

**36 Lonsdale Street &
64-70 Brenan Street, Lilyfield**

Urban Analysis & Context

For JRNN Pty Ltd

Prepared by Derek Raithby Architecture
OCTOBER 2020

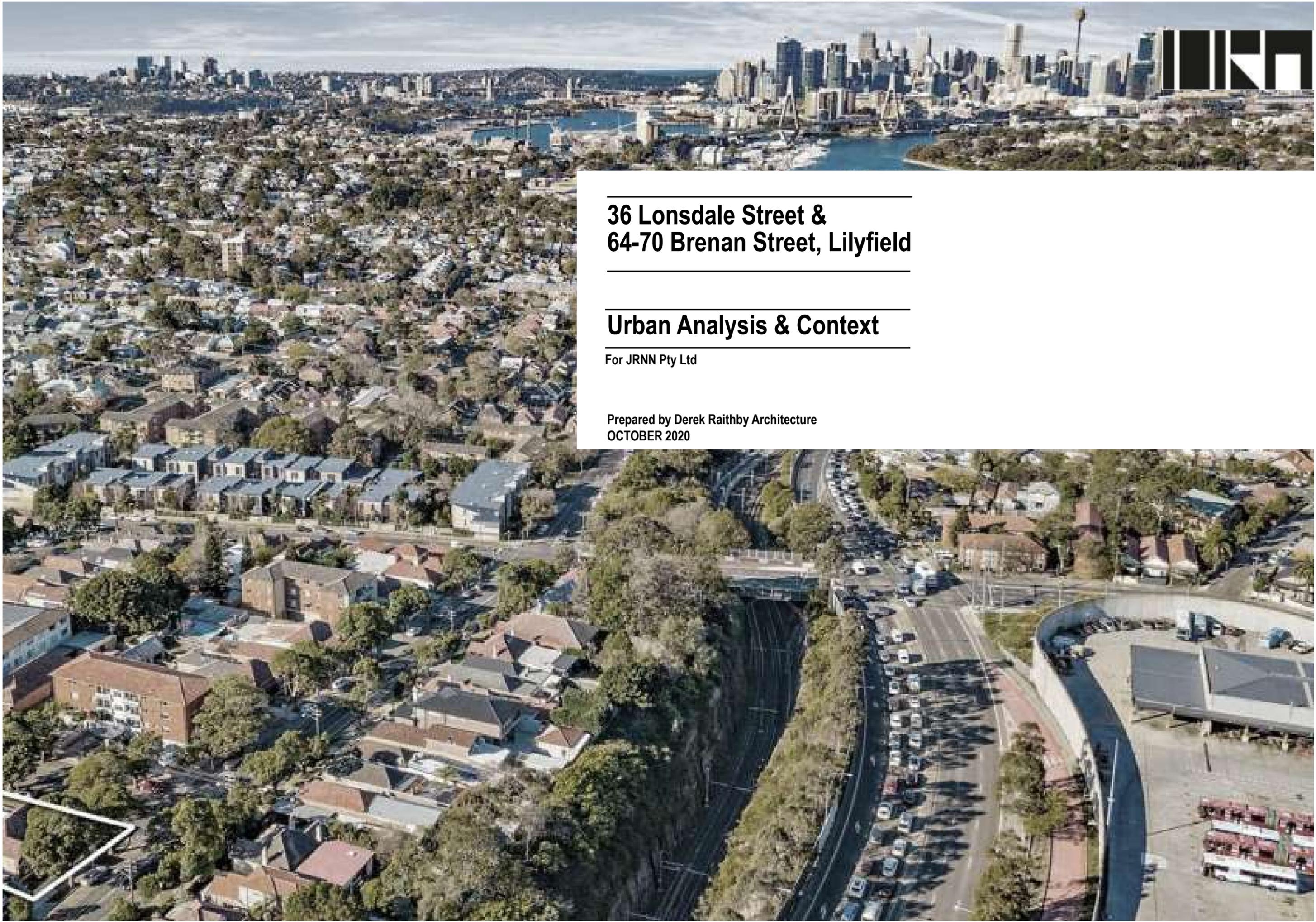
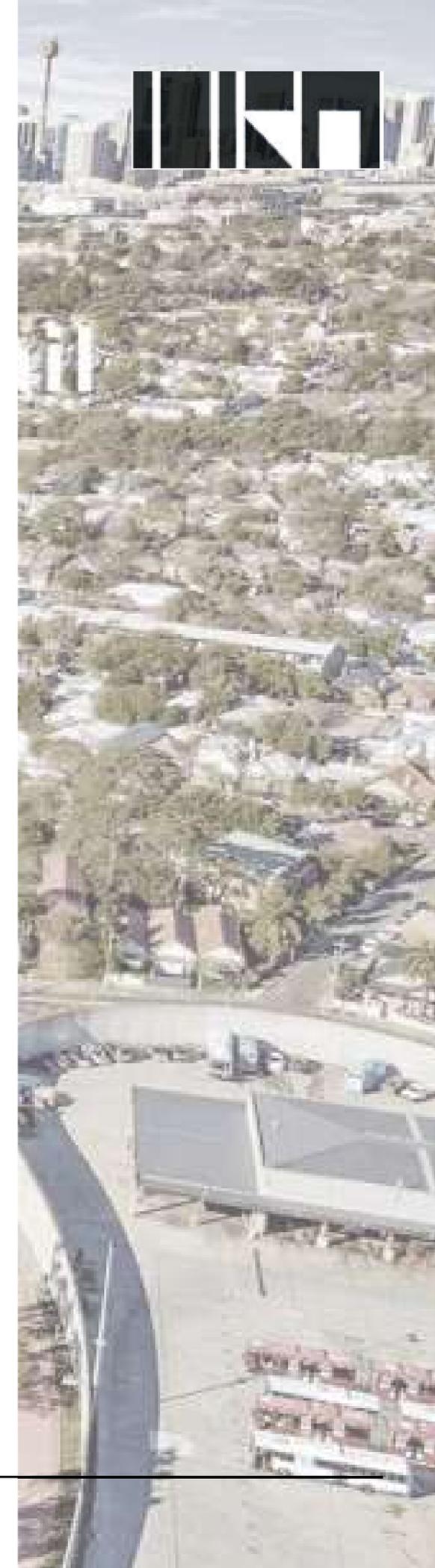


