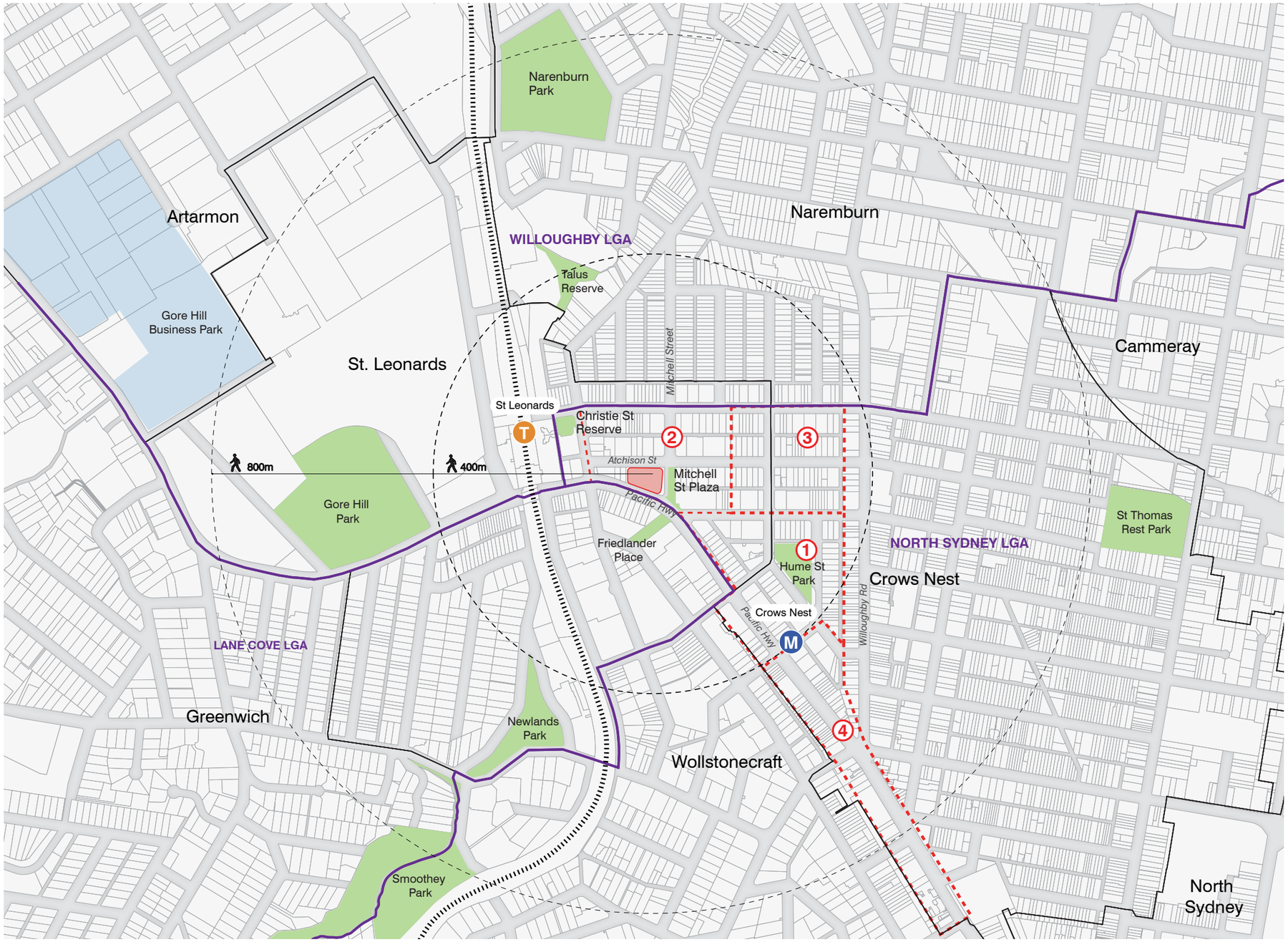
# 3.0 Site analysis

# 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-serviced 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

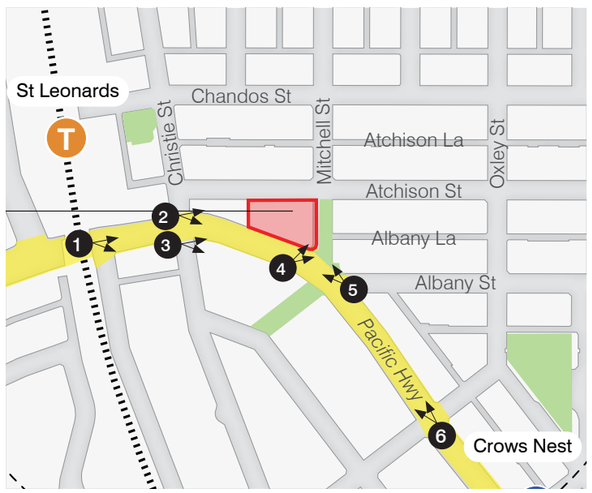
- Subject site
- St Leonards/Crows Nest Planning Study precinct boundaries
- Suburb boundary
- Local Government Area (LGA)
- Open space
- Train Station
- Proposed Crows Nest Metro Station
- Distance from Centre
- Radius Circle
- Precinct numbers identified in St Leonards / Crows Nest Planning Study produced by North Sydney in May 2015

# 3.2 Site character

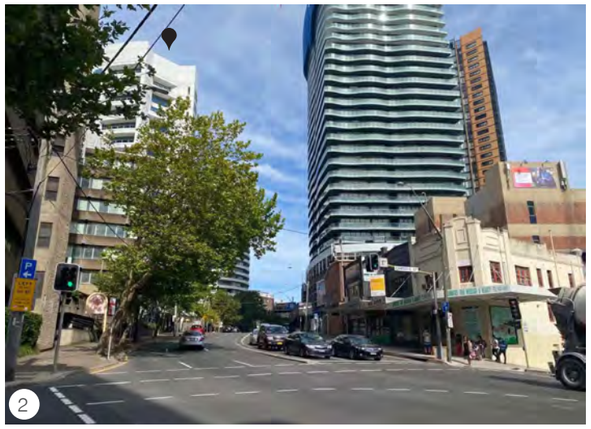
## Pacific Highway

**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.







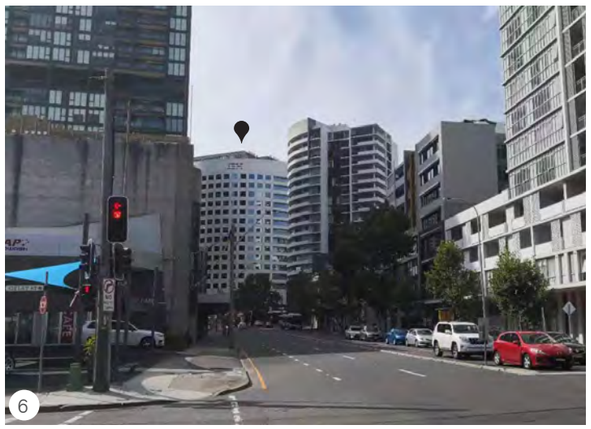

1. The bus stop located outside St Leonards station and the Forum plaza through the pedestrian walkway to Pacific Highway provides public transport connection and has the most active frontage, retail activity and pedestrian movement.

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.

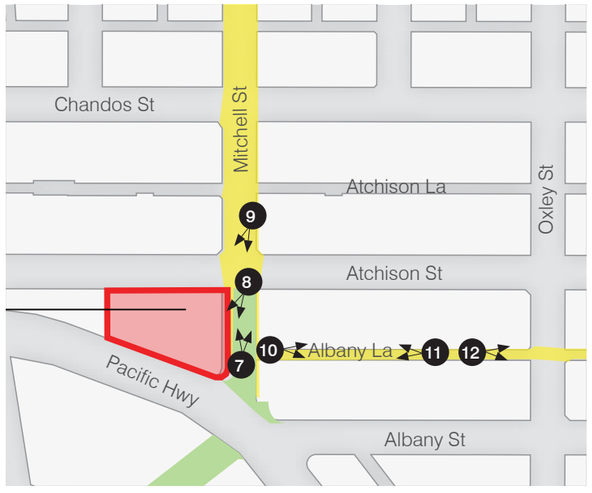
Subject site

## 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.

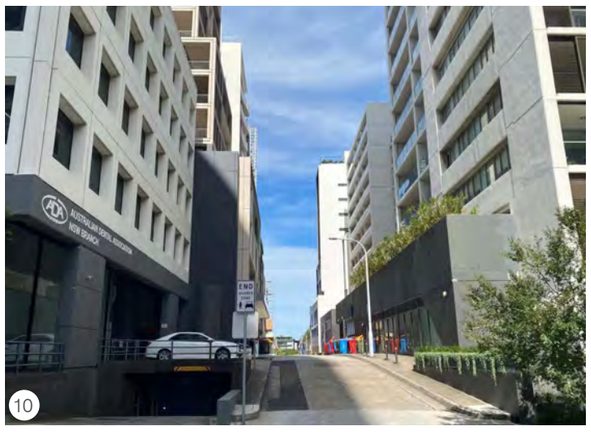
Albany Lane has a mixed use character with low to medium density apartments and low scale commercial office buildings. The lane-way is dominated by driveways and vehicular movements, has little or no footpath and lacks ground floor activation.






