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Stockland
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Concept urban design report for planning proposal

St Leonards 601 Pacific Highway

architectus™

601

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This report is considered a draft unless signed by a Director or Principal	Approved by: 
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**Pacific Highway, the
major North South
connector following the
ridge-line, will have an
exciting new landmark
tower on its iconic
bend in St Leonards.**

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Executive summary

Purpose of this report

Architectus has prepared this Urban Design Report on behalf of Stockland Development Pty Ltd to support a Planning Proposal to amend the statutory planning controls that apply to 601 Pacific Highway, St Leonards (Lot 71 in Deposited Plan 749690) (the site) under North Sydney Local Environmental Plan 2013 (LEP).

The intended outcome of this Planning Proposal is to amend the LEP planning controls as follows:

- Establish a site-specific building height control, with maximum building height of RL259; and
- Establish a site-specific floor space ratio (FSR) control, with a maximum FSR of 20:1.

The Planning Proposal does not amend the site’s existing E2 Commercial Centre zone. Future development aligned with the Planning Proposal is consistent with the permissible land uses and objectives of Zone E2.

The new planning controls seek to unlock the potential of a strategically-located landholding within the St Leonards centre and facilitate a new commercial building in a precinct earmarked for density uplift.

This Planning Proposal will deliver strategic planning merits commensurate with State and Local government policy and align with the St Leonards and Crows Nest 2036 Plan adopted by NSW Department of Planning, Industry and Environment (DPIE) (August 2020). Future development of the site will generate substantial public benefit and make a significant contribution to the evolving character of St Leonards town centre.

The primary purpose of this report is to accompany a Planning Proposal for the subject site. A detailed urban design analysis and indicative concept plan have been developed demonstrating the land use, massing, building form, and an overall building height and floor space ratio for the site. This has been developed with consideration for adequate building separation, and assessment of solar impacts to public domain and neighbouring properties.

In 2020 DPIE adopted the St Leonards and Crows Nest 2036 Plan proposing revised controls for the subject site. The proposal has been prepared to demonstrate that development on the subject site is aligned with the proposed controls in the St Leonards and Crows Nest 2036 Plan, and that the proposal can be accommodated without additional overshadowing impacts to nominated parks and open spaces. An indicative concept design has been prepared that includes indicative basement car parking arrangements, ground level street address, above ground podium, and commercial uses above.

The site and strategic context

The site is located at 601 Pacific Highway in St Leonards town centre, within a 400m walking catchment of both the existing St Leonards railway station and proposed Crows Nest Metro Station .

The site is approx. 2,844 sqm in a rectangular shape, bounded by the Pacific Highway to the south, Mitchell Street to the east and Atchison Street to the north. It is extremely well supported by public transport, and at present contains a 14 storey commercial tower.

One of the key open space and public domain elements in St Leonards town centre, Mitchell Street Plaza, is located along the eastern boundary of the site and provides a excellent opportunity for interface with the ground floor of the proposal.

The North Sydney Local Environmental Plan (LEP) zones the site E2 Commercial Centre, with a maximum building height of 49m, and is not subject to a maximum FSR control. East of the site is the B4 Mixed Use zone. The St Leonards and Crows Nest 2036 Plan indicates a proposed height of 42 storeys and an FSR of 20:1 for the site.

The 2036 plan seeks to unlock the potential of a strategically-located landholdings within the St Leonards centre and facilitate a new commercial building in a precinct earmarked for density uplift. This proposal will deliver strategic planning merits commensurate

with State and Local government policy and align with the St Leonards and Crows Nest 2036 Plan. Future development of the site will generate substantial public benefit and make a significant contribution to the evolving character of St Leonards town centre.

Design options tested

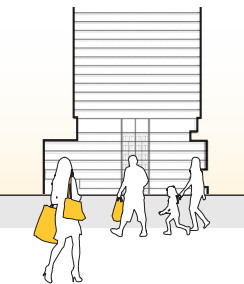
Architectus has developed principles for the site in regards to built form, public domain and character. These include:

- Development on the site should contribute to and reinforce the significance of St Leonards town centre, as a strategic centre on key transport links.
- The development should be a landmark on this iconic corner of the Pacific Highway and at the highpoint of St Leonards town centre,
- Active lobby frontages to Mitchell Street and Atchison Street, and a retail offer on the Pacific Highway will make a significant improvement to the public domain and constitute an important public benefit.
- Building setbacks and public open space along Mitchell Street should improve pedestrian amenity in the walking catchments to St Leonards railway station and proposed Crows Nest Metro Station.

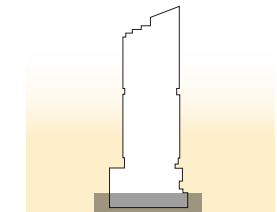
The Proposal

This report presents an indicative concept design for the subject site that results in the following:

- 20:1
- A commercial development with a 20:1 ratio for future employment opportunities;
 - A podium providing activation to Atchison Street and Mitchell street plaza.



- An active ground plane will contribute to Mitchell Street Plaza and engage the public realm



- A new commercial tower above the podium to a maximum height of RL259 (42-storeys)

601 Pacific Highway St Leonards can reinforce the position of St Leonards as a priority growth area in metropolitan Sydney. Being one of the last remaining large sites in the town centre and given its iconic location on the Pacific Highway between St Leonards Train Station and the proposed Crows Nest Metro Station, the site represents an exciting opportunity to add to the St Leonards skyline with a landmark commercial development.

1.0 Introduction

1.1 Purpose of this report

1.2 The site

1.1 Purpose of this report

The concept urban design report has been prepared by Architectus on behalf of Stockland for land at 601 Pacific Highway, St Leonards (the subject site).

The primary purpose of this report is to accompany a Planning Proposal for the subject site, which has been prepared to be consistent with the vision and actions of the St Leonards and Crows Nest 2036 Plan endorsed by DPIE. A detailed urban design analysis and indicative concept plan has been developed demonstrating the future potential distribution of land uses, massing, building form, and an overall building height and floor space ratio for the site. This has been developed with consideration for adequate building separation, and assessment of solar impacts to public domain and neighbouring properties.

To demonstrate that development on the subject site is feasible, an indicative concept plan has been prepared that includes indicative basement car parking arrangements, ground level street address, above ground podium, and commercial uses above.

The indicative concept plan shows one way in which the site could be redeveloped under the controls sought by the Planning Proposal.

Report Objectives

The objectives of this report are to:

1

Investigate the strategic context of the site in light of St Leonards and Crows Nest as Strategic Centres, leveraging the proposed metro station.

4

Understand in detail the features and character of the site, its opportunities and constraints and its potential for renewal.

7

Test potential development scenarios against the urban design and architectural principles and key moves, and identify a preferred option.

2

Present the site's strategic planning context, local character and existing planning controls.

5

Identify appropriate urban design and architectural principles for the site.

8

Prepare an indicative concept design that demonstrates the development potential of the site and the most appropriate built form and public domain.

3

Review and understand North Sydney Council's controls and visions of the DPIE St Leonards Crows Nest 2036 Final Plan for the site and Council's vision for the St Leonards town centre.

6

Develop key moves for the site based on the understanding of the site achieved through the analysis, and on the implementation of the urban design principles.

9

Provide a preferred planning and urban design recommendation that achieves the best outcome for both the site and the community. The best outcome should be one that celebrates the site's strategic context whilst reinforcing the local character and enhancing public domain.

1.2 The site

Site context

The site is strategically located within the North Sydney Local Government Area (LGA). It is within five kilometres of Central Sydney, three kilometres of North Sydney CBD and is centrally located in St Leonards Town Centre.

The site is well supported by public transport, located within 400m of the existing St Leonards Train Station and proposed new Crows Nest Metro Station. The site is also well serviced by existing bus services, providing connections to key centres including Epping, Lane Cove, Chatswood and Sydney CBD. The site also has good road access, being located on the Pacific Highway, and fronting Atchison Street.

Gore Hill Park, to the west of the site provides a significant regional park, which contains sporting and recreational facilities. The Hume Street Park on the edge of St Leonards is also in close proximity.

Royal North shore Hospital and the Gore hill business Park, as well as Artarmon Industrial Precinct, all provide for a diversity of job types and opportunities to the west of St Leonards station. The planned Gore Hill Technology Park to the north-west of the site will provide new jobs in St Leonards.

The site's proximity to local and strategic centres, public transport and open space make it an appropriate location for increased density and height.



Site context map in priority precinct



St Leonards, located in North Sydney local government area, is identified as a strategic centre and Commercial Office Precinct in the Eastern Harbour City in the Greater Sydney Region Plan-A Metropolis of Three Cities. The priorities of this strategic centre are to work with Council to:

- Provide capacity for additional mixed-use development in St Leonards including offices, health, retail, services and housing.

The indicative concept plan shows one way in which the site could be redeveloped under the controls sought by the Planning Proposal.



2.0 Planning context

2.1 Strategic context

2.2 Building heights and density
in centres of Sydney

2.3 St Leonards and Crows Nest 2036 Plan

2.4 Local Council planning controls

2.5 Approved and pending local approvals

2.1 Strategic context

Greater Sydney Region Plan: A metropolis of three cities

The Greater Sydney Region Plan, finalised in March 2018, is the new metropolitan plan for Sydney. The plan provides a 40-year vision of Sydney for a city where people will live within 30 minutes of jobs, education and health facilities, services and great places.

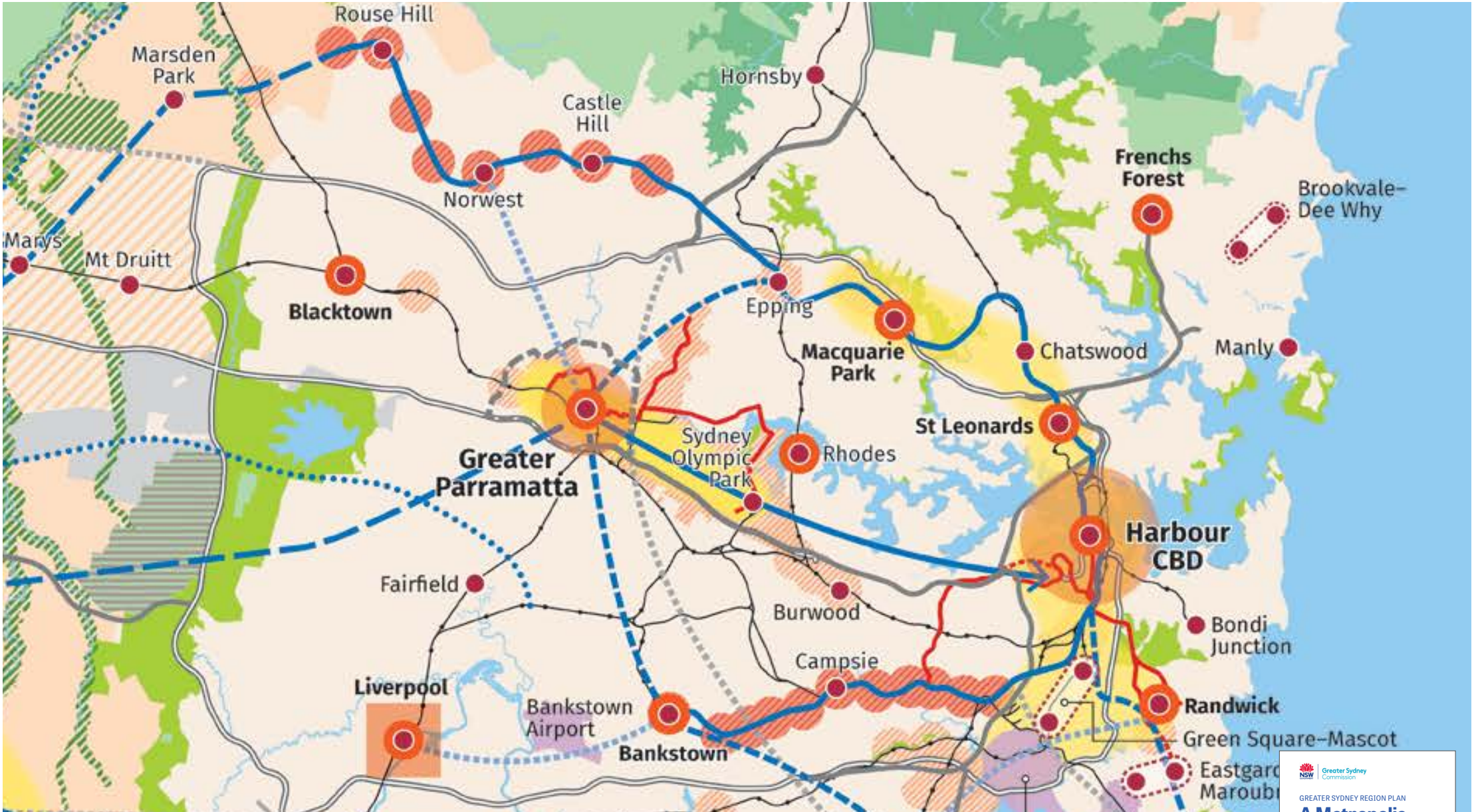
The vision seeks to meet the needs of a growing and changing population by transforming Greater Sydney into a metropolis of three cities - the Western Parkland City, the Central River City and the Eastern Harbour City.

The site is located within the Harbour CBD in the Eastern Harbour City, which will build on its credentials and leverage its strong financial, professional, health and education sectors and extend its capabilities with an innovation precinct that will boost productivity and global connections.

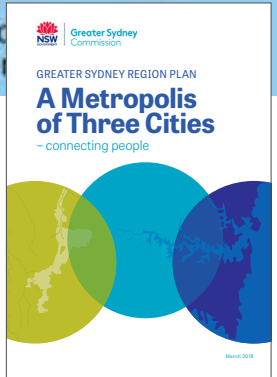
The Plan provides ten key directions for a metropolis of three cities. Key directions and objectives relevant to 601 Pacific Hwy include:

- Jobs and skills for the city: creating the conditions for a stronger economy.
- 'A city in a landscape' objective- the planning proposal will provide significant opportunities to contribute to the accessibility, activation and enhancement of the public domain.

This proposal will facilitate the renewal of the site, which will provide more jobs closer to homes, and businesses connected to a large skilled workforce, supported by an effective public transport network. These benefits maximise opportunities to attract higher density and higher residential amenity, which will enhance the vibrancy of the strategic centre, and support walk-able neighbourhoods.



Structure plan for the Metropolis of three cities, Greater Sydney Commission, 2018



Strategic context

St Leonards and Crows Nest 2036 Plan

In 2020, the Department of Planning, Industry and Environment (DPIE) finalised the package planning for St Leonards and Crows Nest, which includes the St Leonards and Crows Nest 2036 Plan. The 2036 Plan leverage the existing public transport infrastructure and the future Crows Nest Metro Station to support the growing St Leonards and Crows Nest community with the provision of new infrastructure, open spaces, upgraded cycle lanes and planning for health and education. The plan will deliver 6,680 new homes, planning capacity for an extra 119,979 sqm employment floor space and 16,500 new jobs in health, education, professional services and the knowledge sector.

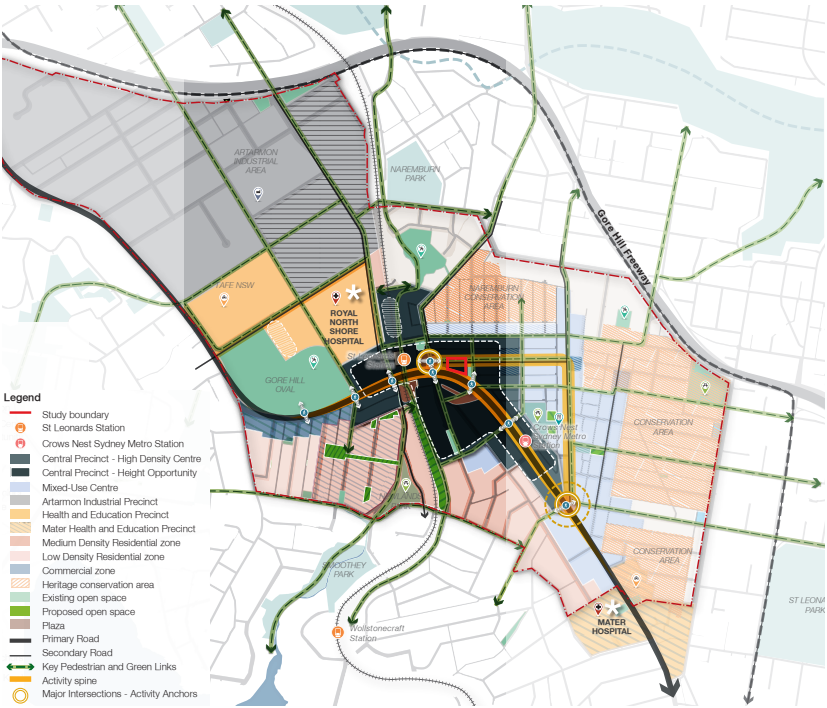
Based on the Department's studies, there is strategic merit and opportunity for the 601 Pacific Highway to deliver increased employment densities, that would provide employment space, focused around an efficient public transport network.

The site is identified as being located in an 'area for higher density between stations', and that large developments are to be located between the stations. The focus of height is referred to as the 'knuckle area' within the St Leonards mixed use commercial core.

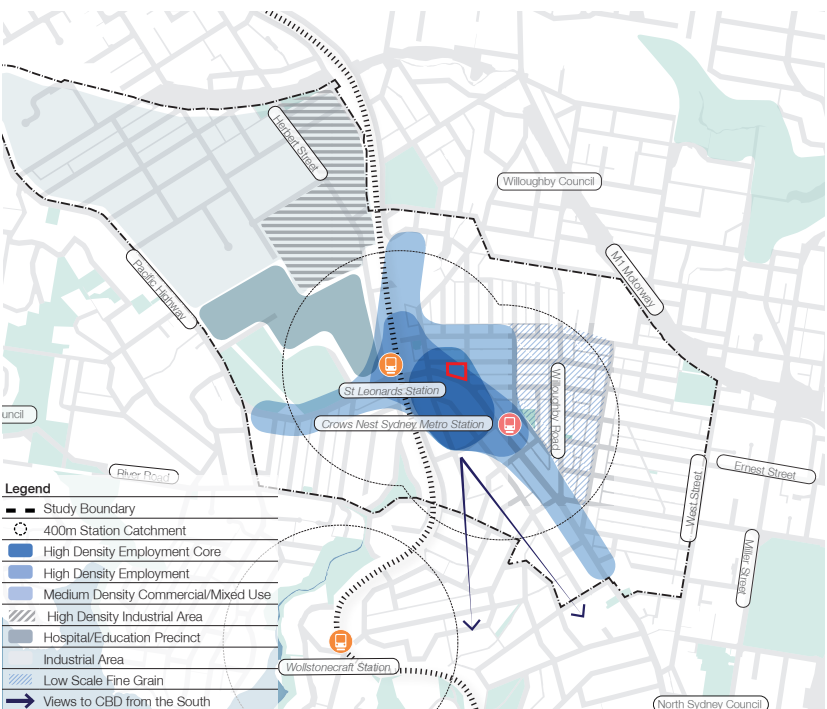
Key opportunities for the site to deliver on the objectives of the plan include:

- Increased height and densities as a result of the new metro station;
- Increasing the offering of employment floorspace via the redevelopment of older stock into new developments;
- Improving and strengthening existing connections to open space and public transport;
- Protecting and enhancing district views to Naremburn Park.

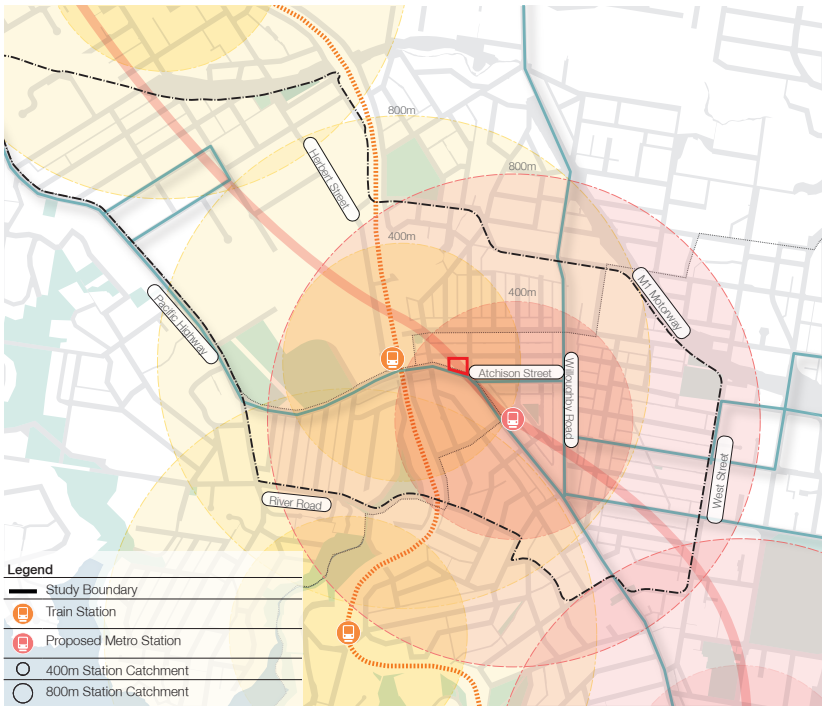
Key directions for the subject site are illustrated in the plans from the St Leonards and Crows Nest 2036 Plan to the right.



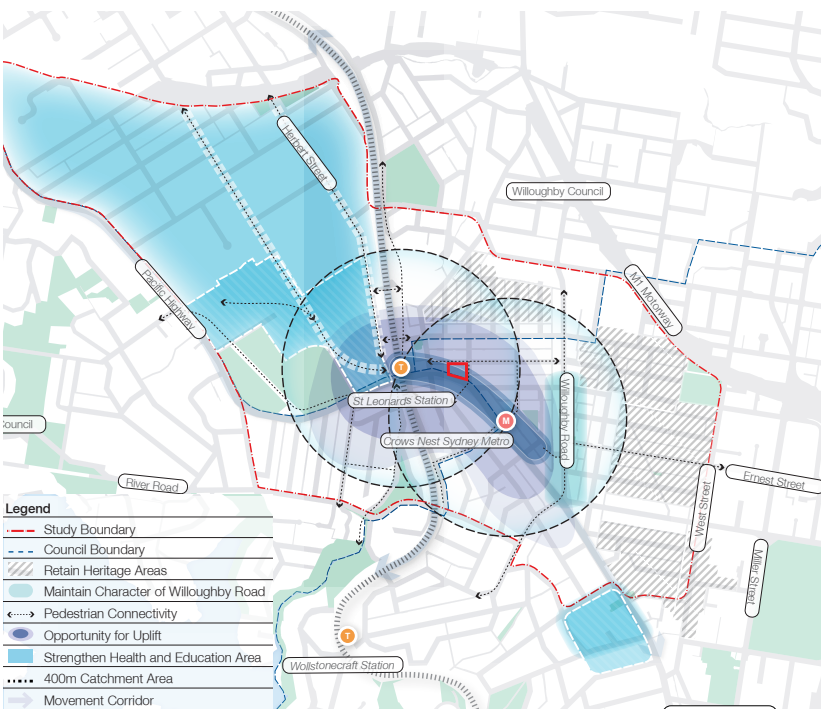
The strategy identifies the site as an appropriate location for potential increase in height and density, located within the St Leonards CBD and along the Pacific Highway.



The site is identified in the St Leonards high density employment core. This will be supported by a contiguous provision of employment along the Pacific Highway Corridor south and west. Through new mixed use development.



The strategy identifies the site within both the St Leonards Train Station and Metro Station catchment. There is also opportunity to improve and strengthen existing connections from the site to existing and proposed infrastructure.



The site identifies within an opportunity corridor for potential uplift along with improved pedestrian connectivity.

Strategic context

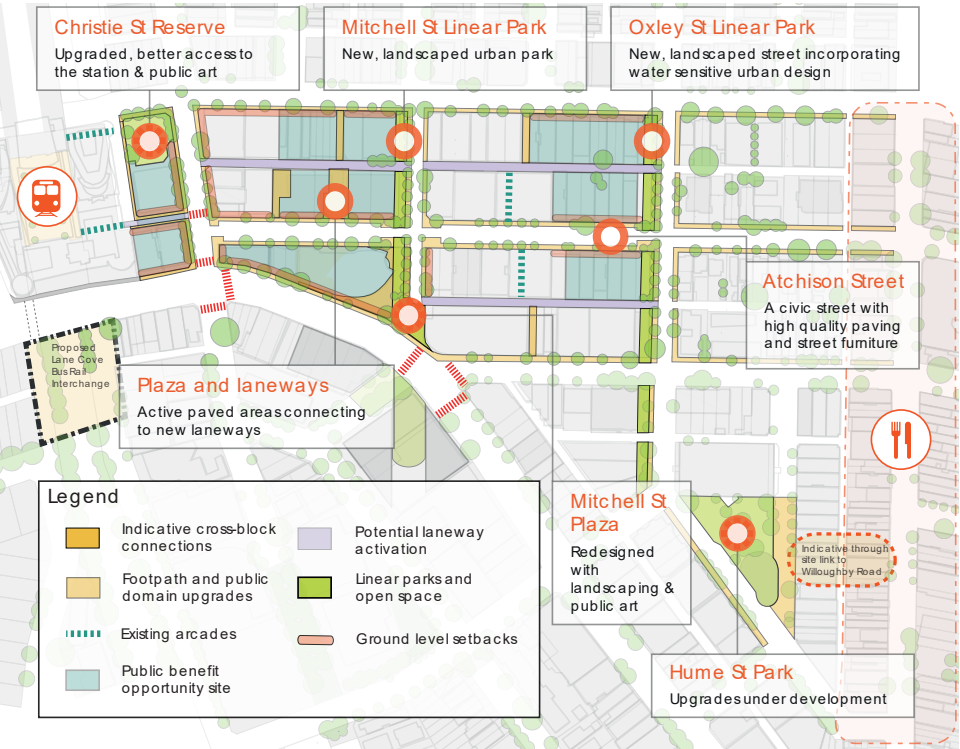


Image above showing the vision for the precinct (Source: SJB Architects on behalf of North Sydney Council, St Leonards Planning Study Precinct 2 and 3)



St Leonards / Crows Nest Planning Study- Precincts 2 & 3

In 2015, North Sydney Council released Precinct 2 of the St Leonards and Crows Nest Planning Study, with the aim of accommodating population growth in North Sydney Local Government Area, protecting jobs, and providing new and improved public domain and open spaces. 601 Pacific Highway is located in Precinct 2, within the high density commercial and mixed use area of St Leonards. The Planning Study identifies the following opportunities for the precinct:

- Strong public transport connections;
- 'Fine bones' of a creative precinct;
- A few 'anchor' establishments;
- North/ south streets running along Mitchell and Oxley Streets; and
- Potential to activate lane ways.

Future development is to reflect the high density character of the centre where the impact on neighbouring properties and the public domain is mitigated through well located, tall, slender towers.

Built form objectives relevant to the 601 Pacific Highway include:

- Deliver award-winning architectural design offering quality mixed use and commercial development;
- Create a built form that transforms St Leonards into a modern, mixed use centre;
- Consider additional residential and employment capacity to meet the demand for new jobs and housing in the LGA;
- Provide a human scale to streets and lane-ways and
- Provide greater pedestrian amenity and outdoor dining opportunities.



Image above showing the vision for the precinct (Source: SJB Architects on behalf of North Sydney Council, St Leonards Place-making & Design Study)



St Leonards Place-making and Design Study

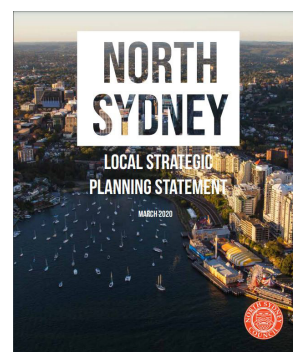
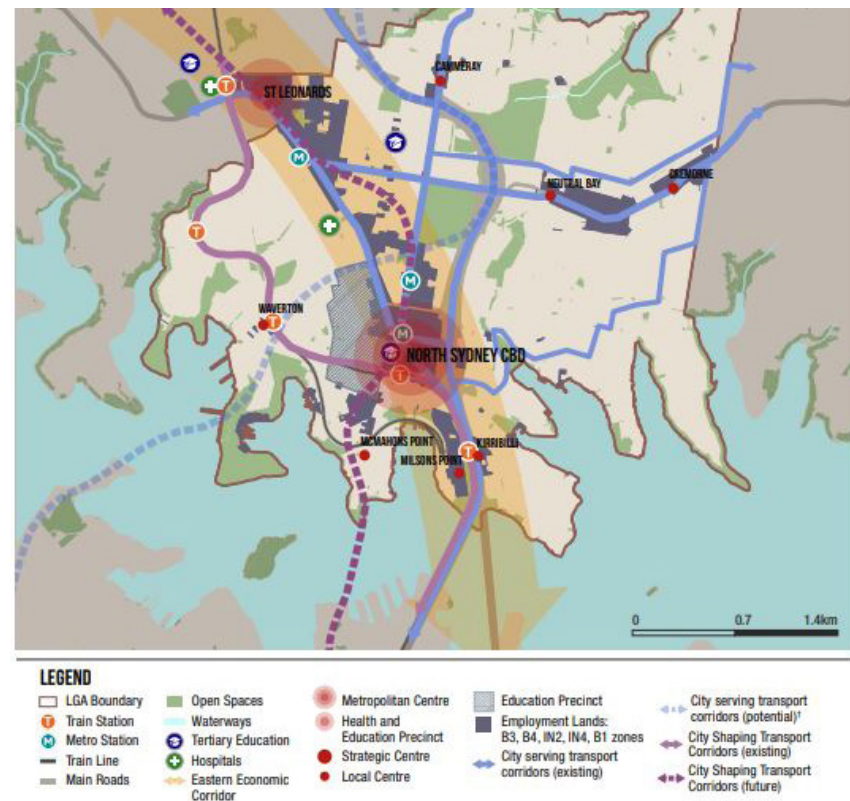
In 2014, SJB Architects prepared a Place-making and Design Study for St Leonards which set a range of design principles and framework to assist North Sydney Council's review of built form, public domain and open space controls. The vision for St Leonards was to create an active, vibrant and sustainable precinct with a strong unified identity that reflects the various characters, land uses and attractions within the area.

The study provides an assessment framework which identifies the site in Zone 2, Mitchell Street West. Key objectives for development in the area are to: Reflect the high density character of this zone;

- Encourage through site links and ensure activity and surveillance is achieved at the ground plane;
- Promote commercial development within the podium;
- Ensure a level of high residential amenity is achieved.

Key design principles relevant to the site are:

- Improve connectivity to public open space;
- Open up sightlines;
- Promote active frontages and outdoor dining;
- Ensure sustainable measures are adopted;
- Transition mixed use development from residential areas to the core;
- Encourage smaller commercial developments;
- Redevelop a key site for community purposes;
- Vary height and built form across the precinct;
- Position taller towers on corner blocks;
- Provide ground floor and upper level setbacks to reflect zone character;
- Ensure side setbacks consider the amenity of lane-ways and adjoining buildings;
- Ensure built form is appropriate to the size and setting of the site;
- Ensure that residential amenity is considered for both proposed and existing developments.



Local economy and employment. Source: North Sydney Council LSPS 2020

North Sydney Local Strategic Planning Summary (LSPS)

The LSPS, adopted in March 2020, sets out Council's land use vision, planning principles, priorities, and actions. One of the key roles of the LSPS is to draw together, in one document, the priorities and actions for future land use planning, and present an overall land use vision for the North Sydney Local Government Area (LGA) for the next 20 years. This will assist in identifying priorities outside Council's responsibilities, which require collaboration and partnership with government agencies and organisations to deliver.

The LSPS outlines the desired future direction for housing, employment, transport, recreation, environment, and infrastructure for North Sydney LGA.

The LSPS guides the content of Council's LEP and DCP and supports consideration and determination of any proposed changes to the development standards under the LEP (via Planning Proposals).

Specifically the plan outlines:

- An approach for Council to work collaboratively with the State Government to maximise and lock-in the regional mode shift benefits of Sydney Metro, as well as support the delivery of the State Government's principal bicycle network.
- Improving walking and cycling infrastructure within walking and cycling catchments of centres that provide access to high quality public transport will be a priority
- The intensification of health and education facilities at St Leonards will continue to support jobs growth within the precinct. Supporting all the opportunities that the existing education, medical, telecommunications and multimedia clusters can bring will ensure North Sydney remains competitive and nationally significant.

2.2 Building heights and density in centres of Sydney

Comparative centres such as Parramatta, Chatswood, Burwood, Green Square and Epping Town Centre with major transport links to some of Sydney's key employment centres are currently undergoing significant growth, resulting in increased densities and building heights.

Given the role of St Leonards as a strategic centre in the eastern economic corridor, there is scope to review heights and densities on this key site close to transport.

As a point of comparison, a summary of comparable growth areas are shown to the right. It is anticipated that future growth and increased densities and building height in St Leonards will be comparable with these centres.



Parramatta (Metropolitan City Centre)

A review of planning controls by Parramatta Council recommended the removal of maximum building height controls in the City Centre, with expected development of 35-75 storeys. The approved 'Aspire' tower, located on Parramatta Civic Square near Parramatta Train Station is currently under construction. The building is a commercial tower which will comprise 120,000m² of office space and be 233 metres in height.



Green Square (Strategic Centre)

Towers in Green Square Town Centre are up to 28 storeys. The majority of the wider Green Square Renewal Area, consists of a typology of lower perimeter blocks and tall, slender buildings marking corners, providing landmarks.



Epping Town Centre (Strategic Centre' and Priority Precinct)

Building heights in Epping town centre are between 48m and 72m (approximately 15-23 storeys).

Planning proposals have been approved recently with proposals considering development up to 30-35 storeys.



Chatswood (Strategic Centre)

The centre is currently being reviewed to investigate further transit oriented development opportunities. Currently, building heights allowing up to 55 storeys apply.



Burwood (Strategic Centre)

Towers in the Burwood Strategic Centre are up to 42 storeys. A vibrant mix of uses are emerging, including high density residential, to create an extended hours urban retail centre for Burwood Town Centre;

2.3 St Leonards and Crows Nest 2036 Plan

The following maps show the proposed planning control changes under the DPIE St Leonards and Crows Nest 2036 Final Plan (referred to in this report as 2036 Final Plan).

Key Planning control changes for the subject site include:

- Increase the maximum building height to 42 storeys
- Retain the existing E2 Commercial Centre land-use
- Introduce a new maximum floor space ratio (FSR) of 20:1.
- Street setbacks:
 - 0m along Atchison Street
 - 5m along Mitchell Street
 - 3m ground level setback along Pacific highway
- 5 Storey street wall height
- Newlands Park should not be further overshadowed between 10am to 3pm.

