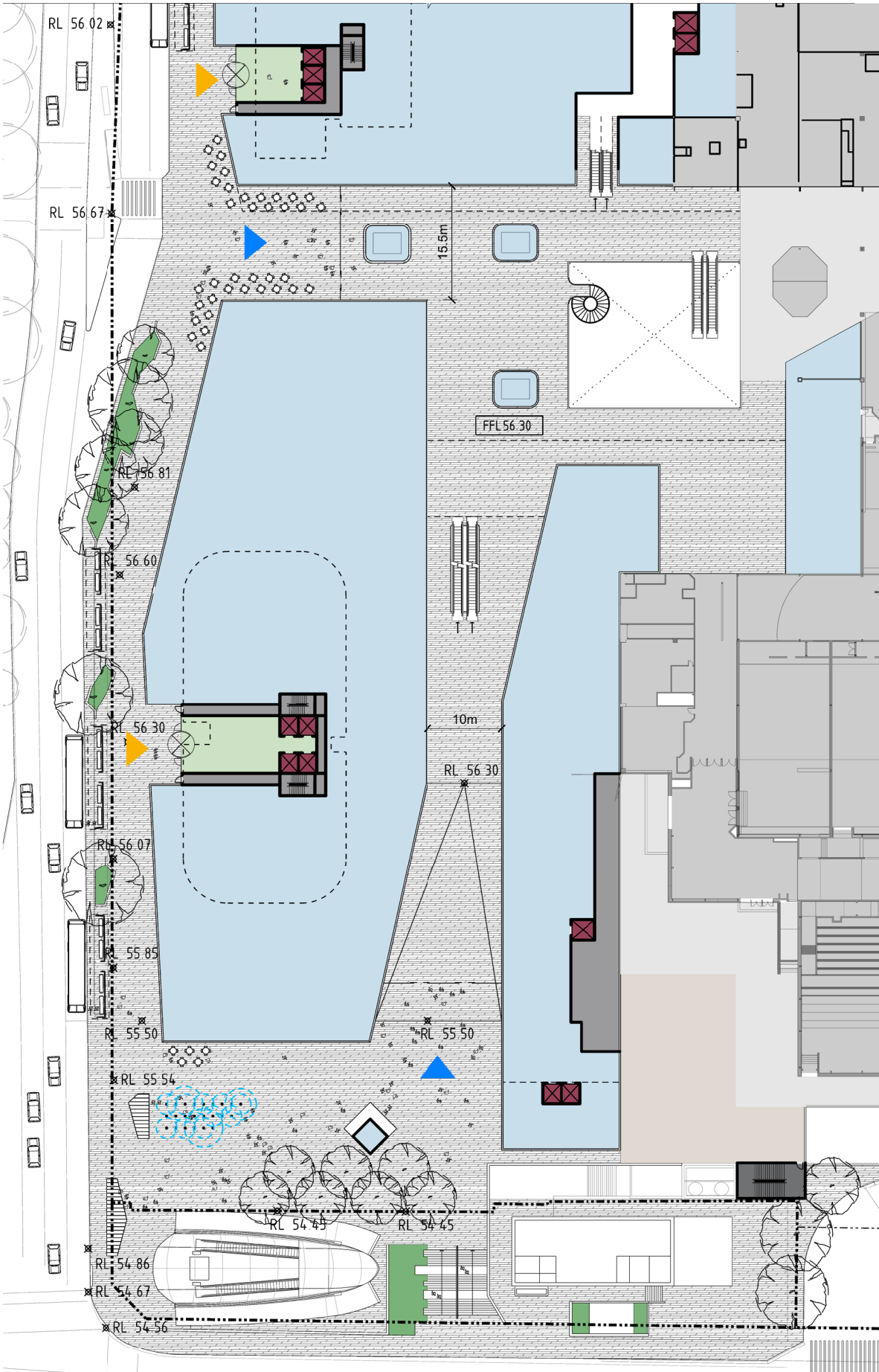
