

High Street Penrith

614-632 High Street, Penrith

URBAN DESIGN JUSTIFICATION REPORT
FOR URBAN PROPERTY GROUP
APRIL 2020



An architectural rendering of a modern city street. On the right, a tall building features a prominent vertical garden facade with lush green plants. The street is lined with trees and has a wide pedestrian sidewalk where several people are walking. Cars are visible on the road, and the scene is set in a bright, sunny environment.

DISCLAIMER & COPYRIGHT

This document was prepared for the exclusive use of Urban Property Group. This information is considered 'preliminary' and should not be used for detailed design discussions. RobertsDay acts in all professional matters as a faithful advisor to its clients and exercises all reasonable skill and care in the provision of its professional services. The information presented herein has been compiled from a number of sources using a variety of methods. RobertsDay does not attempt to verify the accuracy, validity or comprehensiveness of any information supplied to RobertsDay by third parties. RobertsDay makes no warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, validity or comprehensiveness of this document, or the misapplication or misinterpretation by third parties of its contents. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favouring by RobertsDay. This document cannot be copied or reproduced in whole or part for any purpose without the prior written consent of RobertsDay.

RobertsDay

Level Four, 17 Randle Street Surry Hills NSW 2010

T: +612 8202 8000

Roberts Day Pty Ltd, 2018

ABN 53 667 373 703, ACN 008 892 135

www.robertsday.com.au

Contents

EXECUTIVE SUMMARY	4
INTRODUCTION	6
GATEWAY PRECINCT FRAMEWORK	10
URBAN DESIGN ANALYSIS	16
RECOMMENDATIONS	46

Executive Summary

RobertsDay has been engaged by Urban Property Group (the Client) to undertake an independent urban design review of the proposed development of 614-632 High Street, Penrith.

The Penrith City Council (Council) requested that the Urban Property Group (UPG) obtain independent urban design advice to assist the Council in their assessment of the project, within the context of the City West (mixed-use) Precinct and the broader Penrith City Centre. The Council's Design Review Panel assessed the proposal, and as a result of successful negotiations via an iterative design review process, provided its support for the project.

This report provides an independent assessment of the proposed development, including an analysis of the key urban design outcomes, and determination of alignment with the objectives of the Penrith City Council Development Control Plan (DCP) 2014 E11 Penrith, Part A Penrith City Centre, Penrith Local Environmental Plan 2010 (PLEP) and Community Infrastructure Policy.

The proposed development of 614-632 High Street comprises of a 5 storey mixed use podium. The podium consists of retail, food & beverage and sleeved car parking on the ground floor and mezzanine and 3 levels of above ground car parking. Above the podium are 2x towers. The western tower (residential only) of 42 storeys and the eastern tower of 3 storeys (commercial only). The total height across the site is 46 storeys. Three levels of podium communal open space are also provided. A break down of GFA is shown on page 7.

The evolution of the proposal and supporting urban design strategy is a result of an iterative design and review process between the Client and Council.

During the review process, the Council/Design Review Panel sought to improve the urban design and built form response and provided the following feedback to the project team:

- Reconsider the deliverability of the new public street to allow pedestrian crossing for north-south pedestrian flows linking Union Road to High Street;
- Improve the integration between the public realm and the ground plane to create a place that is safe, comfortable and lively, and that responds to the distinct characters desirable in an emerging city centre;
- Reconsider the podium and height-to-width ratios of the street to create a range of 'outdoor rooms' and 'human scale' built form; whilst creating an attractive and coherent streetscape;
- Ensure alignment of the proposed development with world's best practice for tall city centres; and
- Provide justification of the tower height and massing, particularly from key views and their ability to comply with solar access, whilst maintaining an urban skyline and acceptable blue sky index.

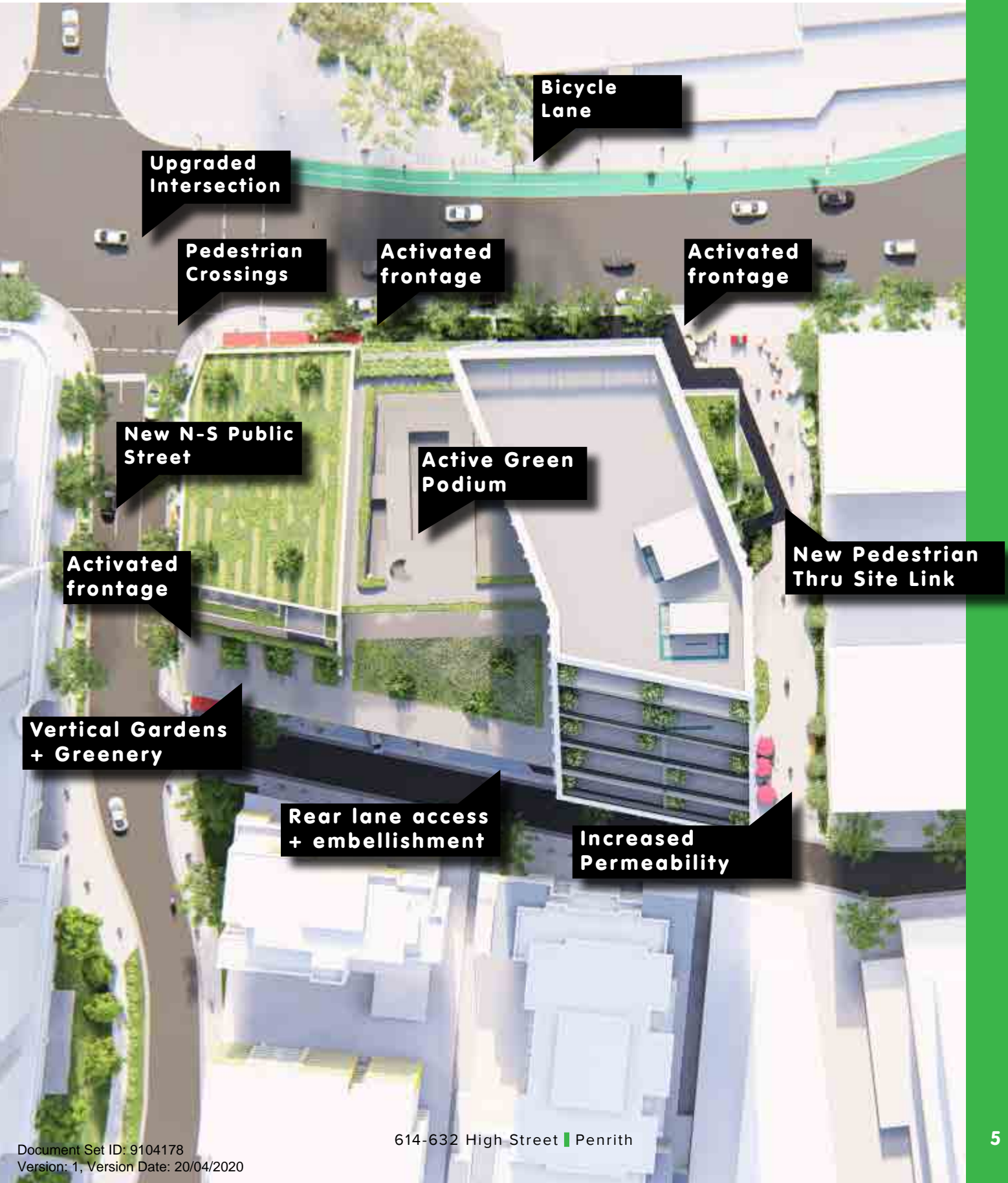
RobertsDay collaborated with the project team, DKO Architects and Urban Property Group, to ensure the project responds to Council's recommendations.

This included providing greater emphasis on incorporating the design objectives for the Precinct to improve the public realm and ground floor interface, improve key pedestrian connections and deliver a 'slender tower' form in order to provide a design that aligns with the 'sky-city-mountain' skyline identity of Penrith City Centre.

The collaboration of RobertsDay and the project team has resulted in a refined urban design strategy that supports the proposed development and achieves improved connectivity and a people-prioritised place.

Based on these improvements, RobertsDay is in a position to support the proposed scheme and recommends Council approve the Development Application in light of the assessment and analysis highlighted in this report.

Project Snapshot...



Introduction

THE OPPORTUNITY

The Penrith City Centre is expected to undergo a significant transformation in terms of urban form and density. New developments are emerging that demonstrate that the City is under pressure to accommodate proposals that create substantial uplift in residential floor space. Whilst the demand for density is evident, there is a need to provide more place-based and considered design responses to delivering mixed use developments that facilitate essential pedestrian connections and lively, vibrant uses on the ground plane.

Incorporating these elements in new developments is essential to support the emerging identity of The Penrith City Centre. There is also significant opportunity to create a place based outcome for the Western Gateway to the City Centre to link the Character Areas of Penrith, including Recreational Tourism; Civic and Cultural; the Commercial Core and High Street Mixed Use.

THE SITE TODAY

The subject site (4,715sqm) sits within the City West (mixed use) Precinct, directly adjacent to the Civic and Cultural Character Area, and is a prominent western gateway to Penrith City's west end. The site is currently vacant and underutilised and surrounded by dilapidated buildings and streetscapes in need of essential upgrades to facilitate regeneration of the Precinct.

The site is bound by High Street to the north, the adjacent Performing Arts Centre on High Street, Union Lane to the south with existing 5-8 Storey apartment buildings, and an abandoned petrol station to the west, and a used car sales yard and mechanical workshop to the east. The site orientates east-west along High Street, and has full exposure to morning and midday sunlight.

THE PROPOSAL

The proposed development facilitates the introduction of key infrastructure requirements for the Precinct, identified in the Penrith Developer Contribution Plan (DCP) and Community Infrastructure Policy, including:

- A public north-south road linking Union Rd to High St and associated network upgrades adjacent to the Civic Precinct;
- Significant improvements to pedestrian safety via intersection treatments and upgrades to the High Street intersection;
- Improved north-south pedestrian connections through the site linking Union Lane and High Street, creating more mid block permeability, consistent with Councils 'Existing / Desired Links'; and
- Public realm improvements including creative lighting installations, public art, and other elements to create a people- focused public domain on High Street.



LOCATION PLAN, 614-632 HIGH STREET, PENRITH



The Breakdown...

Site Area	4,715 sqm
FSR:	6:1
Retail / F&B	1,191 sqm
Commercial:	1,529 sqm
Residential:	25,555 sqm
TOTAL GFA:	28, 275 sqm

Communal Open space:	3,827 sqm
Deep Soil:	720 sqm
New Road:	270 sqm
Pedestrian Laneway:	790 sqm
New Footpaths:	200 sqm
Active Frontage:	202 m

City West Precinct Key Site Highlights

- * Delivery of an engaging new north-south street connection between High Street & Union Lane.
- * A safe, comfortable and lively place that seamlessly integrates the public realm & ground plane activity.
- * An integrated ground plane and activated human-scale podium, reflecting the desired character of the High Street corridor.
- * Elegant Slender tower design to optimise views, solar access + blue sky index.







Gateway Precinct Framework

Building upon existing foundations
for a more connected precinct



Street Framework

THE FOUNDATION

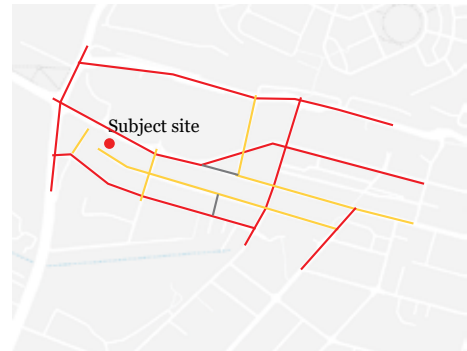
The nature and design of movement networks can impact the health and wellbeing of a community and can determine the viability and success of our centres. Elements of street design, including regular connections, street widths, carparking, street trees, pedestrian paths and connections, and cycling infrastructure, are essential ingredients to creating a great place, and determine how the public realm is used. The key to creating a great centre is designing places that prioritise people over cars.

Movement networks need to consider each street in the wider urban context, as a part of the road network, and as a place in its own right. The design of streets affects our behaviour, perception of place, and significantly influences the public realm experience. Movement network hierarchies, and the layout of streets, also support different types and intensity of development.

ROOM FOR IMPROVEMENT

Considered and well-designed streets can increase social engagement and connection, and support economic growth and activity. The Penrith City Centre is dominated by a vehicle network that does not prioritise people. The lack of pedestrian links within the City make Penrith a car dominated environment, lacking in the essential pedestrian and cycling links and infrastructure that enable the creation of walkable, resilient and sustainable communities.

However, given the current layout and opportunities identified, there is significant room for improvement. The current network and large block layout is expansive, providing opportunity to utilise land for future connections. The need for more connectivity and permeability via shared streets and pedestrian links is strongly represented by the adjacent precedents. Moving towards these examples will make the streets of the City Centre more walkable and enjoyable for pedestrians. They will pave the way for future developments to respond to the streetscape and activate the public realm, new or existing. What we want to see for future Penrith is a more people-centred approach to street planning and design, with less emphasis on the red (main roads) and the increase of more grey (pedestrian links) and orange (shared streets). This will allow Penrith to embrace and enhance public life.



Penrith



Melbourne



Copenhagen



Toronto



COMPARISON OF STREET TYPES IN CITIES

BEST PRACTICE EXAMPLES

Melbourne, Copenhagen and Toronto are examples of cities that possess the elements for a connected and vibrant public life. In these cases, main roads are focused on the periphery, with interconnecting shared streets and pedestrian links connecting larger blocks. The presence of these pedestrian friendly streets creates highly walkable and enjoyable places, and creates opportunities for the creation of new public spaces, public realm improvements and active uses.



WALKABLE GRIDS VS LARGE BLOCKS & DEFINING PUBLIC LIFE (GEHL ARCHITECTS)

STREETS FOR WALKING

A City's vitality is deeply intertwined with the mobility choices of its residents. Public life cannot thrive unless people feel safe and comfortable walking and biking, and have the opportunity for shared transit experiences. Urban mobility is essential for social mobility and provides the opportunity for increased connection and activity. Prioritising the city's streets for pedestrians and cyclists, over private vehicle use, and providing choice in mobility is key to creating a walkable and vibrant centre.