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Context Site Location



“The suburb of Lilyfield is located in the geographic heart of the Leichhardt Local Government Area.

The suburb is bisected by the City West Link, the light rail line, and dominated by Callan Park to the north. Most of Lilyfield has a character which is marked by the consistency of style, form and materials of its residential building stock.

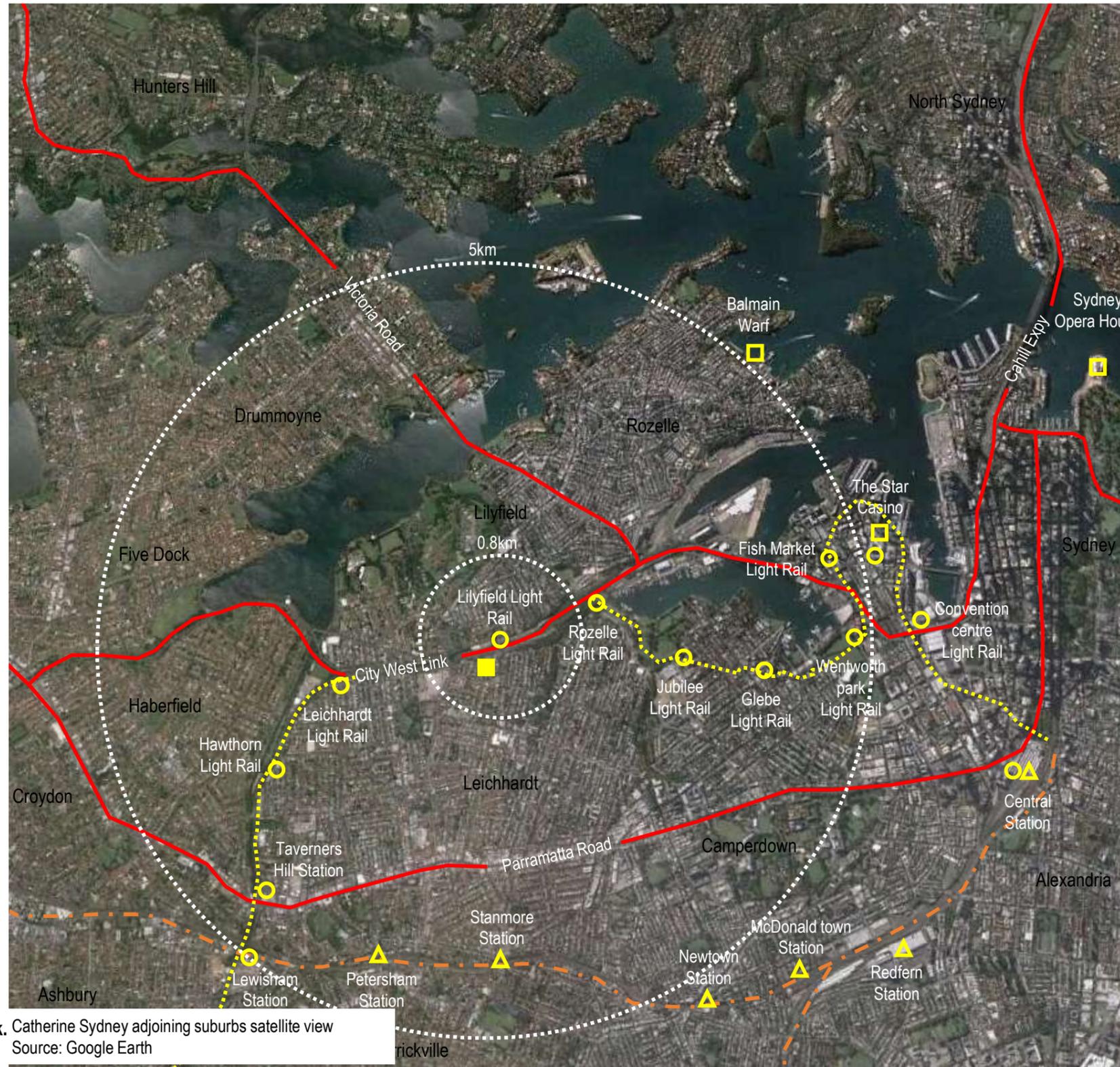
The southern part of Lilyfield, which is located south of the City West Link, is known as the ‘Catherine Street Distinctive Neighbourhood’. The landform in this area is gently undulating and falls, gradually, towards Whites Creek to the east and towards the City West Link to the north.”*