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

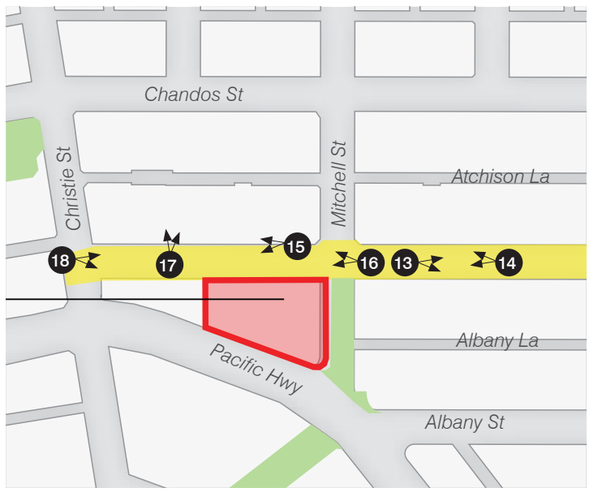
## Atchison Street

**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.

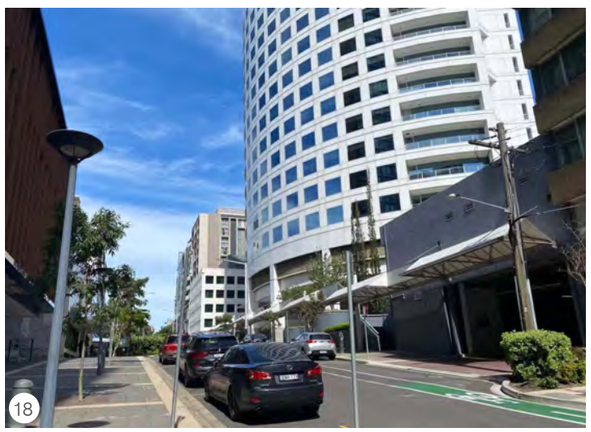
The Planning Study has further ambition to transform Atchison Street into a pedestrianised civic environment.












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.

Subject site

# Site character

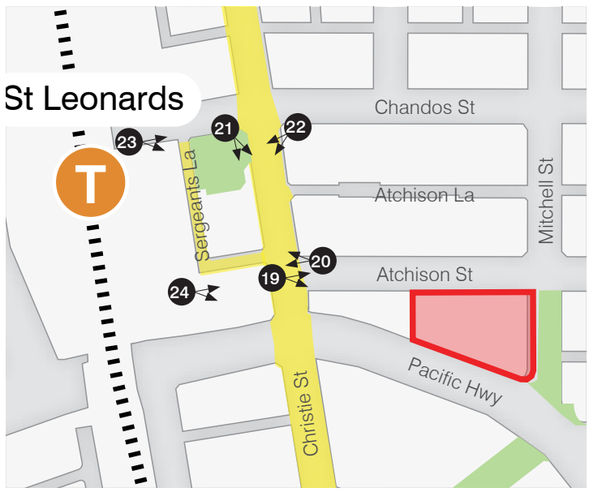
## Christie Street

**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.





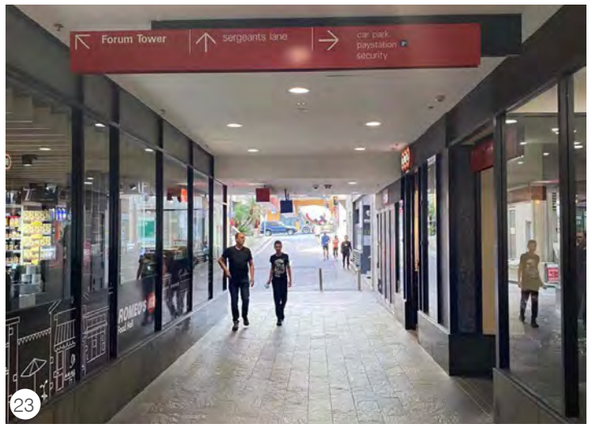

19. Intersection of Christie Street and Atchison Street. There is significant pedestrian movement at street level via Sergeants Lane during the peak hours.

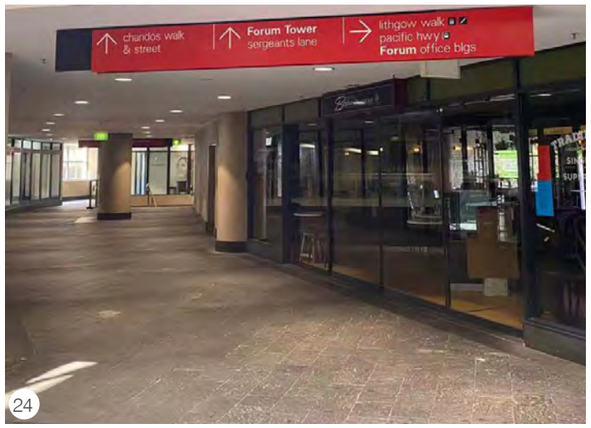
20. Sergeants Lane connecting Christie Street. The lane-way provides pedestrian connection and access between Christie Street and the adjoining St Leonards Station and Forum plaza.



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 B3 Commercial Core 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 B3. 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
- 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.

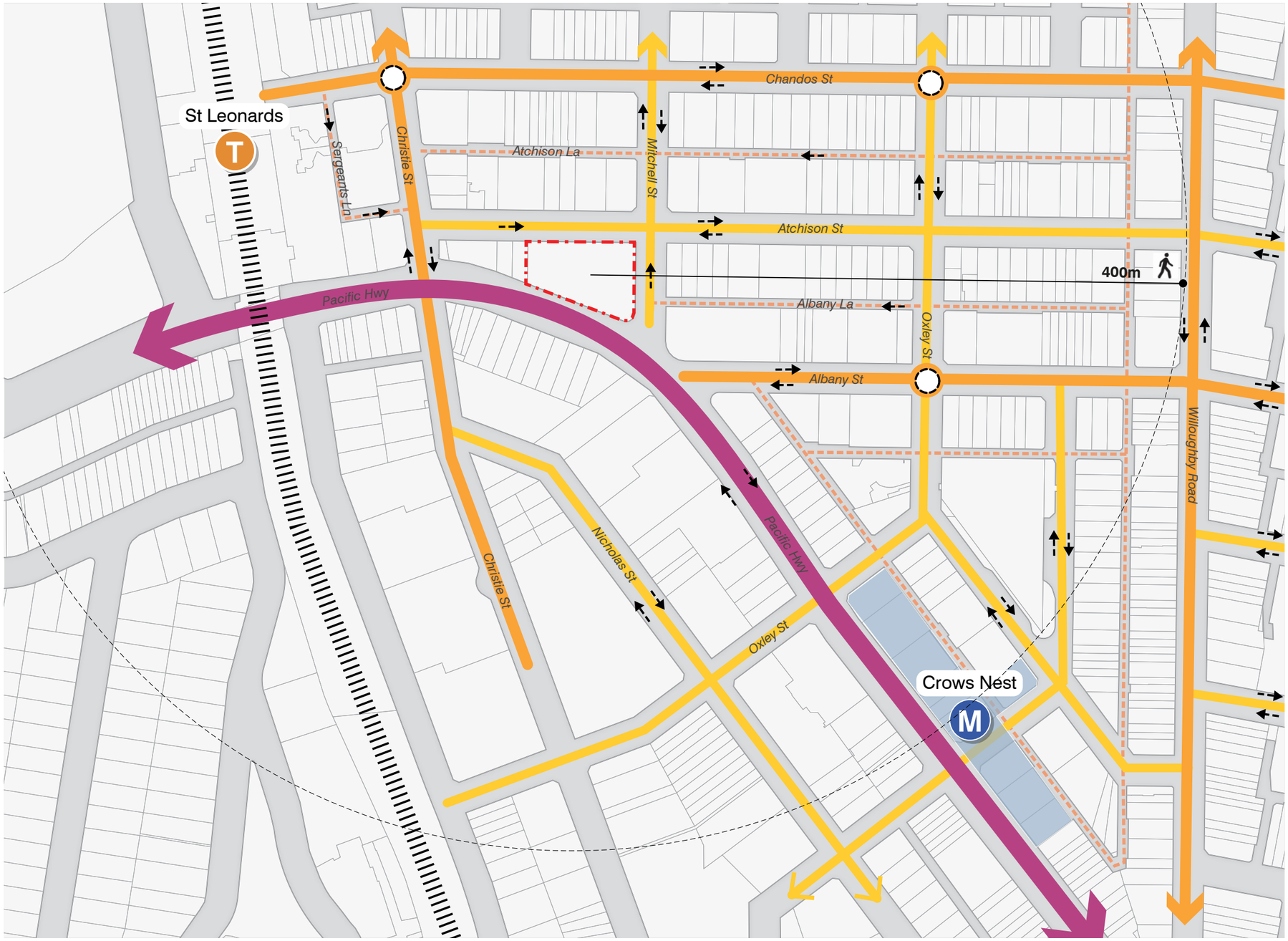

Legend

- Subject site
- Parks and Plazas
- Education
- Health
- Church / Cemetery
- Community Facilities
- Train Station
- Proposed Crows Nest Metro Station
- Distance from Centre
- Radius Circle
- Suburb boundary