Proposed Height of Buildings plan



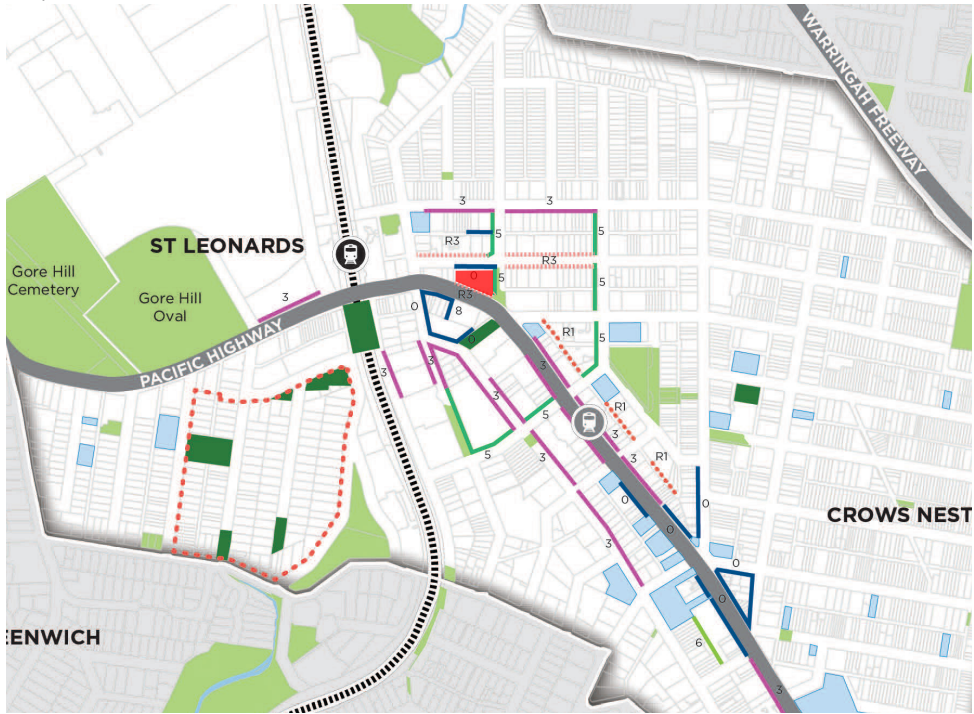
- Railway Line
- Railway Station
- Metro Station
- Existing Open Space
- Potential Open Space
- Waterways
- St Leonards South Rezoning
- 2-3 Storeys
- 4-12 Storeys
- 13-19 Storeys
- 20+ Storeys
- Proposed Height Changes
- Crows Nest Metro Sites

Proposed FSR plan



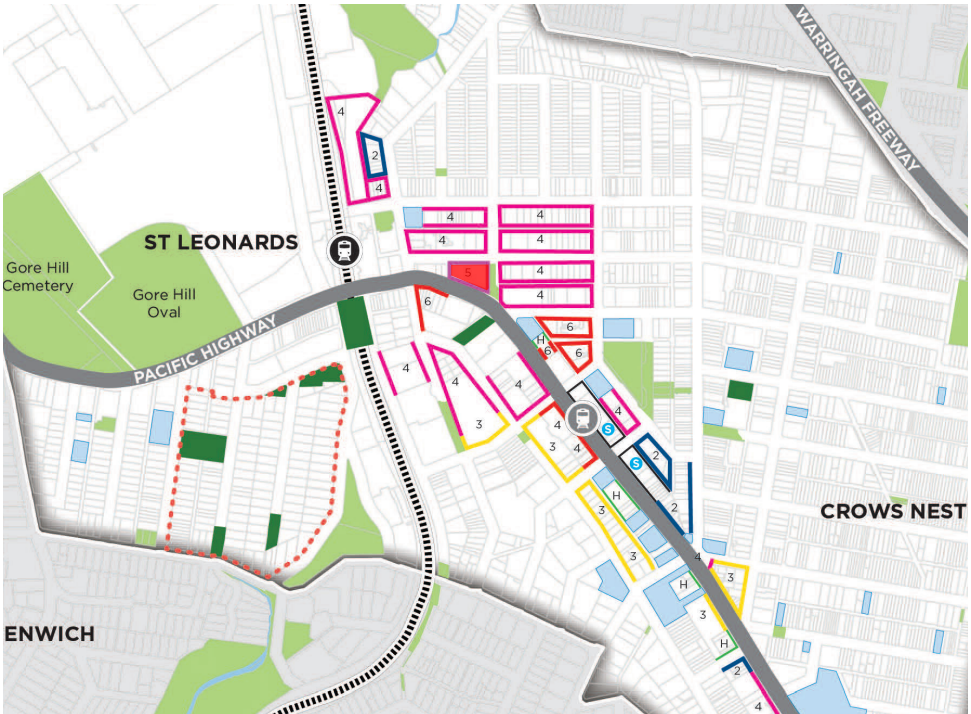
- Railway Line
 - Railway Station
 - Metro Station
 - Existing Open Space
 - Potential Open Space
 - Waterways
 - St Leonards South Rezoning
 - Proposed FSR Changes
 - Crows Nest Metro Sites
- Floor Space Ratio (n:1)**
- 0.5 - 0.9
 - 1 - 1.19
 - 2 - 2.9
 - 3 - 3.9
 - 4 - 4.9
 - 5 - 6.9
 - 7 - 8.9
 - 9 - 14.9
 - 15+

Proposed street setbacks



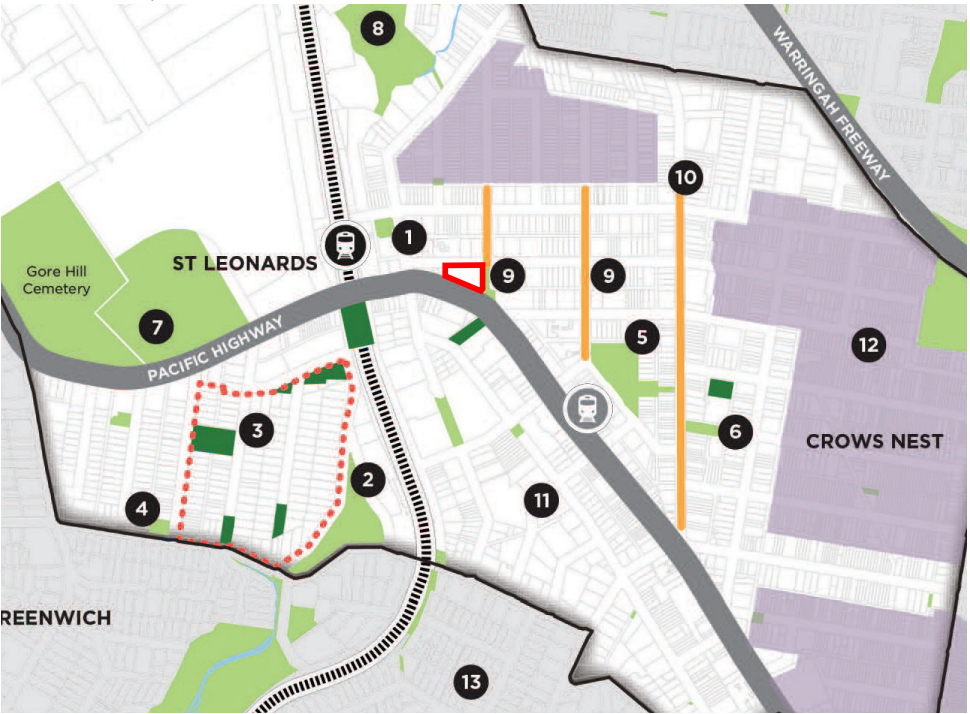
- Railway Line
- Railway Station
- Metro Station
- Existing Open Space
- Potential Open Space
- Waterways
- St Leonards South Rezoning
- 3m reverse setback
- 1m reverse setback
- 0m setback
- 3m setback
- 5m setback
- 8m setback for laneway
- Heritage

Street wall heights



- Railway Line
- Railway Station
- Metro Station
- Existing Open Space
- Potential Open Space
- Waterways
- St Leonards South Rezoning
- 2 storey street wall height
- 3 storey street wall height
- 4 storey street wall height
- 5 storey street wall height
- 6 storey street wall height
- As adjoining heritage storey wall height
- Heritage
- Street Wall Height Subject to Final Crows Nest Metro Station Design

Solar access plane



Public Open Space 10.00am - 3.00pm

- 1 Christie Park
- 2 Newlands Park
- 3 St Leonards South (indicative)
- 4 Propsting Park
- 5 Hume Street Park
- 6 Ernest Place
- 7 Gore Hill Oval
- 8 Talus Reserve

Streetscape 11.30am - 2.30pm

- 9 Mitchell Street and Oxley Streets
- 10 Willoughby Road

Residential Areas 9.00am - 3.00pm

- 11 Residential areas inside boundary (for at least 2 hours)
- 12 Heritage Conservation Areas inside boundary (for at least 3 hours)
- 13 Residential outside boundary (for the whole time between 9am and 3pm)

2.4 Local Council planning controls

North Sydney LEP 2013

The site is currently subject to the following key controls within the North Sydney LEP 2013:

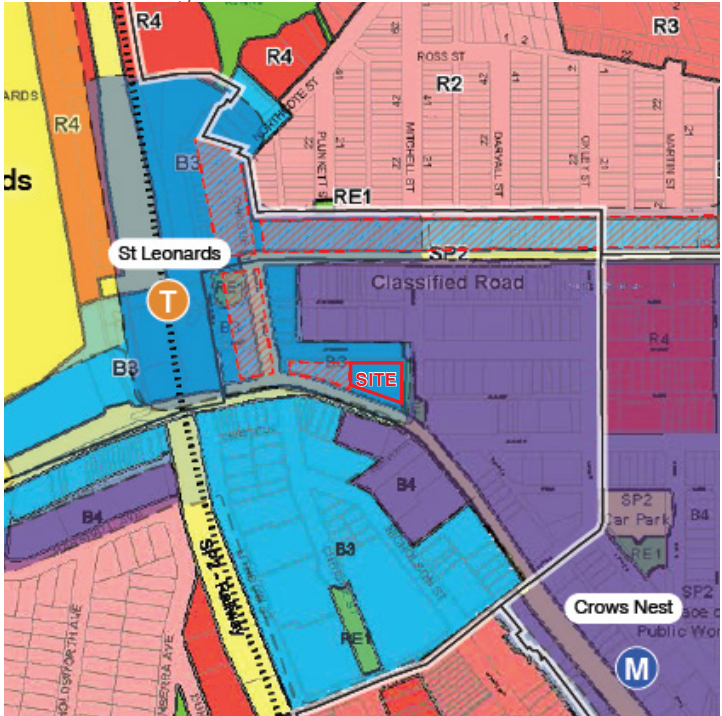
- Land use: E2 Commercial Centre
- Building Height: 49 metres maximum building height
- FSR: No FSR control
- No non-residential floor space ratio
- No heritage constraints

North Sydney DCP 2013

The site is currently subject to the following key controls within the North Sydney DCP 2013:

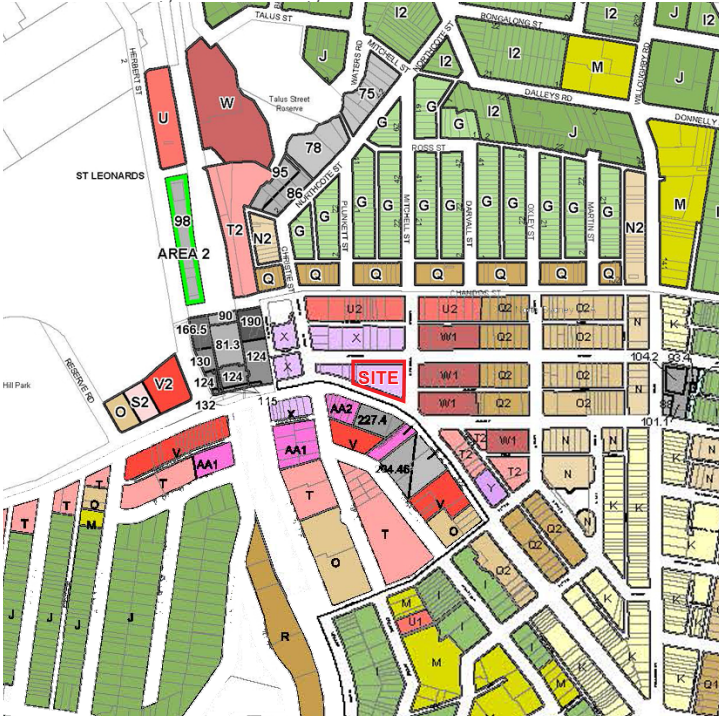
- 3m ground level setback - 1 storey (Pacific Highway)
- 3m whole of building setback (Mitchell Street)
- 4 storey podium
- 3m above podium setback

Land use zoning



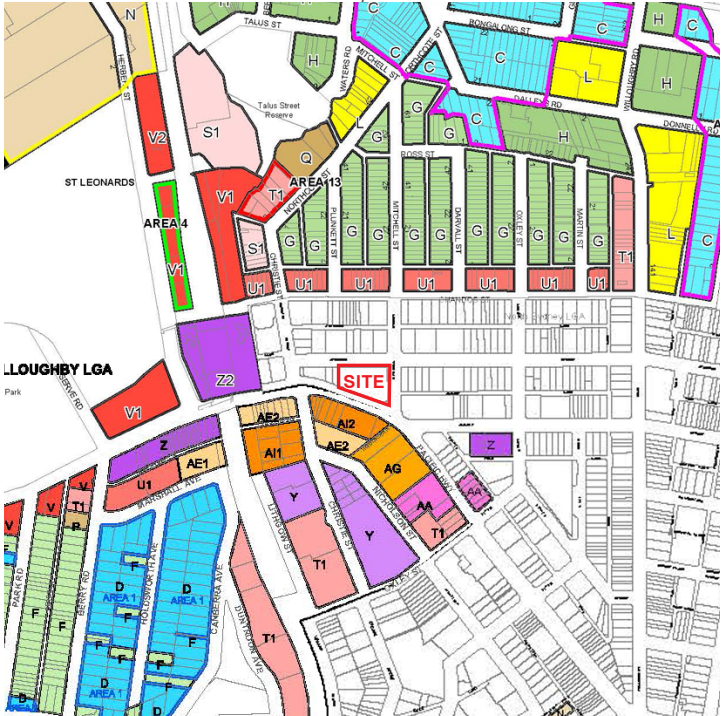
B3	Commercial Core
B4	Mixed Use
E2	Environmental Conservation
E3	Environmental Living
I1	Light Industrial
I2	Working Waterfront
R1	Low Density Residential
R2	Medium Density Residential
R3	High Density Residential
R4	Public Recreation
RE1	Private Recreation
SP1	Special Activities
SP2	Infrastructure
U1	Unzoned Land
U2	Mixed use site (pending)

Maximum Height of buildings



A	1	S	24
I	8.5	T1	25
K	10	T2	26
L	11	U1	30
M	12	U2	33
N	13	W1	40
O	15	W2	42
Q1	16	X	49
Q2	19.15	Y	50
	20	AA1	65
		AA2	72

Minimum non-residential floor space ratio



D	0.5	U1	2.5
F	0.6	U2	2.7
H	0.7	V	3.0
J	0.8	X	4.1
N	1.0	Y	4.5
O	1.1	Z	5.1
P	1.2	AA	6.0
R	1.4	AE1	10.0
S1	1.5	AE2	10.1
S2	1.6	AG	12.0
S3	1.7	AI1	14.1
S4	1.8	AI2	17.1
T1	2.0		
T2	2.4		

2.5 Approved and pending local approvals

Existing building heights in St Leonards are up to about 35 storeys. Several planning proposals and development applications will exceed this height, with towers up to 50 storeys.

#	Site address	Development	Building height
A	100 Christie Street	LEP changes gazetted.	132m 36 storeys
B	20-22 Atchison Street	2036 Strategy allows increased building height	35 storeys
C	50-56 Atchison Street	DA documentation being prepared	56m (16 storeys)
D	617-621 Pacific Highway	DA documentation being prepared	180m (approx. 50 storeys)
E	23-25 Atchison Street	Approved	56m, 16 storeys
F	8-90 Christie Street, 546-564 Pacific Highway + 71-70 Lithgow Street	Under Construction	T1 - no change (RL227.4) T2 - no change (RL168) T3 - 16 (45m)
G	500, 504-520 Pacific Highway	Constructed	44 storeys (RL 227.4)
H	575-583 Pacific Highway	LEP changes gazetted	56m
I	7-11 Albany Street	Approved mixed use buildings	13 storeys
J	472-494 Pacific Highway	Constructed 2 x mixed use buildings	36 and 28 storeys (2 towers) (RL204.5 and RL180.5)
K	46 Nicholson Street	LEP changes gazetted	RL174.95
L	29-57 Christie Street	DA approved	Tower A - 8 storeys (RL115.20) Tower B - 12 storeys (RL130) Tower C - 18 storeys (RL 151.40)
M	Crows Nest OSD *as per amended application (September 2020)	Concept Development Application - Post exhibition phase.	Site A - approx 21 storeys (RL175.6) Site B - approx 17 storeys (RL155) Site C - approx 9 storeys (RL127)
N	524-542 Pacific Highway, St Leonards	DA approved/being assessed	43-storey mixed use building
O	448-456 Pacific Highway, St Leonards	Likely development under 2036 Plan	30 storey mixed use rei tower



- Legend
- Buildings under construction
 - DA Approved/ DA being prepared
 - Likely development (under the 2036 Final Plan)
 - Commercial use for subject site
 - Site boundary

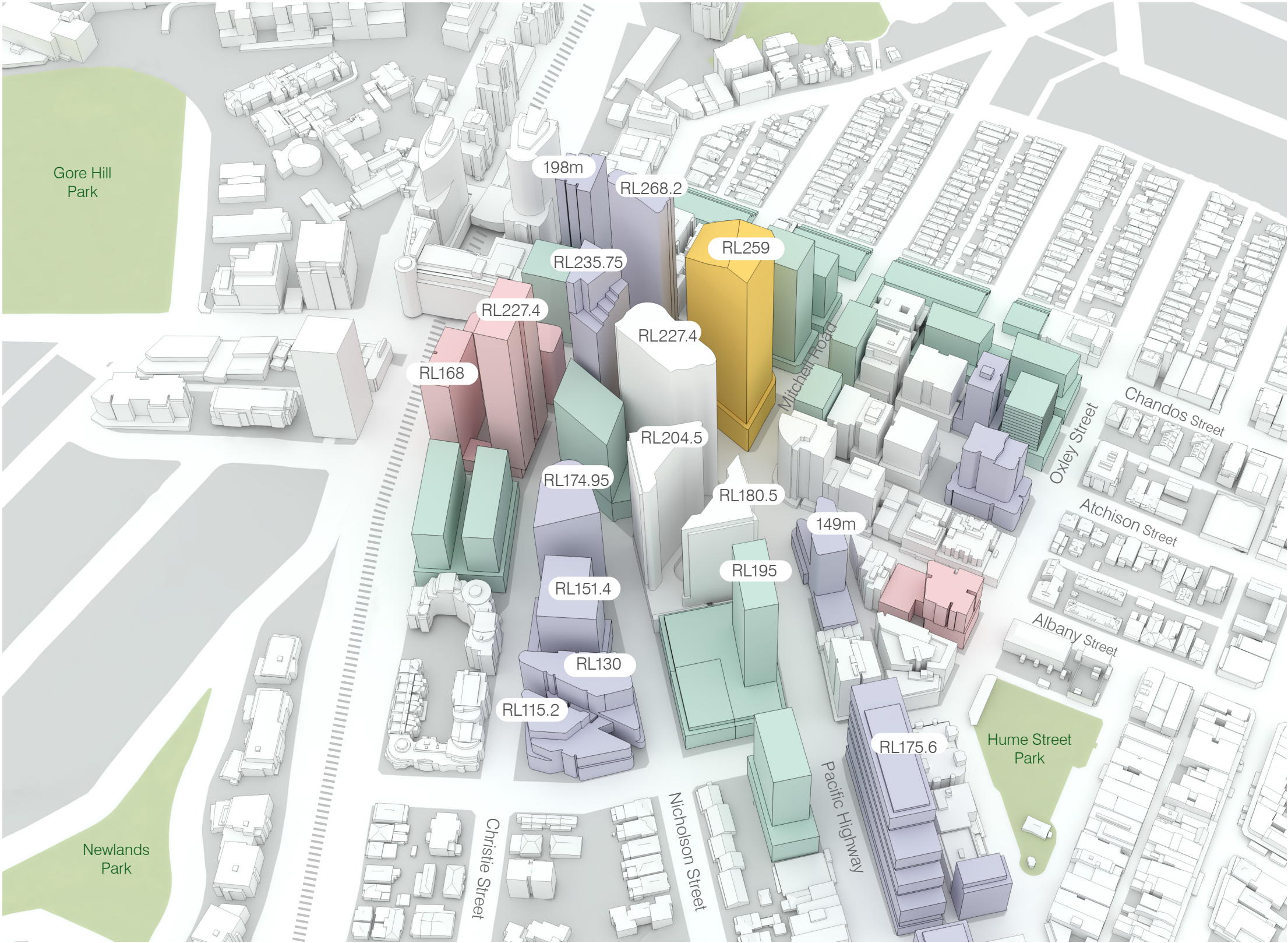
Development context plan

Building heights

The proposed indicative building envelope for the subject site would be the highest of current proposals in St Leonards Town Centre.

We believe that this scale is appropriate for the following reasons:

- The site is in an iconic location at the bend in the Pacific Highway
- The site is located at the topographic high point of the town centre
- It is located between two stations, a location identified in the 2036 Final Plan as the location for height
- Given the size of the site, the tower form would appear slender and provide sufficient space to permit views to sky between adjacent towers
- The tower could become a visual marker of the town centre on the skyline.



Building envelope within adjacent development context showing heights as RLs

Approved and pending local approvals



Building envelope within development context- South elevation



Building envelope within development context- East elevation




Building envelope within development context- North elevation



Building envelope within development context- West elevation

- Legend
- Buildings under construction
 - DA Approved/ DA being prepared
 - Likely development (under the 2036 Final Plan)
 - Commercial use for subject site
 - Site boundary



The site is located within in the suburb of St Leonards in the North Sydney Local Government Area (LGA) at the boundary of both Lane Cove and Willoughby LGAs.

The precinct within which the site is located has been identified in the St Leonards and Crows Nest 2036 Plan as an 'area for higher density between stations'.

3.0 Site analysis

3.1 Site location

3.2 Site character

3.3 Site analysis

3.4 Summary of opportunities
and constraints

3.1 Site location

Located on the iconic bend in the Pacific Highway, this site has a prominent position in St Leonards.

The site is located within in the suburb of St Leonards in the North Sydney Local Government Area (LGA) at the boundary of both Lane Cove and Willoughby LGAs. The site is approximately 200m from St Leonards Train Station and 400m to the proposed new Crows Nest Metro Station. St Leonards Train Station is an established and well-served transport interchange. The site is on the corner of Atchison and Mitchell Streets and bounded on the south by an arterial road (Pacific Highway).

The site is within the Precinct 2 area identified in the St Leonards and Crows Nest Plan 2036. Precinct 2 is a high-density commercial and mixed use area immediately east of St Leonards Train Station .

Legend

Subject site

St Leonards/Crows Nest Planning Study precinct boundaries

Suburb boundary

Local Government Area (LGA)

Open space

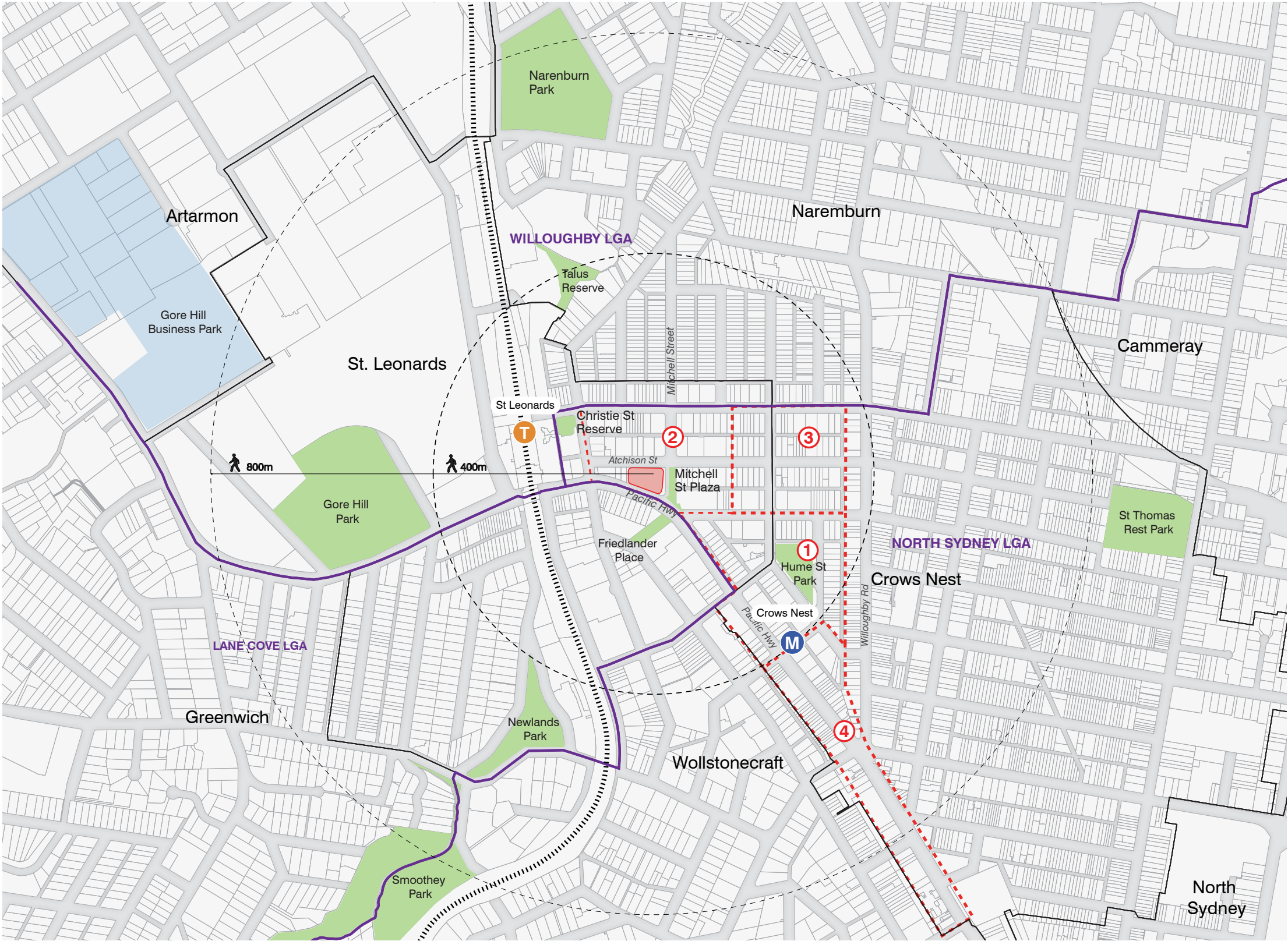
Train Station

Proposed Crows Nest Metro Station

Distance from Centre

Radius Circle

Precinct numbers identified in St Leonards / Crows Nest Planning Study produced by North Sydney in May 2015



3.2 Site character

Pacific Highway

A major arterial road with a limited pedestrian amenity

The southern edge of the site is bounded by the Pacific Highway, a busy arterial road. The high volumes of traffic and noise, the wind tunnel effect from existing buildings and the narrow footpath result in a compromised pedestrian environment. Existing buildings adjacent to the site are predominantly commercial at lower levels with little ground floor activation along the Highway. In spite of the uninviting pedestrian environment, many pedestrians use the Pacific Highway and Albany Street to walk between St Leonards Station and Crows Nest.



1. The bus stop located outside St Leonards station and the Forum plaza through the pedestrian walkway to Pacific Highway provides public transport connection and has the most active frontage, retail activity and pedestrian movement.
2. View towards the subject site, a steep up hill slope with narrow footpaths, inactive street frontages and mature trees on the paved street kerb.
3. On the corner of Pacific Highway and Christie Street, a few remaining small adjoining two-storeys top-shops currently not active.
4. View of site ground level and Mitchell Street Plaza.
5. On the corner of Pacific Highway and Albany Street, a busy and noisy intersection with heavy traffic and uninviting street for pedestrian movement.
6. View towards the ridge of Pacific Highway, the existing tower on the site shows the prominent and a true landmark location on the lower North Shore.

Subject site

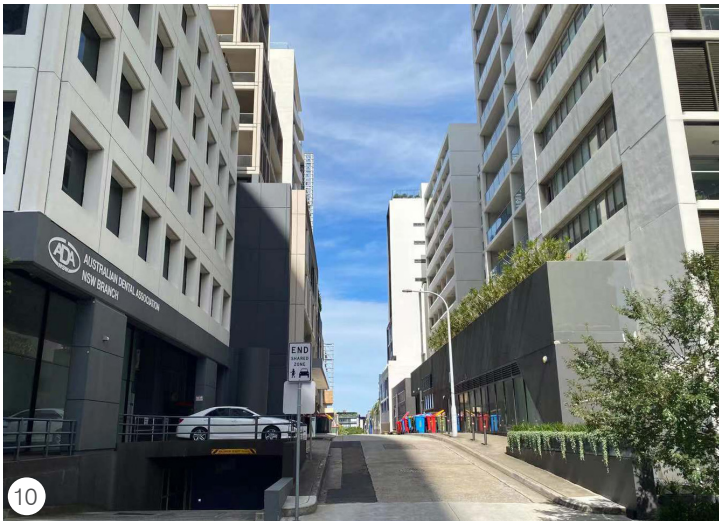
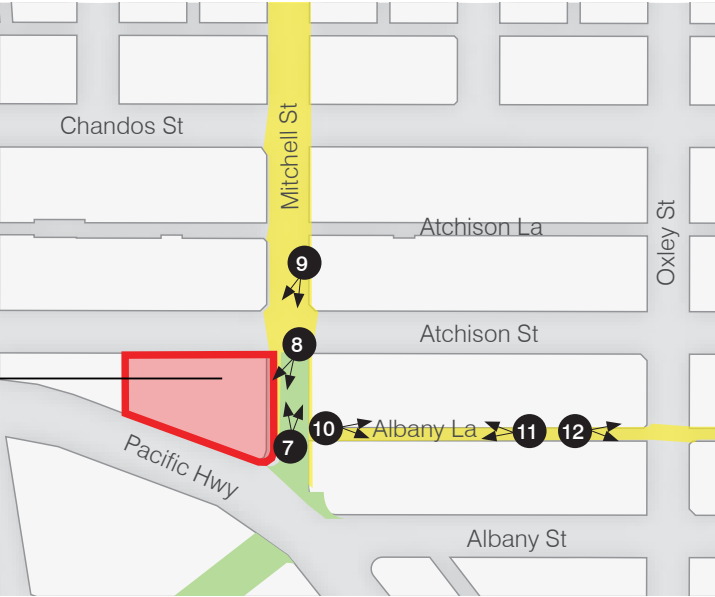
Site character

Mitchell Street & Albany Lane

Mitchell Street Plaza, a focal landscaped open space for St Leonards

The site is situated at the pedestrianised southern end of Mitchell Street, where it meets the Pacific Highway and T-junction of Albany Lane. Mitchell Street is a short local street which acts as the interface between commercial and mixed uses at it’s southern end, and two storey residential properties at it’s northern end. The southern end of Mitchell Street, along the frontage of the site has been transformed by Council into a landscaped plaza with a one-way-north shared traffic and pedestrian zone with soft and hard landscaping. The space receives good solar access, and is shielded from Pacific Highway noise by a raised green wall, which also serves to accommodate the gradient change towards the Highway.

Albany Lane has a mixed use character with low to medium density apartments and low scale commercial office buildings. The lane-way is dominated by driveways and vehicular movements, has little or no footpath and lacks ground floor activation.



7. Street view facing north of Mitchell Street. The construction of Mitchell Street Plaza is completed.

8. Mitchell street plaza view facing south, creating a good connection with subject site.

9. Mitchell Street looking up hill to the site which is located at the high point of the topography.

10. The start of Albany Lane, view from Mitchell Street.

11. Looking up-hill towards the subject site from 8 to 16 storey apartments and offices with narrow street at Albany Lane.

12. Further to the east towards the Hume Lane, small scale lots and from medium density to low scale offices and residential dwellings and apartments.

Subject site

Site character

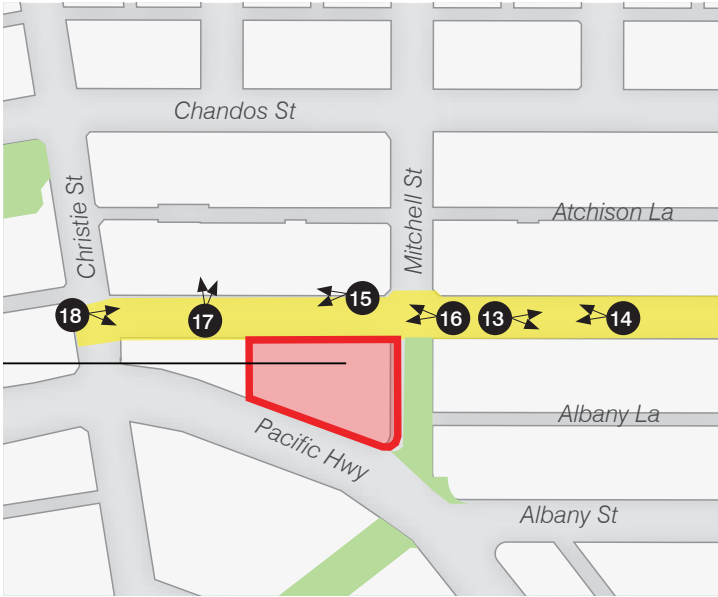
Atchison Street

A key east-west pedestrian connector with a focus on outdoor dining

The north side of the site is bounded by Atchison Street, which has one-way eastbound traffic movements between Christie and Mitchell Streets. Atchison Street rises steeply from west to east, with the high-point in the topography being at the corner of Mitchell Street. In spite of the topography, Atchison Street is a major east-west pedestrian connector between St Leonards Station at Christie Street, the surrounding commercial area and the Crows Nest town centre at Willoughby Road.

The existing building at 601 Pacific Highway presents steep topography with stairs and ramps dominating the ground plane. The adjoining site to the west currently has an inactive frontage which is dominated by solid walls and driveway access to basement parking. Between Christie and Mitchell Streets, Atchison Street has undergone public domain improvements including footpath widening, seating and planting. With low traffic volumes and active edges, particularly food and beverage tenancies at ground floor, the street has the potential to become a pleasant pedestrian oriented civic street.

The Planning Study has further ambition to transform Atchison Street into a pedestrianised civic environment.



13. Street sloping down towards Willoughby Road are medium density apartments and offices and low scale residential dwellings with low traffic volume.



