



Prepared for: TWT Property Group Pty Ltd
Date: September 3, 2018

architectus™

Urban Design Report for a Planning Proposal

55-89 Chandos & 58-64 Atchison Streets, St Leonards

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Contents

01	Introduction	7	03	Developing the master plan	55
	1.1 Regional context	8		3.1 The Vision	56
	1.2 Local context	9		3.2 Urban Design principles: Ground floor interface	58
	1.3 Site	10		3.3 Urban Design principles: podium and tower	60
	1.4 Strategic Planning Context	12		3.4 A day in the life of St Leonards Arts Precinct	64
	1.5 Local Planning Strategies	16			
	1.6 Local Environmental Planning Controls	17	04	The proposal	67
	1.7 Local Development Controls	19		4.1 Indicative basement Level 1	72
	1.8 Building heights and density in strategic centres	20		4.2 Indicative Basement Levels	73
	1.9 Building heights and densities in St Leonards	21		4.3 Ground floor plan	74
	1.10 Strategic drivers	22		4.4 Typical Podium Plan	75
				4.5 Private communal open space	76
02	Analysis	25		4.6 Typical tower plan	77
	2.1 Demographics	26		4.7 Communal outdoor space	78
	2.2 Existing Local Character	28		4.9 Arts Precinct and Public Square	80
	2.3 Street grid and heirarchy	30		4.10 Oxley Street linear park	82
	2.4 Transport	35		4.11 Indicative schedule of areas	84
	2.5 Pedestrian Movement	36			
	2.6 Active street frontage	37	05	Assessment	87
	2.7 Topography and views	38		5.1 Building setout	88
	2.8 Open Space	40		5.2 SEPP 65 - Solar Analysis	89
	2.9 Community infrastructure	42		5.3 SEPP 65 - Cross ventilation	93
	2.10 Heritage	44		5.4 Views from the sun	94
	2.11 Future building heights	46		5.5 Visual Impact Assessment	110
	2.12 Study of height transitions in centres	48			
	2.13 Combined constraints	52	06	Conclusion and recommendations	113
	2.14 Combined opportunities	53			

The Purpose of the Report

The concept urban design report has been prepared by Architectus on behalf of TWT for land at 55-89 Chandos & 58-64 Atchison Street, St Leonards (the subject site).

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 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 within the site 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 including non-residential uses and community benefit, and residential uses above.

The site is located within a 400m walking catchment of both the existing St Leonards railway station and proposed Crows Nest Metro Station.

The site is consolidated on two adjacent sites approximately 4,211sqm and 1,440sqm, bounded by Chandos Street to the north, Oxley Street to the east and Atchison Street to the south with Atchison Lane dividing the two sites. At present the site contains a mixture of 3-7 storeys of commercial buildings.


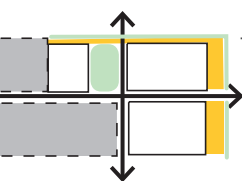
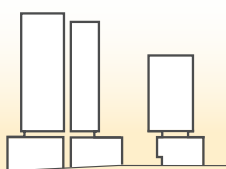
The Vision

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

- Development on the site should contribute to and reinforce the significance of St Leonards, as a strategic centre on two key transport links. This is to be achieved by a suitable level of density for the site.
- Built form should help define the St Leonards Centre, through a height and scale appropriate to the strategic importance of the centre which is comparable with other regional and strategic centres (Parramatta, Chatswood, Burwood, Green Square, and Epping).
- Creating vibrant, active street frontages along Chandos Street and Oxley Street through a linear park and a plaza area.
- Providing dwellings and jobs within proximity of transport, community facilities and centres.
- Creating a built form which reinforces the importance of the St Leonards Strategic Centre and helps define the commercial centre.
- Providing a creative arts space for the benefit of the broader community which builds on the existing creative precinct.

The Proposal

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

-  – A mixed use development of commercial, community and residential uses, including 39,740 sqm of residential GFA and 8,730 sqm of residential GFA future employment opportunities;
-  – A podium providing creative arts spaces, museums and galleries and fine grain retail to both Chandos Street and Oxley Street, a defined street edge and active uses to spill out into an engage the public realm; and;
-  – A range of tower forms across the sites up to a maximum height of 101m (28-storeys).

Executive Summary

The Team

This master plan has been prepared by the following team:

- Urban design – Architectus
- Planning – Architectus
- Architecture – Architectus
- Traffic – TTPP
- Economics – Urbis
- Heritage – Urbis
- Renders – Doug and Wolf







01 Introduction

Introduction

1.1 Regional context

The site is located in St Leonards Centre, approximately 5km from Sydney CBD. St Leonards Centre is a major employment and mixed use centre bound by Oxley Street to the south and east, the Royal North Shore Hospital to the west and Henry Lane to the north.


St Leonards is identified as a metropolitan centre, commercial office and health and education precinct in the Greater Sydney Region Plan. The Department of Planning & Environment has also identified St Leonards and Crows Nest as a Planned Precinct to be revitalised.


The site is well connected by public transport, located within 400m from St Leonards Train Station providing services along the T1 North Shore Line with connections to Sydney CBD (Central, Town Hall and Wynyard) North Sydney, Chatswood, Macquarie Park and Macquarie University. St Leonards is one of the busiest train stations in metropolitan city, also serving as an interchange for bus services with services travelling north and south along the Pacific Hwy to the City, Manly, Botany, North Sydney, Chatswood, Macquarie Park, and Hornsby.


The site is also located within 400m from the new Crows Nest Metro Station which will provide improved travel time and accessibility to nearby centres including Chatswood (4mins), Barangaroo (5mins) and Martin Place (7mins).


The Pacific Highway is a major arterial road providing vehicular connections to and from North Sydney CBD, other major centres on the North Shore, the Hills and Sydney CBD.

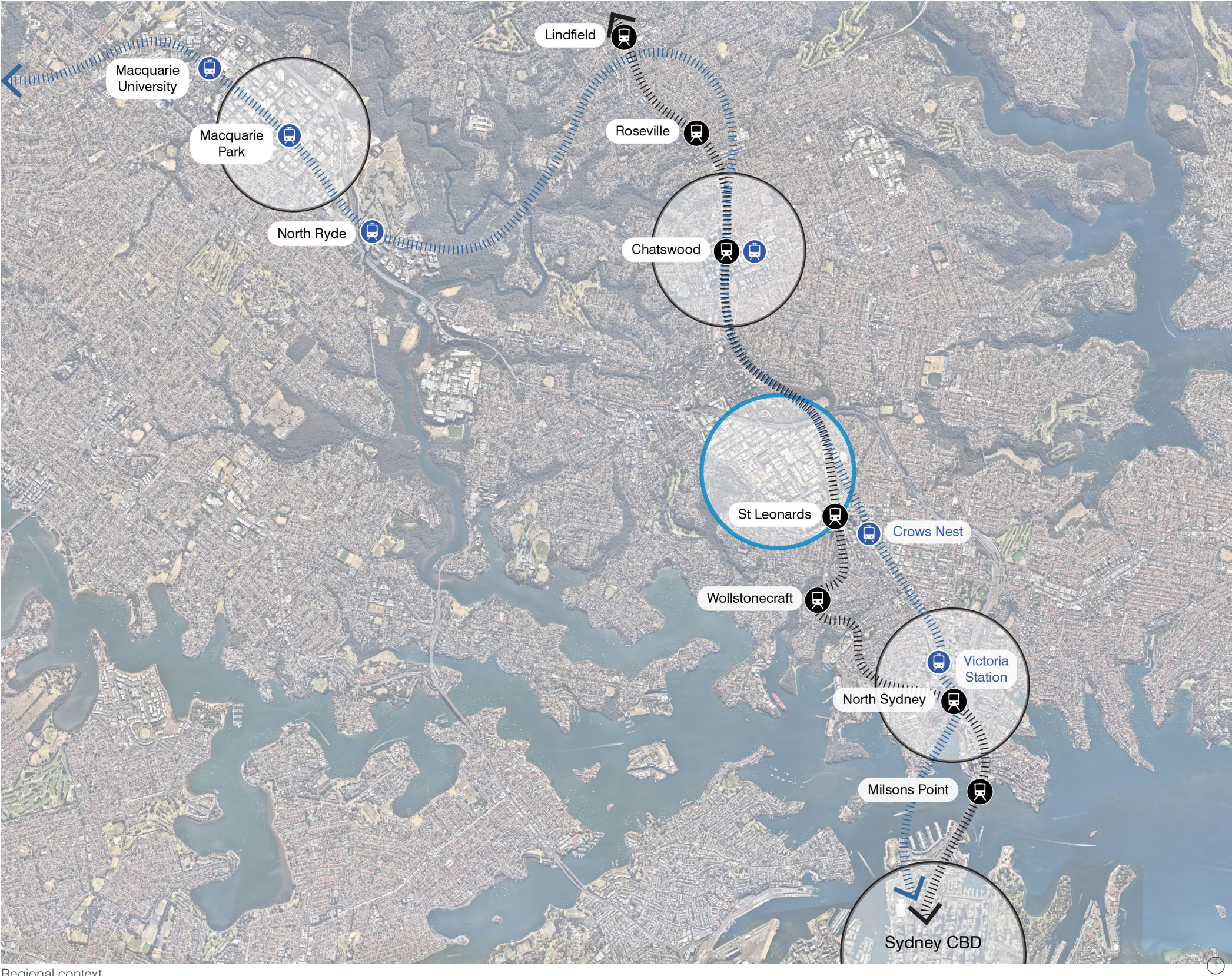
Legend

 Sydney Metro line

 Train line

 St Leonards area

 Strategic Centres



Regional context

Introduction

1.2 Local context

St Leonards is situated within a context of growth including both existing and planning public infrastructure and an area identified for significant urban renewal. Crows Nest to the south will bring increased jobs, housing and more people to the area through the delivery of the new metro station.

The plan to the right shows the subject sites location within this local context. Whilst the site is contained within the St Leonards Centre, is important to understand the sites relationship to the broader St Leonards and Crows Nest Precinct.

The site is located in the St Leonards Centre. It is a very accessible site, located 400m from both St Leonards Train Station and the future Crows Nest Metro Station.

There are a range of important education and health services and infrastructure in proximity to the site including Royal North Shore Hospital, St Leonards TAFE, North Sydney Boys High School and North Sydney Girls High School.

Despite limited provision of open space, the site is located in proximity to a number of existing open spaces including Gore Hill Park, Naremburn Park, Newlands Park, St Thomas' Rest Park and St Leonards Park.



Introduction

1.3 Site

The site is approx. 5,654sqm in a rectangular shape bound by Chandos Street to the north, Oxley street to the east and Atchison Street to the south. Atchison Lane lies between the two sites and is where majority of current buildings are serviced with access to basement car parking.

At present the site contains a range of 3-7storey mixed use buildings including a range of community and art facilities. All sites are owned by Auswin TWT Pty Ltd.

No.	Address	Lot	DP	Entity name
1	55-61 Chandos St	C	172499	Tasktea Pty Ltd atf Harbin Trust
2	55-61 Chandos St	1	927 407	Tasktea Pty Ltd atf Harbin Trust
3	63-65 Chandos St	1	104816	TWT Dvelopment Pty Ltd atf St Leonards Unit Trust #2
4	67-69 Chandos St	10	877196	TWT Dvelopment Pty Ltd atf St Leonards Unit Trust #2
5	71-73 Chandos St	1	900998	TWT Dvelopment Pty Ltd atf St Leonards Unit Trust #2
6	75 Chandos St	1	115581	75 Chandos Street Pty Ltd aft 75 Chandos Street Trust
7	79 Chandos St	28	455939	TWT Dvelopment Pty Ltd atf St Leonards Unit Trust #2
8	79 Chandos St	29	455939	TWT Dvelopment Pty Ltd atf St Leonards Unit Trust #2
9	83-85 Chandos St	B	443166	TWT Dvelopment Pty Ltd atf St Leonards Unit Trust #2
10	83-85 Chandos St	A	443166	TWT Dvelopment Pty Ltd atf St Leonards Unit Trust #2
11	87 Chandos St	31	2872	TWT Dvelopment Pty Ltd atf St Leonards Unit Trust #2
12	89 Chandos St	32	2872	TWT Dvelopment Pty Ltd atf St Leonards Unit Trust #2
13	64 Atchison St	1	1029839	Atchison Lane Pty Ltd aft Atchison Lane Trust
14	62 Atchison St	2	1029839	Atchison Lane Pty Ltd aft Atchison Lane Trust
15	60 Atchison St	3	1029839	Atchison Lane Pty Ltd aft Atchison Lane Trust
16	58 Atchison S	4	1029839	Atchison Lane Pty Ltd aft Atchison Lane Trust



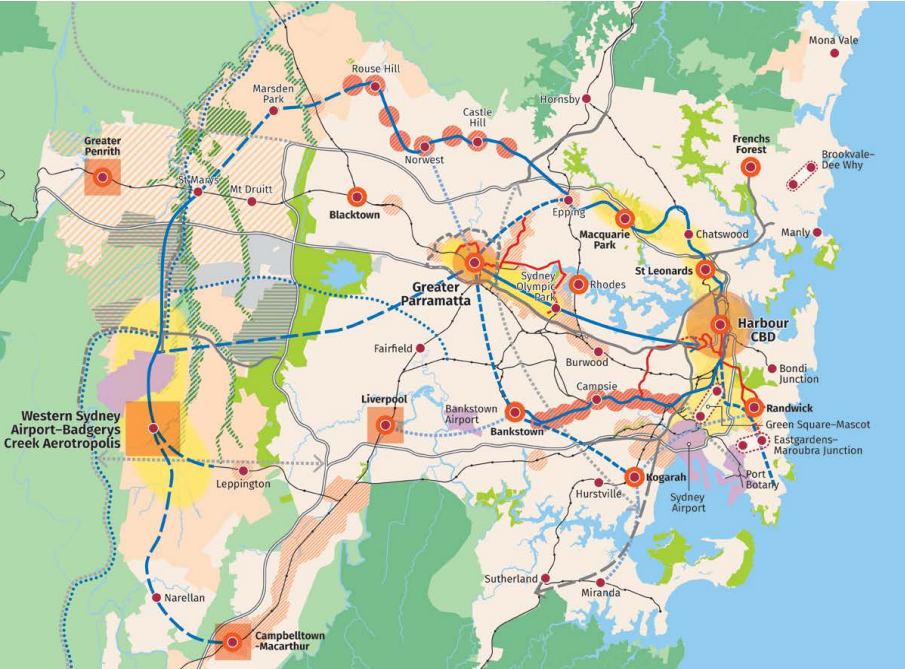
Introduction



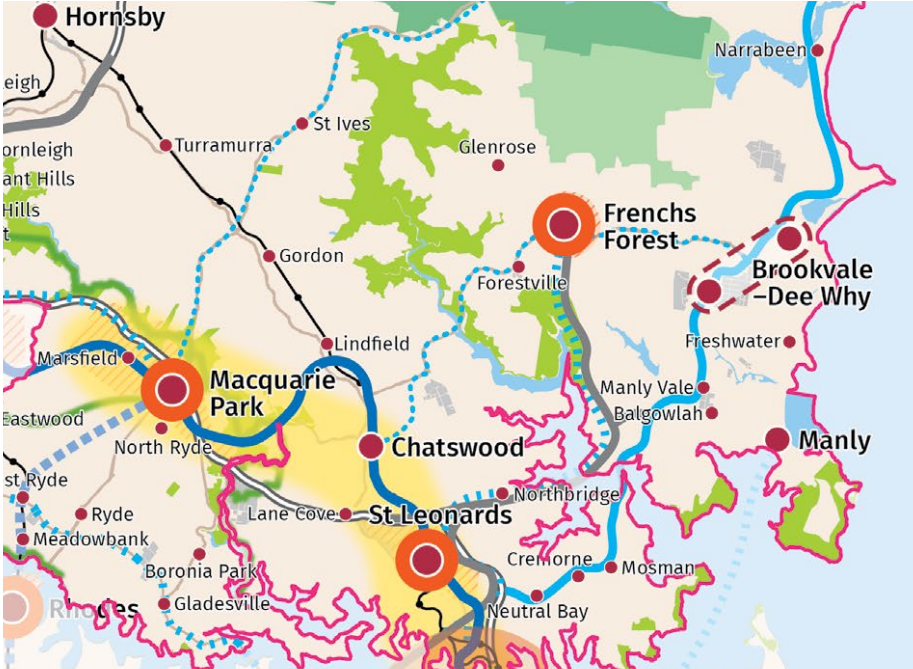
- 01 Atchison Lane
- 02 The site on the corner of Chandos & Oxley Streets
- 03 Typical buildings along Atchison Street
- 04 Mitchell Street Plaza
- 05 On grade car park on site along Oxley Street
- 06 Subject site along Atchison Lane

Introduction

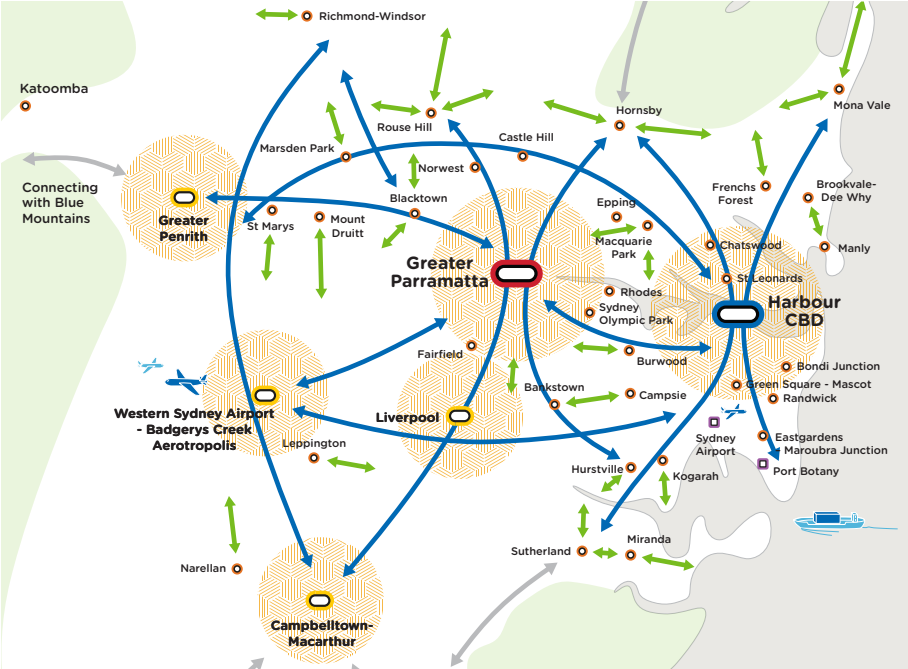
1.4 Strategic Planning Context



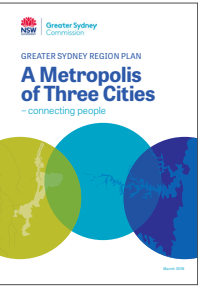
Source: Greater Sydney Region Plan: A Metropolis of Three Cities (Greater Sydney Commission, 2018)



Source: North District Plan (Greater Sydney Commission, 2018)



Source: Future Transport Strategy 2056 (Transport for NSW, 2018)



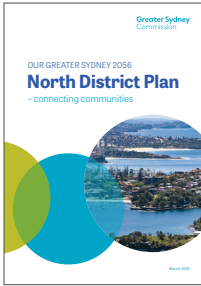
1.4.1 Greater Sydney Region Plan

The Greater Sydney Region Plan, released in March 2018, is the new metropolitan plan for Sydney. The plan sets 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 St Leonards Centre is strongly defined throughout the Plan which suggests there is significant opportunity to reinforce its importance through built form.

Key planning initiatives relevant to St Leonards include:

- It's role as a **metropolitan centre**, particularly within the **Eastern Economic Corridor** - as one of the major **commercial office precincts** in the Sydney Metropolitan Area
- It's role as a **Planned Precinct** - a key NSW State Government initiative to facilitate place-based outcomes through increased housing supply.
- It's role as a **health and education precinct** which contributes to the overall productivity of the centre.



1.4.2 North District Plan

The North District Plan, released by the Greater Sydney Commission in March 2018, sets out priorities and actions for the North District. The population in the North District is projected to increase by an additional 196,350 people and an additional 92,000 houses over the next 20 years.

Key priorities for St Leonards are:

- Leverage the new Sydney **Metro Station** at Crows Nest to deliver additional employment capacity;
- Grow **jobs** in the centre;
- Reduce the impact of vehicle movement on pedestrians and cyclist **accessibility**;
- Deliver high quality **open space** and upgrade public areas through collaborative place-making initiatives;
- Promote synergies between **health and education** related activities.



1.4.3 Future Transport Strategy 2056

The Future Transport 2056 strategy prepared by Transport for NSW provides an overarching strategy that guides transport investment across regional and greater Sydney over the next 40 years. In developing the Central River City, the Strategy identifies the need for investment in a mass transit network to support 30-minute public and active transport access.

Key transport initiatives relevant to St Leonards include:

- **Sydney Metro at Crows Nest** - a game-changing piece of rail infrastructure which will provide new metro rail access creating a new transport focus on the southern side of St Leonards supporting the gateway to commercial and mixed land uses.

Introduction

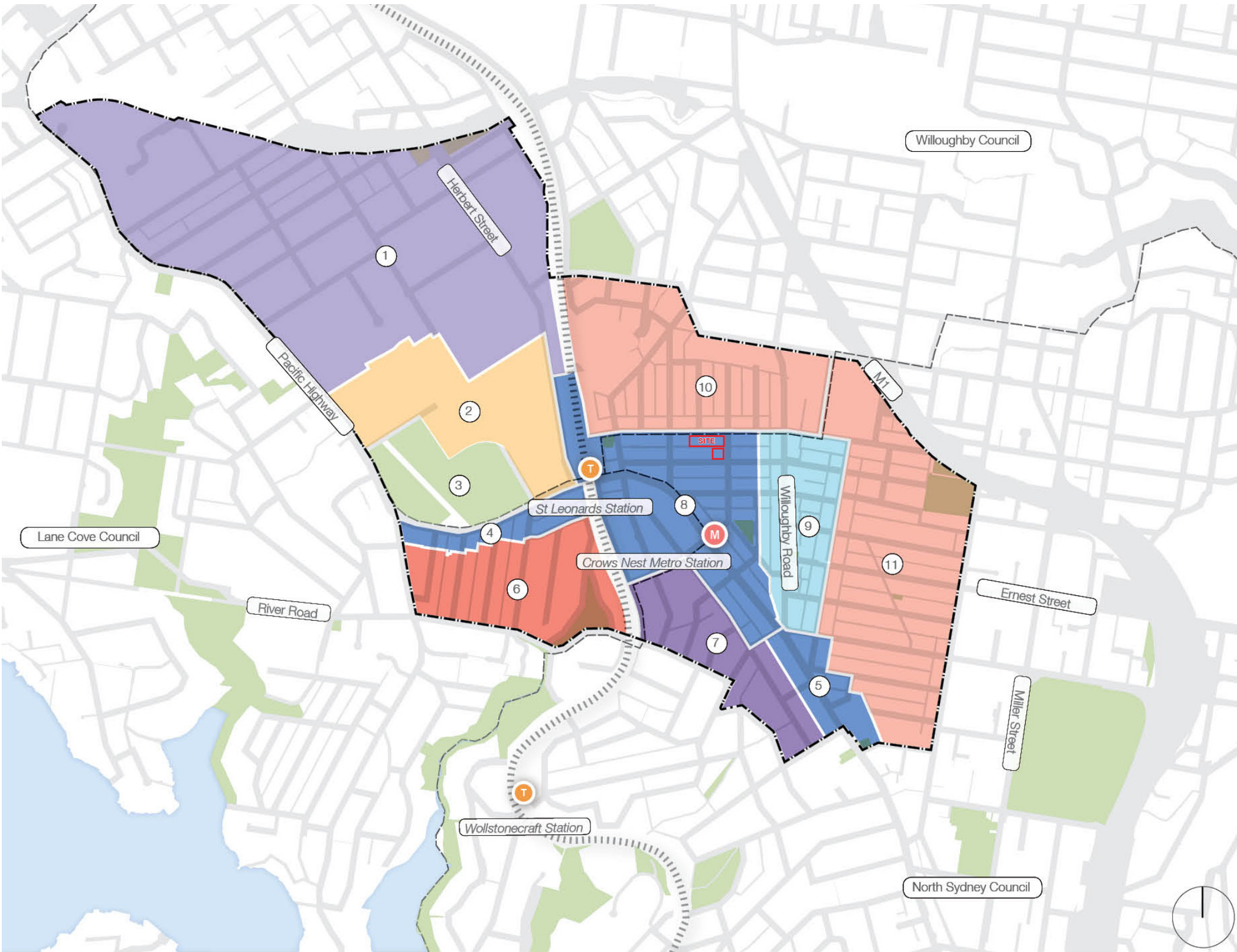
1.4.4 St Leonards and Crows Nest Station Precinct Interim Statement

In 2016, the Minister for Planning announced a strategic planning investigation of the St Leonards and Crows Nest Station Precinct. This recognised the importance of St Leonards as a Strategic Centre, and its ability to act as a key employment centre in combination with the delivery of the new Metro Station at Crows Nest. The first stage of the investigation included a Strategic Review of the centre which culminated in a Interim Statement for the St Leonards and Crows Nest Station Precinct issued by the Department of Planning & Environment (DP&E) in 2017.

Supporting the Interim Statement is a Stage 01 Preliminary Urban Design Analysis, which identifies key opportunities and constraints for the Planned Precinct. Key to this plan is the definition of existing character areas for the St Leonards and Crows Nest Planned Precinct based on current land uses and identifies the subject site within the **St Leonards Centre and Crows Nest Station Character Precinct**.

The established character areas provide opportunity for new development to build upon the **existing character** of each precinct, as well as provide an appropriate **land use strategy** for each area. The subject site, located in St Leonards Centre and Crows Nest Station is envisaged to contain **high, mixed use densities**, with a strong **commercial core** and supporting **community infrastructure**.

- Character Areas identified include:
- 1. Artarmon Employment
 - 2. Health and Education
 - 3. Gore Hill Oval and Cemetery
 - 4. Pacific Highway Corridor West
 - 5. Pacific Highway Corridor South-East
 - 6. Residential (South St Leonards)
 - 7. Residential (Wollstonecraft)
 - 8. St Leonards Centre and Crows Nest Station
 - 9. Crows Nest Village
 - 10. Residential (Naremburn)
 - 11. Residential (Crows Nest)

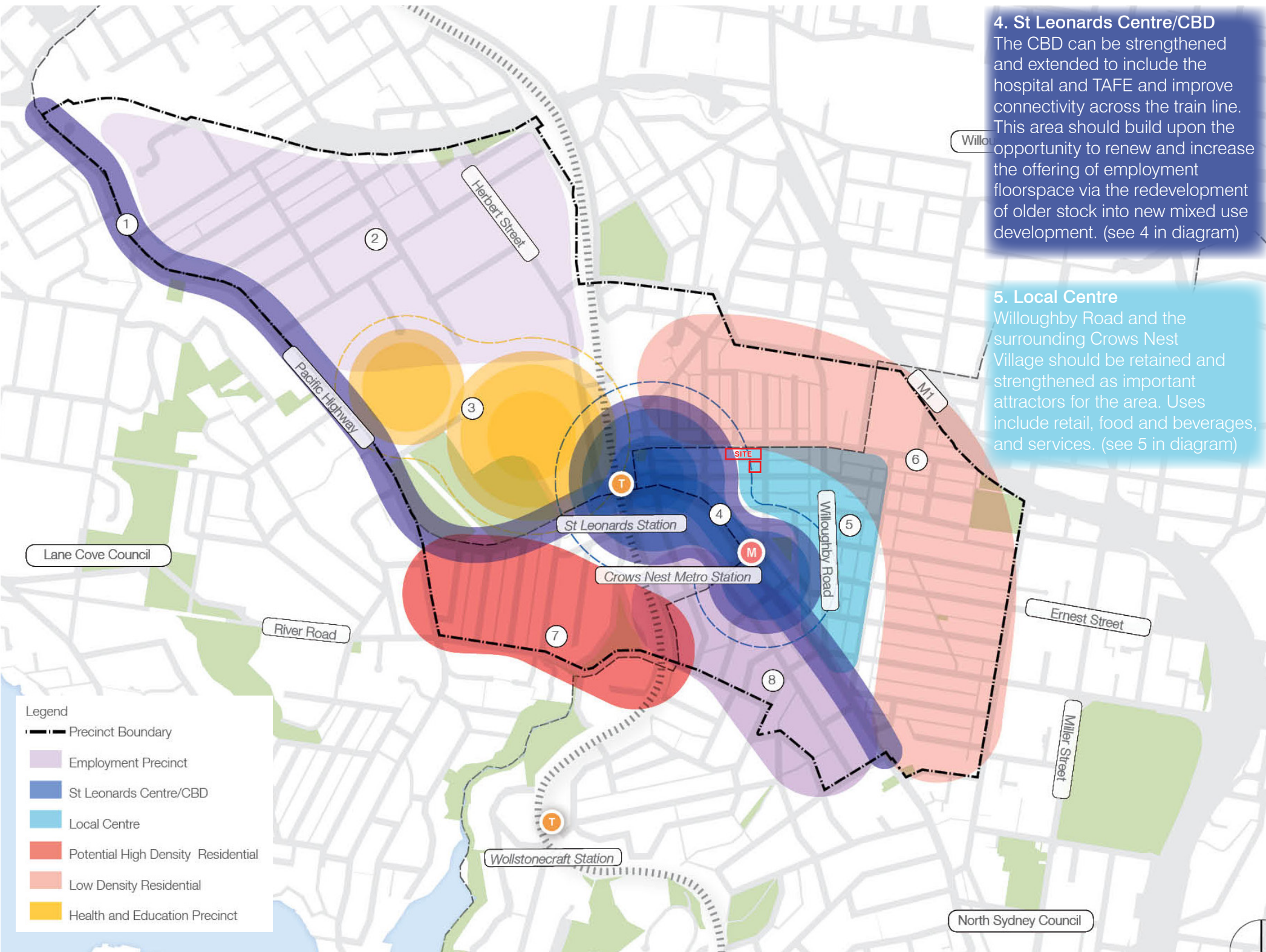


Source: Figure 5.4.1 - Preliminary Structure Plan - Character Areas in St Leonards and Crows Nest Station Precinct Preliminary Urban Design Analysis (Department of Planning & Environment, 2017)

Introduction

The *St Leonards and Crows Nest Station Precinct Preliminary Urban Design Analysis* also identifies opportunities for the future development of the centre. A summary of land use opportunities for the different character areas identified in the study is provided below.

- 1. Development along the Pacific Hwy should continue to accommodate important **urban services** and facilitate **transport movement**.
- 2. The Artarmon Employment Area should continue to provide **light industrial and warehouse uses and employment land**.
- 3. The Royal North Shore Hospital and TAFE in the **health and education** precinct offer important social infrastructure and should be strengthened through supporting land uses in surrounding areas.
- 6. The **low density residential** area is to be retained and protected due to the **heritage** character areas.
- 7. The area to the south of the precinct is to be investigated for further intensification to accommodate **medium density residential**.
- 8. A **mixed-use** precinct that encourages uses to support the Mater Hospital by providing complimentary **commercial** and **residential** uses.



Source: Figure 4.9.1 - Opportunities Land Use Plan in St Leonards and Crows Nest Station Precinct Preliminary Urban Design Analysis (Department of Planning & Environment, 2017)

Introduction

Further detailed analysis undertaken as part of the study also identifies the following key opportunities and challenges for the St Leonards/Crows Nest Precinct and subject site.

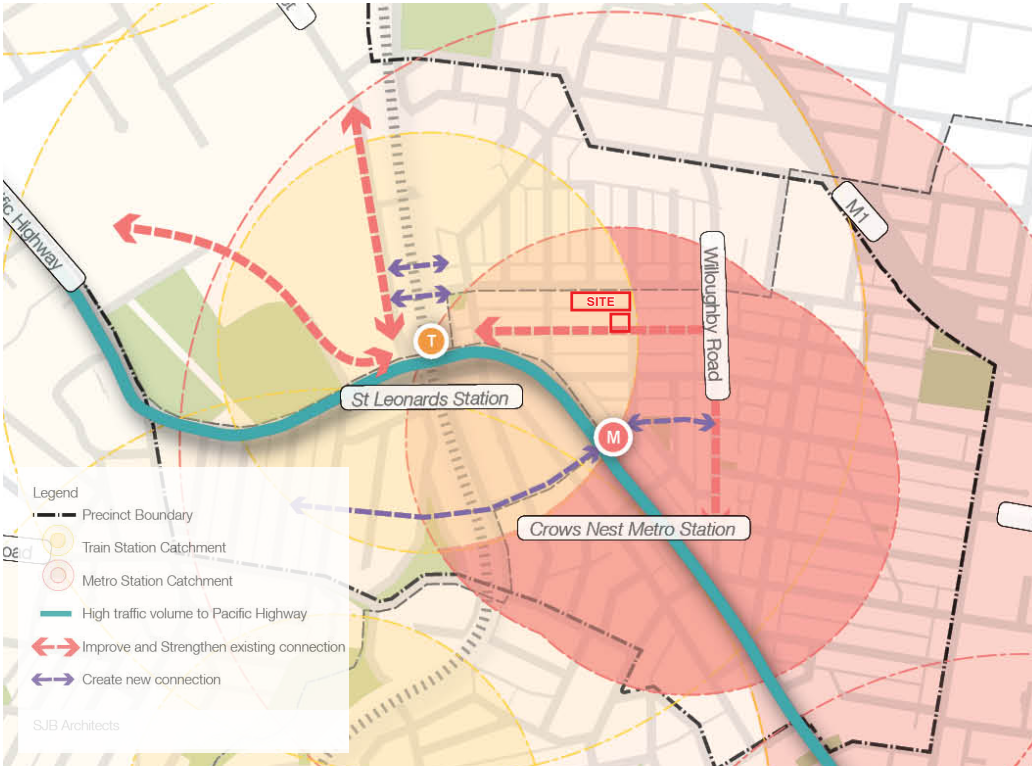
Opportunities

- The site is identified within the 400m train station catchment of St Leonards Train Station and the new Crows Nest Metro Station. As stated on pg.10 of the strategy, ‘the new **metro station** will further fuel development in the area, creating opportunities to champion **Transport Oriented Development**. It also supports an argument for **increased intensification** further east of the Forum than what was previously considered prior to the Metro announcement.’
- The site is identified in an area for potential **increase in height and density**. Page.50 of the strategy notes ‘given the station is located near the Willoughby Road area that is to be conserved, areas identified for **additional density is likely to expand outwards of the Pacific Hwy** to capture the St Leonards CBD either side of the Pacific Hwy.’

Challenges

- A key challenge for the site and surrounding St Leonards Centre will be ensuring uplift does not erode the **employment capacity** of St Leonards, whilst managing competing demands between increased **height, density and amenity**.
- It is also critical for sites within the St Leonards Centre to ensure additional development is captured through appropriate **funding mechanisms** and **public benefit incentives** to improve the **public domain** and **connections** throughout the Precinct.

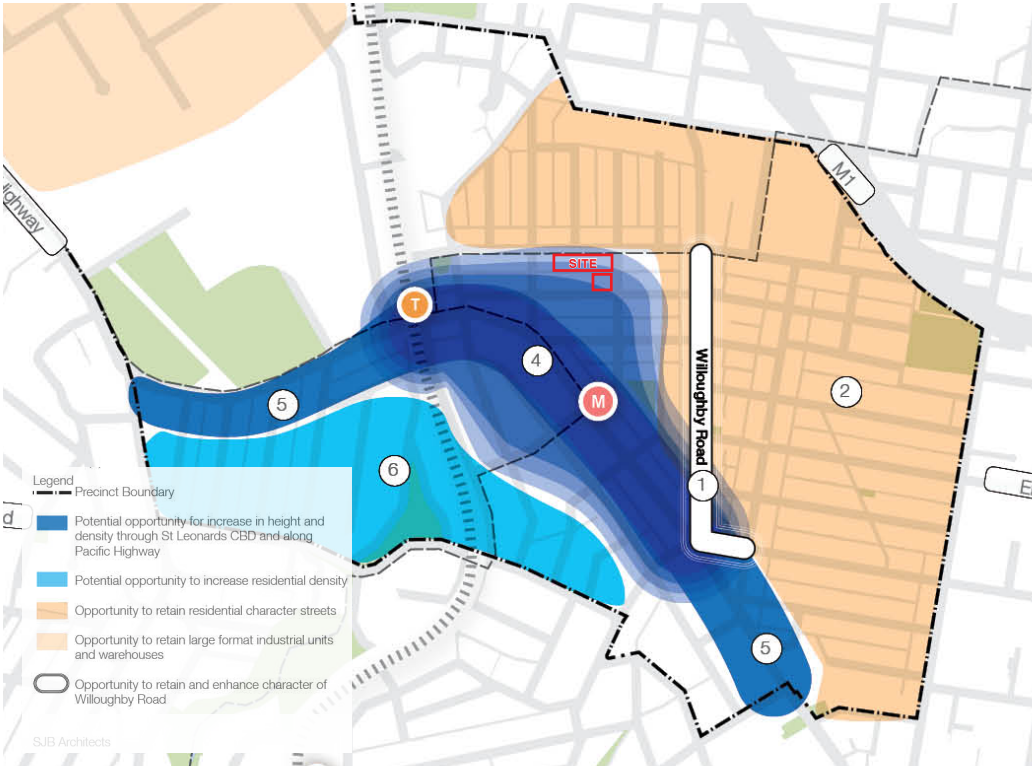
Critically, the images right show the site at the edges of the defined centre. Development within this area should be maximised to allow the centre to achieve its highest potential in accordance with the importance of the Strategic Centre in the broader context of Sydney.



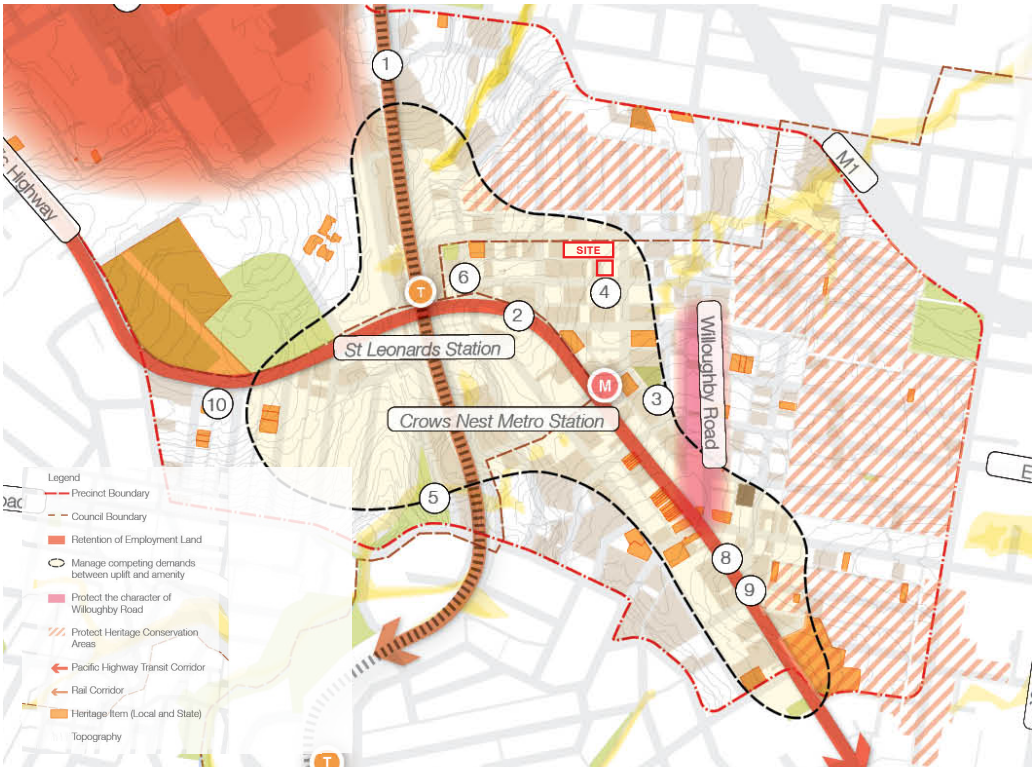
Source: Figure 1.7.1 - New Public Transport Catchment (Department of Planning & Environment, 2017)



Source: Figure 5.2.1 - Combined Opportunities Plan Preliminary Urban Design Analysis (Department of Planning & Environment, 2017)



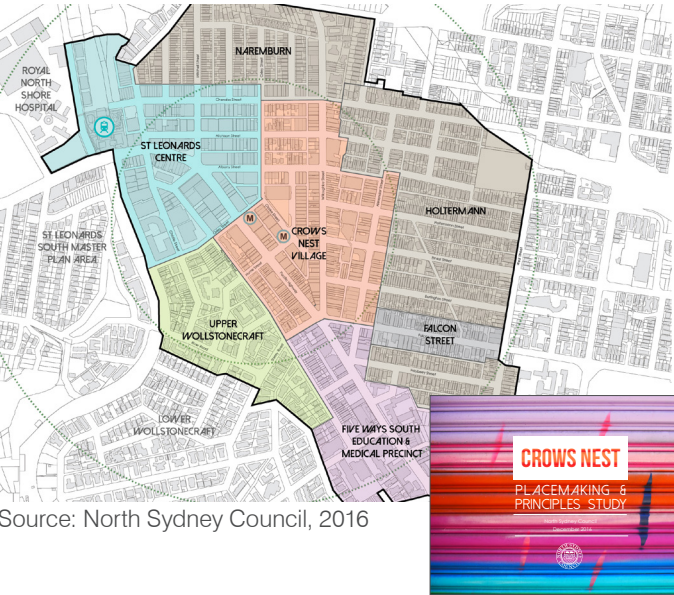
Source: Figure 5.2.1 - Opportunities - Built Form (Department of Planning & Environment, 2017)



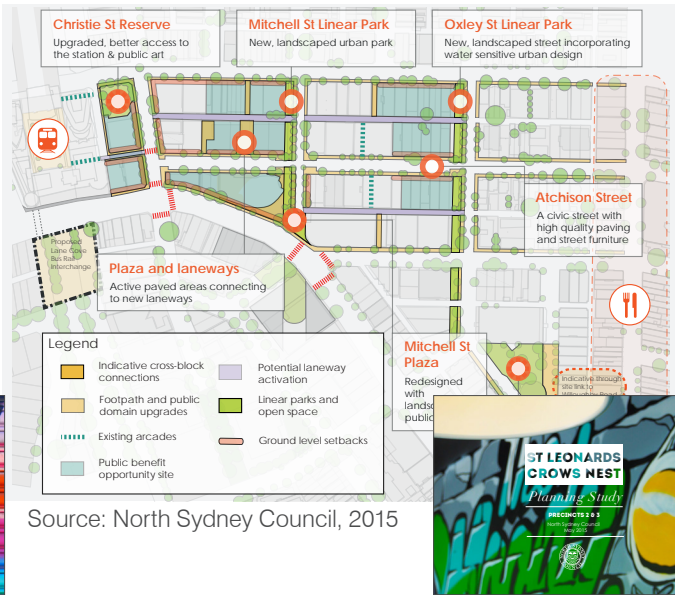
Source: Figure 5.1.1 - Challenges Plan (Department of Planning & Environment, 2017)

Introduction

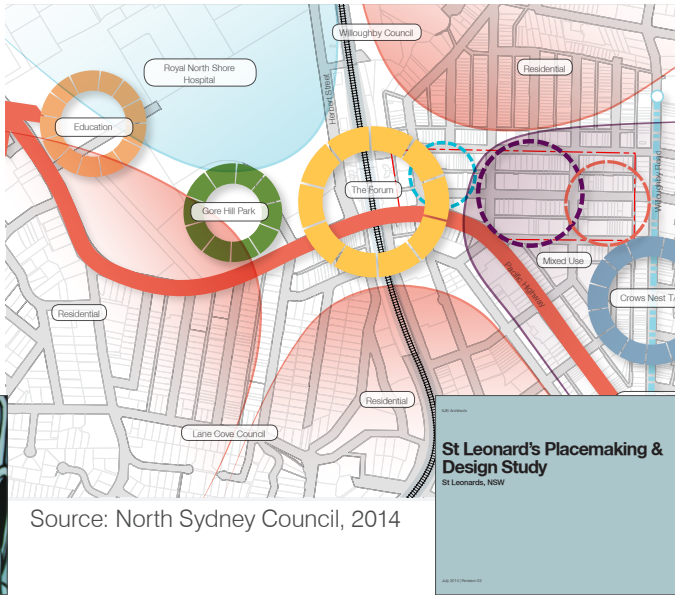
1.5 Local Planning Strategies



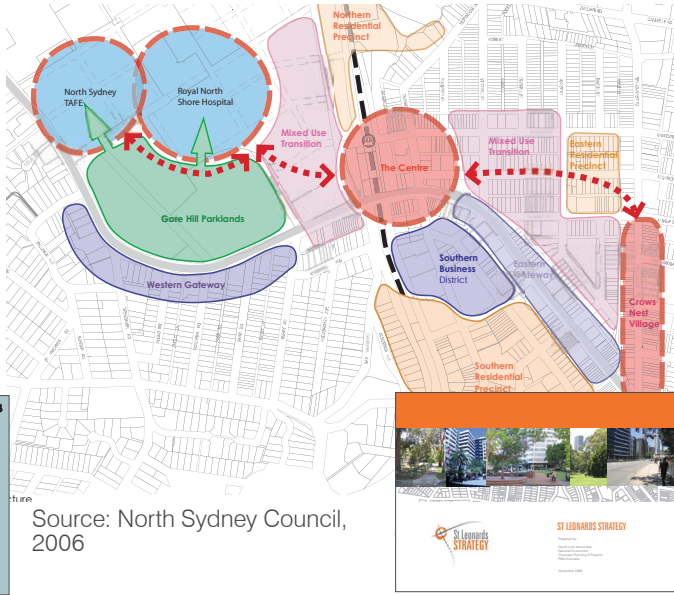
Source: North Sydney Council, 2016



Source: North Sydney Council, 2015



Source: North Sydney Council, 2014



Source: North Sydney Council, 2006

Crows Nest Placemaking & Principles Study (2016)

Adopted by North Sydney Council in December 2016, the Crows Nest Placemaking & Principles (CNPP) Study presents an overarching strategy, in response to the announcement of the Crows Nest Metro Station and the Crows Nest and St Leonards Priority Precinct and Strategic Planning Investigation.

Key principles for future growth which are relevant to the subject site include:

- Capitalising on the **Metro** as a catalyst for renewal;
- Continue to develop St Leonards as a major **employment** centre;
- Priorities **walkability** and amenity of **public spaces**;
- Ensure the social, intellectual, recreational, cultural and economic needs of the **community** are met;
- Deliver a high standard of **design excellence** and respond positively to the local context;
- Increase the amount and quality of **open space**.

St Leonards & Crows Nest Planning Study – Precincts 2 & 3 (2015)

Whilst released prior to the announcement of the Metro Station, the St Leonards & Crows Nest Planning Study was initially prepared to manage the high level of development interest in area and to provide strategic directions to accommodate sustainable population growth in North Sydney LGA, protect jobs and deliver much-needed open space and public domain.

The site lies within **Precinct 2** – the **high density commercial and mixed-use** area immediately east of the St Leonards Train Station. The site also forms part of the ‘**West Oxley**’ **Precinct** which is envisaged to be ‘an exciting **creative quarter** supporting small-medium sized firms, start-ups, galleries, specialty retail and urban living’.

- Key design outcomes relevant to the site are:
- ‘Dank Street-style’ galleries and specialty retail;
 - An activated ground plane and embellishment along Oxley Street;
 - High quality urban living.