## 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.



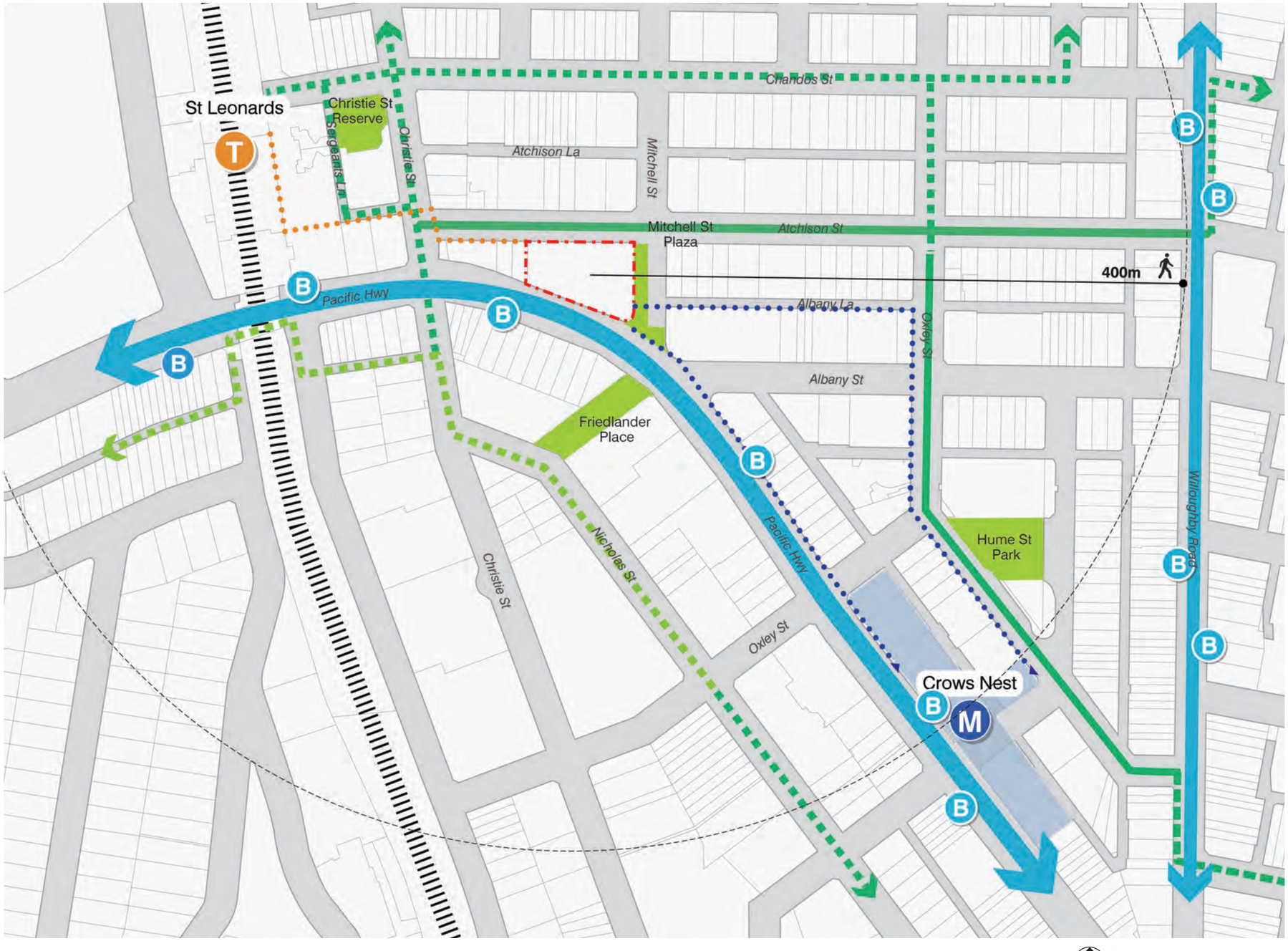

Legend

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

## 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

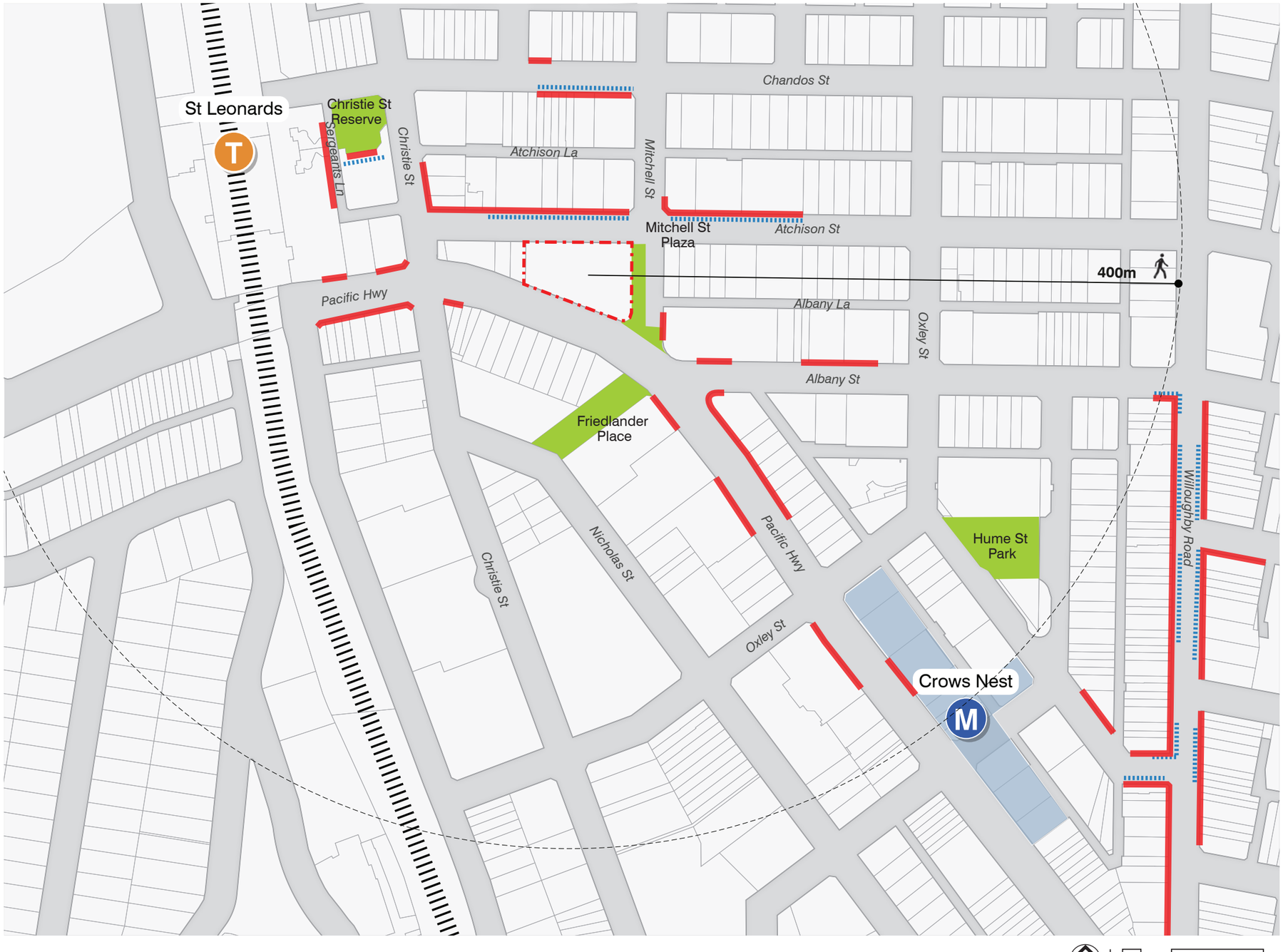
– **Footpaths**
Atchison and Chandos Streets and the Pacific Highway are currently primary east-west pedestrian desire lines connecting with St Leonards Station. There is pressure on existing signalised and un-signalised pedestrian crossings across Christie Street, which is a busy street separating the 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.