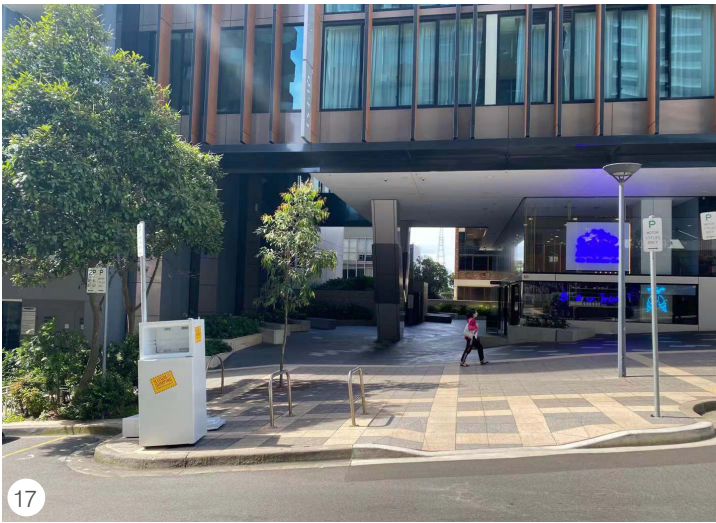
14. View towards the site from Albany street with sloping up hill.



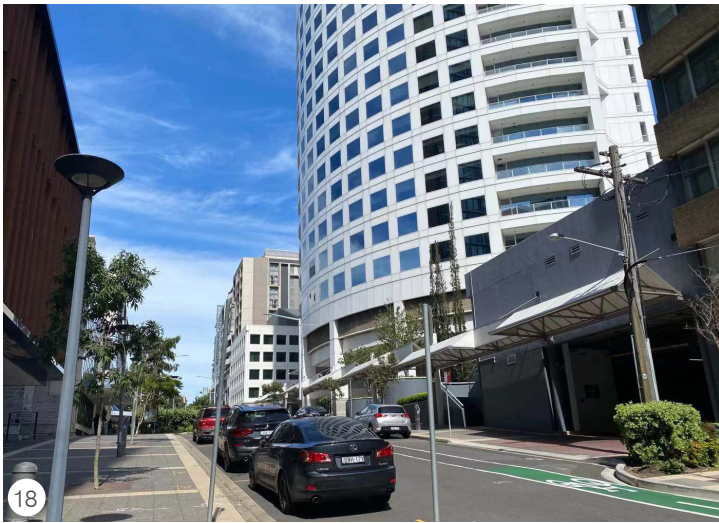
15. Adjacent to the site, hedges and pergolas plants creates a buffer and enclosed landscape open spaces zoned by the slope stepping along the ground topology.



16. The high-rise building on 6-16 Atchison Street adjacent to the subject site requires consideration of privacy.



17. Opposite to the site, there is better pedestrian amenity on the ground level of 6-16 Atchison Street. On the street level, public open space is accessible for pedestrians and connects to Atchison Lane.



18. Atchison Street between Christie and Mitchell Street is one way street and includes paid street parking and a dedicated cycle lane. The painted cycle lane is recently implemented.

Site character

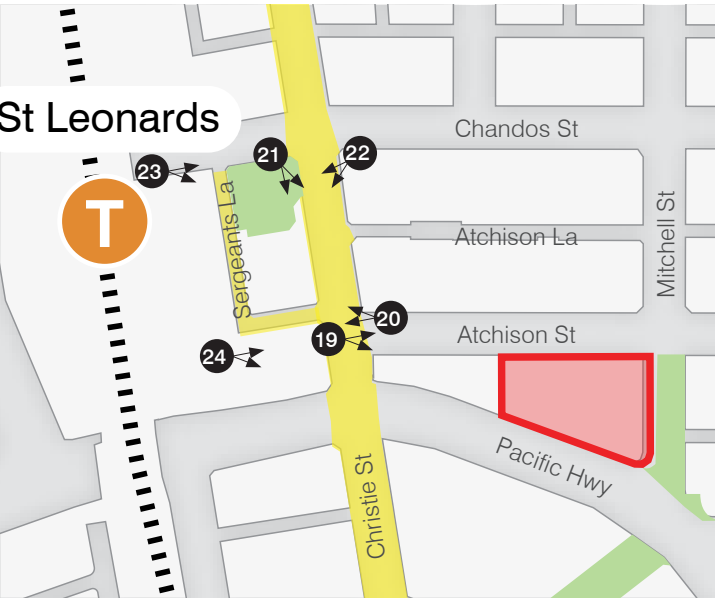
Christie Street

This busy street forms a barrier to east-west pedestrian movement to and from St Leonards Station

Christie Street is characterised by high rise commercial and features street tree planting, narrow footpaths and a heavily trafficked road.

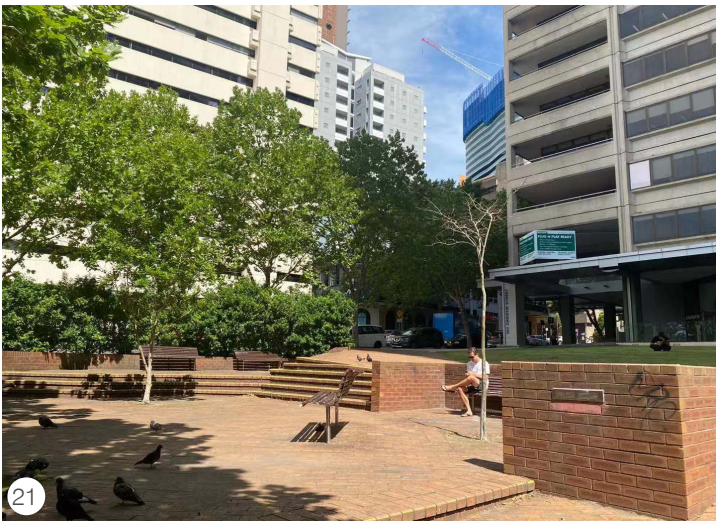
Pedestrians travel to and from St Leonards Station from Christie Street via a pedestrian walkway at Stargate Lane or via Chandos Street.

At the corner of Christie and Chandos Streets, Christie Street Reserve is a public green space. The reserve is close to the station, receives ample sunlight and is well utilised by working community during lunch hour.



19. Intersection of Christie Street and Atchison Street. There is significant pedestrian movement at street level via Sergeants Lane during the peak hours.

20. Sergeants Lane connecting Christie Street. The lane-way provides pedestrian connection and access between Christie Street and the adjoining St Leonards Station and Forum plaza.



21. Christie St Reserve is a small park with plane trees planted around the perimeter of the reserve. The pedestrian movements correspond with the lunch time visits to the Christie Reserve, the surrounding commercial premises and the Forum Plaza.



22. 100 Christie Street existing commercial building is under planning proposal for redevelopment.



23. To Forum Plaza via pedestrian covered through link from Stargate Lane.



24. To Forum Plaza via pedestrian covered through link from Chandos Street.

Subject site

3.3 Site analysis

Land use

The subject site is located in one of the few E2 Commercial Centre zones on the highway east of the trains station and towards the proposed Metro station. Surrounding sites are predominantly zoned mixed-used with the exception of the eastern neighbour which is also E2. There is medium to high density residential development in St Leonards South and historic low-density residential development in the Naremburn Conservation Area.

Legend

Subject site

Stand Alone Commercial

Mixed use

Education and Health Infrastructure

High Density Residential

Medium Density Residential

Low Density Residential

Train Station

Proposed Crows Nest Metro Station

400m

Distance from Centre

Radius Circle



Site analysis

Community Infrastructure

To the west of the site, a major health precinct is clustered around Royal North Shore Hospital. There are also a number of places of public worship along Willoughby Road to the east of the site.

There are a number of schools and colleges in the area, however most are located further south along the Pacific Highway towards North Sydney.

The approved proposed building at 617-621 Pacific Highway adjacent to the site includes a proposal for 2 level Community arts centre within the podium of 1,830sqm. The hospital expansion plans, the industrial land to North, and Gore Hill business park will all provide new jobs in the area.

Open Space

Mitchell Street Plaza, adjacent to the site, is one of the key public domain elements in St Leonards Town Centre. Christie Street Plaza and Hume Street Park are located within a 200m radius of the site. Gore Hill and Newlands Parks are larger recreational open spaces and are located further to the west and south, approximately 400m from the site. Further afield around 800m from the site are St Thomas Rest Park to the east and Smoothey Park to the south-west.

Legend

Subject site

Parks and Plazas

Education

Health

Church / Cemetery

Community Facilities

T

 Train Station

M

 Proposed Crows Nest Metro Station

400m

 Distance from Centre

 Radius Circle

 Suburb boundary

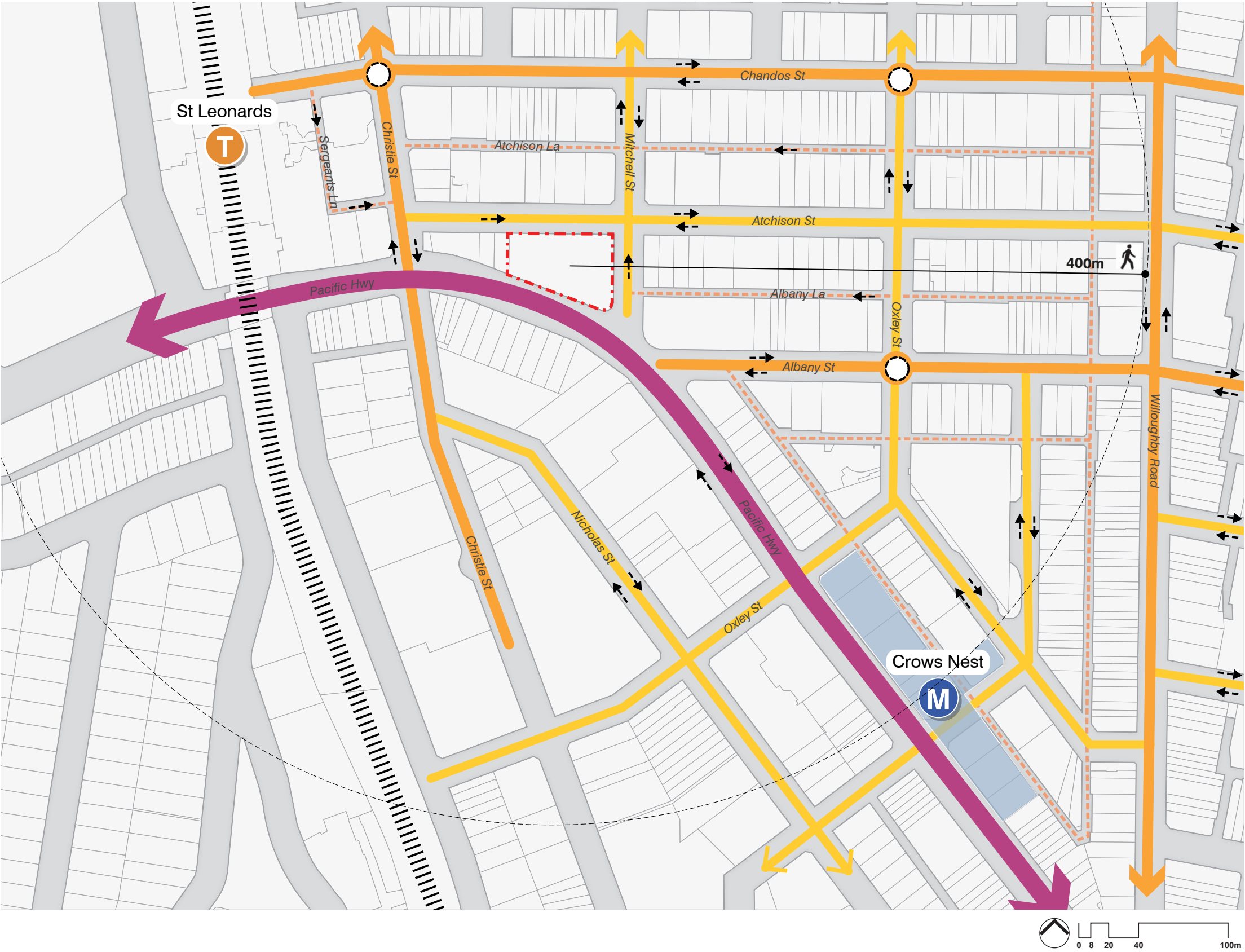


Site analysis

Street grid and hierarchy

The urban structure around St Leonards is characterised by a fragmented parallel grid system with street blocks on average 150m in length and typically 35m in depth.

The site is bounded by an arterial road, the Pacific Highway on the south and rectilinear street grid on the other sides. The four collector roads are served by Christie Street, Chandos Street, Willoughby Road and Albany Street carrying traffic from Naremburn and Crows Nest past the site to the Pacific Highway. Atchison, Mitchell and Oxley Streets are internal local roads and are quiet streets with low volumes of traffic. Lane-ways run parallel between the collector and local roads which are usually located at the rear of building with narrow streets.



- Legend
- Subject site
 - Arterial Road
 - Collector Road
 - Local Road
 - Lane-way
 - Train Station
 - Proposed Crows Nest Metro Station
 - Road direction

Site analysis

Transport

Key public transport opportunities in the locality are:

- **Train**
The site is approximately 200m from St Leonards station, an established and well serviced transport interchange.
- **Proposed Sydney Metro Station**
The site is approximately 400m from the proposed Crows Nest Metro, currently under construction.
- **Bus**
Buses runs frequently along Pacific Highway and Willoughby Road and connect with rail, servicing Macquarie Park and Chatswood to the west and north, Manly to the east and Millions Point to the south.
- **Cycle**
Improvements to the cycle network at St Leonards are taking place. Recently a wide dedicated cycle lane has been installed on the uphill section of Atchison Street.



Legend

- Subject site
- Council Proposed bicycle path
- Dedicated on-road bicycle path
- On-road bicycle path
- Likely pedestrian route from train station
- Likely pedestrian route from metro station
- Bus Route and Bus Stop
- Train Station
- Proposed Crows Nest Metro Station
- Proposed Metro Station entry
- Distance from Centre
- Radius Circle



Pedestrian access and connectivity

- Footpaths**
Atchison and Chandos Streets and the Pacific Highway are currently primary east-west pedestrian desire lines connecting with St Leonards Station. There is pressure on existing signalised and un-signalised pedestrian crossings across Christie Street, which is a busy street separating the site from the train station. Although there have been some upgrades to the public domain on Atchison Street, new development at 601 Pacific Highway has the potential to improve the pedestrian environment along the southern edge of Atchison Street.
- Through-site links**
Well-used through site links exist through the Forum Plaza and connect Atchison Street and the site with St Leonards Train Station. There are a number of other north-south through-site links connecting streets with lanes, however visibility and desirability tend to be poor.
- Lane-ways**
The streets at Albany and Atchison Lanes have the potential to provide an active, safe and accessible street for pedestrian. There are also a number of connections to the site via covered pedestrian walkways and through-site links.

Legend

Subject site

Parks and Plazas

Pedestrian covered opens space

Primary pedestrian desire line

Secondary pedestrian desire line

Site through links (Identified)

Lane-ways

Pedestrian signalised crossing

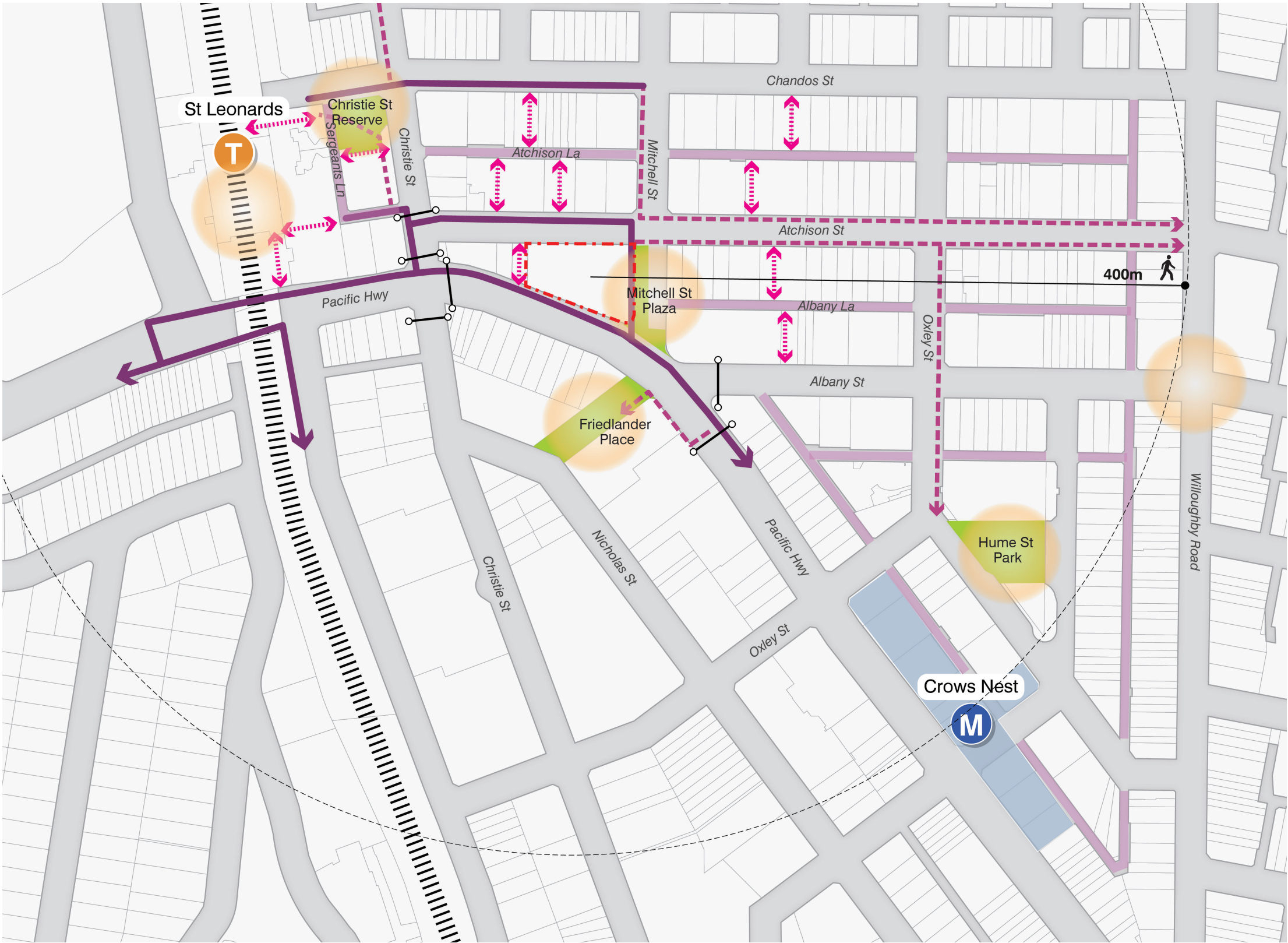
T

 Train Station

M

 Proposed Crows Nest Metro Station

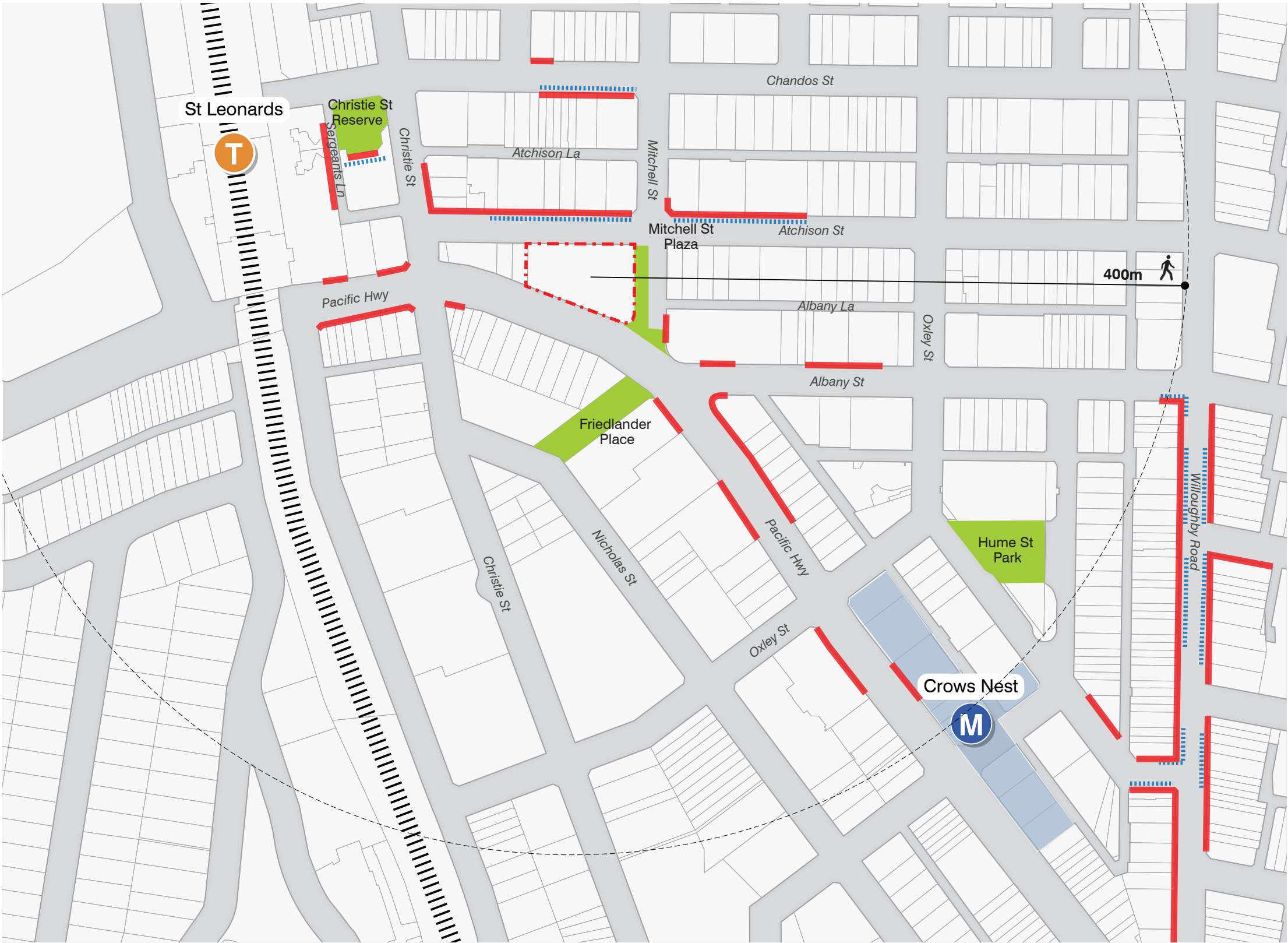
Key attractors



Site analysis

Active street frontages

Atchison Street has good pedestrian amenity, as well as some isolated active retail, dining and public open space at street level. Pacific Highway has little or no active street frontage on the north side between Christie Street and Albany Street. Mitchell Street has few active street frontages and some outdoor dining.



- Legend
- Subject site
 - Parks and plaza
 - Active frontage
 - Footpath dining
 - Train Station
 - Proposed Crows Nest Metro Station
 - Distance from Centre
 - Radius Circle

Site analysis

Topography

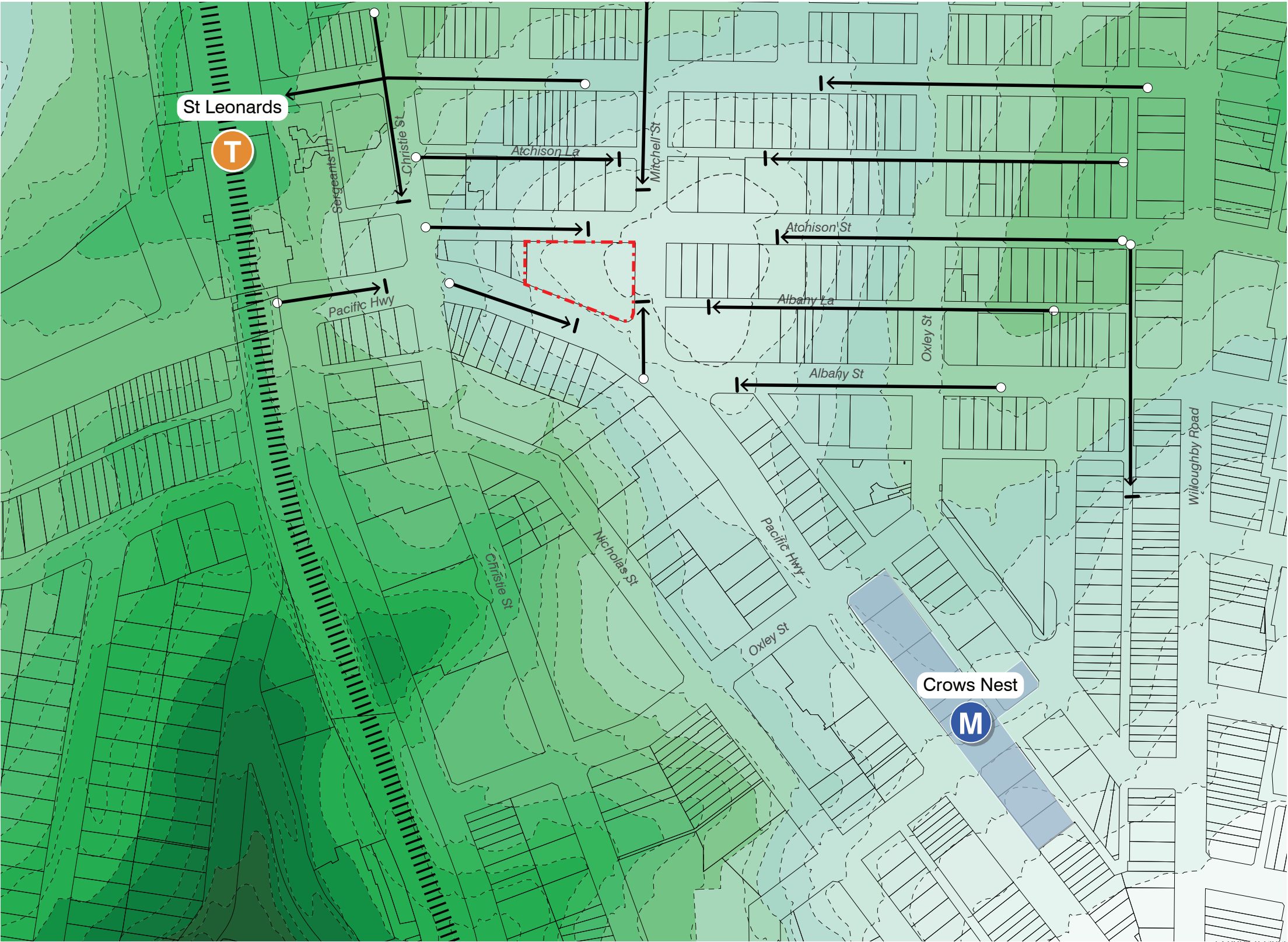
The Pacific Highway runs along the natural ridge line connecting North Sydney to the upper North Shore. 601 Pacific Highway is located at the high point of this ridge, marking the site as the iconic centre of St Leonards.

The high point is located mid-block between Mitchell Street and Atchison Street, at an of RL 92, from which point the terrain slopes away in all directions.

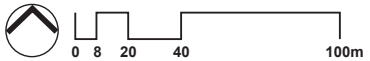
Within the site, there is a fall of approximately 3m from east to west, and a fall of approximately 1.5m from north to south across the site.

Sight-lines and Vistas

The terrain drops to the west and the south away from the high-point at the corner of Mitchell and Atchison Streets. The steep nature of Atchison Street makes east-west pedestrian connections more difficult and also impacts on vistas and sight-lines from west to east along Atchison Street.



- Legend
- Subject site
 - Vistas interrupted by topography
 - Contours @ 2m intervals
 - Site fall - light (high) to dark (low)
 - High point
 - Train Station
 - Proposed Crows Nest Metro Station



Site analysis

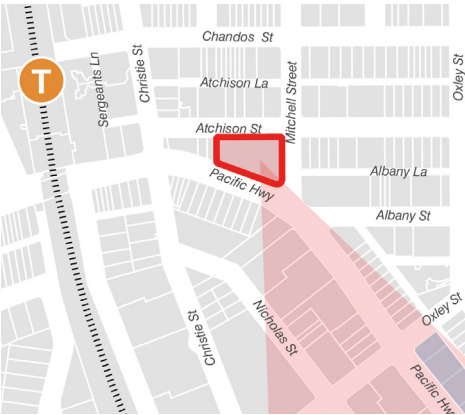
View towards the south east from the existing commercial building on site



View from level 13 of the existing building



South East view towards the CBD and harbour

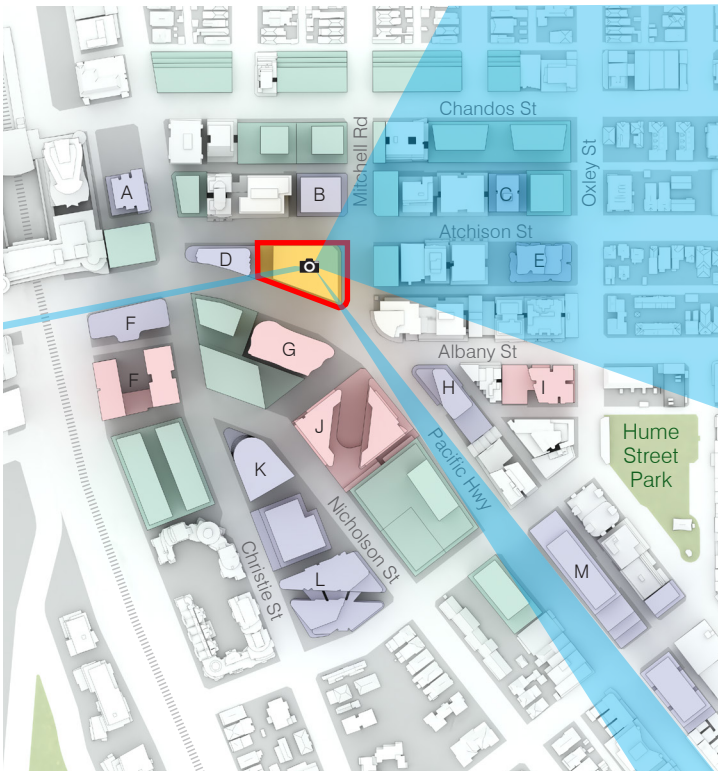


Site analysis

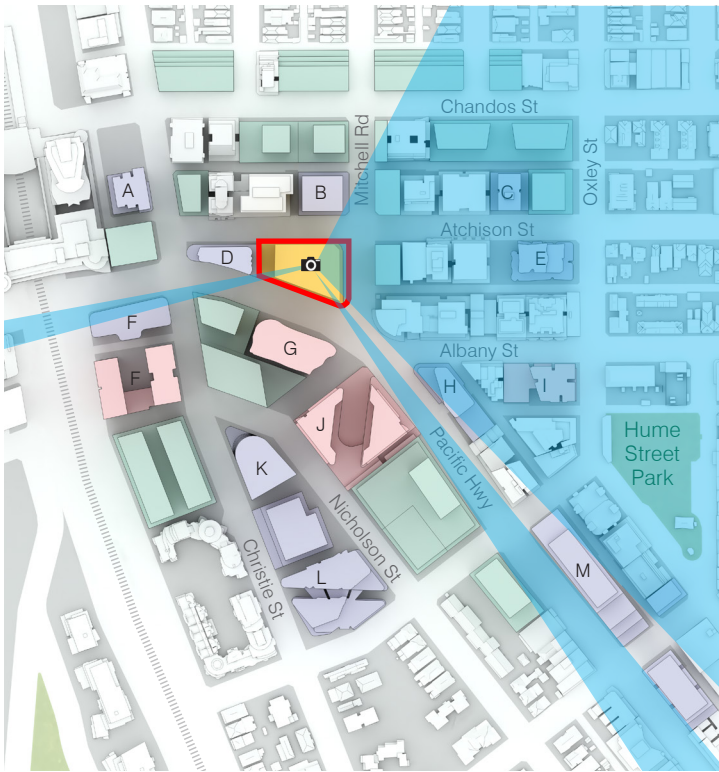
Views

Excellent views particularly towards the harbour to the south and the ocean to the east, would be available from upper levels of any proposed new development at 601 Pacific Highway. The following 2 pages show indicative views from a context model that would be available from nominated floors of a potential new tower on the site.

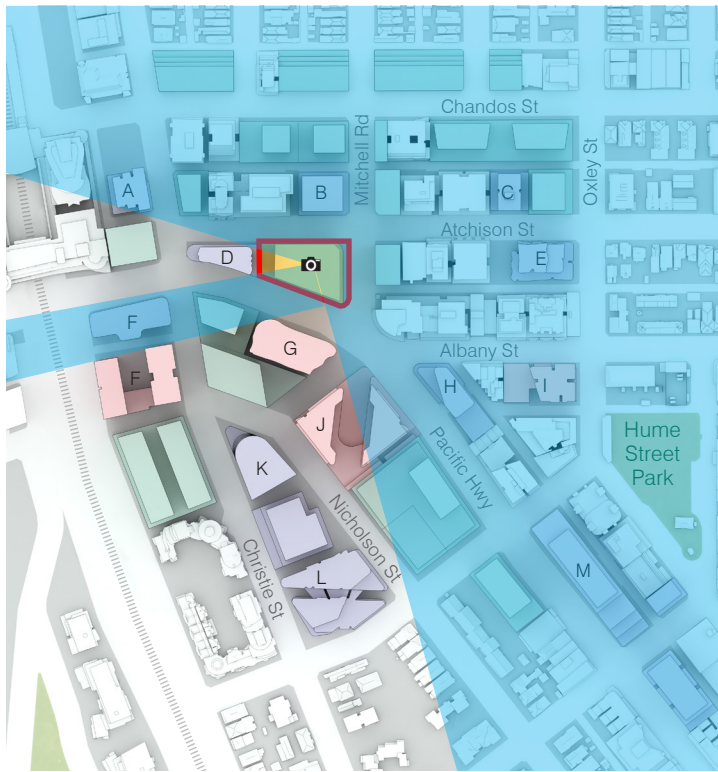
Proposed new development surrounding the site would block some of these views, as indicated on the diagrams below. (Proposed and new developments are described in detail in section 2.5 approved and pending local approvals.)