St Leonards Placemaking and Design Study (2014)

Prepared prior to the announcement of the Crows Nest Metro Station, the St Leonards Placemaking and Design Study presents a series of design principles and framework to assist Councils review of built form controls across the Precinct.

The site is identified in a **transitional zone** (Zone 3 and 4). Key design outcomes of the study relevant to the subject site are:

- **High density** character with high residential amenity;
- Appropriate **interface** with development north of Chandos street;
- Encourage **access** through sites, prioritising surveillance at the ground plane; and
- Promote **commercial development** within the podium.

St Leonards Strategy (2006)

The St Leonards Strategy, prepared in 2006 is a strategy that is adopted by all three Councils (Lane Cove, North Sydney and Willoughby Councils) and the Department of Planning in order to manage the varying planning controls, public infrastructure and management of St Leonards.

Whilst this strategy was prepared much earlier, it is a strategy that is still adopted by Council and should therefore be considered.

A summary of key recommendations from the strategy in relation to the **Eastern Mixed Use Tranistion Area** are summarised below.

- To promote redevelopment and floorspace for **local service businesses**
- To promote **more apartments**
- To provide ‘lifestyle ingredients’ that attract people to **work** and **live** in St Leonards including improved **recreation** opportunities and creating an active route to Crows Nest.

Introduction

1.6 Local Environmental Planning Controls

The subject site lies within the North Sydney Local Government Area (LGA). The North Sydney Local Environmental Plan (LEP) 2013 remains the primary planning instrument for the site.

Parts of St Leonards also fall under Lane Cove and Willoughby LGAs. The Lane Cove LEP 2009 and Willoughby LEP 2012 provide relevant planning controls for land north of Chandos Street and west of Sergeants Lane, Pacific Hwy and Lithgow Streets.

Across the three LGAs, there is a quite a variance in local planning controls, particularly with heights ranging between:

- 9.5m up to 227.4m (RL) in Lane Cove LGA
- 7m up to 190m (RL) in Willoughby LGA; and
- 8.5m to 104.2m (RL) in North Sydney LGA.

It is important to note the current LEP controls predate the announcement of the metro and are likely to be revised as part of DPes ongoing Strategic Investigation into the broader precinct.

1.5.1 Land zoning

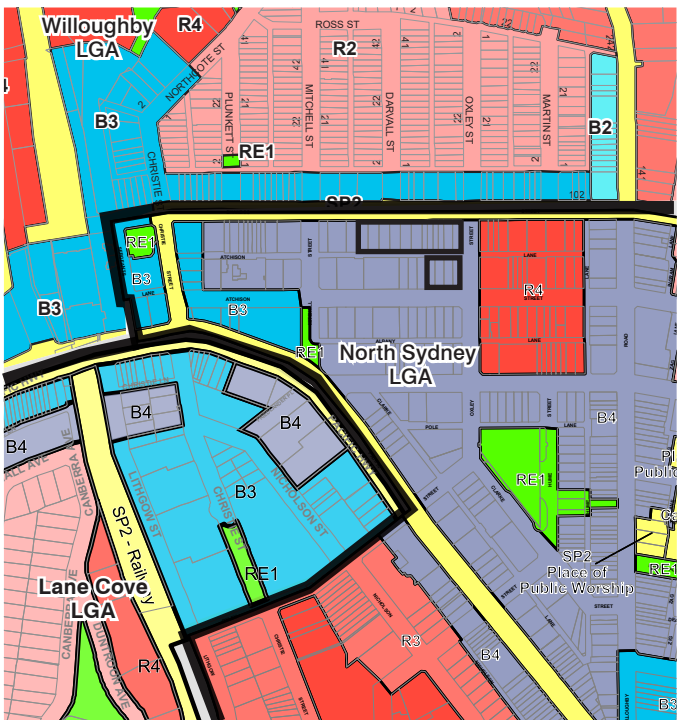
- The site is zoned **B4 ‘Mixed Use’** which allows a range of land uses including (but not limited to) commercial premises, community facilities, educational establishments, hotel or motel accommodation, information and education facilities, residential flat buildings, seniors housing, serviced apartments and shop top housing.

1.5.2 Maximum building height

- The site has a maximum height of building limit of part **20 metres** (eastern portion) and **33 metres** (western portion). Critically however, the adjoining land surrounding the station has heights up to 147m approximately.

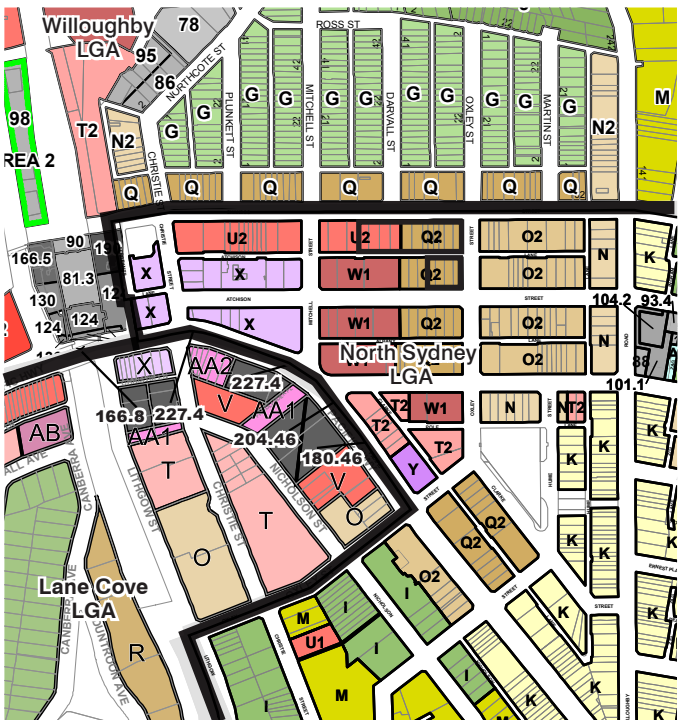
1.5.3 Maximum floor space ratio

- The site has **no maximum floor space ratio** control, as per much of the North Sydney LGA.



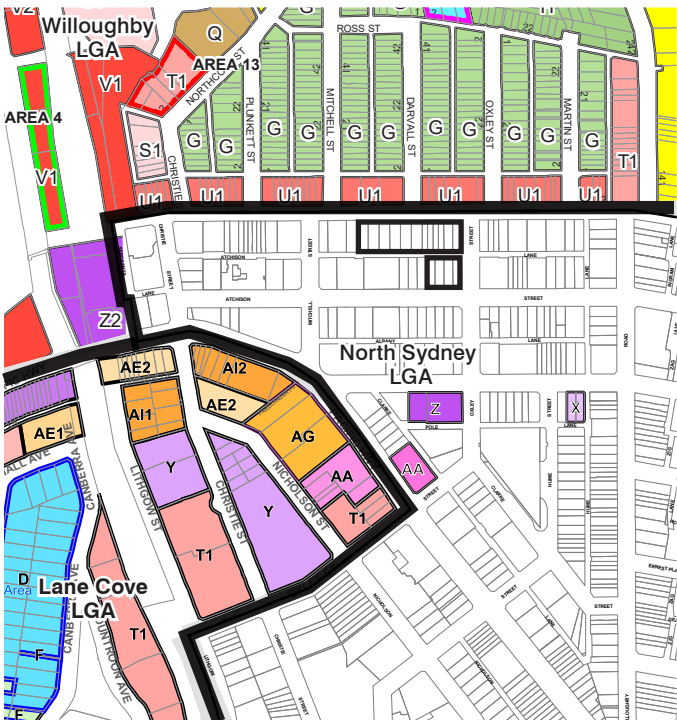
1.5.1 Land zoning map

B1	Neighbourhood Centre
B3	Commercial Core
B4	Mixed Use
E2	Environmental Conservation
E4	Environmental Living
IN2	Light Industrial
IN4	Working Waterfront
R2	Low Density Residential
R3	Medium Density Residential
R4	High Density Residential
RE1	Public Recreation
RE2	Private Recreation
SP1	Special Activities
SP2	Infrastructure
UL	Unzoned Land



1.5.2 Maximum height of building map

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
O1	15	W2	42
O2	16	X	49
Q1	19.15	Y	50
Q2	20	AA1	65
		AA2	72



1.5.2 Maximum floor space ratio map

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	AH	14.1
S4	1.8	AI1	17.1
T1	2.0		
T2	2.4		

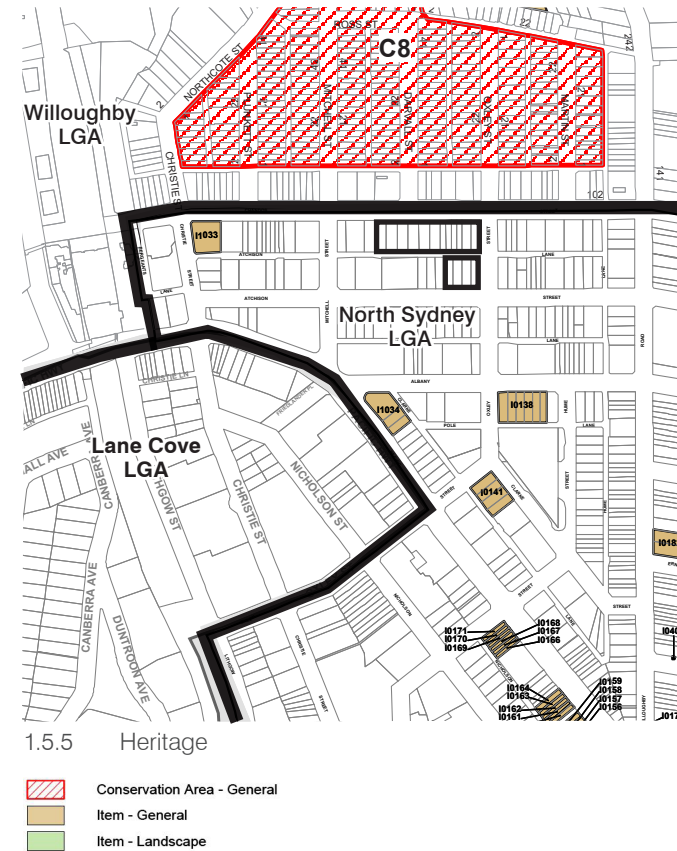
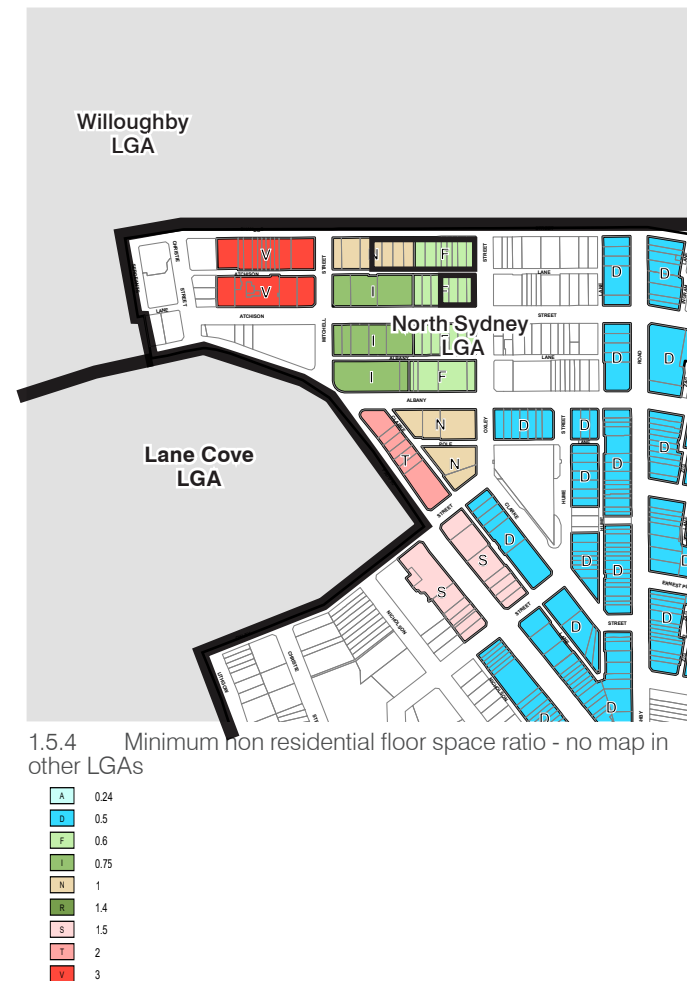
Introduction

1.6.1 Minimum non-residential floor space ratio

- The site has a minimum non-residential floor space ratio control of **part 0.6:1 and 1:1**
- Land which falls under Lane Cove LEP 2009 to the west and Willoughby LEP 2012 to the north is not subject to a minimum non-residential floor space ratio control.
- Non-residential floor spaces are not the following:
 - residential accommodation,
 - serviced apartments, if less than 50 serviced apartments are or will be contained within the site,
 - a car park,
 - a telecommunications facility

1.6.2 Heritage

- There are **no heritage items** located on the site.
- The site is **not located within a heritage conservation area**.
- There are two **heritage conservation areas within proximity of the site** including the Naremburn Heritage Conservation Area to the north, located in Willoughby LGA and the Holtermann Estate A Heritage Conservation Area located further to the east of the site which falls under North Sydney LGA.



Introduction

1.7 Local Development Controls

The site is located within the St Leonards Town Centre. Any future development on the site should consider the following key planning and development controls subject to North Sydney DCP 2013:

Chandos and Atchison Streets

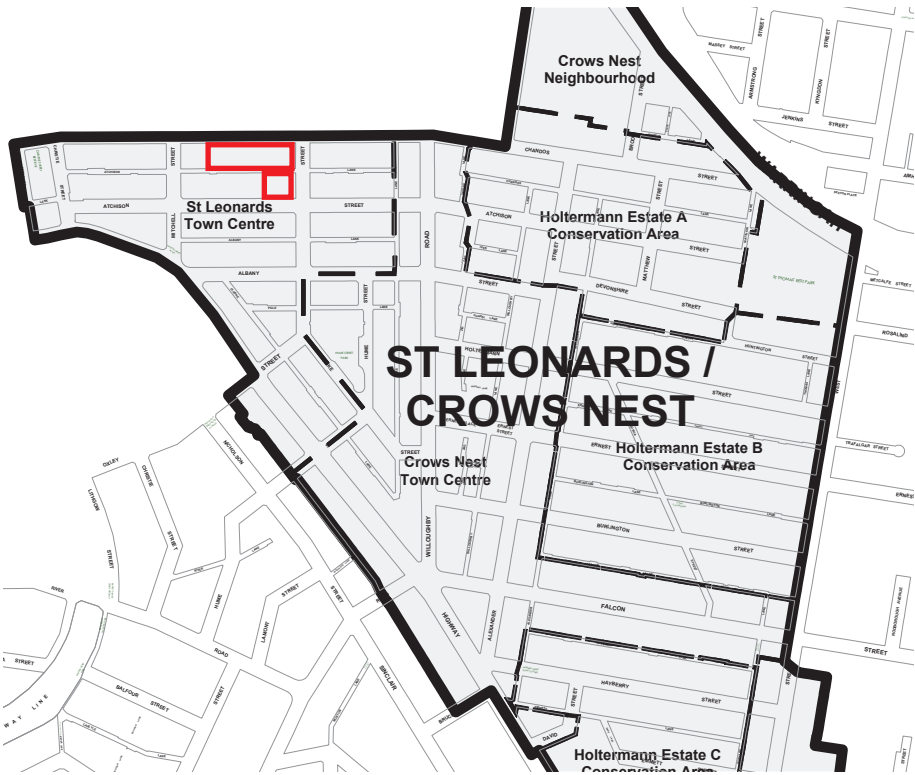
- 3m whole building setback
- 3m above podium setback
- 4 storey podium

Atchison Lane

- 1.5m whole of building setback
- 3 storey podium
- 4m above podium setback

Oxley Street

- 5m whole of building setback
- 4 storey podium
- 7m above podium setback



St Leonards and Crows Nest Planning Area Map



Building Setbacks Map



Building Podiums Map



Above Podium Setbacks Map

1.8 Building heights and density in strategic centres

Metropolitan and Strategic Centres should be locations of greater heights and densities to provide a greater number of dwellings and jobs, reinforcing their importance in the hierarchies of centres.

Typically, centres such as St Leonards, have high densities and building heights of between 25-45 storeys with some buildings achieving 55+ storeys. To ensure the long term liveability of these centres, high quality public domain elements and well thought out high-rise design is required.

St Leonards compares well to many of these precincts and centres, with its strong links to some of Sydney’s key centres and major transport connections. Accordingly, best practice dictates that that future building heights and densities for the centre should be of a level to support St Leonards ongoing role as a Strategic Centre.

Maximising density in these centres allows for effective investment in infrastructure, the ability to preserve existing agricultural lands, low-scale suburbs and conservation areas and ultimately reducing the dependency on vehicles, due to the close proximity of land uses.

It is important that the centres are developed to an appropriate density for the circumstances, and that architectural design, access to transport, public domain and infrastructure is high quality.

Building heights in Strategic Centres should be given by:

- Strategic planning objectives in delivering large amounts of dwellings and employment spaces;
- Ensuring reasonable solar access to important public places and open spaces;
- The impacts of density/height on heritage items, local character, traffic, and public domain amenity;
- Aeronautical operations; and
- Enabling the delivery of community facilities which support the existing and new communities.

When setting principles for height in Strategic Centres, emphasis must be to the future. Where centres are developed for high density residential development, under-development means long-term lost opportunity and pressure on less suitable areas for density.

A critical part of the Metropolitan Strategy and a centres-based approach is the quality of architectural design, public space and infrastructure provided in the densest areas. The development of Green Square Town Centre and Parramatta Square over the next 5 years, is providing a benchmark for how to create dense urban centres in Sydney.



Chatswood (Strategic Centre)
Building heights up to 55 storeys
FSR 10+:1 (Chatswood Transport Interchange)



Epping Town Centre (Priority Precinct)
Building heights between 48m and 72m (approximately 15-23 storeys). FSR between 4.5 and 6.0:1.



Sydney Olympic Park
20-35 storeys (current review of the master plan suggests up to 50 storeys)



Parramatta (Regional Centre)
A recent review of the 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 is for 55 storeys.



Green Square (Strategic Centre)
Towers in the Green Square Town Centre are up to 28 storeys. In the majority of the wider Green Square Renewal Area, lower perimeter blocks and tall, well designed buildings marking corners and providing landmarks is the adopted typology.



Burwood (Strategic Centre)
Burwood Council and the Central District Panel have endorsed heights of up to 42 storeys near the train station. A vibrant mix of uses, including high density residential, to create an extended hours urban retail centre for this strategic site within Burwood Town Centre.

Introduction

1.9 Building heights and densities in St Leonards

Strategic Centres in Metropolitan Sydney are the State’s primary focus for employment, residential density, and investment in infrastructure and transport.

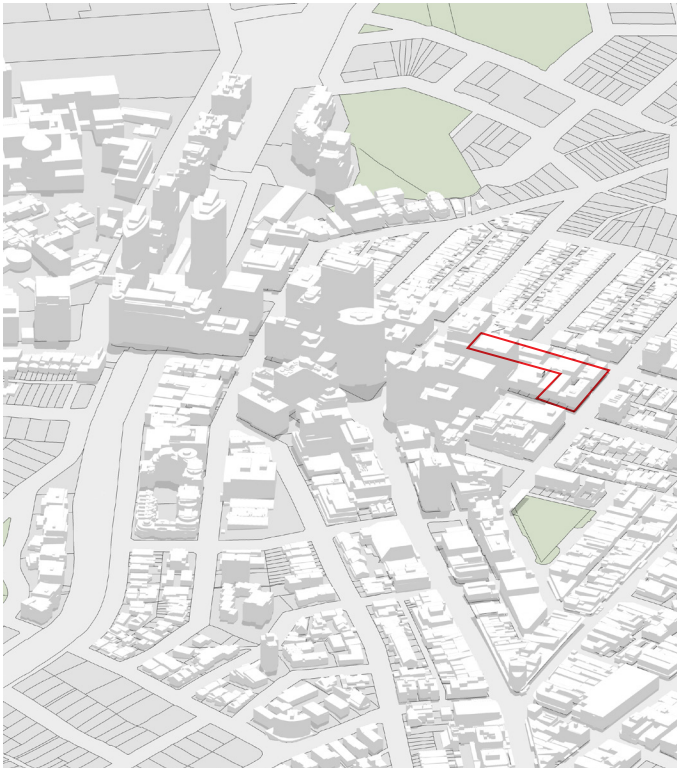
St Leonards, as a Strategic Centre, should be achieving heights and densities commensurate with its accessibility via transport and high levels of amenity.

The development of the centre is currently resulting in a range of building heights but should also ensure that it capitalises on the significant investment of infrastructure and allows for the provision of a high number of dwellings and employment spaces.

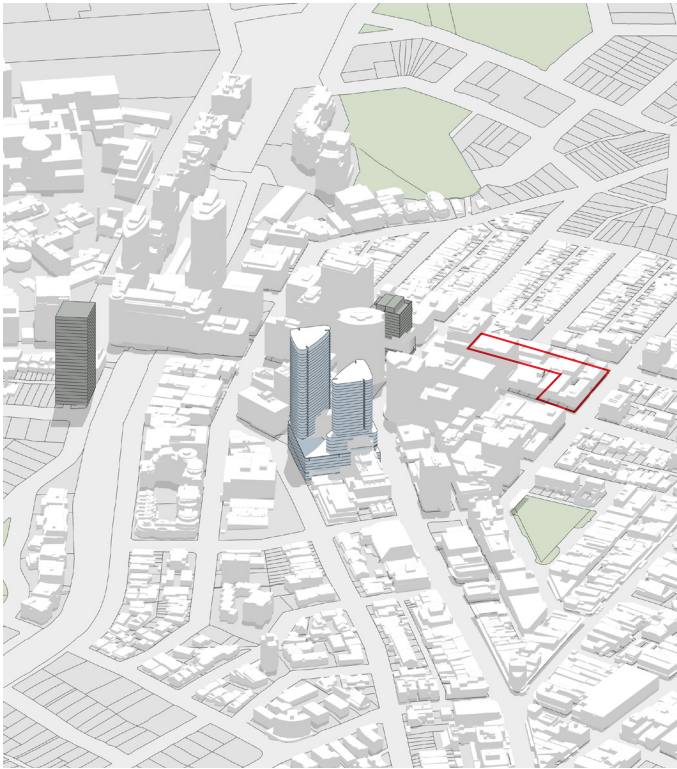
The current height controls on the site do not adequately reflect the future context of the subject site or support its ongoing development as a Strategic Centre.

Based on a review of local and state planning strategies, St Leonards is earmarked for high, mixed use densities with tall buildings identified as 18+ storeys.

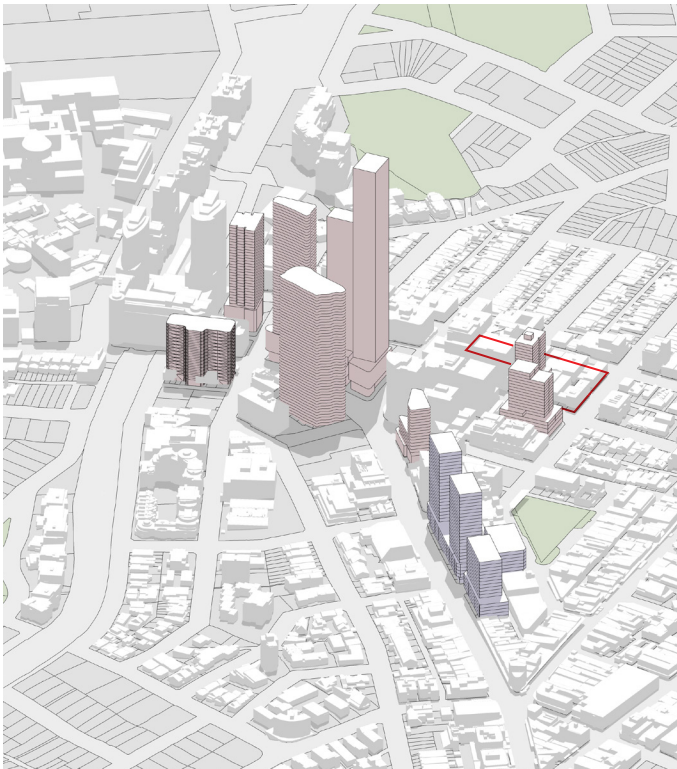
An overview of the current and future planning for the broader precinct is shown right.



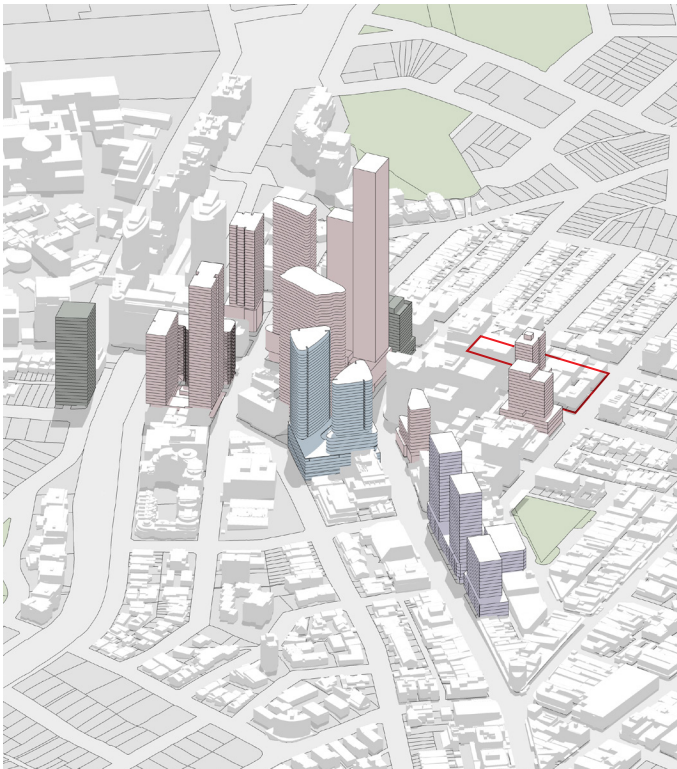
Existing



Approved DAs and Planning proposals



Proposed DAs and Planning proposals

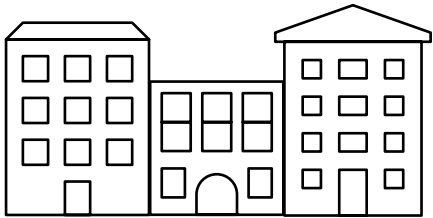


Potential future St Leonards centre

- Legend
- Subject site
 - Existing building context
 - Lodged Planning Proposal/DAs
 - Metro Station (proposal)
 - Approved Planning Proposal/DAs
 - Under construction

In response to the strategic and local planning context, the following strategic drivers have been developed which provide a foundation for the vision of the site.

1.10 Strategic drivers



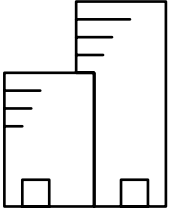
1

Deliver high density in the St Leonards/Crows Nest Centre

The delivery of high density in the centre ensures that a large number of dwellings and jobs are provided, supporting its role as a Strategic Centre is maintained.

This will ensure that a critical mass for a busy and active public domain is achieved which supports a range of activities throughout the day.

The first stage of highest densities should be within 400m of the train station. This site is will situated to be halfway between the existing St Leonards Station (400m) and future Crows Nest metro (230m).



2

Maximise heights to define the St Leonards Centre

Tall buildings play an important role in defining the image and liveability of St Leonards. Councils local planning study identifies the site as a 'tall building site' which are defined as developments over 18 storeys in height.

In principle, the highest heights on suitably sized sites in the Centre gives strong visual definition of the centre in contrast to the surrounds. Heights should be to the northern areas of the precinct and along Pacific Hwy to preserve sunlight to the residential areas to the south of the precinct.



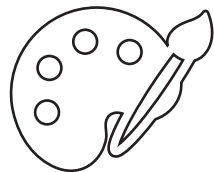
3

Enhance employment within the St Leonards area

In order to maintain St Leonards as a robust commercial hub for the Greater Sydney area, quality A-grade commercial floorspace should be provided that is suitable to the tenancy requirements of businesses in the area.

Part of this will require the delivery of a broad range of facilities to support a vibrant mixed use precinct. Part of this will need to include creative and open spaces to provide a unique and defined nature for the centre.

Smaller floorplates are suitable to the context with many smaller start up and small scale companies are attracted to the area with its close connection to Sydney CBD and proximity to regional public transportation.



4

Contribute to the broader Arts and Cultural Precinct of St Leonards

There is a need to capture the existing vibrancy of creative uses on site. The proposal for the site includes a new creative arts precinct, under a not-for-profit entity, as part of an integrated mixed use development.

An opportunity exists to provide the community with 4,000sqm of art gallery, museum and creative co-working spaces at reduced rental rates to renew and reinvigorate this existing asset on site.



5

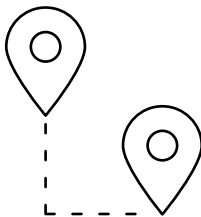
Provide high quality open space and public domain

The broader precinct currently has a shortfall of activated outdoor plaza / urban park areas which appeal to residents and employees alike.

Given the nature of the proposal at the northern edge of the Precinct, there exists opportunities to provide meaningful open plaza areas which recieve large amounts of sunlight and create opportunities for future residents and workers.

This also includes the partial delivery of the Oxley Street Linear Park, already envisioned and identified by Council.

These spaces can also provide a spill out space for future community uses.



6

Improve connections that prioritises the pedestrian

As St Leonards further develops into a high density mixed use centre, it will be important to ensure good connections to open space are provided to promote a more walkable urban environment and reinforce Council's vision of a green spine along Oxley Street.



Magee

02 Analysis

This section provides an overview of the site and surrounds, identifying key factors which will influence the proposal.



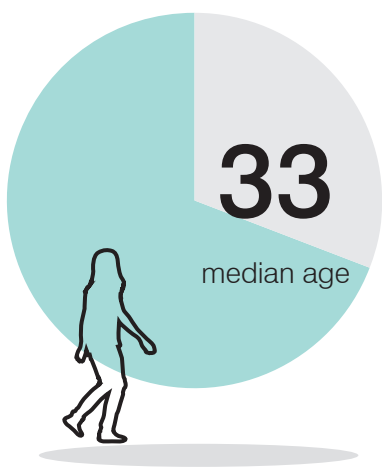
2.1 Demographics

The 2016 census told us a number of key facts about the type of people that were attracted to St Leonards



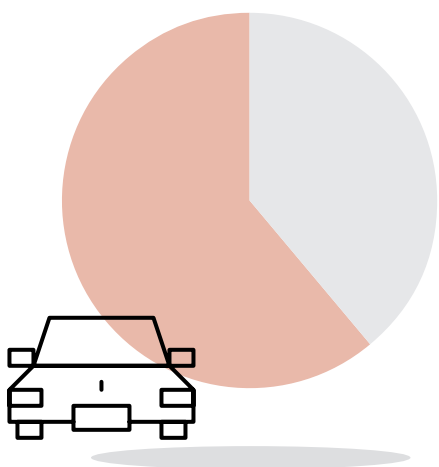
Compact living
94% of residents live in an apartment

The census found that the great majority of residents living in St Leonards who occupied private dwellings were flats, units or apartments and only 4.4% were in detached houses. The average household size was 2.0 people



Young and ambitious
31% of people were attending a tertiary or technical institution.

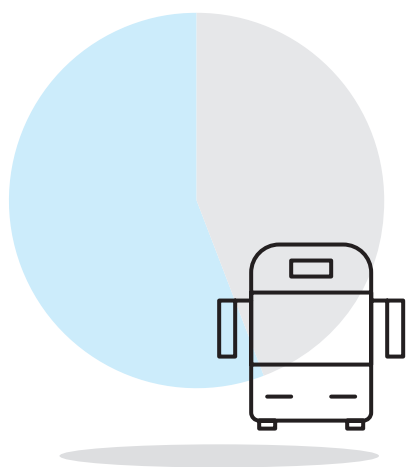
31% of residents in St Leonards were attending a University or tertiary institution, in comparison to the national average of 16%.



Low car ownership
39% of households in St Leonards don't own a car

St Leonards has a relatively low car ownership rate of 39% in comparison to North Sydney LGA of 16.4%.

Low car ownership rates can correlate with high accessibility to public transport, in which St Leonards benefits from via the St Leonards Train Station, Bus Interchange Area and soon the new Metro Station at Crows Nest.



Highly accessible
51% of people travel to work by train

People in St Leonards utilise public transport as a means to travel to work with 41.2% travelling by train and 5.7% by bus

In addition 13.3% of residents in St Leonards walk to work and only 24.5% of people travel to work.



Analysis

2.2 Existing Local Character

The work prepared by the Department of Planning & Environment for the St Leonards and Crows Nest Station Precinct breaks the Precinct down into eleven character areas.

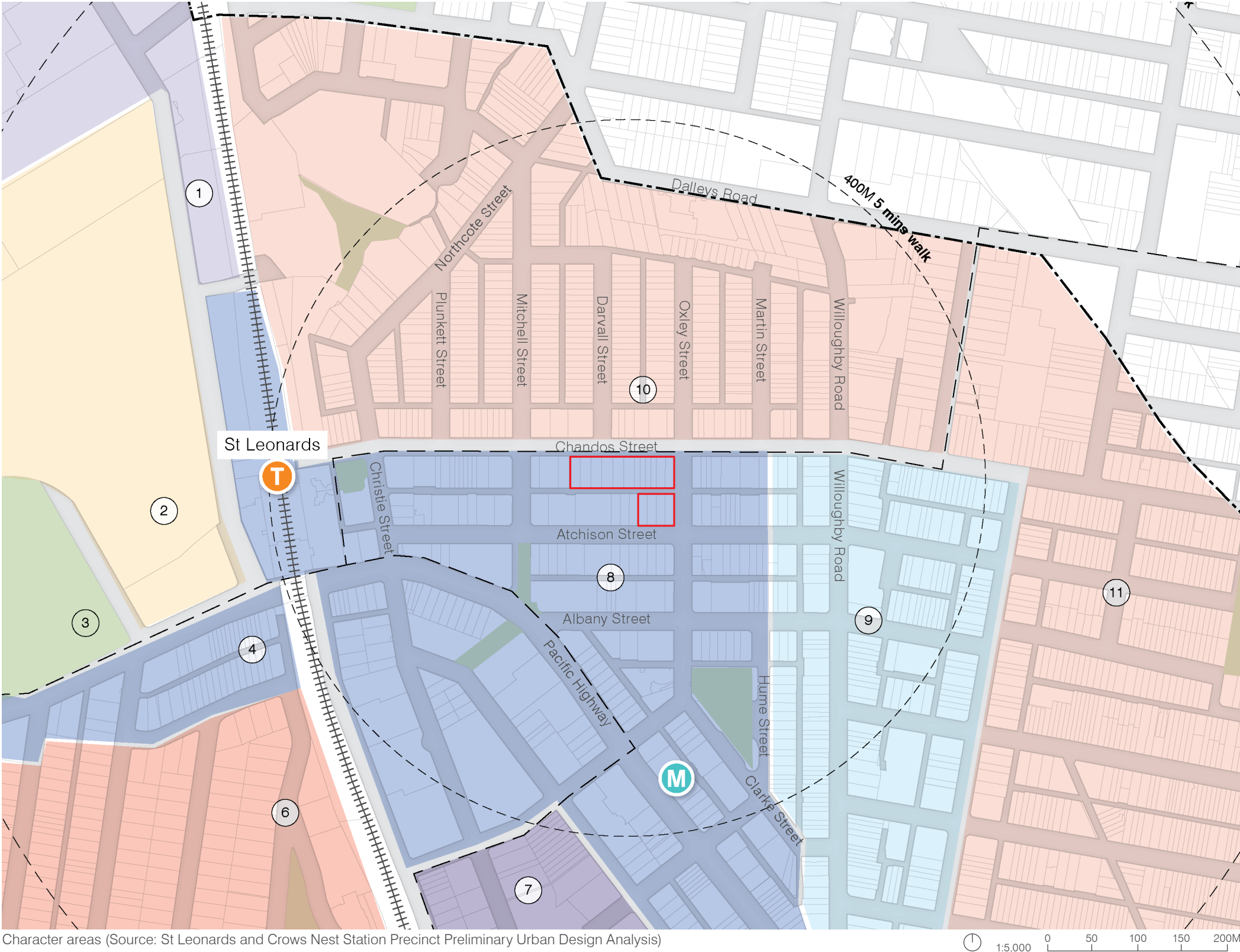
The subject site is located in the **St Leonards and Crows Nest Station Character Area** which is characterised by high, mixed use densities with a strong commercial focus, as well as a range of community infrastructure such as community arts, galleries, entertainment and retail.

The St Leonards and Crows Nest Station Character Area is hemmed in by residential areas to the north and further east. The Health and Education Precinct comprising the Royal North Shore Hospital, and TAFE NSW is located to the west and the Crows Nest Local Village is located toward the south-east.

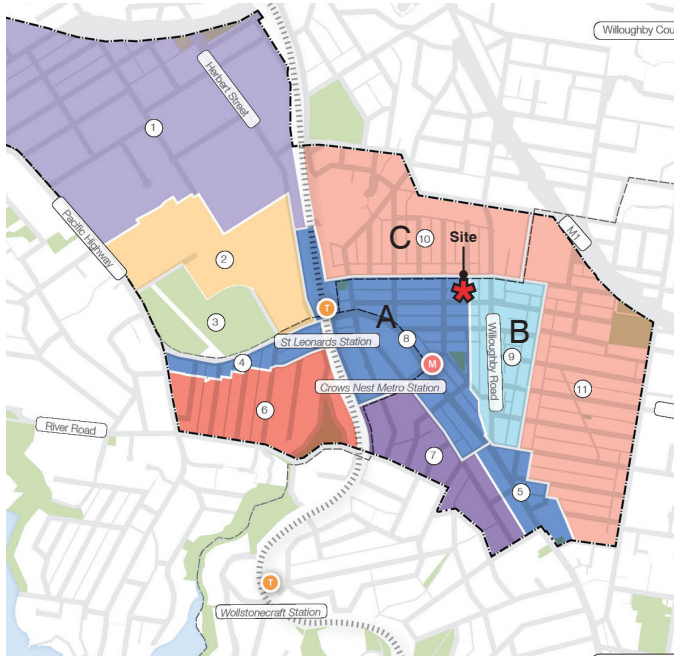
It is important for the site to provide a built form response that is appropriate to the St Leonards Centre, whilst also considering adjacent and nearby character areas to ensure any impacts can be properly managed.

Further analysis of adjoining character areas are provided overleaf.

- 01 Artarmon Employment
- 02 Health & Education
- 03 Gore Hill Oval & Cemetery
- 04 Pacific Highway Corridor West
- 05 Pacific Highway Corridor South-East
- 06 Residential (St Leonards South)
- 07 Residential (Wollstonecraft)
- 08 St Leonards Centre and Crows Nest Station
- 09 Crows Nest Village
- 10 Residential (Naremburn)
- 11 Residential (Crows Nest)



Analysis



Atchison Street, St Leonards Centre

A - St Leonards Centre and Crows Nest Station Precinct

St Leonards is a large scale, highly urbanised centre, characterised by range of mixed uses including commercial, residential and retail with building heights ranging between 12 to 30+ storeys.

The St Leonards grid runs in an east-west direction and is bounded by Oxley Street to the south and east, the Royal North Shore Hospital to the west and Henry Lane to the north.

The centre itself provides a major employment role, which is to be retained and protected in the core, closest to the St Leonards Train Station and the Pacific Highway.

Tall buildings (30+ storeys) are concentrated around the train station and along the Pacific Hwy.

Open space is limited in St Leonards Centre, with only two open spaces located at Christie Street Reserve and Mitchell Street Plaza. Christie Street Reserve receives extensive sunlight throughout the year, and is well used by workers at lunch time.



Willoughby Road, Crows Nest local village strip

B - Willoughby Road

Willoughby Road is an important north-south street for the area providing connections from Crows Nest in the South to St Leonards and Willoughby to the north.

Willoughby Road is characterised by fine grain built form, boutique shops, cafés and restaurants. It contains wide footpaths, active street frontages with plenty of outdoor dining and significant tree plantings.

Willoughby Road and the surrounding Crows Nest Village should be retained and strengthened and continue to provide important retail, food and beverage attractors for existing and future residents, workers and visitors to the local area.



Darvall Street, Naremburn Heritage Conservation Area

C - Residential (Naremburn)

The Naremburn Heritage Conservation Area is located to the north of the St Leonards Centre, bounded on the east by Wheatleigh Street and Christie Street in the west.

From Chandos Street, the land falls quickly towards the north into the residential neighbourhood of Naremburn, but is separated from the subject site by the modest buildings between 4-6 storeys in height.

The Naremburn Heritage Conservation Area has a distinct low scale residential and heritage character made up of predominately single and two storey Federation era detached dwellings.

The conservation area stretches across to Willoughby Road, where on the western side of Willoughby Road contains more low-rise mixed use attached buildings. The eastern side of Willoughby Road predominantly consists of mid rise residential apartment buildings.

Analysis

2.3 Street grid and heirarchy

The site has good road access, with three street frontages to main streets along Chandos Street, Oxley Street and Atchison Street, and a secondary frontage along Aitchison Lane.

Chandos Street is a collector road in St Leonards on the northern boundary of the site. It is a street that runs east-west with connections to St Leonards Station to the west, as well as Christie Street and the Pacific Highway.

Oxley Street is located on the eastern edge of the site. Oxley Street is a local north-south road providing connections from Crows Nest in the south-east to St Leonards and Willoughby to the north.

Atchison Street is along the southern boundary of the site and is a local road which provides east-west connections to St Leonards Centre and Crows Nest.

Atchison Lane runs parallel between the subject site, which is mostly used for servicing and access to basement car parking.

Based on existing servicing and basement car park entries located along Atchison Lane, an opportunity exists to provide access to the site via Atchison Lane, which will reduce vehicular activity along Chandos and Atchison Streets and create a safer pedestrian environment along these streets.



Analysis

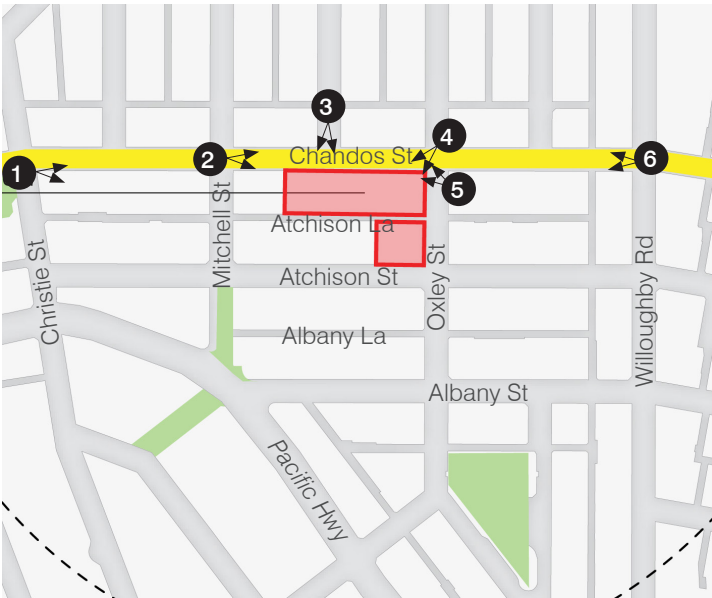
Chandos Street

A collector road with a poor pedestrian environment

Despite topography, the subdivision pattern of the area means that there are many existing east-west connections to St Leonards Station, such as Chandos Street.

To enhance these connections, Council envisage Chandos Street to become more pedestrianised with a strong focus on reducing vehicular traffic movement.

Driveways should be avoided along Chandos Street, and instead focus on pedestrian movement throughout St Leonards Centre, St Leonards Station to the west and Crows Nest local village to the east.



- 1. Corner of Christie and Chandos Street looking east.
- 2. Corner of Mitchell and Chandos Street looking east. This view shows a poor pedestrian street environment with narrow footpaths, and inactive street frontages.
- 3. Looking south from Darvall Street toward Chandos Street and the subject site. Darvall Street provides a transition between the St Leonards Centre to the south and the Naremburn residential area to the north.
- 4. Oxley Street looking south-west along Chandos Street at the subject site as part of the St Leonards Centre.
- 5. East of Oxley Street, looking north-west at the subject site. This view shows an existing grassed verge which is identified by Council to be upgraded into a new green, linear park providing connections south toward Hume Street Park and Crows Nest Metro Station.
- 6. Chandos Street looking West toward St Leonards Station.

Subject site

Analysis

Oxley Street

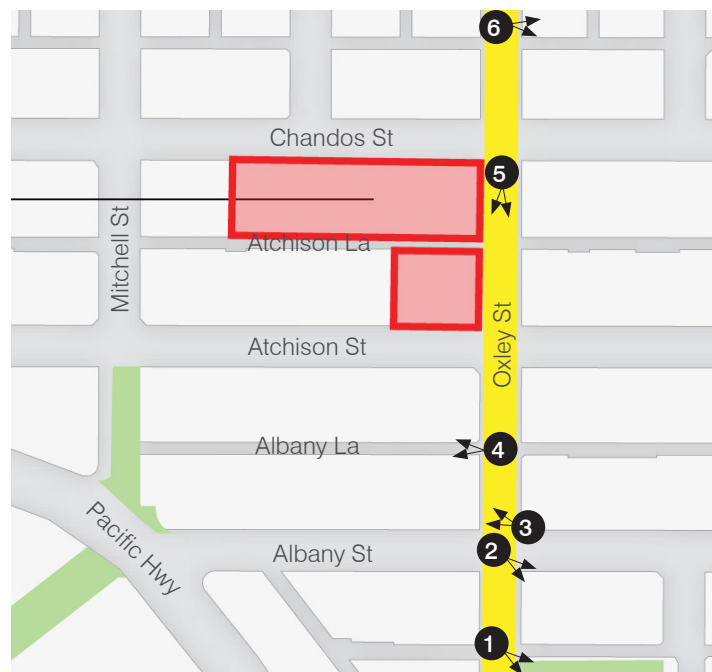
A key north-south street with a focus on green space and improving tree canopy

The site is located on the corner of Chandos Street and Atchison Street, where it meets Oxley Street.

Oxley Street is a local street which provides connections to local retailers surrounding the major activity areas along Willoughby Road, and in the creative arts precinct and commercial core between Willoughby Road and St Leonards Station.

The western edge of Oxley Street, along the frontage of the site is currently being planned by Council to transform into a green linear park providing a green landscaped connection to Hume Street Park and the Crows Nest Metro Station.

This presents an opportunity for the site to embellish the western side of the site through a ground floor setback, which will encourage pedestrian movement and activity along this important sunlit street.



1. Oxley Street looking south east at Hume Street Park. Hume Street Park is earmarked for significant upgrades including a new public park and plaza, and associated facilities.
2. Corner of Albany and Oxley Street looking south east along Albany Street.
3. View from Albany Street looking north-west along Oxley Street.
4. View from Oxley Street looking west toward Albany Lane.
5. View from the corner of Oxley and Chandos Street looking south along Oxley Street.
6. Henry Lane, north of Chandos Street. This view shows typical low-scale residential housing typologies in Naremburn, one block north-east of the subject site.