### 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

## Topography

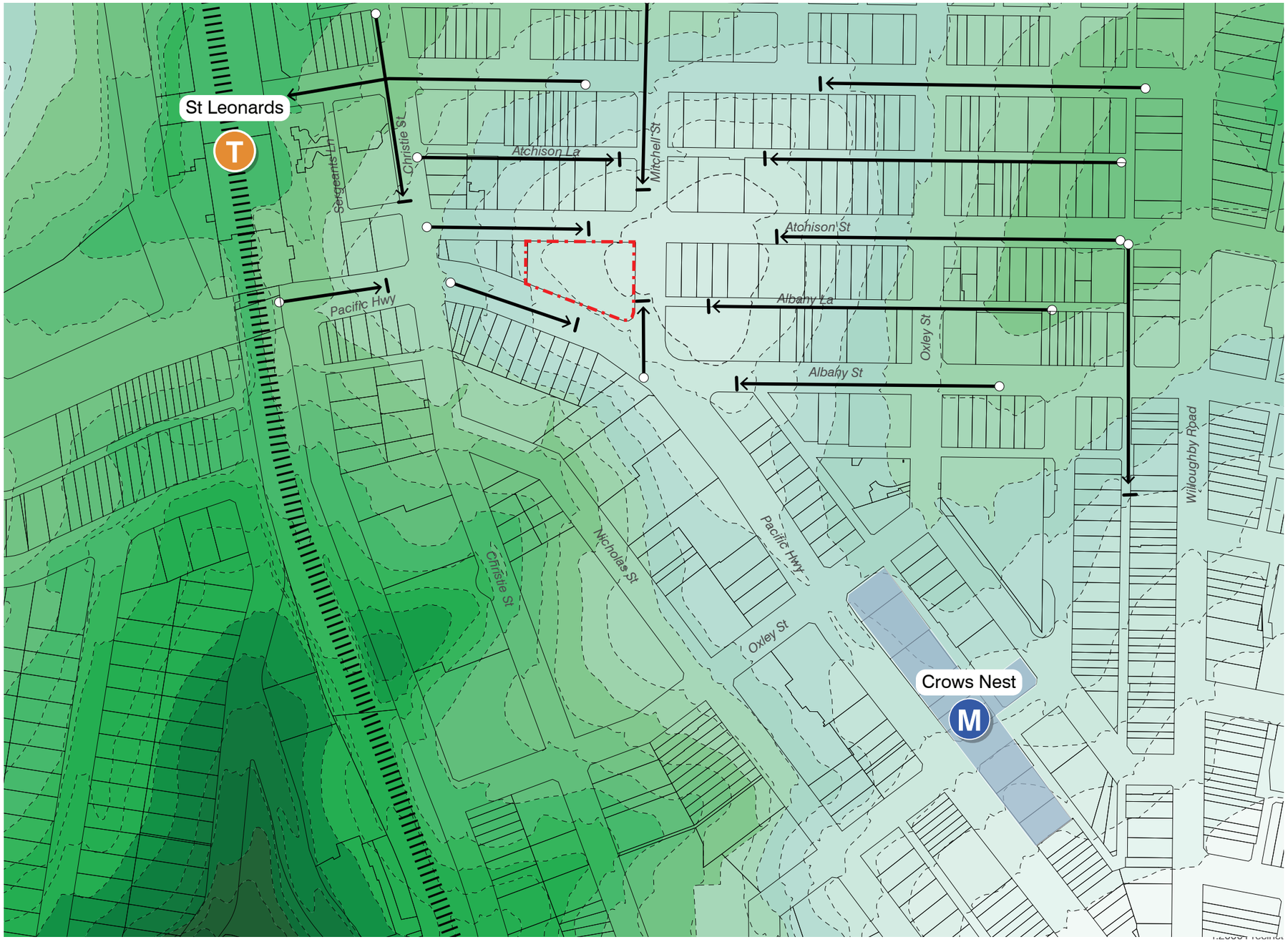
The Pacific Highway runs along the natural ridge line connecting North Sydney to the upper North Shore. 601 Pacific Highway is located at the high point of this ridge, marking the site as the iconic centre of St Leonards.

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

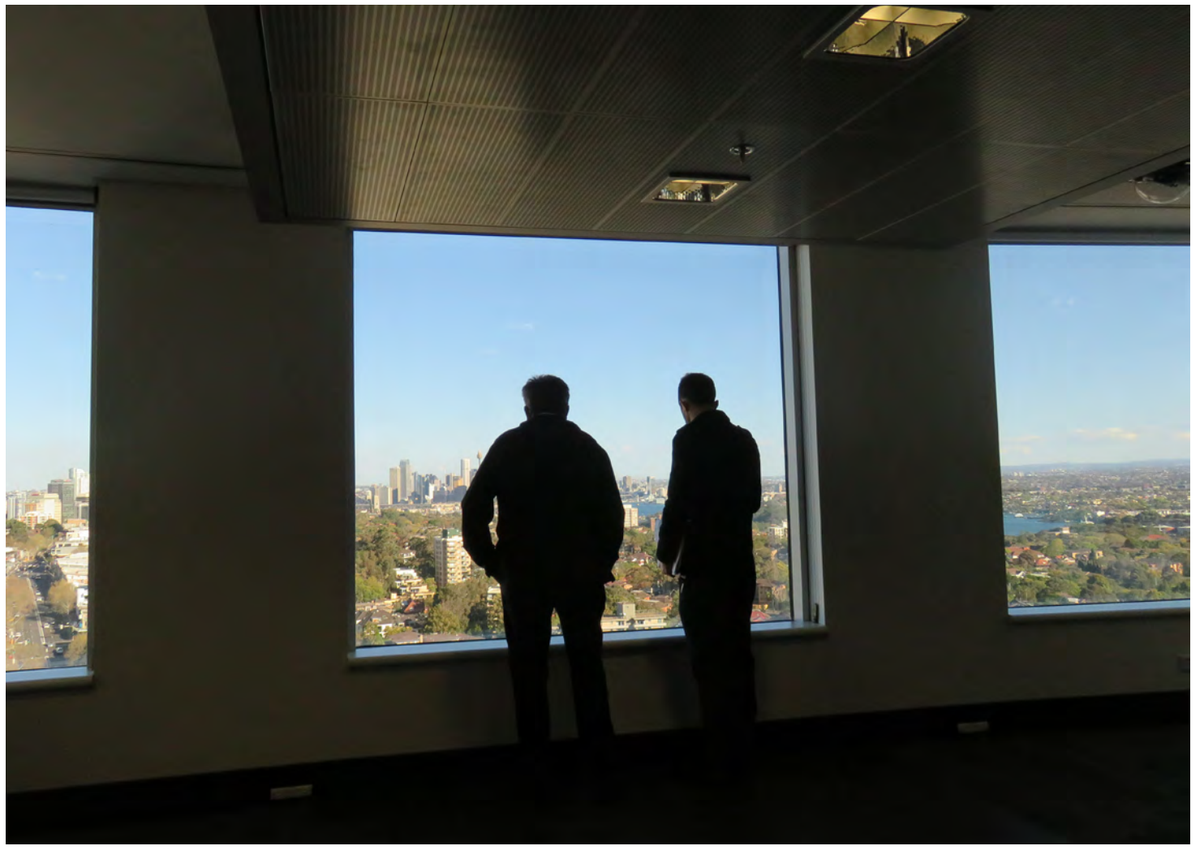
The terrain drops to the west and the south away from the high-point at the corner of Mitchell and Atchison Streets. The steep nature of Atchison Street makes east-west pedestrian connections more difficult and also impacts on vistas and sight-lines from west to east along Atchison Street.




Legend

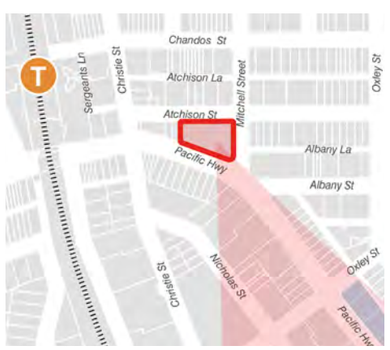
- Subject site
- Vistas interrupted by topography
- Contours @ 2m intervals
- Site fall - light (high) to dark (low)
- High point
- Train Station
- Proposed Crows Nest Metro Station

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



*View from level 13 of the existing building*

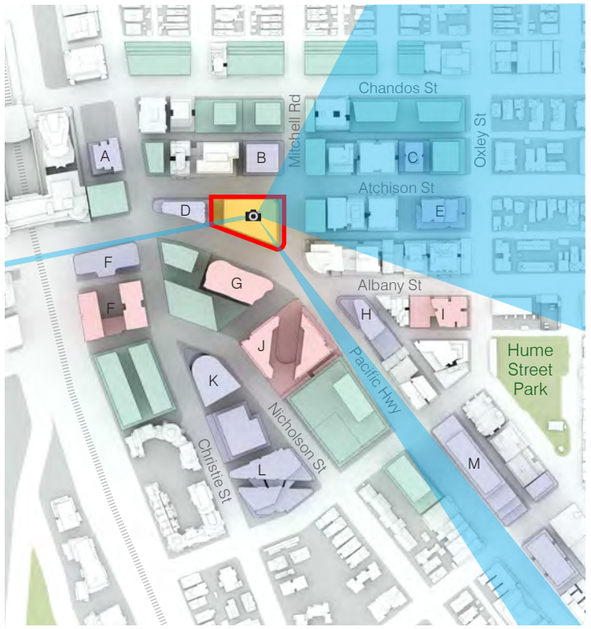
*South East view towards the CBD and  harbour*