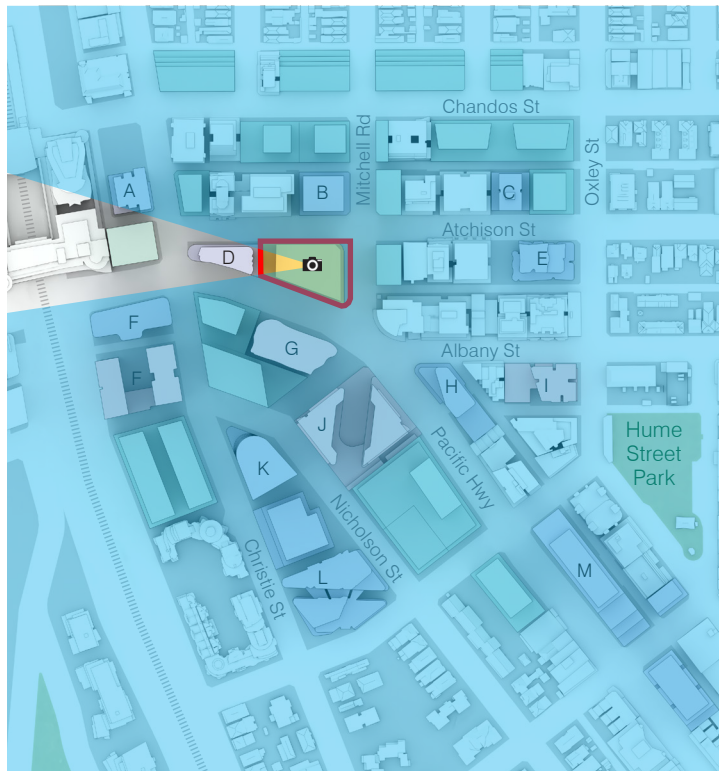
Views available at low levels (Level12-15)



Views available at medium levels (Level16-Level28)



Views available at top levels (Level29-Level35)



Views available at top levels (Level36+)

Legend

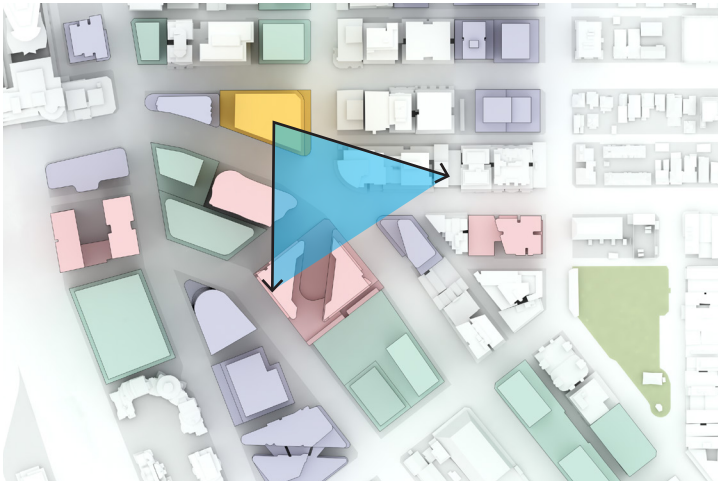
- Buildings under construction
- Approved building/Pending approval
- Likely development (under LUIIP)
- Commercial use for subject site
- Site boundary

#	Site address	Development	Building height
A	100 Christie Street	LEP changes gazetted.	132m 36 storeys
B	20-22 Atchison Street	Planning Proposal recently lodged with Council for assessment	35 storeys
C	50-56 Atchison Street	Planning Proposal for a mixed use	15 storeys
D	617-621 Pacific Highway	LEP controls in place. DA yet to be lodged	175m, 50 storeys
E	23-25 Atchison Street	LEP changes gazetted. DA lodged awaiting approval	56m, 16 storeys
F	8-90 Christie Street, 546-564 Pacific Highway + 71-70 Lithgow Street	Approved 2 x residential towers and a 16 storey commercial office building, under construction.	47storeys 26storeys 14storeys
G	500, 504-520 Pacific Highway	Mixed use building, under construction	44 storeys

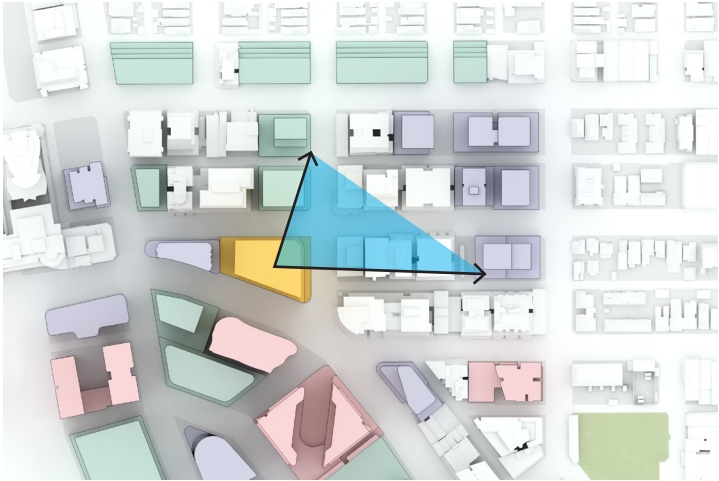
H	575-583 Pacific Highway	Planning Proposal for a future mixed-use building. Gazetted.	56m
I	7-11 Albany Street	Approved mixed use buildings	13 storeys
J	472-494 Pacific Highway	Constructed 2 x mixed use buildings	36 and 28 storeys (2 towers)
K	46 Nicholson Street	Planning Proposal for a commercial building lodged with Lane Cove Council in July 2020.	32 storeys
L	29-57 Christie Street	Lodged DA	7-18 storeys
M	Crows Nest OSD *as per amended application (September 2020)	Concept Development Application - Post exhibition phase.	22 storeys 18 storeys 9 storeys

Site analysis

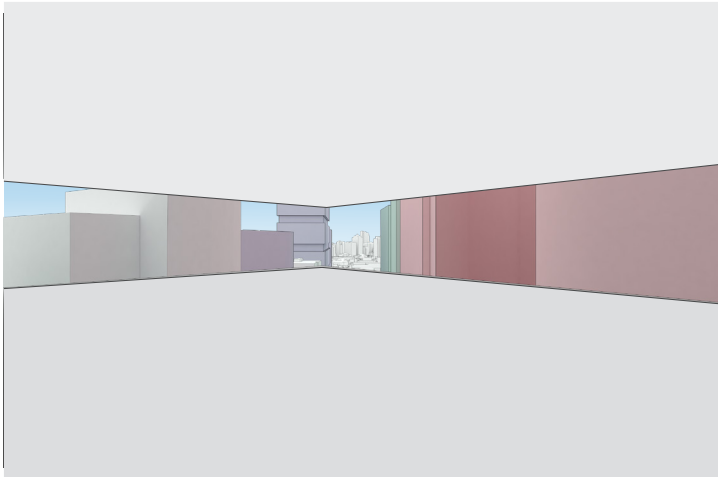
Surrounding buildings obstruct views at lower levels, as illustrated below. At lower levels, there is only a narrow view corridor along the Pacific Highway. As the height increase views open up towards the south and east capturing north Sydney CBD and the harbour.



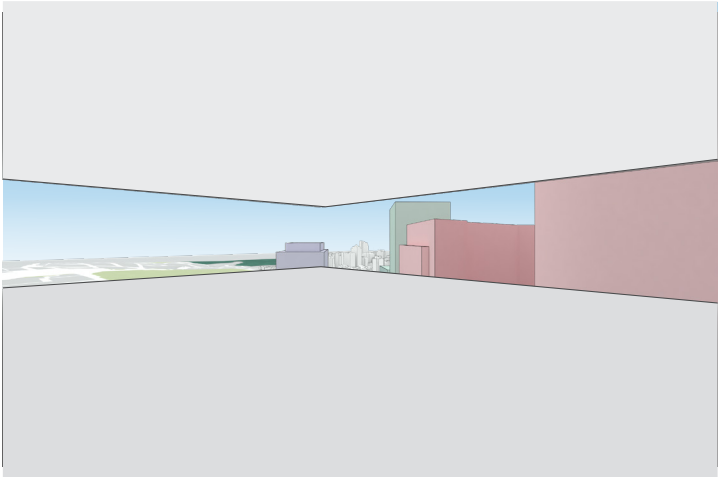
View location - Towards Southeast



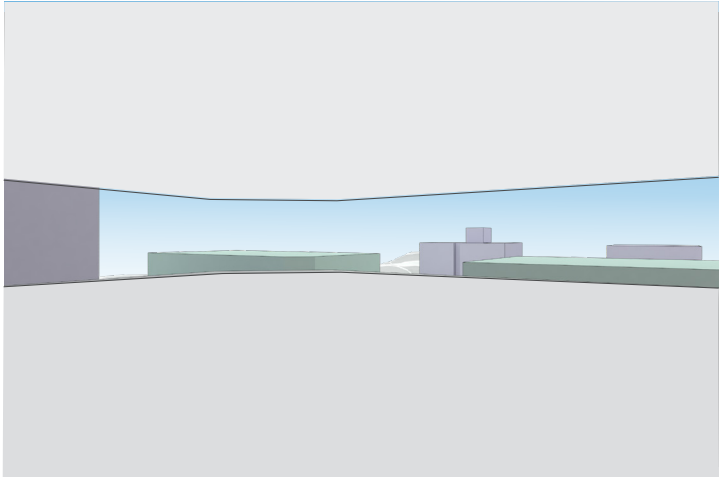
View location - Towards Northeast



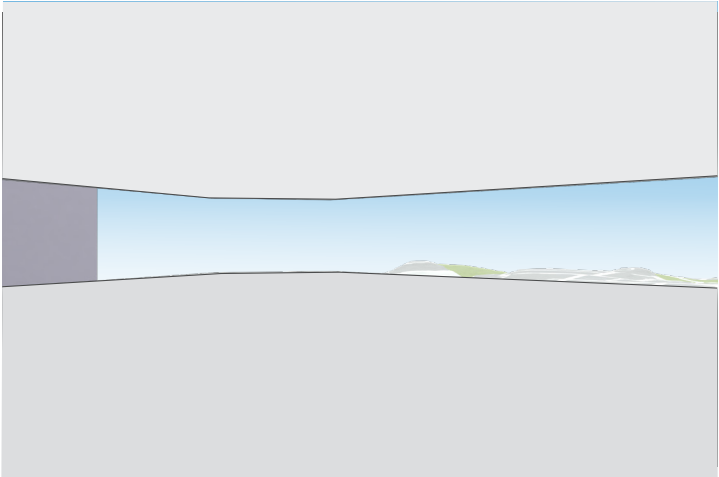
View towards south-east at level 14



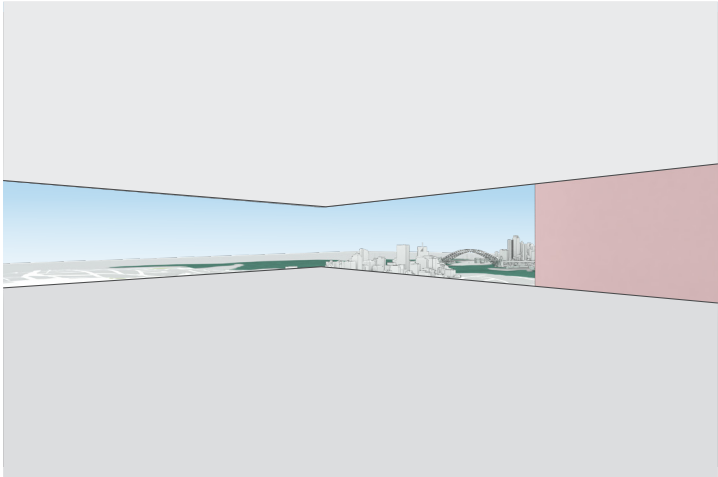
View towards south-east at level 23



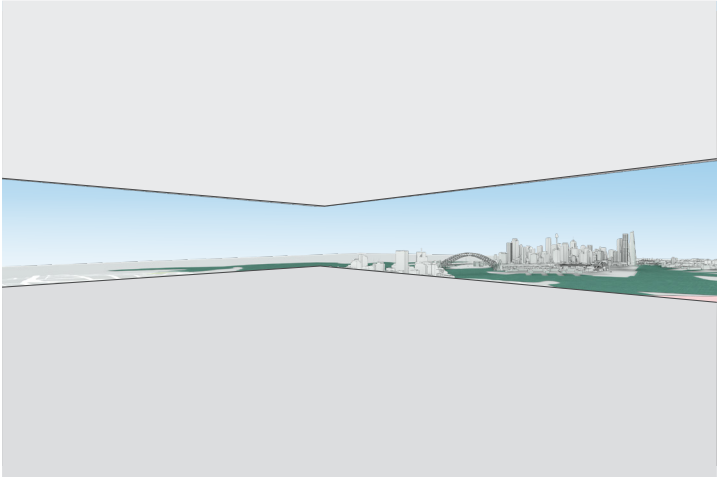
View towards the north-east at level 14



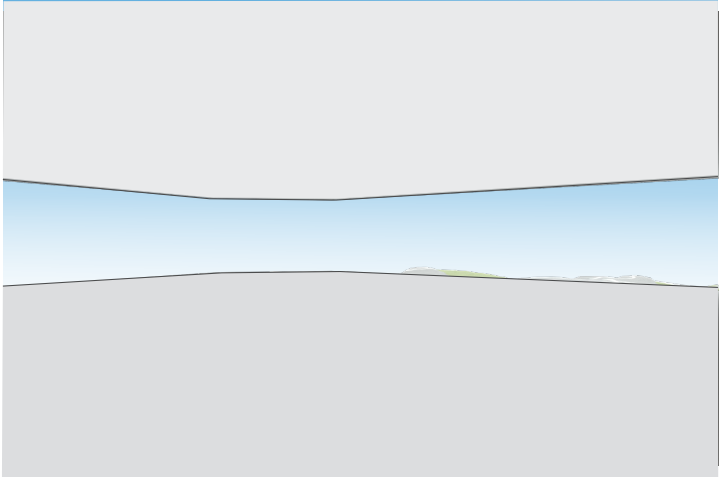
View towards the north-east at level 23



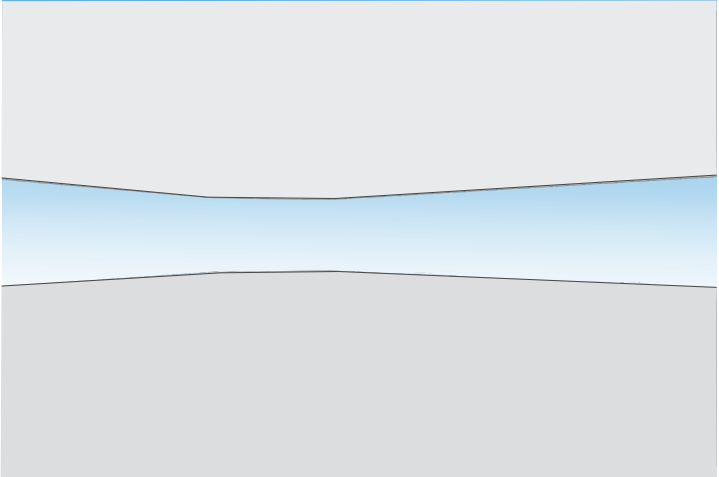
View towards south-east at level 32



View towards south-east at level 37



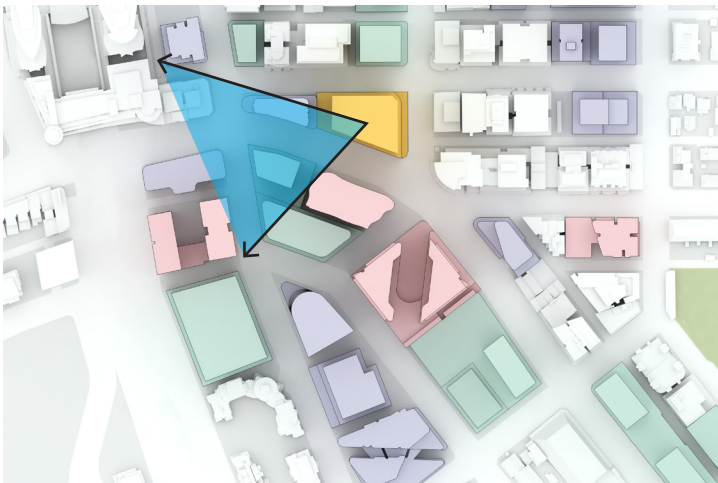
View towards the north-east at level 32



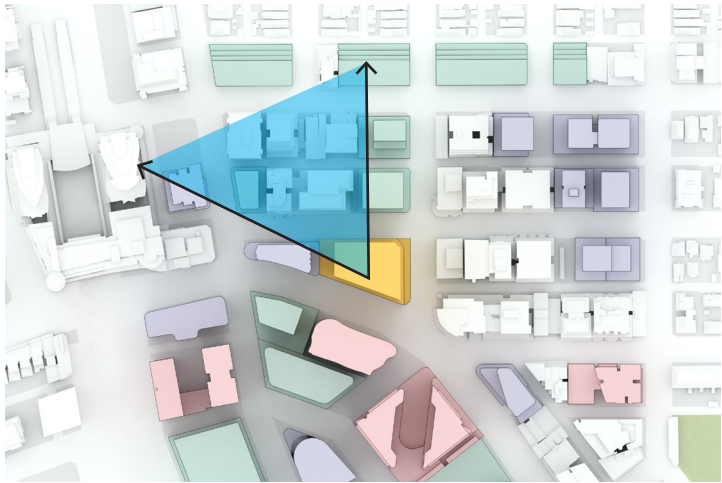
View towards the north-east at level 37

Site analysis

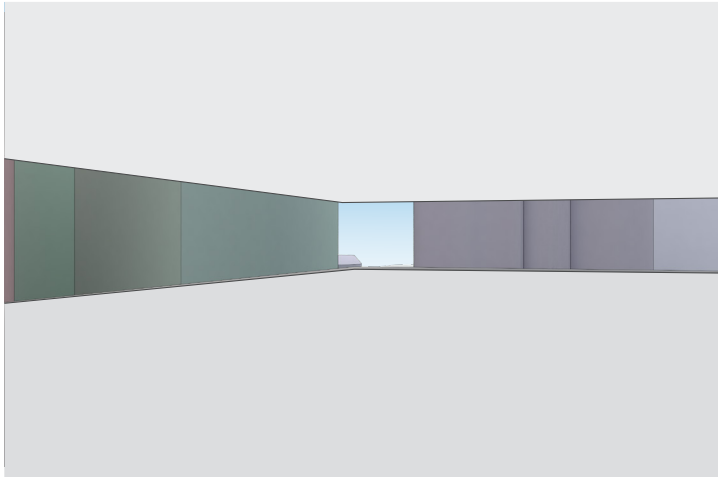
Views towards the west are largely obstructed by the adjacent proposed development.
Views towards the north open up only at higher levels.



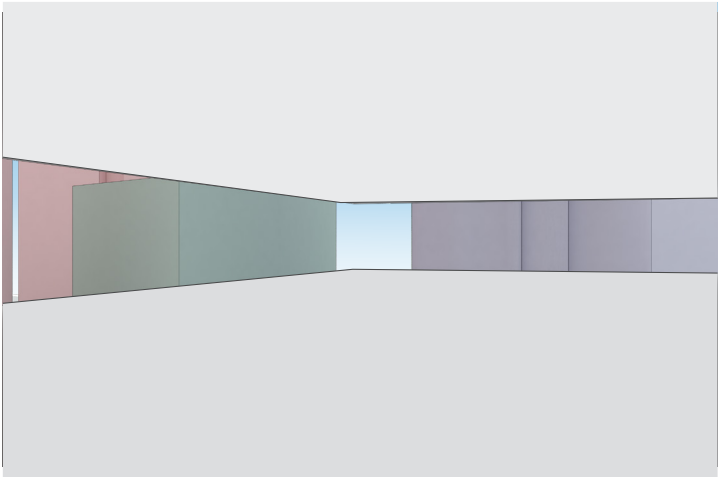
View location - Towards Southwest



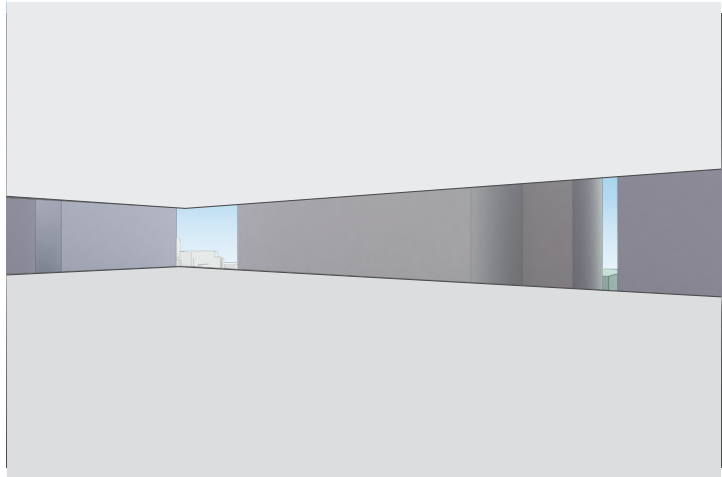
View location - Towards Northwest



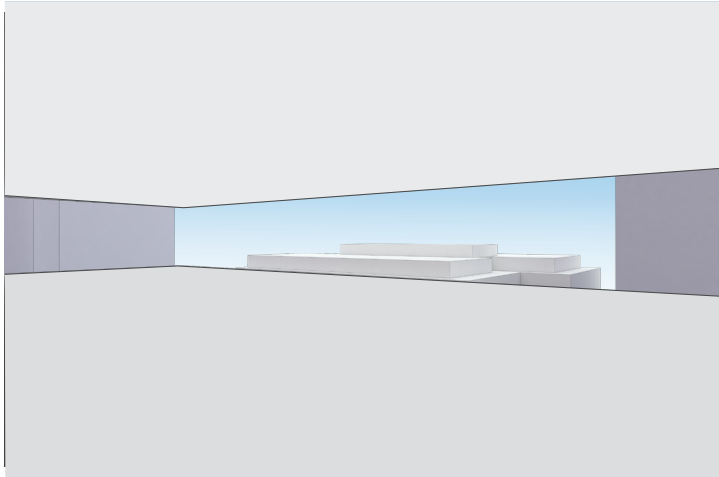
View towards the south-west at level 14



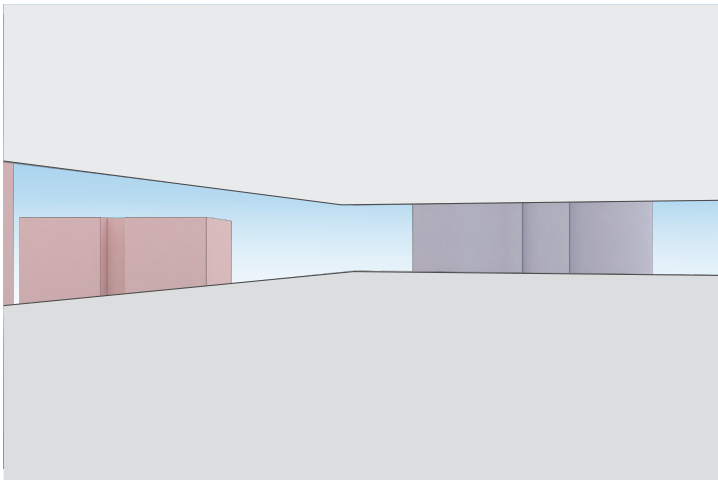
View towards the south-west at level 23



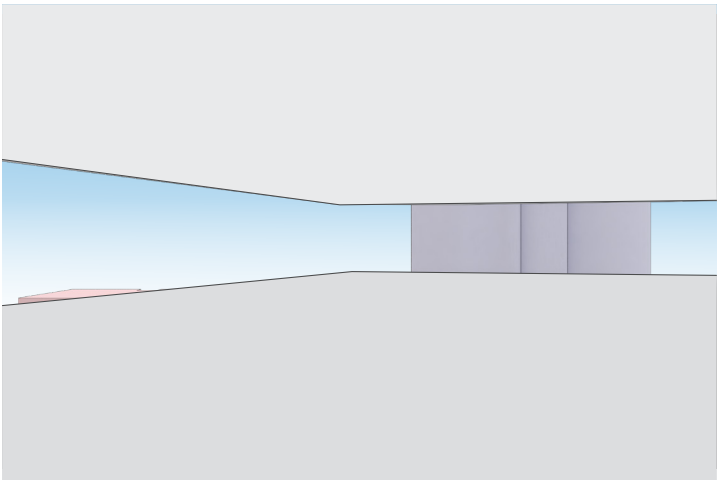
View towards north-west at level 14



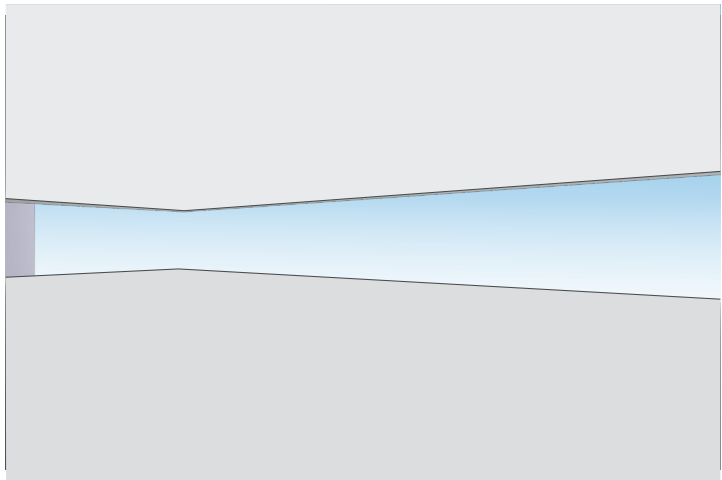
View towards north-west at level 23



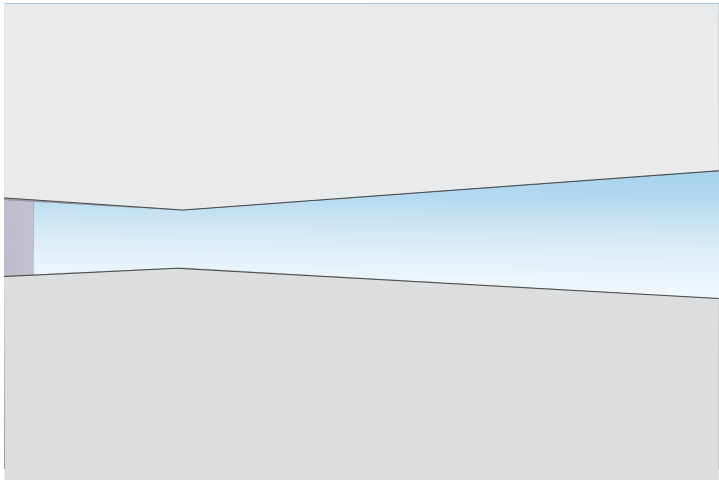
View towards the south-west at level 32



View towards the south-west at level 37



View towards north-west at level 32



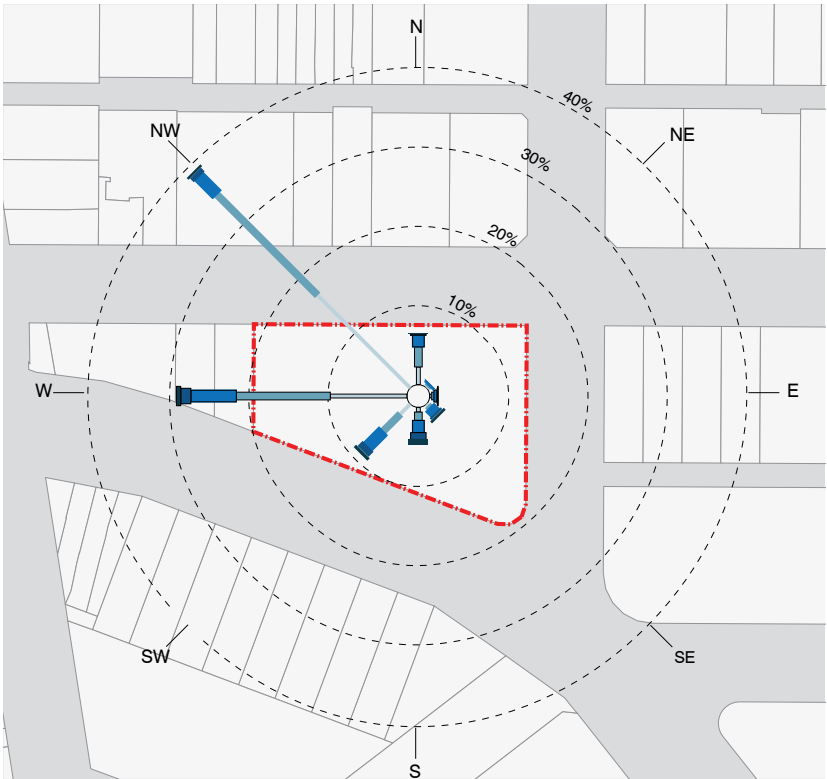
View towards north-west at level 37

Site analysis

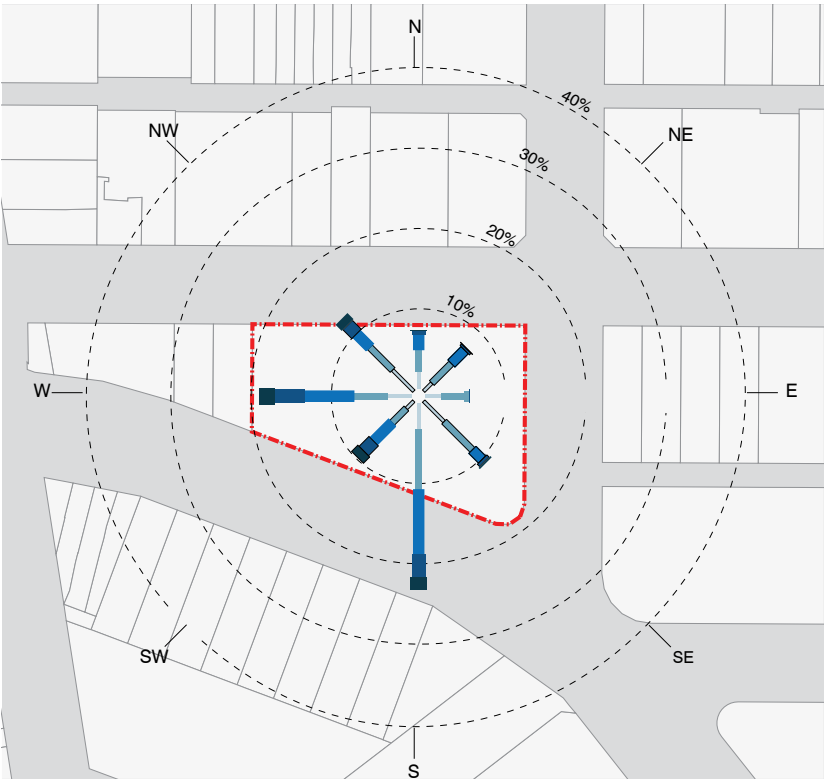
Prevailing wind

The wind rose from the Australia Government Bureau of Meteorology demonstrates that:

- In winter the prevailing winds are from the west and north-west in the morning and tend to change in the afternoon to be predominately from the south.
- In summer prevailing winds in the morning are from the south, while in the north-easterly breeze picks up and dominates in the afternoon and evening.
- Existing and proposed tall buildings in the vicinity of the site also generate specific wind tunnel environments.

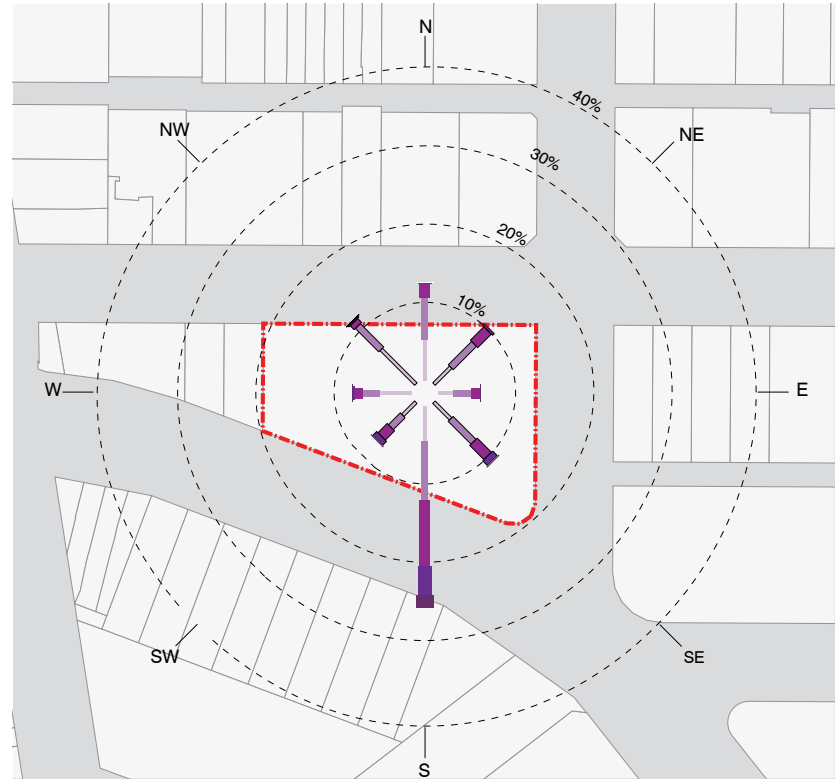
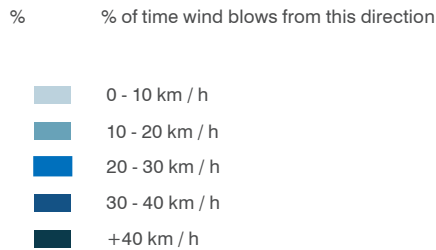


9am Winter

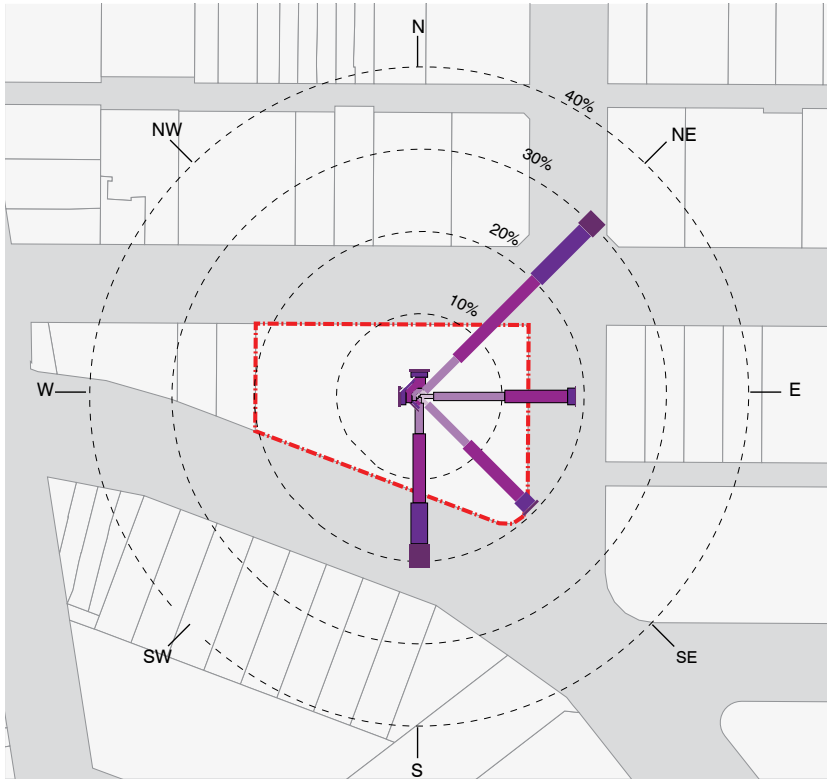


3pm Winter

Winter Wind direction

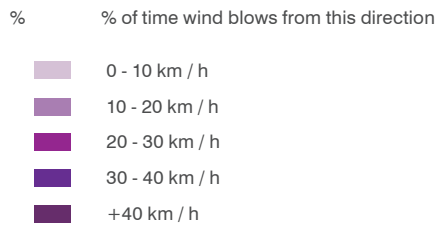


9am Summer



3pm Summer

Summer Wind direction



Legend
Subject site

Source: Australia Government Bureau of Meteorology

3.4 Summary of opportunities and constraints

Constraints

In summary, the key constraints impacting the subject site and indicative concept design include:

- Traffic noise from the busy Pacific Highway;
- Strong breeze and winds from a southerly direction throughout the year;
- Access for pedestrians approaching the site from St Leonards Train Station is compromised by traffic congestion on Christie Street, the rising gradient from Christie Street up to Mitchell Street and the hostile and noisy environment of the Pacific Highway;
- Lack of shelter or activation for pedestrians along the frontages of adjacent properties;
- The proposal can not cast any additional shadow to Mitchell street plaza and Newlands park;
- New and proposed development in the immediate surrounds has a potential impact of views and privacy.