Subject site

Analysis

Atchison Street

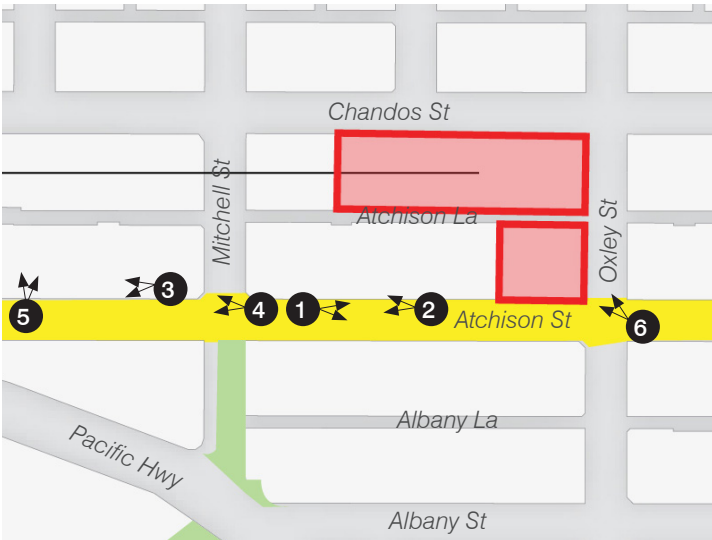
A key east-west pedestrian connector with a focus on civic character.

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. Despite its 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 local village along Willoughby Road.

With low traffic volumes and active edges and good street tree planting, the street has the potential to become a pleasant pedestrian oriented civic street.

This presents an opportunity for the site to continue to enhance the streetscape through activated retail uses.



- 1. View from Atchison Street looking east. The topography of Atchison Street slopes down towards Willoughby Road.
- 2. View from Atchison Street looking west. This view shows taller buildings located on the southern side of Atchison Street.



- 3. New public domain upgrade along Atchison Street with new planting and seating. Hedges and pergolas plants creates a buffer and enclosed landscape open spaces zoned by the slope stepping along the ground topology.
- 4. View looking west along Atchison Street.



- 5. There is good pedestrian amenity on the ground level of 6-16 Atchison Street, with public open space which is accessible for pedestrians providing a connection to Atchison Lane.
- 6. Corner of Atchison Street and Oxley Street looking north-west towards the subject site.

 Subject site

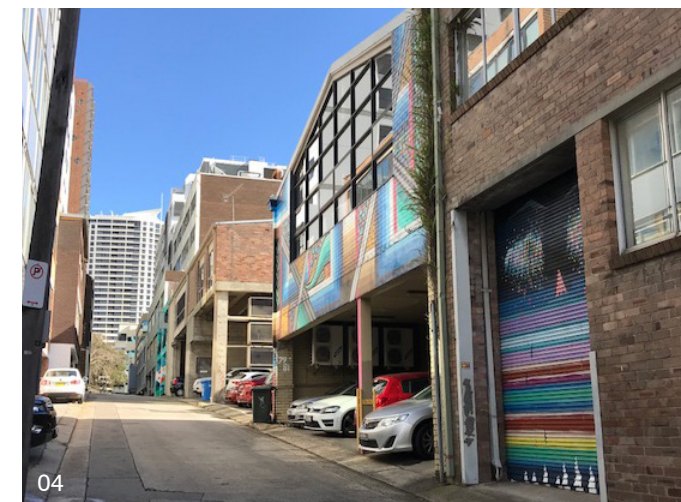
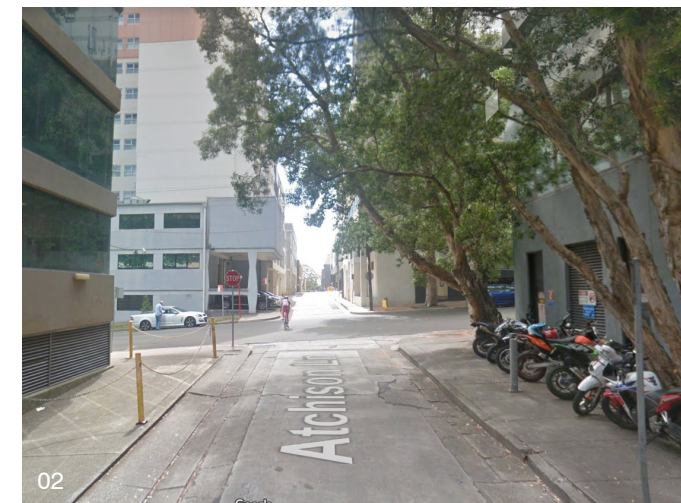
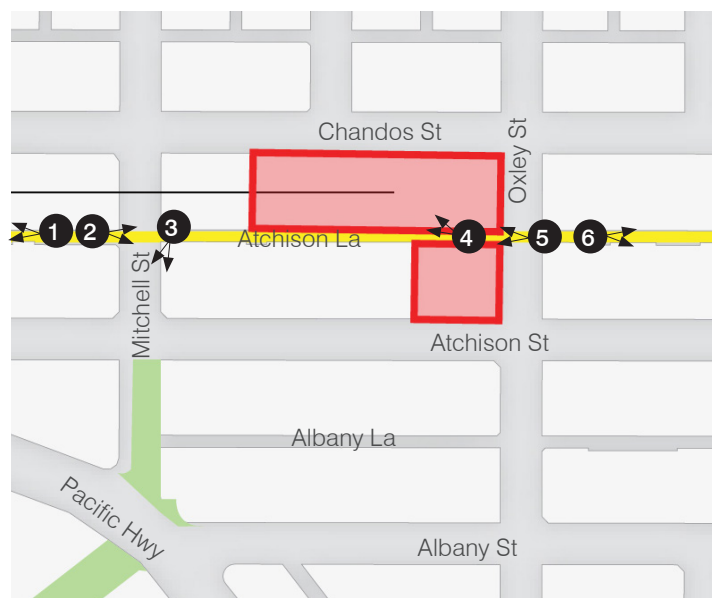
Analysis

Atchison Lane

Atchison Lane is narrow and dominated by driveways, and vehicular movement. Atchison Lane has little or no footpath and lacks ground floor activation.

Some buildings along Atchison Lane have started to incorporate elements of public art on the external facade of buildings and garage roller doors.

With existing servicing along Atchison Lane, an opportunity exists to provide vehicular access to the site via Atchison Lane, which will reduce vehicular activity along Chandos and Atchison Streets.



1. View looking west along Atchison Lane.

2. View looking east along Atchison Lane.

3. View looking south from Atchison Lane towards Mitchell Street.

4. View looking west along Atchison Lane.

5. View from Oxley Street looking west toward Atchison Lane

6. View looking east along Atchison Lane.

Subject site

Analysis

2.4 Transport

The site is very well serviced by public transport including train, bus and the new metro station which is expected to be complete by 2024.

Metro

The site is also located within 230m from the future Crows Nest Metro Station with a direct walk through a linear park from the station entry to the site. This will provide improved travel time and accessibility to nearby centres including Chatswood (4mins), Barangaroo (5mins) and Martin Place (7mins).

Train

The site is located within 400m of St Leonards Train Station (around a 5 minute walk).

St Leonards Train Station is services by the T1 North Shore Line with connections to Sydney CBD (Central, Town Hall and Wynyard) North Sydney, Chatswood, Macquarie Park and Macquarie University. the train station provides regular train services on- and off-peak. Travel times to Wynyard station are around 15mins, with trains every 6mins.

Buses

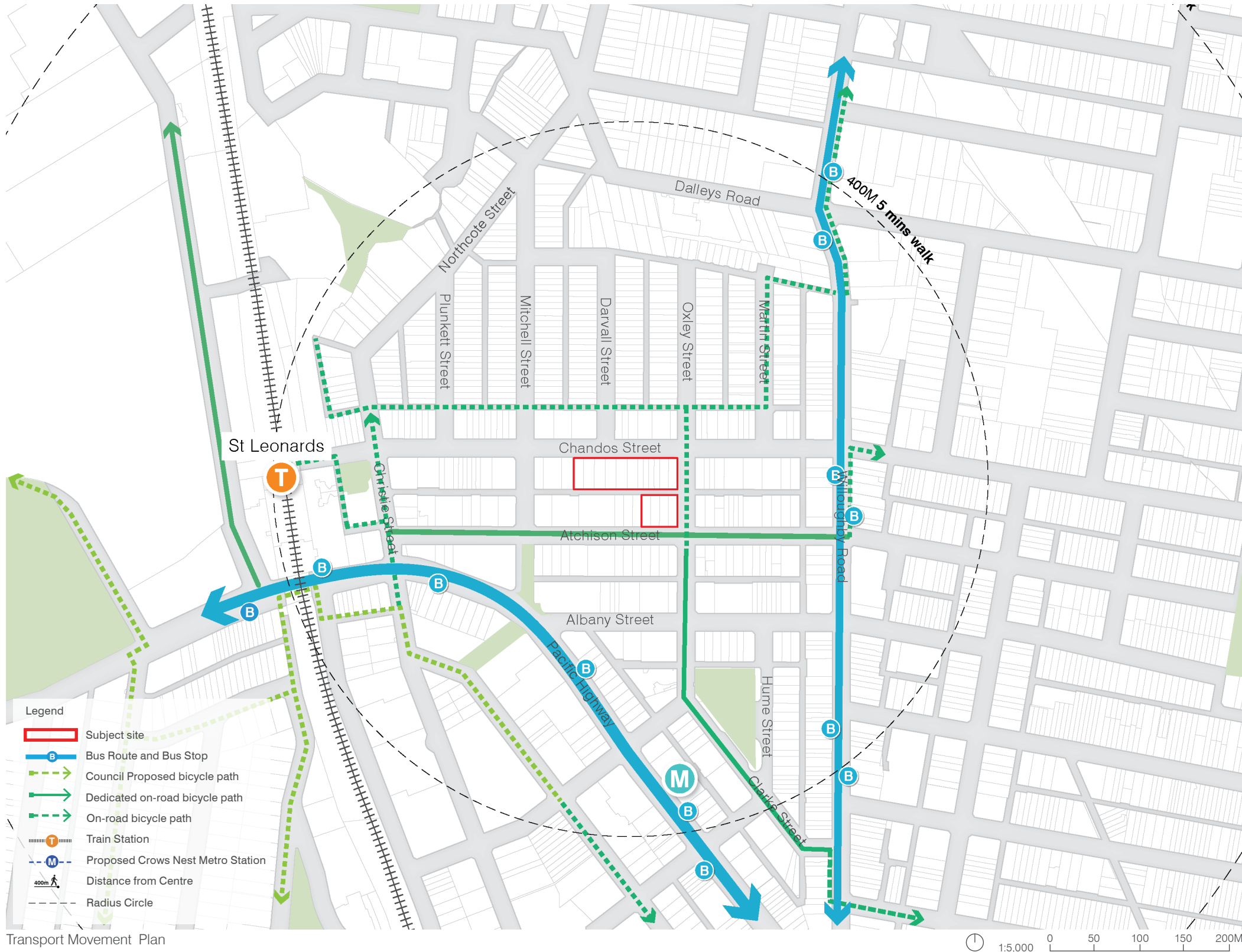
St Leonards is one of the busiest train stations in metropolitan city, also serving as an interchange for bus services with services travelling north and south along the Pacific Hwy to the City, Manly, Botany, North Sydney, Chatswood, Macquarie Park, and Hornsby.

Cycling

There are some on-road bicycle connections in St Leonards Centre, which providing connections to the St Leonards Station along Chandos Street and Christie Street.

There is a dedicated on-road bicycle path along Atchison Street, which continues south along Oxley Street via Hume Street Park and into Crows Nest.

There is opportunity for on-road bicycle connections to be extended north of Atchison Street toward Naremburn and west along Chandos Street toward St Leonards Train Station.



Analysis

2.5 Pedestrian Movement


There are a number of primary pedestrian desire lines throughout the precinct, which generally provide connections to certain key attractors including The Founmn Plaza, Christie Street Reserve, Mitchele Street Plaza, Friedlander Place, Hume Street Park and Crows Nest Village along Willoughby Road.


Pedestrian through site links throughout the Precinct are very important, as majority of east-west street blocks average around 150m in length.


With majority of through site links being north-south connections, there may be an opportunity for the subject site to provide a new connection from Atchison Lane to Chandos Street. This will allow the site to be broken up along Chandos Street, providing an opportunity to enhance connectivity from Chandos Street and Darvall Street in the north through to Atchison Lane and Atchison Street in the south.


Opening up the site will also allow provision for a new north-facing public space which will achieve great sun access during the middle of the day.


Legend


 Subject site


 Parks and Plazas


 Pedestrian covered opens space


 Primary pedestrian desire line


 Secondary pedestrian desire line


 Covered pedestrian walkway


 Pedestrian through site links

 Pedestrian signalised crossing

 Pedestrian desired line unsignalised crossing

 Train Station

 Proposed Crows Nest Metro Station

 Key attractors



Analysis

2.6 Active street frontage

Active street frontages in St Leonards generally run in an east-west direction.

Some parts of north-south street, including parts of Willoughby Road and the Pacific Highway also contain active street frontages.

It is important for the subject site to continue the prevailing activate street frontage pattern, particularly along the northern side of Atchison Street, as well as Chandos Street to promote pedestrian traffic and draw activity along these streets.



Analysis

2.7 Topography and views

The Pacific Highway runs along the natural ridge line connecting North Sydney to the upper North Shore.

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.

Across the site there is a fall of approx. 4m from west to east along Chandos Street and approx. 1m from north to south along Oxley Street.

It is common urban design principle that higher development occurs on higher elevated land particularly when this reinforces an urban centre. The site is close to the highest land in the centre of St Leonards.

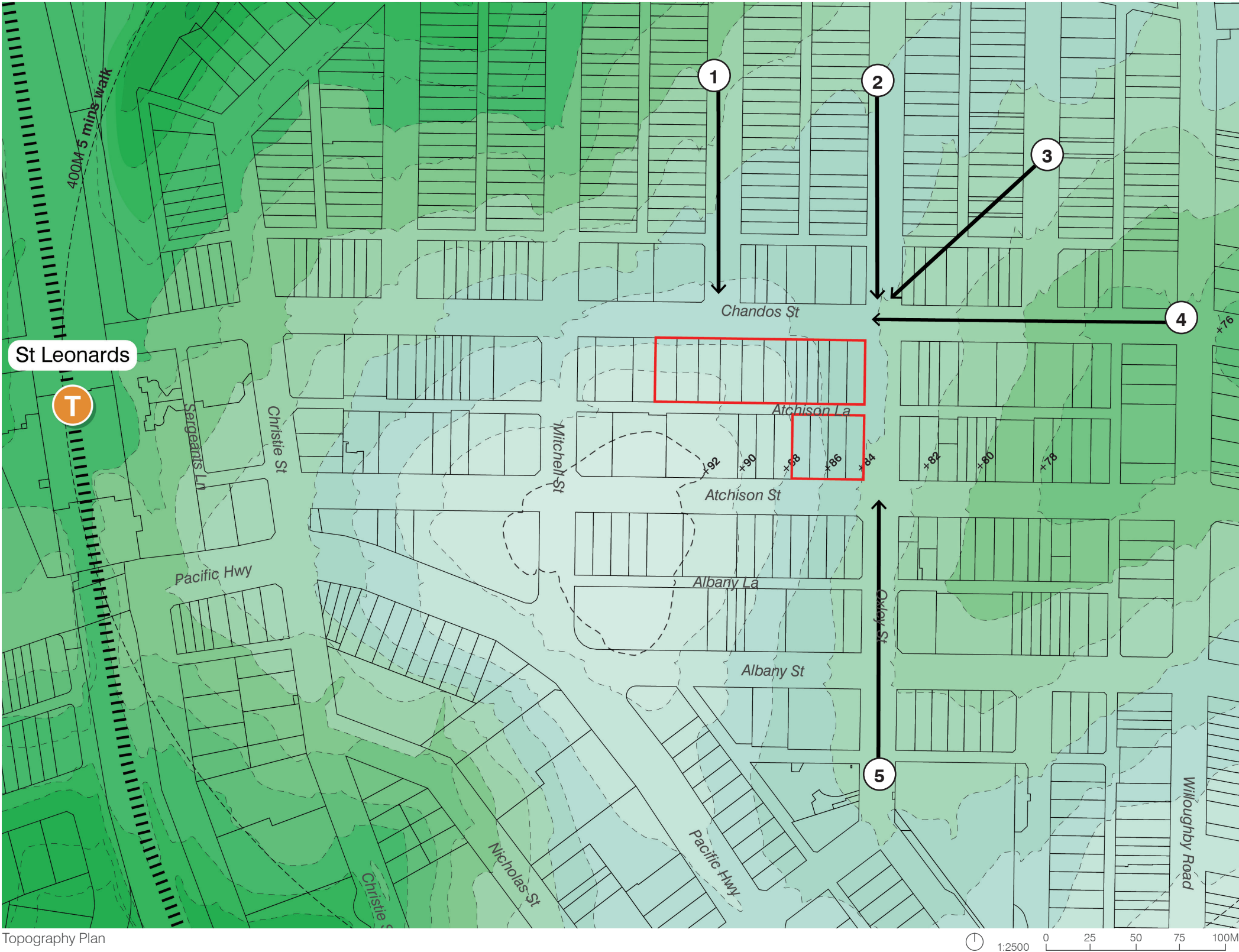
Sight-lines and Vistas

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)
 - T

 Train Station
 - M

 Proposed Crows Nest Metro Station



Analysis



Darvall Street looking south



Oxley Street looking south west



Martin Street looking south west



Chandos Street looking west



Oxley Street looking north

Analysis

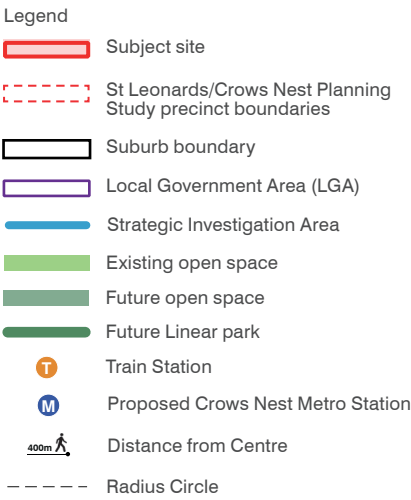
2.8 Open Space

St Leonards is challenged by limited provision of open space.

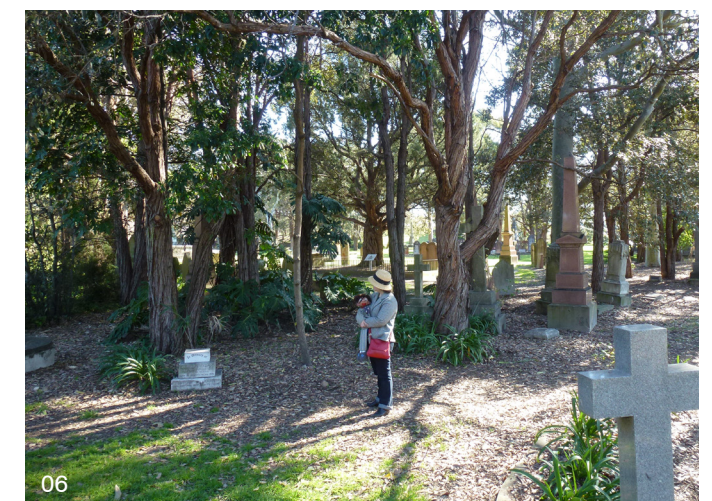
Hume Street Park is the closest public open space to the site (within 160m) which currently provides a grassed, sunlit open space, with outdoor seating adjacent to an indoor sports centre. Hume Street Park has been identified for significant upgrades with plans to deliver a new park and plaza with a new playground, children's centre, underground sports centre complex, open air cinema. **As a principle the proposed development on the subject site should not overshadow Hume St Park which is located southeast of the site.**

Other open spaces in proximity to the site include Mitchell Street Plaza, which is one of the key public domain elements in St Leonards Town Centre, as well as Christie Street Plaza, Talus Street Reserve.

Gore Hill, Naremburn and Newlands Parks are larger recreational open spaces, located further north and west, approximately 800m from the site.



Analysis



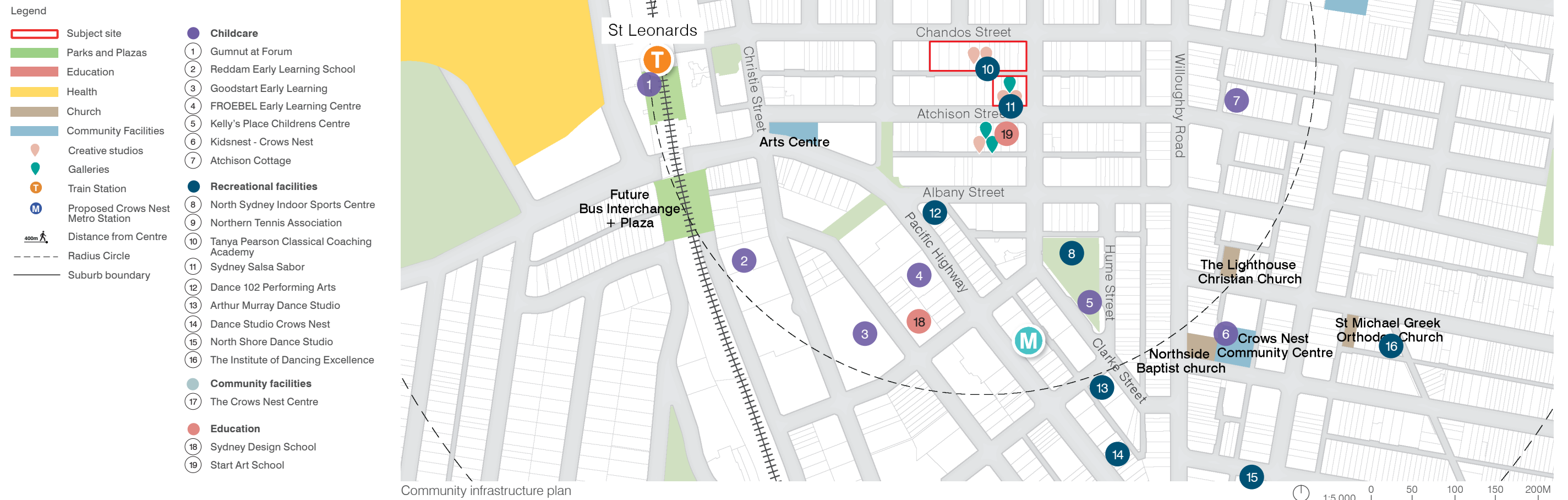
- 01 Hume Street Park Concept Plan
- 02 Mitchell Street Plaza
- 03 Gore Hill Park
- 04 Naremburn Park
- 05 Newlands Park
- 06 Saint Thomas Rest Park

Analysis

2.9 Community infrastructure

The site benefits from proximity to a range of important health and education facilities in the area including North Sydney Institute, Royal North Shore Hospital to the west, the Northern Park Tennis Association to the north, and Crows Nest TAFE, North Sydney Boys High School and North Sydney Girls High School to the south-east.

There are also a number of public worship places located throughout the area, which are mostly located along Willoughby Road.



Analysis



- 01 Ernest Place: Crows Nest Community Centre
- 02 Cre8tiv Studios (within subject site)
- 03 ME Artspace (within subject site)
- 04 Traverse mural 2017 by Bradley Eastman (within subject site)
- 05 Contact Sheet: creative co-working space and gallery (within subject site)
- 06 Rehearsal space by Brand X (within subject site)
- 07 Hume Street Park proposal
- 08 Mitchell Street Plaza redevelopment

2.10 Heritage

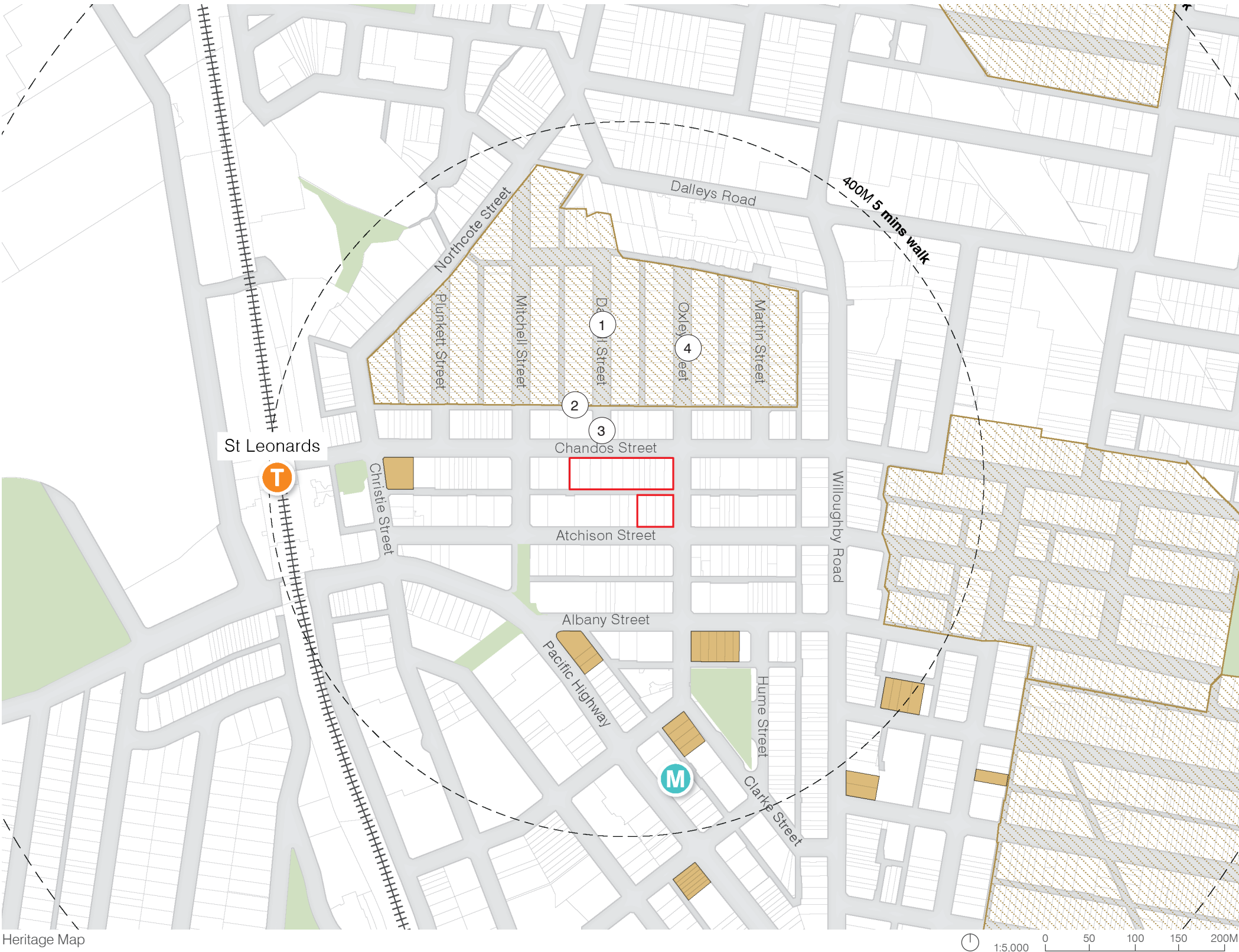
The consolidated subject site is **not a heritage item**, and is **not located in a heritage conservation area**. Despite this, there are two heritage conservation areas located within proximity to the site, being the:

- **Naremburn Heritage Conservation Area** in the North Sydney LGA, to the north of the subject site, separated by Chandos Street and a city block of medium density commercial and residential development; and,
- **Holtermann Estate A Heritage Conservation Area** in the Willoughby LGA, to the east of the subject site. This area is substantially separated physically and visually by low to medium scale development.

Analysis of the heritage context in the area shows that potential development on the subject site will be **physically separated** from the heritage conservation areas. In particular, the street block between Chandos Street and Henry Lane to the north provides a **transition barrier** between the subject site (and wider St Leonards commercial centre) and the lower-scale Naremburn Heritage Conservation Area.

The Holtermann Estate A Heritage Conservation Area is **substantially distanced** to the east and generally screened by existing medium density development along Oxley Street and existing mature vegetation and the start of the heritage conservation area.

It will be important for any future development on the site to consider potential visual impacts from the heritage conservation areas.



Analysis



1. View looking south towards the St Leonards Centre. This view shows the layers of transition from the single storey dwellings in the heritage conservation area in the north to 18+storeys in St Leonards Centre in the south.
2. View looking west along Henry Lane showing a built form transition between the heritage conservation area and the subject site.



3. View looking west along Chandos Street. This view shows the subject site on the southern side of the street, which is interfaced with 4-5 storey built form on the northern side of Chandos Street.
4. Single storey federation housing style typologies in the Naremburn Heritage Conservation Area.

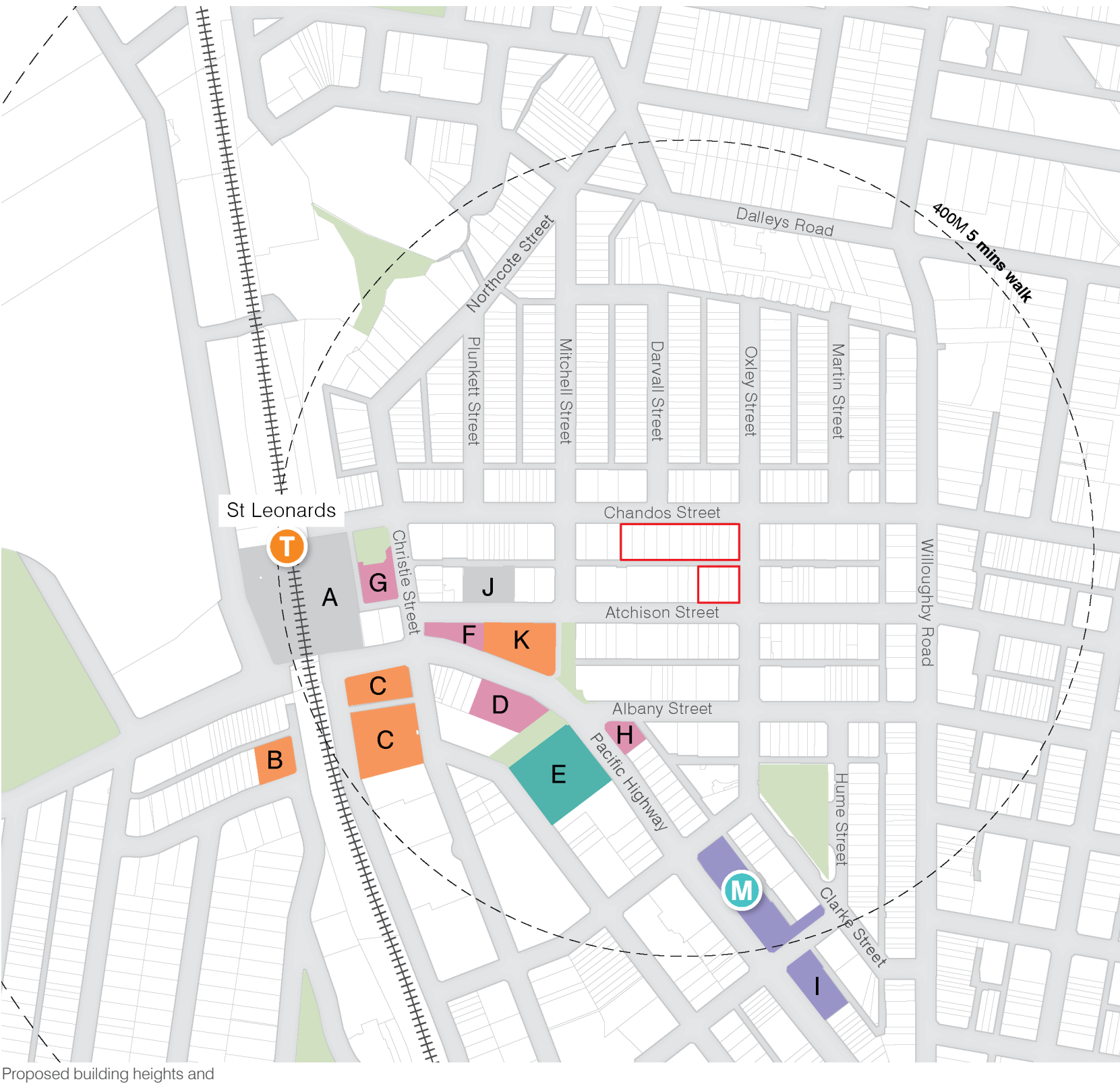
2.11 Future building heights

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.

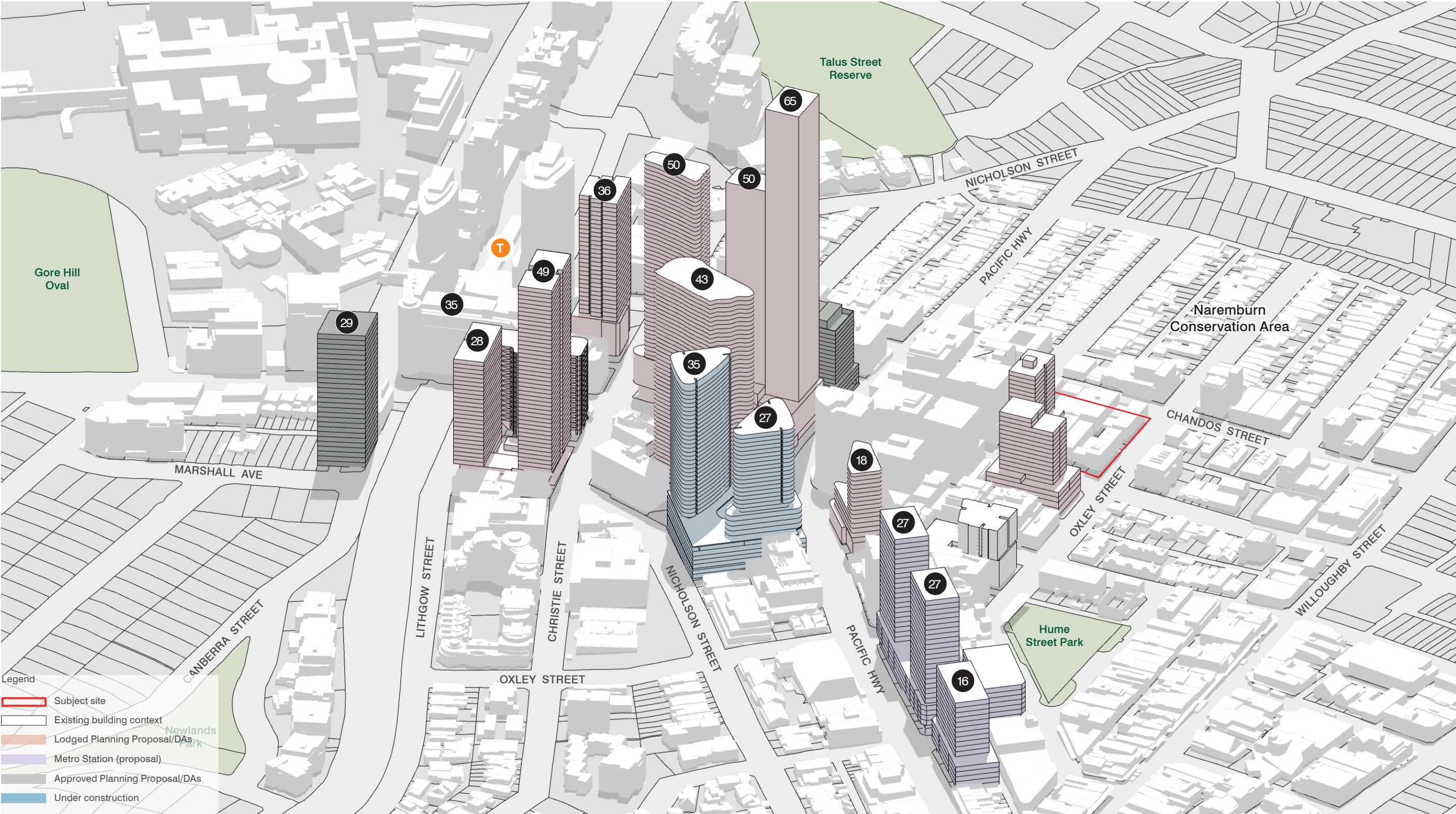
Development around the future Crows Nest Station is expected to take on a similar character and scale as St Leonards, with taller buildings capitalising on proximity to public transport.

#	Address (storeys)	Height of building	Status
A	The Forum, 201 Pacific Highway	(34 & 35 storeys)	Built
B	1-13 Marshall Avenue, St Leonards	(29 storeys)	Approved
C	82-90 Christie Street &, 546-564 Pacific Hwy & 71-79 Lithgow Street	(16, 28 & 49 storeys)	DA lodged
D	500 & 504-520 Pacific Highway	(43 storeys)	Consent received
E	472-494 Pacific Highway, St Leonards	(27 & 35 storeys)	Construction
F	617-621 Pacific Highway, St Leonards	(50 storeys)	Approved
G	100 Christie Street, St Leonards	(36 storeys)	DA consent
H	575-583 Pacific Highway, Crows Nest	(18 storeys)	Gateway
I	Future Crows Nest OSD	(27 storeys)	In progress
J	6-16 Atchison Street, Crows Nest	(32 storeys)	Built
K	601 Pacific Highway, St Leonards	(65 storeys)	Lodged PP

- Site boundary
- LGA boundary
- St Leonards / Crows Nest Station Precinct
- Railway
- Primary road
- Lots
- Open space
- Built
- Under construction
- Approved
- Pending approval
- Potential future development



Analysis



Analysis

2.12 Study of height transitions in centres

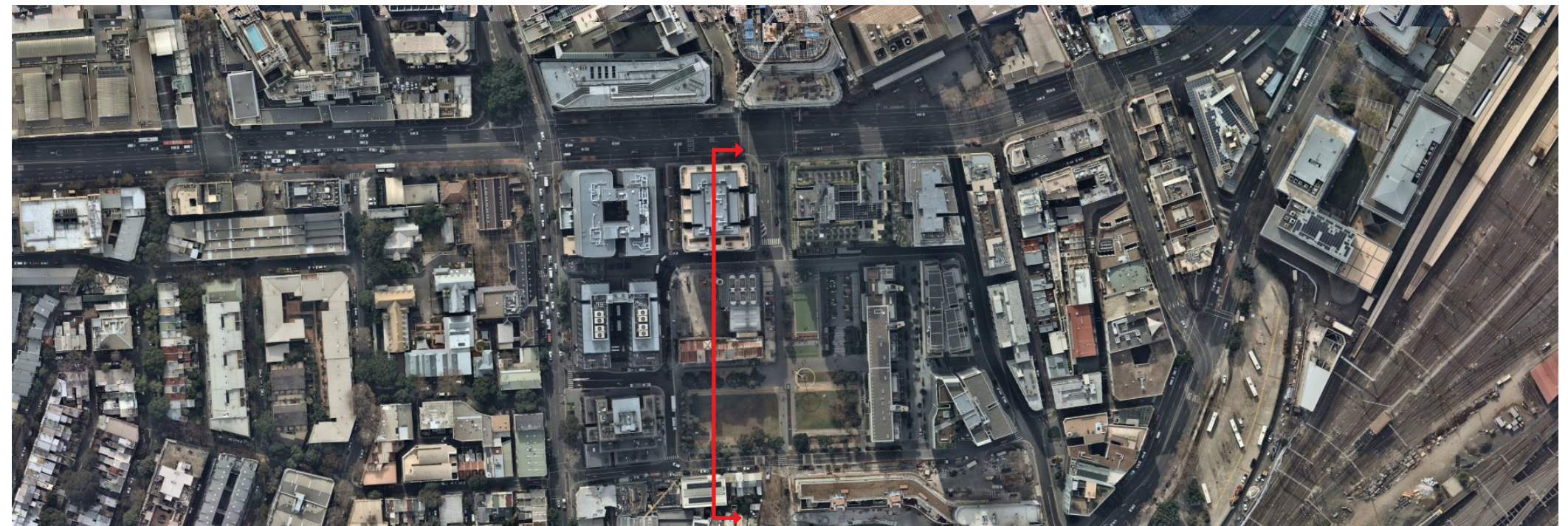
Across the St Leonards Centre there are a variety of interface conditions to surrounding character areas, with each requiring an appropriate transition.

Based on our experience, Architectus favours a generally sharp transition wherever possible to both visually define the centre, as well as define the protected area.

Often gradual transitions in built form provide a blurring of the precincts and will result in a ring of lower-scale, bulky built form at the CBD edge rather than the strong expression of the city centre, exhibited by tall and slender towers.

The built form transition is usually best addressed architecturally within a development by podia to towers and defining street walls of 4-6 storeys which scale the towers down to a more human scale and the scale of heritage buildings.

The following case studies are provided overleaf to demonstrate examples of transition in scale from city centres to conservation areas.



Aerial photograph of the Central Park Precinct in Chippendale



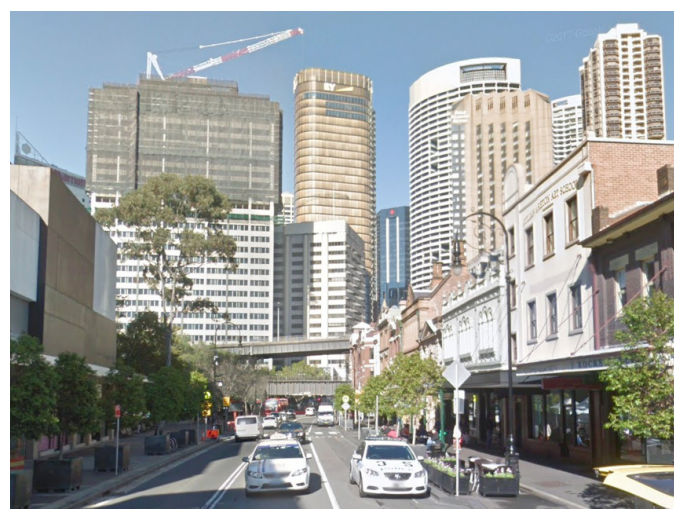
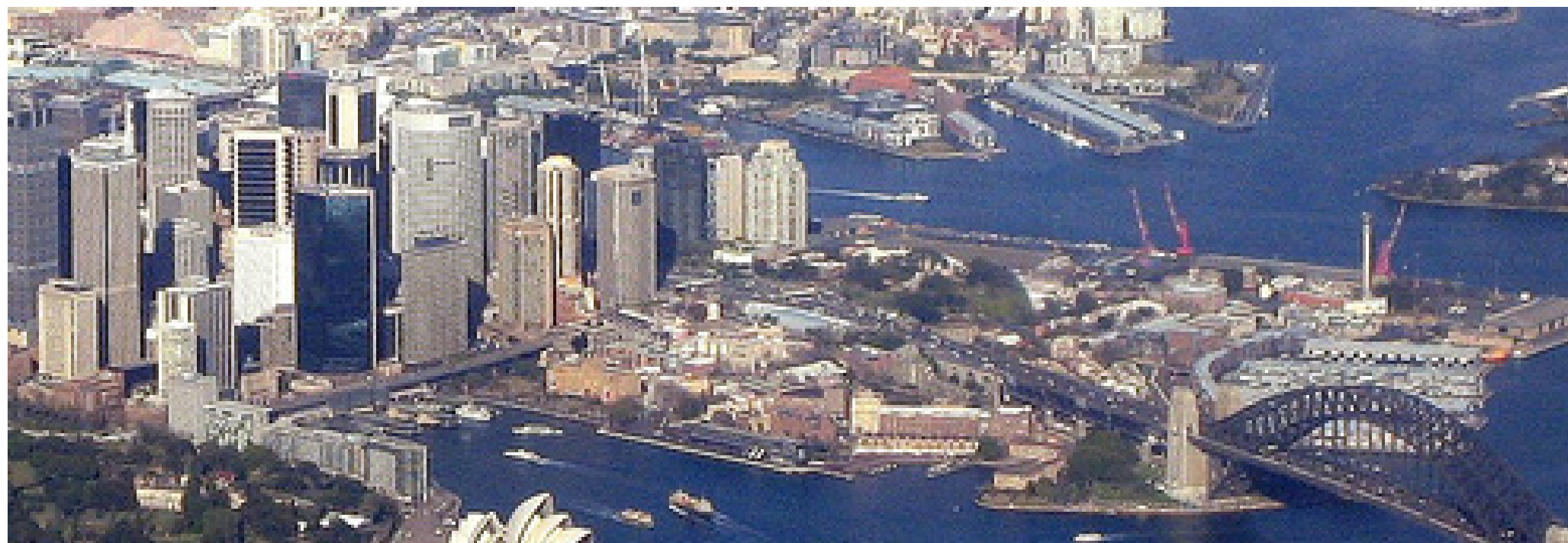
Central Park (Central Sydney)/ Chippendale HCA

The recent Central Park development on the former CUB site has a sharp transition from 34 storeys to the 2 storey Chippendale conservation area to the south in the space of one street block - like the subject proposal which is one block north of the Harris Park Conservation Area. The conclusion is that a fairly sharp transition reinforces the strong skyline quality of the CBD and by contrast reinforces the heritage character of the nearby conservation areas.



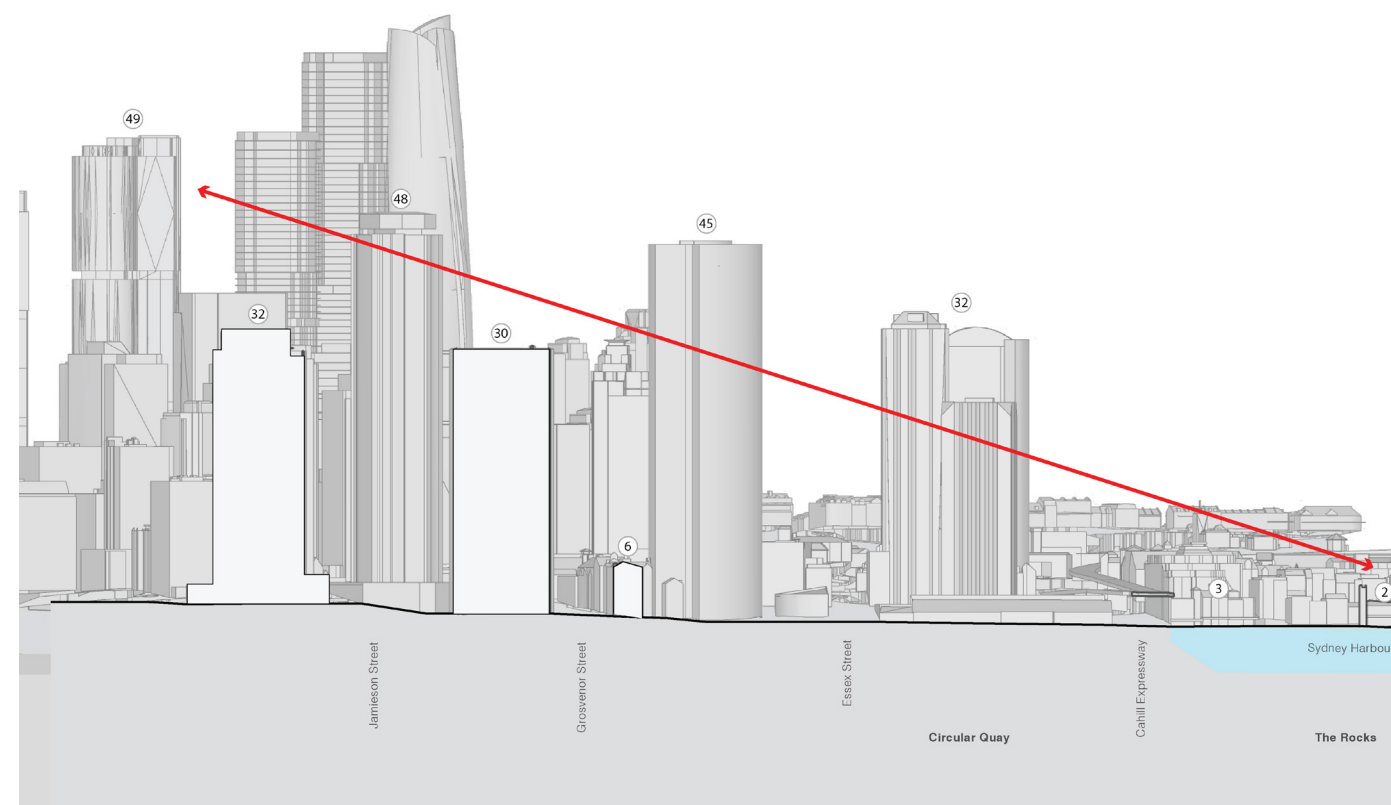


Aerial photograph of Circular Quay (east) along Phillip Street



Central Sydney/The Rocks HCA

The transition between the CBD skyline of Central Sydney to one of Australia's most highly recognised conservation areas - The Rocks - is quite sharp - from 2-4 storeys to over 40 storeys across a street.