EXAMPLES OF WALKABLE GRIDS + PLACES

Walkable City

BUILDING ON THE FOUNDATION

Penrith has a similar foundation to the best practice examples, particularly the City West Precinct. The main roads encompass the precinct, whilst there is a good presence of existing laneways (Shared streets) there are missing links in between the blocks created. The introduction of these new connections will provide vital links between large expansive blocks, enabling a more diverse and unique urban form with less focus on bulky and poorly scaled built form.

The City West Precinct has advantage of being a relatively underdeveloped precinct. The opportunity presents to transform this precinct and some of the existing parcels into new connections.

THE VISION RESPONSE

Taking into account the principles of the best practice examples, the network connection for the City West Precinct focuses on maintaining the DCP objectives (as seen adjacent) with a significant improvement to walkability. The block structure is broken up via shared streets and pedestrian lanes, providing opportunities for eat streets, green laneways, shared streets that prioritise walking and cycling, creating more public spaces and places that residents can enjoy.

KEY

- MAIN ROADS
- SHARED STREETS
- - PEDESTRIAN LINK

BEFORE

Minimal thru-site links & long blocks

DCP ENVISIONED NETWORK CONNECTIONS

AFTER

Thru-site links & diverse narrow lots

FUTURE ENVISIONED NETWORK CONNECTIONS



The background image shows a modern building facade with vertical greenery (living walls) and a sign that reads "CAFE ROMA". The image is overlaid with a semi-transparent green filter.

Urban Design Analysis

Analysis of DCP Part E11 -
Penrith City Centre

"SUSTAINABLE DEVELOPMENT
IS A DYNAMIC PROCESS WHICH
ENABLES ALL PEOPLE TO
REALISE THEIR POTENTIAL, AND
TO IMPROVE THEIR QUALITY
OF LIFE, IN WAYS WHICH
SIMULTANEOUSLY PROTECT AND
ENHANCE THE EARTH'S LIFE
SUPPORT SYSTEMS"

FORUM FOR THE FUTURE ANNUAL REPORT, 2000

New Public Street

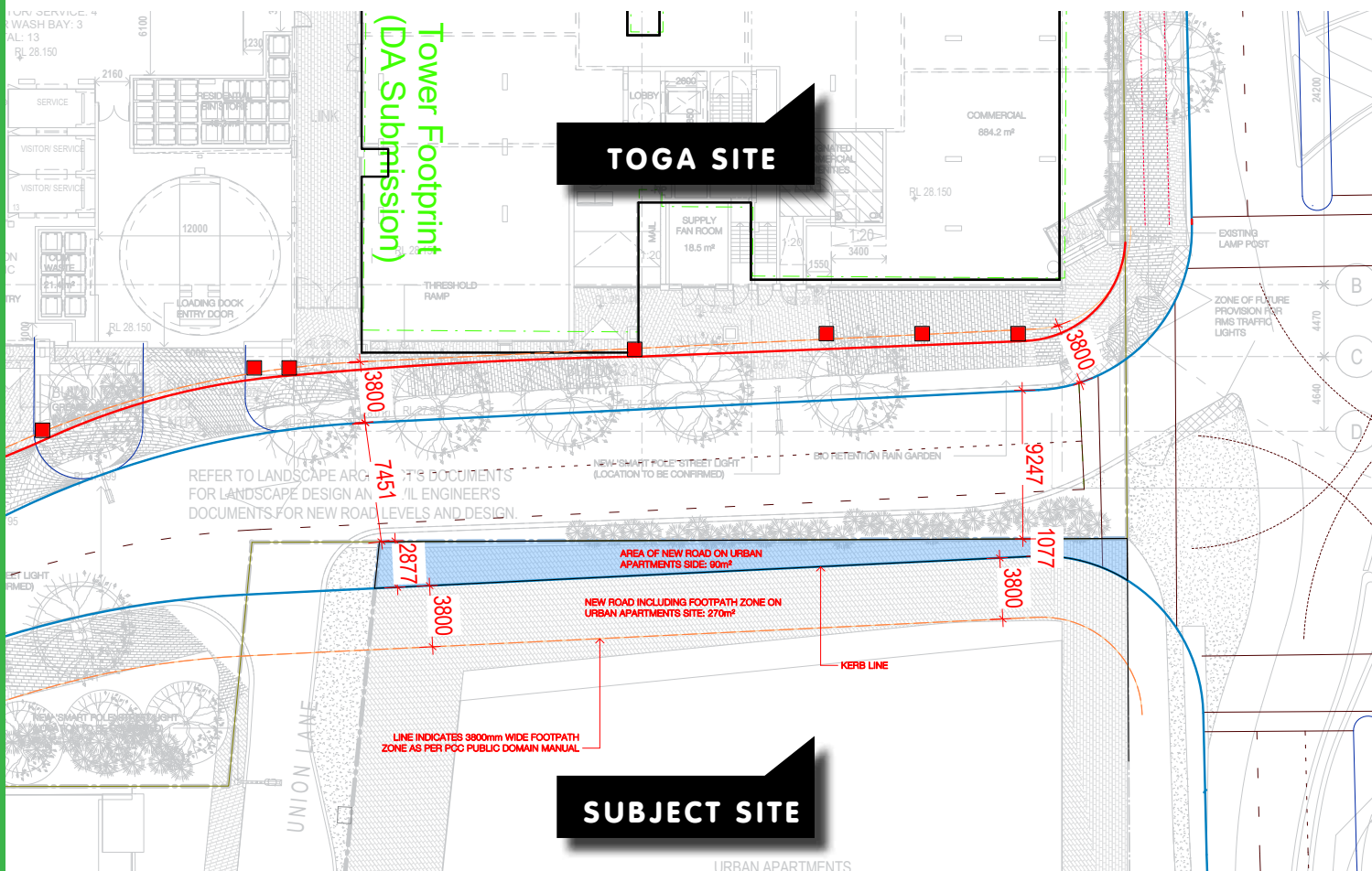
Building to Street Alignment and Street Setbacks

The addition of the new north-south connecting street will contribute to the lively character of the precinct, lined by greenery and alfresco dining and on-street retail activity.

A well connected street network is an essential component of the urban structure of a successful centre. The connecting north-south street will provide additional opportunities for activity and is an extension to the cultural and civic precinct and future development along Union Rd. The new street and interface with a mix of ground floor retail uses support pedestrian activity and around the clock uses, inviting a diversity of activity at the street level. The engaging daily life along the new street supports the emerging city centre's mixed use precinct character.

PROPOSED RESPONSE

- Highly walkable pedestrian north-south connection that enhances the permeability to and from neighbouring areas within the City Centre.
- Revised building to street alignment and generous setbacks to allow for widened footpaths to support comfortable and safe through-zones for unobstructed pedestrian movement between High St and Union Rd.
- Provision of widened footpaths provide additional space for improved pedestrian amenity, on-street retail activity, and the planting of street trees and low-level groundcover and planters.
- Activation measures include alfresco dining, street trading, trees, greenery, seating, and integrated public art promote social corners at street intersections.



DELIVERING A NEW STREET: PARTNERSHIP OF TOGA & UPG TO DELIVER THE NEW PUBLIC STREET



Date: 14.08.2018 Scale: 1:200 Sheet Size: A1

Analysing the Streetscape & Pedestrian Zones

1. FRONTAGE ZONE

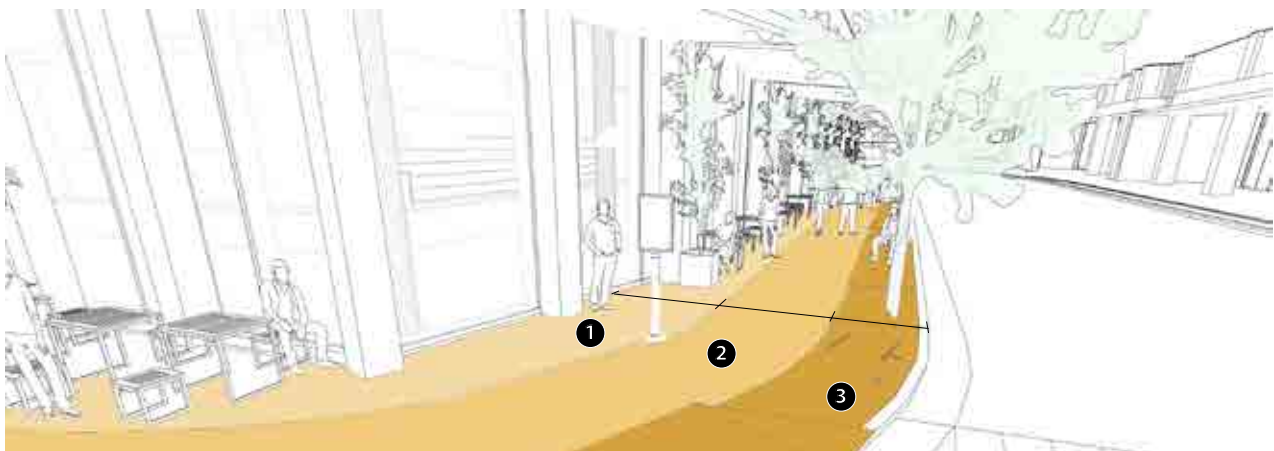
The Frontage Zone defines the section of footpath that is an extension of the building as well as an area for active frontages to spill out into the public realm. Between 1m - 1.5m.

2. CLEAR PATH ZONE

The Pedestrian clear path defines a dedicated and accessible pathway that runs parallel to the street, ensuring pedestrians have safe and adequate space to walk. The proposed clear path zone is 3.8m to allow for heavy volumes.

3. STREET FURNITURE ZONE

The street furniture zone provides a space for amenities such as lighting, seating, utilities, kiosks, bicycle parking / racks and tree pits. The proposed Street Furniture Zone is 1m.



FOOTPATH ZONES: STREET ALIGNMENT & GENEROUS SETBACKS ALLOW FOR WIDENED FOOTPATHS, ACTIVATION OPPORTUNITIES & GREATER PEDESTRIAN FLOW

SUBJECT SITE

TOGA SITE



3,80 m

9,24 m

3,80 m

3,00 m

TYPICAL STREET SECTION OF THE NEW N-S PUBLIC ROAD (AERIAL VIEW)

Public Life

Street frontage Heights & The Ground Plane

The proposed development delivers a public realm & ground plane response that is safe, clean, relaxed and legible. The proposal considers the building façade, street, and public spaces to be experienced as a cohesive and continuous place.

The experience and attractiveness of the continuous public realm encourages play, exchange and engagement with the ground level activity, landscape and surrounding uses. The proposed diversity of retail offerings and amenities reflect the emerging culture of the mixed use precinct in the area, marked by active frontages offering an interesting and dynamic liveliness to the ground plane.

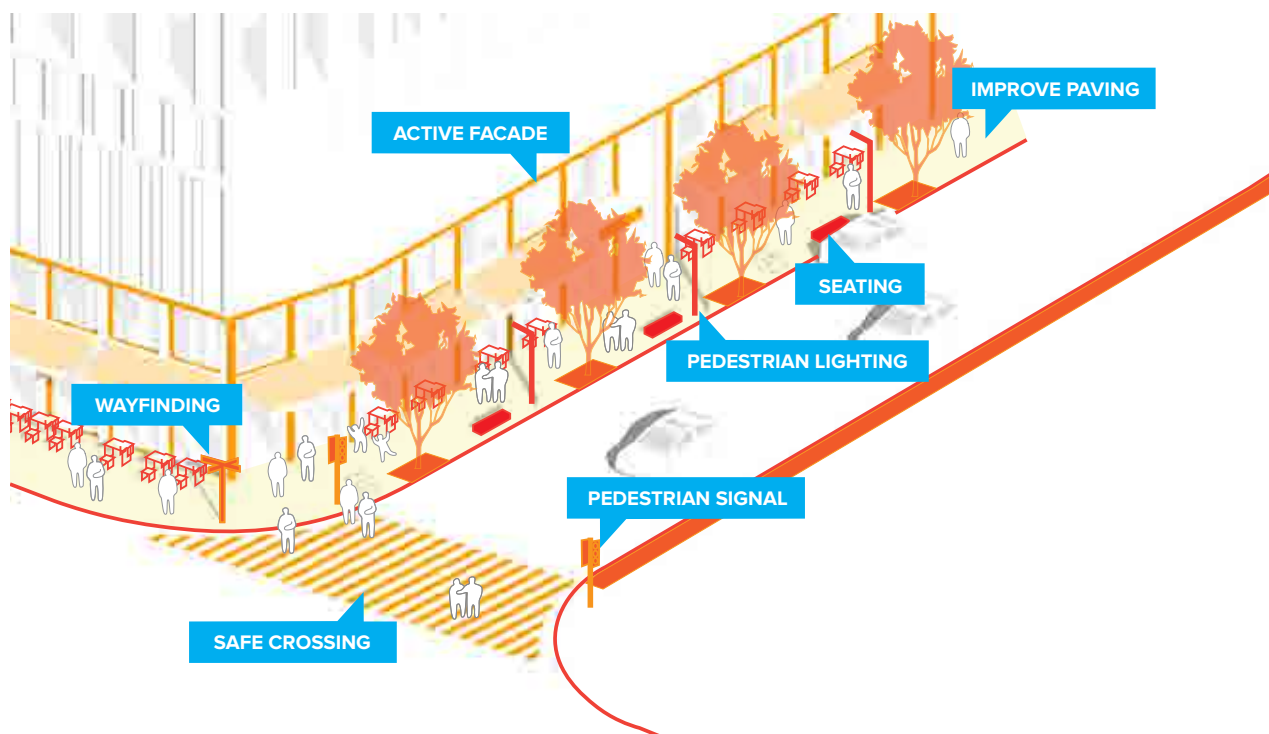
PROPOSED RESPONSE

- Slow new street and laneway through-site link which maximises connectivity and continuous pedestrian movements.
- Highly activated ground floor interfaces featuring Active and Friendly frontages oriented in all directions, with adjacent built form addressing public spaces, based on building function.
- Fine grain built form addressing High St, New Rd and the proposed through-site link provide a sense of transition and human scale.
- Awning elements will support pedestrian activity, alfresco dining and street trading, particularly along High St and New Rd.
- Integrated public art activate and differentiate the public realm from adjoining public spaces and differing character frontages.