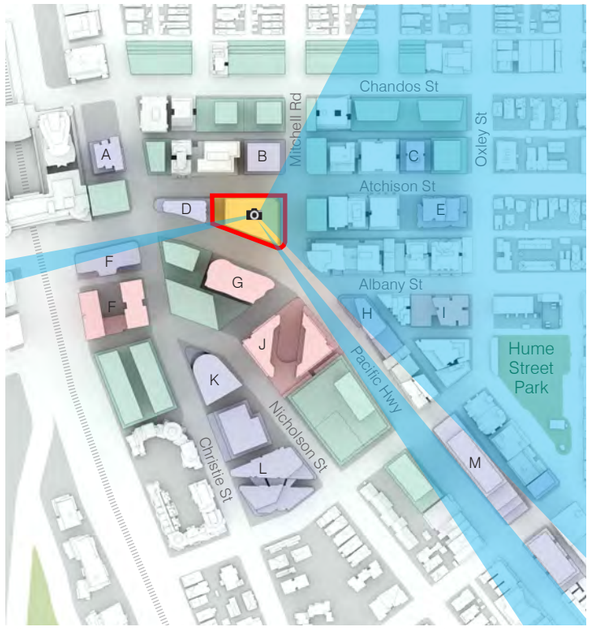
## Views

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.

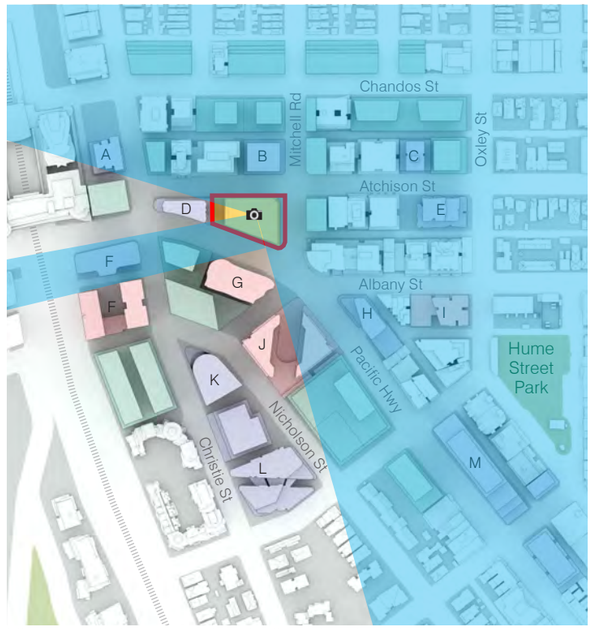
Proposed new development surrounding the site would block some of these views, as indicated on the diagrams below. (Proposed and new developments are described in detail in section 2.5 approved and pending local approvals.)



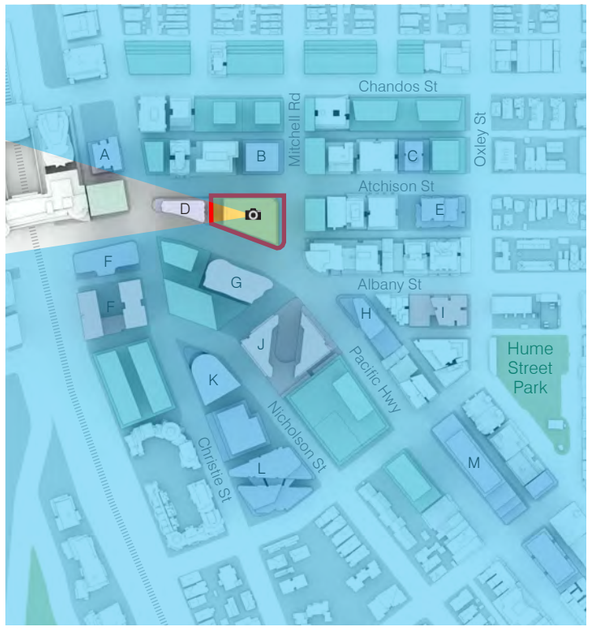

*Views available at low levels (Level12-15)*




*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

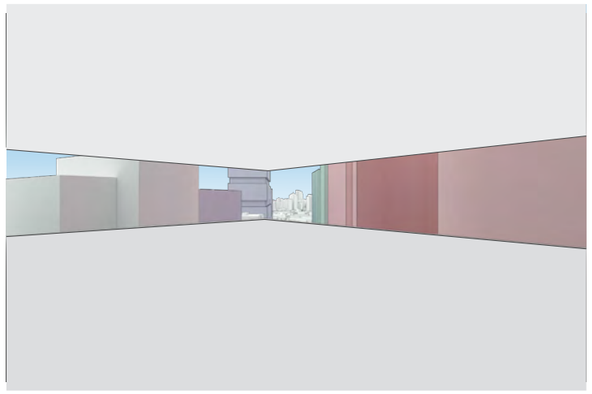
| # | Site address | Development | Building height |
|---|---|---|---|
| A | 100 Christie Street | LEP changes gazetted. | 132m 36 storeys |
| B | 20-22 Atchison Street | Planning Proposal recently lodged with Council for assessment | 35 storeys |
| C | 50-56 Atchison Street | Planning Proposal for a 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<br>26storeys<br>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<br>*as per amended application (September 2020) | Concept Development Application - Post exhibition phase. | 22 storeys<br>18 storeys<br>9 storeys |

# Site analysis

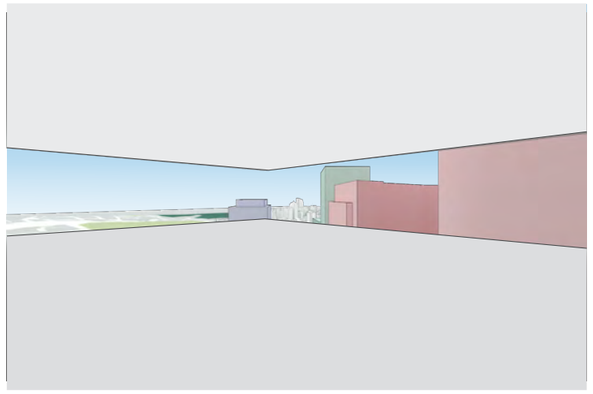
Surrounding buildings obstruct views at lower levels, as illustrated below. At lower levels, there is only a narrow view corridor along the Pacific Highway. As the height increase views open up towards the south and east capturing north Sydney CBD and the harbour.