Analysis

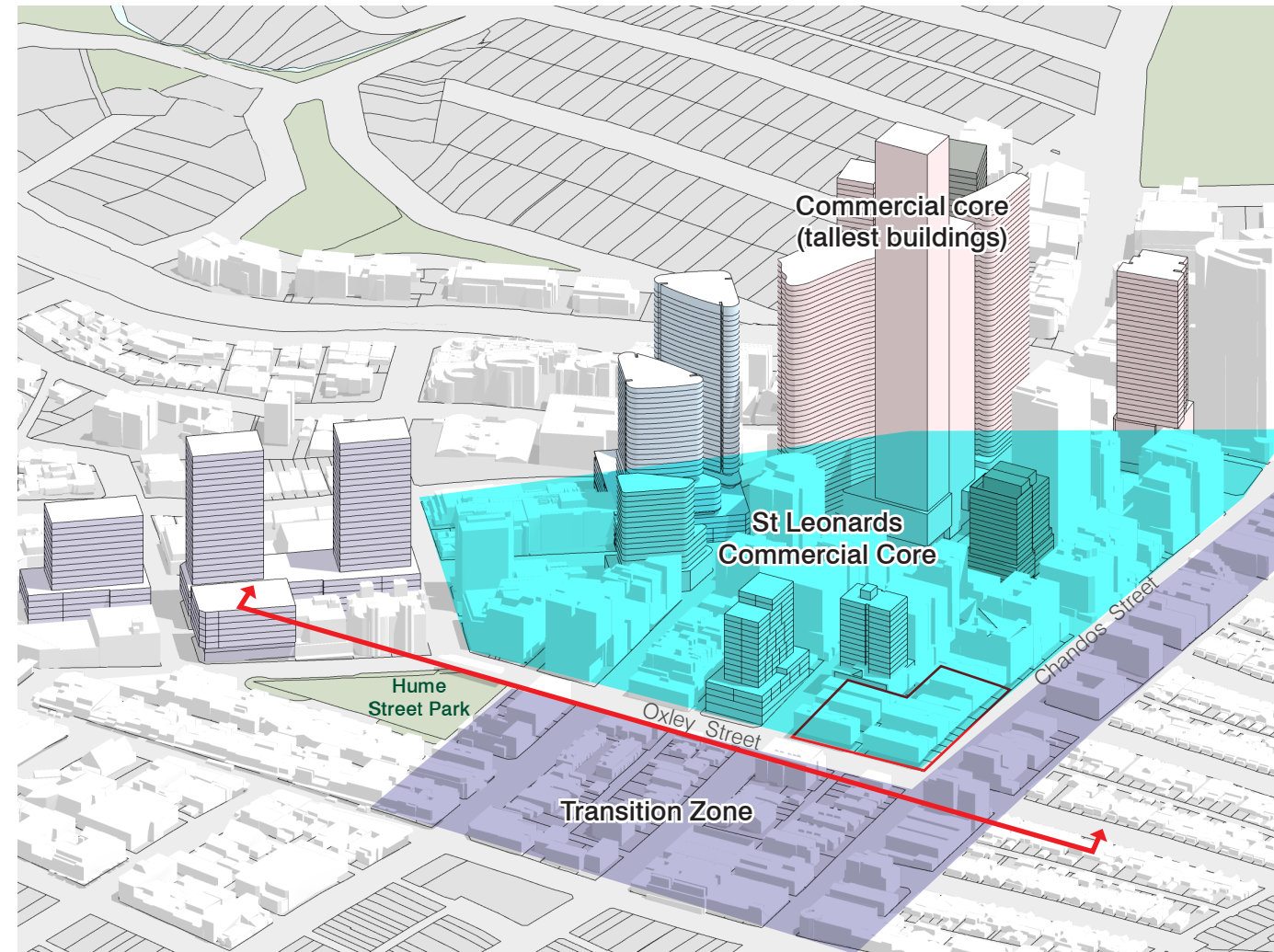
2.12.1 Transition height in St Leonards towards Hume Street Park

As a Strategic Centre, it is critical to ensure that opportunities for dwellings and employment spaces are maximised. Accordingly, the commercial core of St Leonards needs to be clearly defined through heights and associated densities.

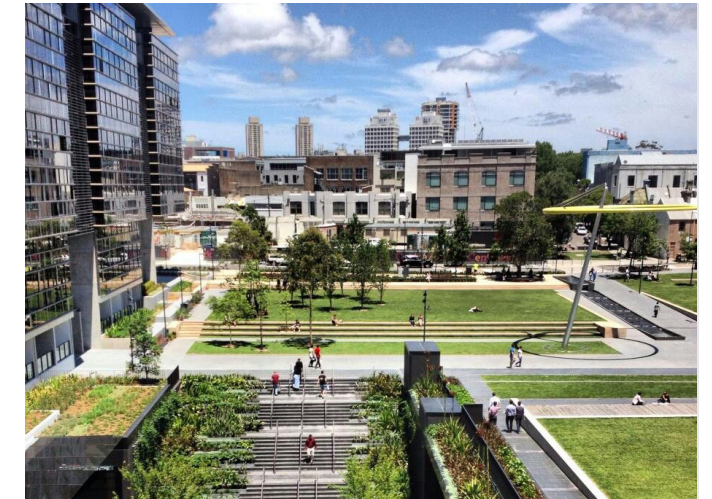
Heights in these areas should be driven by maximising development potential whilst preserving solar access to the future Hume Street Park and creating a strong built form character for the commercial core.

Where density and heights of buildings are increasing, especially as St Leonards grows, maintaining solar access to public areas and open spaces becomes more challenging. Planning for new public places and open spaces with good solar access in existing urban centres is also difficult.

Based on the sites proximity to Hume Street Park (within 170m), a key design principle for the site should be tested to show no overshadowing to Hume Street Park.



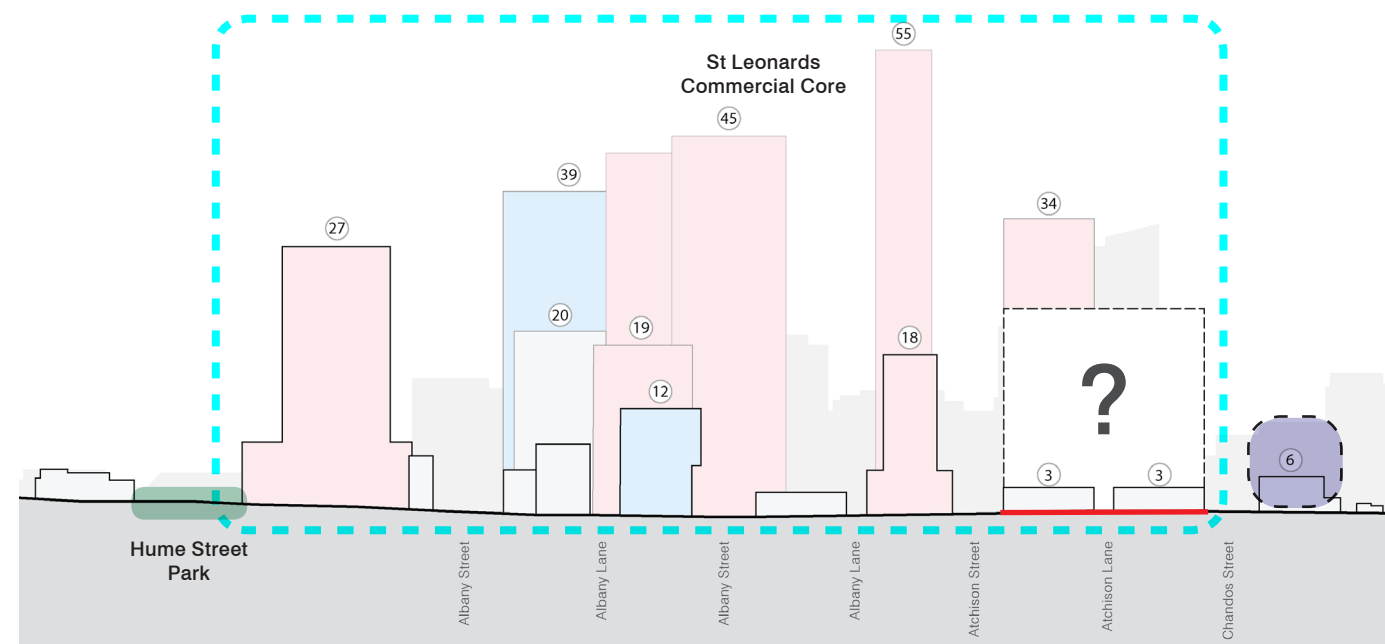
St Leonards future context



Central Park, Chippendale



Wulaba Park, Green Square



Analysis

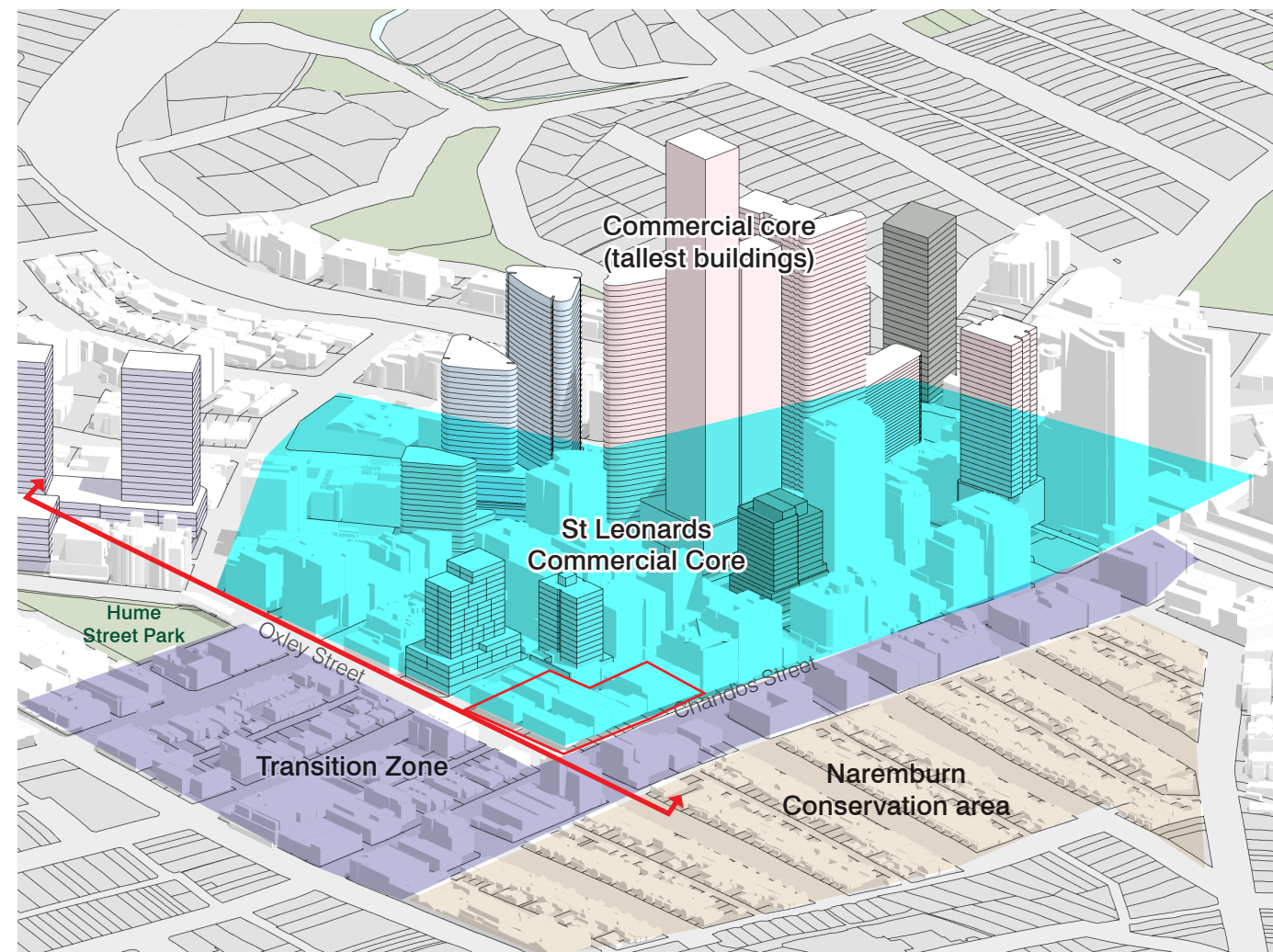
2.12.2 Transition height to Naremburn Conservation area

The site is located in a position that is physically separated from the Naremburn Heritage Conservation Area by a defined street block between the north of Chandos Street and south of Henry Lane. This is shown right by the area identified as the transition area.

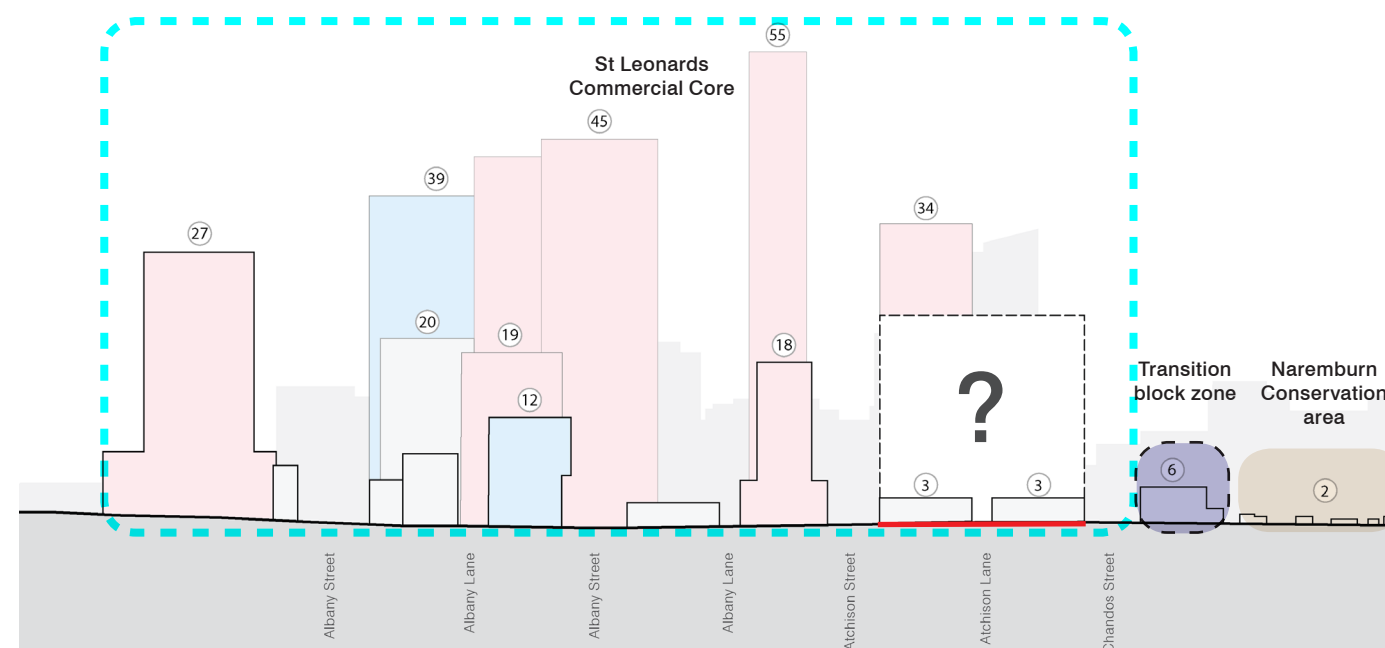
The transition block which currently contains a range of medium-density (4-6 storeys) commercial and retail development forms a natural physical boundary to the future taller development and urban context of the St Leonards Centre.

When viewed from with these heritage conservation areas, future development on the site will read as part of the context of the St Leonards Commercial Core, being a rapidly evolving major commercial centre with numerous high-rise office and residential developments contained within this urban core.

The impact of increased heights for the site will not alter or detrimentally impact outward views from the conservation areas. Instead, future development on the site will contribute to the visually defined and highly urbanised distant skyline of St Leonards.



St Leonards future context



The Heritage, North Sydney



Rundle Street, Adelaide

Analysis

2.13 Combined constraints

- 1. The site contains a number of existing trees around the perimeter of the site. These should be retained where possible.
- 2. There is approximately a 4m cross fall from the western part of the site to Oxley Street. Strategies for suitable basement car parking entry will need to be considered.
- 3. The block along Chandos Street is over 115m in width. This may inhibit the development potential of the site.
- 4. Vehicular access to the site is restricted to Atchison Lane. Future uses should limit traffic generation and encourage more active modes of transport (walking and cycling).
- 5. Pursuant to North Sydney DCP 2013, there are a number of site-specific development controls which apply to the site and therefore should be considered where possible. These include:

Chandos and Atchison Streets

- 3m whole building setback
- 3m above podium setback
- 4 storey podium

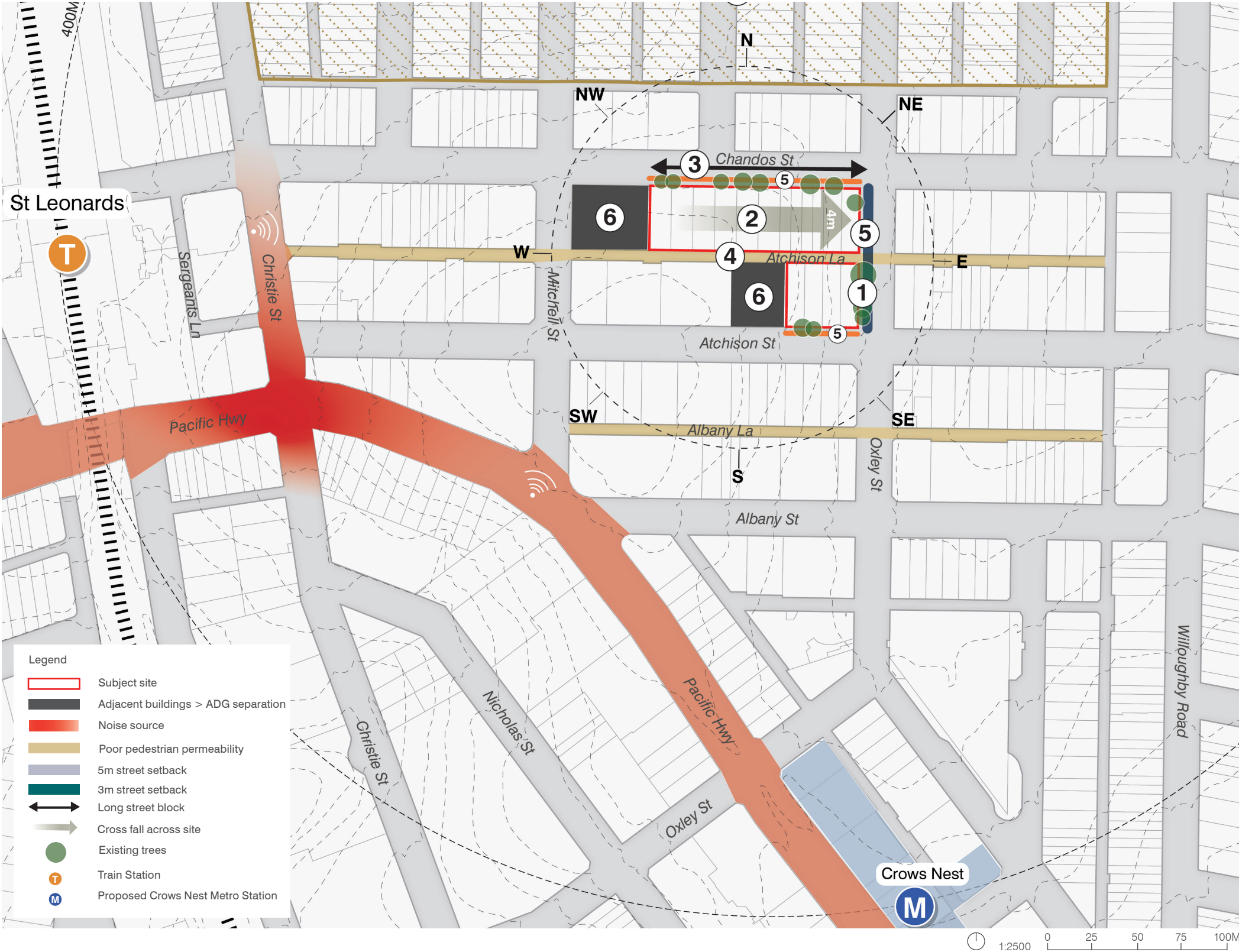
Atchison Lane

- 1.5m whole of building setback
- 3 storey podium
- 4m above podium setback

Oxley Street

- 5m whole of building setback
- 4 storey podium
- 7m above podium setback

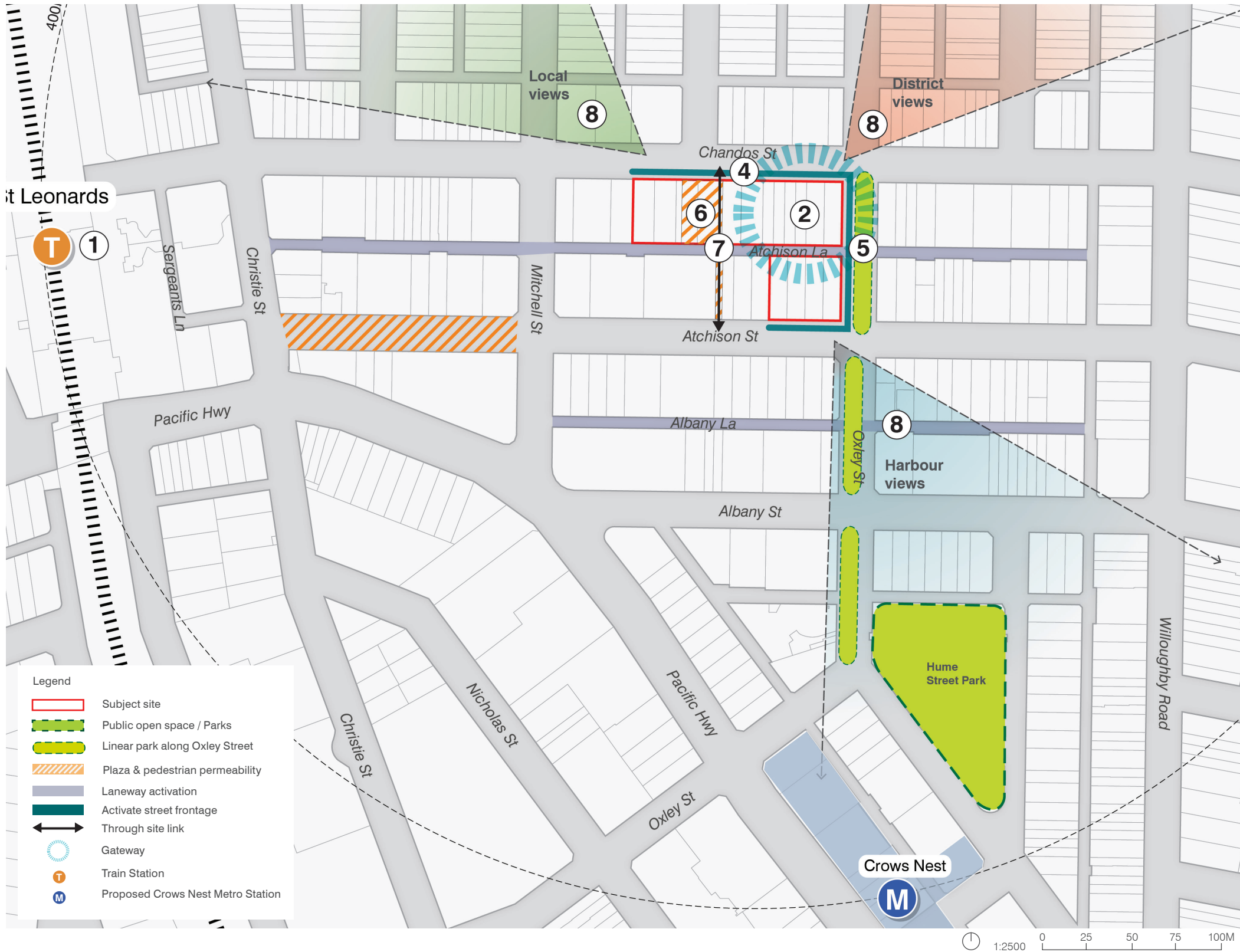
- 6. An existing 12-storey residential building and 14-storey planning proposal to the west of the site is developed to the boundary. Measures to mitigate visual privacy should be considered.
- 7. To the north is the Naremburn Estate Heritage Conservation Area comprising 1-2 storey federation style dwellings. Future development should respond to the character and scale of the heritage conservation area.



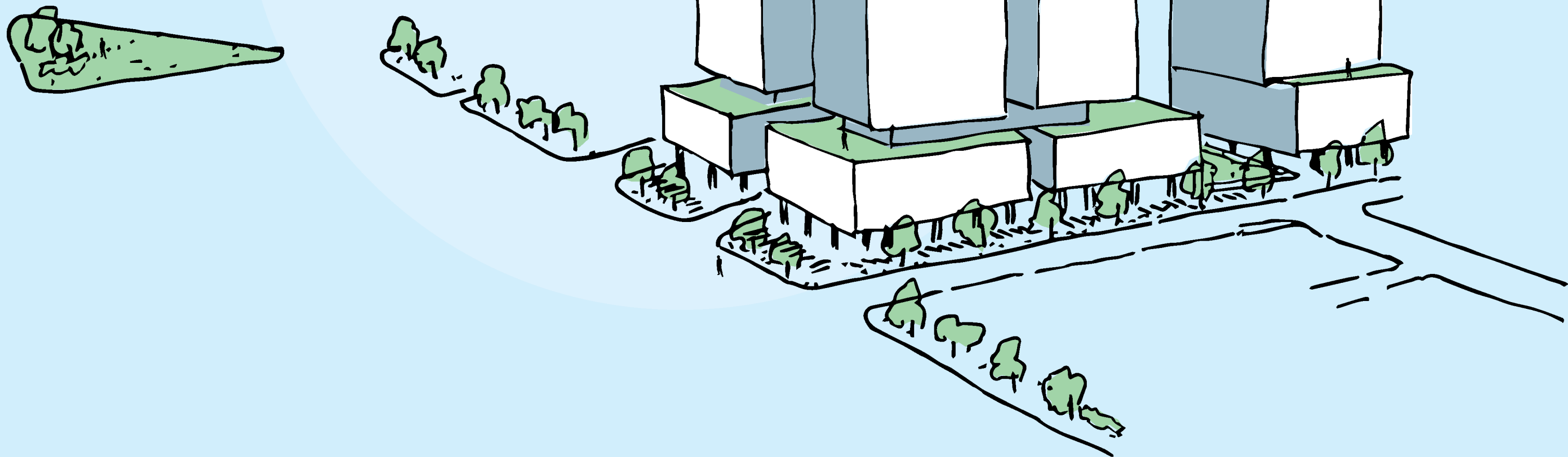
2.14 Combined opportunities

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

- 1. The site is very well serviced by public transport, within 400m of St Leonards Train Station and the future Crows Nest Metro Station.
- 2. Being a corner site located at the intersection of Chandos and Oxley Street, the site presents an opportunity to create a gateway entry to the St Leonards Centre.
- 3. The site is a large, consolidated site (approx. 5,651sqm), which is considered to be a 'opportunity site' for public benefit contributing to the urban renewal of the St Leonards Centre.
- 4. The site benefits from three street frontages along Chandos, Oxley and Atchison Streets. There is opportunity to develop a proposal which responds to the character of each street edge, whilst positively contributing to the overall character of the St Leonards Centre.
- 5. Oxley Street is a key interface to the site. Councils plans for a green linear park along the eastern boundary of the site present a significant opportunity for street activation and better connections to Hume Street Park and the Crows Nest Metro Station.
- 6. The length of the site provides an opportunity to open up the site to provide significant public domain improvements to facilitate street activation and pedestrian permeability.
- 7. Atchison Lane, located between the two street blocks presents an opportunity for better north-south connections between the two sites.
- 8. The site enjoys good local, district and harbour views.



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.



03 Developing the master plan

In developing the master plan, we established a specific set of principles which ensure that our design is founded on practical and robust urban design thinking.

3.1 The Vision



01

Support of the creative arts

The support of creative arts in the precinct will create opportunities to further develop and shape the cultural landscape of Sydney's lower North Shore

Vision

Our vision is to celebrate the emerging civic role of the arts on lower north shore. As the existing community in St Leonards grows, it is important that creative spaces as a focal point for the community are delivered.

The arts and cultural facility is part of a broader vision to build a neighbourhood that is focussed on inclusion – a concept where people from the existing community and new members have a place to socialise, gather and celebrate together.



Developing the master plan

02

Creative industries

A flourishing place for creative industries, innovators, makers and musicians to thrive, enhancing the viability and desirability of St Leonards as a employment centre.

03

Street activation

The proponent has long committed their land in the St Leonards precinct to ongoing community art programs and street activation

The arts has long held an important civic role in the lower north shore. By delivering a new community facility focused on the creative arts directly adjacent to a publicly accessible plaza, the site has the ability to create a space which can be a focal point for the broader community.

The subject site is in close proximity to major transportation links, parks, health and sporting facilities. As a result, it has the ability to provide a rich and vibrant cultural overlay currently absent in the St Leonards Area.

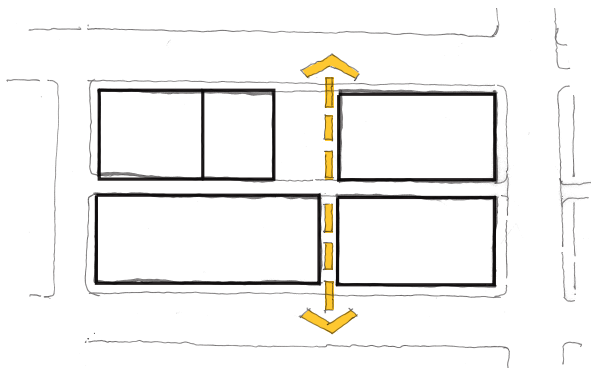
Given the sites location in the Oxley West Arts Precinct, a careful approach to the planning of the ground floor interface incorporating retail and arts uses will be adopted to ensure that the major street frontages of Oxley, Atchison and Chandos Streets remain active, vibrant places for residents and visitors.

The delivery of this space is supported by residential development in conjunction with some commercial and small scale retail spaces which focus on the arts and will significantly bolster the profile of St Leonards as a destination, whilst preserving existing cultural uses.



3.2 Urban Design principles: Ground floor interface

To deliver a proposal which recognises the key drivers for the precinct and the importance of the site, the following Urban Design Principles have been established in tandem with the strategic drivers to guide the framework for the redevelopment of the site.



Strategic Drivers

- ➔ Deliver high density in the St Leonards Crows Nest Area
- ➔ Maximise heights to define the St Leonards Centre
- ➔ Enhance employment within the St Leonards area
- ➔ Contribute to the broader Arts and Cultural Precinct of St Leonards
- ➔ Provide high quality open space and public domain
- ➔ Improve connections that prioritises the pedestrian.

1 Through Site Link

A mid block through site link between Atchison and Chandos Street could be possible through the site. The link could be partially open to the sky and form part of a larger open space on the site. This would require delivery of a link on adjoining properties also.

2 Ground floor setbacks to Chandos and Oxley Streets

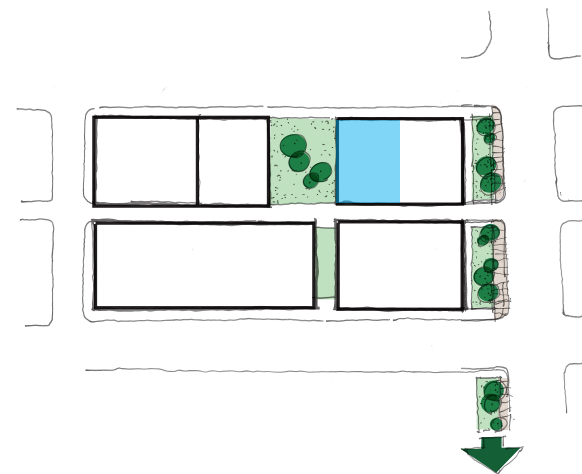
The podium and ground floor footprint has been set back along Chandos and Oxley Streets to provide wider footpaths for outdoor retail and dining opportunities. Along Oxley, this responds to Council's long term plans for a linear park.



3 Prioritise activation on Chandos and Oxley Streets

The ground plane is proposed to be dominated by fine grain retail and creative arts spaces. Retail would include predominately food and beverage venues along Oxley and Atchison Streets.

By locating all vehicular access off Atchison Lane the civic function of all major streets will be strengthened by the presence of continuous active frontages. In addition to retail activation, a number of community uses will also be featured to provide a diverse range of activities within the site

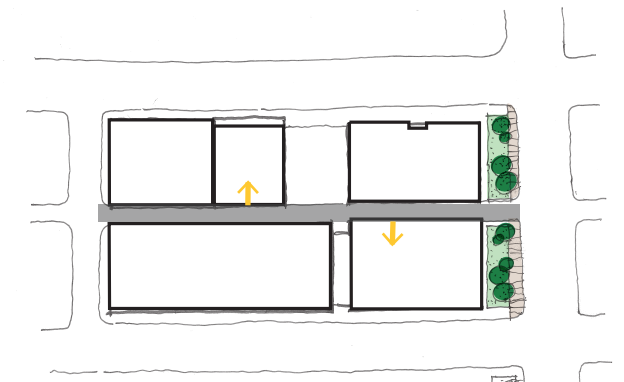


4 Provide community focused uses, complete with a new network of open space

The site fronts Chandos Street and is located adjacent to the low scale residential dwellings in the Narramburn Conservation Area.

The sites redevelopment could accommodate new community uses accompanied by a dedicated open space to address the termination of Darvall Street.

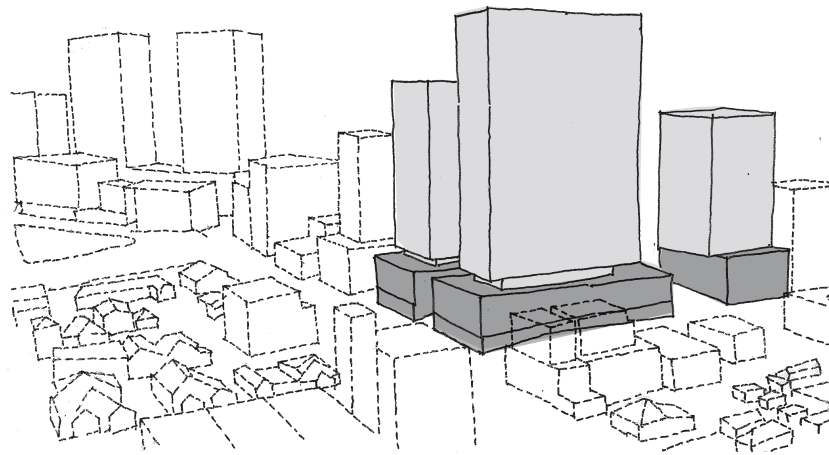
The set back along Oxley Street captures Council's vision of creating a north-south linear park along Oxley Street from the intersection of Chandos Street to Hume Park and the new Metro Station.



5 Preserve active frontages and enhance the existing street network

Servicing and loading should be carefully considered and restricted to Atchison Lane to ensure streets are places for people - basement car entries will be excluded from Atchison and Chandos Streets.

3.3 Urban Design principles: podium and tower

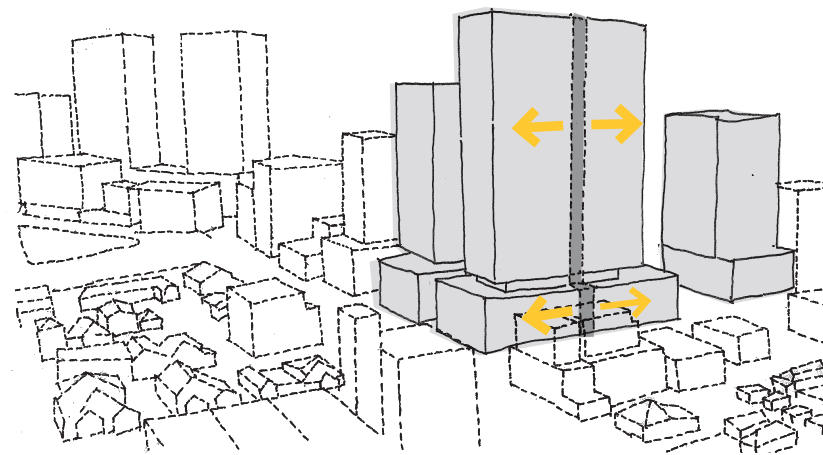


1 A tower and podium built form

Tower forms should be set back from a strong podium to ensure that buildings provide a human scale to the street. This will also alleviate the effects of wind and rain and reduce the visual dominance of tower forms.

Towers will provide a variation in height and floorplates, creating a varying scale and style to individual towers. Towers should be slender and generally be orientated north-south, whilst also appearing slim and well spaced.

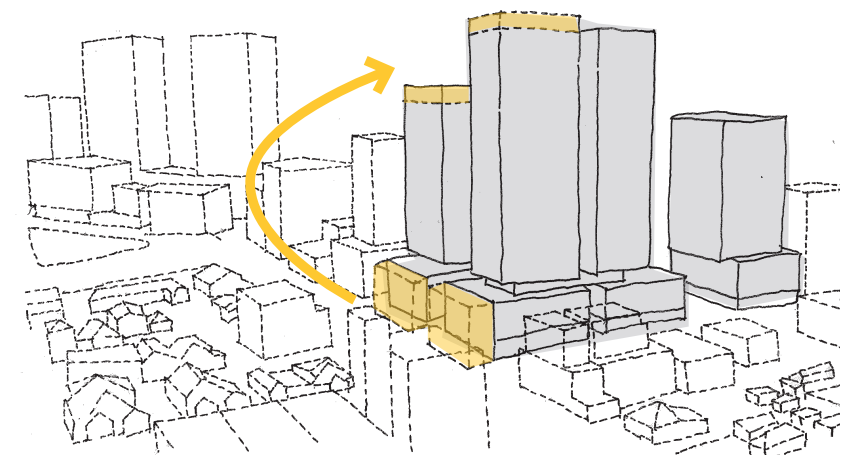
The lower height of the surrounding buildings should enable shared local and city views from towers.



2 Reducing perception of building massing

Façades should be broken through separation or architectural treatment to reduce building mass. Strategies which allow an expression of slender towers should be explored to enable an appearance of a slim building profile.

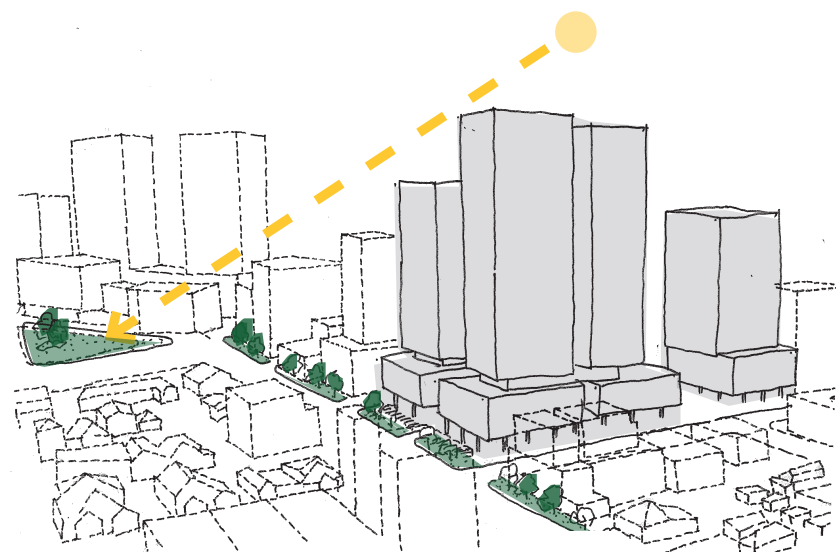
Towers should be slender and articulated to address building separation to other towers for view sharing and minimise the effect of tower crowding.



3 Provide setbacks on Oxley Street

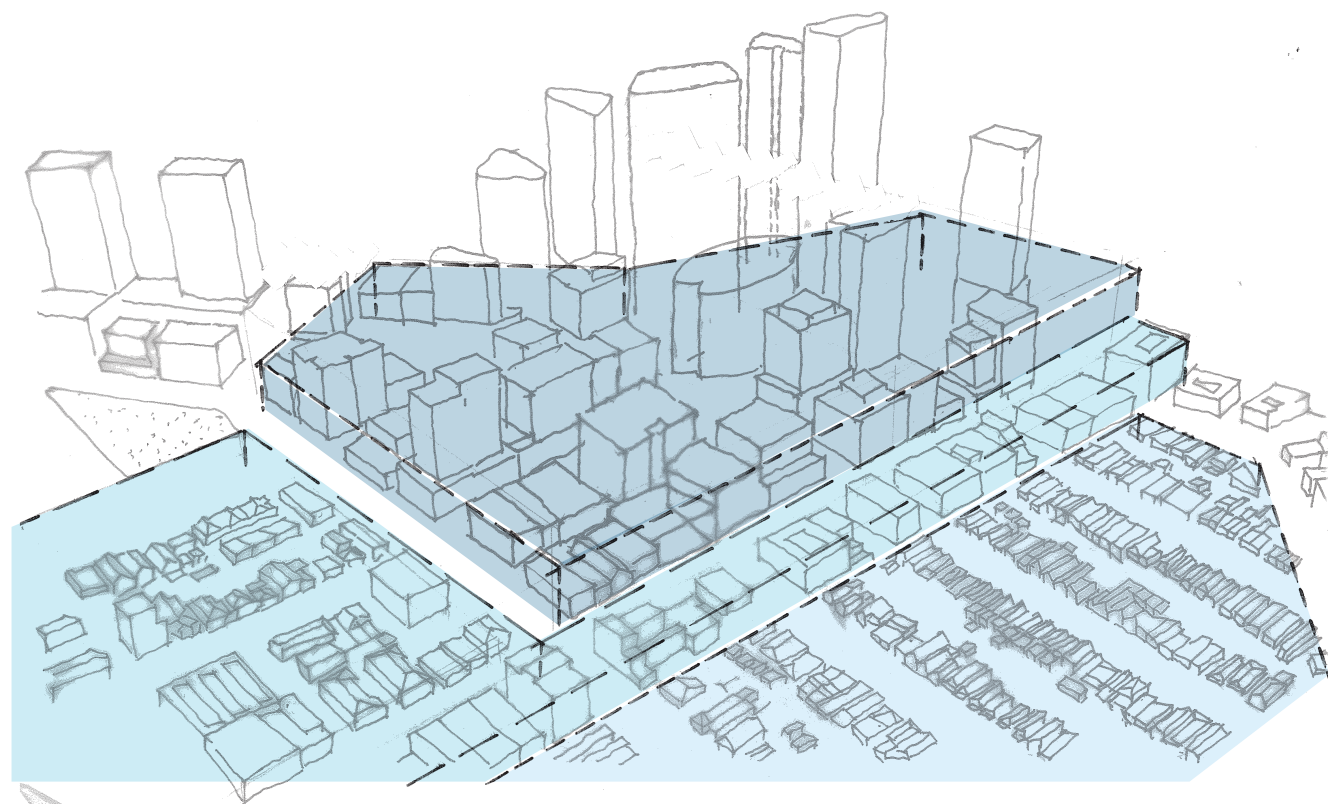
The set back along Oxley Street captures Council's vision of creating a north-south linear park along Oxley Street from the intersection of Chandos Street to Hume Park and the new Metro Station.

The set back also provides a clear point of height transition along Oxley Street, with the loss of floorspace being offset through the overall increase in height of the resultant built form.



4 Ensuring solar access is preserved to key public open spaces including the future Hume Street Park

Limit building heights on the site to ensure that there are no overshadowing impacts to the future Hume Street Park.



5 Defining the commercial core

Building heights within the commercial core of ST Leonards should respond to the Strategic Centre of ST Leonards through providing building heights which define the commercial core. This will also allow for a suitably dense amount of dwellings and employment floor space areas.

The definition of the commercial core will be assisted by taller building heights, with transitional lower areas as shown above.