Intersection between Lonsdale and City West Link.
Source: Google Street View



Intersection between Catherine st. and City West Link.
Source: Google Street View



Catherine Sydney adjoining suburbs satellite view
Source: Google Earth

- Legend
- Subject Site
 - Main Roads
 - Light Rail
 - Train Line
 - Light Rail Station
 - Train Station

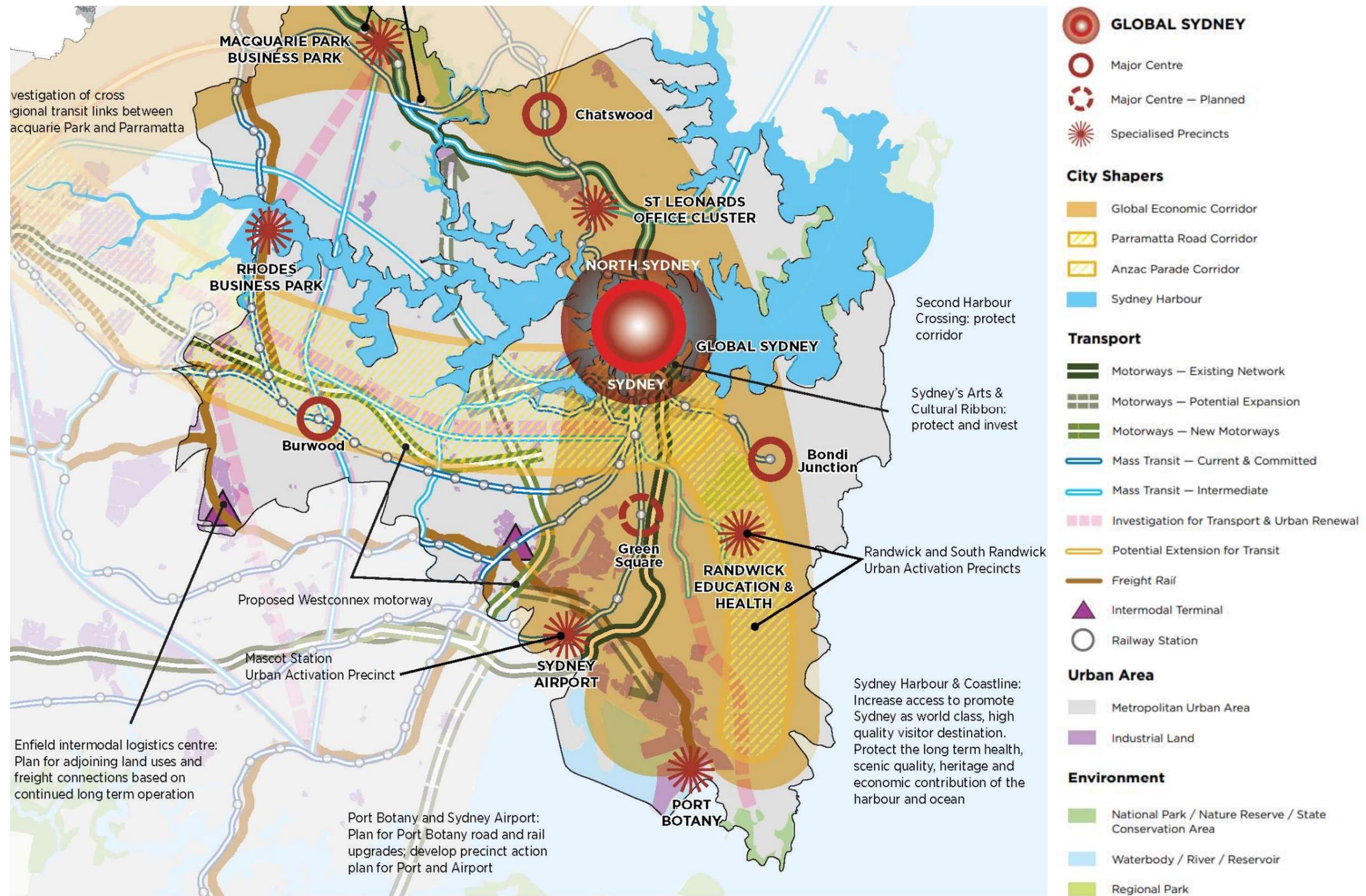
Context

Planning Strategies - Metropolitan Plan



A Metropolis of Three Cities- The Greater Sydney Region Plan guides the metropolitan land-use planning and infrastructure delivery by the state government.

The suburb of Lilyfield is located within the Parramatta Road Corridor linking Sydney CBD to Parramatta. The guidelines of Corridor Renewal aims to facilitate the delivery of the WestConnex Motorway and urban residential renewal.