Metro corridor constraints

The site is above the proposed metro tunnel alignment, which impacts on the potential structural solution and basement depth for future development on the site.

Legend

- Subject site
- Resulting Building Envelope
- Proposed Metro tunnel underground
- Heavy traffic on Pacific Highway
- Traffic congestion
- Contours @ 2m intervals
- Topography
- Winter wind direction
- Summer wind direction
- Noise
- Unsafe lane-ways
- Vehicle access

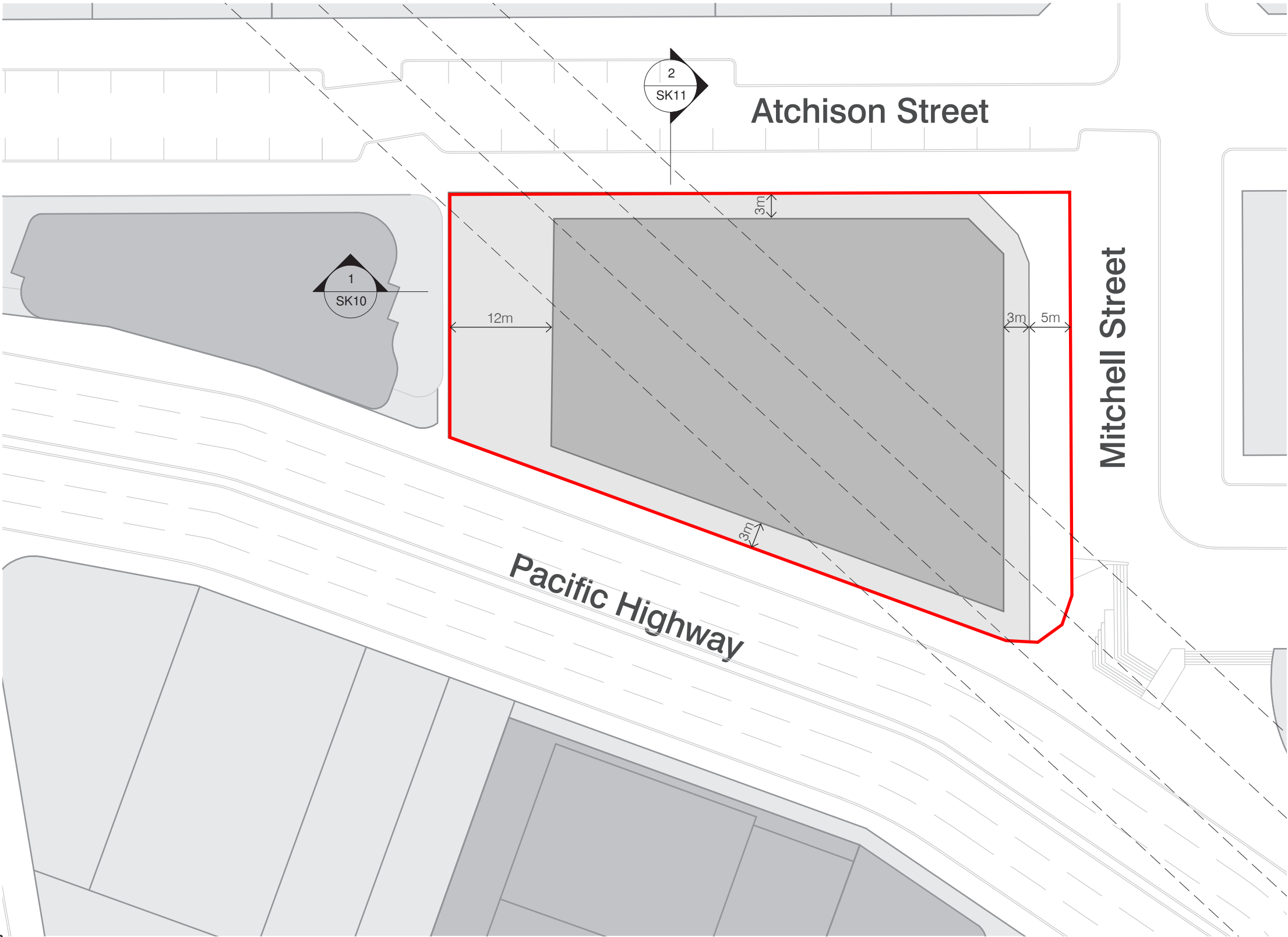


Summary of opportunities and constraints

Planning constraints

The site is subject to the following planning controls. All design options have considered the setbacks and envelope constraints below:

- Zero setback to Atchison Street.
- 3m ground level setback (1 storey) to Pacific Highway.
- 5m street setback to Mitchell Street.
- 3m whole of building setback to Mitchell Street.
- 3m above podium setback to Pacific Highway, Mitchell Street, and Atchison Street.
- Corner sites to maintain a consistent podium height to all street frontages.



Summary of opportunities and constraints

Opportunities

Taking into account the site constraints, there is significant opportunity to:

1. Create an iconic gateway development at the high point of St Leonards and on the important vista at the bend in the Pacific Highway.
2. Capitalise on and integrate the Mitchell Street Plaza public domain into the site, ensuring that the podium provides a high quality interface, activation and good integration.
3. Contribute to the activation of the public domain and pedestrian environment along Atchison Street. There is an opportunity to strengthen the character of Atchison Street as a civic, retail and dining street with active frontages, reduce the traffic role of Atchison Street and create a stronger focus for pedestrians.
4. Provide commercial and non-residential uses as part of the employment strategy to support the long term investment in the broader Centre.
5. Improve walking connections and gradients to the proposed Crows Nest Metro Station.
6. Capitalise on the excellent views that will be available from level 35 onwards, particularly towards the east.

Legend

Subject site

Parks and plaza

Public Open space / plaza

Activate Atchison Street

Lane-way activation

Adjacent open spaces connection

Green spine connecting to parks

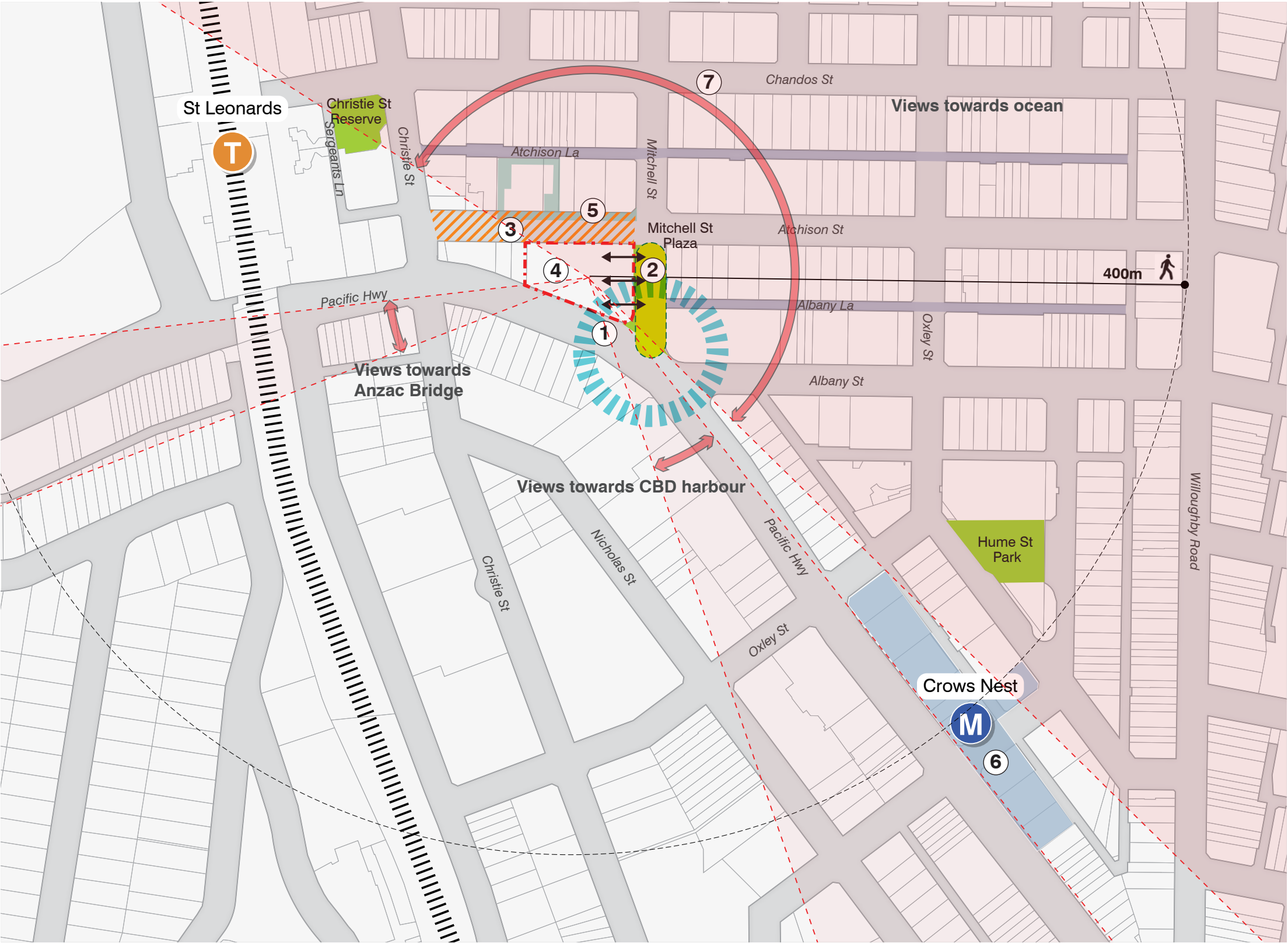
Gateway


Train Station

Proposed Crows Nest Metro Station

Distance from Centre

Radius Circle



An architectural rendering of a modern urban development. The central focus is a large, curved building with a glass facade and multiple levels of balconies. The balconies are enclosed with white, curved railings. The building is surrounded by lush green trees and a pedestrian plaza with a checkered pattern. People are walking and sitting on the plaza, and there are outdoor seating areas with umbrellas. The sky is clear and blue.

In developing the indicative concept design plan we explored principles and key moves which would ensure that the design is founded on best practice urban design and planning thinking.

4.0 Developing the indicative concept design

4.1 Principles

4.2 Key moves

4.3 Option summary



1 Support Mitchell Street Plaza

Provide an appropriate interface to the plaza with lobby entries and potential for outdoor dining to support the role of this open space as a focal point for the precinct.



2 Activate Atchison Street

Provide a ground floor interface that creates active edges to Atchison Street, and a high quality public domain generating opportunities for outdoor dining on footpaths to reinforce Atchison Street as the key day and night dining precinct.

3 Employment opportunities

Create a highly efficient commercial tower that caters to the employment needs in the town centre, and is attractive to future tenants.



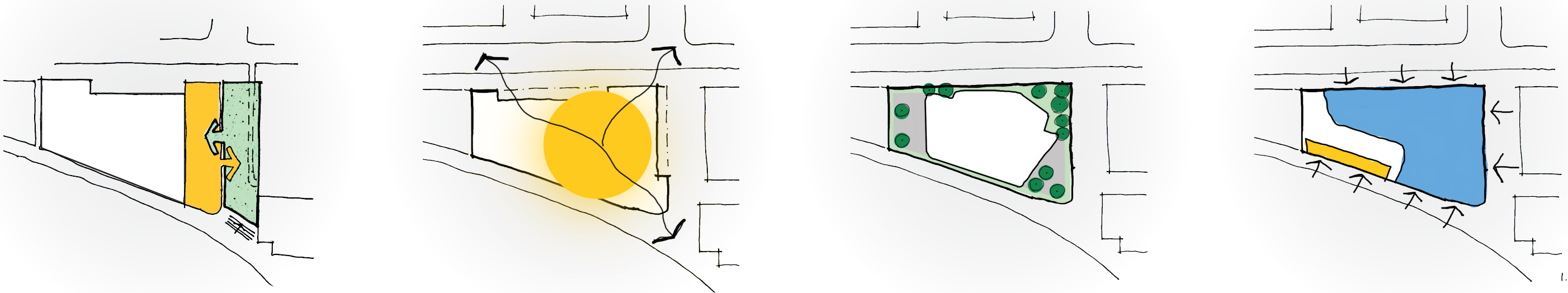
4 Landmark built form and tower envelope

Ensure that the podium has active ground uses, engages with the public domain and has well distributed and clear building entries. The tower form should be slender and articulated and designed to maximise separation from other towers for view sharing and to minimise the effect of 'tower crowding'.

4.2 Key moves

The design is underpinned by the following key moves:

Urban design key moves



1 Open space

The site fronts Mitchell Plaza which has recently been upgraded and is a focal landscaped open space for the town centre, with a shared way connection to Atchison Lane. The site's redevelopment could provide an active and permeable frontage to the western side of the Plaza. Operable and transparent lobby frontages at ground level would allow activity to spill into the open space, and the open space to visually expand into the lobby area.

2 Through site link

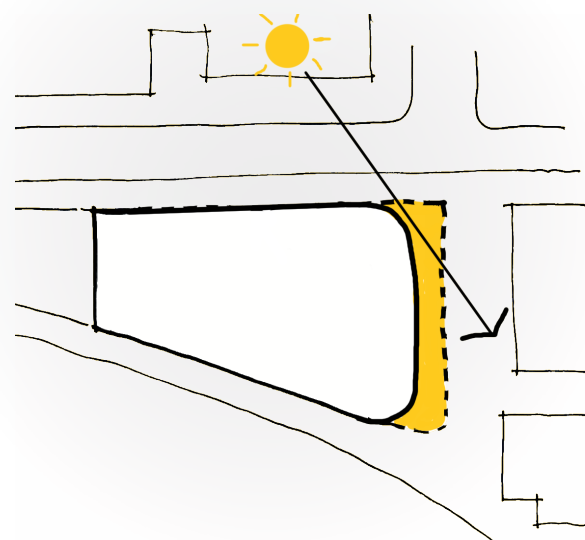
The ground floor would provide permeability through the site via lobbies during business hours. Escalators would provide a convenient means of negotiating the steep terrain.

3 Biophilia and Workplace Design

The podium roof as well as a number of special floors within the tower are designed to provide generous landscaped outdoor spaces. These provide amenity to workers as well as greenery on the building facade.

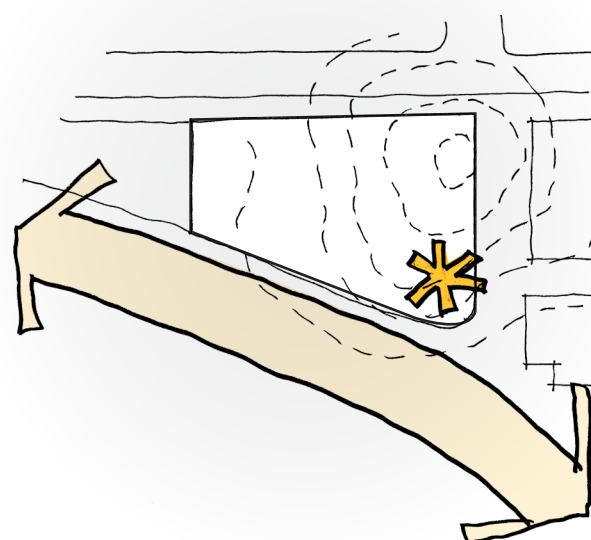
4 Retail activation

Proposed Retail along the pacific highway has the opportunity to activate what is currently a poor pedestrian environment.



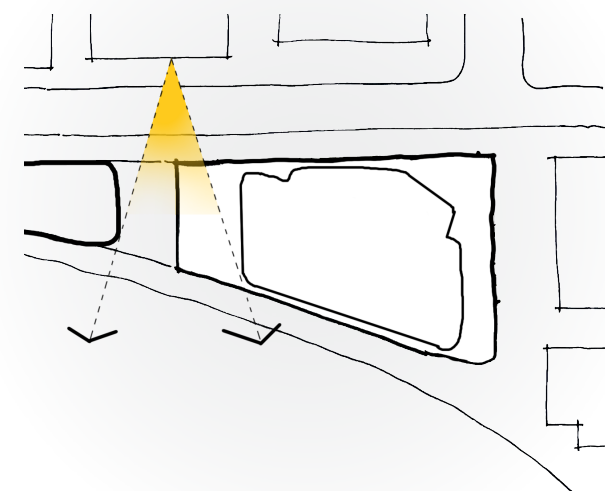
5 Podium setback

The podium footprint has been set back at the corner of Mitchell and Atchison Streets to ensure that no additional overshadowing is created on Mitchell Street Plaza. The setback also provides wider footpaths for outdoor dining opportunities.



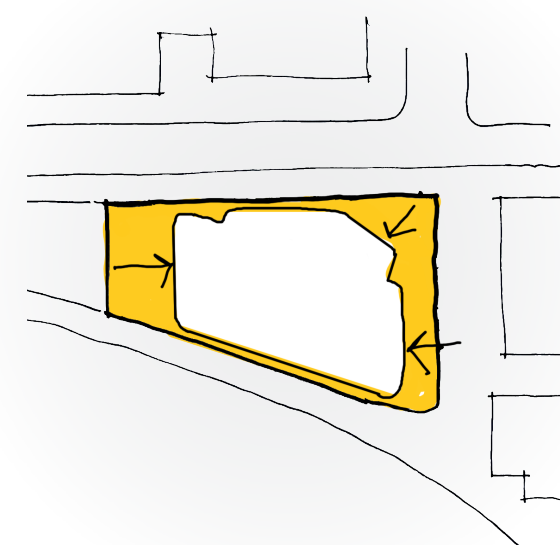
6 Iconic corner

The tower is proposed for the topographic high point of St Leonards, and on the bend in the Pacific Highway. The site is the town centre and gateway, and is a natural location for a tall slender tower marking the vista. The tower proportions have been designed to ensure a sensitive architectural form on the corner.



7 Tower separation and view sharing

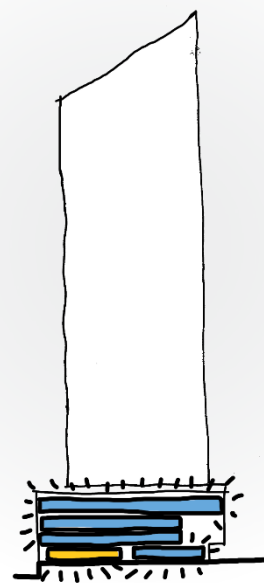
The tower is set 18m back from the Western boundary to ensure separation with the proposed redevelopment of neighbour at 619-621 Pacific highway, and to reduce visual 'tower crowding'



8 Tower and podium articulation

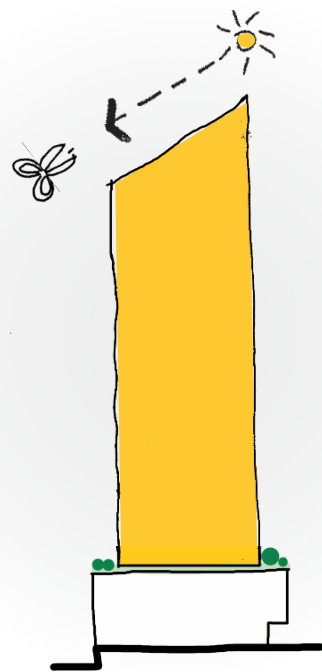
The tower form is set back from the podium, and articulated up the tower elevation with sky-gardens.

Architectural key moves



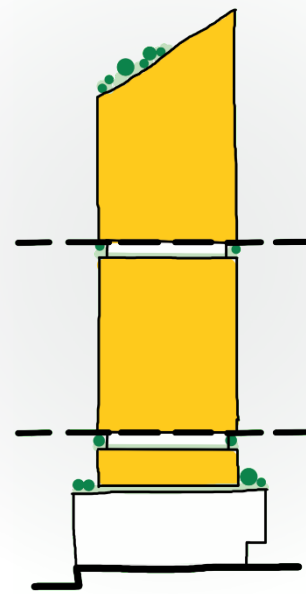
1 The podium

Proposed podium uses will be clearly expressed on the outside of the building. Double height spaces in the lobby zones will provide articulation on the facade and provide opportunities for collaborative working environments that interfacing with the public domain.



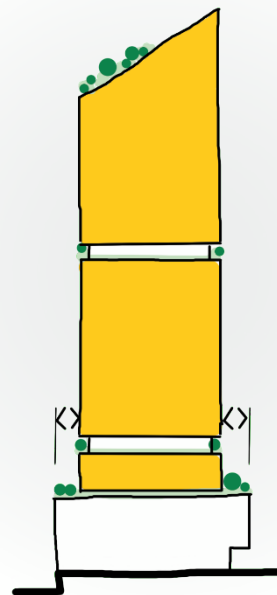
2 Building form

The building envelope has been determined by shadow modelling, to ensure that there is no additional overshadowing to Newlands back. The sloped crown enhances the elegant form of the tower in relation to natural topography.



3 Proportions

By splitting the tower form into 2 distinct elements- core and workplace, the bulk is reduced and an elegant form created. The building articulation clearly defines the podium and tower, which is further articulation through location of special floors with sky-garden and plant-room elements.



4 Setbacks

The tower is set back from podium edges to reduce its apparent bulk and scale when viewed from ground level.

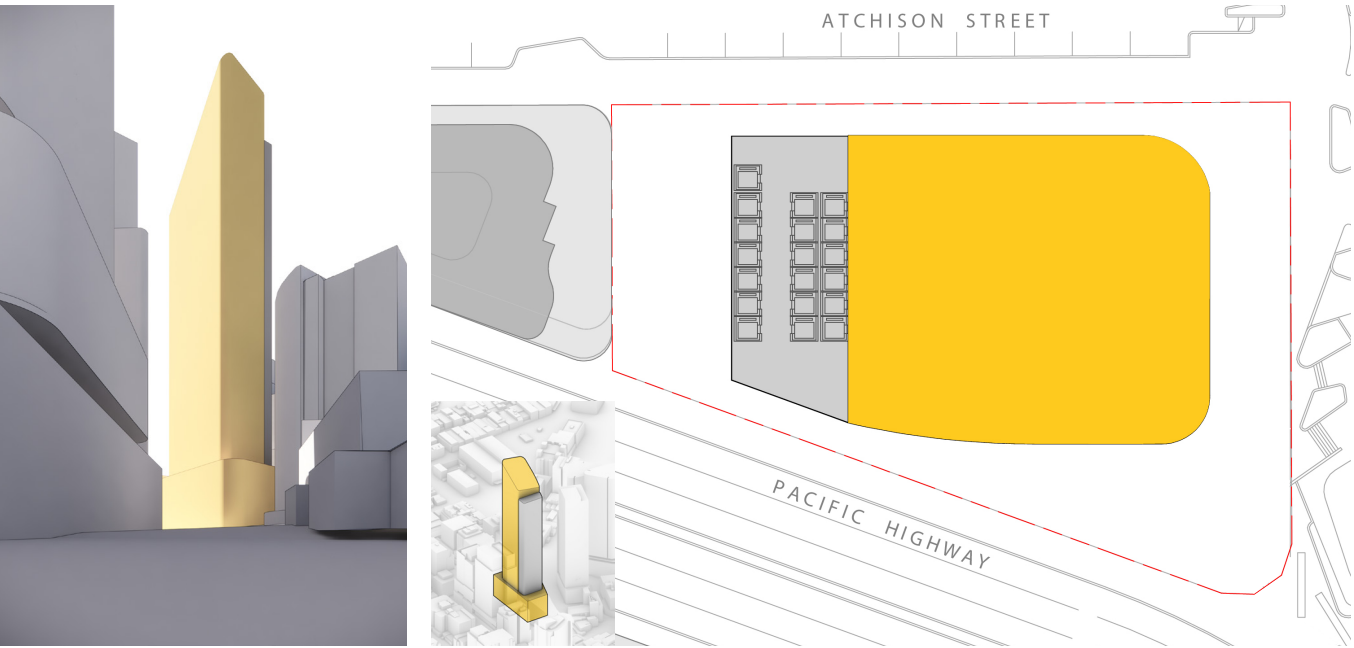


4.3 Option summary

A number of tower configurations were tested to respond to the design principles and site constraints while achieving a feasible commercial building. These include:

- Testing different core locations, environmental outcomes and core location feasibility with the sloped crown, as well as impact on views available from floors
- Testing floor-plate types and flexibility for multiple tenancies
- Avoiding tower crowding

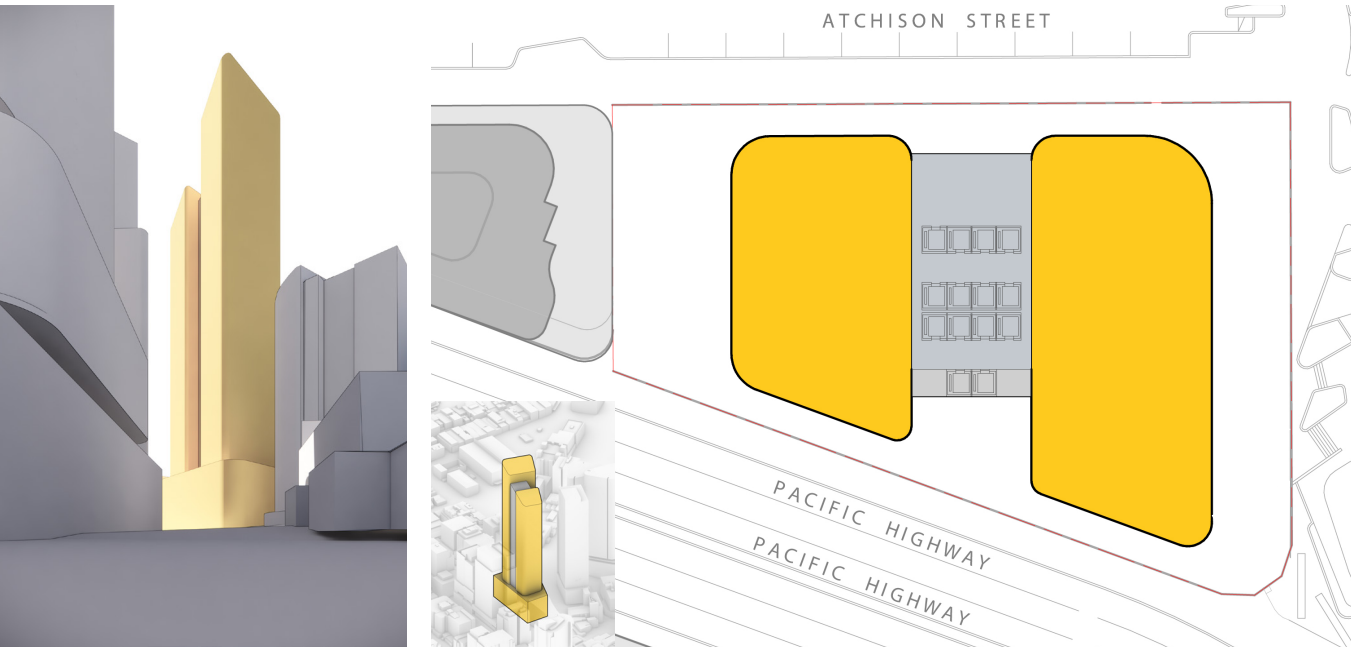
1 Option 1: A tower form running east-west



⊗	⊕	⊗	⊕
Maximised height to solar envelope	Optimised floor-plate connectivity	Optimised floor-plate sub-divisibility	Optimised View and environmental performance

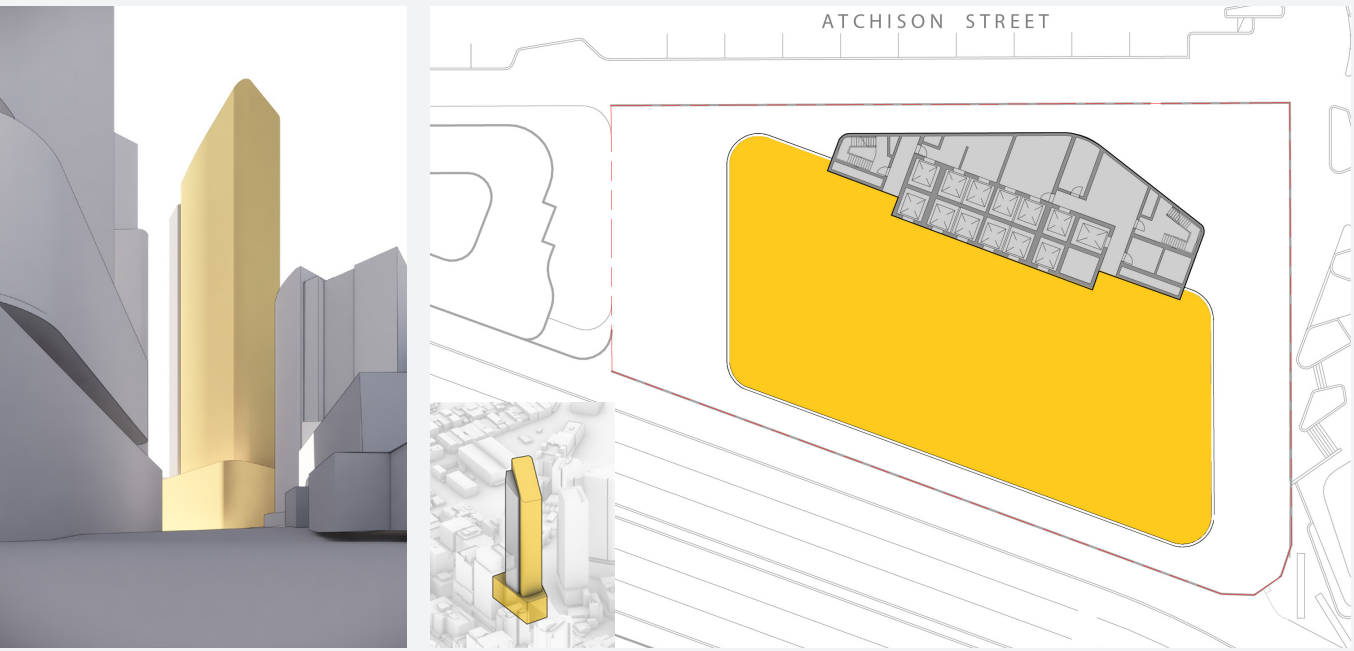
- Achieves minimum separation and setback requirements.
- Side core results in clear floor-plate with solid façade against the neighbouring tower.
- Large north façade would require high performing solution to deal with heat gain and glare.
- The core location is positioned in the lowest part of the envelope which cannot be maximized in terms of height, and therefore cannot serve the top floors
- The long floor-plate will result in loss of NLA if it is required to be subdivided.