3.4 A day in the life of St Leonards Arts Precinct

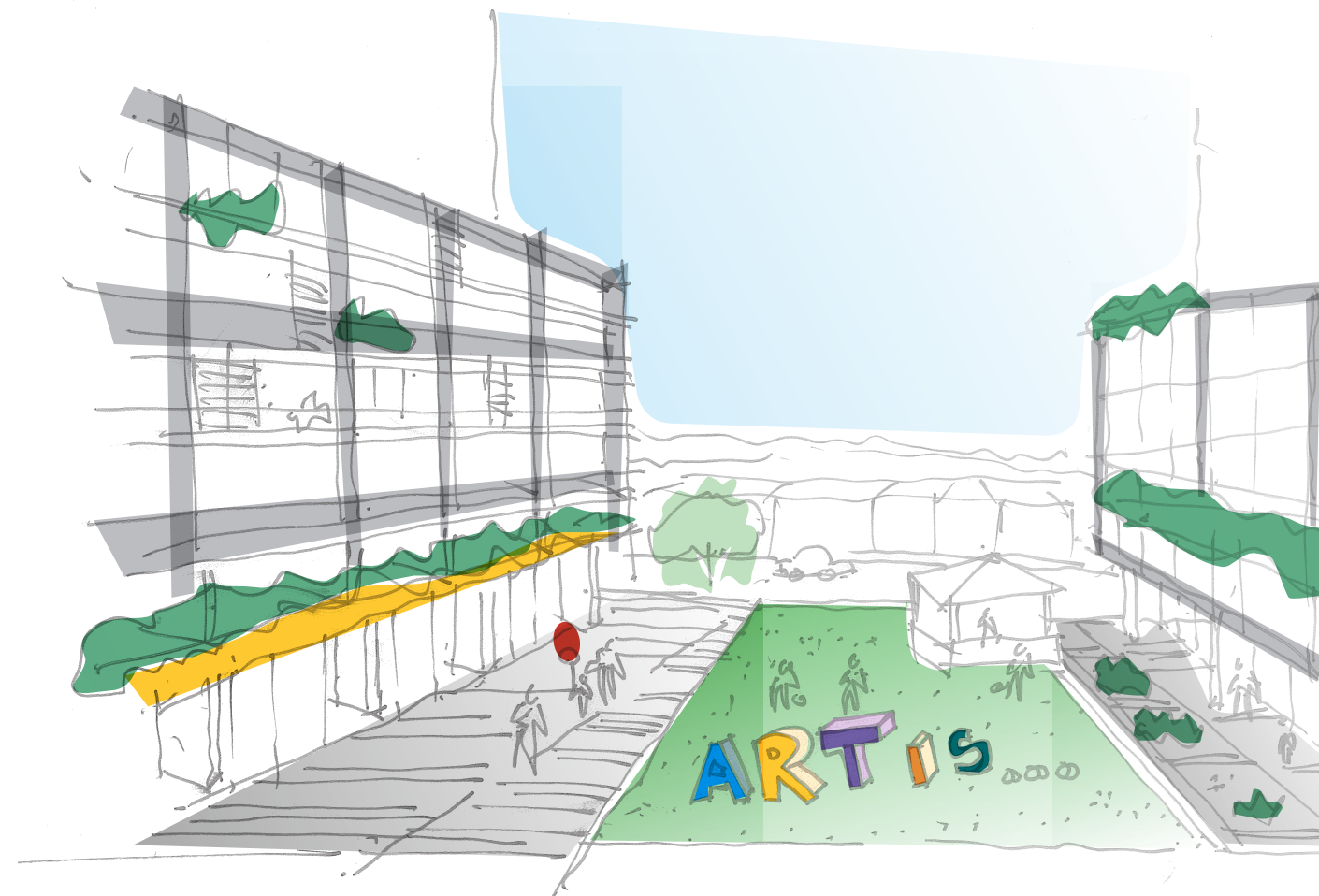


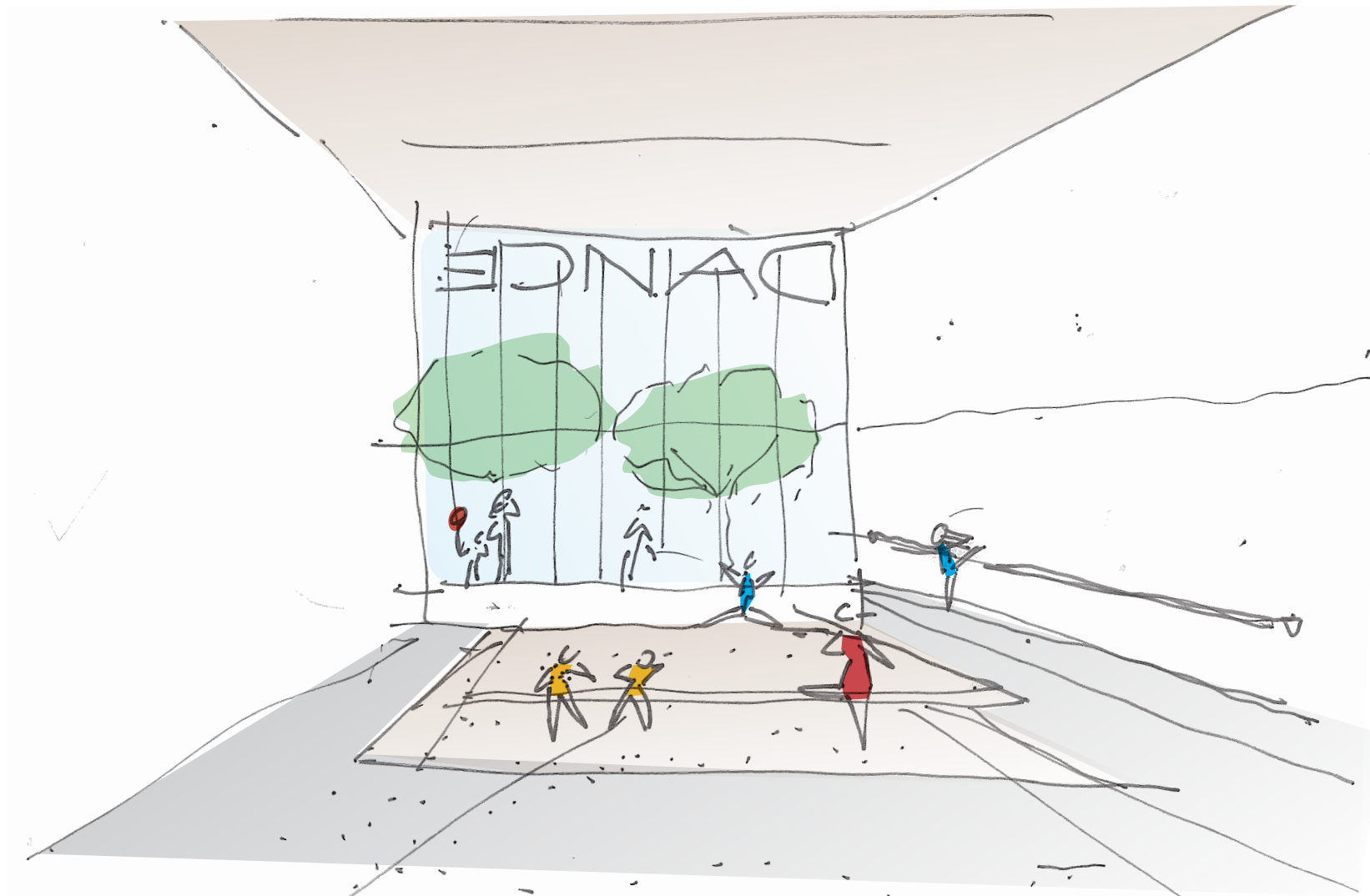
1 09:00am – Morning Breakfast in Oxley Park

A typical bustling Saturday morning in St Leonards begins with a flurry of activity along the bustling, tree lined and sun drenched Oxley Street park, with keen ballet students and their parents converging on Chandos Street Dance School for Saturday morning dance lessons. Parents busily grabbing their first cups of coffee and stealing a few moments of sun before heading up to the dance school around the corner. The day officially begins with the familiar sounds of the laughter of excited children and opening number to Swan Lake.

2 12:30pm – Early Lunch and Art Fair

After the hectic drop off in the morning, the day slows a little with a visit to the art gallery next door to see the latest installation and the recent travelling exhibition of contemporary art that has just arrived. This is followed by a quick lunch in the new park on Chandos Street. The winter sun makes warm dappled light into the plaza space.



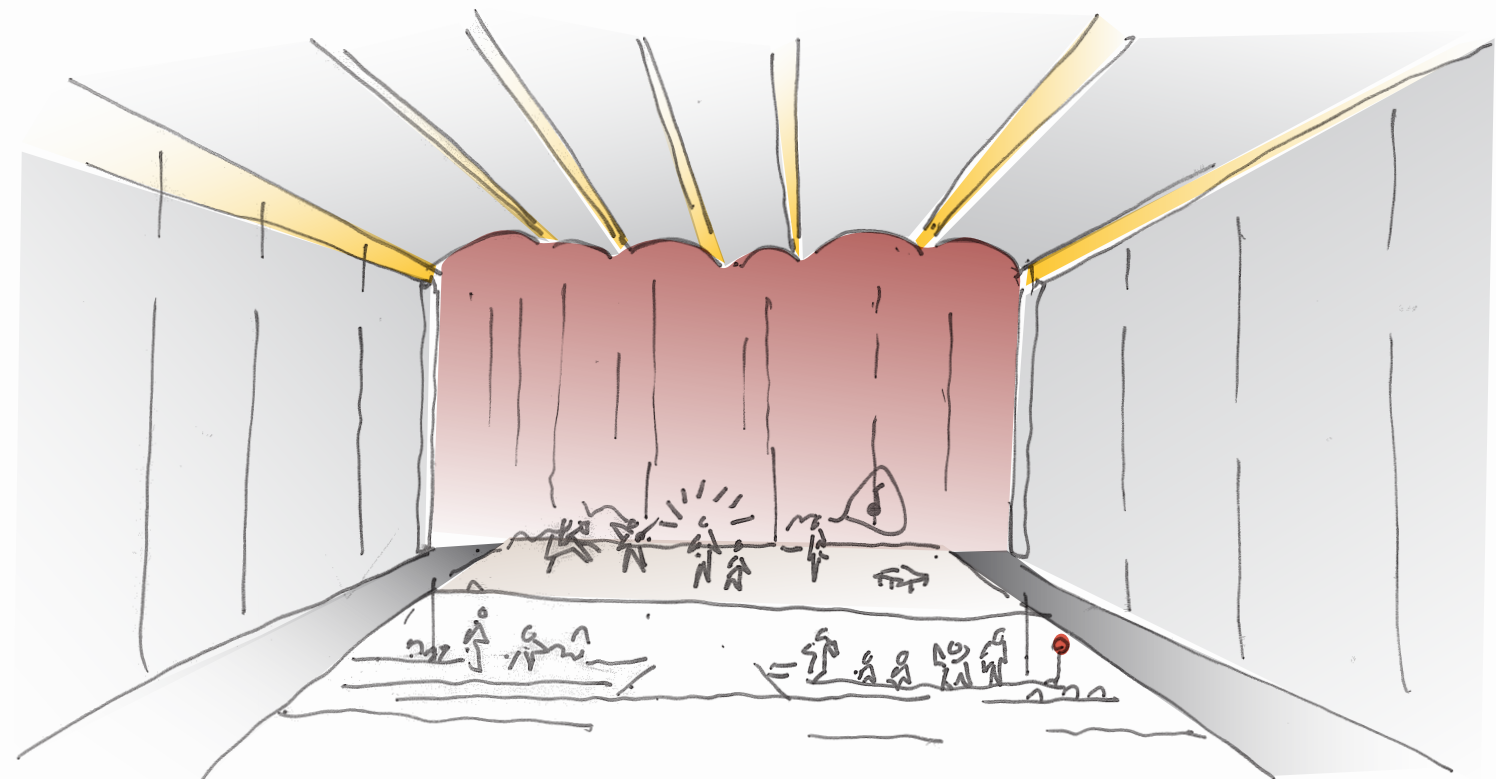


3 2:00pm – The Recital Pick Up

After the hustle and bustle of dance classes and recitals, it is time for kids and parents to head home. A couple of kids from the apartments next door stay a little longer to talk to the dance teacher before heading back home to play with friends. The park and the gallery sees a quiet lull, before the next crowd of art lovers full from lunch in Crows Nest arrive at the gallery.

4 6:30pm – Evening Concert Time

As the day comes to a close, a night time crowd converges on the art space converted for a one-night-only concert. Tonight it is a trio of artists from Canada who play pop music in a classical genre. It is a huge hit with the musically savvy locals and as the crowd filters into the night, another day draws to a close in the St Leonards arts precinct.





04 The proposal

The proposal

This master plan includes a creative arts space and plaza, delivering significant public benefit for the St Leonards community.

New mid-block connections will further provide pedestrian integration, linking the wider community to major transport hubs.

These are the strategic drivers		This is how they are being delivered in the Master plan	
①	Deliver density in the St Leonards/ Crows Nest Centre	→	438 apartments with 10% as affordable housing
②	Maximise height to define the St Leonards Centre	→	The highest heights in suitably sized sites in the centre provide strong visual definition of the centre.
③	Enhance employment within the St Leonards area	→	6,970 sqm of non-residential floorspace, equating to approximately 342 jobs .
④	Contribute to the broader Arts and Cultural Precinct of St Leonards	→	4,000 of sqm of the commercial floorspace will be dedicated to gallery and creative spaces integrating into the fabric of the existing arts precinct.
⑤	Provide high quality open space/public domain	→	Publicly accessible plaza will create a 700 sqm urban oasis and place for community events and spillout space for gallery activities.
⑥	Improve connections that prioritises the pedestrian.	→	Through site link creates a mid-block connection between Chandos Street and Atchison Lane and street activation with generous street setbacks , tie into the St Leonards public domain vision.



The proposal



23 storeys

28 storeys

17 storeys

2

1

3

4

5

6

The proposal

The public domain will improve the overall permeability of the site and support the new community facilities that will be introduced as part of the redevelopment.

- 1 The through site link located mid- block between Mitchell and Oxley Streets will offer a high quality public realm and open space which will create a visual book end along Darvall Street.
- 2 The through site link will extend to a greater network of existing and proposed links provide pedestrians with safe and comfortable access to Chandos Street via Atchison Lane.
- 3 Generous setbacks along Chandos Street and Oxley Street tie into Council's vision of a linear park along Oxley Street which connect to the proposed Hume Street Park and new Metro station. The extension of this network along Chandos Street will create an opportunity to connet to the proposed plaza.
- 4 Streetscape improvements, including high quality footpaths, street planting and car park/loading access along Atchison Lane will further enhance the streetscape of the area.
- 5 Publicly accessible plaza and break out space, creating street activation.

Legend

Subject site

Arts hub/creative space/gallery

Retail

Commercial

Residential

Car park / loading

Illustrative master plan



The proposal

The proposal seeks to amend the North Sydney Council LEP 2013 floor space ratio and building height controls.

- A

– Site area: **2,904sqm**

– Building height proposed: **101m**

– Total FSR proposed: **8.7:1**

– Non-residential FSR: **1.6**

– Residential FSR: **7.1**
- B

– Site area: **1,440sqm**

– Building height proposed: **85m**

– Total FSR proposed: **9.1:1**

– Non-residential FSR: **0.6:1**

– Residential FSR: **8.5:1**
- C

– Site area: **1,310sqm**

– Building height proposed: **67m**

– Total FSR proposed: **7.9:1**

– Non-residential FSR: **5.4:1**

– Residential FSR: **2.5:1**

Public benefits delivered by the proposal include:

- 700sqm of public plaza;
- 4,000sqm creative arts spaces for 20 years;
- Linear park along Oxley Street; and
- 10% of dwellings as affordable housing for 20 years.

Legend

Subject site

Plaza

Tower Footprint

Podium

Adjoining Buildings

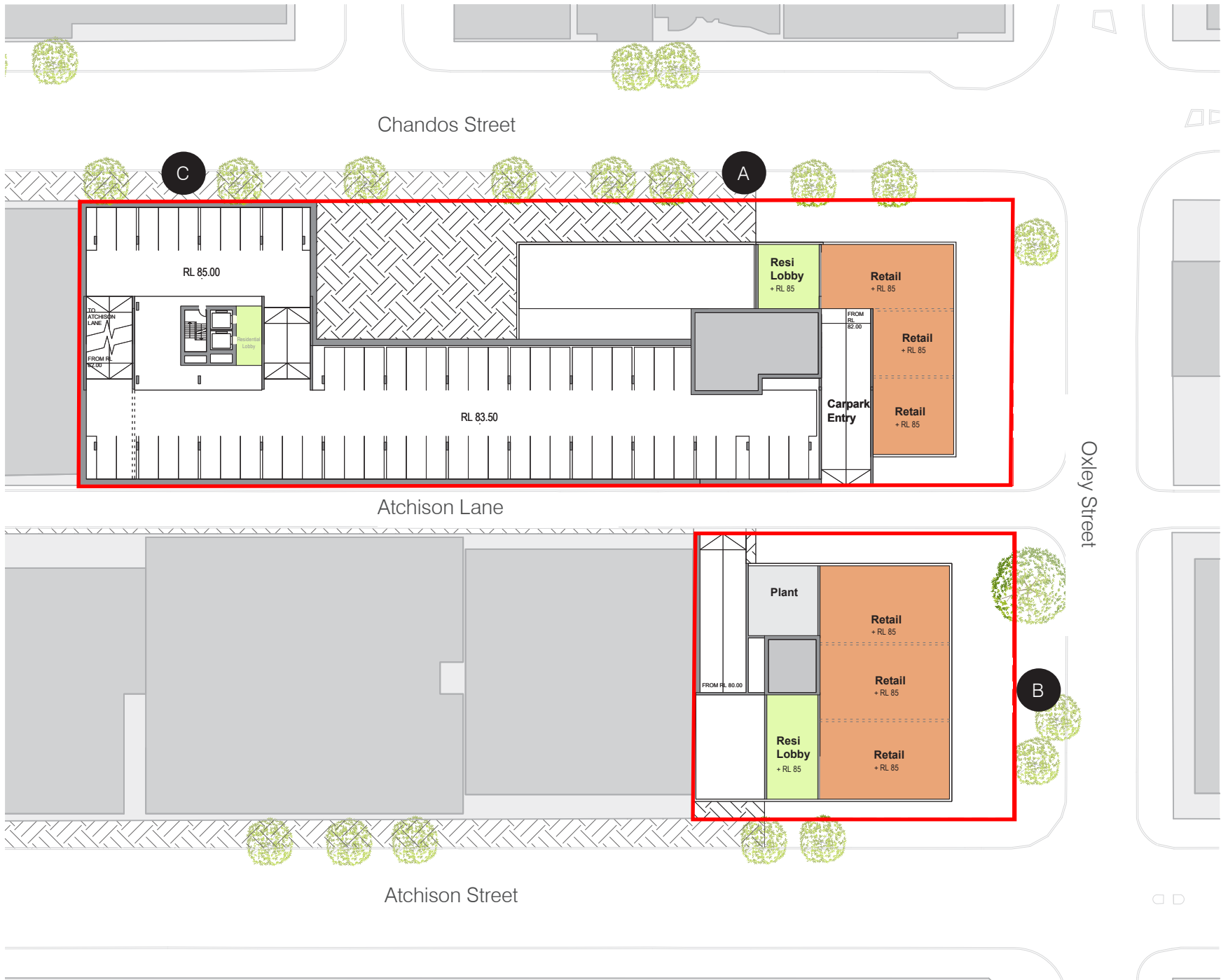


The proposal

4.1 Indicative basement Level 1

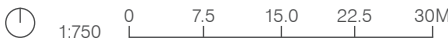
The site slopes approximately 4 metres from the West to East along Chandos Street to Oxley Street. This presents an opportunity for double height retail outlets fronting Oxley street that provide an active frontage to the linear park along Oxley Street.

The Basement is designed for efficiency and egress. Access to the basement is through Atchison Lane to maintain the pedestrian permeability along Oxley Street and Chandos Street.



- Legend
- Subject site
 - Arts hub/creative space/gallery
 - Retail
 - Commercial
 - Residential
 - Plant / Core

Ground floor plan

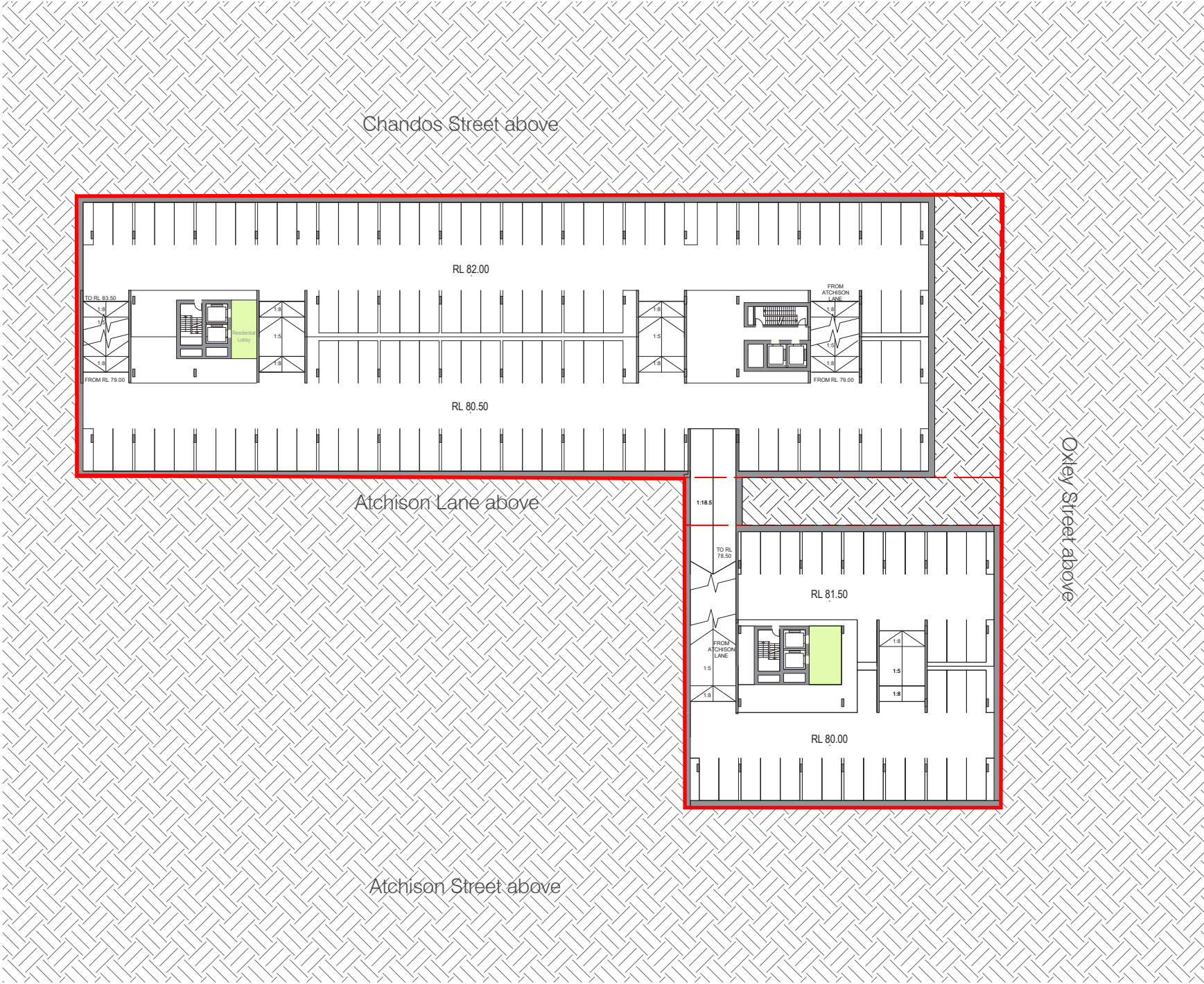


The proposal

4.2 Indicative Basement Levels

The basement layout is designed to have all access from Atchison lane to maintain pedestrian permeability along Chandos Street and Oxley Street. The car park is designed to allow for maximum efficiency and egress.

Subject to further discussions with Council as part of subsequent detailed design DAs there is the potential to provide a underground connection underneath Atchison Lane, minimising vehicle entrances.



- Legend
- Subject site
 - Arts hub/creative space/gallery
 - Retail
 - Commercial
 - Residential
 - Car park / loading

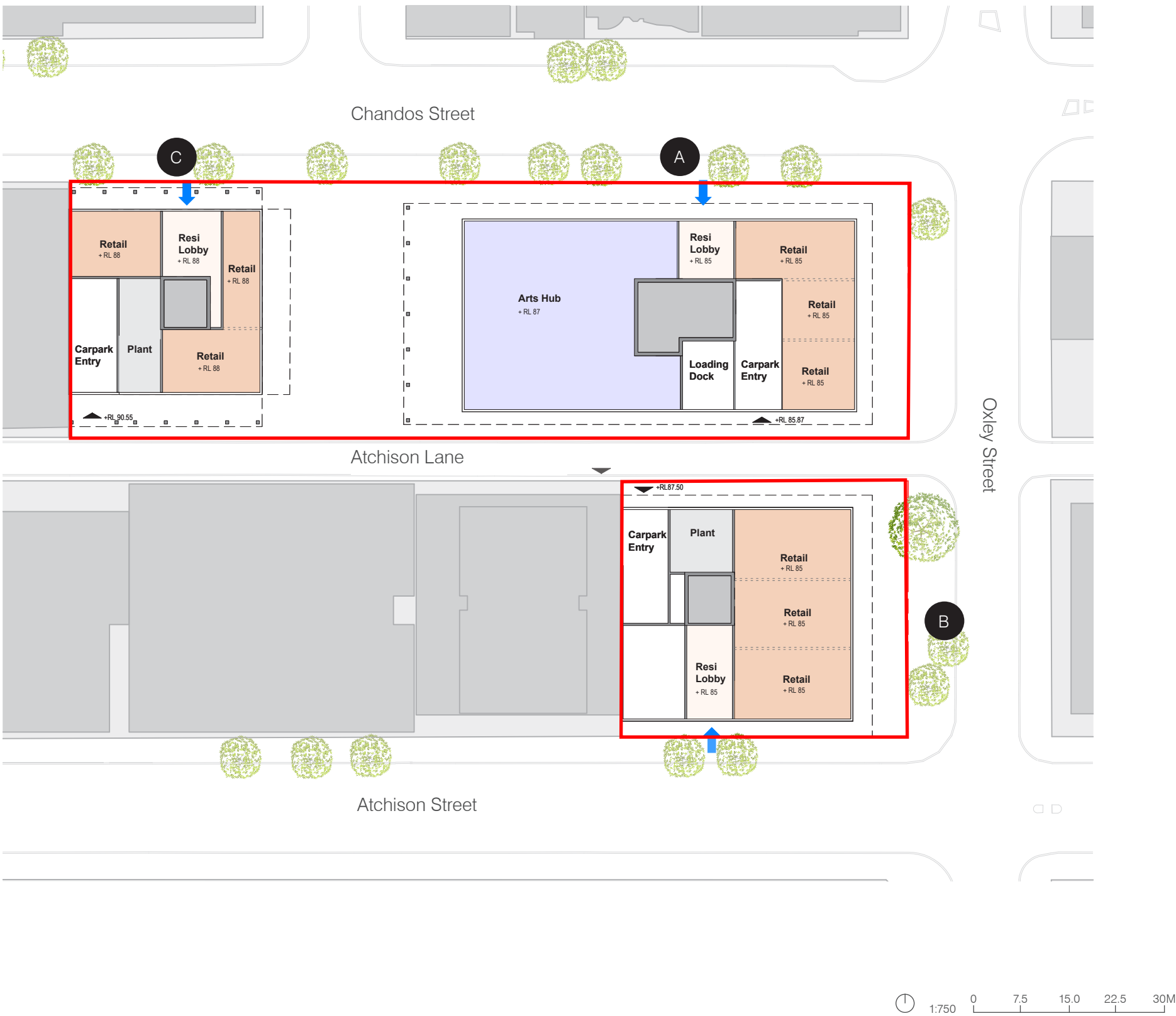
Basement plan

The proposal

4.3 Ground floor plan

The ground floor plan illustrates the street activation and permeability of the proposal. A new plaza allows for 700sqm of public open space on Chandos Street. The ground plane integrates a new through site link from Atchison Lane to Chandos Street attracting pedestrians through the site and activating the public space through the creative space and retail interface.

Loading dock and car park entries will be located away from Chandos and Oxley Streets on Atchison Lane, to minimise impacts on traffic and ensure walkable streets. Subject to detailed design, there may be opportunities to delete the basement entry for Tower B, relying on an underground shared basement under Atchinson Lane.



Ground floor plan

The proposal

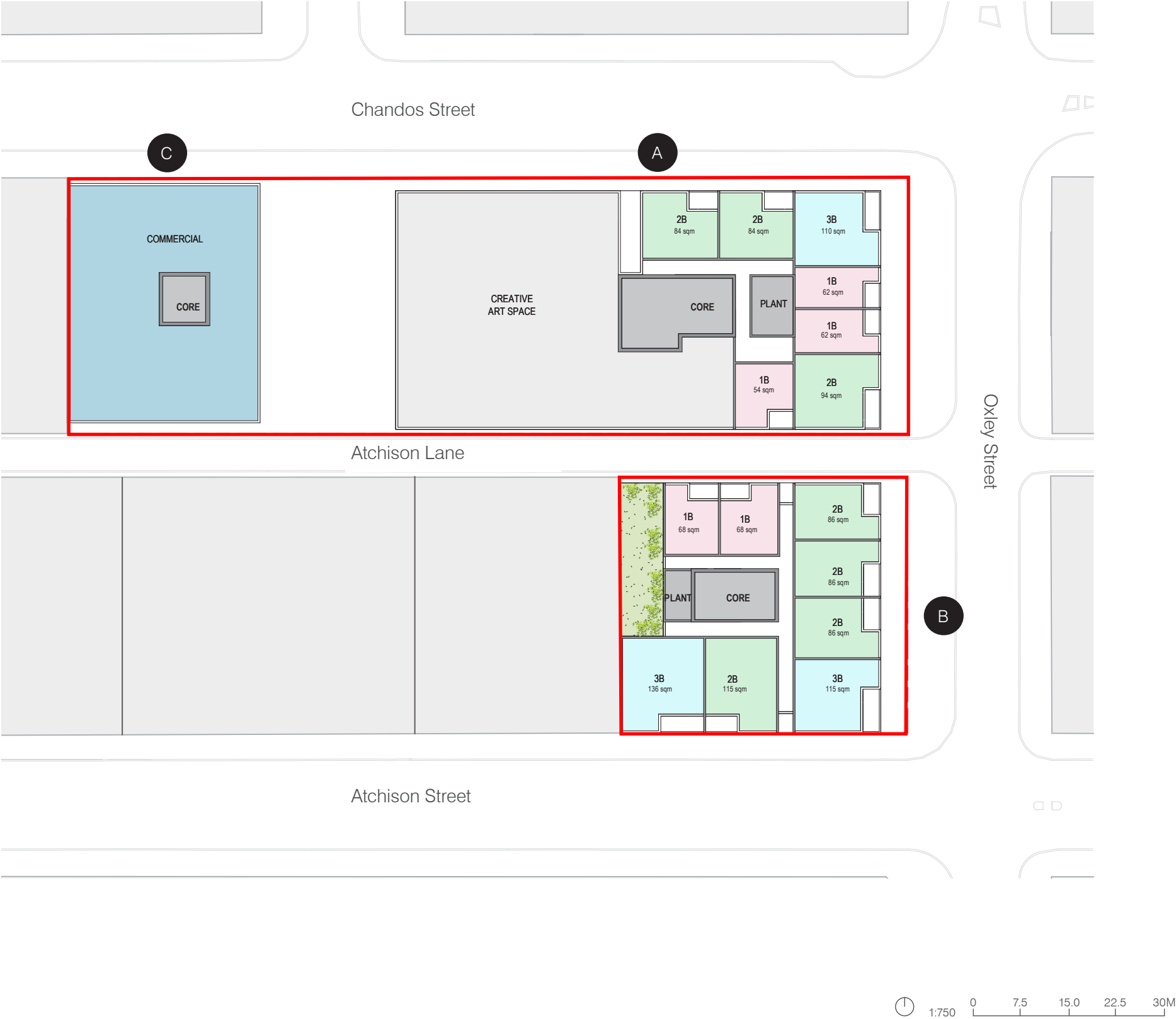
4.4 Typical Podium Plan

All buildings contain a 4-storey podium, with towers setback above.

Tower A provides a mixed use purpose, a creative hub for multi-use creative activities and education with an interface to the proposed public plaza. To the Chandos and Oxley Street interface there is proposed residential use to reflect the existing podium treatment of Oxley street.

Tower B has a residential use podium in consistency with Tower A and the existing street address to Oxley street.

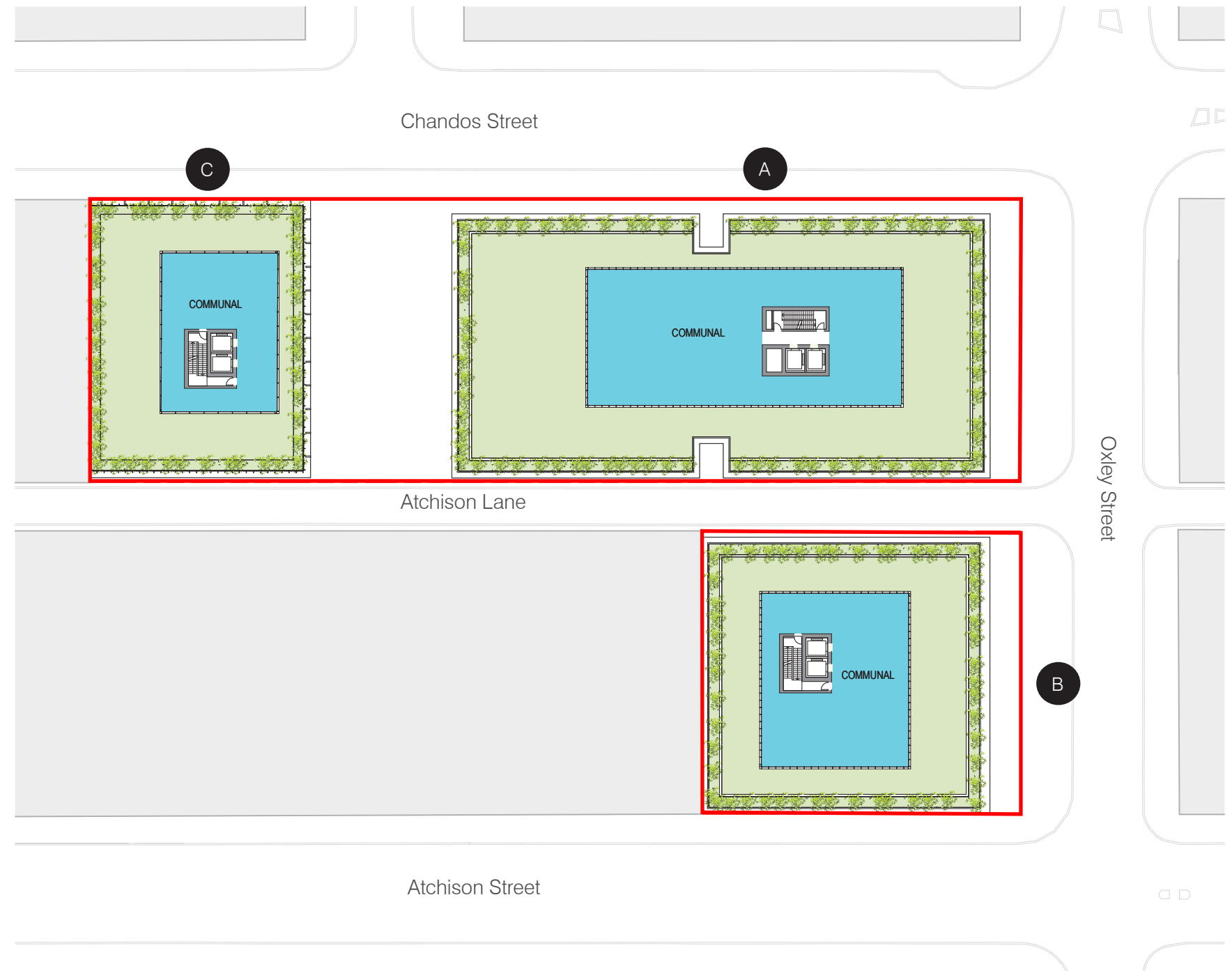
Tower C provides 3,258 sqm of Commercial floorspace with an interface to the proposed public park.



The proposal

4.5 Private communal open space

There is private communal open space on all of the proposed podiums. The private space is subject to ideal solar access facing North and East with views along Oxley street to the East and South and Crows Nest to the North.



Legend

- Subject site
- Communal open space
- Communal facilities

Ground floor plan

1:750 0 7.5 15.0 22.5 30M

The proposal

4.6 Typical tower plan

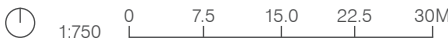
The master plan proposed three towers which range from 28 storeys on the corner of Chandos and Oxley Streets, stepping down to a 23 storey residential tower on Oxley and Atchison Streets and a mixed use tower of 17 storeys on Chandos Street. The towers are carefully positioned on the site to ensure solar access is maximised and that views are distributed equitably between towers and that they tie into the surrounding context.

The towers have also been designed to a maximum floor plate size of 800m² GFA to ensure they appear tall and slender.



- Legend
- Subject site
 - 1 bedroom
 - 2 bedroom
 - 3 bedroom

Typical high rise tower plan



4.7 Communal outdoor space

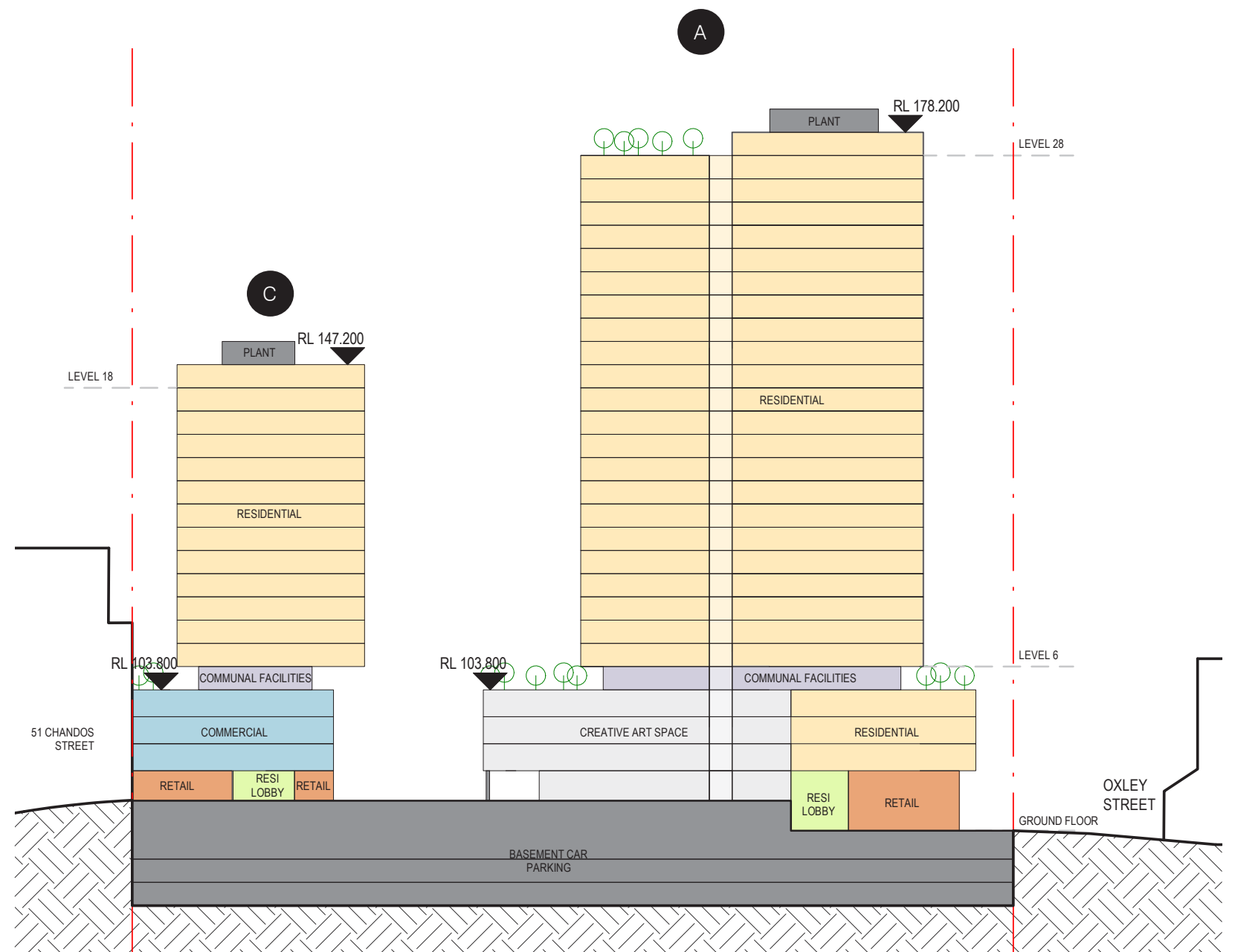
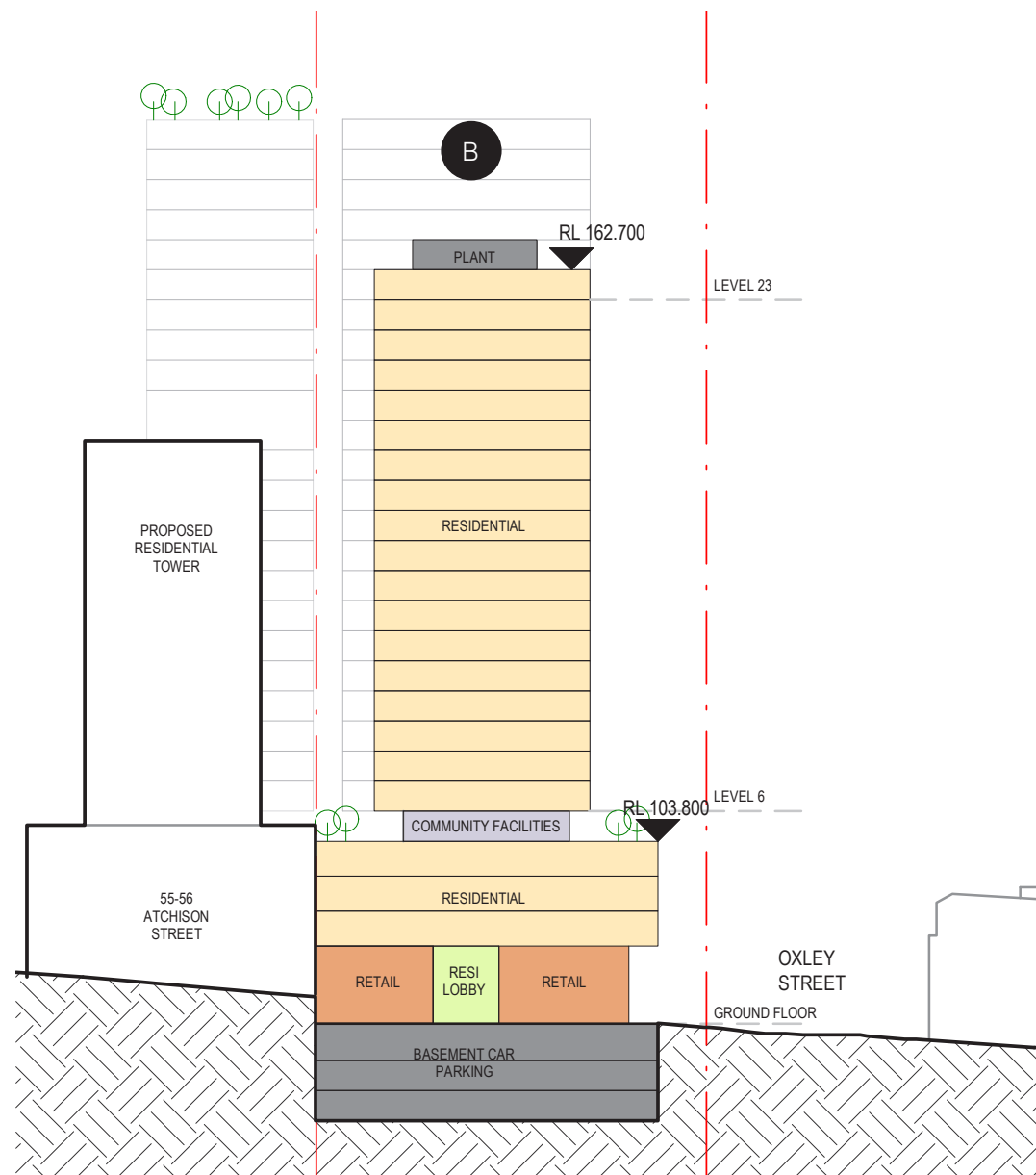
The top floor of tower A will include a generous communal rooftop space or future residents. The flexible open space will be available for communal events and take in sweeping local and harbour views and be afforded a sunny northerly aspect.



Typical podium plan

Legend

- Subject site
- Arts hub/creative space/gallery
- Retail
- Commercial
- Residential
- Car park / loading



Legend

- Subject site
- Arts hub/creative space/gallery
- Retail
- Commercial
- Residential
- Community facilities
- Car park / loading



The proposal

4.9 Arts Precinct and Public Square

- The character of this area will be highly urban and form an extension of the open space network and include all new arts facilities including a range of uses focussed around the visual and performing arts in the podium of a mixed use residential tower.
- A new dedicated arts focused facility will be located on Chandos Street and will become the focus around which many of the day to day activities for the community will be centred around. The diverse range of proposed uses for the arts facilities will ensure that the spaces are activated throughout the day and be accessible after hours.
- The public square will be located adjacent to the new arts facility on Chandos Street and will be aligned to the termination of Darvall Street to mark a clear break in the street block between Oxley and Mitchell Streets. More importantly, the square will form part of a mid-block pedestrian connection between Chandos and Atchison Streets.
- The public square will provide a natural extension for the arts facility to host large gatherings and major public events, while ensuring residents access to an important piece of green open space close to their place of residence.



Legend

- Subject site
- Arts hub/creative space/gallery
- Retail
- Residential lobby
- Car park / loading

The proposal



Saint Louis Art Museum, Missouri



Studio Olafur Eliasson, Munich



St Patrick's Square in Auckland is a compact urban space which successfully integrates an open green space with a through site link

The proposal

4.10 Oxley Street linear park

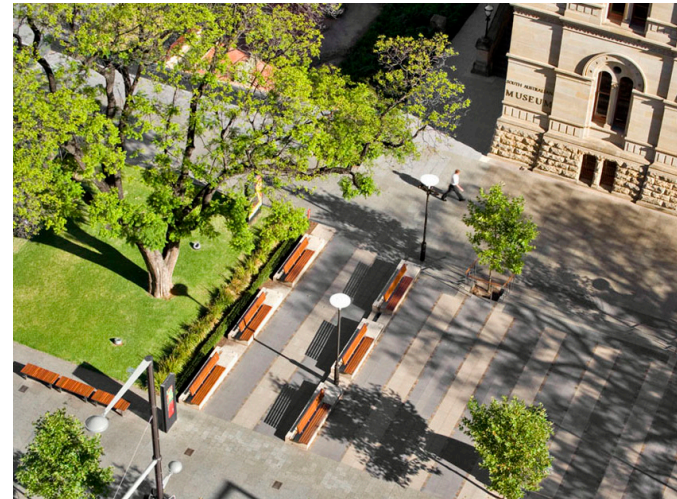
- The character of this area will be a fine balance of commercial uses at ground floor and residential uses in the podium above.
- Commercial uses such as wine bars, cafes and small shops at street level will ensure that Oxley Street remains a place for the burgeoning Café Culture scene while taking advantage of its green interface and sunny eastern aspect.
- Bisected by Atchison Lane, the frontage along Oxley Street will form part of a series of linear Parks which will link the precinct back to the proposed Hume Street Reserve.
- Streets will integrate footpaths, street planting, outdoor dining areas and areas for passive recreation uses, particularly on the western edge of the street to assist with activation.