*View location - Towards Southeast*

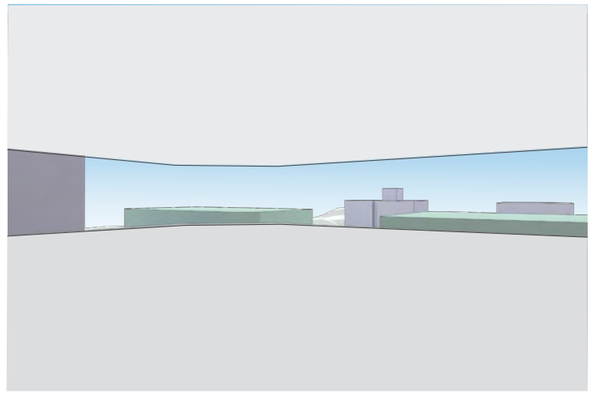
*View location - Towards Northeast*



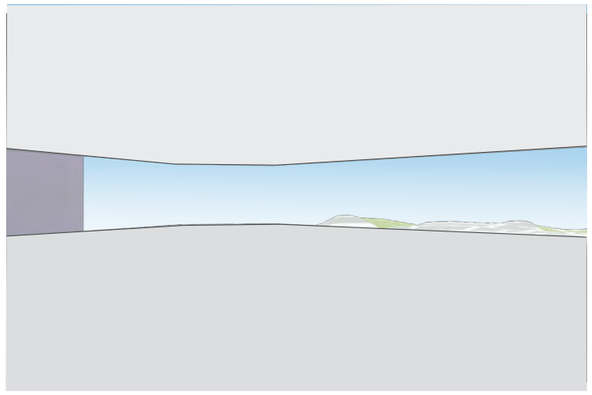
*View towards south-east at level 14*



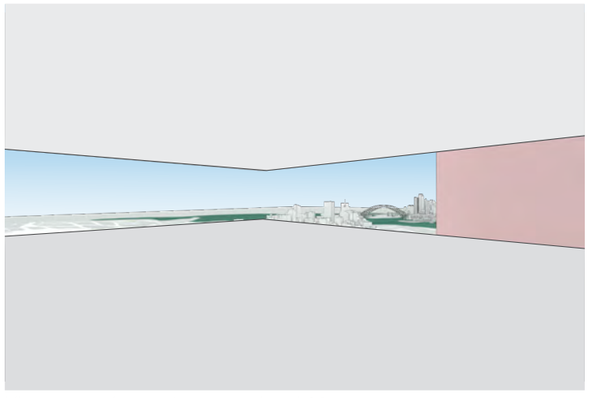
*View towards south-east at level 23*



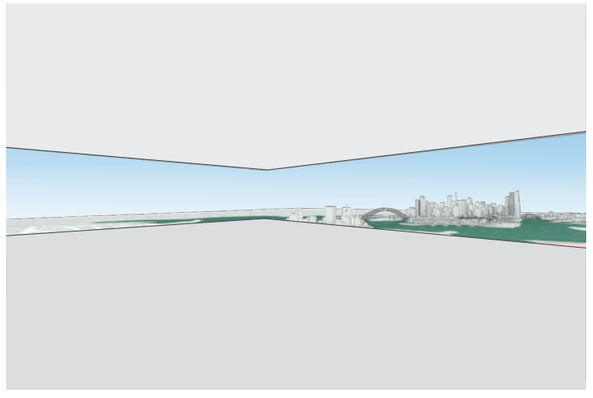
*View towards the north-east at level 14*



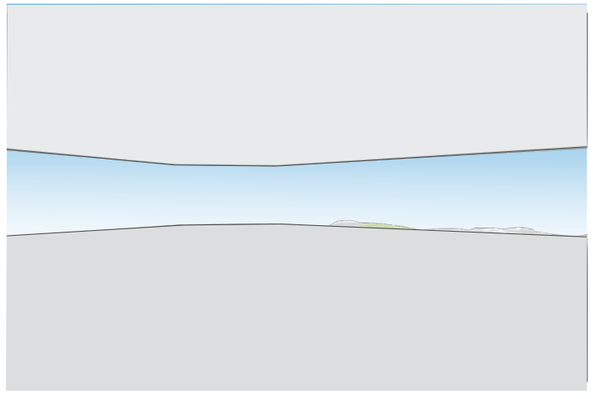
*View towards the north-east at level 23*



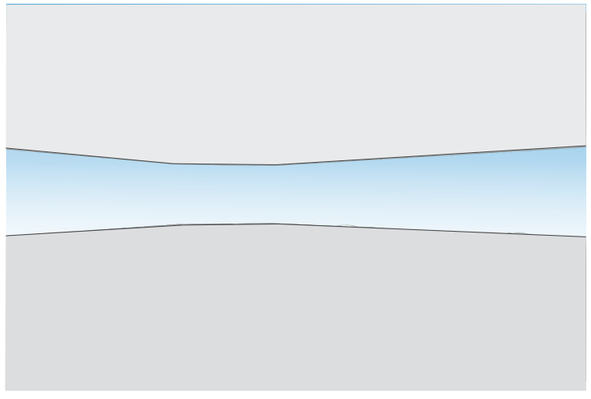
*View towards south-east at level 32*



*View towards south-east at level 37*



*View towards the north-east at level 32*



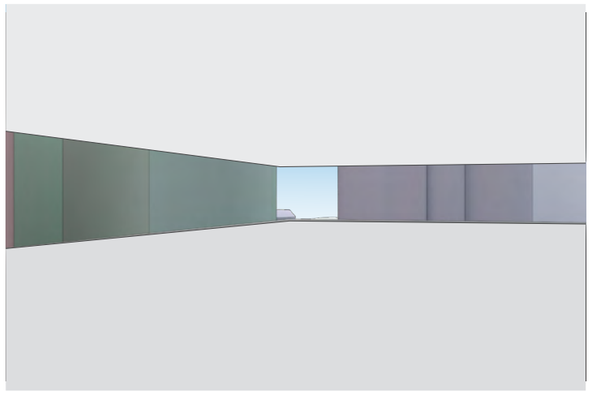
*View towards the north-east at level 37*

# Site analysis

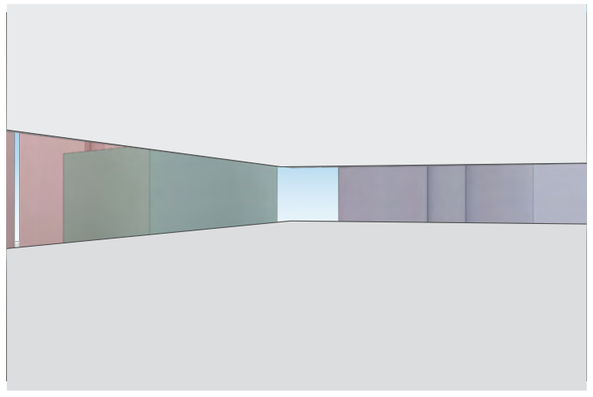
Views towards the west are largely obstructed by the adjacent proposed development.
Views towards the north open up only at higher levels.

*View location - Towards Southwest*

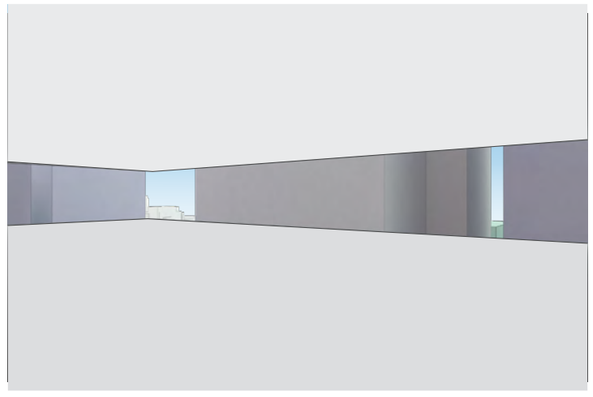
*View location - Towards Northwest*



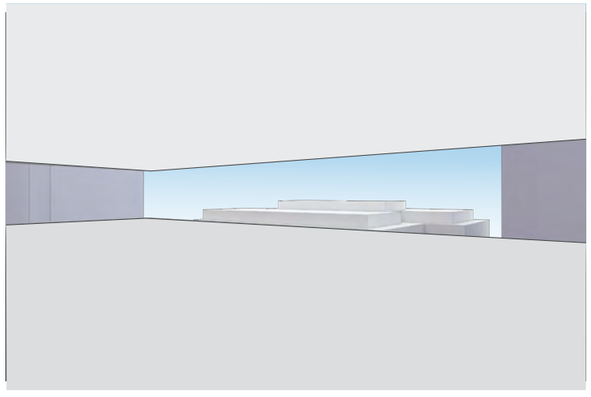
*View towards  the south-west at level 14*



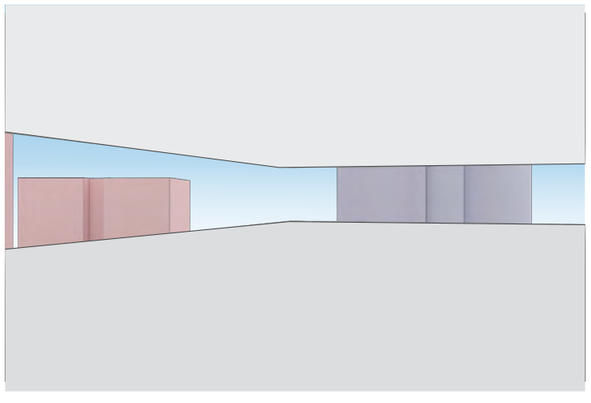
*View towards  the south-west at level 23*