GROUND FLOOR PLAN: ACTIVATION OF ALL EDGES AND PUBLIC REALM INTERFACES



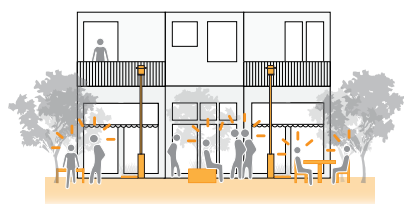
Contributing to Public Life



THE KEY ELEMENTS OF A GOOD PUBLIC REALM THAT CONTRIBUTE TO PUBLIC LIFE

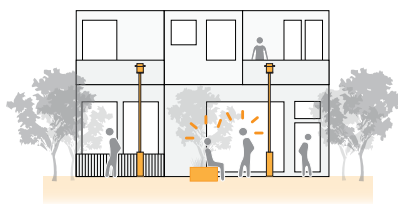
ACTIVE FACADES

- Small units, many doors.
- Vertical greenery, including pots and planters (soft green).
- Large variation in function and uses (non residential).
- Visual richness in facade details to engage the pedestrian.
- Horizontal and vertical articulation of facades.
- Nil vehicle access permitted



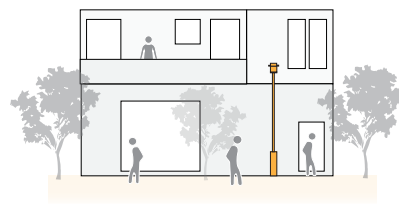
FRIENDLY FACADES

- Relatively small units.
- Potential greenery planting to create separation between private and public realm.
- Some variation in function and uses (mainly residential with visual connection through transparent facades).
- Limited vehicle access and servicing.



MIXED FACADES

- Large and small units with many doors.
- Visual connection & variation in function.
- Limited vertical greenery.
- Some blank walls and passive units embellished with façade art or greenery.
- Vehicle access and servicing permitted.



FACADE TYPOLOGIES DETAILING VARYING LEVELS OF CONNECTION BETWEEN PRIVATE AND PUBLIC REALM.

Ground Plane

Diversity at the ground level

Whilst the proposed development delivers a public realm & ground plane response, it also creates opportunities for diversity of built form, interface, facade and experience at the pedestrian level. This enables the ground plane to be experienced as a cohesive and continuous place.

The experience and attractiveness of the diverse pedestrian experience also encourages play, exchange and engagement with the ground plan, thus making it more active. Ground plane diversity can come in a few categories, those being Vertical, Horizontal and Inside-Outside Connections. This is something which the proposed scheme exhibits. Thus making it a highly diverse and engaging ground plane.

PROPOSED RESPONSE

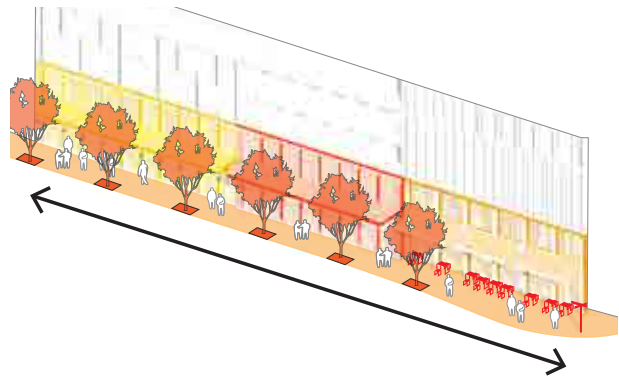
VERTICAL DIVERSITY

- Mix of functions and uses from floor to floor
- Stacking and mixing functions allows vertical flexibility in buildings uses, allowing the building to adapt to the evolving economy, culture and market demands.



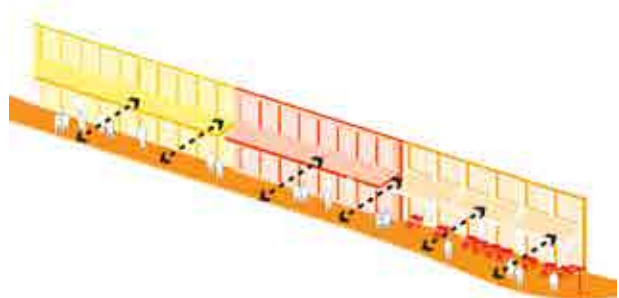
HORIZONTAL DIVERSITY

- Small units, many entrances
- Integrating residential, work, retail and entertainment into blocks creates a dynamic place where people want to spend time.
- A mixture of functions within a block is essential to achieve a more walkable street and centre



INSIDE OUTSIDE CONNECTIONS

- Permeable frontages, integrating the public and private realms
- Small scale frontages with high levels of permeability ensure eyes on the street at all times of the day.
- Entrances and openings invite people to enter, and gather, generating activity and movement at the ground level.



VERTICAL DIVERSITY



HORIZONTAL DIVERSITY



INSIDE OUTSIDE CONNECTIONS



The Podium

Podium relationship to the Street & Pedestrian Experience

The proposed podium defines the streetscape through human scale datums achieved by a range of built form expressions, contributing to the character and attractiveness of the public domain.

The articulations and built form elements along the building plinth contribute to pedestrian comfort, protection from the weather and achieves strong physical & visual definition between the building facade and the street.

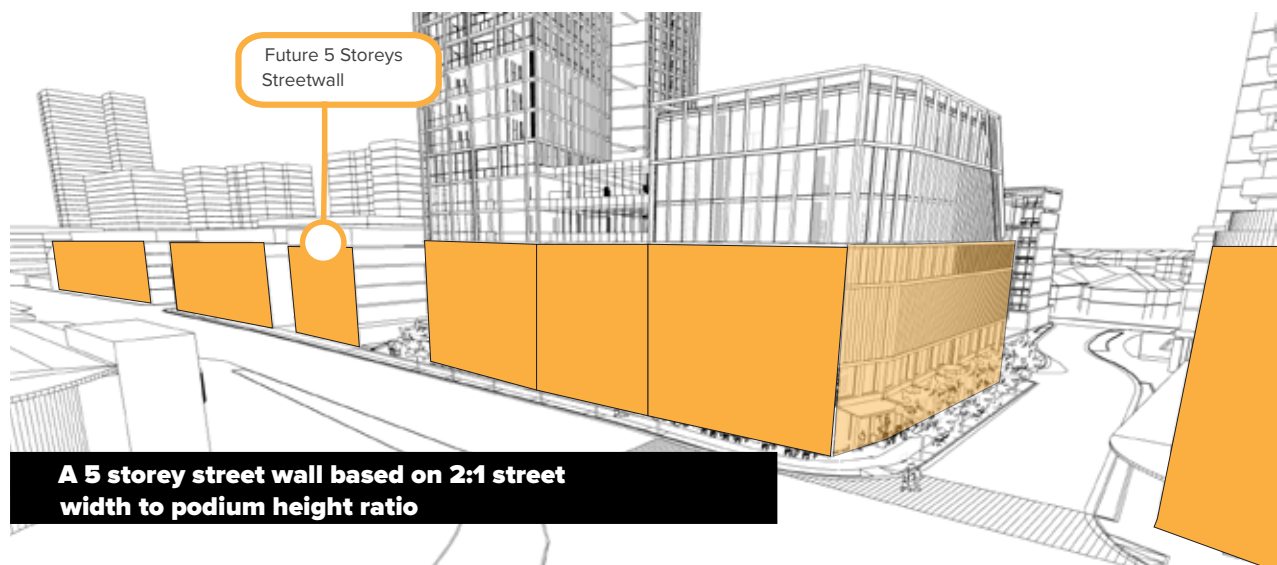
The podium response provides clear points of access, safe building entries and good internal building amenity through appropriate building depth and bulk that assist in the overall building quality presented to the street. Studies of great urban streets, from around the world, tend to exhibit a number of common characteristics (Mid-Rise Symposium, 2005; A Great City of Avenues):

- Mixed-use buildings, with tall, transparent, ground-floor commercial spaces;
- A common setback or build-to line with occasional interruptions;
- An average height of a building that is as high as the street is wide;
- Generous tree-lined footpaths;
- Good public transportation;
- Buildings that frame the street, without overpowering the space or depriving it of access to natural light.

The practice of creating outdoor room within the street can be done through an appropriate street width to podium height ratio. Best practice suggests that a 2:1 ratio creates a good urban design outcome for the streetscape and pedestrians.

PROPOSED RESPONSE

- A human scale form can be achieved without the need for large setbacks between tower and podium.
 - The proposal presents a number of ways to delineate between tower and podium forms, ensuring the built form is designed for human scale through the following alternative measures:
1. Benchmarking best practice DCP and projects for human scale podium datums and height-to-width ratios (2:1), creating enclosure and perception of outdoor rooms from eye level.
 2. Provision of awnings, activated edges, public art and greenery.
 3. Vertical rhythm and fine grain expression.
 4. Built form composition and function.



CHURCH & WESLEY, TORONTO. UNDER CONSTRUCTION



ELIZA BUILDING SYDNEY



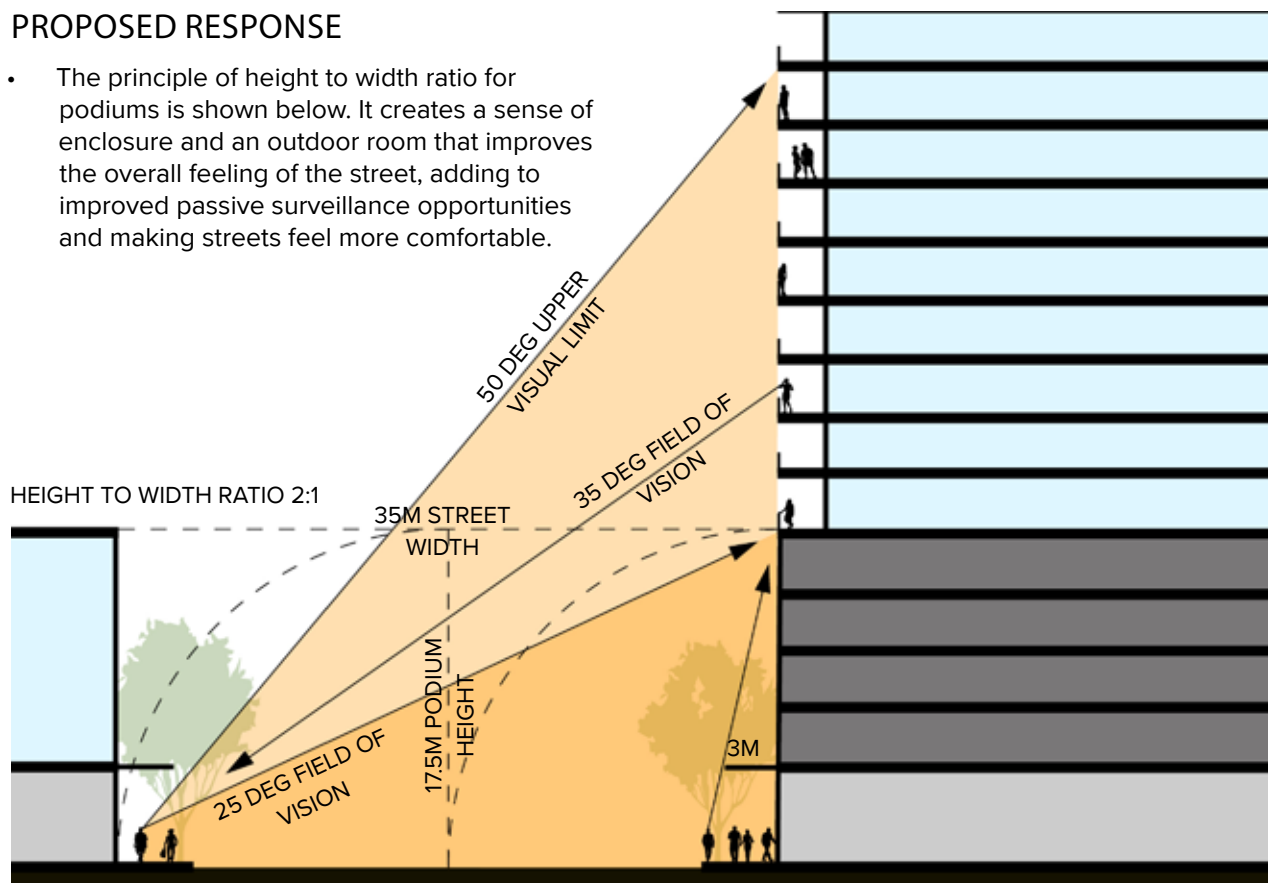
ONE CENTRAL PARK, CHIPPENDALE



EXAMPLES OF ENCLOSURE AS A FUNCTION OF PODIUM HEIGHT

PROPOSED RESPONSE

- The principle of height to width ratio for podiums is shown below. It creates a sense of enclosure and an outdoor room that improves the overall feeling of the street, adding to improved passive surveillance opportunities and making streets feel more comfortable.