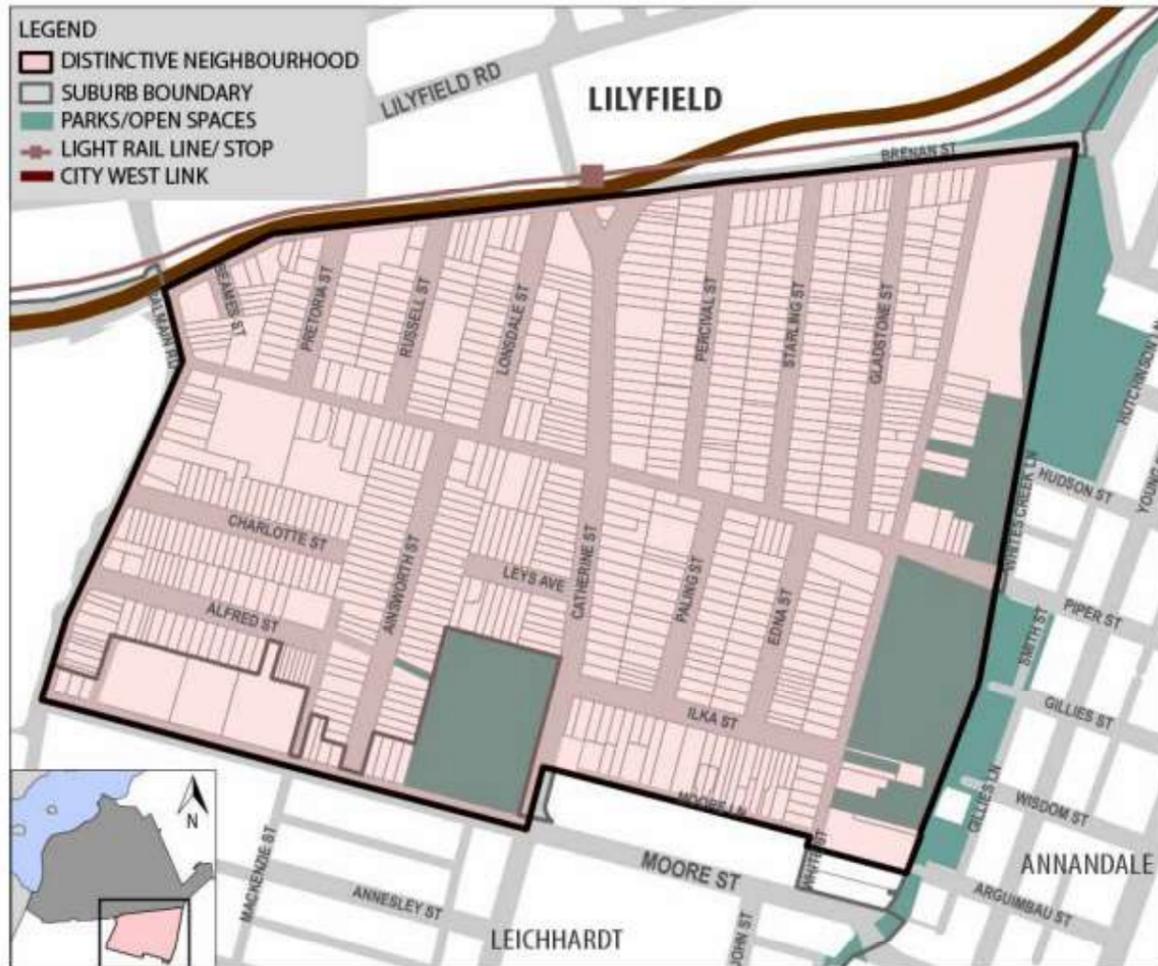
Metropolitan priorities for the Central Sub region (Source: Draft Metropolitan Strategy for Sydney, pg.82)

Context

LDCP 2013 - Catherine Street Distinctive Neighbourhood



C2.2.4.1 Catherine Street Distinctive Neighbourhood



C2.2.4.1(b) The Peripheral Sub Area



Catherine Street Distinctive Neighbourhood (Source:Leichhardt DCP 2013 , pg.270)

The Peripheral Sub Area (Source:Leichhardt DCP 2013 , pg.275)

Desired Future Character

Objective

O1 To facilitate development that is consistent with the Desired Future Character and Controls for the Distinctive Neighbourhood.

Controls

- C1 Maintain the character of the area by keeping development consistent in architectural style, form and materials.
- C2 Maintain and enhance the predominant low scale 'cottage' character of the residential streets.
- C3 Promote the consistent rhythm in the residential streetscapes created by the regular allotment sizes, predominance of detached dwellings and predominance of hipped and gabled roof forms.
- C4 Encourage larger buildings consisting of a variety of accommodation types at the edge of the Distinctive Neighbourhood.
- C5 Preserve the prevalence of mature and/or regularly spaced street trees, as well as mature and visually significant trees on private land.

- C6 Preserve and enhance the aesthetic and environmental significance of the vegetation corridor made up of War Memorial Park, the properties on the southern side of Ilka Street and the Whites Creek Valley.
- C7 Preserve and enhance the availability of views, particularly towards the City.
- C8 Enhance and promote the viability and potential for neighbourhood shops.
- C9 Promote the continuing development of a neighbourhood centre and identity.
- C10 Building wall height is to be a maximum of 3.6m, unless an alternate building wall height is prescribed under the relevant Sub Area controls.
- C11 Neighbourhood shops or buildings originally designed for non-residential use may have a maximum building wall height of 7.2m in order to incorporate a parapet.
- C12 Development is to be consistent with any relevant Sub Area objective(s) and condition(s).