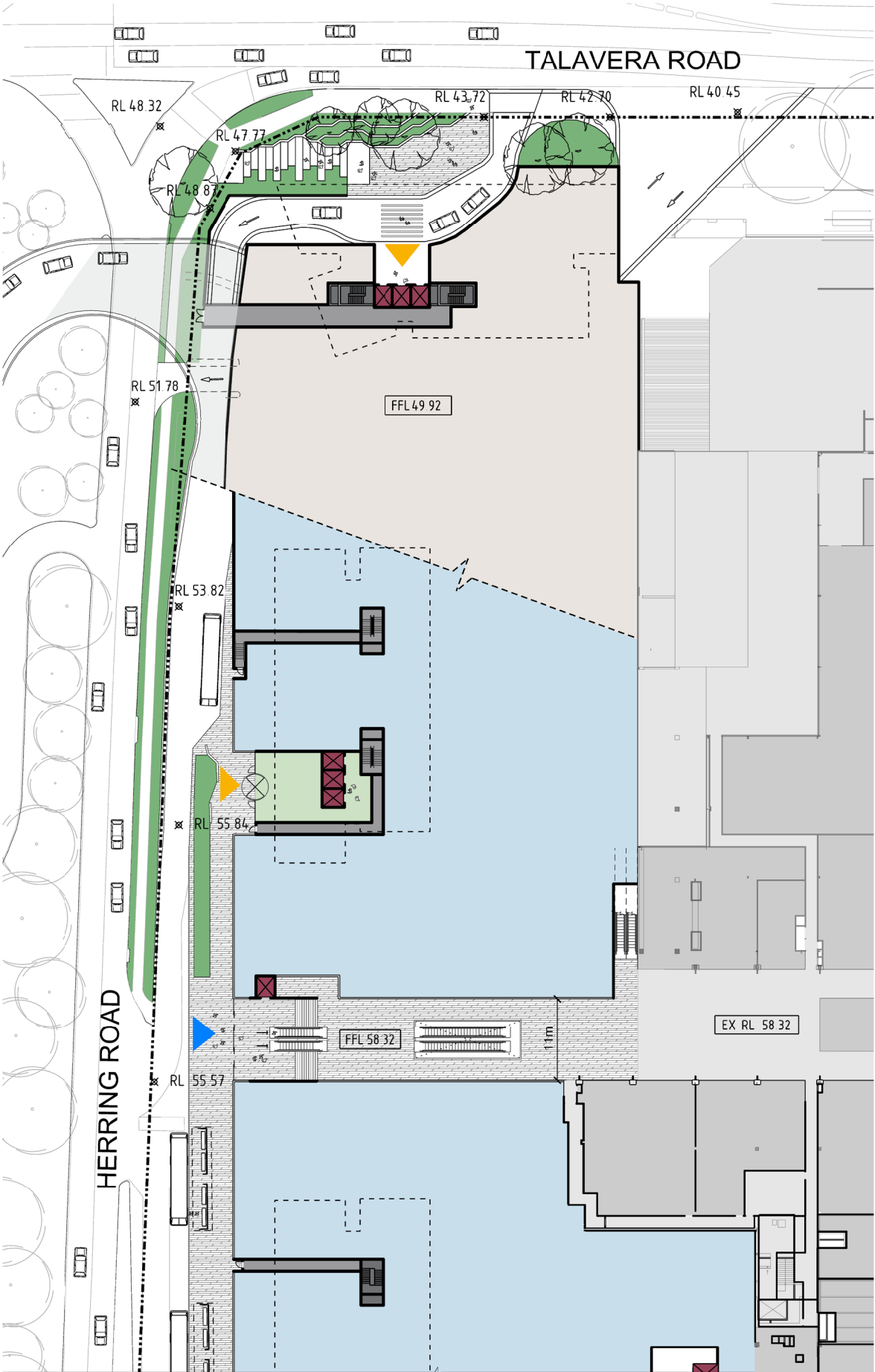
APPENDIX 2 - ILLUSTRATIVE CONCEPT