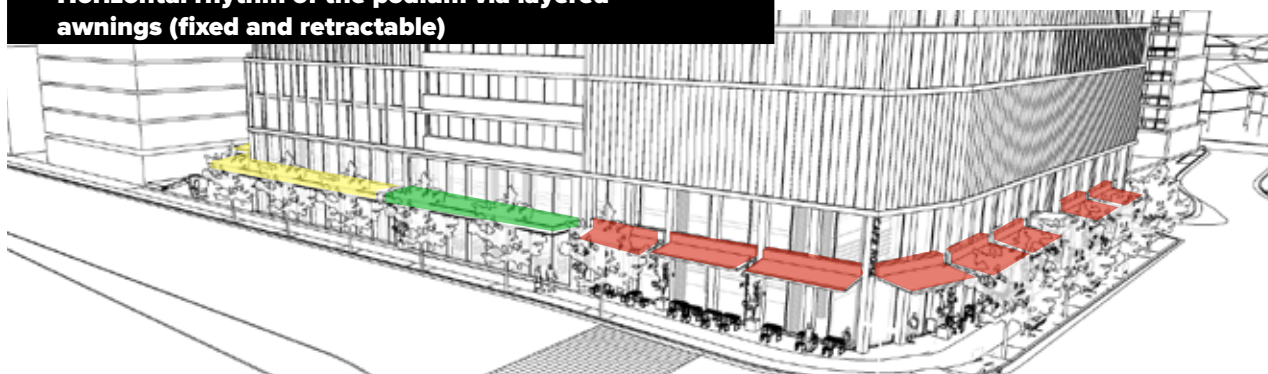


PROPOSED RESPONSE

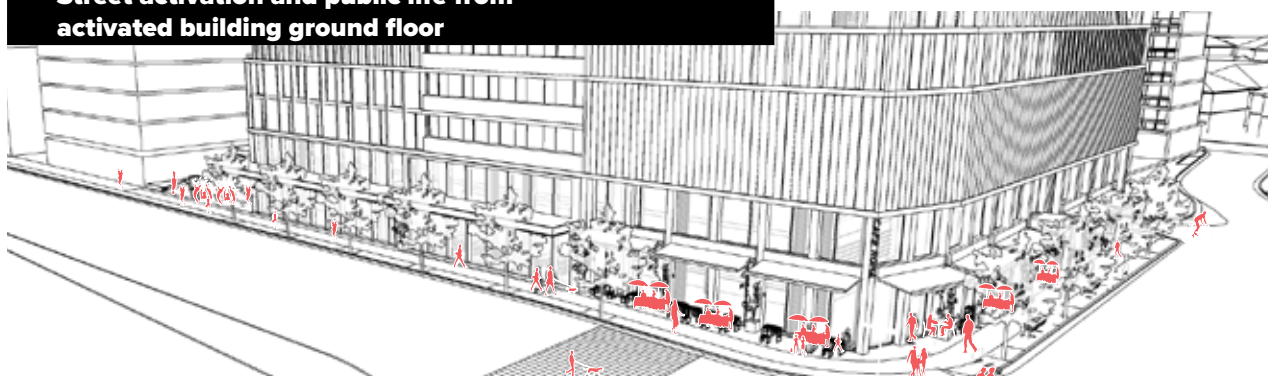
Vertical rhythm of the podium and exposed columns



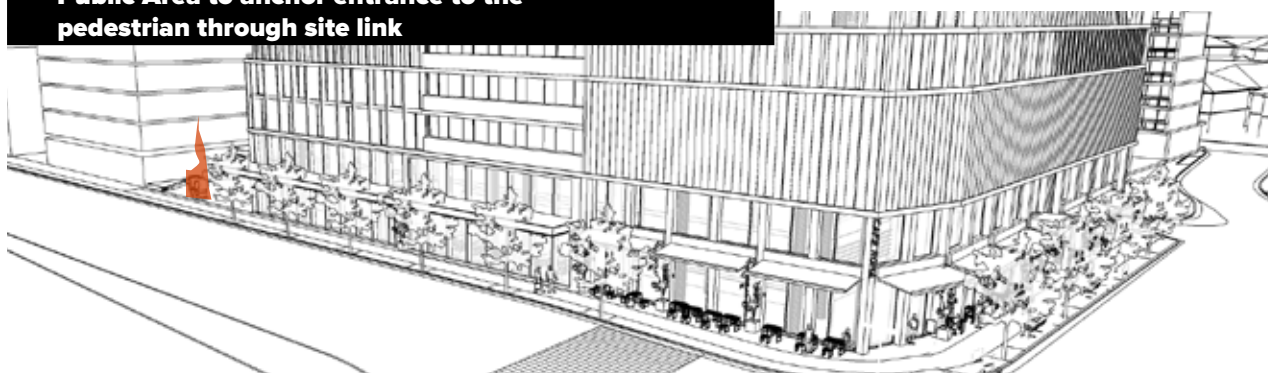
Horizontal rhythm of the podium via layered awnings (fixed and retractable)



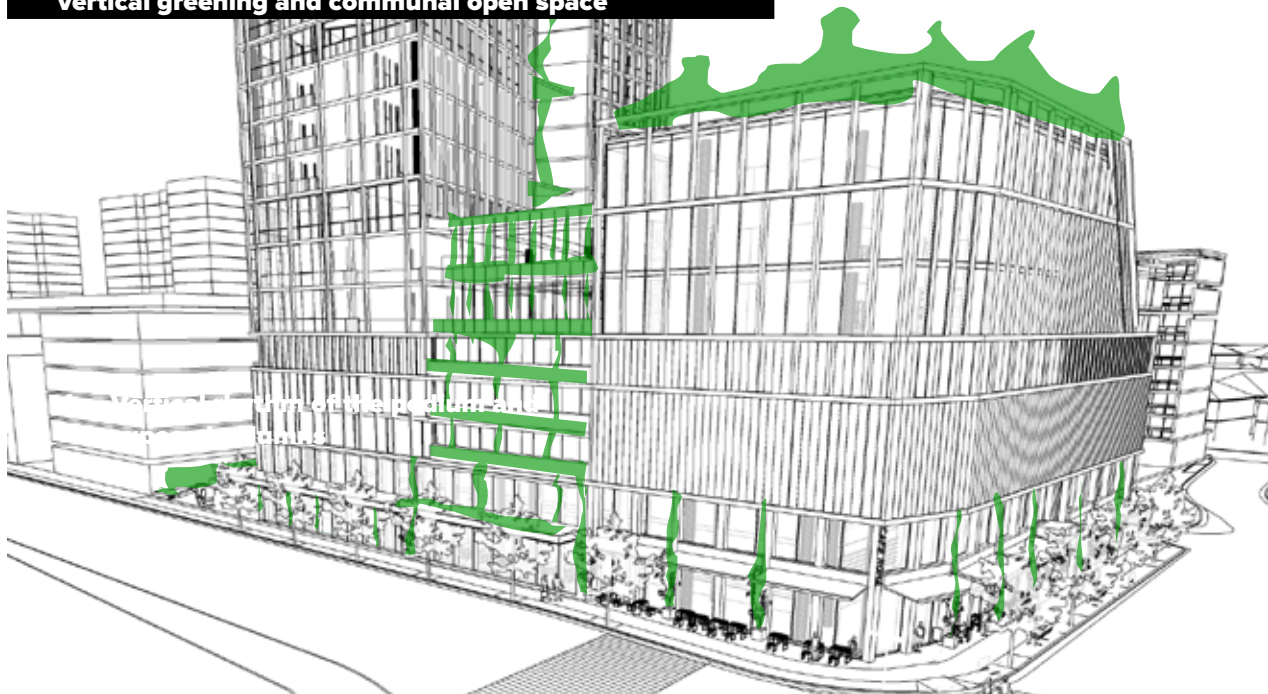
Street activation and public life from activated building ground floor



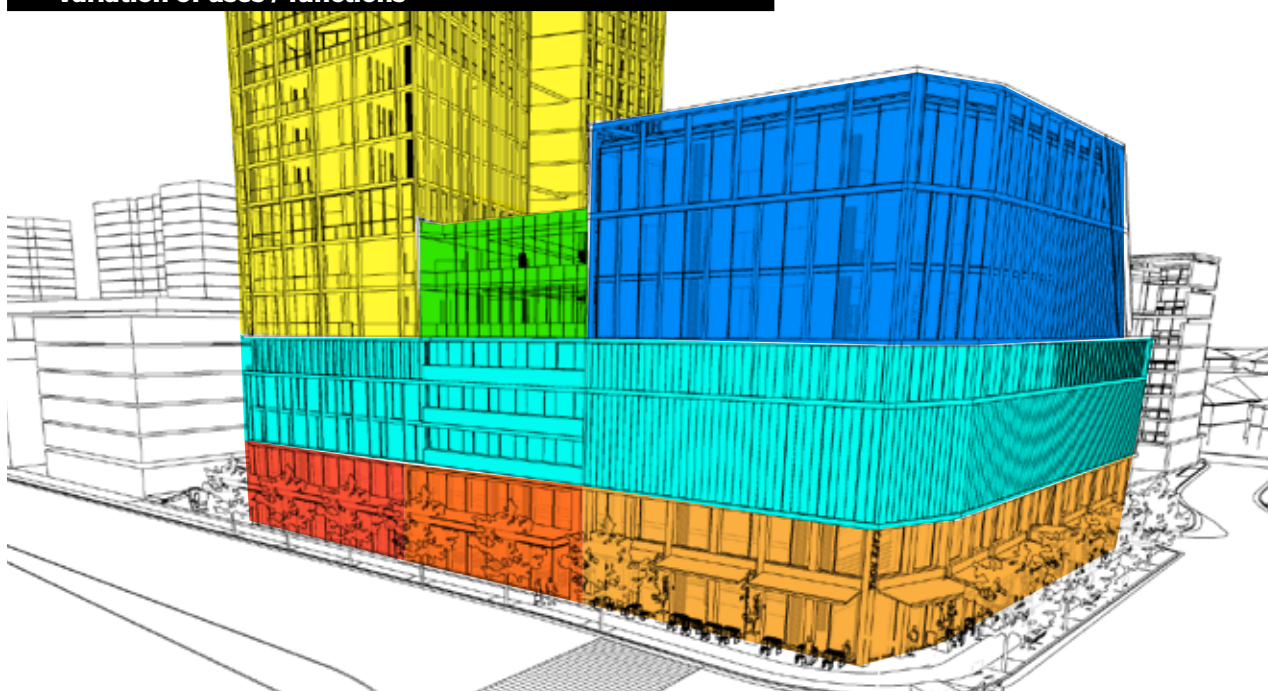
Public Area to anchor entrance to the pedestrian through site link



Facade interest in podium and tower through vertical greening and communal open space



Podium and tower composition and variation of uses / functions



KEY

- ACTIVE RETAIL / F&B
- ACTIVE RETAIL / F&B
- ACTIVE RETAIL / F&B

- ABOVE GROUND CAR PARK
- COMMERCIAL
- COMMUNAL OPEN SPACE

- RESIDENTIAL

614-632 High Street | Penrith

Vertical Village

Boundary Setbacks and Building Separation

The scale, dimension, form and separation of the proposed development responds to the emerging city centre identity of Penrith, that protects the pedestrian amenity at street level and lower building levels, enhances solar access and provides for privacy between the adjoining properties and future development.

The proposed setback of the built form contributes to the streetscape character of High St and New Rd by providing a continuous streetscape facade. The proposed setbacks ensure comfortable pedestrian amenity through appropriate building scale and facilitate good growing conditions for street trees.

THE RATIONALE

Examining worlds best practice examples and the design principles of the Toronto Tall Buildings Guidelines and the Vancouver Podium / Slender Tower Model, allows us to understand how the proposal will contribute to future Penrith, and the assessment rationale needed to consider future development moving forward. The Toronto Tall Buildings principles include:

- Adequate tower separation distances from property lines and other towers is critical for tall building design;
- The appropriate placement of towers minimises the negative impact on the public realm and neighbouring properties, such as overshadowing, pedestrian wind tunnels, and blockage of sky views;
- Tower design should maximise the environmental quality of the building interiors including solar access, privacy and cross ventilation;
- Separation distances greater than 25 metres are necessary to ensure a tall building fits harmoniously within an existing or planned context.

Minimum separation distances are established to ensure tall buildings achieve the following objectives for the protection of sky view, privacy and solar access;

SKY VIEW

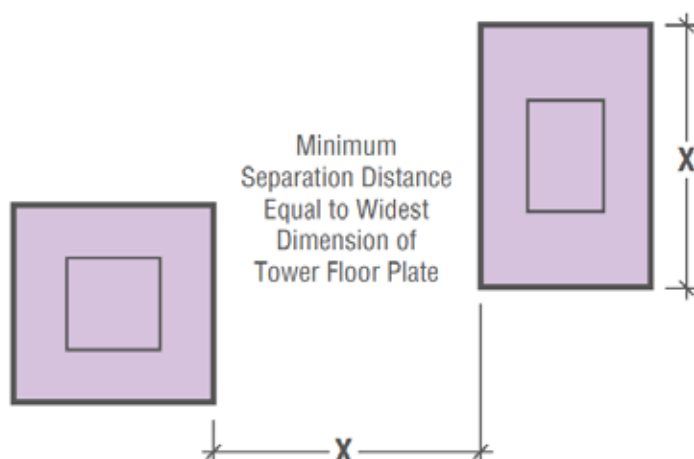
- Ability to retain sky view in between building masses is essential to maintain the character, usability, quality of streets, parks, open space and neighbouring properties. Lack of sky view will negatively affect micro climate and sense of pedestrian scale at the street level.

PRIVACY

- Appropriate tower orientation, facing distances and setbacks combine to mitigate overlooking between the openings and private spaces from one building to another.

SOLAR ACCESS

- Access to sunlight is an important component of residential liveability, workplace productivity, and sustainable building practice. Tall buildings with smaller floor plates and adequate separation provide enhanced opportunity for solar access.



TOWER SEPARATION DISTANCE PROPORTIONATE TO FLOOR PLATE SIZE (TORONTO TALL BUILDINGS GUIDELINES)

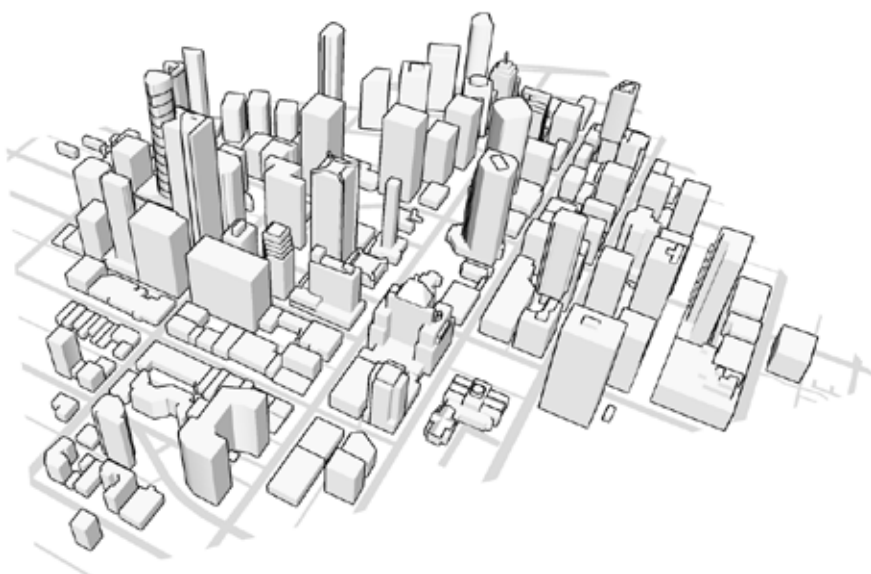
VANCOUVER MODEL

The Vancouver Model, below, depicts how buildings are treated. The success of the City's built form and streetscape within the CBD is accredited to its approach on tower development. The term 'Vancouverism' refers to the slender tower to large podium relationship seen below, not only does it refer to the architecture but also green space, and the retention of key views and sightlines between towers to North Vancouver's mountainous landscape and the water body that encompasses the CBD. Vancouverism is also popular for the people that occupy the towers as each high rise building is treated in a way that it

becomes a vertical village, whereby it is considered a community in itself, given the raft of uses and infrastructure available.