Context

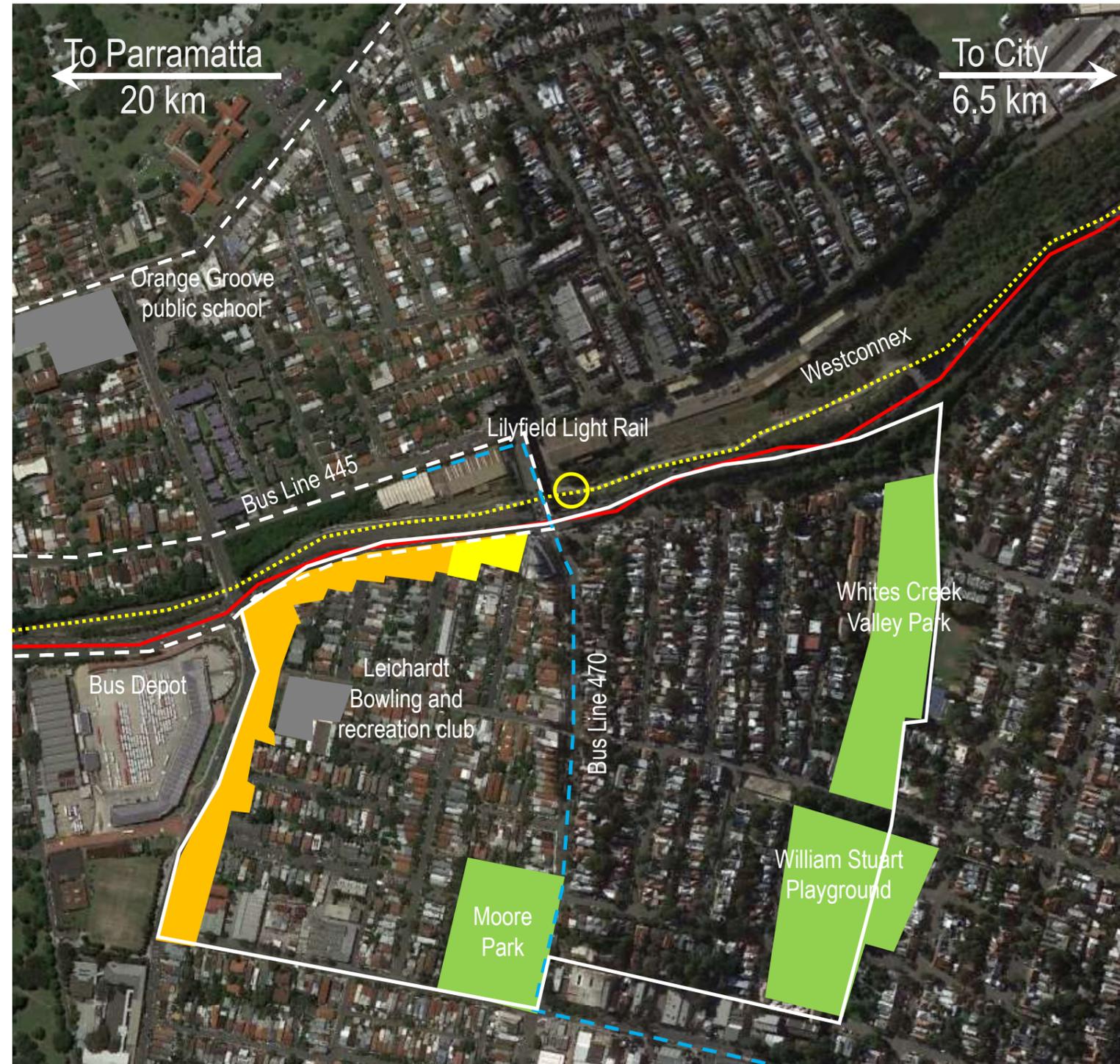
Site Context

“The area making up the ‘Catherine Street’ Distinctive Neighbourhood was subdivided following the suburban expansion of Leichhardt during the early 1900s.

The Peripheral Sub Area consists of the length of the City West Link west of Catherine Street to the junction of Balmain Road, and from this point on Balmain Road south to the intersection with Moore Street.

With the introduction of the nearby Lilyfield Light Rail stop, and the mix of commercial and residential uses in this area, there is potential for Council to make provision for future multi-unit development around this node.

The location, and mixed residential/commercial character of the road, lends itself to higher density development.”*



Catherine Street neighbourhood satellite view
Source: Google Earth

Context

Site Context



"The area making up the 'Catherine Street' Distinctive Neighbourhood was subdivided following the suburban expansion of Leichhardt during the early 1900s.

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View 1



View 2



View 3



Catherine Street neighbourhood map view
Source: Google Earth



View 4

Source: Google Street View



View 5

Source: Google Street View

Context Site and Context Analysis



AMENITY

Developments in dense urban centres usually have limited availability to open space, however this development proposes communal open space at the rear of the site. This provides a private landscape for the residents of the development hidden from the public domain. This has a positive effect on the local environment as it creates a green barrier between the proposed development and the single/double storey dwellings behind it.