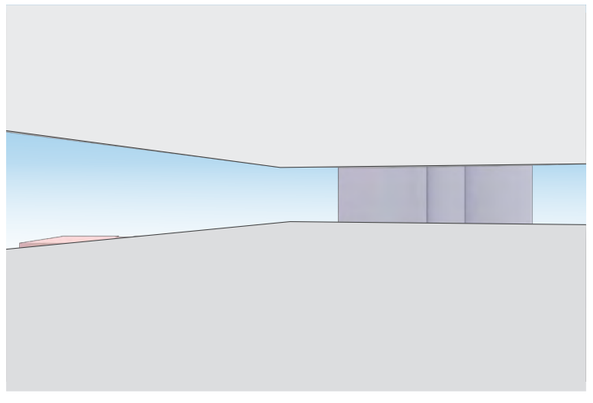
*View towards north-west at level 14*



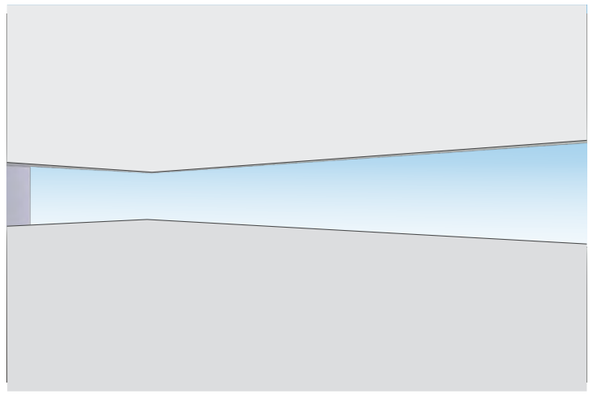
*View towards north-west at level 23*



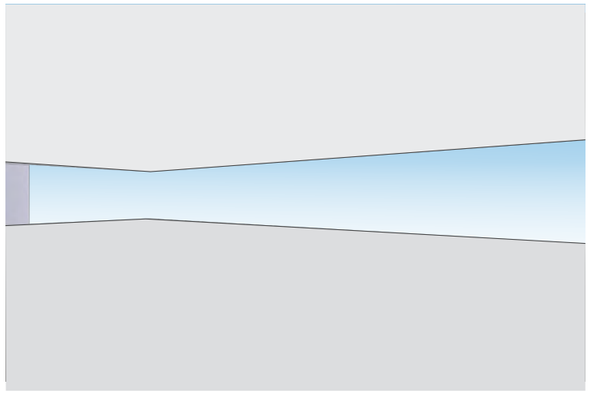
*View towards  the south-west at level 32*



*View towards  the south-west  at level 37*



*View towards north-west at level 32*

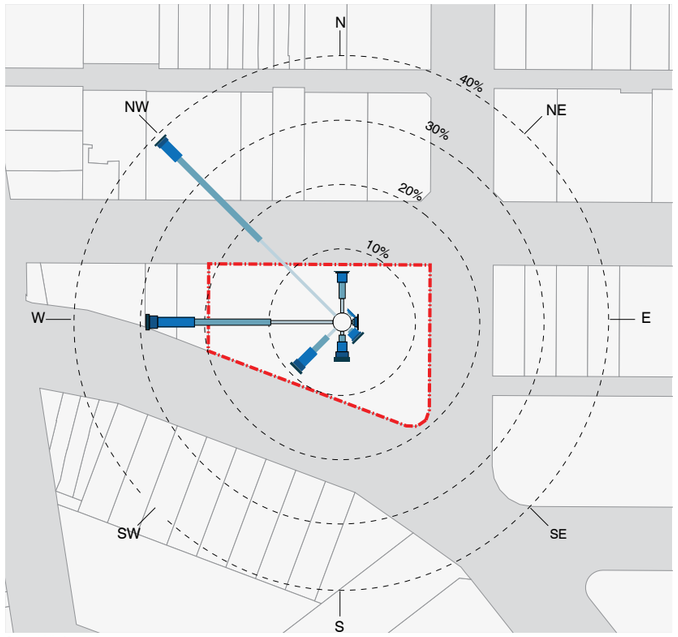


*View towards north-west at level 37*

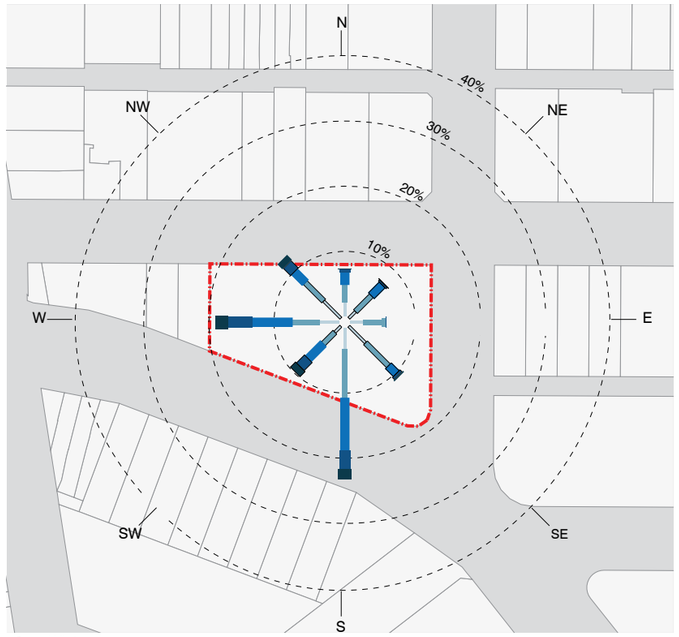
## Prevailing wind

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

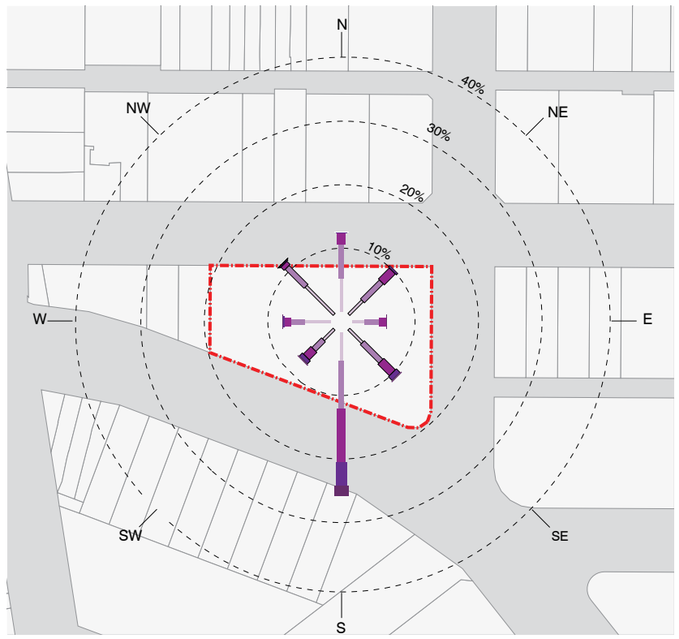



3pm Winter

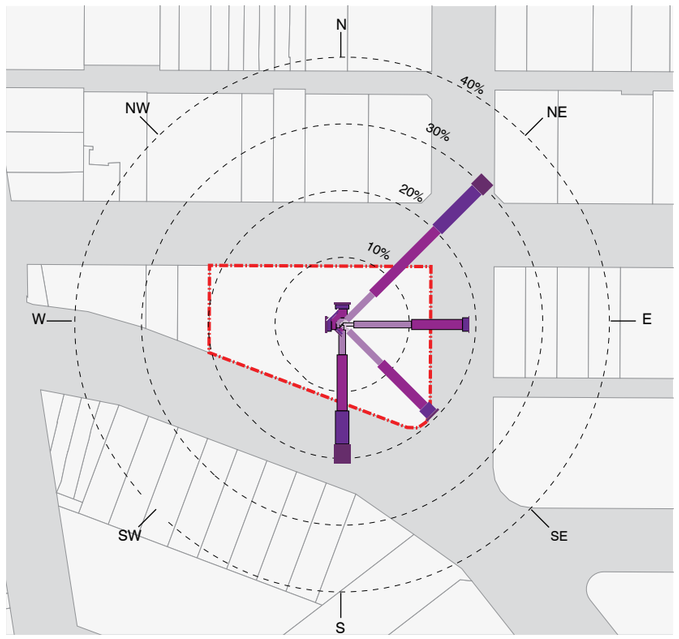
Winter Wind direction

% % of time wind blows from this direction

- 0 - 10 km / h
- 10 - 20 km / h
- 20 - 30 km / h
- 30 - 40 km / h
- +40 km / h




9am Summer




3pm Summer

Summer Wind direction

% % of time wind blows from this direction

- 0 - 10 km / h
- 10 - 20 km / h
- 20 - 30 km / h
- 30 - 40 km / h
- +40 km / h

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.