How and why is this applicable is simple, the proposed scheme draws similar principles to a Vancouverism model tower in its physical form but also uses, and its relationship to the streetscape and activation of the public realm. If we apply this concept to the Penrith City Centre, the value of the proposed scheme is further heightened, as well as the vision for future development and transformation City wide.

VANCOUVER MASSING MODEL: PODIUM AND TOWER RELATIONSHIP



VANCOUVERISM

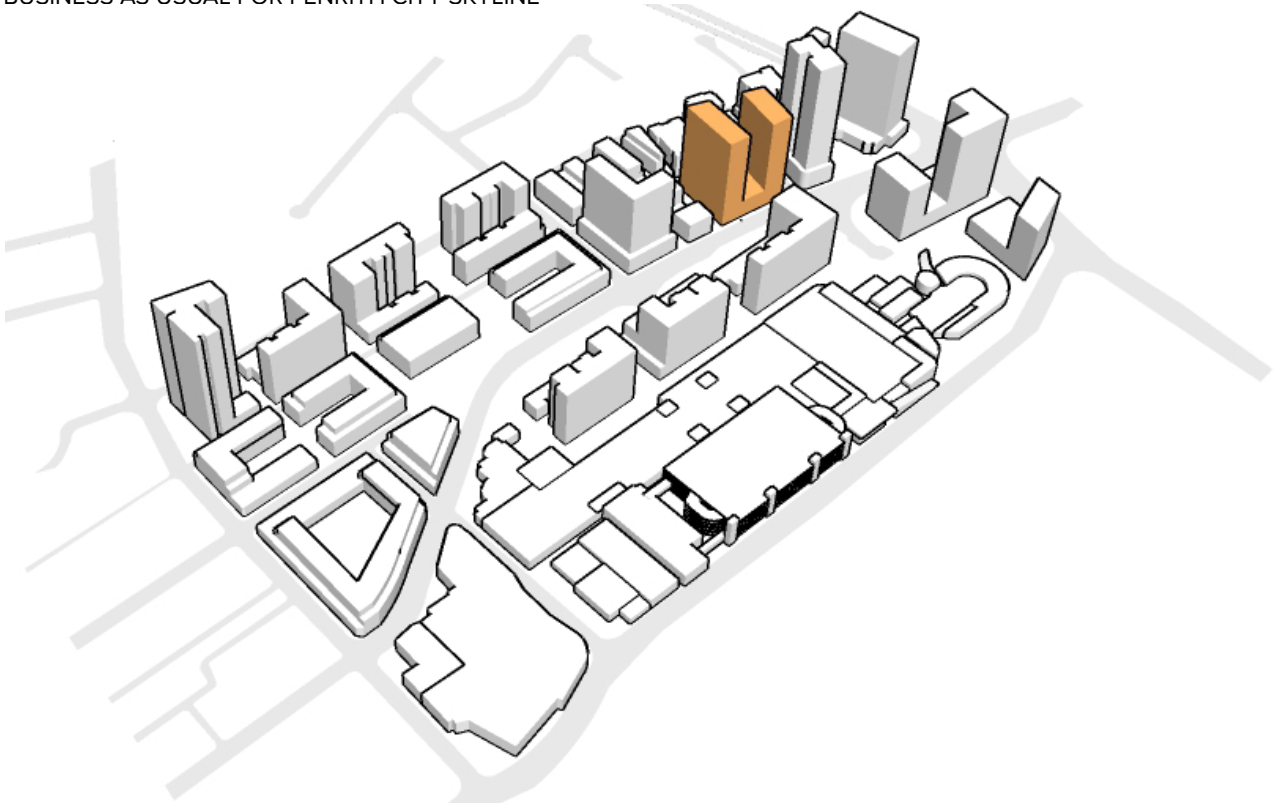
Scenario Comparison for Future Penrith

PROPOSED RESPONSE

- Distinctive slender tower design reinforces the role as a notable landmark to the precinct and city centre.
- The articulation of the building facade complements the adjoining cultural and civic precinct and contributes to the legibility of the city.
- The slender tower design maintains and enhances the significant views of the city centre to the surrounding natural landscape features of the Blue Mountains.
- Tower elements are setback to maintain pedestrian scale at ground level, supporting effective way finding landmark to provide orientation cues.
- Achieves a number of Great Place Performance metrics including;
- Sky View Index - perception of 30% of visible sky from pedestrian eye level.
- To understand a better outcome for the Penrith City Centre, two scenarios have been modeled to compare the outcomes of principles from Toronto and Vancouver:
- SCENARIO 1: The business as usual approach to tower development is applied to Penrith. This Scenario exhibits more bulkier and forms at a consistent datum. Towers are also large and bulky and impose on the streetscape.
- SCENARIO 2: Applying the Vancouver Model to Penrith whereby human scale is achieved through appropriate podium heights and slender towers.

SCENARIO 1

BUSINESS AS USUAL FOR PENRITH CITY SKYLINE



COMPARATIVE ANALYSIS

The following diagrams in pages 32-33 model the two below scenarios from 4 key locations with in PEnrith City Centre in order to analyse the impact of the built form scenarios on views to the surrounding context and Sky View Index (SVI). Scenario 2 provides the best outcome in terms of maintaining views to the surrounding context of Penrith as well as a quality Blue Sky Index (analysis on page 3435). Tall slender towers provide visual breaks that maintain view sharing whilst still facilitating density. Shorter, bulkier buildings result in blocked views that limited visual connections in additional solar access as described preciously.

SCENARIO 2

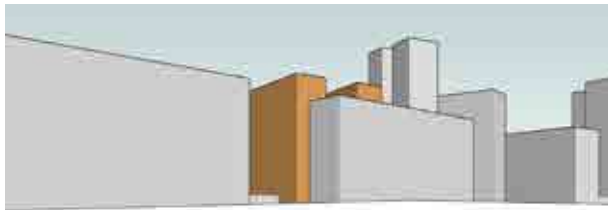
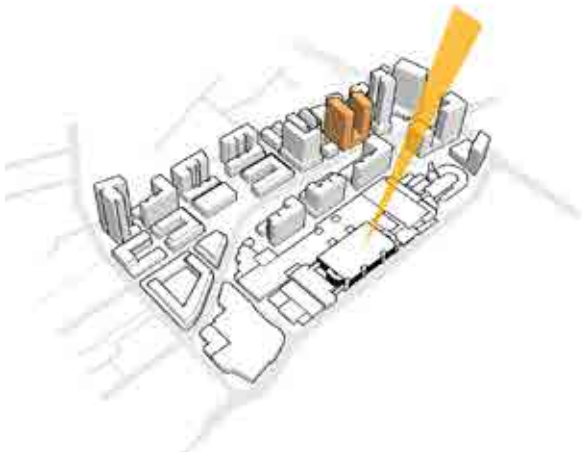
VANCOUVERISM APPLIED TO PENRITH CITY CENTRE SKYLINE



Scenario Comparison within the Penrith City Centre

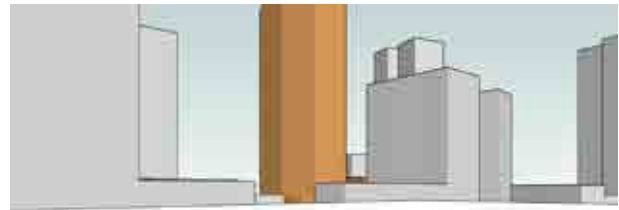
LOCATION 1

BUSINESS AS USUAL PENRITH



BUSINESS AS USUAL PEDESTRIAN PERSPECTIVE

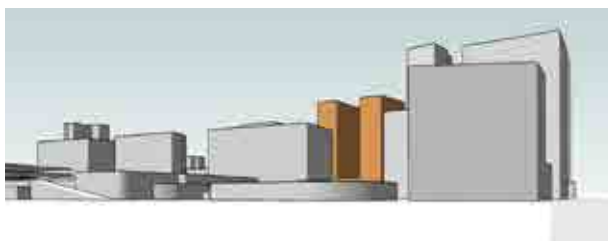
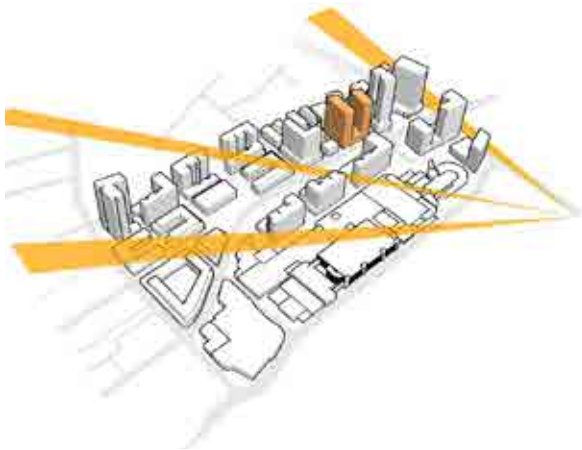
VANCOUVERISM MODEL PENRITH



VANCOUVERISM MODEL PEDESTRIAN PERSPECTIVE

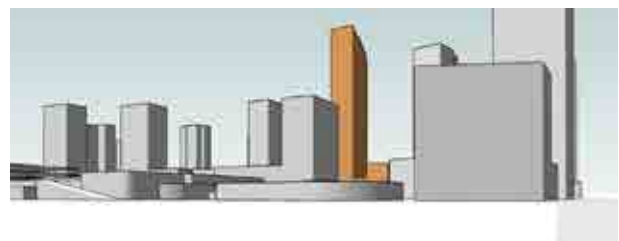
LOCATION 2

BUSINESS AS USUAL PENRITH



BUSINESS AS USUAL PEDESTRIAN PERSPECTIVE

VANCOUVERISM MODEL PENRITH



VANCOUVERISM MODEL PEDESTRIAN PERSPECTIVE

KEY

 KEY VIEWS FROM GROUND PLANE

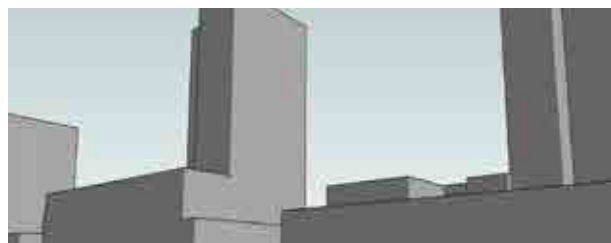
LOCATION 3

BUSINESS AS USUAL PENRITH



BUSINESS AS USUAL PEDESTRIAN PERSPECTIVE

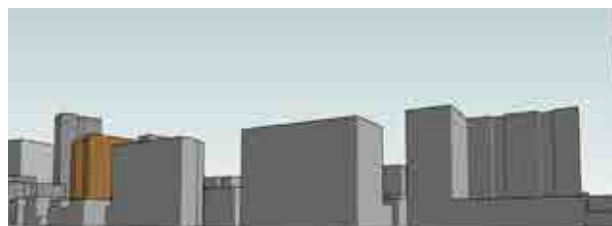
VANCOUVERISM MODEL PENRITH



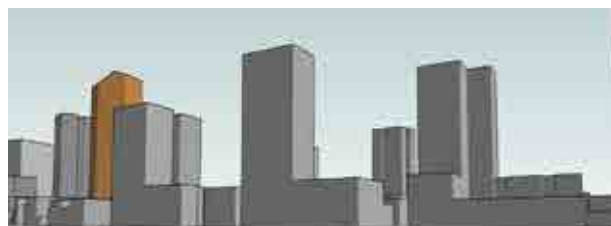
VANCOUVERISM MODEL PEDESTRIAN PERSPECTIVE

LOCATION 4

BUSINESS AS USUAL PENRITH



BUSINESS AS USUAL PEDESTRIAN PERSPECTIVE

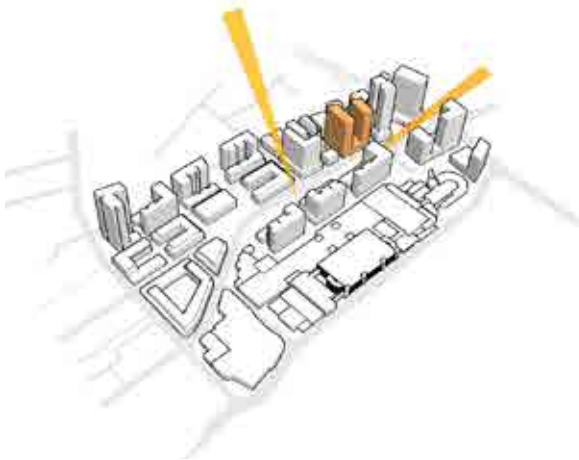


VANCOUVERISM MODEL PEDESTRIAN PERSPECTIVE

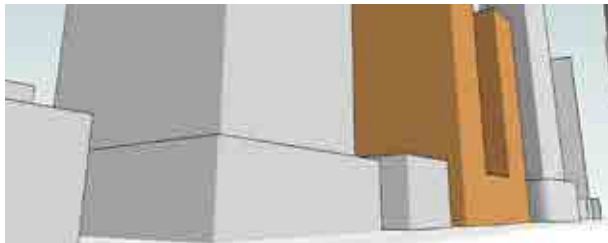
Scenario Comparison From High Street

LOCATION 6 FROM HIGH STREET

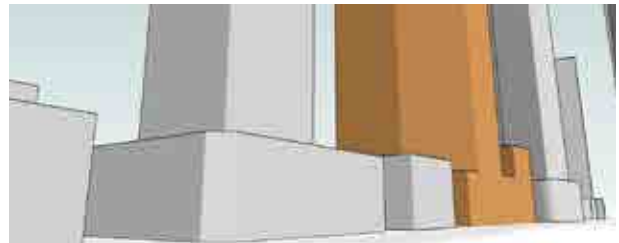
BUSINESS AS USUAL PENRITH



VANCOUVERISM MODEL PENRITH



BUSINESS AS USUAL PEDESTRIAN PERSPECTIVE



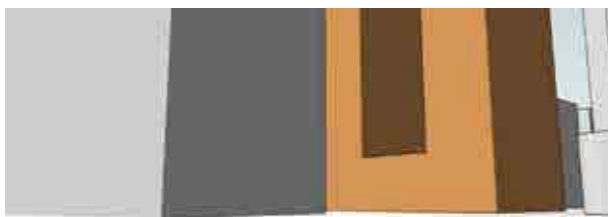
VANCOUVERISM MODEL PEDESTRIAN PERSPECTIVE

LOCATION 7 FROM COMMUNITY CENTRE

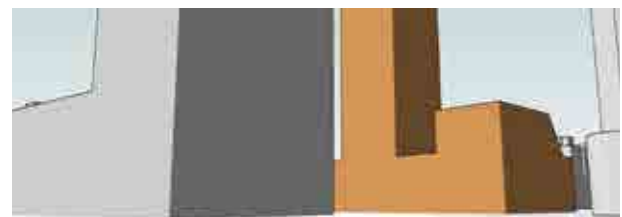
BUSINESS AS USUAL PENRITH



VANCOUVERISM MODEL PENRITH



BUSINESS AS USUAL PEDESTRIAN PERSPECTIVE



VANCOUVERISM MODEL PEDESTRIAN PERSPECTIVE



Future Penrith Sky View Index

PENRITH SKY VIEW INDEX (SVI)

The following analysis of SVI demonstrates that when the Vancouver Model (podium and slender tower) is applied to Penrith City Centre, it achieves an SVI between 59% to 79%. This is comparable to Vancouver's SVI of 61.4%.