2 Option 2: Split tower form with shorter floor plate to the east



<div><div></div><div>+</div></div>	<div><div></div><div>×</div></div>	<div><div></div><div>+</div></div>	<div><div></div><div>×</div></div>
Maximised height to solar envelope	Optimised floor-plate connectivity	Optimised floor-plate sub-divisibility	Optimised View and environmental performance
<div><div></div><div>– Achieves good articulation of tower form with appropriate floor-plate efficiency.</div><div>– Only part of the floor-plate will achieve good views and amenity with large zone obscured by core, resulting in poor quality to western workplace zone.</div><div>– The floor-plate will feature excellent sub-divisibility, however horizontal connectivity is quite poor.</div><div>– Lift core is entirely positioned in the proposed zone of influence for the Sydney Metro.</div></div>			

3 Option 3 (Preferred): Tower located diagonally across the site



<div><div></div><div>+</div></div>	<div><div></div><div>+</div></div>	<div><div></div><div>+</div></div>	<div><div></div><div>+</div></div>
Maximised height to solar envelope	Optimised floor-plate connectivity	Optimised floor-plate sub-divisibility	Optimised View and environmental performance
<div><div></div><div>– Achieves appropriate articulation of the building mass with lift core located in optimal location given the proposed zone of influence for the Sydney Metro.</div><div>– The north core provides excellent solar protection with the entire floor-plate enjoying good views.</div><div>– The floor-plate has excellent efficiency, connectivity and when subdivided the NLA loss is minimised.</div><div>– The core is positioned in such a way that with the sloping crown, the building envelope can be maximized through a stepped floor-plate.</div></div>			



5.0 The indicative concept design

5.1 Indicative design

5.2 Indicative floor plan

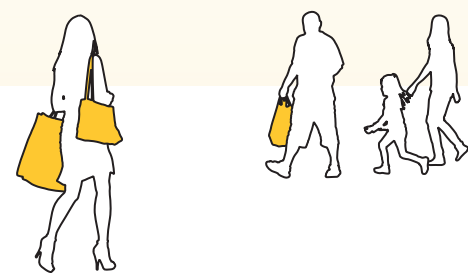
5.3 Indicative sections

5.4 Floor-plate analysis



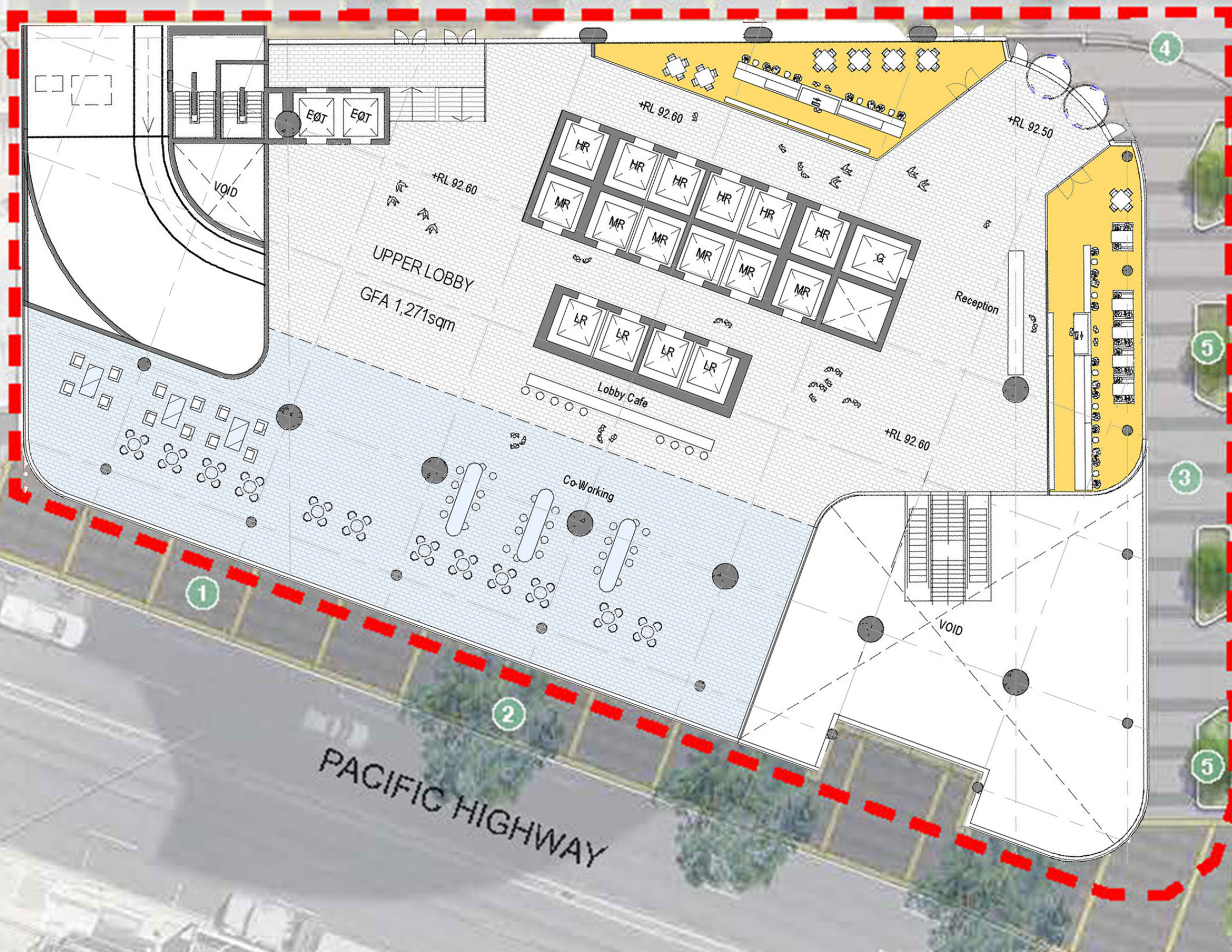
5.1 Indicative concept design

601 Pacific Highway will be one of the key commercial buildings for St Leonards Town Centre. The indicative concept design results in a design outcome which will strengthen the town centre with active and engaging ground floors and provide an iconic tower appropriate to its strategic location.



ATCHISON STREET

(existing paving work to be retained)



MITCHELL STREET
(existing work to be retained)



Indicative concept render - Atchison Street corner looking west with Mitchell St Plaza to the left



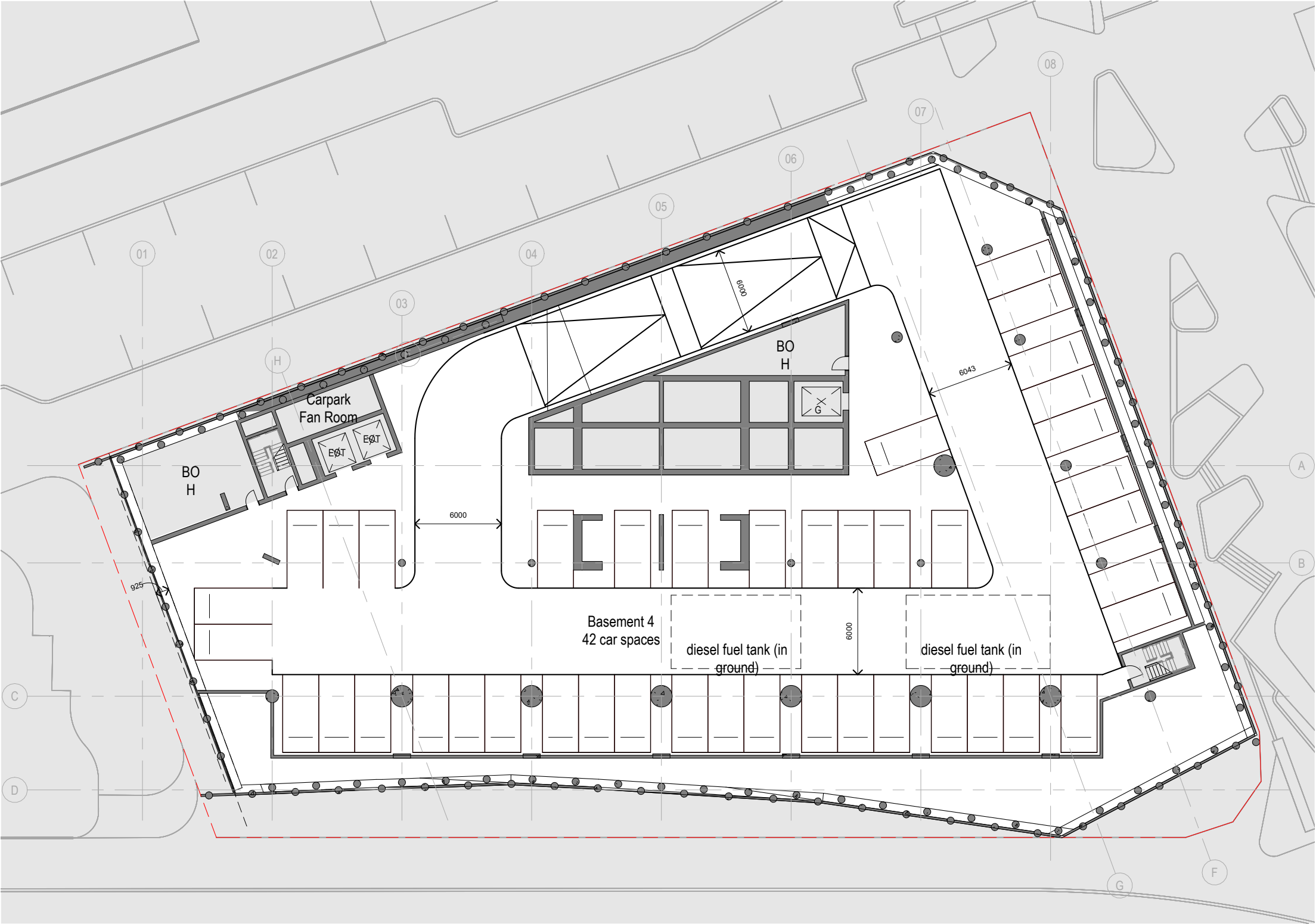
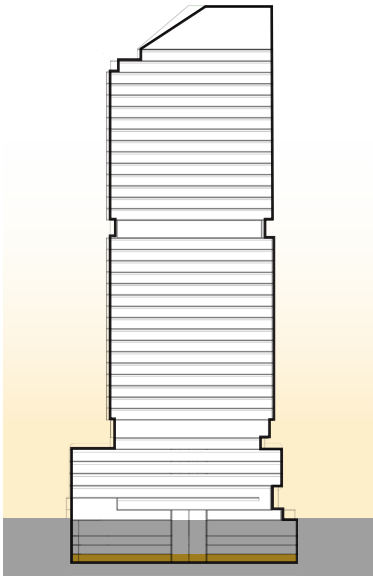
Indicative concept render -looking north-west along the Pacific Highway



Indicative concept render - Lobby view from Pacific Highway, looking North, with Mitchell St Plaza to the right

5.2 Indicative floor plan

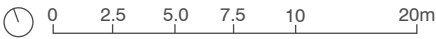
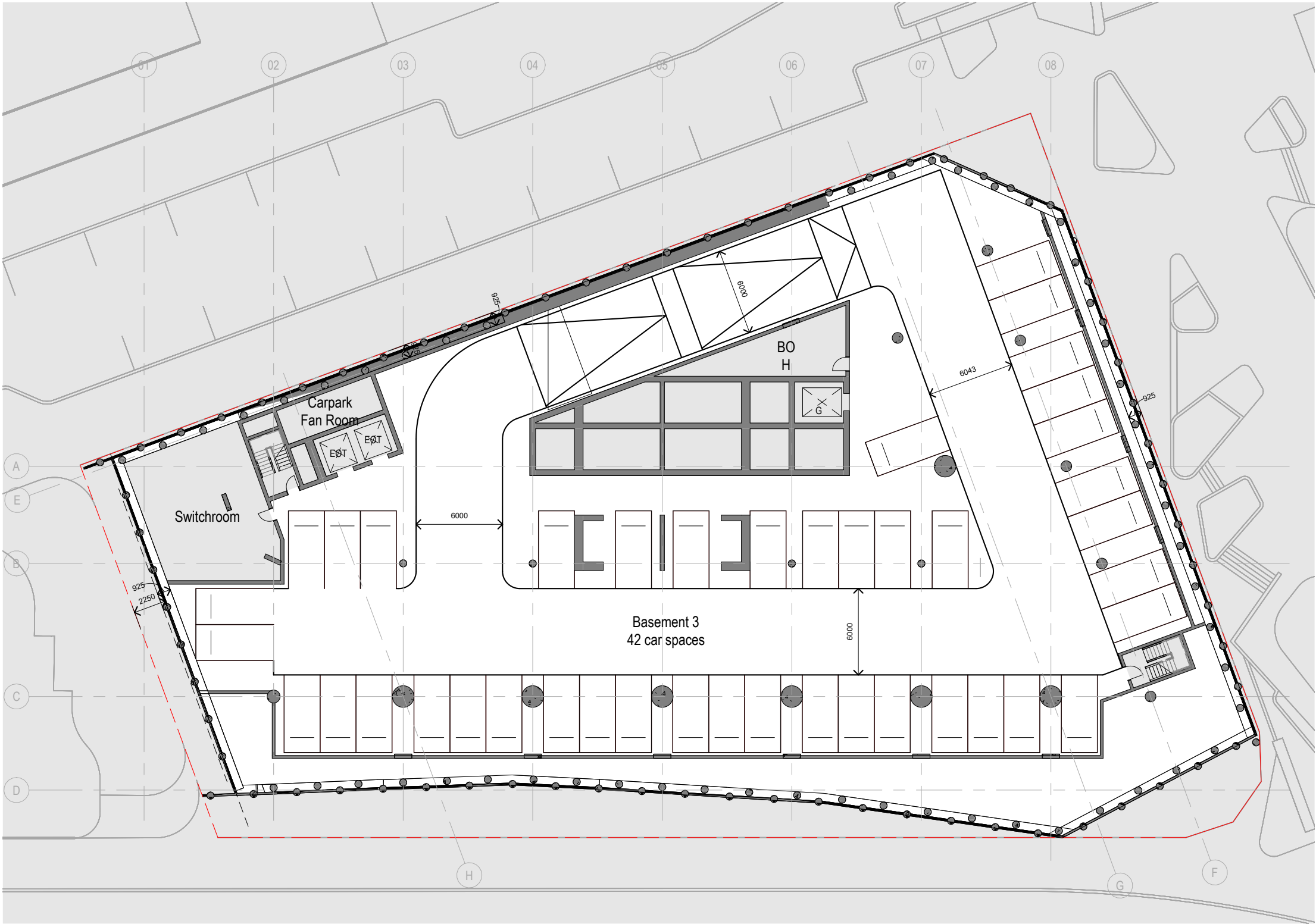
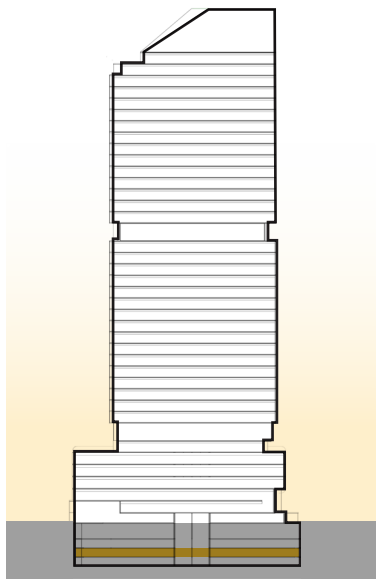
Indicative floor plan - Level B4 Basement



Indicative basement 4 plan

Indicative floor plan

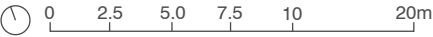
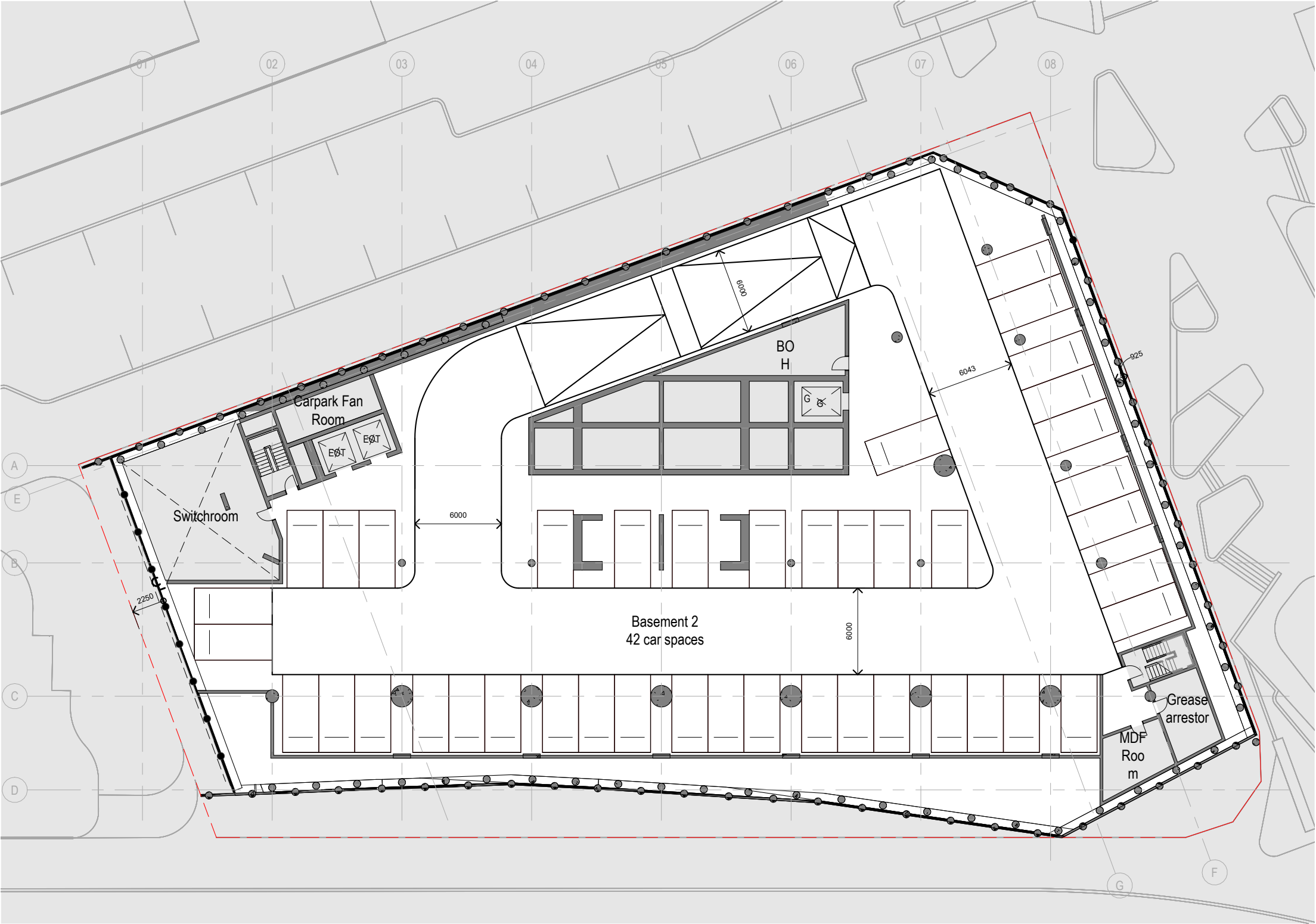
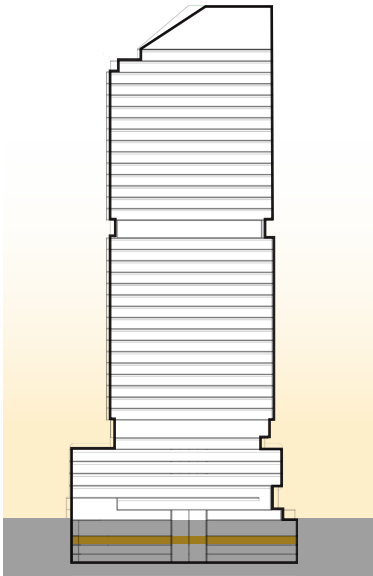
Indicative floor plan - Level B3 Basement



Indicative basement 3 plan

Indicative floor plan

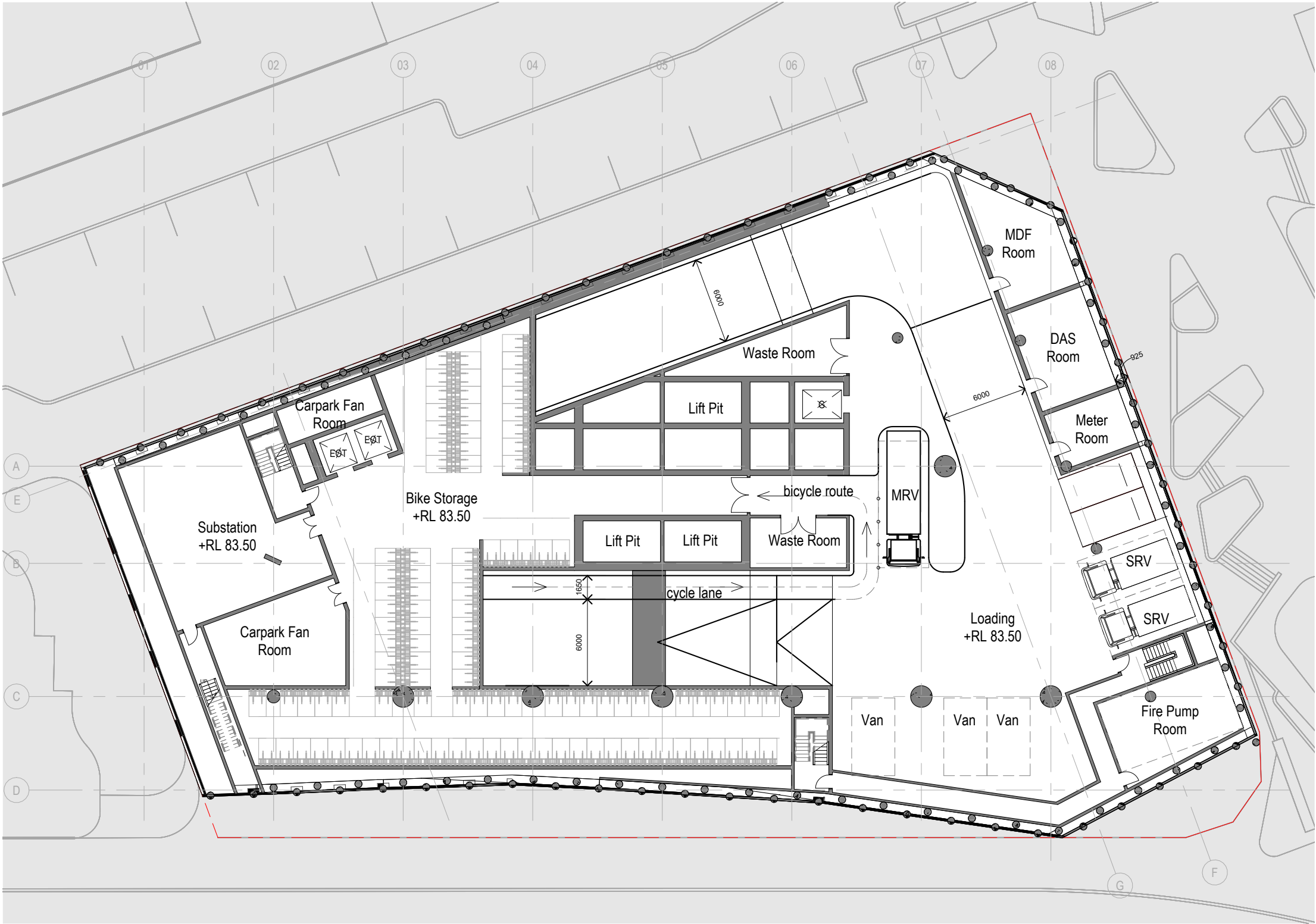
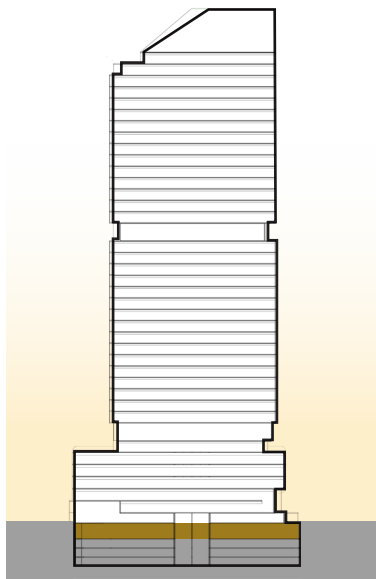
Indicative floor plan - Level B2 Basement



Indicative basement 2 plan

Indicative floor plan

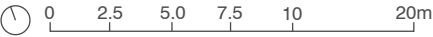
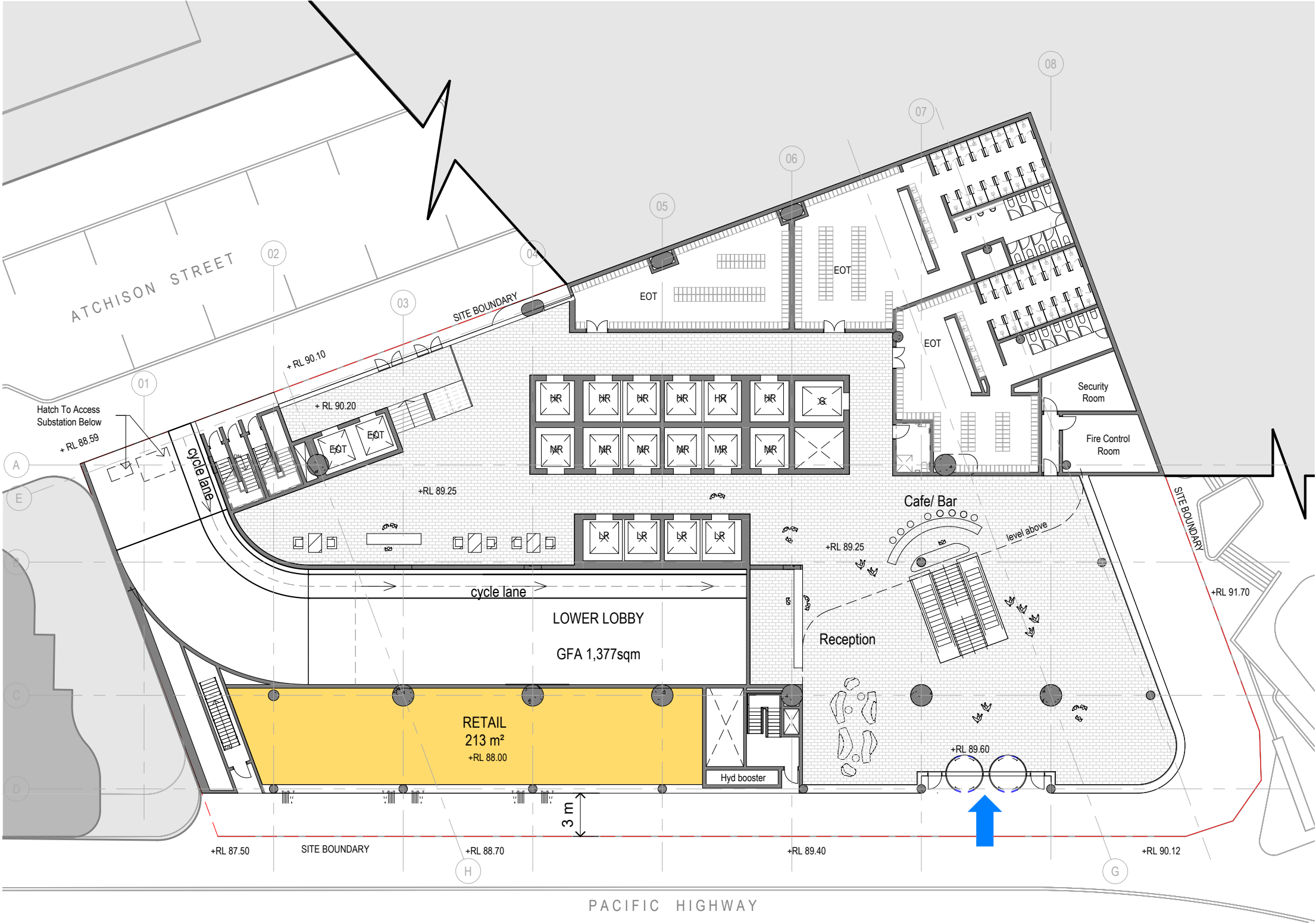
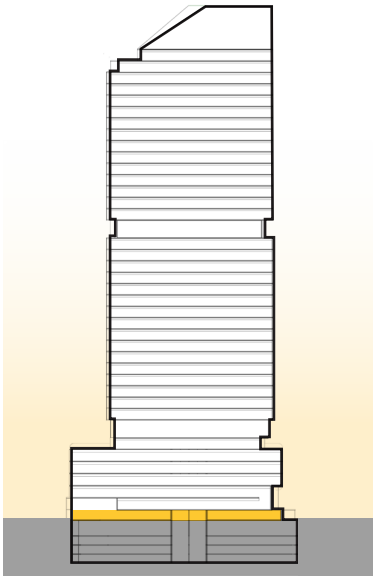
Indicative floor plan - Level B1 Basement



Indicative basement 1 plan

Indicative floor plan

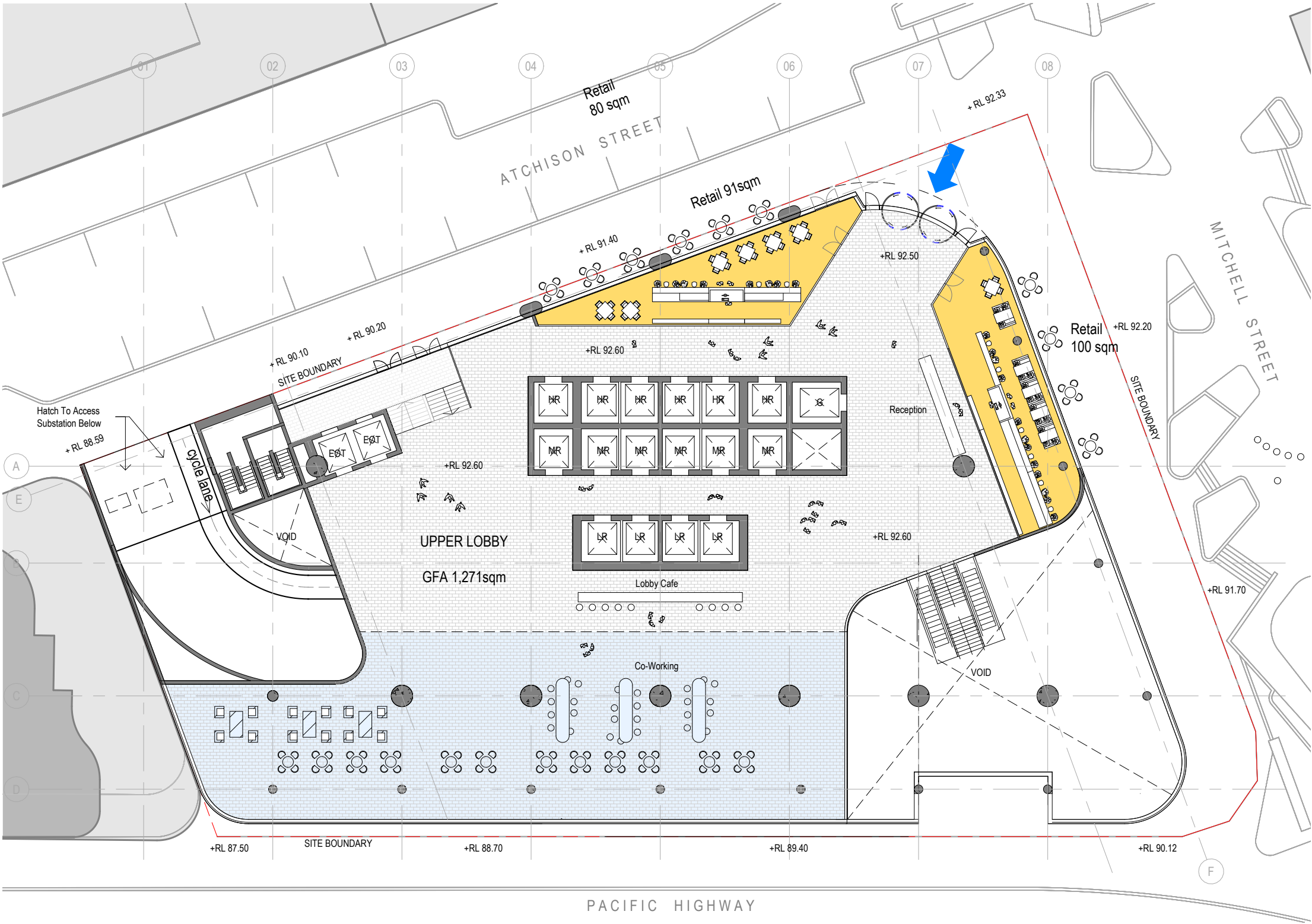
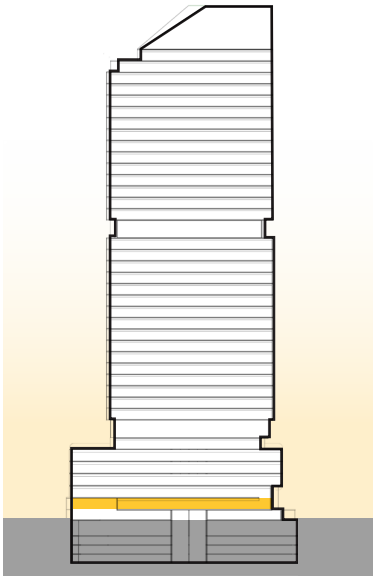
Indicative floor plan - Ground Level
Lower Lobby Plan



Indicative ground floor plan- Pacific Highway level

Indicative floor plan

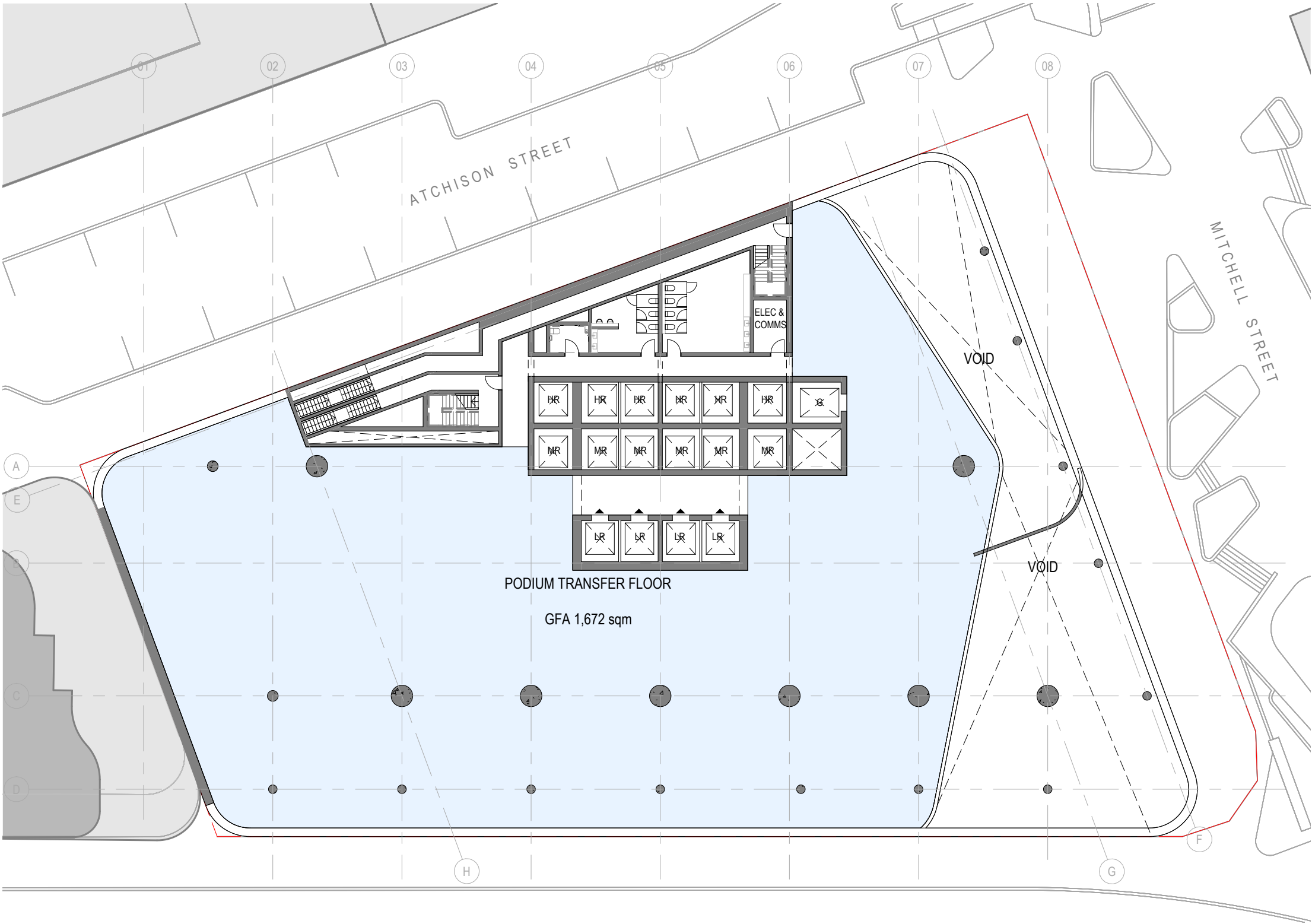
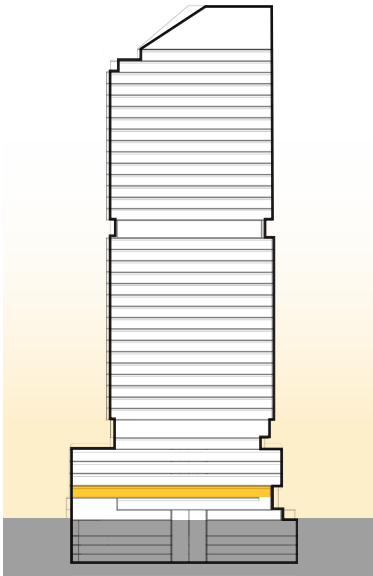
Indicative floor plan - Level 01
Upper Lobby Plan