The proposed development is within walking/ driving distance of the following:

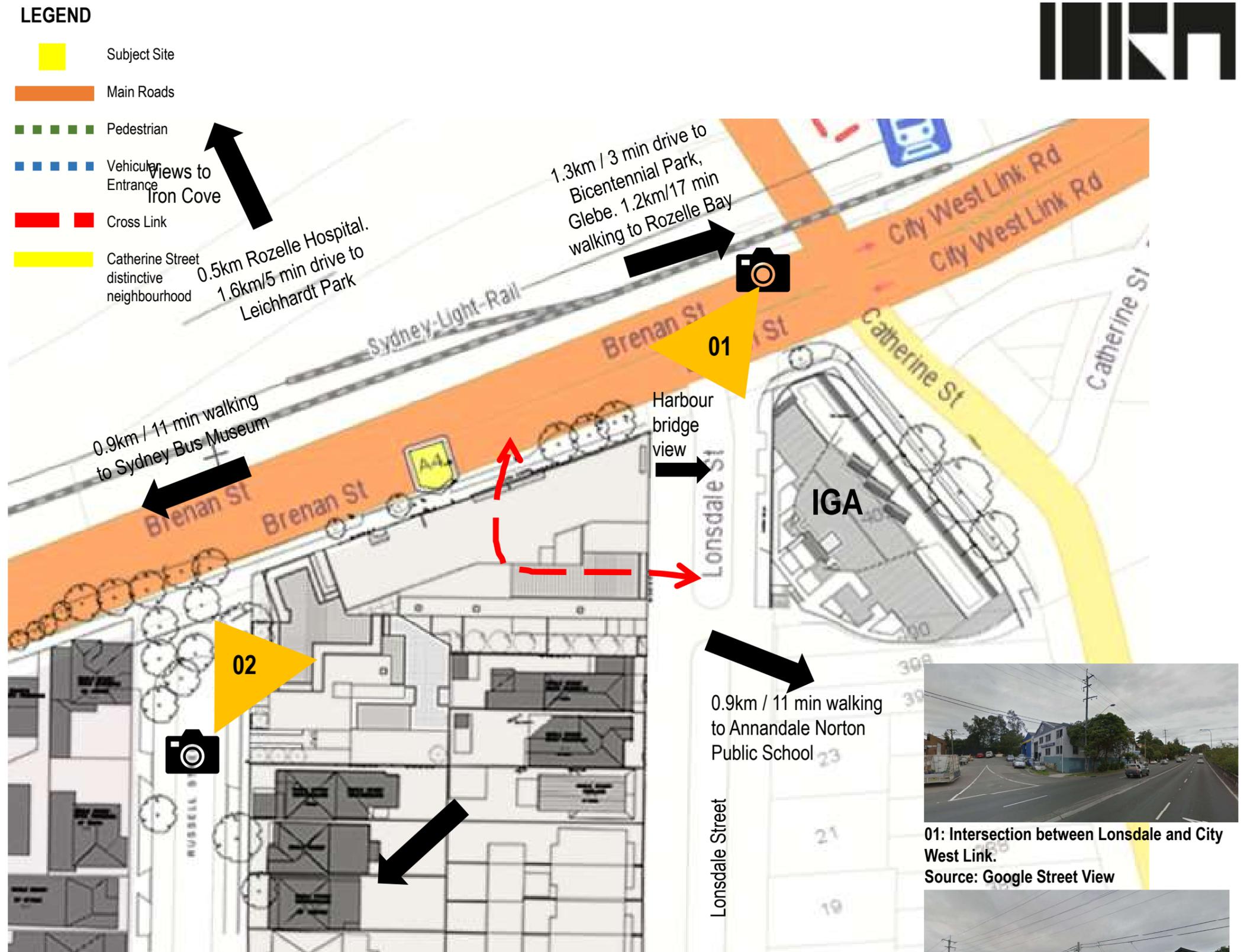
- Lilyfield Light Rail Station and IGA
 - 0.9km / 11 min walking to Annandale Norton Public School
 - 1.3km / 3 min drive to Bicentennial Park, Glebe. 1.2km/17 min walking to Rozelle Bay
 - 0.5km Rozelle Hospital. 1.6km/5 min drive to Leichhardt Park
 - 0.9km / 11 min walking to Sydney Bus Museum
 - 0.8km / 10 min walking to Sydney Secondary School.
 - 0.4km / 4 min walking to Bowling & recreation park
- The proposed development will have views of the Harbour bridge and Iron Cove.

STREET ACTIVATION

The new development will significantly increase the amount of active street frontage, not only to Brenan St but also to Russel St & Lonsdale ST. As outlined in the Urban Study the lane way is undesirable and in need of gentrification. The activation of the lane-way along with new cross site link are ingredients for an improved laneway environment.

CROSS SITE LINK

A new cross site link joins Brenan St to Lonsdale Street. This allows for easy pedestrian travel in any direction.