A comparison of 3 locations within Penrith City Centre was undertaken and benchmarked against international case studies to determine how Penrith City Centre performs in terms of SVI.

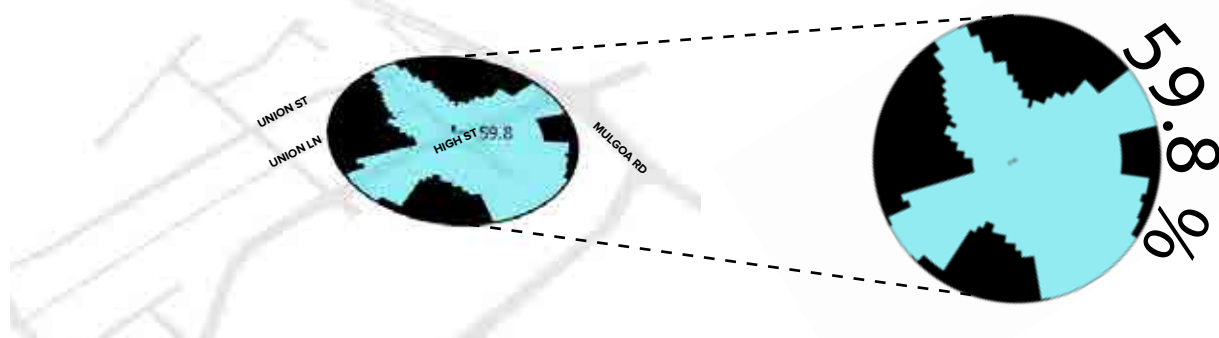
LOCATIONS

- LOC 1. The Roundabout at High Street (directly adjacent to the subject site)
- LOC 2. Signalised Pedestrian Crossing (High Street & Worth Street)
- LOC 3. Triangle Park (High Street)

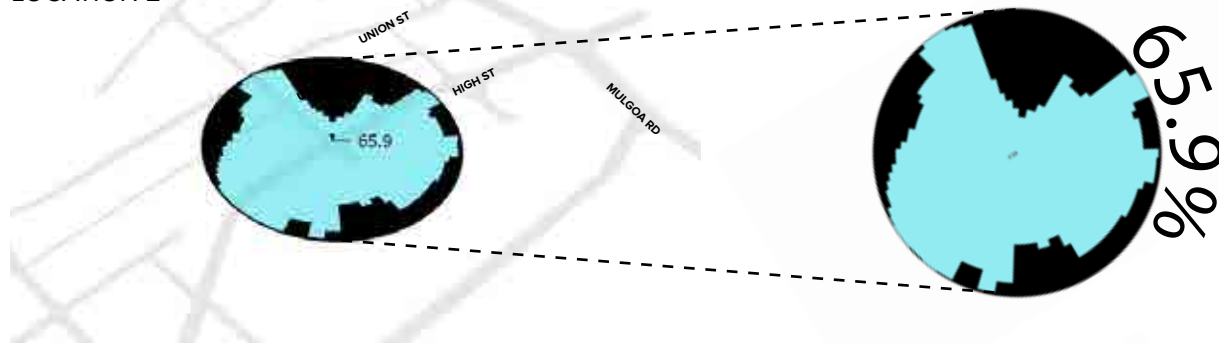
KEY

- BUILDING VIEW FROM GROUND PLANE
- SKY VIEW FROM GROUND PLANE

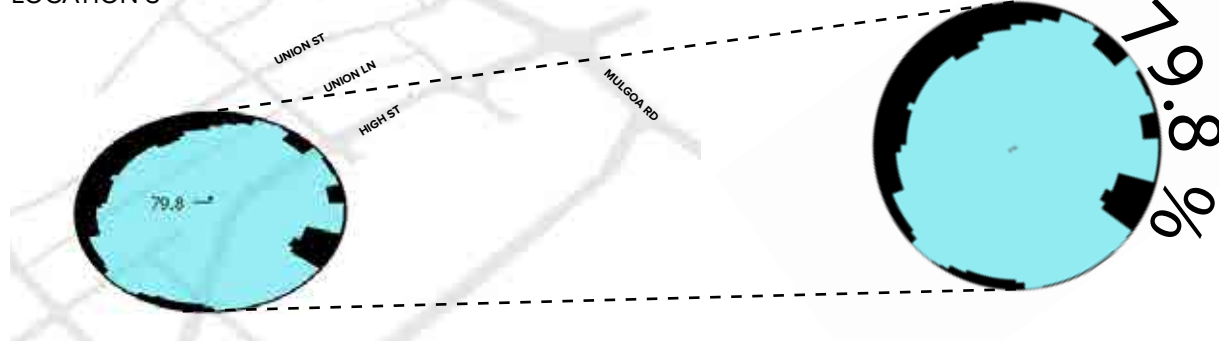
LOCATION 1



LOCATION 2



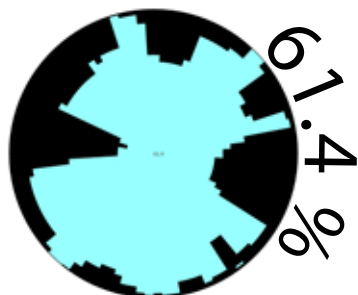
LOCATION 3



International Sky View Index Comparison

INTERNATIONAL CASE STUDY

VANCOUVER (CAN)



VANCOUVER SVI LOCATION



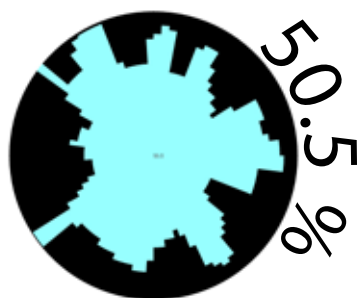
MELBOURNE (AUS)



MELBOURNE SVI LOCATION



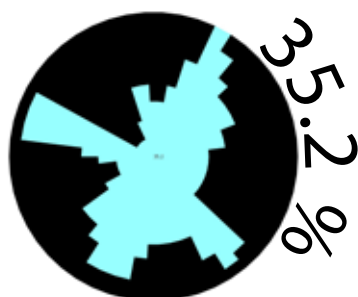
DOWNTOWN SINGAPORE (SIN)



SINGAPORE SVI LOCATION



NEW YORK CITY (USA)



NYC SVI LOCATION



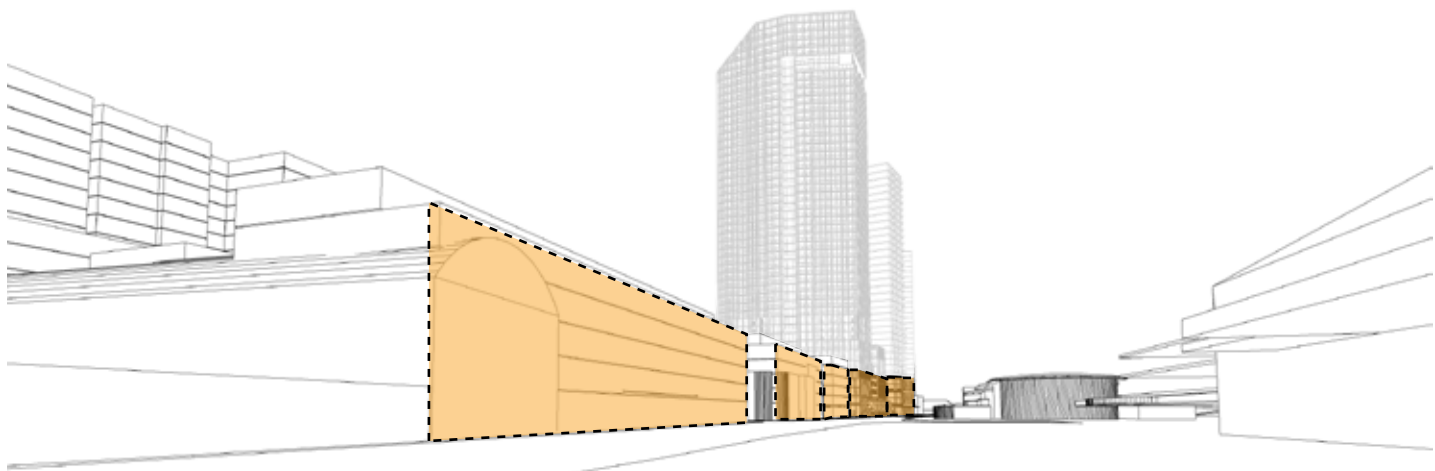
Visual Analysis

Analysing Future Penrith from the Ground Plane

KEY

5 STOREY PODIUM

VIEW 1

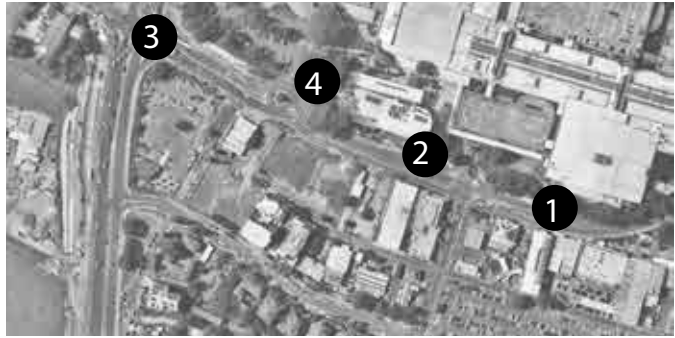


VIEW LOOKING WEST ALONG HIGH STREET WITH CONTINUOUS 5 STOREY PODIUM / STREET WALL

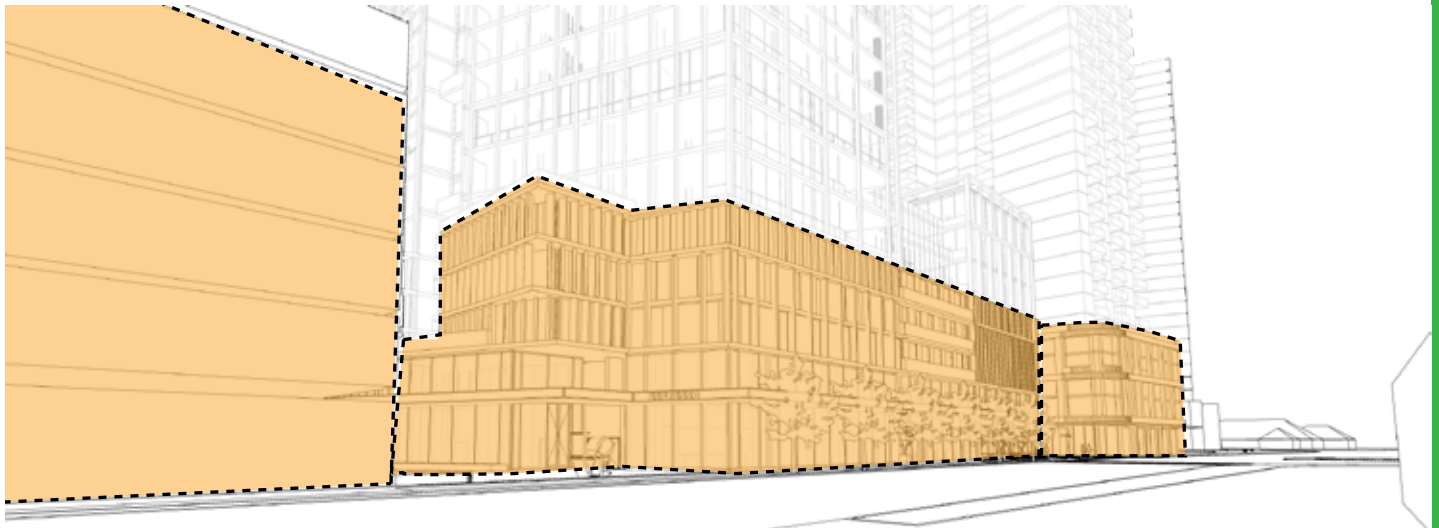
VIEW 1



VIEW LOCATION PLAN



VIEW 2



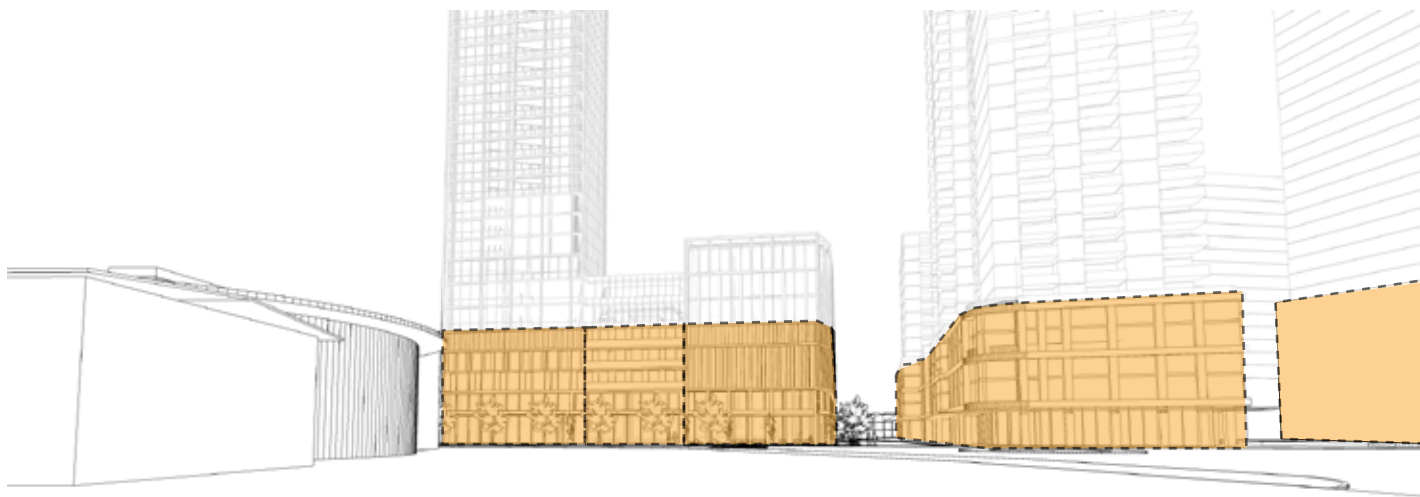
VIEW LOOKING WEST ALONG HIGH STREET WITH CONTINUOUS 5 STOREY PODIUM / STREET WALL