Legend

- Subject site
- Arts hub/creative space/gallery
- Retail
- Residential lobby
- Car park / loading
- Car park / loading
- Oxley Street linear park

The proposal



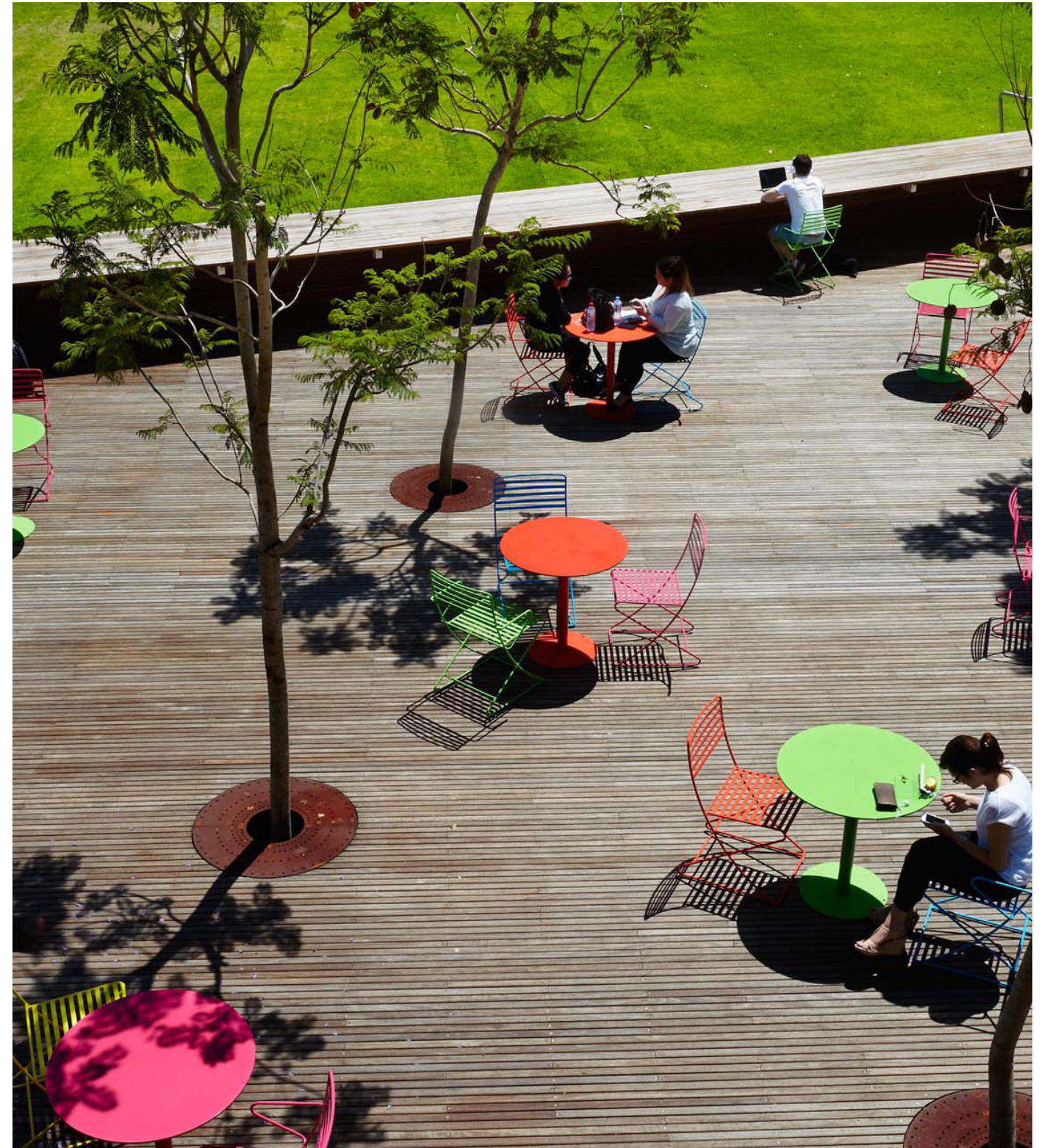
University of Adelaide, South Australia



University of Adelaide, South Australia



Crows Nest Library, Surry Hills NSW



Monash Uni, Caulfield, VIC

The proposal

4.11 Indicative schedule of areas

	Tower A	Tower B	BEA	GFA	Tower C	BEA	GFA	Retail apartments	Creative space
28	570		570	445					
27	1050		1050	819					
26	1050		1050	819					
25	1050		1050	819					
24	1050		1050	819					
23	1050	610	1660	1295					
22	1050	610	1660	1295					
21	1050	610	1660	1295					
20	1050	610	1660	1295					
19	1050	610	1660	1295					
18	1050	610	1660	1295	650		507		
17	1050	610	1660	1295	650		507		
16	1050	610	1660	1295	650		507		
15	1050	610	1660	1295	650		507		
14	1050	610	1660	1295	650		507		
13	1050	610	1660	1295	650		507		
12	1050	610	1660	1295	650		507		
11	1050	610	1660	1295	650		507		
10	1050	610	1660	1295	650		507		
9	1050	610	1660	1295	650		507		
8	1050	610	1660	1295	650		507		
7	1050	610	1660	1295	650		507		
6	1050	610	1660	1295	650		507		
5	630	1170	1800	1377	650		507		
4	630	1170	1800	1377	905		815		
3	630	1170	1800	1377	905		815		1370
2	630	1170	1800	1377	905		815		1370
1					905		815	1025	1370
B1								1175	1370
GFA				32535	3258	7098	10356	1650	4055
Total Resi GFA									39633
Total GFA									48596
Site Area									5,651
Total FSR									8.60 :1
Resi FSR									7.01 :1
Non-Resi FSR									1.59 :1

The proposal







05 Assessment

5.1 Building set out

The master plan features three residential tower envelopes positioned above podium buildings which form an appropriately scaled transition to the streets. Tower A and C are located in the North portion of the site and separated by a proposed

Tower A is located on the North-East corner of Chandos and Oxley Street, it consists of a mixed use podium comprising of fine grain retail at ground level and 4,000sqm of creative art space activating the proposed public plaza.

Tower B consists of a mixed use podium fronting Oxley and Atchison Street with fine grain retail fronting Oxley Street at ground level and residential 4 storeys of residential use.

Tower C is located at the North West corner of the site with 4 storeys of commercial uses in the podium fronting Chandos Street and activating the proposed public plaza. There is a modest cantilever of 4m over the plaza space proposed at level 6.

The plan opposite shows the set out of the building envelopes, setbacks and tower separation distances. The ADG promotes towers to maintain a separation of 24 metres between residential apartment buildings. This is generally within compliance by the layouts indicated in the master plan with the exception of towers A and C having with a setback of 18 metres, this is consistent with the existing buildings with an interface to Atchison Lane.

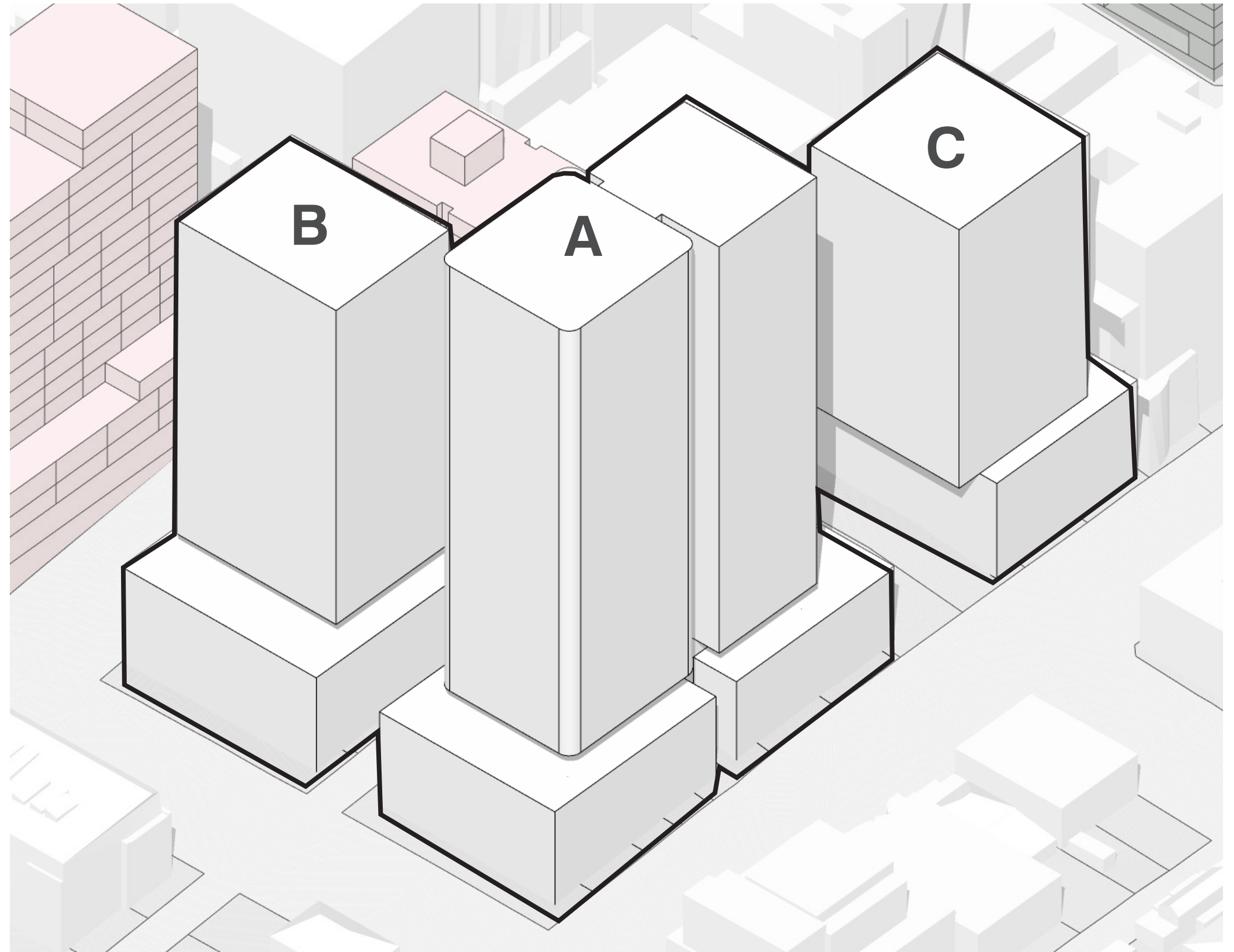


Assessment

5.2 SEPP 65 - Solar Analysis

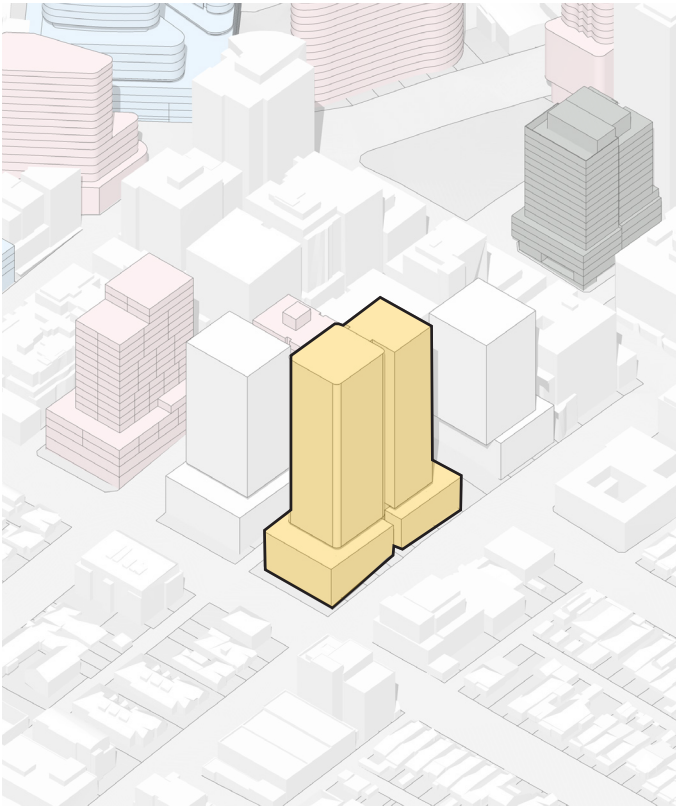
The placement of the towers has been carefully considered to ensure that SEPP 65 requirements for sunlight and natural ventilation are met for the proposed residential dwellings on the site.

The proposed building envelopes perform very well with the layout and orientation resulting in all buildings envelopes achieving the minimum 2 hour solar access and 60% cross ventilation requirements set out in the ADG



Legend

 Proposed development



Legend
Subject building

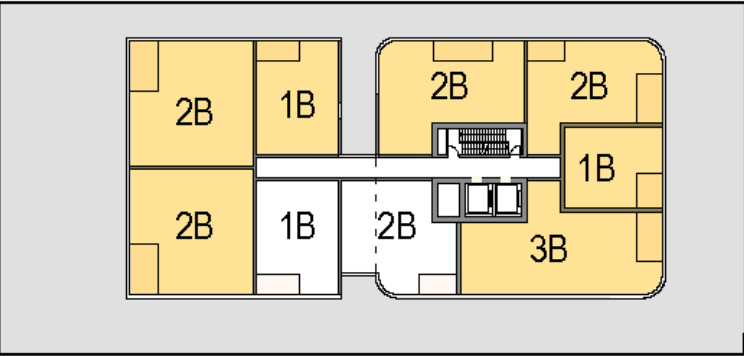
Solar Access Building A

Direct sunlight to the indicative built form of the master plan has been assessed for winter solstice (June 21) between the hours of 9am to 3pm. A minimum of 70% of apartments needs to meet this ADG requirement for solar access.

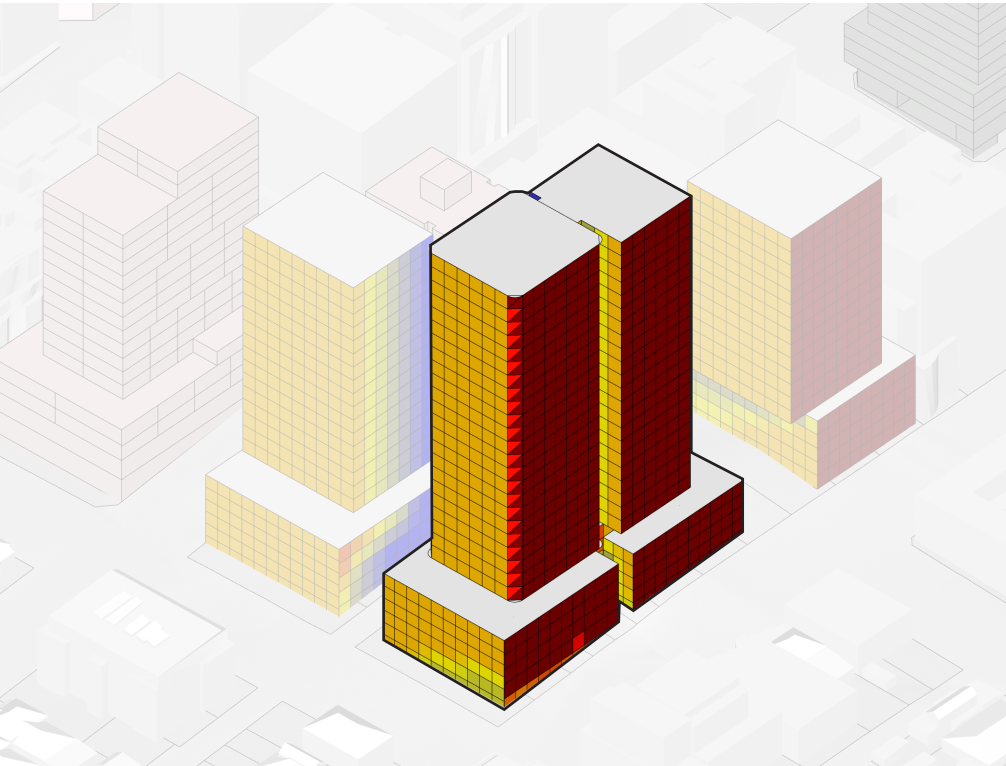
The floor plan below illustrates that the indicative building envelope is capable of achieving the minimum requirement.

Compliant apartments	Total apartments per floor	Compliance Yes / No
7	9	Yes

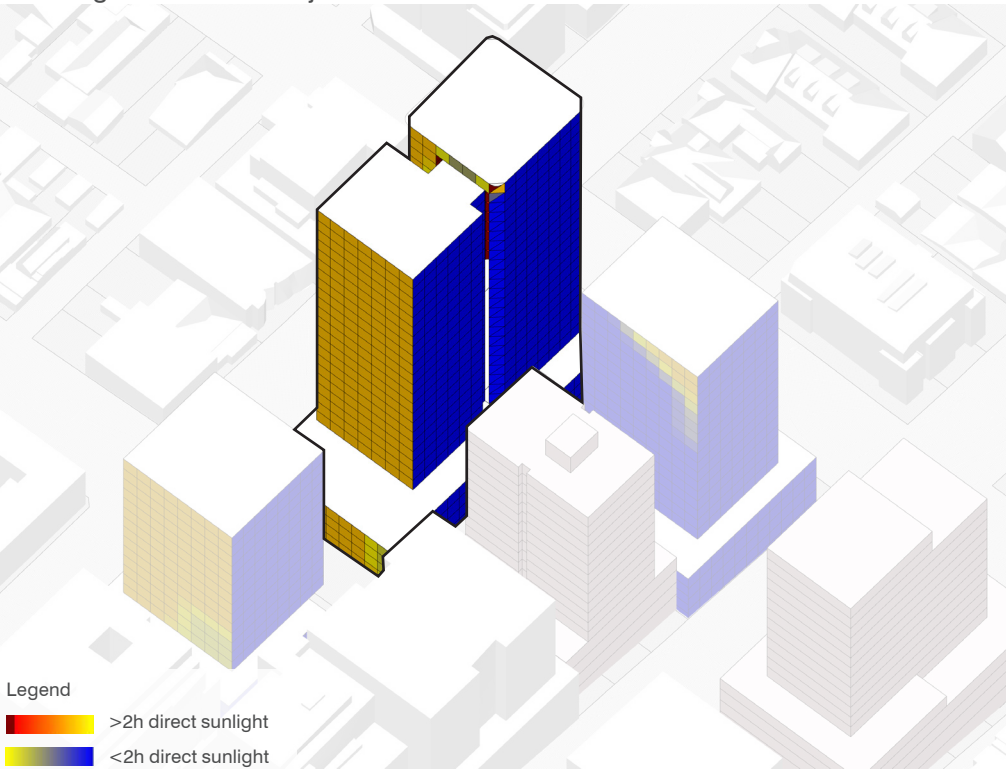
78% OF APARTMENTS ACHIEVE REQUIRED SOLAR ACCESS



Legend
Compliant apartment (>2h direct sunlight)

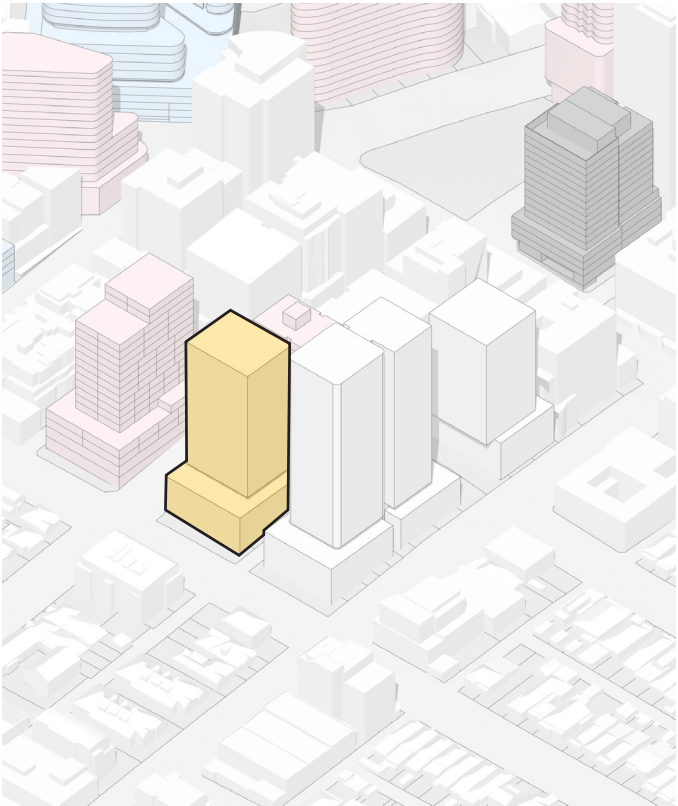


Looking South at the subject site



Legend
>2h direct sunlight
<2h direct sunlight
Looking North at the subject site

Assessment



Legend
Subject building

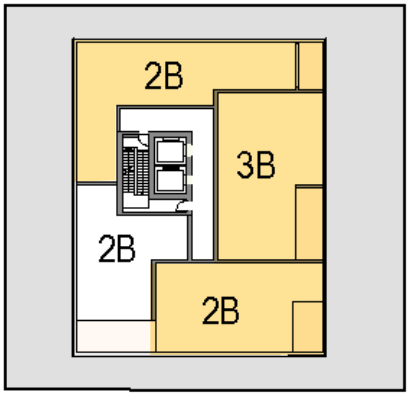
Solar Access Building B

Direct sunlight to the indicative built form of the master plan has been assessed for winter solstice (June 21) between the hours of 9am to 3pm. A minimum of 70% of apartments needs to meet this ADG requirement for solar access.

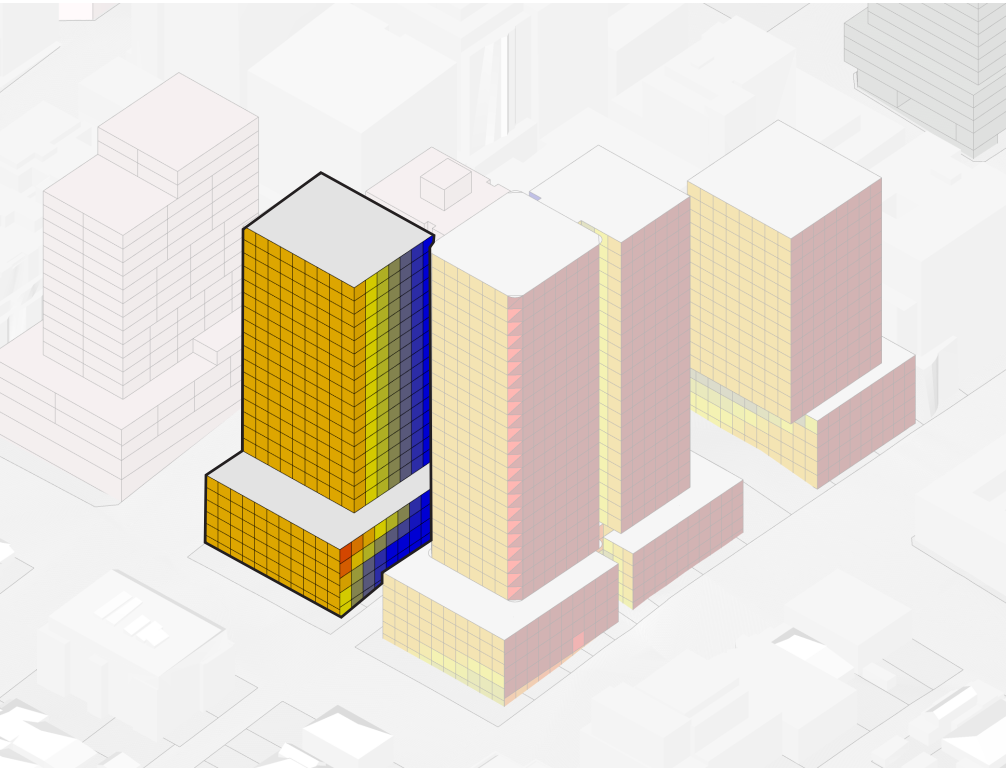
The floor plan below illustrates that the indicative building envelope is capable of achieving the minimum requirement.

Compliant apartments	Total apartments per floor	Compliance Yes / No
3	4	Yes

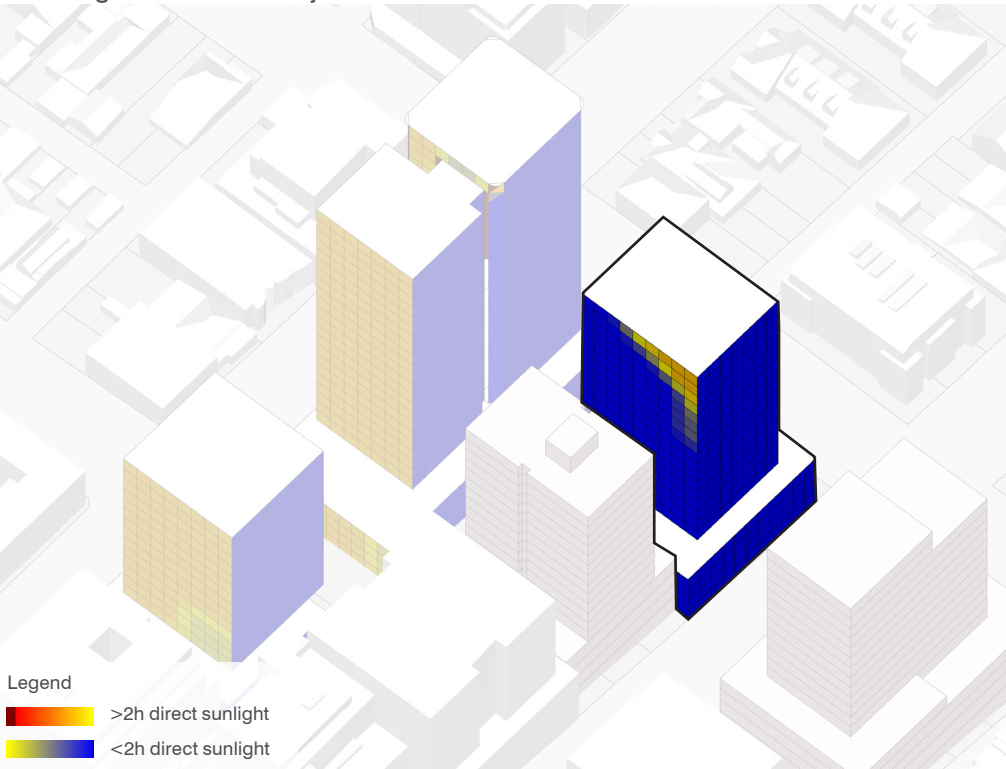
75% OF APARTMENTS ACHIEVE REQUIRED SOLAR ACCESS



Legend
Compliant apartment (>2h direct sunlight)

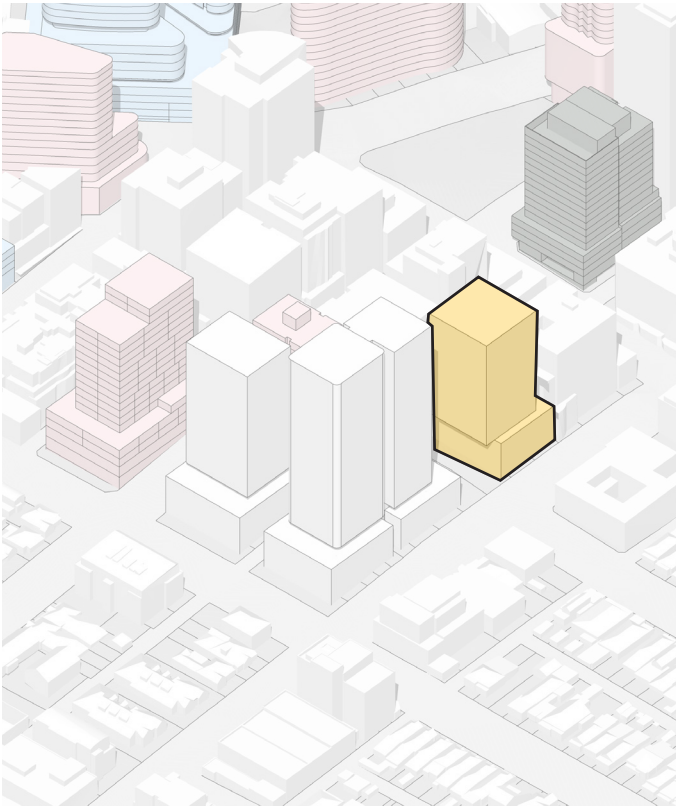


Looking South at the subject site



Legend
>2h direct sunlight
<2h direct sunlight

Looking North at the subject site



Legend
Subject building

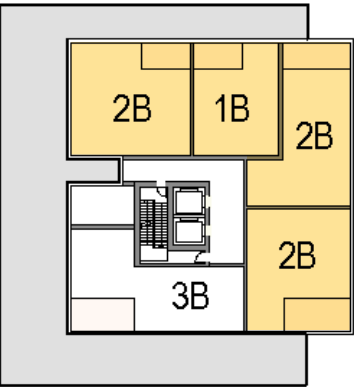
Solar Access Building C

Direct sunlight to the indicative built form of the master plan has been assessed for winter solstice (June 21) between the hours of 9am to 3pm. A minimum of 70% of apartments needs to meet this ADG requirement for solar access.

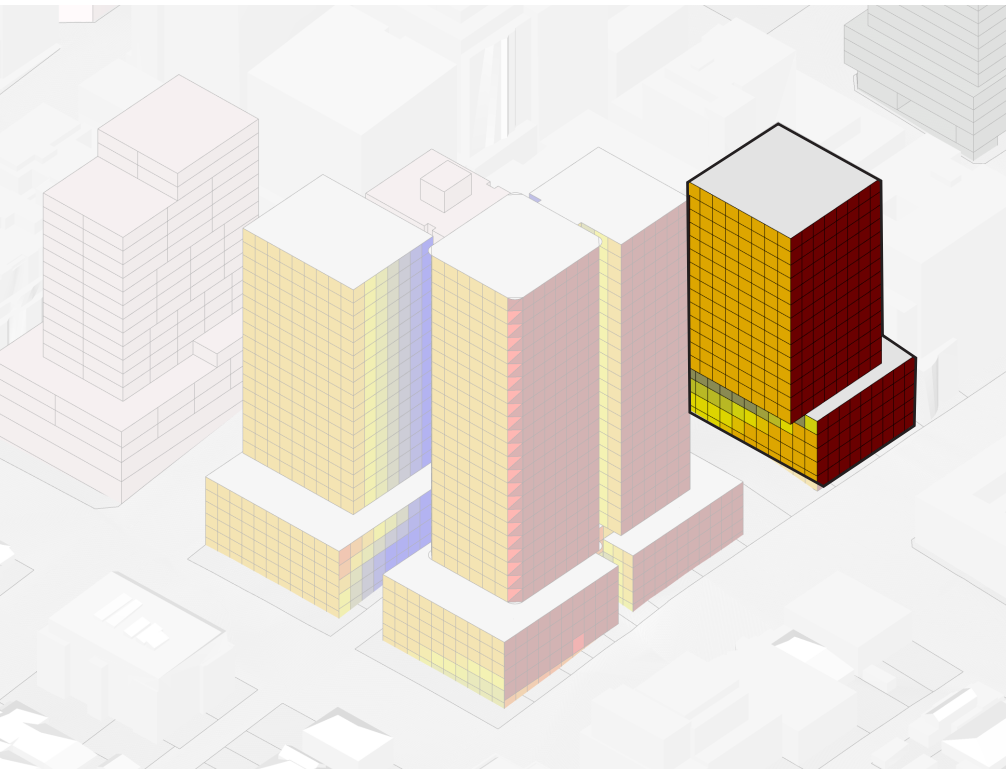
The floor plan below illustrates that the indicative building envelope is capable of achieving the minimum requirement.

Compliant apartments	Total apartments per floor	Compliance Yes / No
4	5	Yes

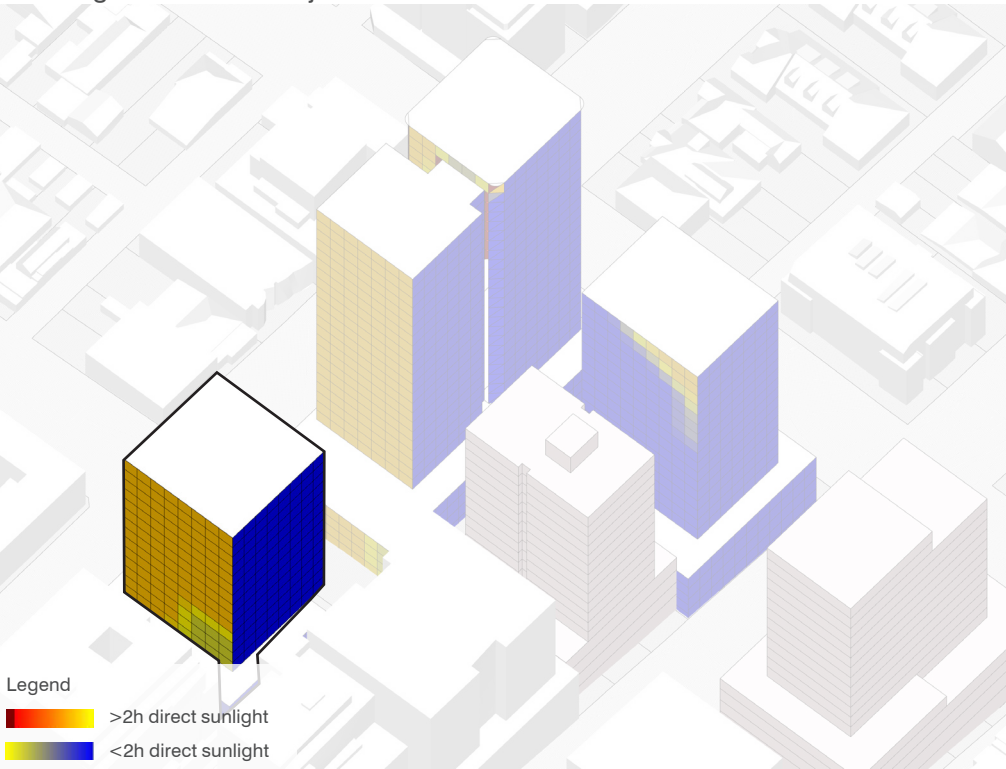
80% OF APARTMENTS ACHIEVE REQUIRED SOLAR ACCESS



Legend
Compliant apartment (>2h direct sunlight)



Looking South at the subject site



Legend
>2h direct sunlight
<2h direct sunlight

Looking North at the subject site

5.3 SEPP 65 - Cross ventilation

Cross Ventilation

A minimum of 60% of all apartments within the first 9 storeys of the development needs to achieve cross ventilation as required by the Apartment Design Guide.

When considered as a whole the development achieves 60% cross-ventilation. It should be noted that the development phasing and detailed design of the proposal could be staged multiple ways to further enhance compliance with this requirement as the development progresses.

Given that this application is for amendment to the planning controls only, it is considered that subject to detailed design the development would be capable of achieving compliance with requirements of the ADG. Any future DAs would be subject to detailed assessment and consideration of the ADGs at a later stage.

	Cross Ventilated level 1-9	Total apartments level 1-9	% Cross Vent
Tower A	42	69	58%
Tower B	27	52	52%
Tower C	24	30	80%
Total	93	151	62%

24



Assessment

5.4 Views from the sun

Views from the sun are indicated in the adjacent diagrams at every hour between 9am and 3pm on June 21.

Shadows are indicated in the adjacent diagrams at every hour between 9am and 3pm on June 21.

The study indicates that during the winter solstice the tower casts a long shadow that is relatively fast moving and affects surrounding buildings to the south for short periods of time. A majority of the shadow falls within the shadow cast by existing buildings surrounding the subject site, meaning that the additional shadow has a relatively minor impact. The greatest impact is between 9:00am and 11:00am to the existing and proposed building to the south fronting Atchison Lane.

Methodology

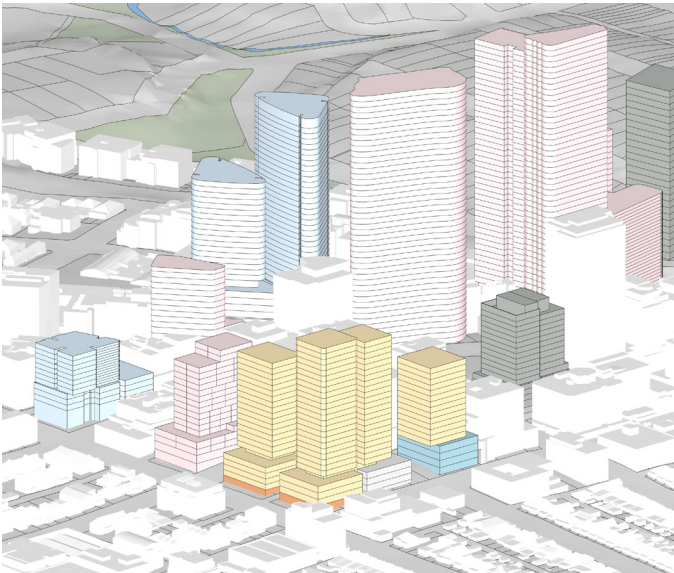
The following section also analyses the overshadowing impact of the proposed building envelopes on surrounding buildings in detail.

Model images have been taken to demonstrate the overshadowing impact on the façades of surrounding buildings. The shadow cast is projected onto the model between the hours of 9m and 3pm on winter solstice (June 21) for every 30min as a view from the sun.

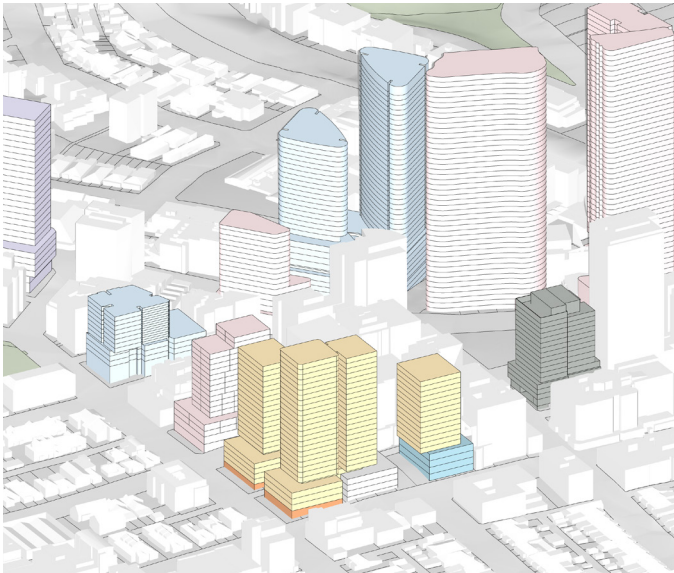
Impacts on existing single detached dwellings, existing medium-rise apartment buildings and future high-rise apartment buildings to the South of Chandos Street Precinct have been assessed. The solar access testing estimates only and do not calculate additional and/or variation of shadows impacted by existing trees shadow impact.

The assessment shows that the towers cast relatively fast moving shadows that affect different residential areas between the hours of 9am and 3pm on winter solstice. Between 9am and 10am mainly medium-rise and future high-rise apartments would be affected. Between 9am and 12pm the impact is limited to the site south of Chandos Street. This extends to include some singled detached dwellings between 12pm and 2pm. After 1:30pm only existing single detached dwellings along Oxley Street.

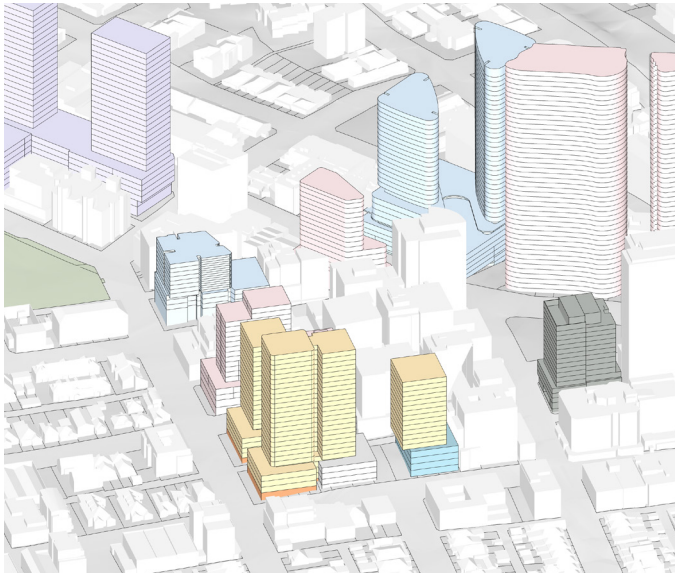
Assessment



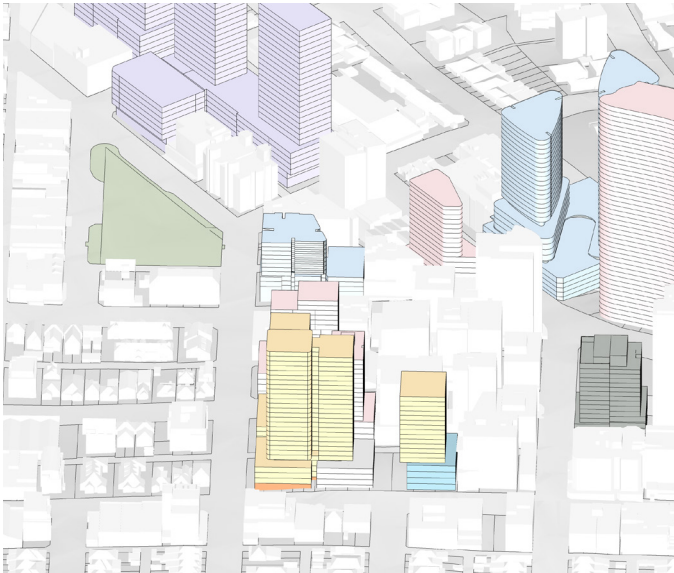
9am
The majority of the shadow falls onto existing buildings to the south fronting Atchison Lane.



10am
The majority of the shadow falls within the shadow cast by existing and proposed development to the south of the subject site fronting Atchison Lane.

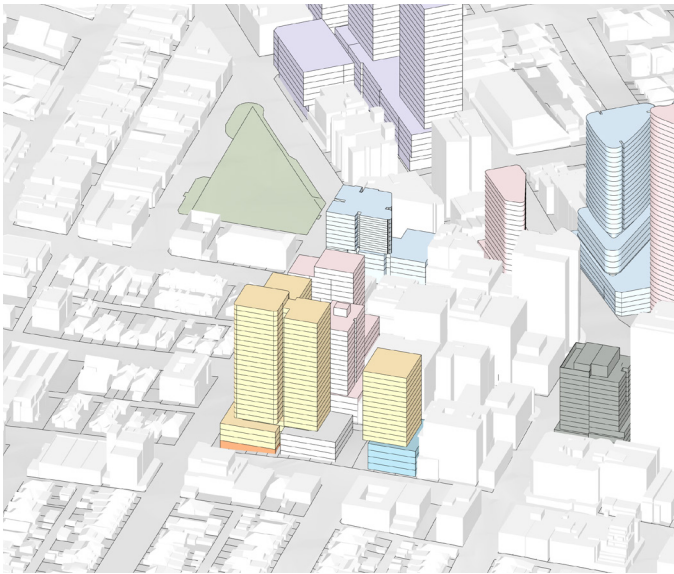


11am
The majority of the shadow falls onto proposed development to the south of the site fronting Atchison Lane.

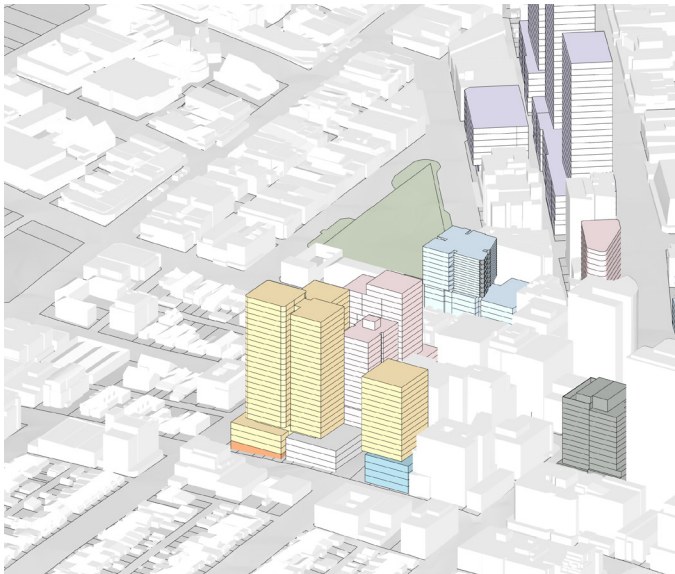


12pm
The majority of the shadow falls onto proposed development to the south of the site fronting Atchison Lane.

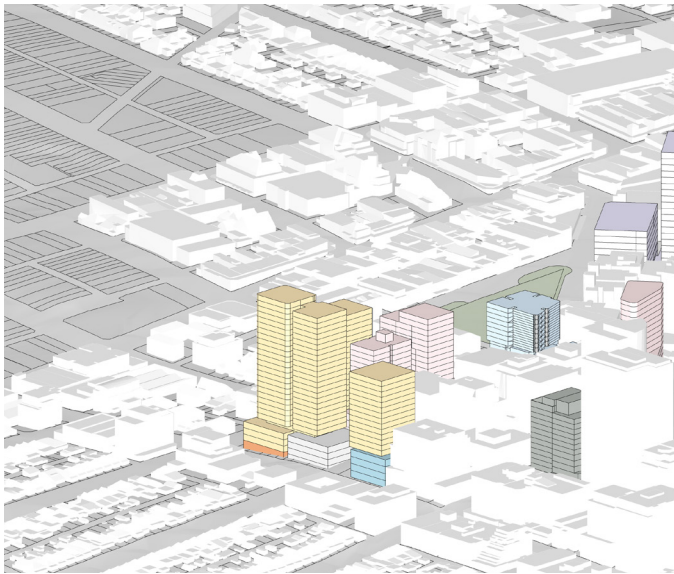
- Legend
- Under construction
 - Approved
 - Pending approval
 - Potential future development
 - Proposed building



1pm
The majority of the shadow falls onto proposed development to the south of the site fronting Atchison Lane and low rise houses on Atchison street and Albany Street.



2pm
The majority of the shadow falls onto proposed development to the south of the site fronting Atchison Lane and low rise houses on Atchison street and Albany Street.

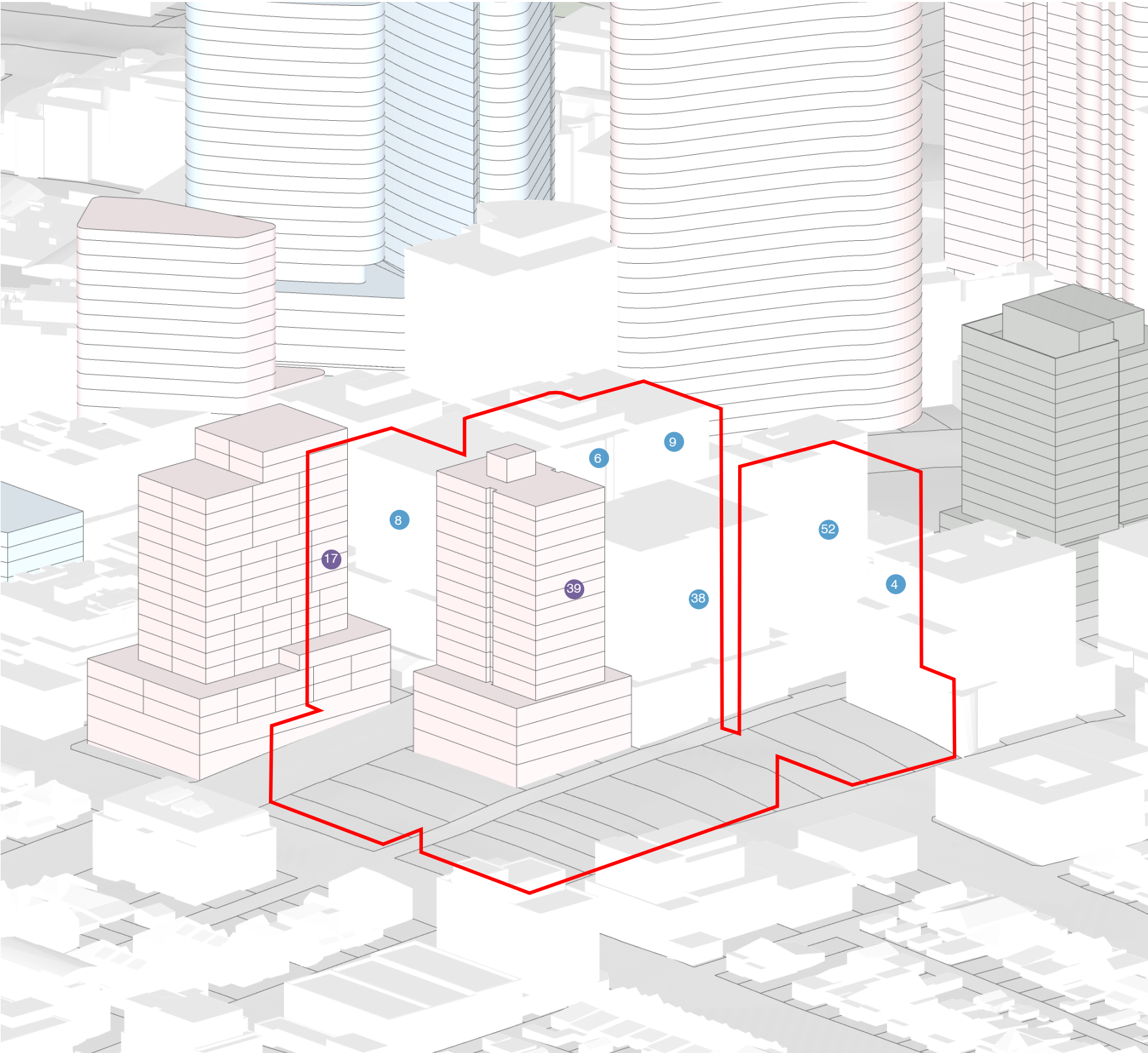


3pm
The majority of the shadow falls onto proposed development to the south of the site fronting Atchison Lane and low rise houses on Atchison street and Albany Street.