DETAIL MALL SECTIONS



- KEY
- MIXED USE BUILDING ENVELOPE
 - RETAIL USE (INCL. COMMERCIAL PREMISES, FOOD & DRINK PREMISES, ENTERTAINMENT FACILITIES, RECREATION FACILITIES, COMMUNITY FACILITIES)
 - RESIDENTIAL USE (INCL. SERVICED APARTMENTS)
 - NEW CAR PARKING AND LOADING / PLANT
 - EXISTING RETAIL / CAR PARK / ROOF

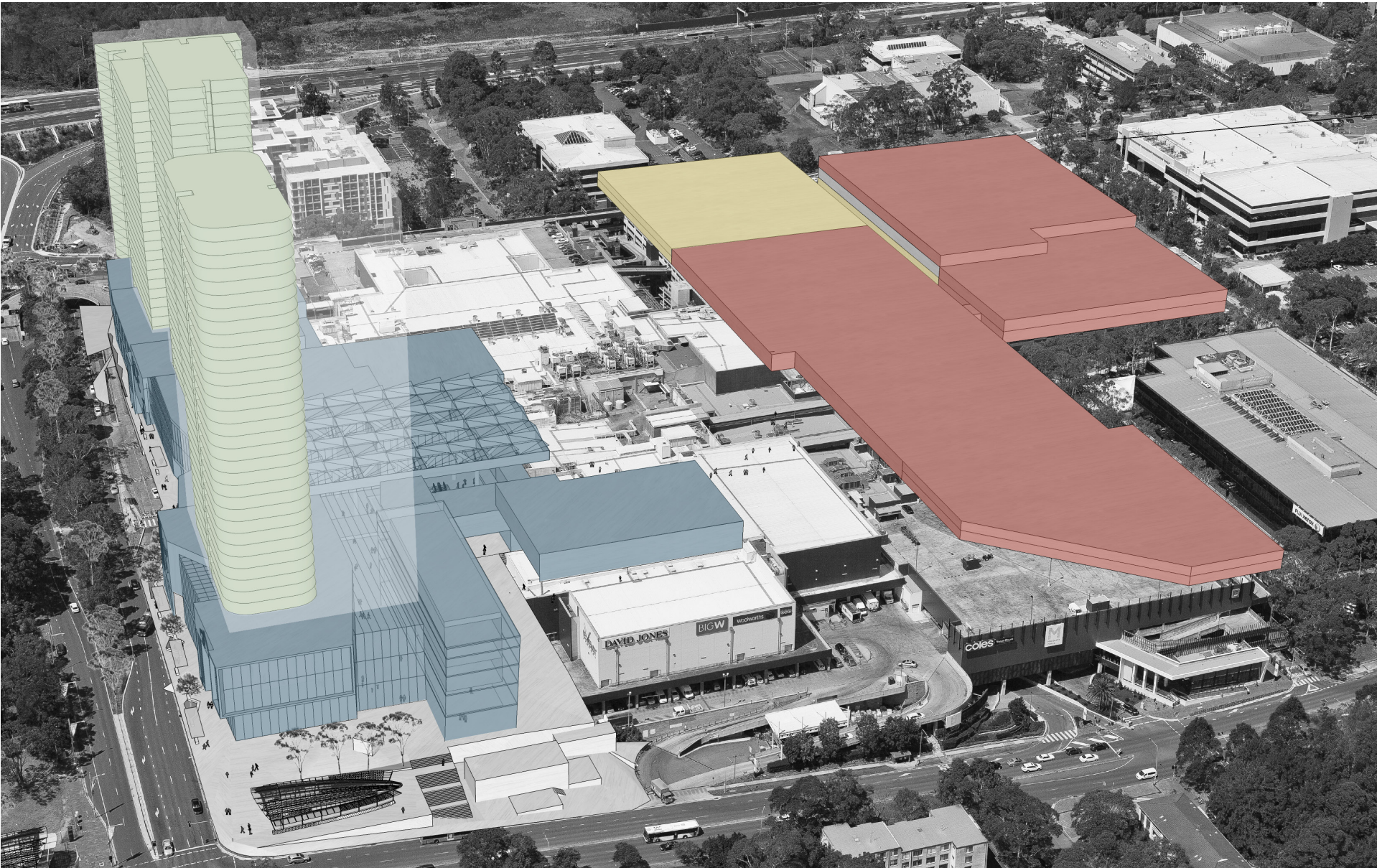




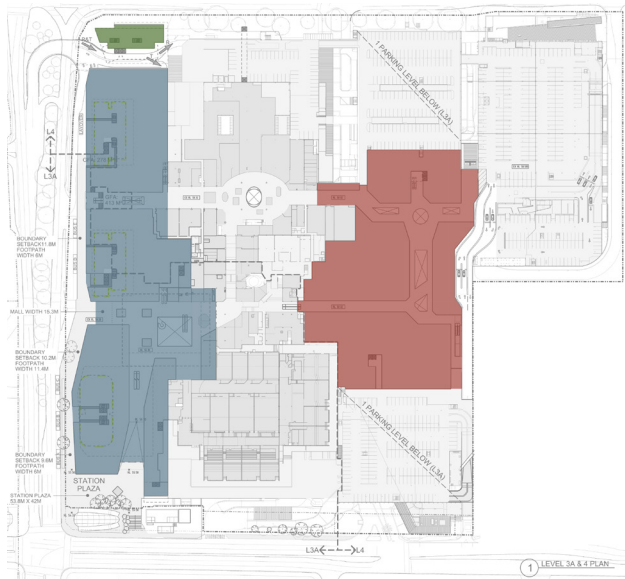
- KEY**
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 - EXISTING RETAIL / CAR PARK / ROOF
 - RETAIL ENTRY
 - TOWER ENTRY

07 APPENDICES

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- STAGE ONE
- STAGE TWO
- STAGE THREE
- STAGE FOUR



Level 3A + 4



Level 4A + 5



Level 6



Level 7