VIEW 2



Analysing Future Penrith from the Ground Plane

VIEW 3

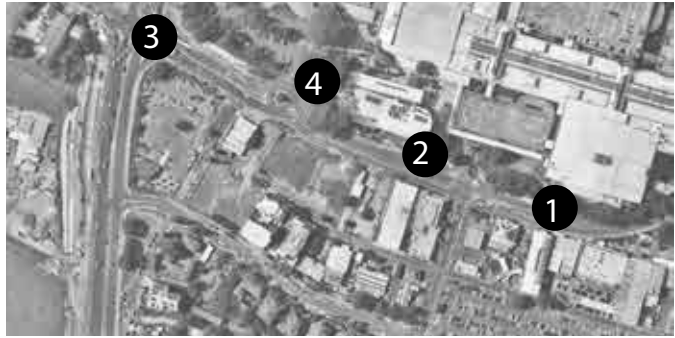


VIEW SOUTH TO THE NEW PUBLIC STREET FROM THE PERFORMING ARTS CENTRE, VIEW 3 SHOWS THE INTERFACE BETWEEN THE TOGA DEVELOPMENT AND THE SUBJECT SITE

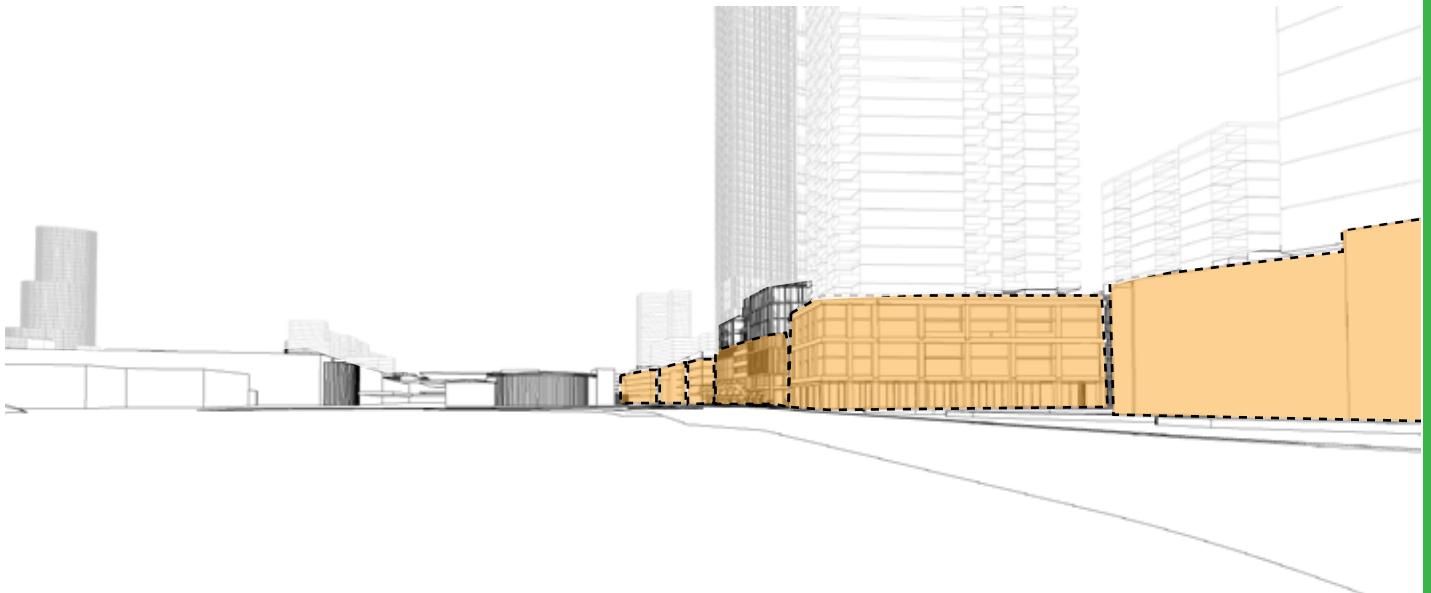
VIEW 3



VIEW LOCATION PLAN



VIEW 4



VIEW LOOKING EAST ALONG HIGH STREET FROM MULGOA RD HIGHLIGHTING THE RELATIONSHIP OF STREET WALLS AND TOWER SEPARATION

VIEW 4



Visual Analysis

Analysis of Views to the Escarpment

VIEWS TO THE ESCARPMENT

We understand that the views to the escarpment are important from an amenity and navigational perspective. Whilst the proposed tower will sit in front of the escarpment from View 5 shown below, it is evident that the impact and reduction of views to the escarpment is minimal. This is due to the fact that the proposed tower is slender in form, creating a positive outcome. It also creates a cluster that identifies the Penrith CBD location from this view. The below analysis reveals that the proposed tower impacts the view to the escarpment by only 1%, leaving 19% (from the original 20%) of visible escarpment from this location. Approximately 80% of the current view is covered by large trees and other obstructions.

VIEW 5A



VIEW TO THE SITE FROM THE INTERSECTION OF GREAT WESTERN HIGHWAY AND PARKER STREET, PENRITH (LOOKING WEST)

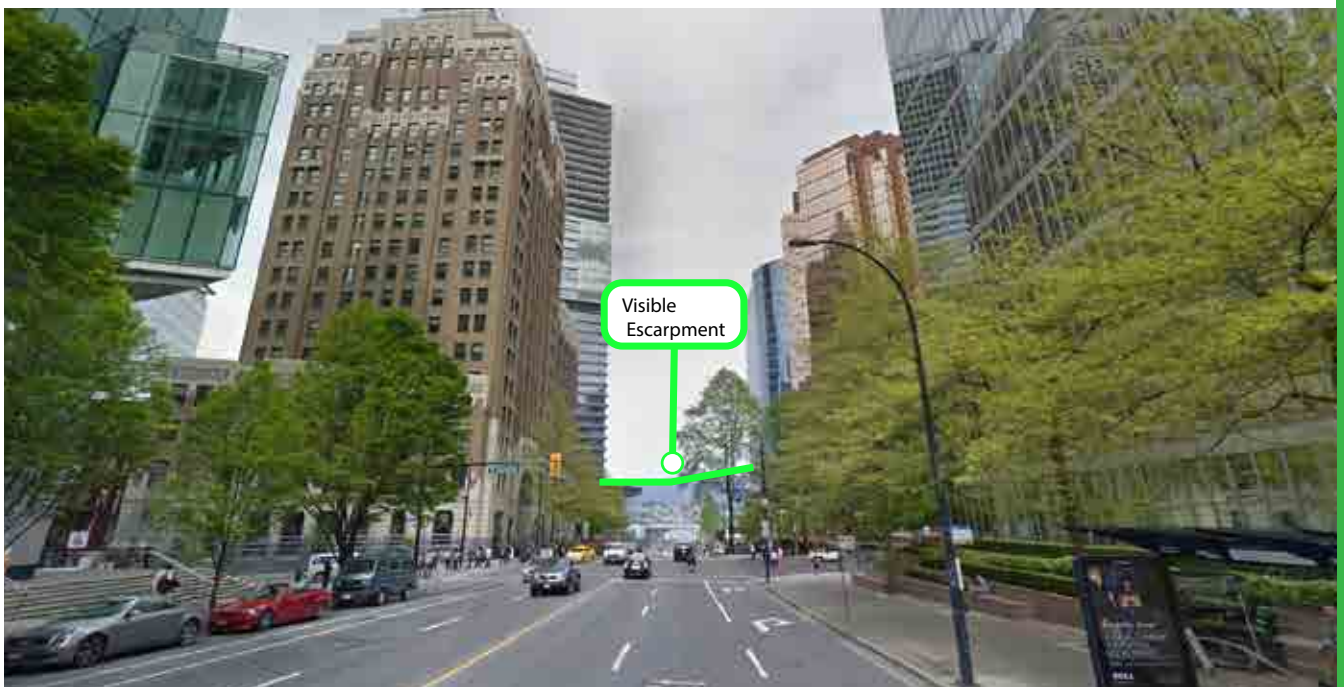
VIEW LOCATION PLAN



VANCOUVERISM COMPARISON

Vancouver is a city surrounded by nature and whilst the CBD cannot expand outwards / horizontally due to a significant water body surrounding the CBD, the CBD is continuously growing in density with more high rise buildings. Whilst the two locations are vastly different, it is evident that through adequate tower separation and slender tower design, views to Vancouver's natural amenity are still enjoyed from many locations of the City Centre.

VANCOUVER VIEW



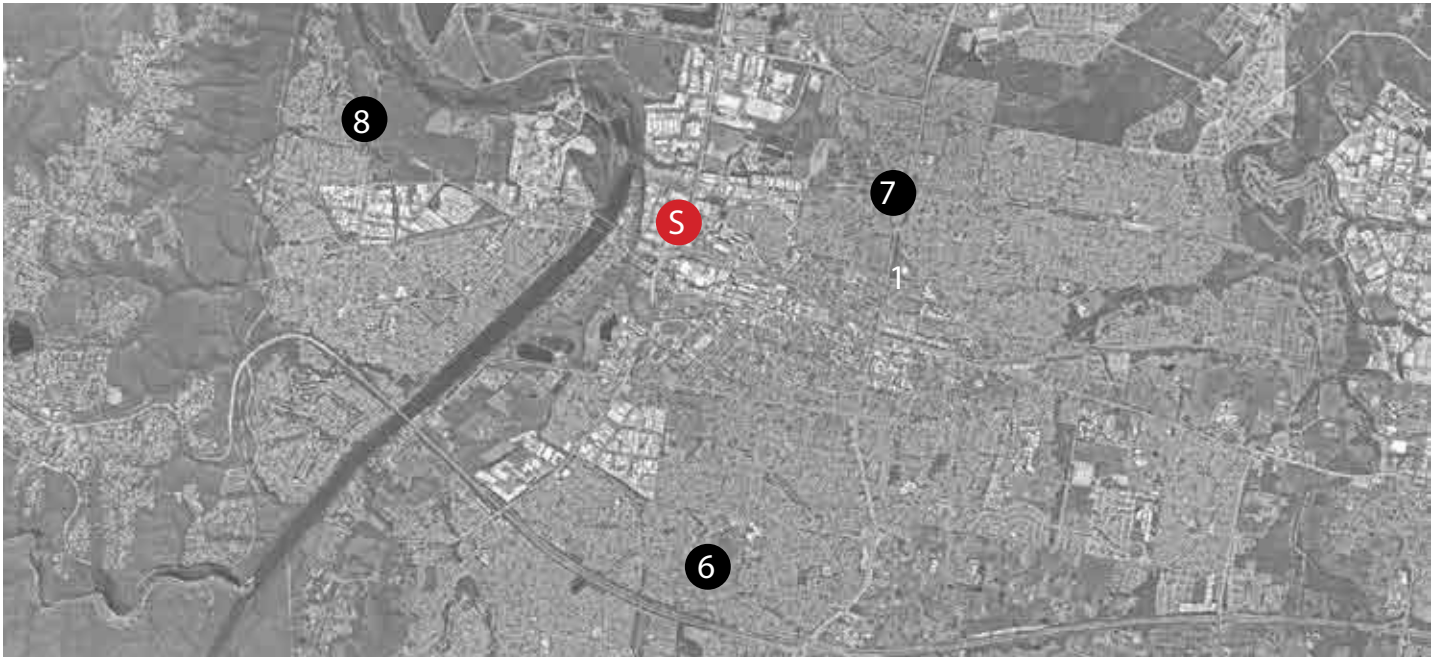
VIEW FROM BURRARD STREET IN DOWN TOWN VANCOUVER LOOKING NORTH EAST TO THE MOUNTAINS IN NORTH VANCOUVER

Visual Analysis

Analysis of other Key Views from the Penrith LGA

OTHER KEY VIEWS

The remaining views shown below and adjacent show minimal impact of the tower on key views to Penrith, but rather achieving a good urban design and city scape outcome by creating a built form cluster that identifies the Penrith City Centre.