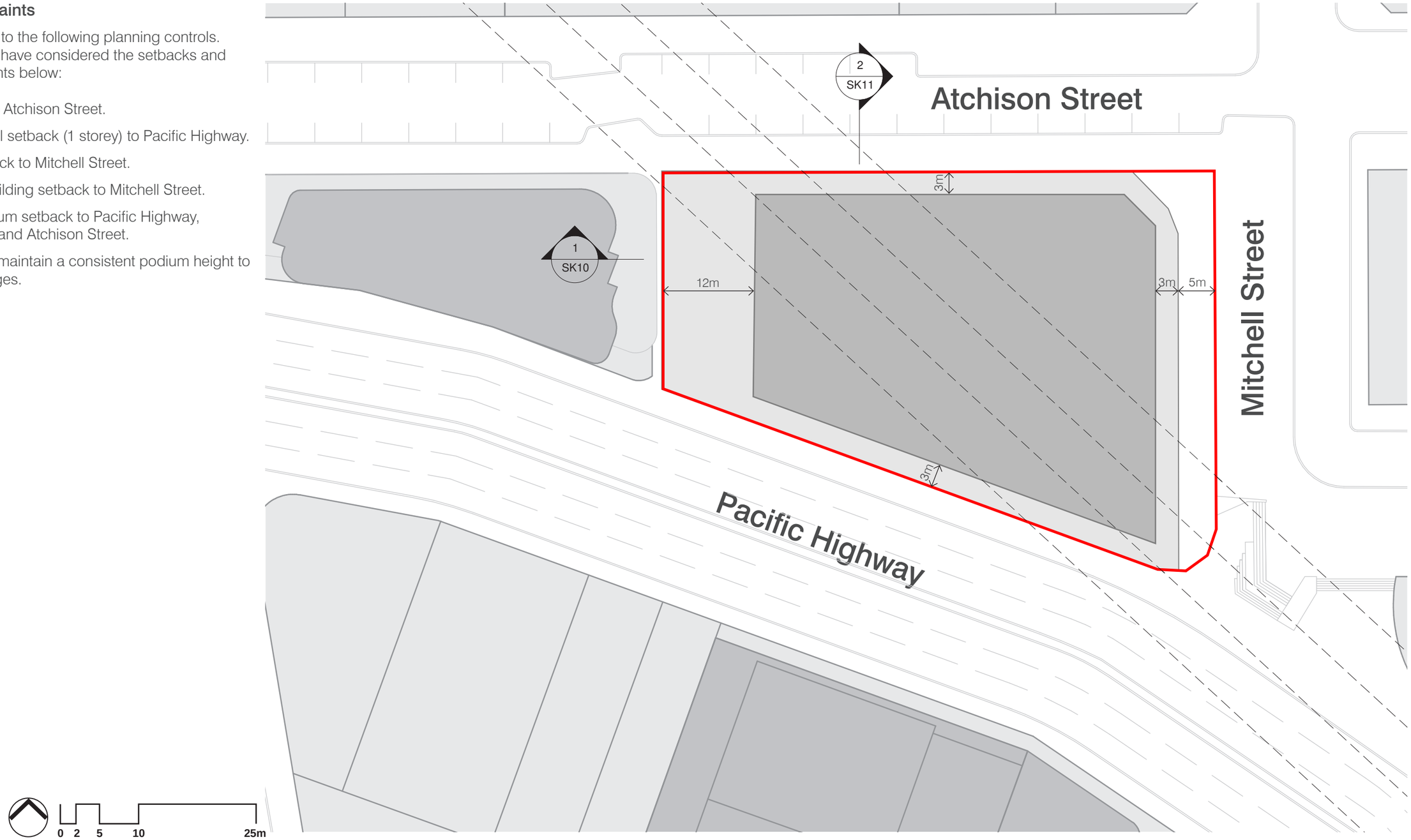

Legend

- 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

## 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.

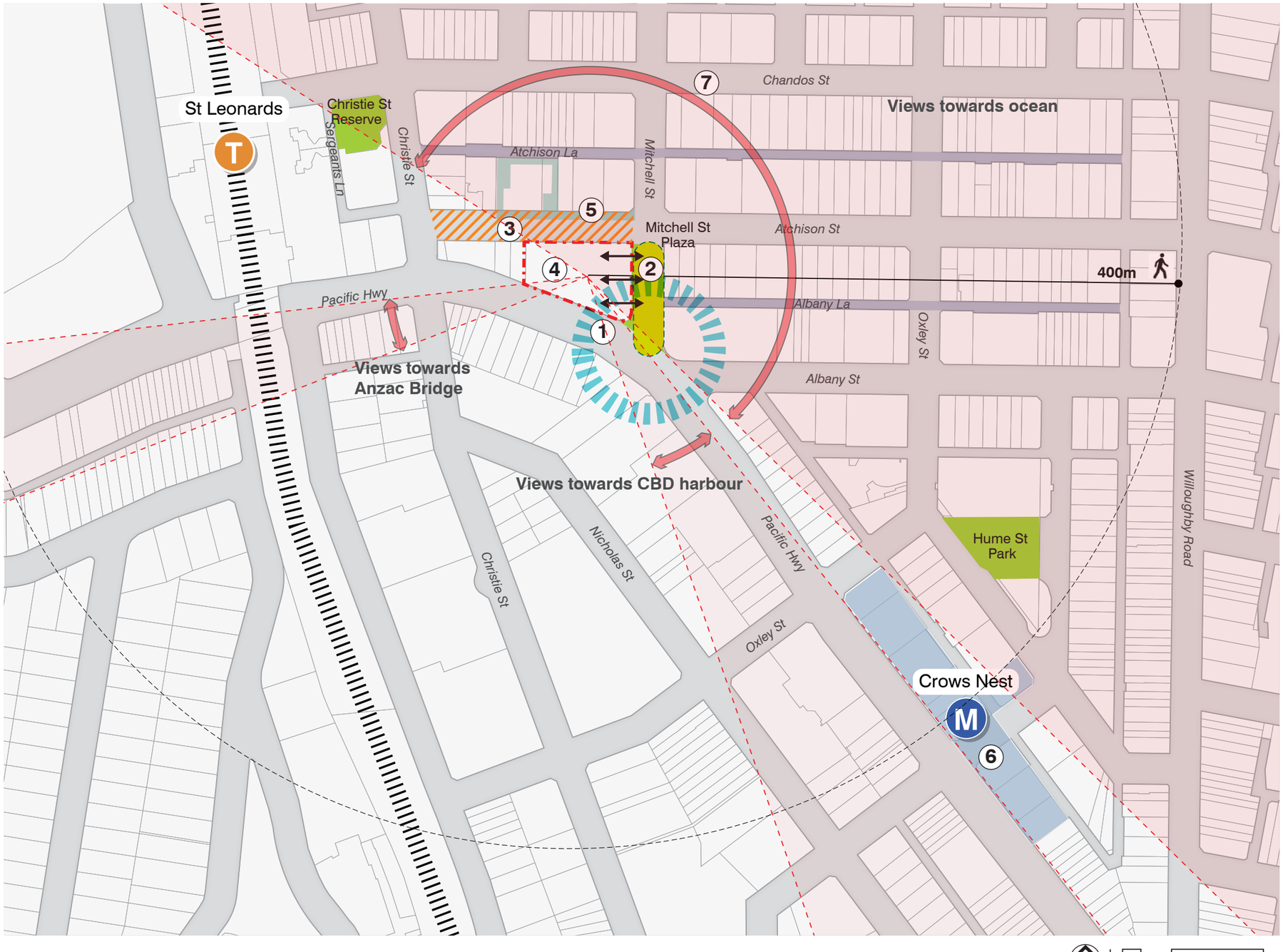


# Summary of opportunities and constraints

## 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

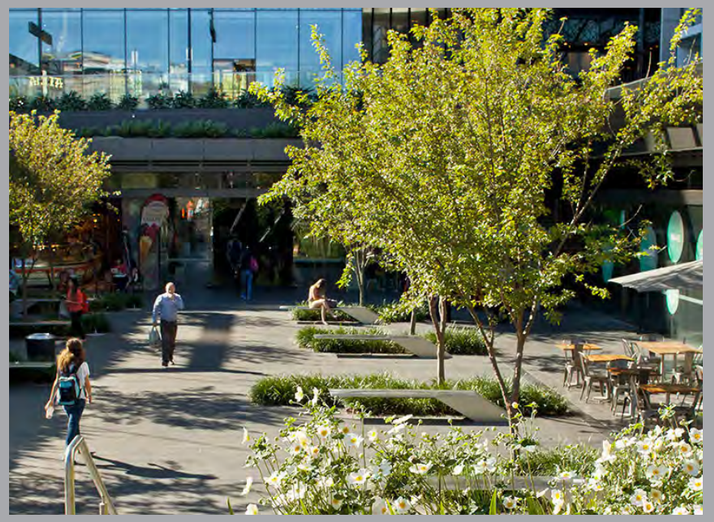
In developing the indicative concept design plan we explored principles and key moves which would ensure that the design is founded on best practice urban design and planning thinking.

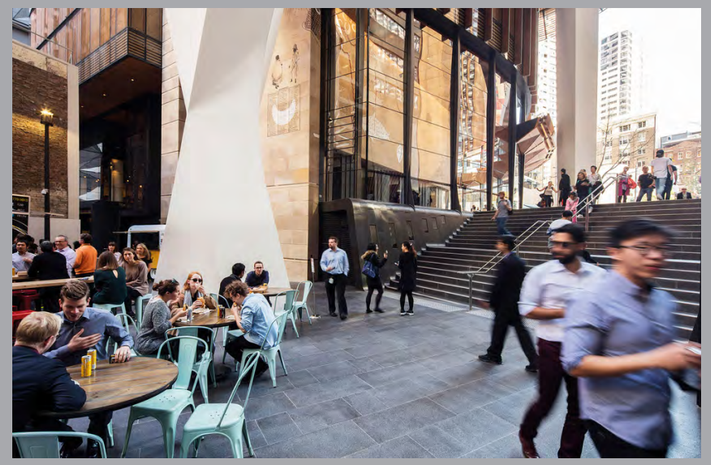


# 4.0 Developing the indicative concept design

## 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'.