01: Intersection between Lonsdale and City West Link.
Source: Google Street View



02 : View from City west link to subject site
Source: Google Street View

Context

Site and Design Opportunities

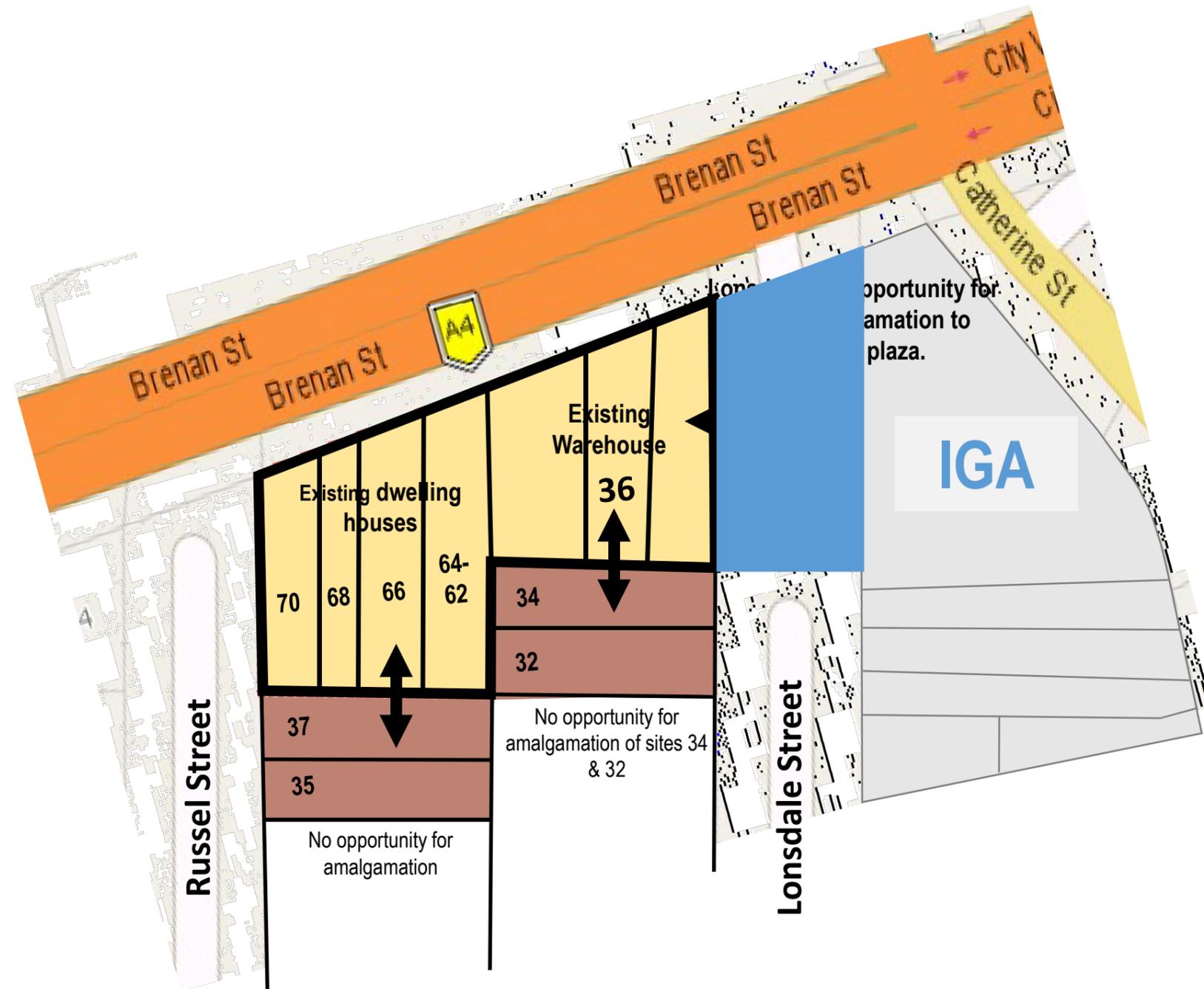


FACILITY INTEGRATION

The existing site currently uses the entire rear of the property for landscaping. The proposal amalgamates lots 36, and lots 62-70. The existing exterior brick façade of the warehouse on Lot 36 is retained and extended to the amalgamated lots 62-70 to maintain the visual characteristics of the area.

OPPORTUNITY OF AMALGAMATION

It is important to note that the site as a development has no opportunity to amalgamate with the neighbouring sites in the south to achieve a more desirable development. With the intention to amalgamate the developer has approached both neighbours to the south with no success. But the no-through street, Lonsdale Street, between the proposed development and the IGA can be amalgamated to create a plaza which can serve as a community space.



Legend

- Amalgamated lots 36, 64-70
- Existing double storey houses, lots 32, 34, 35 & 37
- Opportunity for future amalgamation



Context Height of Buildings



In this analysis we describe the height of the surrounding buildings within the are.