Assessment

Winter solstice 9am

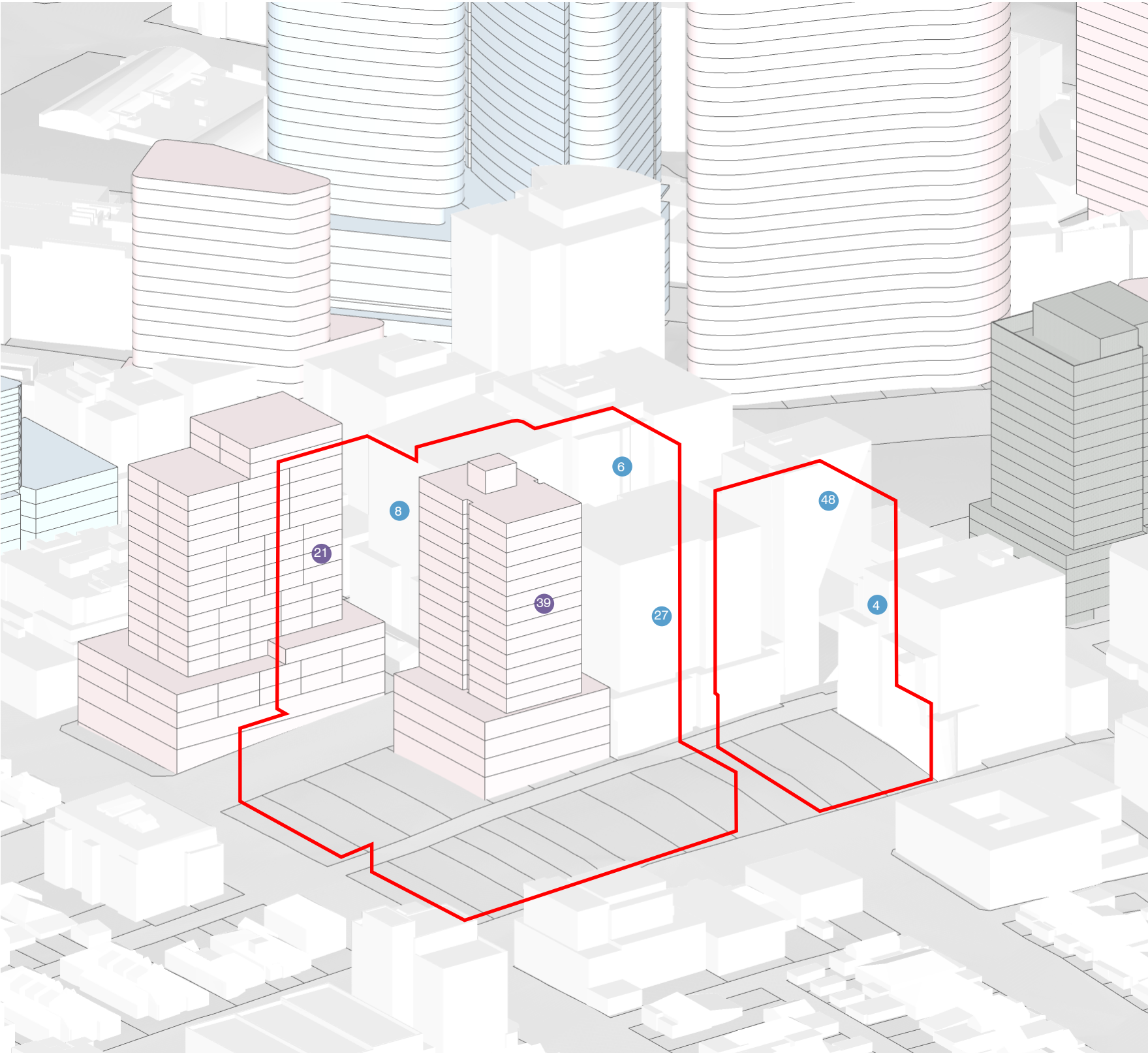
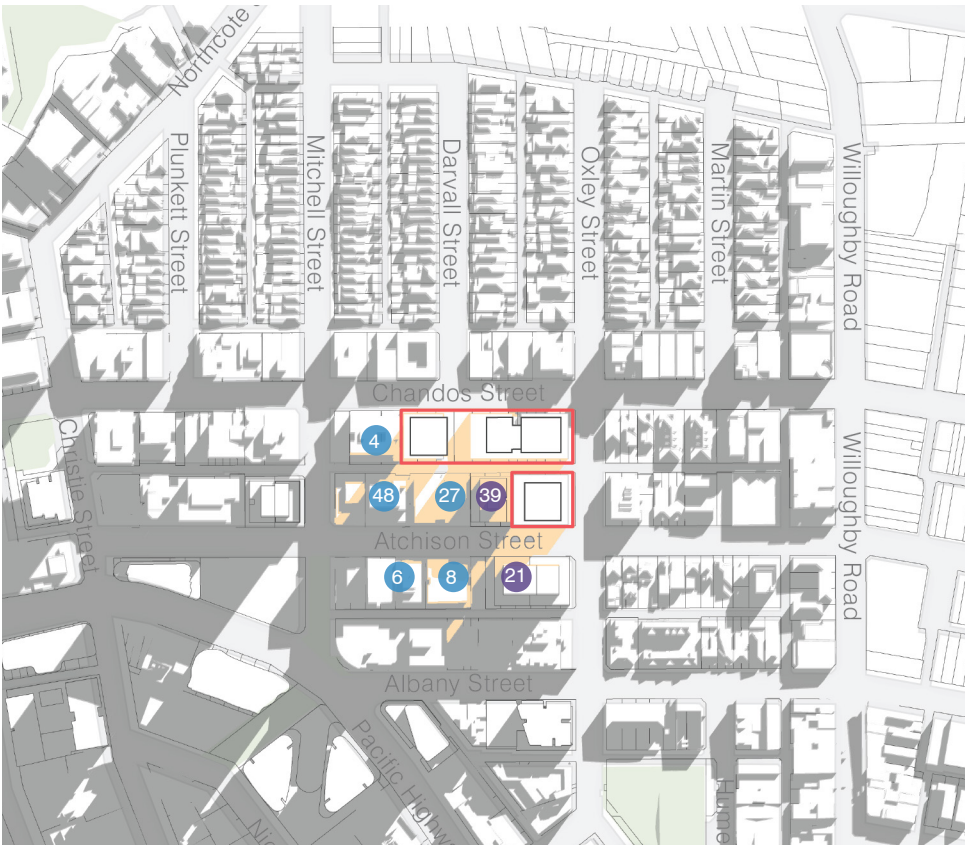
Overshadowing impacts of the proposed development in addition to impacts of existing and currently proposed development		
Impacts on existing high-rise apartment buildings	38	40-48 Atchison Street, St Leonards
	8	15 Atchison Street, St Leonards
	52	32-38 Atchison Street, St Leonards
	6	9 Atchison Street, St Leonards
	9	5 Atchison Street, St Leonards
Impacts on potential high-rise apartment buildings	4	51 Chandos Street, St Leonards
	39	55-56 Atchison Street, St Leonards
	17	23 Atchison Street, St Leonards



Assessment

Winter solstice 9.30am

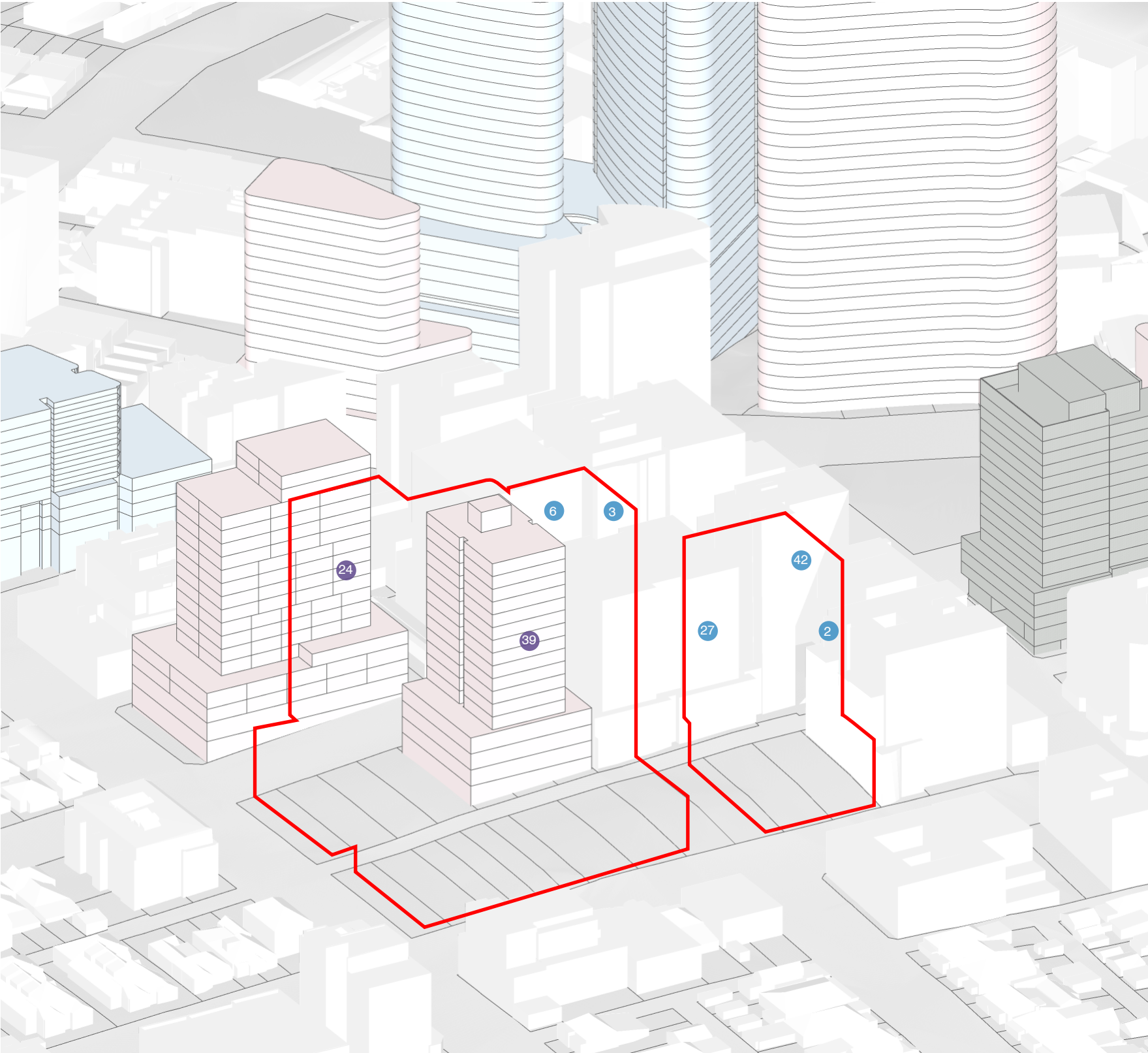
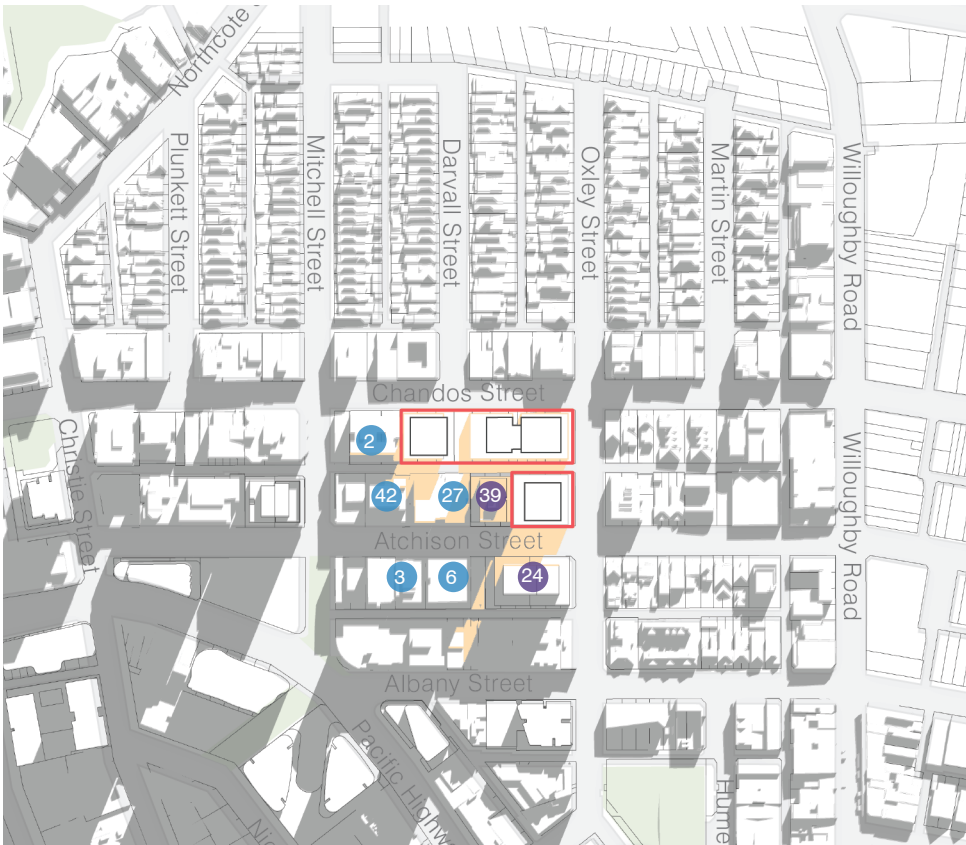
Overshadowing impacts of the proposed development in addition to impacts of existing and currently proposed development	
Impacts on existing high-rise apartment buildings	8 15 Atchison Street, St Leonards
	6 9 Atchison Street, St Leonards
	27 40-48 Atchison Street, St Leonards
	48 32-38 Atchison Street, St Leonards
	4 51 Chandos Street, St Leonards
Impacts on potential high-rise apartment buildings	39 55-56 Atchison Street, St Leonards
	21 23 Atchison Street, St Leonards



Assessment

Winter solstice 10am

Overshadowing impacts of the proposed development in addition to impacts of existing and currently proposed development	
Impacts on existing high-rise apartment buildings	6 15 Atchison Street, St Leonards
	3 9 Atchison Street, St Leonards
	27 40-48 Atchison Street, St Leonards
	42 32-38 Atchison Street, St Leonards
	2 51 Chandos Street, St Leonards
Impacts on potential high-rise apartment buildings	24 23 Atchison Street, St Leonards
	39 55-56 Atchison Street, St Leonards

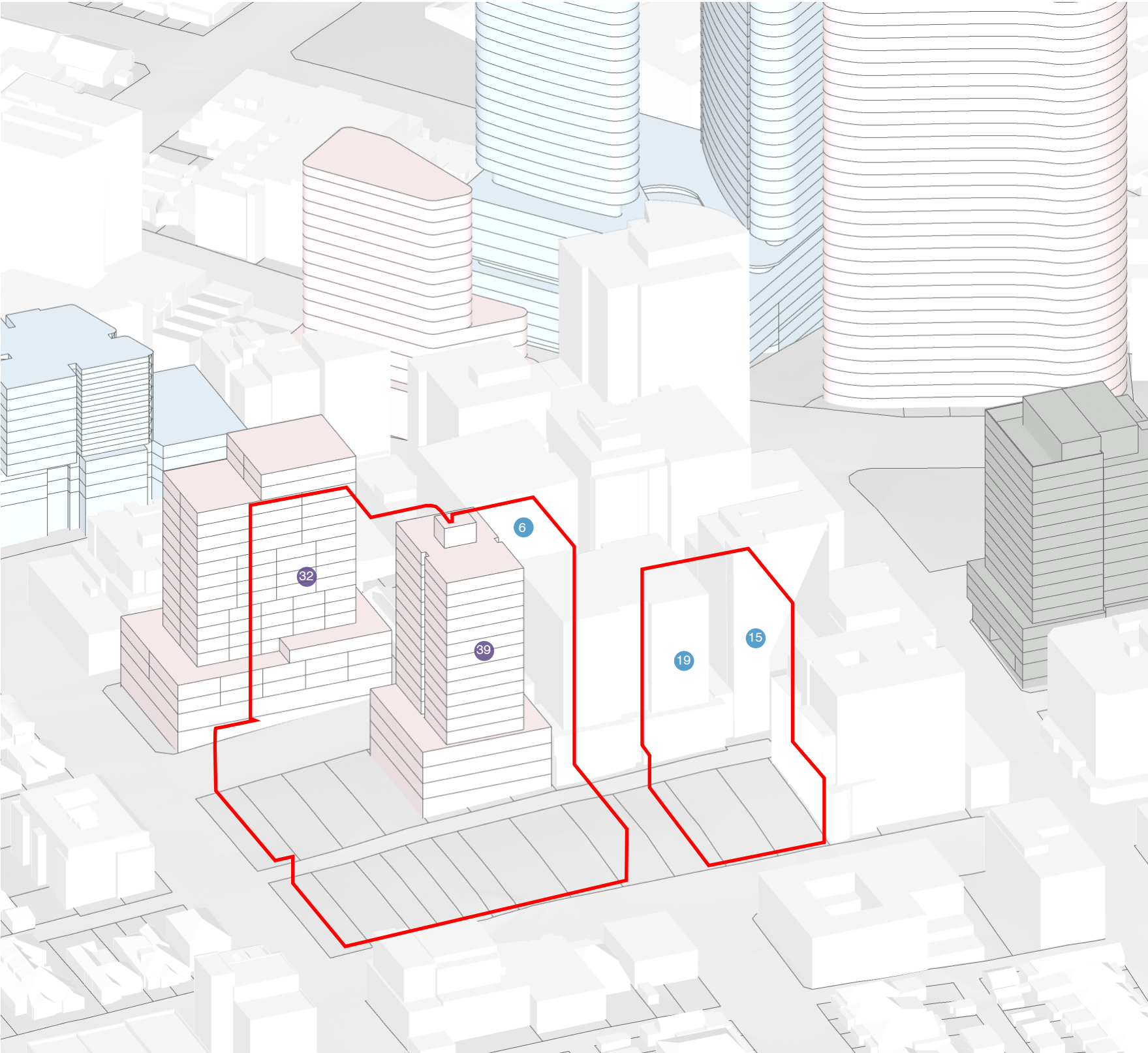


Assessment

Winter solstice 10.30am

Overshadowing impacts of the proposed development
in addition to impacts of existing and currently proposed development

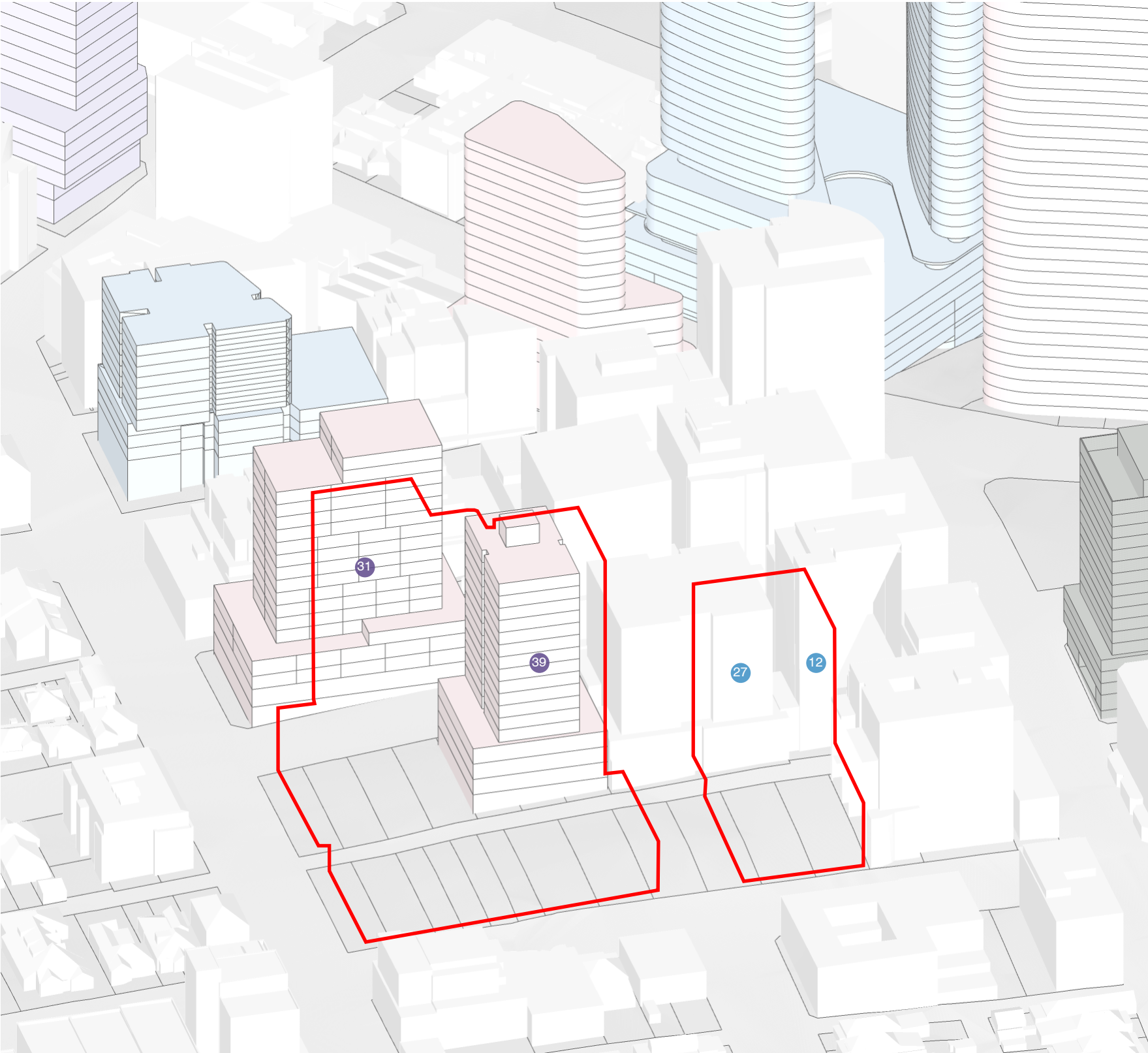
Impacts on existing high-rise apartment buildings	6	15 Atchison Street, St Leonards
	19	40-48 Atchison Street, St Leonards
Impacts on potential high-rise apartment buildings	15	32-38 Atchison Street, St Leonards
	32	23 Atchison Street, St Leonards
	39	55-56 Atchison Street, St Leonards



Assessment

Winter solstice 11am

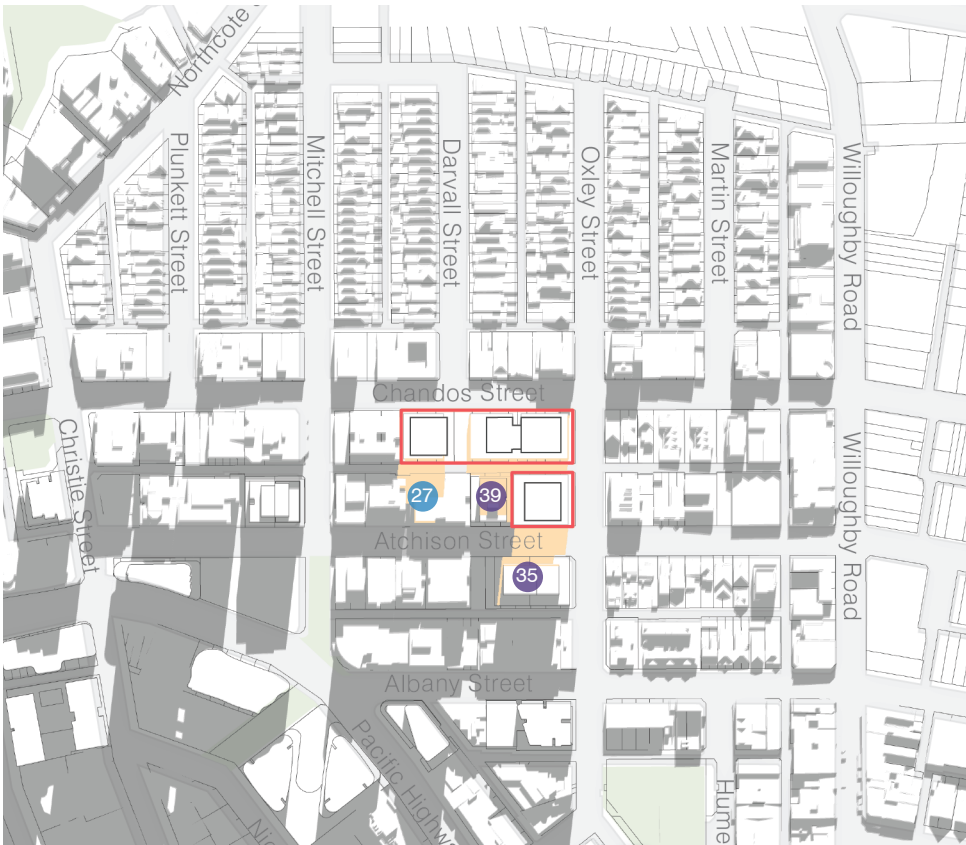
Overshadowing impacts of the proposed development in addition to impacts of existing and currently proposed development		
Impacts on existing high-rise apartment buildings	27	40-48 Atchison Street, St Leonards
	12	32-38 Atchison Street, St Leonards
Impacts on potential high-rise apartment buildings	31	23 Atchison Street, St Leonards
	39	55-56 Atchison Street, St Leonards



Assessment

Winter solstice 11.30am

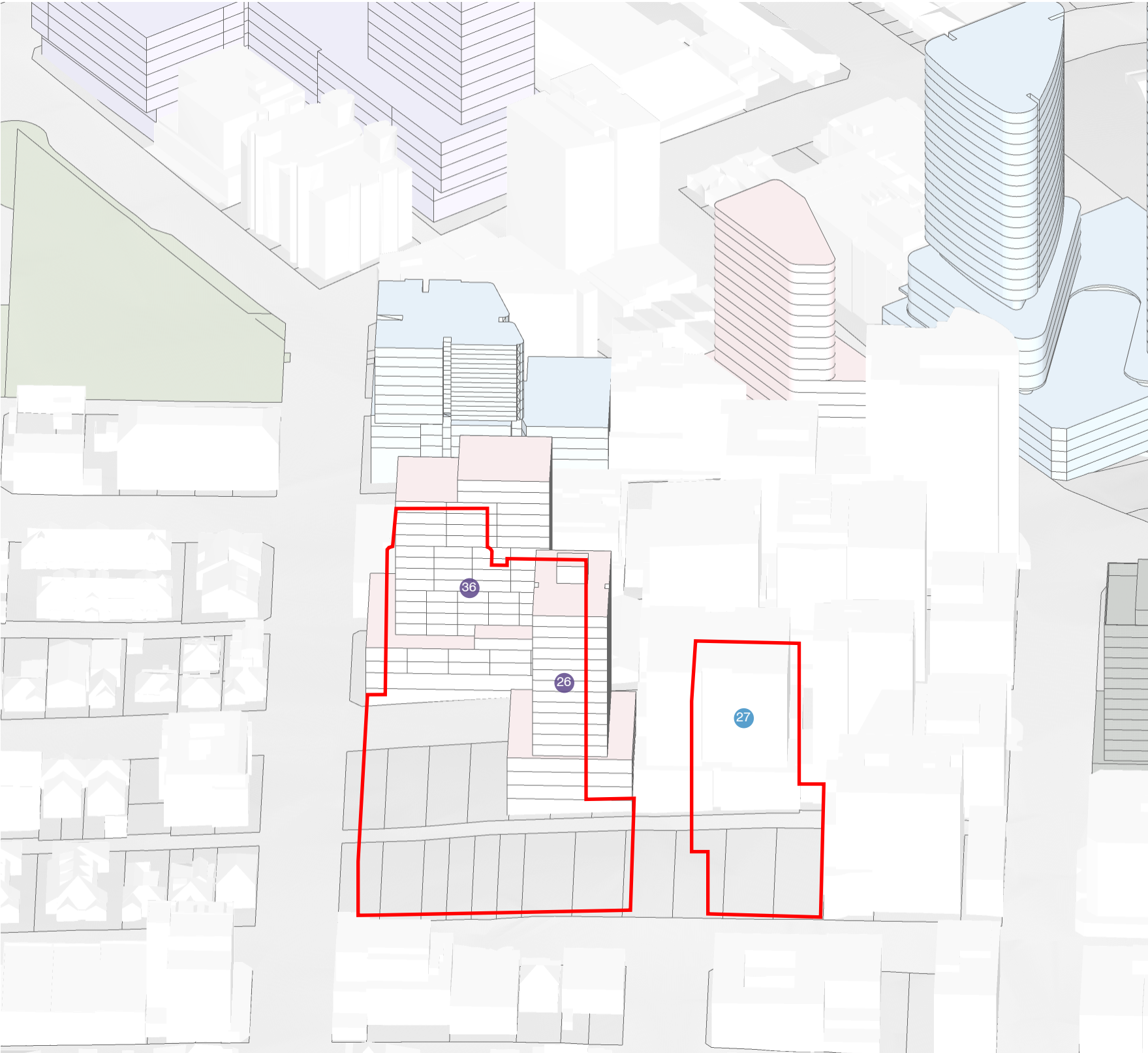
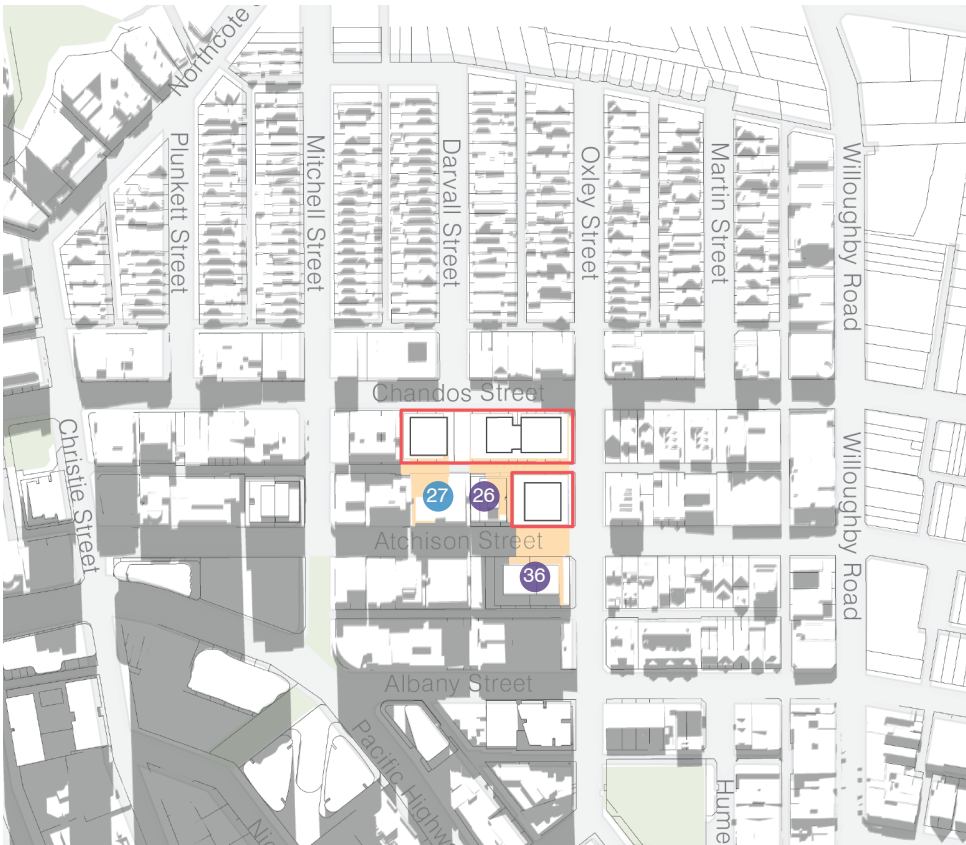
Overshadowing impacts of the proposed development in addition to impacts of existing and currently proposed development		
Impacts on existing high-rise apartment buildings	27	40-48 Atchison Street, St Leonards
Impacts on potential high-rise apartment buildings	35	23 Atchison Street, St Leonards
	39	55-56 Atchison Street, St Leonards



Assessment

Winter solstice 12pm

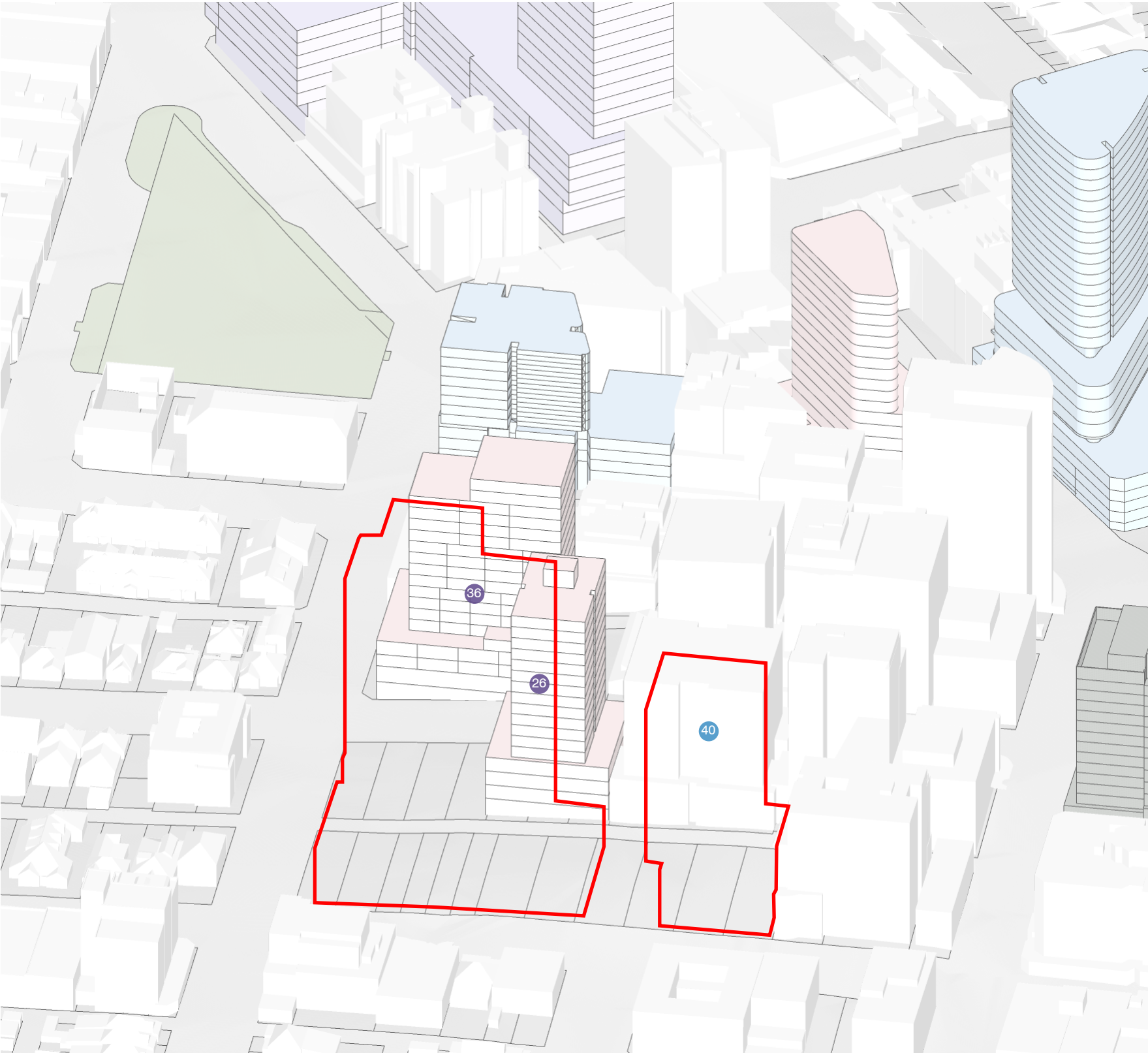
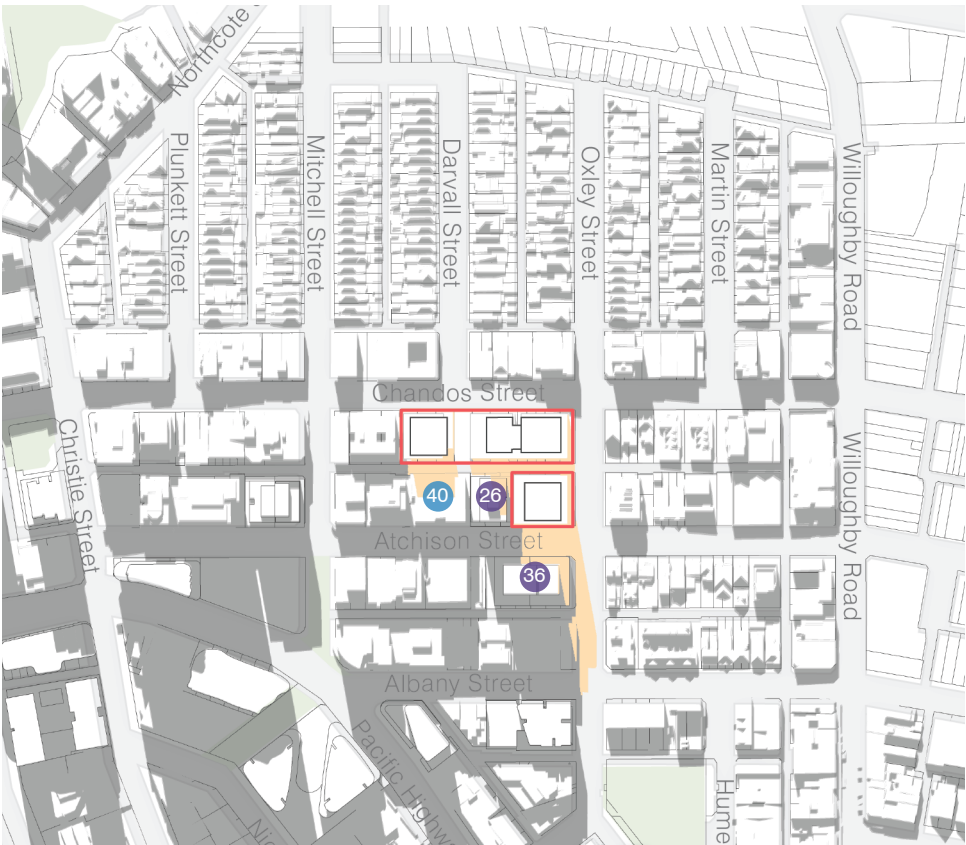
Overshadowing impacts of the proposed development in addition to impacts of existing and currently proposed development		
Impacts on existing high-rise apartment buildings	27	40-48 Atchison Street, St Leonards
Impacts on potential high-rise apartment buildings	36	23 Atchison Street, St Leonards
	26	55-56 Atchison Street, St Leonards



Assessment

Winter solstice 12.30pm

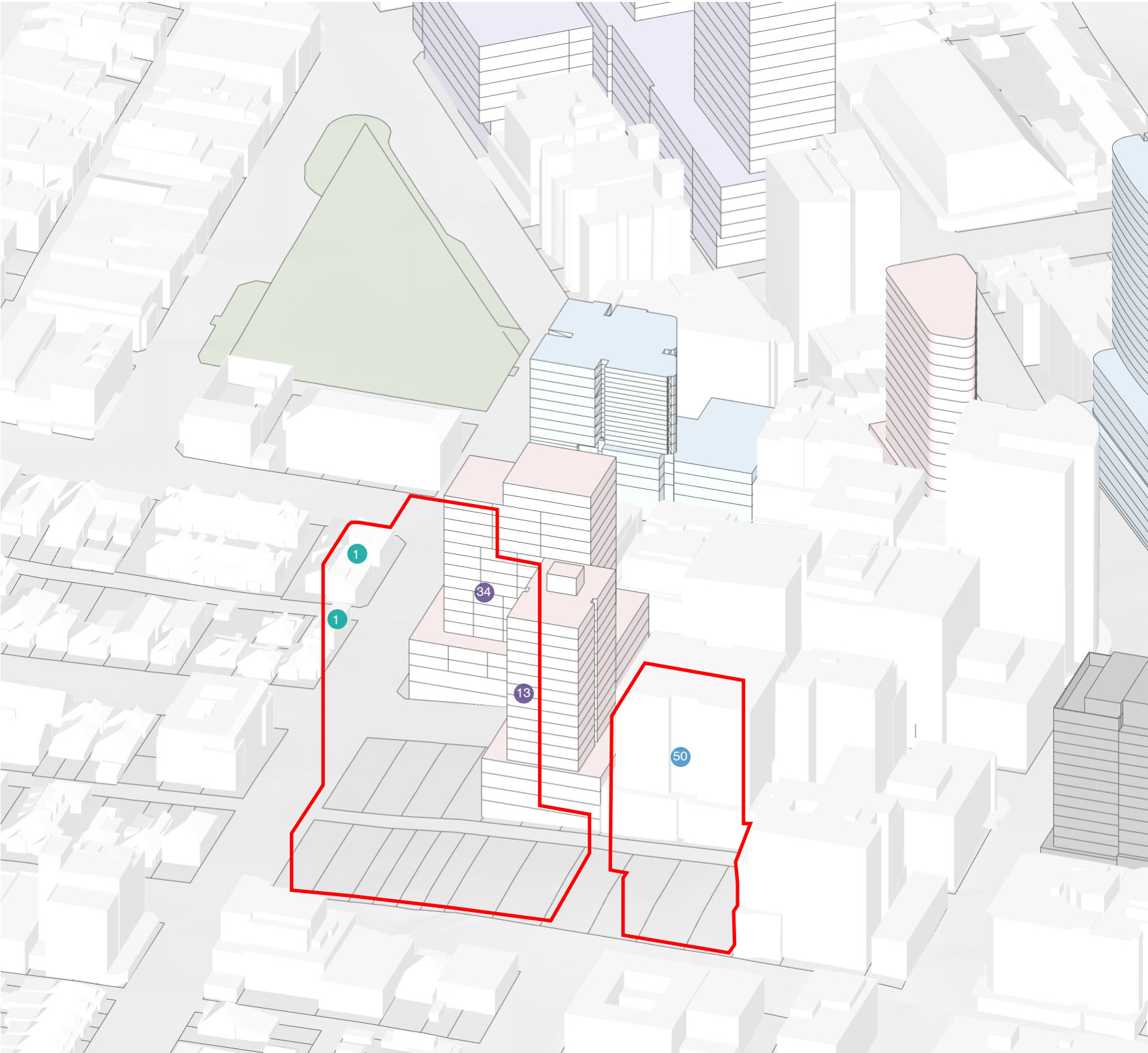
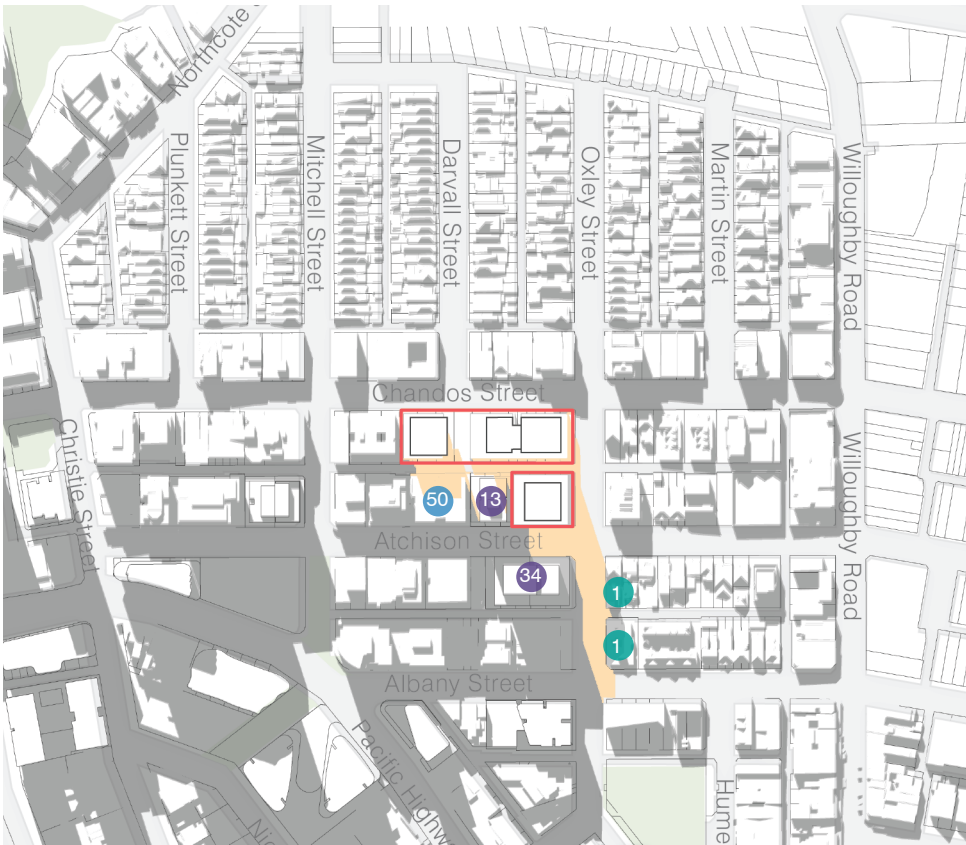
Overshadowing impacts of the proposed development in addition to impacts of existing and currently proposed development	
Impacts on existing high-rise apartment buildings	40 40-48 Atchison Street, St Leonards
Impacts on potential high-rise apartment buildings	36 23 Atchison Street, St Leonards
	26 55-56 Atchison Street, St Leonards