Indicative ground floor plan- Atchison St and Mitchell St Plaza level

Indicative floor plan

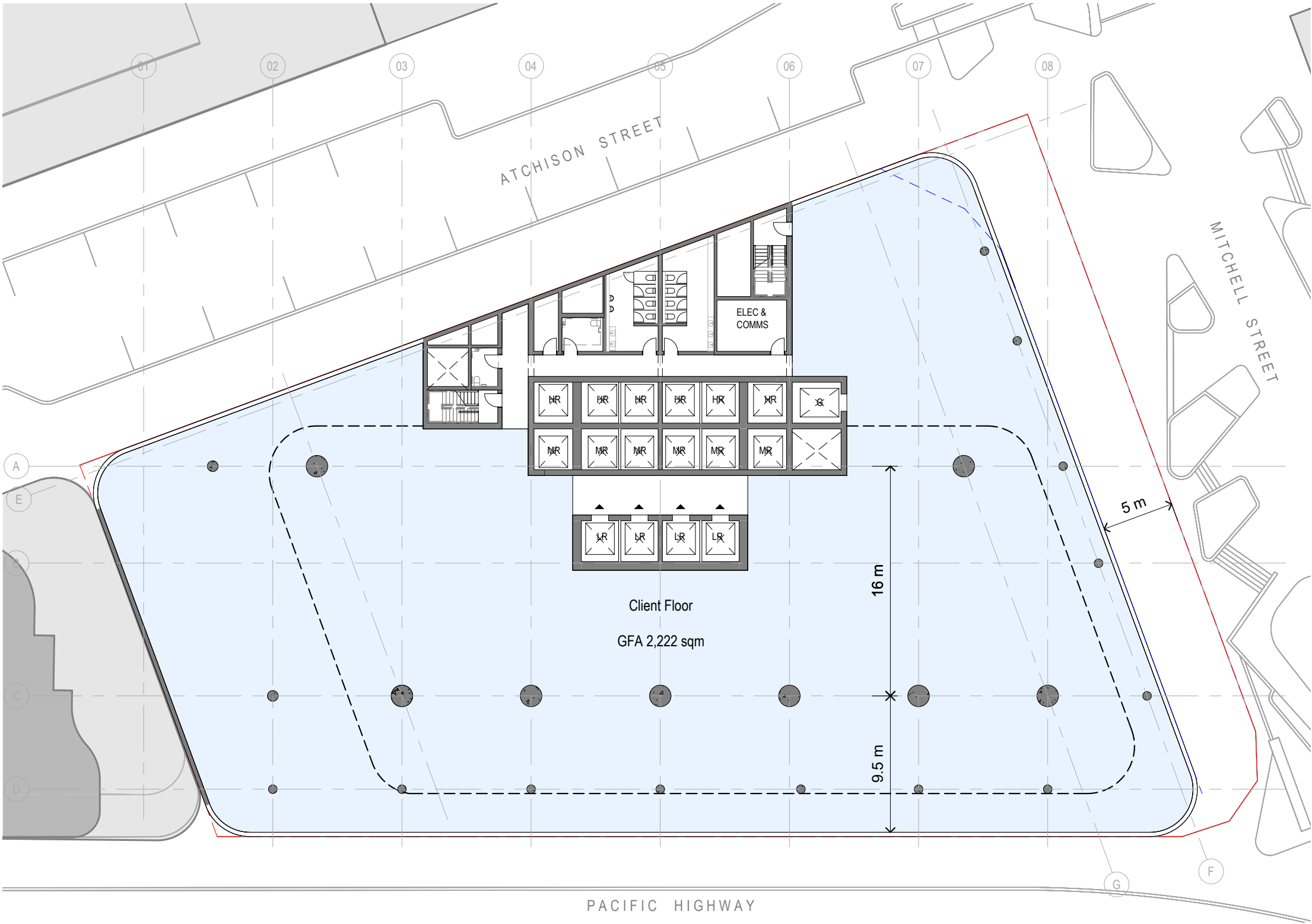
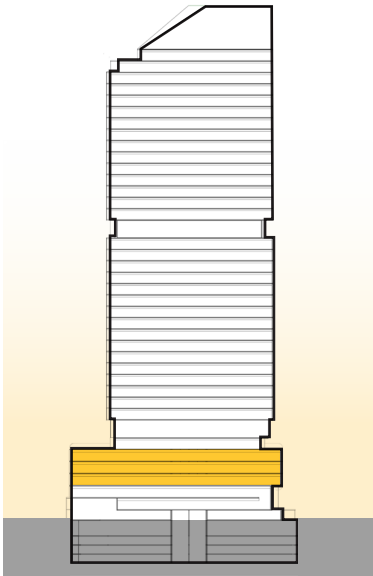
Indicative floor plan - Level 02
Podium Plan



Indicative podium transfer floor plan

Indicative floor plan

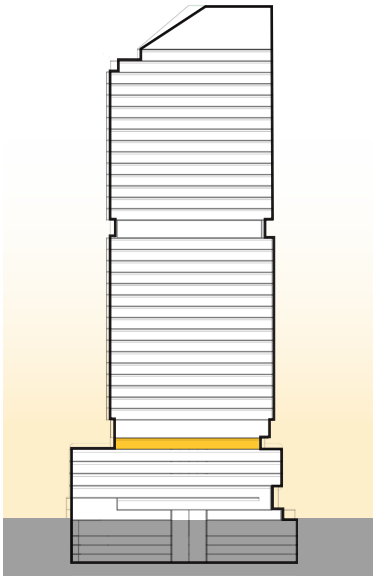
Indicative floor plan - Level 03
Typical Podium Plan



Indicative typical podium client floor

Indicative floor plan

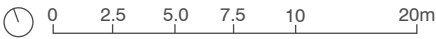
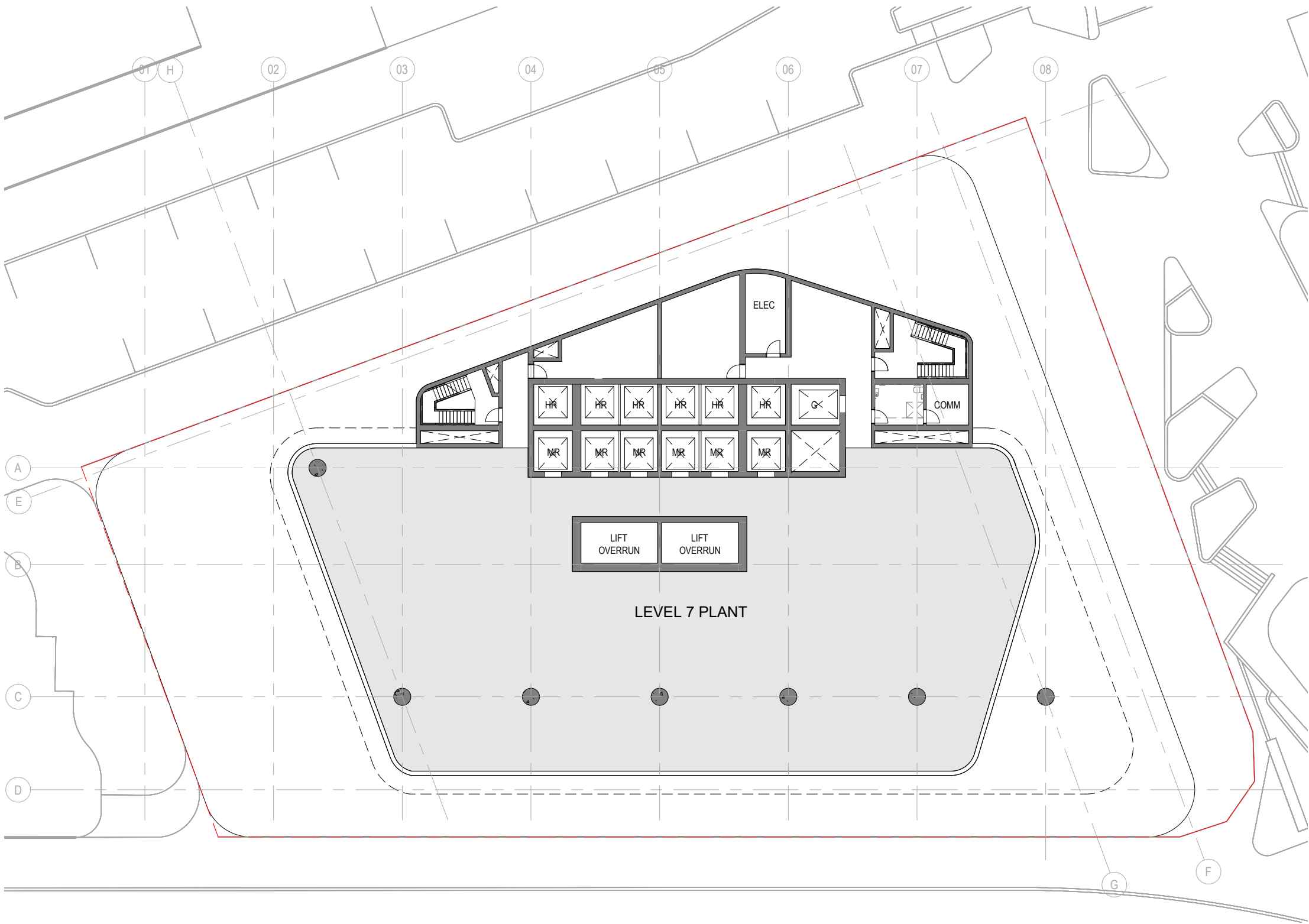
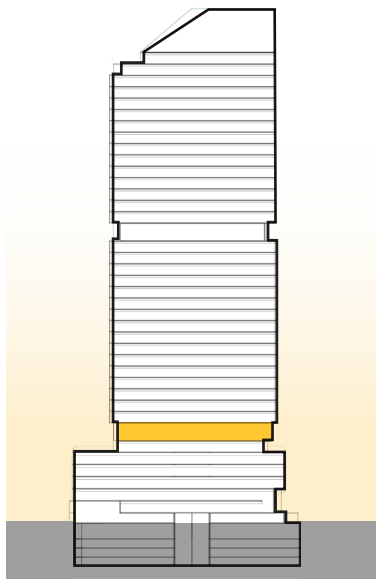
Indicative floor plan - Level 06
Client Floor



Indicative L06- special tower client floor

Indicative floor plan

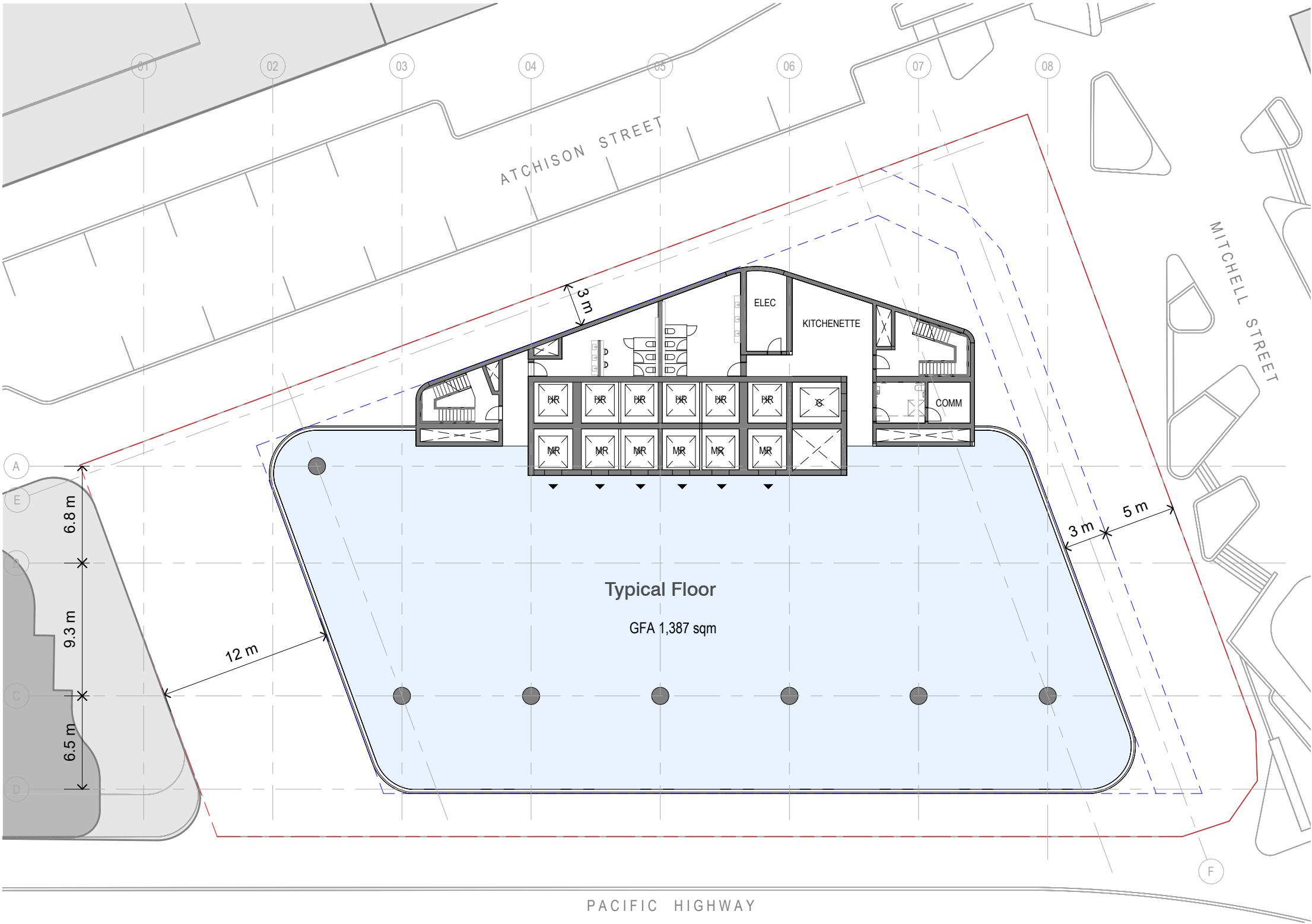
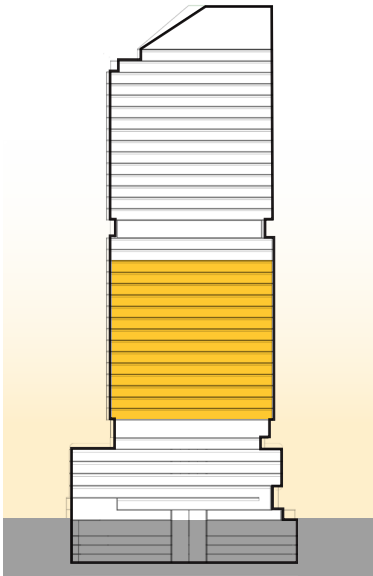
Indicative floor plan - Level 07
Lower Plant



Indicative Level 07 lower plant plan

Indicative floor plan

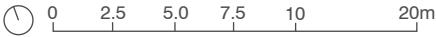
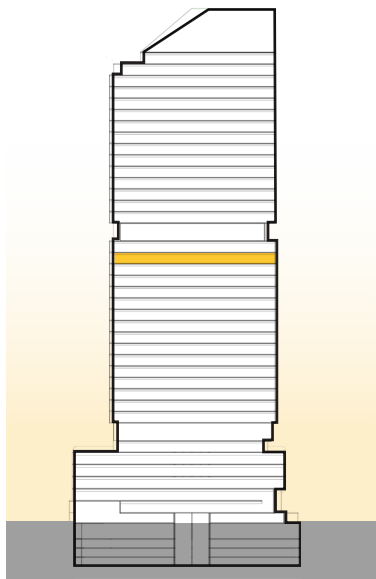
Indicative floor plan - Level 08-21
Typical Mid Rise Level



Indicative typical mid rise floor plan

Indicative floor plan

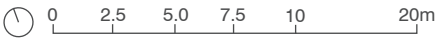
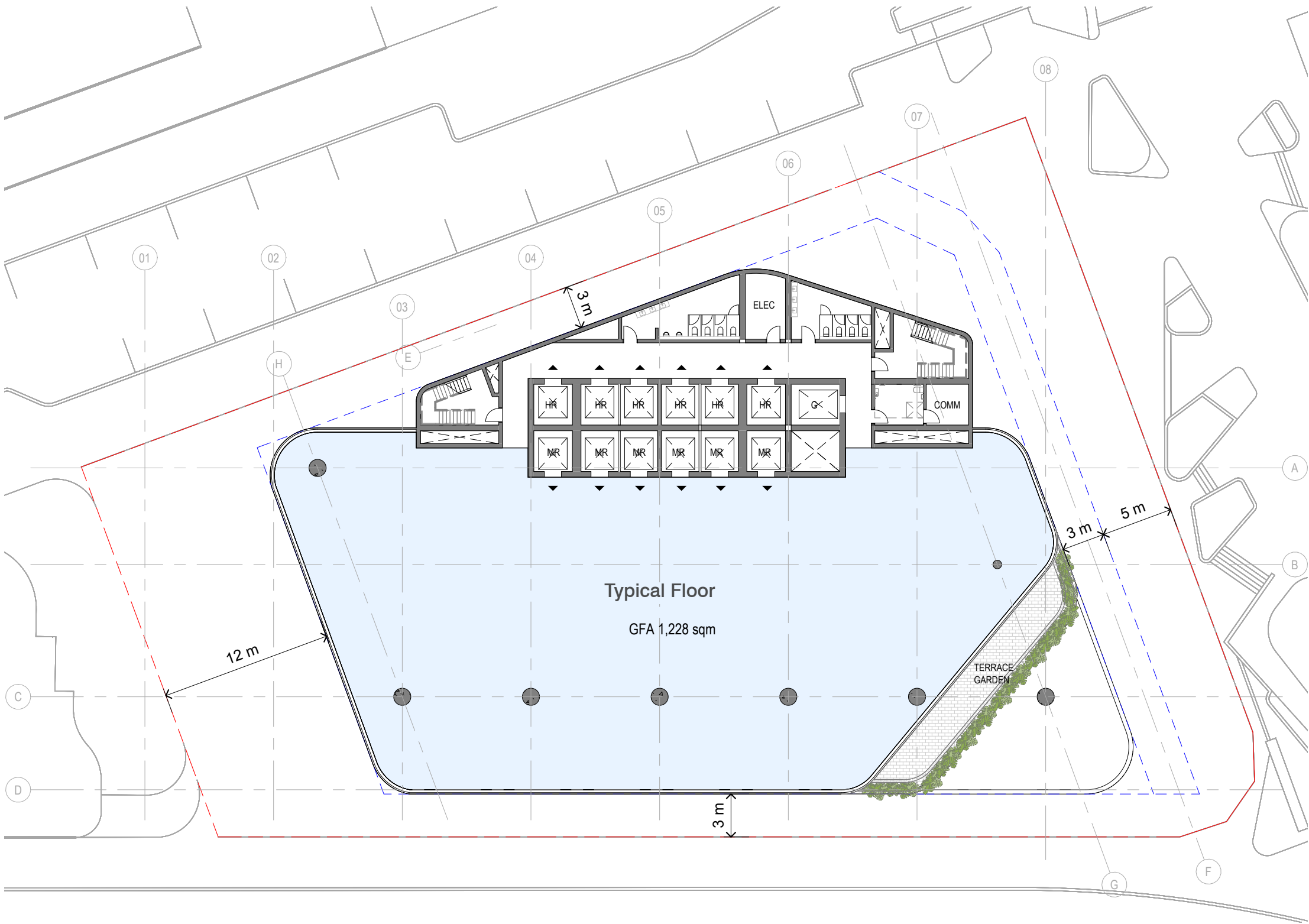
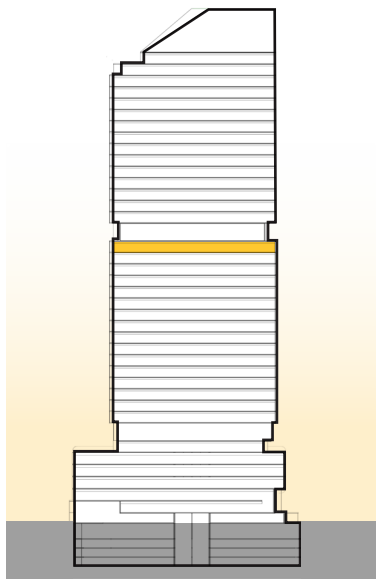
Indicative floor plan - Level 22
Client Floor



Indicative L22- special client floor plan with sky-garden

Indicative floor plan

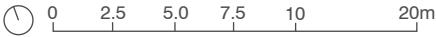
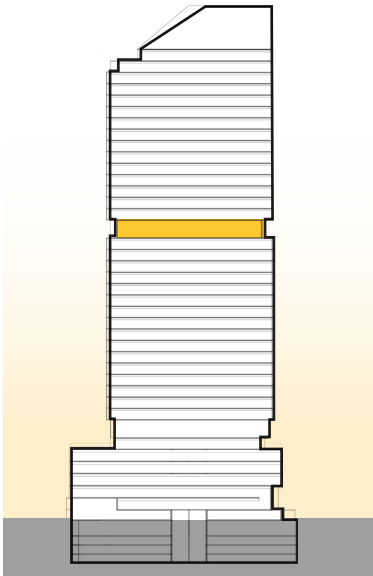
Indicative floor plan - Level 23
Client Floor



Indicative L23- special client floor plan with sky-garden

Indicative floor plan

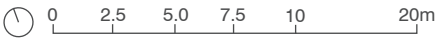
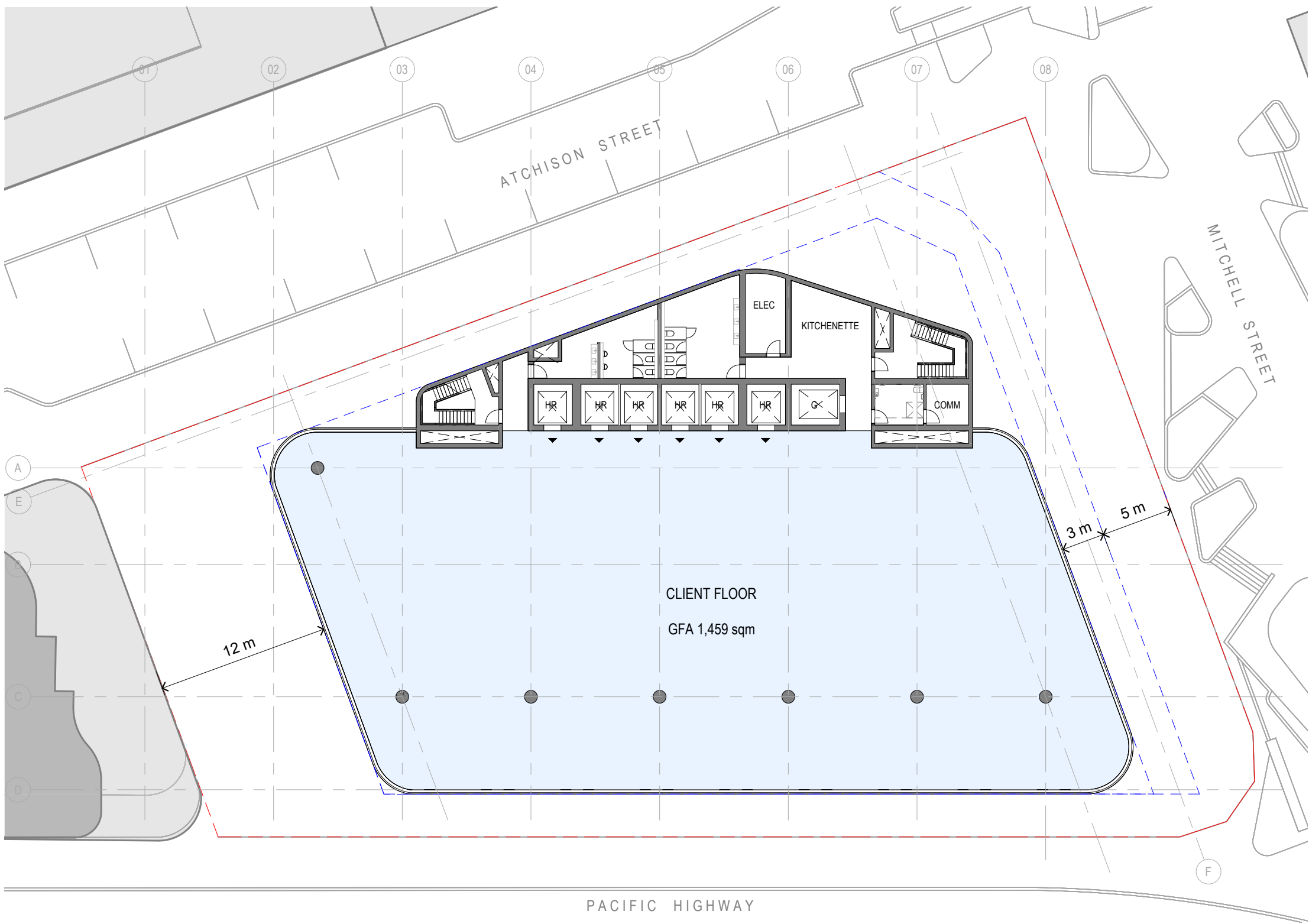
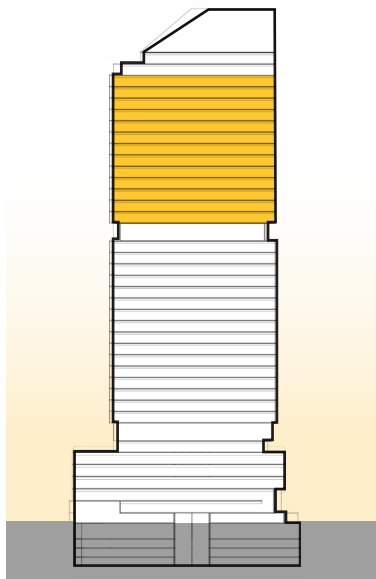
Indicative floor plan - Level 24
Upper Plant



Indicative L24- indicative upper plant

Indicative floor plan

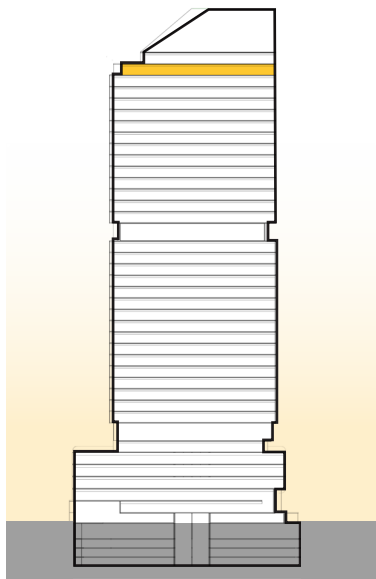
Indicative floor plan - Level 25-37
Typical High Rise Plan



Indicative typical high rise plan

Indicative floor plan

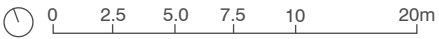
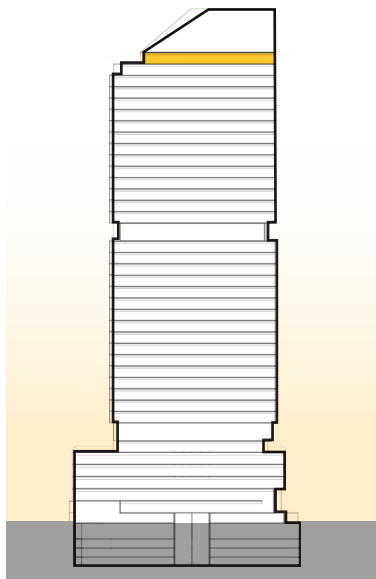
Indicative floor plan - Level 38
Terrace Floor



Indicative level 38 plan

Indicative floor plan

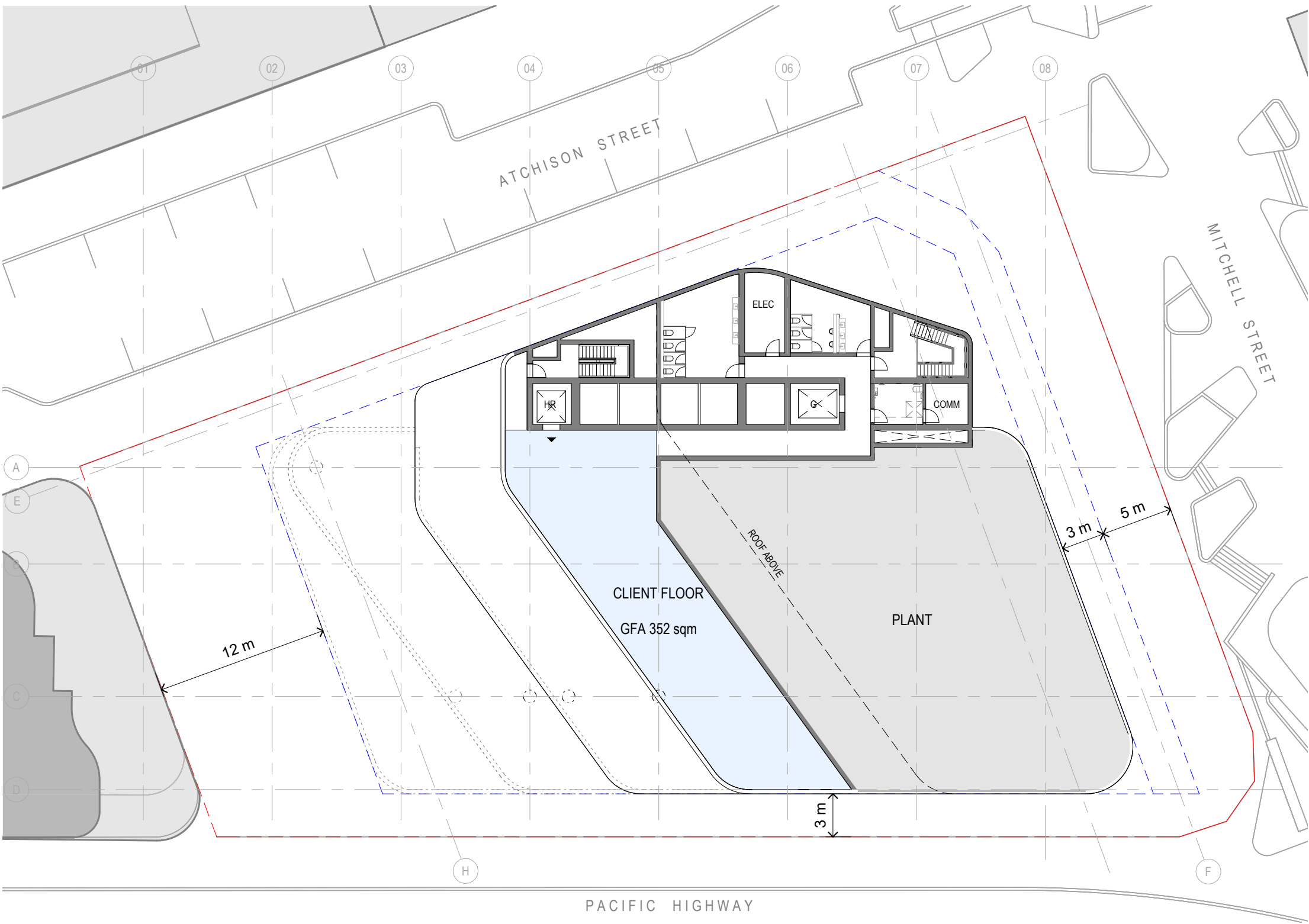
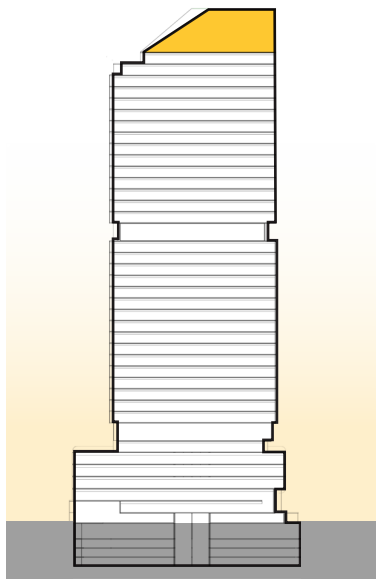
Indicative floor plan - Level 39
Terrace Floor