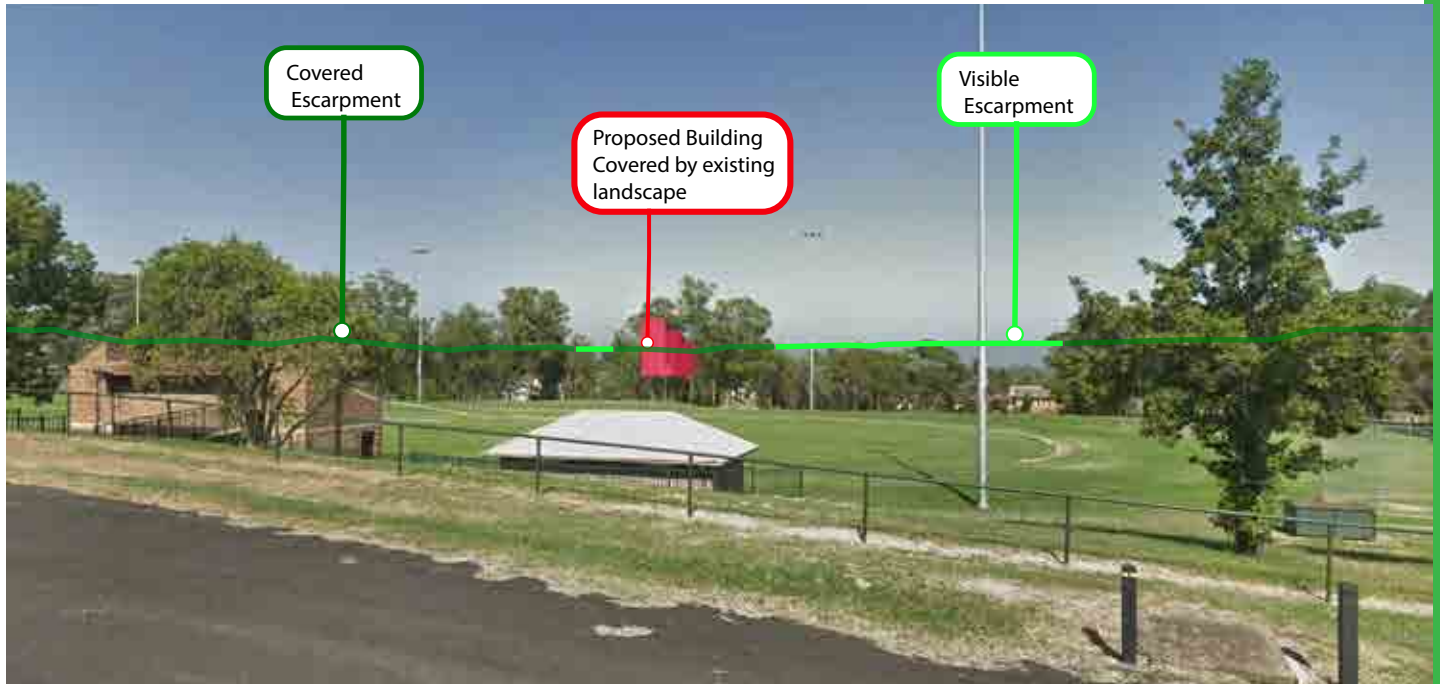
VIEW LOCATION PLAN

VIEW 6



VIEW FROM THE M4 WESTERN MOTORWAY (LOOKING NORTH WEST)

VIEW 7



VIEW FROM PARKER STREET RESERVE, PENRITH (LOOKING SOUTH WEST)

VIEW 8



VIEW FROM OLD BATHURST ROAD AND RUSSELL STREET, EMU PLAINS (LOOKING EAST)

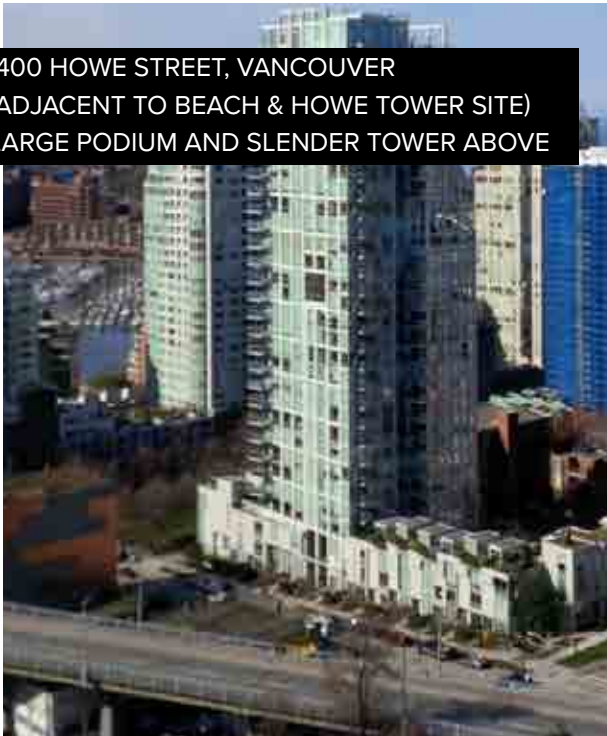
Worlds Best Practice

Highlighting the outcomes achieved elsewhere

BEACH & HOWE TOWER, VANCOUVER (UNDER CONSTRUCTION)
4-6 STOREY PODIUM WITH A SLENDER TOWER ABOVE



1400 HOWE STREET, VANCOUVER
(ADJACENT TO BEACH & HOWE TOWER SITE)
LARGE PODIUM AND SLENDER TOWER ABOVE



82 FLINDERS STREET, MELBOURNE
HIGH STREET WALL & DIVERSE BUILT FORM



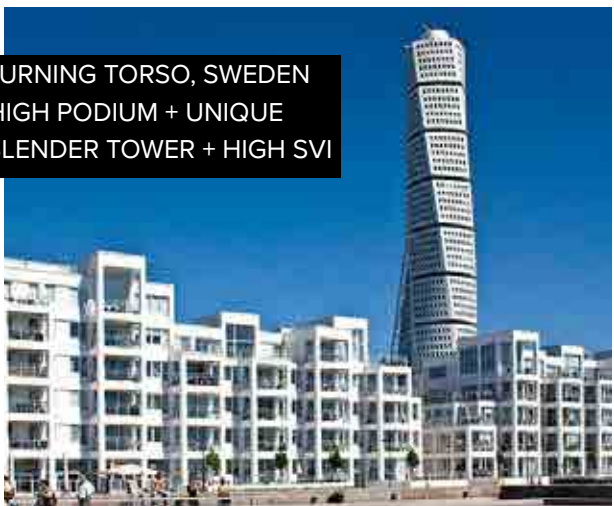
480 QUEEN STREET, BRISBANE
PODIUM FORM MODULATION & RHYTHM



BOOMERANG TOWER,
SYDNEY OLYMPIC PARK
HIGH PODIUM + UNIQUE
SLENDER TOWER + HIGH SVI



TURNING TORSO, SWEDEN
HIGH PODIUM + UNIQUE
SLENDER TOWER + HIGH SVI



The Principles

A SUMMARY OF PRINCIPLES APPLIED

From the identified urban design analysis, the below summary highlights the principles derived from world best practice case studies and applied to the proposed scheme for 614-632 High Street Penrith. Principles also consider future development within the Penrith City Centre.

- Slender and taller tower forms that incorporate podiums at a human scale, and are easily differentiated. Desired GFA is achieved without producing excessively bulky form;
- Enhanced views through taller, more slender, buildings due to generous building separation (Toronto Taller Buildings Guidelines);
- Modular forms to allow improved opportunity for finer grain elements, including laneways, secondary streets and further reduced bulk at the human scale;
- Built form variety and typologies in tower elements and at the podium to create fine grain experiences;
- Taller buildings have a clearly defined form including a base, a middle and top and the capacity for design innovation to provide visual interest, noting that mid-rise and bulky buildings will contribute only regularity and uniformity;
- Greater flexibility in dwelling design and opportunities for views and aspects from all four frontages;
- Provide for higher quality development by upper tier developers;
- Allows for a greater SEPP 65 compliance on a range of matters including southern aspect dwellings, cross ventilation etc;
- Reducing the occurrence of mid-rise bulky forms where:
 - Larger or amalgamated lots provide the opportunity for Canyon-like development at the human scale;
 - Apparent walls of development are more imposing when viewed obliquely;
- Fewer opportunities for views to sky or views through or past buildings to nearby hills at the human scale and from distant views;
- Large and long double-loaded corridor developments with single aspects only. Likely to generate blank walls at two out of four frontages if a mid-block development. Views and amenity would be reduced; and
- Increased difficulty in DCP and SEPP 65 compliance in dwelling design and sustainability (southern aspect dwellings and natural cross ventilation).

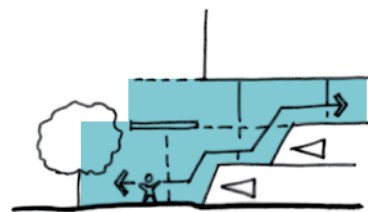


Fig. 19

Public realm extends into development: vertical extension.

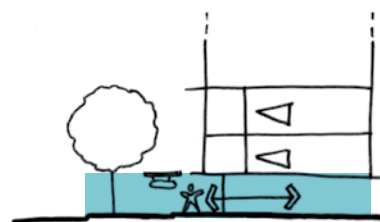


Fig. 20

Public realm extends into development: horizontal extension.

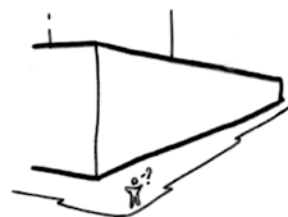


Fig. 7

Continuous facade
– not supported.

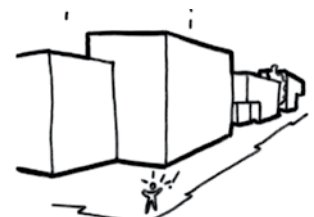
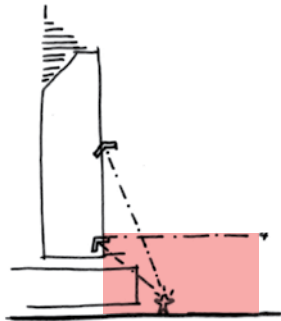


Fig. 8

Significant modulated form.

THE URBAN GROUND GUIDELINE (Source: City of Gold Coast, 2019)



The human scale experience of the streets and public spaces define the real city experience.

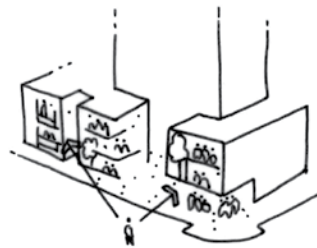


Fig. 32

Breaks in the building mass increase site permeability.

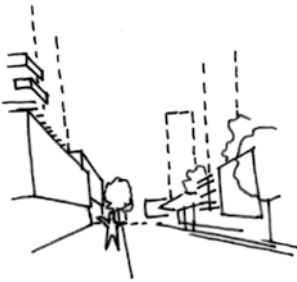


Fig. 2

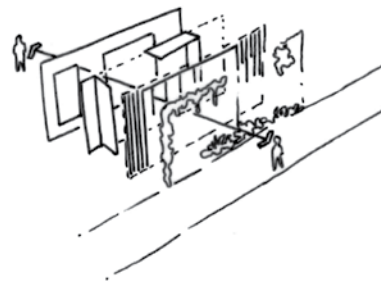
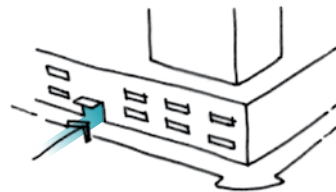


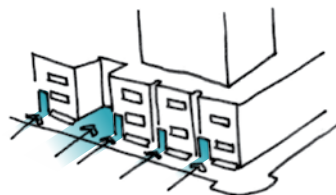
Fig. 33

Provide visual connection from public to private.



Figs. 15

Limit singular shared entry.



Figs. 16

Promote multiple entries from the street.



Figs. 17

Residential interface.

THE URBAN GROUND GUIDELINE (Source: City of Gold Coast, 2019)

Recommendations

RECOMMENDATIONS TO COUNCIL

The Project will be a catalyst for positive change within the Penrith City Centre and aligns with Council's strategic planning for regeneration of the Centre. The proposal pioneers height and skyline outcomes that Penrith City Council can apply across the Centre and provides the framework for the renewal of the immediate precinct and broader city centre.

The proposed development has a strong architectural character with an elegant vertical proportion that is appropriately scaled to its context. It marks and punctuates a strategic location in the City West Precinct of the City Centre. It's height, FSR and setbacks are comparable or more modest when assessed against world's best practice examples, particularly relevant given this is a Pilot Project within the context of urban transformation.

Apartments have high quality amenity throughout, both internally and in common areas. The design provides a high-quality outcome architectural outcomes for the City West Precinct.

It has been identified that the proposed development for 614-632 High Street is consistent with strategic and local planning strategies for Penrith, and will encourage both daytime and night time activity through the provision of a new high quality public space, activated streets and a range of social activities.

This design is also highly considerate of its urban context and provides a good urban design and built form response to the surrounding development and regeneration efforts.

Based on RobertsDay's urban design and place-making review of the project, it is strongly considered that the proposed scheme, prepared in collaboration with The Design Team, creates a catalyst for the Penrith City Centre to evolve from sub-urban to urban character - where the tallest buildings with greatest mix of uses shape a vibrant City Centre as a place for people.

In accordance with the Council's recommendations, we consider the following measures have been met:

- The essential deliverability of the public shared street, to allow pedestrian crossing for north-south pedestrian flows linking Union Road to High Street;
- Integration between the public realm and the ground plane as a place that is safe, comfortable and lively that responds to the distinct characters desirable in an emerging city centre;
- Appropriate podium and height-to-width ratios of the street and podium achieve a range of 'outdoor rooms' and more 'Human Scale', whilst also creating an attractive and coherent streetscape;
- Aligning the proposed development with world's best practice for tall city centres, such as Vancouver, benchmarking 5 Storey streetwall datum line; and
- Justification to support the tower height and massing, particularly from key views and their ability to comply with solar access whilst maintaining an interesting skyline and blue sky index.

In light of the above, it is recommended that Council approve the amended Planning Proposal, based on the exhibition of design excellence as well as quality urban design outcomes that will set the precedent for the future transformation of the Precinct.





planning·design·place

SYDNEY

level four
17 randle street surry hills
nsw australia 2010
t+61 2 8202 8000
hello_sydney@robertsday.com.au

PERTH

level two
442 murray street perth
wa australia 6000
t+61 8 9213 7300
hello_perth@robertsday.com.au

MELBOURNE

level five
441 collins street melbourne
vic australia 3000
t+61 3 9620 5421
hello_melbourne@robertsday.com.au

BRISBANE

level four
99 creek street brisbane
qld australia 4000
t+61 7 3221 1311
hello_brisbane@robertsday.com.au

ROBERTSDAY.COM.AU