Assessment

Winter solstice 1pm

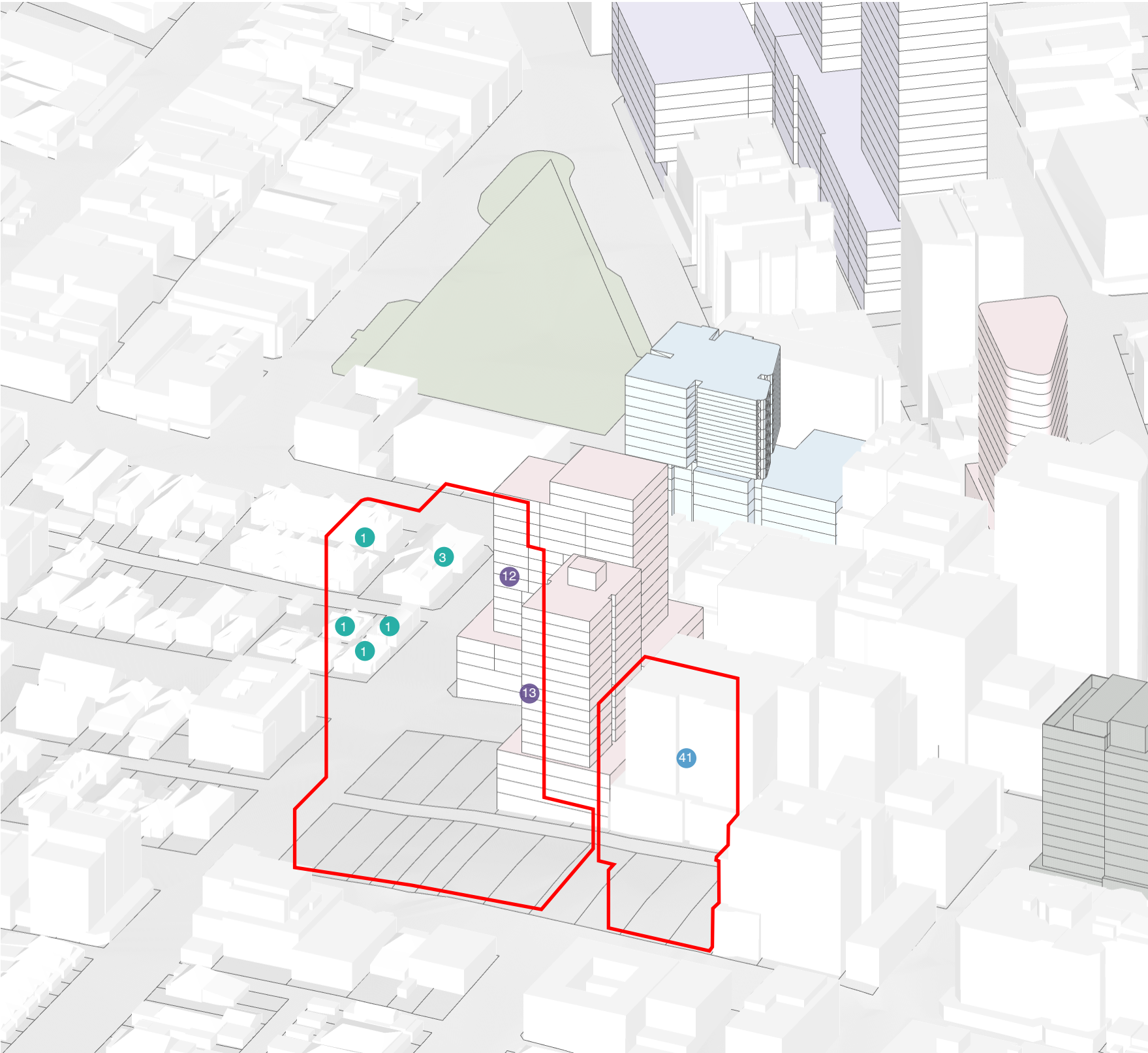
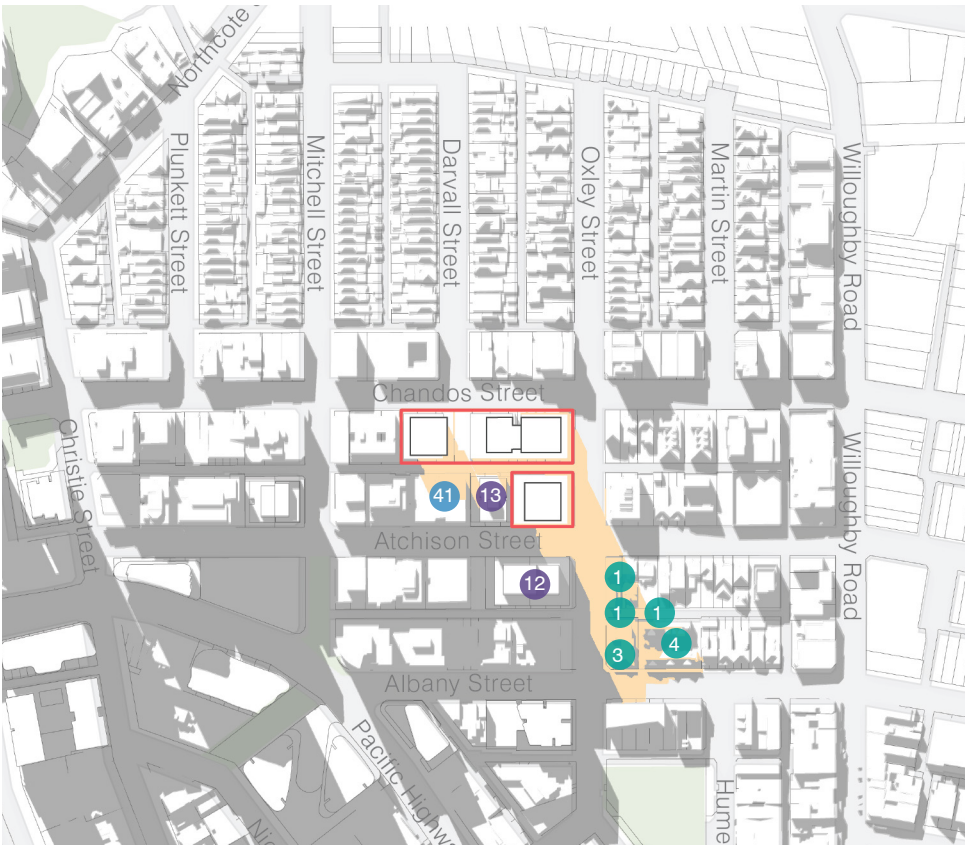
Overshadowing impacts of the proposed development in addition to impacts of existing and currently proposed development	
Impacts on existing low-rise residential buildings	1 37 Atchison Street, Crows Nest
	1 51 Albany Lane, Crows Nest
Impacts on existing high-rise apartment buildings	50 40-48 Atchison Street, St Leonards
Impacts on potential high-rise apartment buildings	34 23 Atchison Street, St Leonards
	13 55-56 Atchison Street, St Leonards



Assessment

Winter solstice 1.30pm

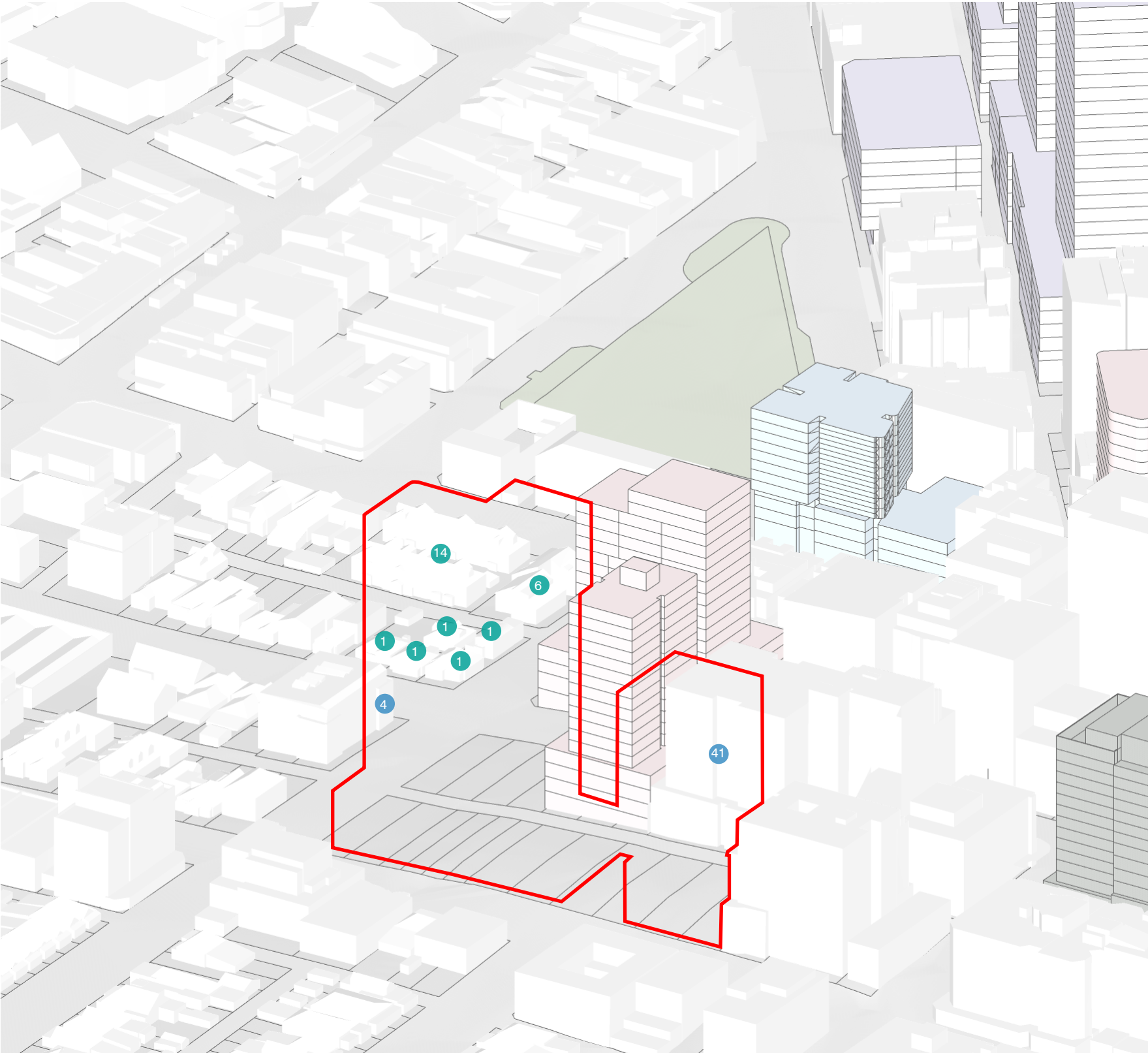
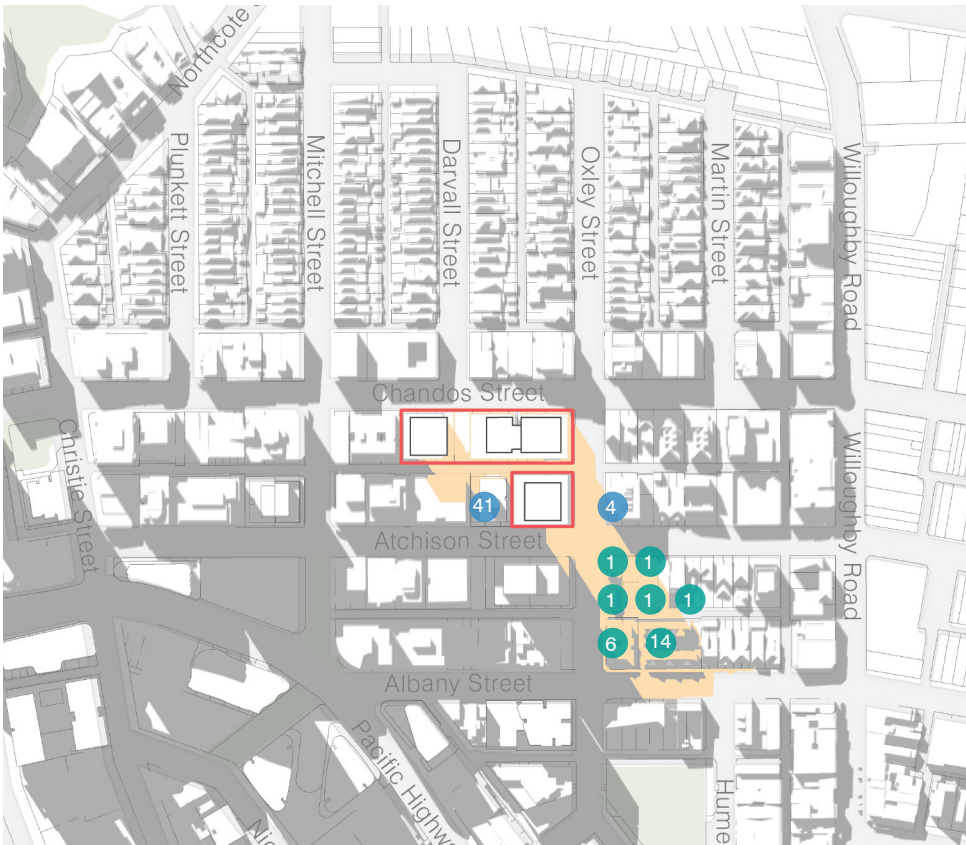
Overshadowing impacts of the proposed development in addition to impacts of existing and currently proposed development	
Impacts on existing low-rise residential buildings	1 37 Atchison Street, Crows Nest
	1 51 Albany Lane, Crows Nest
	3 50 Albany Lane, Crows Nest
	4 54 Albany Lane, Crows Nest
Impacts on existing high-rise apartment buildings	41 40-48 Atchison Street, St Leonards
Impacts on potential high-rise apartment buildings	13 23 Atchison Street, St Leonards
	12 55-56 Atchison Street, St Leonards



Assessment

Winter solstice 2pm

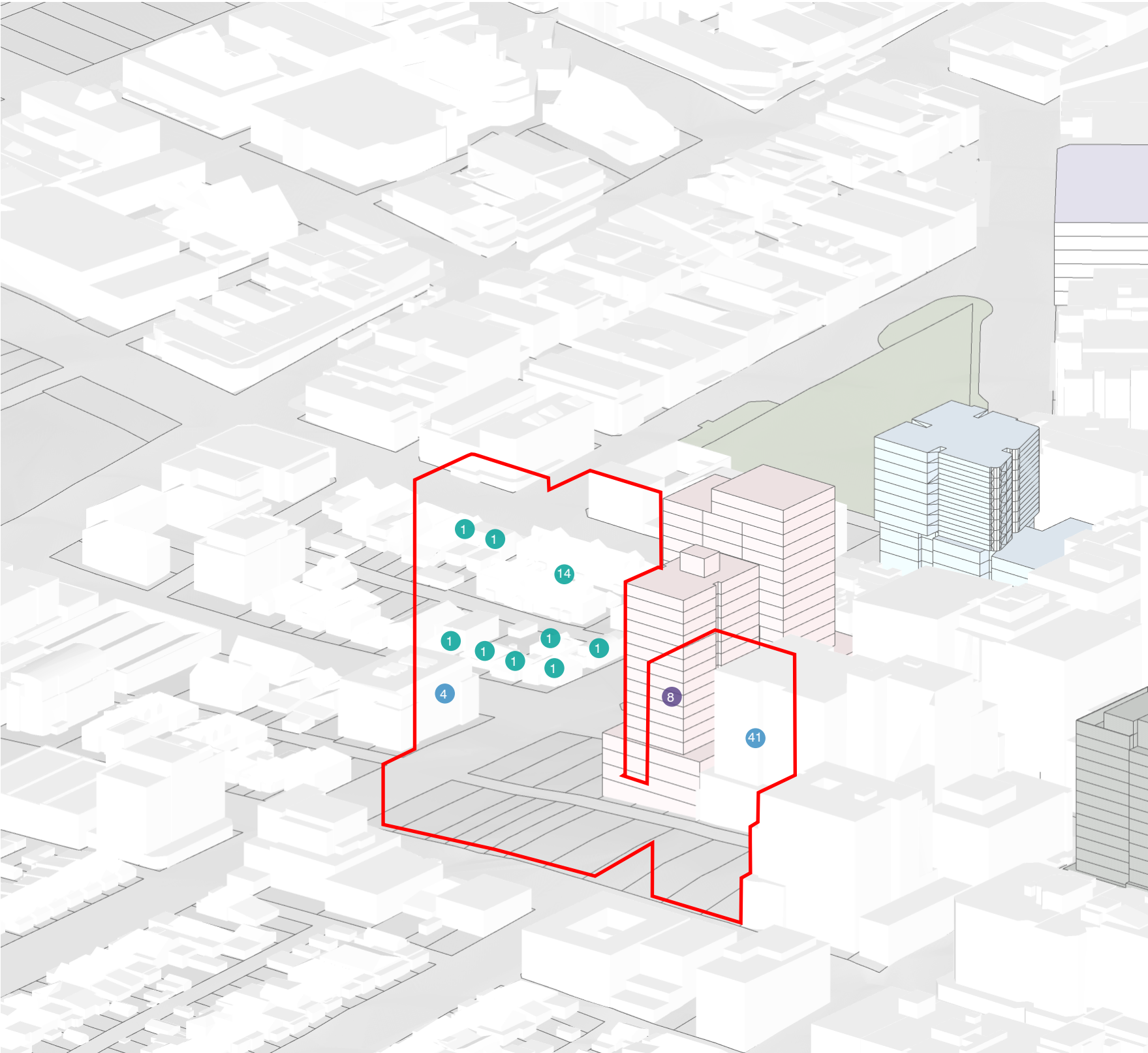
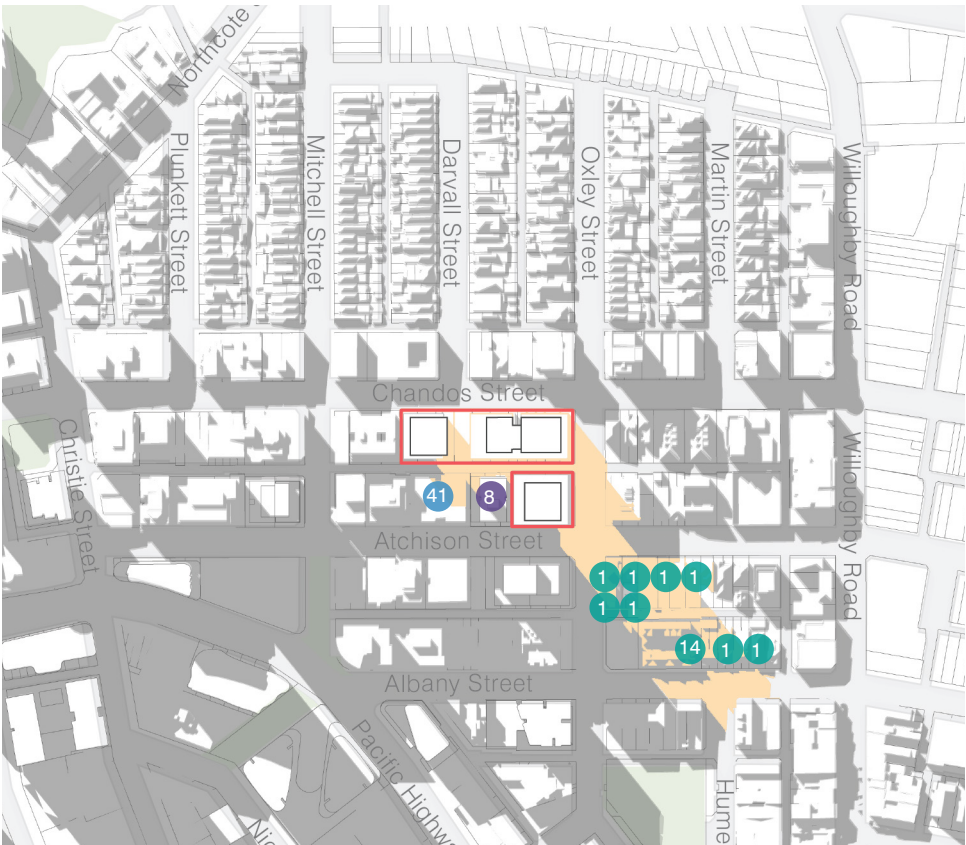
Overshadowing impacts of the proposed development in addition to impacts of existing and currently proposed development	
Impacts on existing low-rise residential buildings	1 37 Atchison Street, Crows Nest
	1 39 Atchison Street, Crows Nest
	1 41 Atchison Street, Crows Nest
	1 51 Albany Lane, Crows Nest
	6 50 Oxley Street, Crows Nest
	14 54 Albany Street, Crows Nest
Impacts on existing high-rise apartment buildings	41 40-48 Atchison Street, St Leonards
	4 68 Atchison Street, St Leonards



Assessment

Winter solstice 2.30pm

Overshadowing impacts of the proposed development in addition to impacts of existing and currently proposed development	
Impacts on existing low-rise residential buildings	1 37 Atchison Street, Crows Nest
	1 39 Atchison Street, Crows Nest
	1 41 Atchison Street, Crows Nest
	1 51 Albany Lane, Crows Nest
	1 45 Atchison Street, Crows Nest
	1 47 Atchison Street, Crows Nest
	14 54 Albany Street, Crows Nest
Impacts on existing high-rise apartment buildings	4 68 Atchison Street, St Leonards
	41 40-48 Atchison Street, St Leonards
Impacts on potential high-rise apartment buildings	8 55-56 Atchison Street, St Leonards

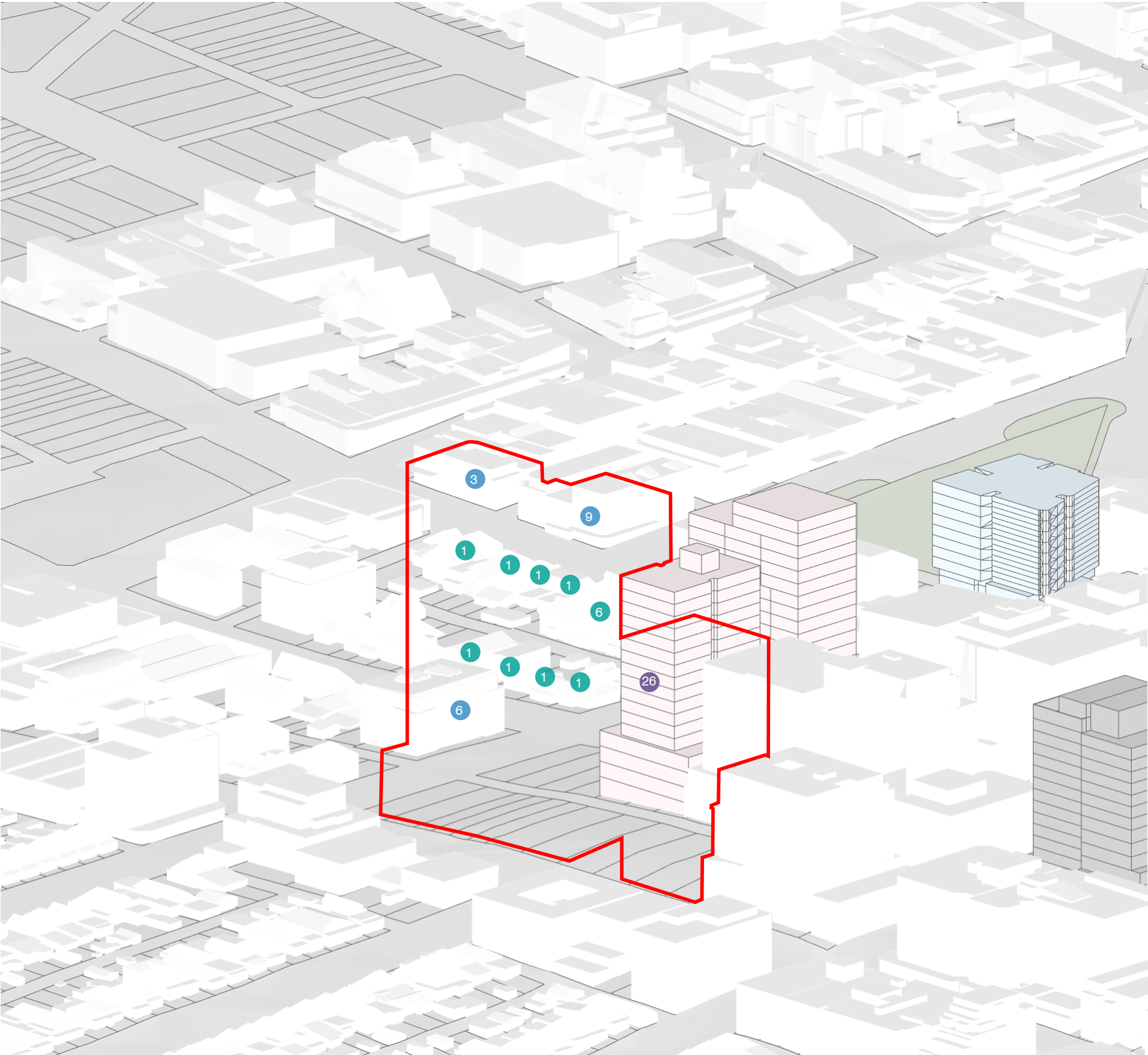
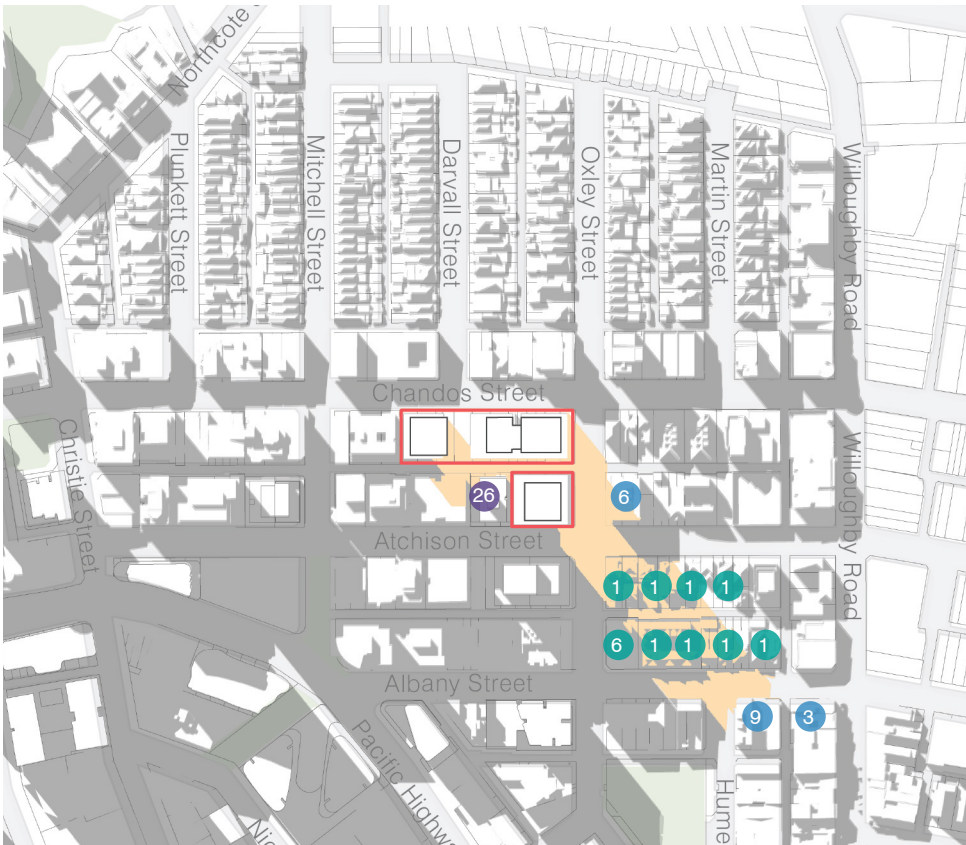


Assessment

Winter solstice 3pm

Overshadowing impacts of the proposed development in addition to impacts of existing and currently proposed development

Impacts on existing low-rise residential buildings	1	37 Atchison Street, Crows Nest
	1	39 Atchison Street, Crows Nest
	1	41 Atchison Street, Crows Nest
	1	51 Albany Lane, Crows Nest
	1	50 Oxley Street, Crows Nest
	1	62 Albany Street, Crows Nest
	1	64 Albany Street, Crows Nest
	1	66 Albany Street, Crows Nest
	6	54 Albany Street, Crows Nest
Impacts on existing high-rise apartment buildings	3	33 Albany Lane, Crows Nest
	9	29 Albany Lane, Crows Nest
	6	68 Atchison Street, St Leonards
Impacts on potential high-rise apartment buildings	26	55-56 Atchison Street, St Leonards





Assessment

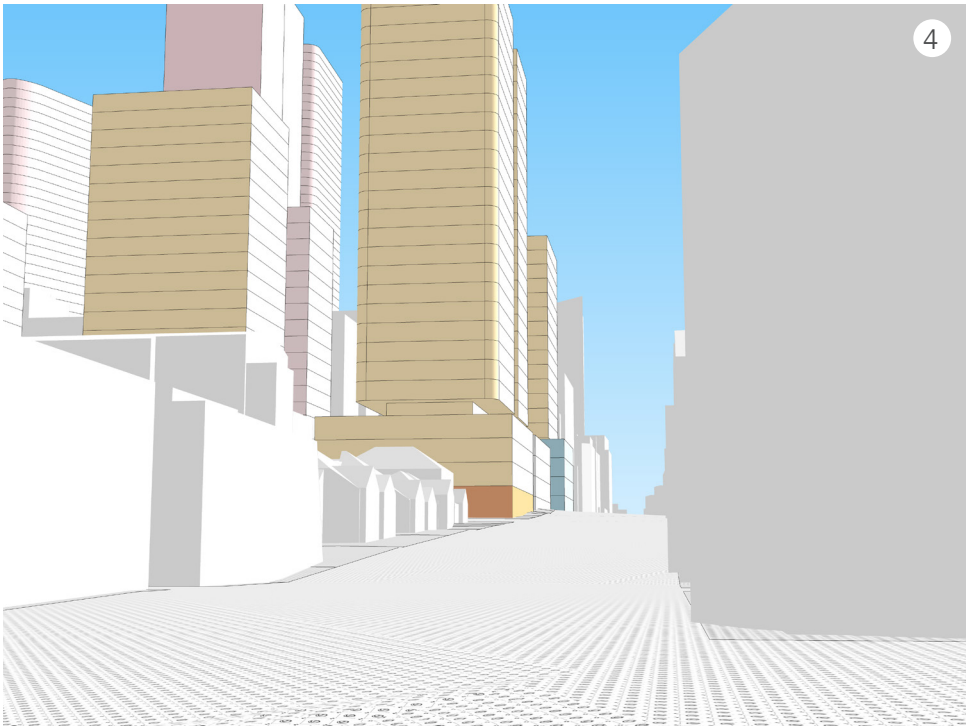
5.5 Visual Impact Assessment

As a result of the proposed tower forms, the buildings will result in an acceptable amount of visual impact on surrounding areas.

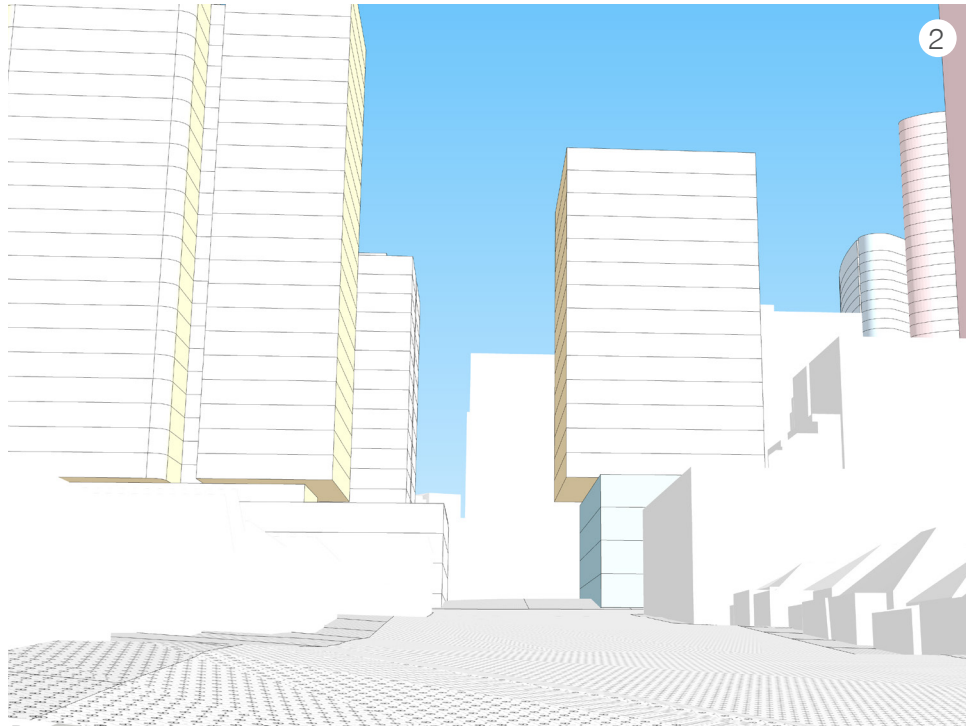
Particular reference is made to the views from the adjacent Heritage Conservation Area, of which an assessment by Urbis Heritage identified the following:

Future development on the subject site in accordance with the amended development controls of this Planning Proposal, will be significantly physically separated from the vicinity heritage conservation areas. In particular, Chandos Street and a row of medium-density commercial and retail development provides a transition barrier between the subject site (and wider St Leonards commercial centre) and the lowerscale C8 Naremburn Heritage Conservation Area to the north. The CA07 Holtermann Estate A Heritage Conservation Area is substantially distanced to the east and generally screened from view by existing medium density development along Oxley Street and existing mature vegetation.

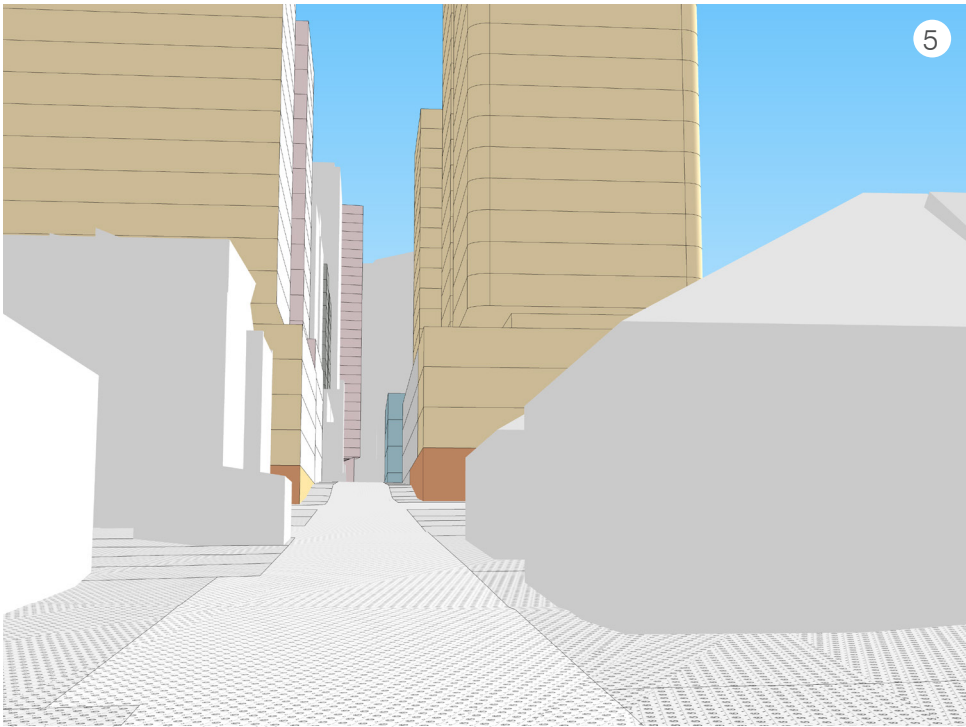
Future development on the subject site in accordance with the amended development controls of this Planning Proposal, will be peripherally visible from within both of the vicinity heritage conservation areas. However, when viewed from within these heritage conservation areas, the future development on the subject site will read as part of the context in which it is located, being a rapidly evolving major commercial centre with numerous high-rise office and residential developments contained within this urban core. Future development on the subject site to the heights and FSRs set out in this Planning Proposal will not alter or detrimentally impact outward views from the conservation areas, it will instead contribute to an already altered and highly urbanised distant skyline.



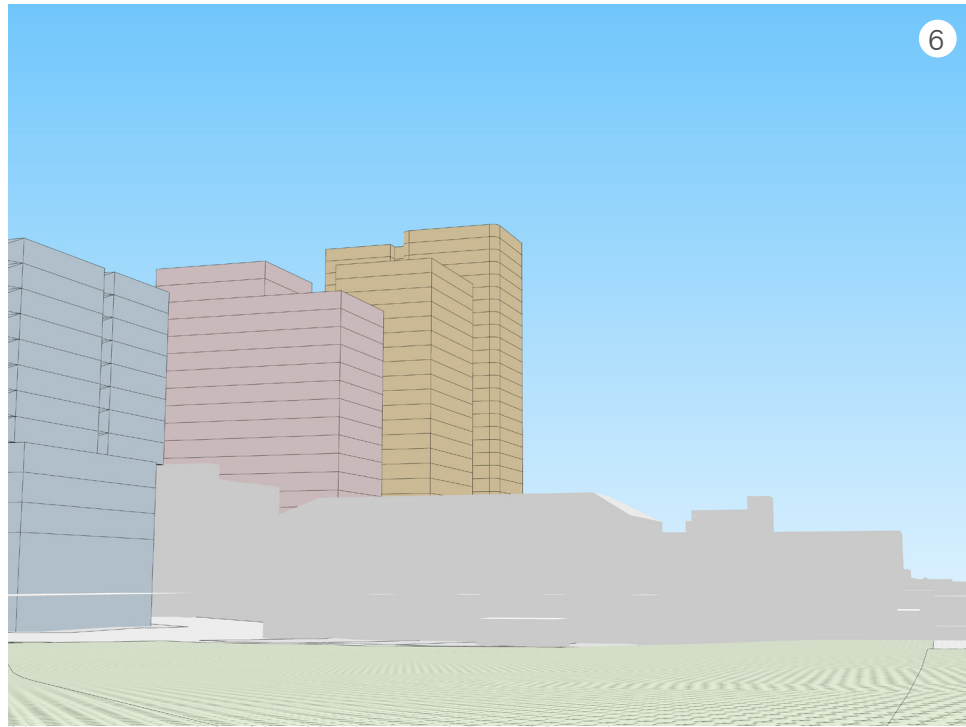
Corner of Martin Street and Chandos Street looking West toward the subject site



Darvall Street looking South toward the subject site

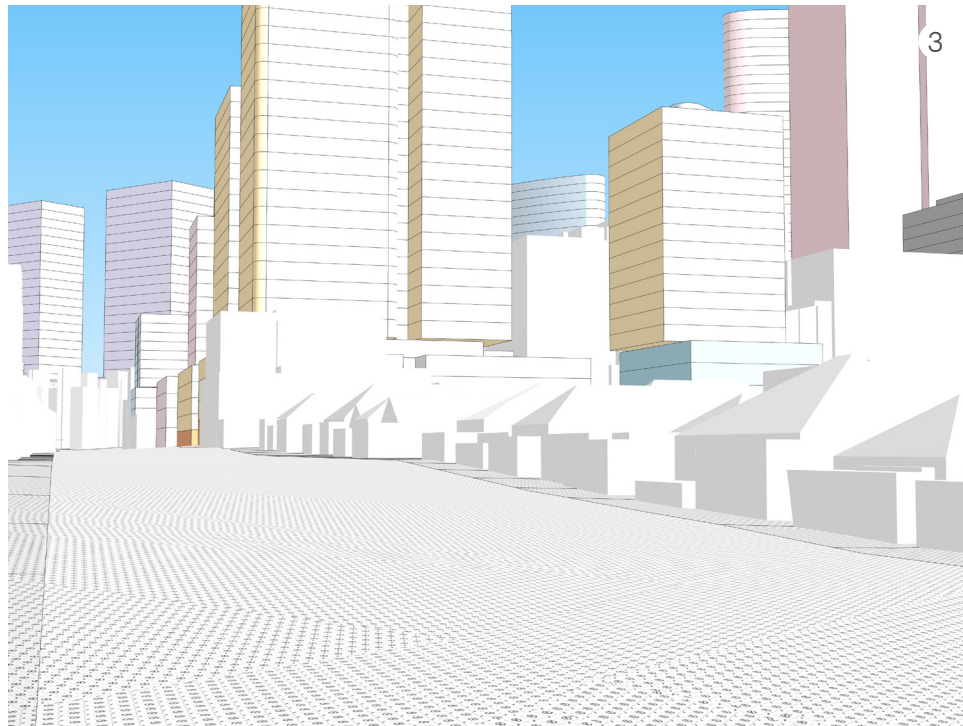


Atchison lane looking West toward the subject site

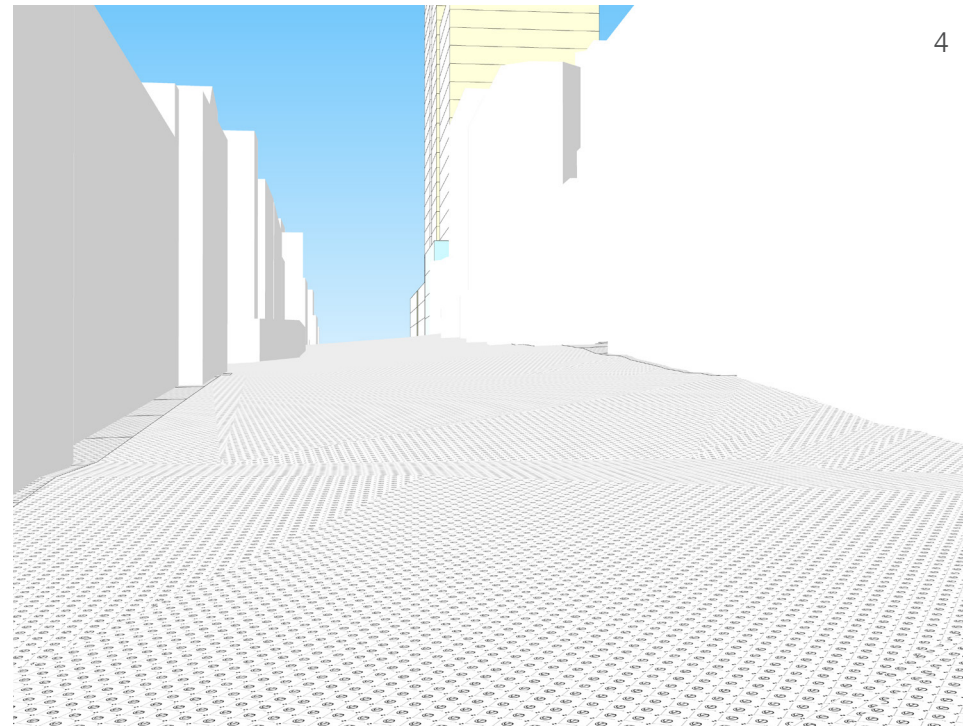


Hume street park looking North toward the subject site

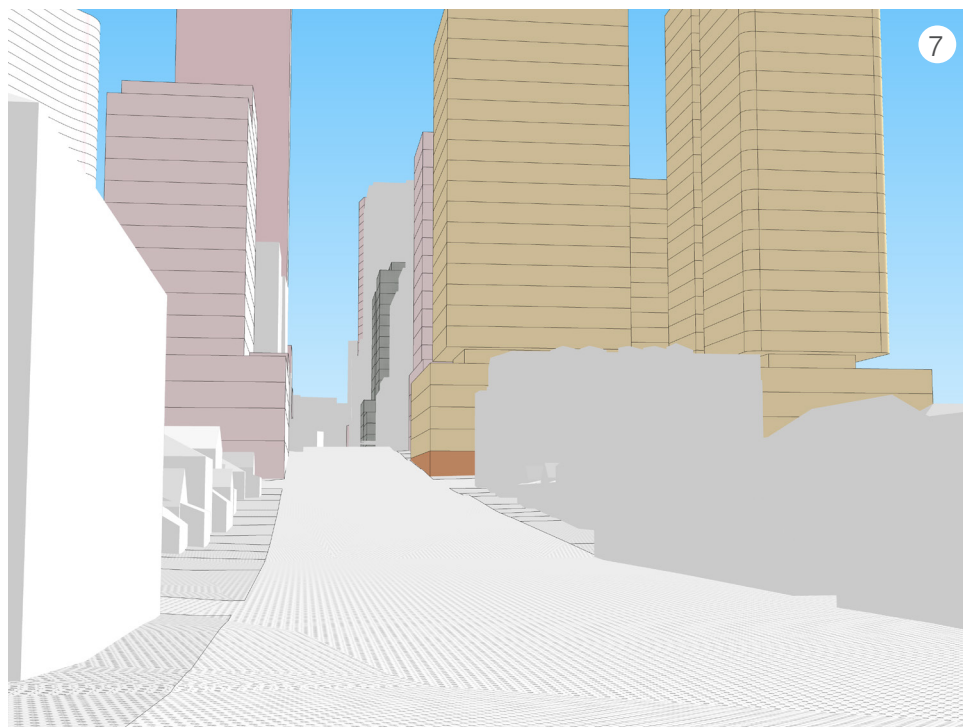
Assessment



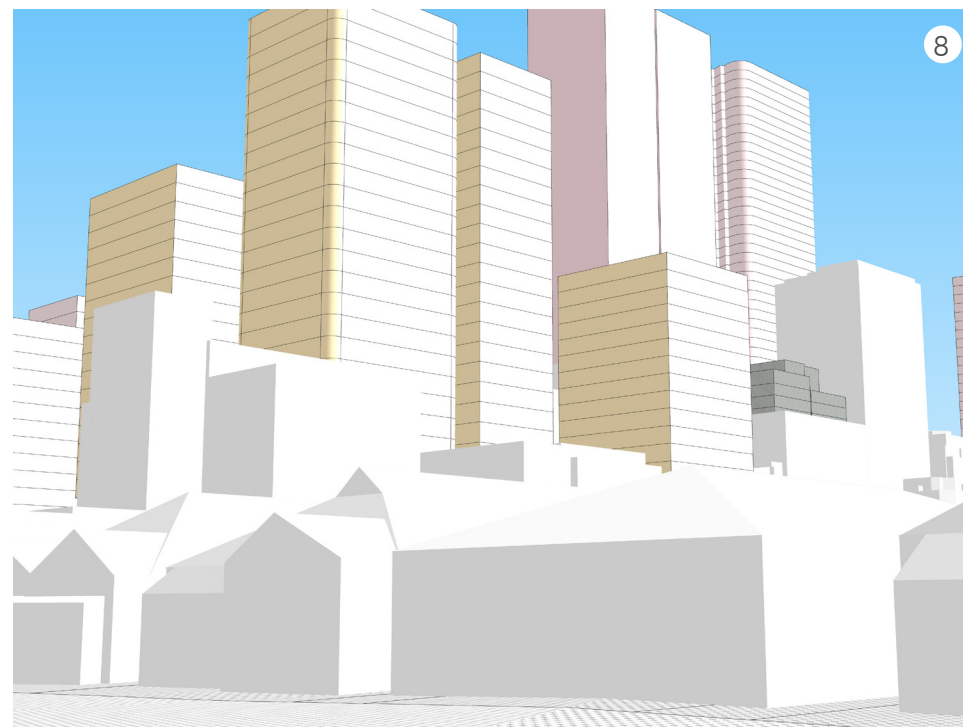
Oxley Street looking South toward the subject site



Chandos Street looking East



Atchison Street looking West toward the subject site



Martin Street looking south west at the subject site



06 Conclusion and recommendations



Conclusion and recommendations



Planning for the site has responded to both the existing context and changing nature of the St Leonards Centre. In line with the densities achieved in comparable strategic and metropolitan city centres, the site achieves an overall FSR of 8.6:1 with a range of building heights. Increased height and density is justified through the efficient use of a well located site, that is very well located in proximity to significant rail infrastructure, employment, retail, services and open space.

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

Overall, the Planning Proposal achieves:

- An architectural design response for the site that visually defines the St Leonards Centre and contributes to the St Leonards urban skyline.
- An appropriate density and built form to reinforce the role of St Leonards as a strategic, metropolitan city centre.
- An optimum development for a large, consolidated development site in St Leonards.
- A commitment to a wide range of public benefits including the provision for a new public open space/ plaza, a new linear park along Oxley Street and up to 4,000sqm of creative art space.
- A mixed use precinct with a community and creative arts focus that addresses the needs of a rapidly growing centre.

The following recommendations have been made in response to the key strategic drivers:

- 1

Deliver high density in the St Leonards/ Crows Nest Centre
 - A mixed use development of commercial, community and residential uses which achieves an overall FSR of 8.6:1 including a non residential FSR of 1.6:1.

- 2

Maximise heights to visually define the St Leonards Centre
 - Three residential tower elements above a 4-storey podium, with building heights ranging between 18 and 28 storeys.

Conclusion and recommendations



3 Enhance employment within the St Leonards Centre

- An increase in employment floor space including office, retail and creative art space.
- Delivery of up to 8,730sqm of commercial floor space
- 341 new jobs

4 Contribute to the broader Arts and Cultural Precinct of St Leonards

- A podium providing creative arts spaces, museums and galleries and fine grain retail to both Chandos Street and Oxley Street, a defined street edge and active uses to spill out into an engaged public realm

5 Provide high quality open space and public domain

- An excellent public domain including a new 700sqm north facing public open space along Chandos Street.
- A beautiful, morning sunlit linear park supported by an activated ground plane, promoting pedestrian activity and enhanced access to Hume Street Park.

6 Improve connections that prioritise the pedestrian

- A new open through site link will provide improved north-south connections from Chandos Street, through to Atchison Street.

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