Indicative level 39- terrace floor plan

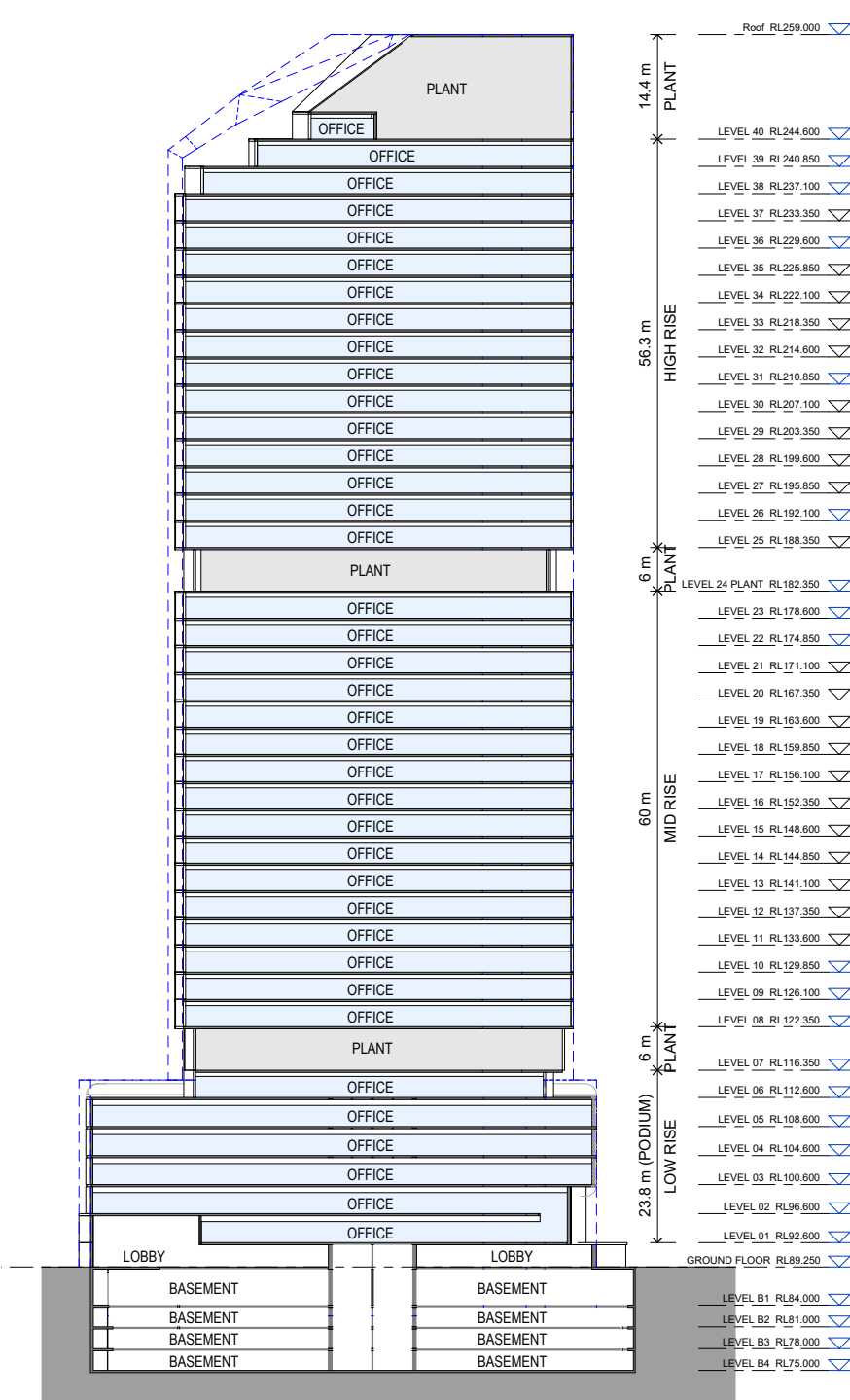
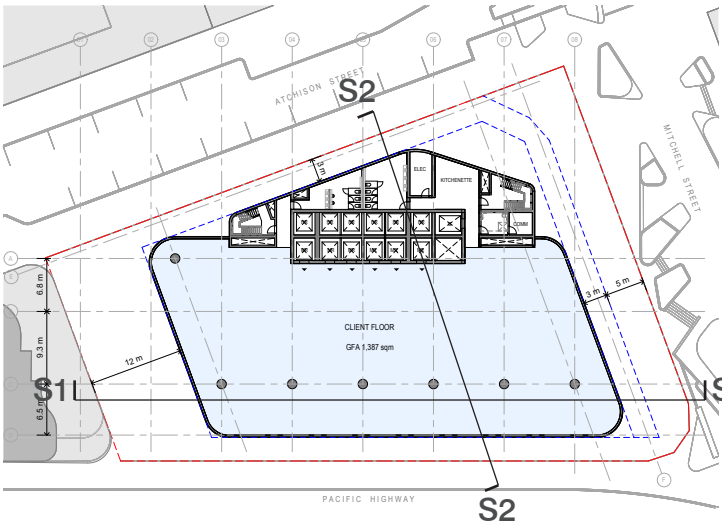
Indicative floor plan

Indicative floor plan - Level 40
Roof Plant

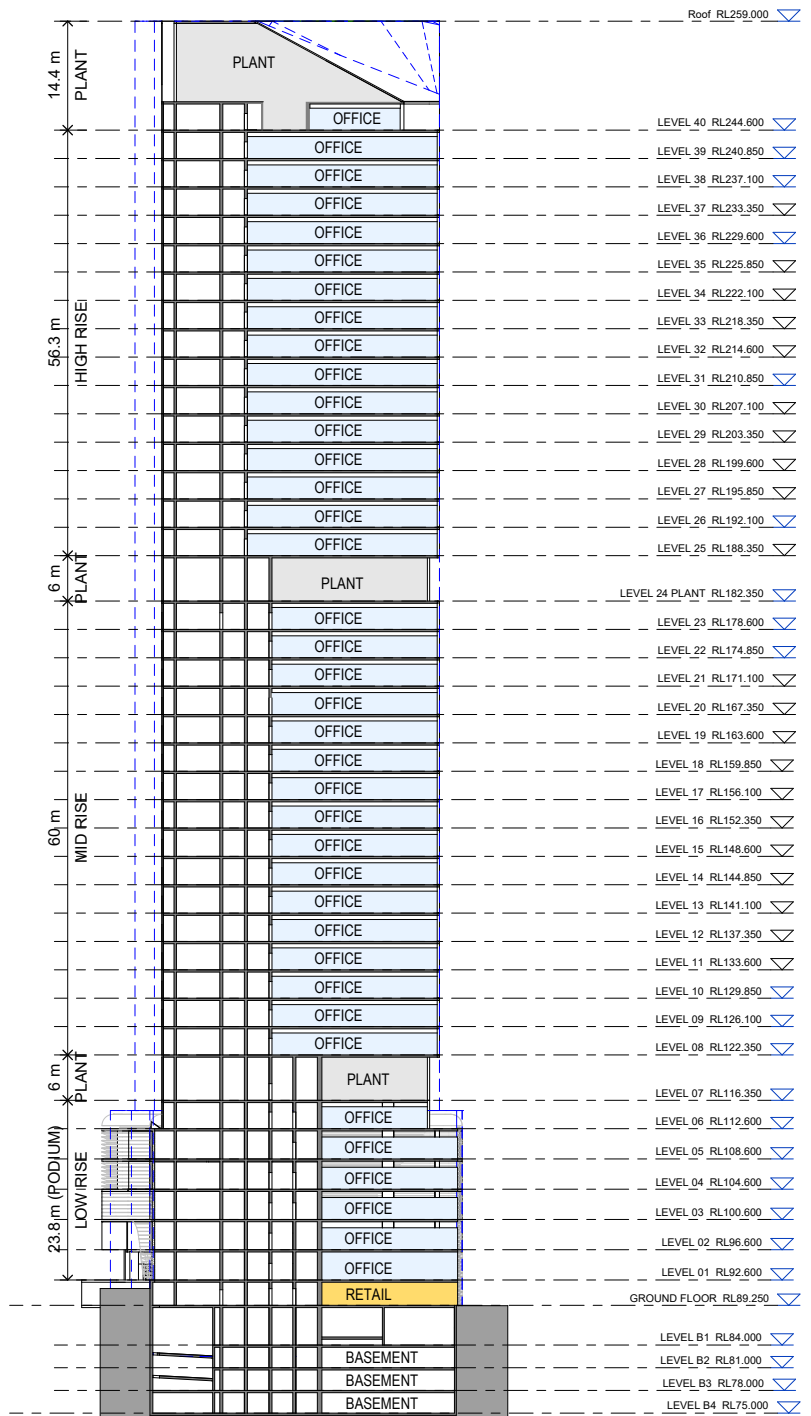


Indicative level 41- Roof plant

5.3 Indicative Sections



section1 showing the permissible envelope in blue dotted line



section2 showing the permissible envelope in blue dotted line

6.0 Assessment

6.1 Shadow analysis

6.2 Visual impact

6.3 Aviation height limits

6.1 Solar amenity

The site is located within the North Sydney Planning Area. All relevant planning strategies have been taken into consideration in developing the reference envelope. These documents include Greater Sydney Region Plan, North District Plan, the North Sydney Local Strategic Planning Statement (LSPS) 2020, St Leonards and Crows Nest Station Precinct Interim Statement, St Leonards/Crows Nest Planning Study, St Leonards Place-making and Design study and the St Leonards Crows Nest 2036 Plan.

The St Leonards Crows Nest 2036 Plan nominates solar access controls (see solar access map and controls, right) for the St Leonards and Crows Nest area which stipulate:

- No additional shadow to Newlands Park and Ernest Place from 10am-3pm, in mid-winter (21 June).
-
- No additional shadow to Mitchell Street Plaza and Willoughby Road from 11:30am-2:30pm in mid-winter (21 June).
- Residential areas inside the precinct boundary are to receive sunlight for at least 2 hours between 9:00am–3:00pm on 21 June.
- Heritage Conservation Areas inside the precinct boundary are to receive sunlight for at least 3 hours between 9:00am – 3:00pm on 21 June.

The following pages illustrate solar testing to each of these protected areas.



Solar Access

- Plan Area
- Railway Line
- Railway Station
- Metro Station
- Existing Open Space
- Potential Open Space
- Waterways
- St Leonards South Rezoning
- Heritage Conservation Area
- Streetscape
- Relevant Park

Public Open Space 10.00am - 3.00pm

- 1 Christie Park
- 2 Newlands Park
- 3 St Leonards South (indicative)
- 4 Propsting Park
- 5 Hume Street Park
- 6 Ernest Place
- 7 Gore Hill Oval
- 8 Talus Reserve

Streetscape 11.30am - 2.30pm

- 9 Mitchell Street and Oxley Streets
- 10 Willoughby Road

Residential Areas 9.00am - 3.00pm

- 11 Residential areas inside boundary (for at least 2 hours)
- 12 Heritage Conservation Areas inside boundary (for at least 3 hours)
- 13 Residential outside boundary (for the whole time between 9am and 3pm)

Solar access map (Source: The St Leonards and Crows Nest 2036 Plan - p38)

6.2 Solar analysis

Newlands Park, Ernest Place and Willoughby Road

The proposal does not create any additional overshadowing to Newlands Park between 10am and 3pm, on 21 June and therefore complies with controls for Newlands Park.

For Willoughby Road and Ernest Place the proposal does not create any additional overshadowing between 10am and 3pm on 21 June, and therefore complies with The St Leonards Crows Nest 2036 Plan which protects Ernest Place from 10.00am-3.00pm and Willoughby Road from 11:30am-2:30pm.



21June 10.00am



21June 11.00am



21June 12.00pm



21June 1.00pm



21June 2.00pm



21June 3.00pm



21June 3.30pm



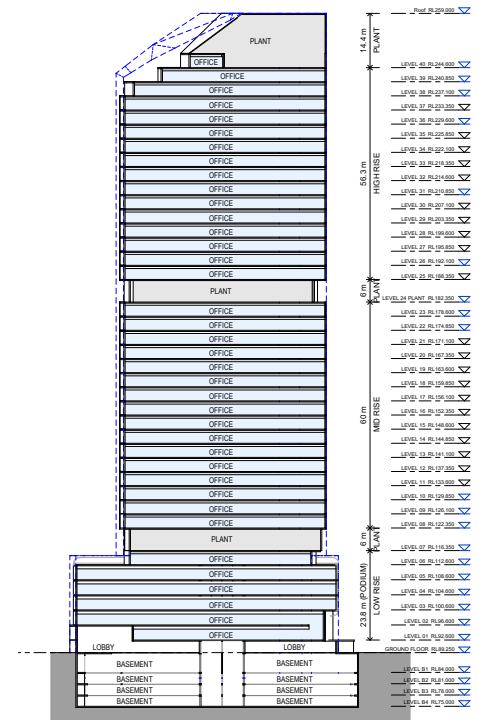
21June 4.00pm

Legend

- Site boundary
- Buildings under construction
- DA Approved/ DA being prepared
- High Likely development (under LUIIP)
- 601 Pacific highway
- Shadow path of building envelope at 601 Pacific highway

Willoughby Road (2pm-3pm)

The maximum envelope has been applied in testing shadows. There is no impact on Willoughby Road between the tested hours.



Section of the new proposal

Legend

- Site boundary
- Buildings under construction
- DA Approved/ DA being prepared
- High Likely development (under LUIIP)
- 601 Pacific highway
- Shadow path of building envelope at 601 Pacific highway



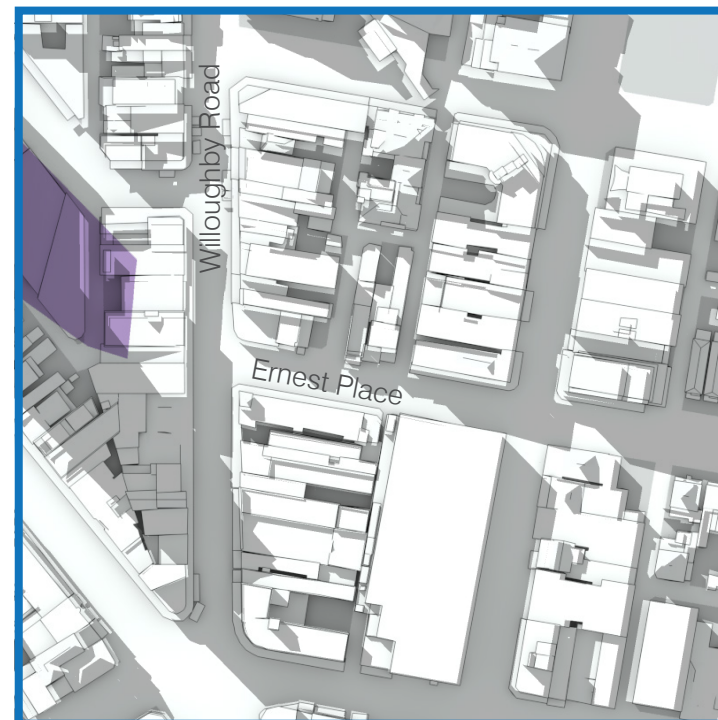
21June 2.00pm



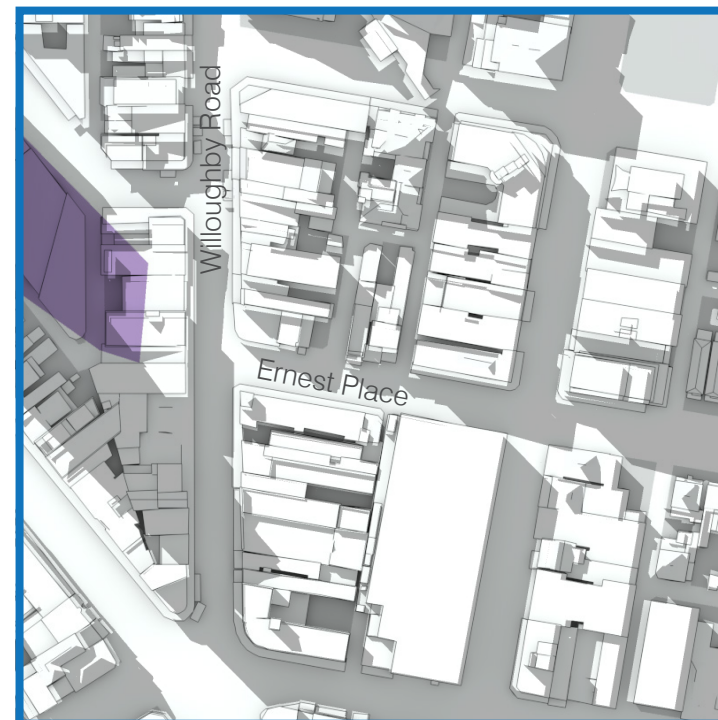
21June 2.30pm



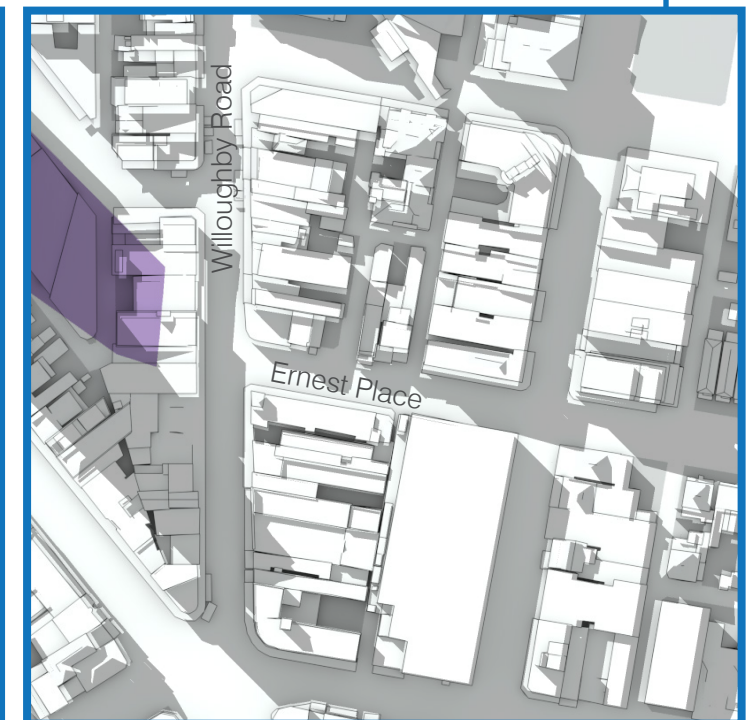
21June 3.00pm



21June 2.58pm (zoomed in)



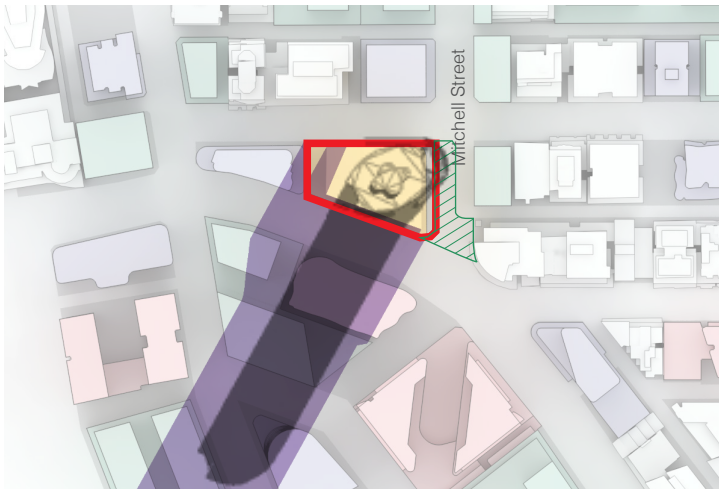
21June 2.59pm (zoomed in)



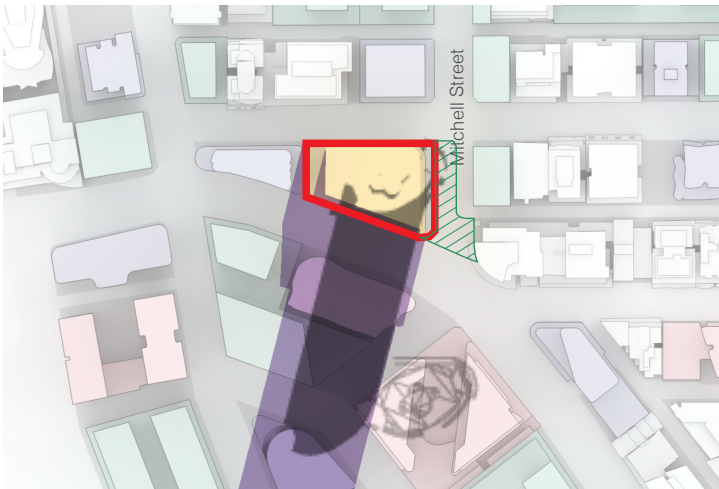
21June 3.00pm (zoomed in)

Mitchell Street Plaza

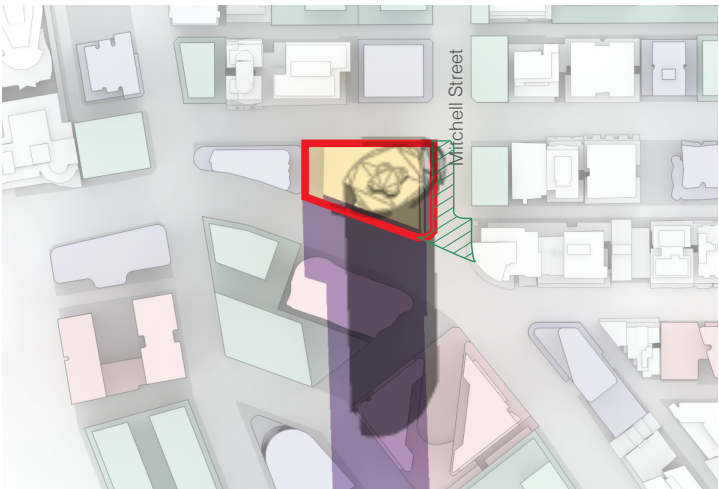
The proposal includes a 5m street setback to Mitchell Street and 3m tower setback above podium resulting in a proposal that does not create any additional overshadowing to Mitchell Street Plaza beyond that created by the existing building, therefore complying with the St Leonards Crows Nest 2036 Plan.



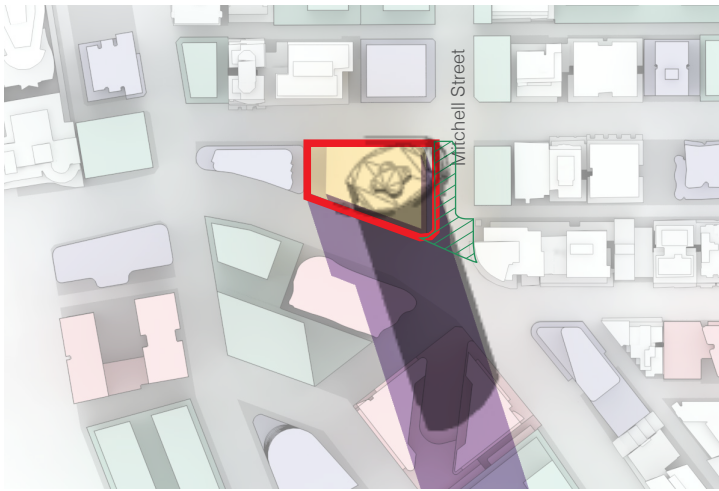
21June 10.00am



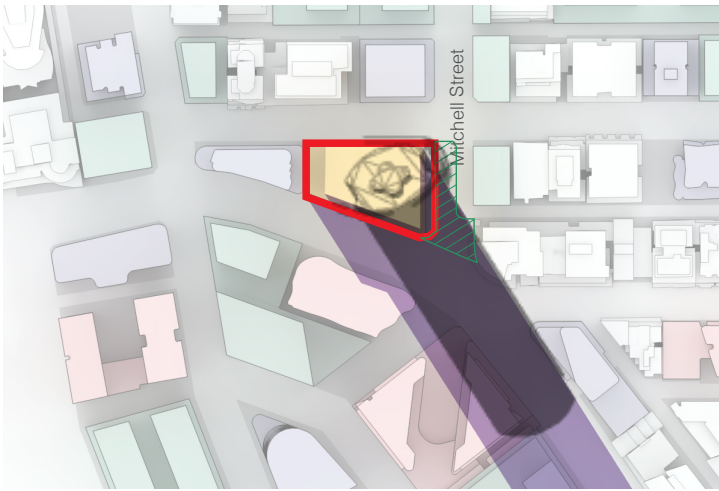
21June 11.00am



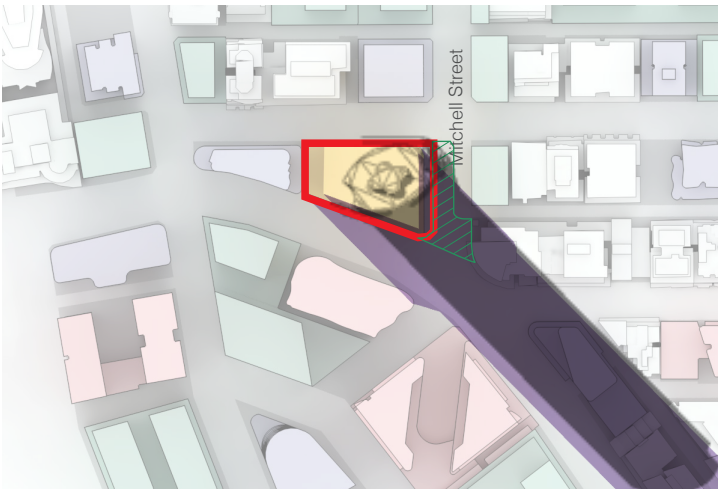
21June 12.00pm



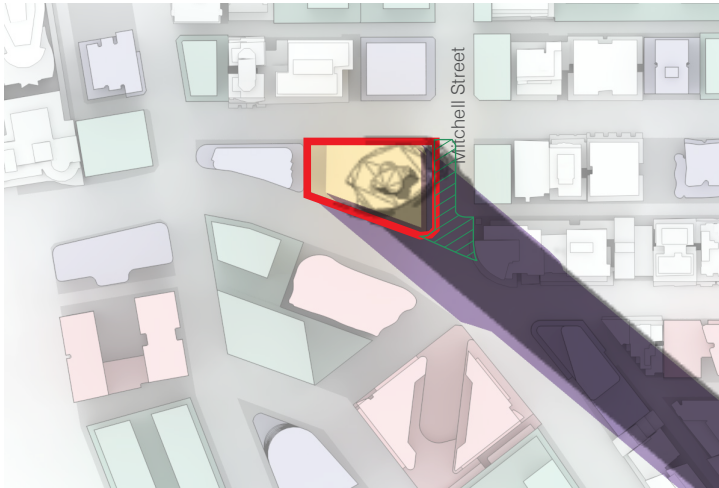
21June 1.00pm



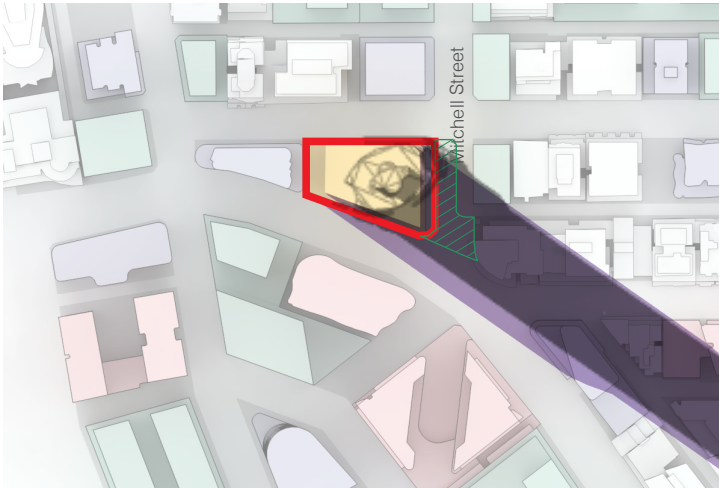
21June 2.00pm



21June 3.00pm



21June 3.30pm



21June 4.00pm

- Legend**
- Site boundary
 - Proposed built form
 - Mitchell street plaza
 - Existing building shadow path
 - Shadow overlap
 - Shadow path of proposed building envelope

6.3 Solar analysis

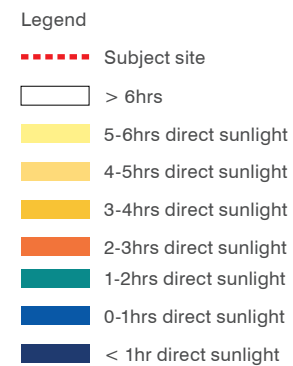
Residential areas and heritage conservation areas

The residential areas and conservation zone are outlined in the adjacent diagram. The diagram illustrates that:

- The vast majority of residential areas receive 5-6hrs of sunlight on 21 June, and a small portion of the R4 area adjacent to the rail corridor receives 4-5 hours, therefore complying with the St Leonards Crows Nest 2036 Plan which requires residential areas inside the precinct boundary to receive sunlight for at least 2 hours between 9:00am – 3:00pm on 21 June.
- The Conservation areas to the east of the site are not impacted by the proposal at all, therefore complying with the St Leonards Crows Nest 2036 Plan which requires heritage Conservation Areas inside precinct boundary to receive sunlight for at least 3 hours between 9:00am – 3:00pm on 21 June.



Indicative L23- special client floor plan with sky-garden



6.4 Visual impact

The Visual Impact assessment takes into account views from all directions at a local(short) and suburban (medium) distance.

The assessment demonstrates that the proposal will have a moderate impact on views towards the precinct from the public domain. The views adjacent consider the importance of public views, timing of views and screening provided by approved and likely future development in the vicinity of the proposal. In most views, the proposal will partially obstruct views of the sky, however the proposal is consistent with the scale of future development in the centre and presents a slender form against sky.

When viewed from the Pacific Highway from the south and the north, and from Falcon Street, the proposal is partially obscured by approved and likely adjacent future development. From the Pacific Highway at Reserve Road, a large portion of sky view is preserved. When viewed from local vantage points in Willoughby Road, the proposal is shorter than other likely future development and has minimal impacts on views of the sky. When viewed from medium vantage points in Northbridge, Artarmon, Greenwich and Willoughby, the proposal has a moderate impact on the skyline. The tower will be particularly visible from Willoughby Road Crows Nest, however its visual impact is mitigated by the slender tower form, with sky-gardens, and approved and likely future adjacent development.



Falcon Street, Pacific Highway and Willoughby Road



Shirley Road at Nicholson Street



Willoughby Road at Hallstrom Park between Small Street and Walter Street



Frenchs Road at Tulloh Street



Pacific Highway at Greenwich Road



Pacific Highway at Reserve Road



Naremburn Park - Station at Dalleys Road



Strathallen Avenue at Baroona Road



Willoughby Road and Clark Street



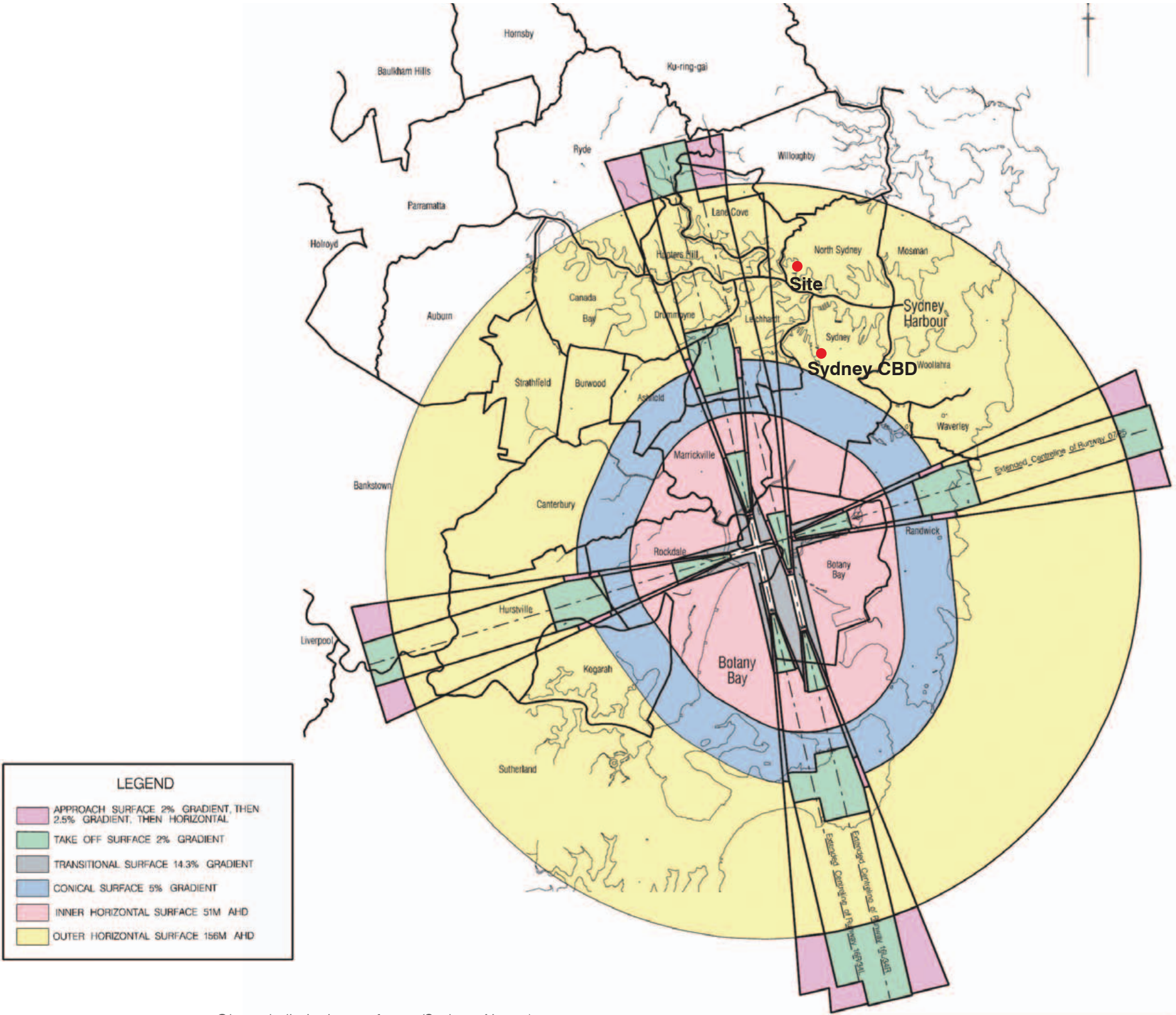
Willoughby Road and Albany Street

6.5 Aviation height limits

Aviation height limits apply to the site.

A preliminary aeronautical assessment has been completed by Avlaw consulting, which demonstrates that the proposed building would be located below the OLS, PANS-OPS and combined radar Assessment surfaces limits, as outline in the table prepared by Avlaw below:

Airspace Surface (Sydney Airport)	November 2017	February 2021
Obstacle Limitation Surfaces (OLS) - Conical Surface	156m AHD	156m AHD
Procedures for Air Navigation Services - Aircraft Operations (PANS-OPS)	335.2m AHD	340m AHD
Radar Terrain Clearance Chart (RTCC)	1100ft/335.28m AHD	1100ft/335.28m AHD
Combined Radar Departure Assessment Surfaces	(N/A)	455m AHD (N/A)



Obstacle limitation surfaces (Sydney Airport)



7.0 Conclusion

7.1 Conclusion and recommendations

The planning proposal for the site provides opportunity to facilitate the creation of an exciting new addition to St Leonards for both locals and visitors. It is designed to stimulate the economy and provide much needed quality commercial space close to transport, retail and other key amenities. The subject site is ideally suited to a landmark development, being one of the largest remaining sites in St Leonards and being located between St Leonards Train Station and the proposed Crows Nest Metro Station .

Having investigated the site and its context in detail, Architectus is confident that the Planning Proposal, and this indicative concept design that underpins it, represents the best urban design and public domain outcome for the site.

Key outcomes of the proposal include:

1

A proposal that supports Government's vision for the strategic context of the site in light of St Leonards and Crows Nest as Strategic Centres, leveraging the proposed metro station.

2

Providing high quality commercial office space for jobs to be retained and increased in the centre.

3

Enhanced the activation around Mitchell Street Plaza, and improved pedestrian amenity and environment on Atchison St and Pacific Hwy are important public benefits made possible by the proposal.

4

Renewal of the site with an iconic tower at the high point of the topography visually marks the importance of the strategic centre.



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