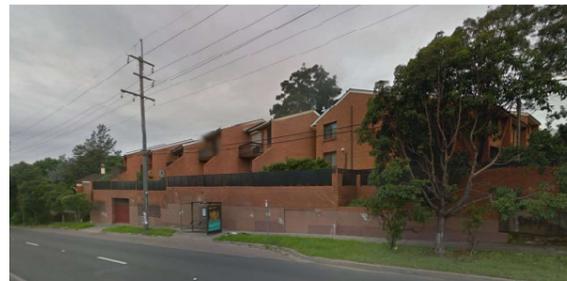
359-365 Catherine St, Lilyfield.
Source: Google Street View



402 Catherine St, Lilyfield.
Source: Google Street View



13-29 Russel St, Lilyfield.
Source: Google Street View



72 Brennan St, Lilyfield.
Source: Google Street View

Legend

- Subject Site
- 1 Store
- 2 Storeys
- 3 Storeys
- 4 Storeys
- 5 Storeys
- 6 Storeys
- Green areas
- InnerCity Steel Pty



Height of buildings map

Proposal Council's Initial Recommendation



Council has provided us some indicative floor plans achieving 1.5 to 1 FSR with designated setbacks in their email dated on 10 September 2020. The revised urban report and attached amended architectural plans are based and then further developed with the aid of the indicative site layout plan on the right.

In light of design measures drawn from the report, the following design considerations are included and elaborated in this proposal:

- 4 live/ work units with their individual entries located on lower ground floor;
 - a 3 meter wide buffer along City West Link and a 3m wide perimeter deep soil zone adjacent to adjoining dwellings to the south;
 - Min. communal open space area required is located on ground floor;
- so that the residential amenities can be optimised.



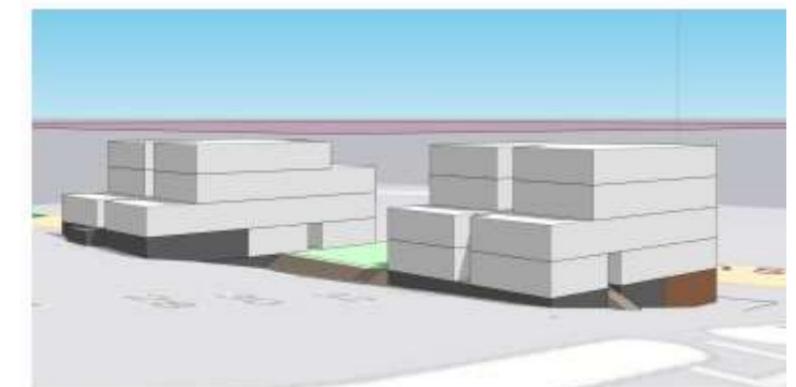
Indicative site layout provided by council officers



Street View _ City West Link _ From East



Street View _ City West Link _ From West

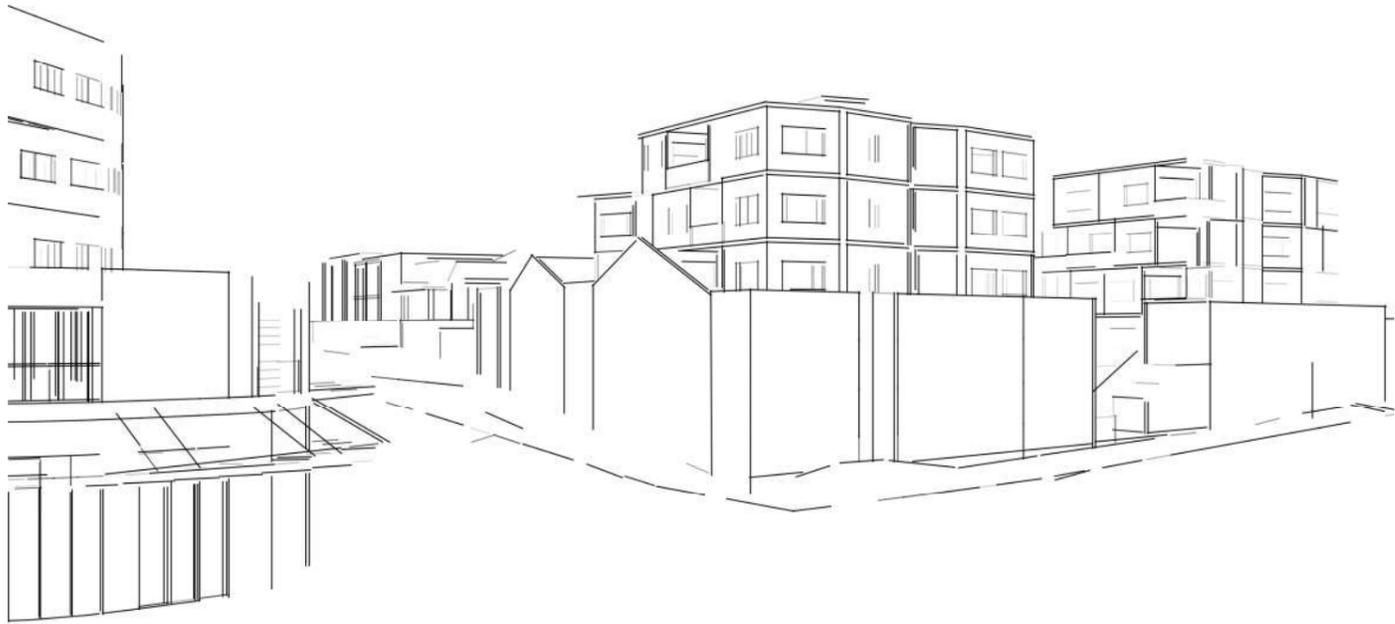


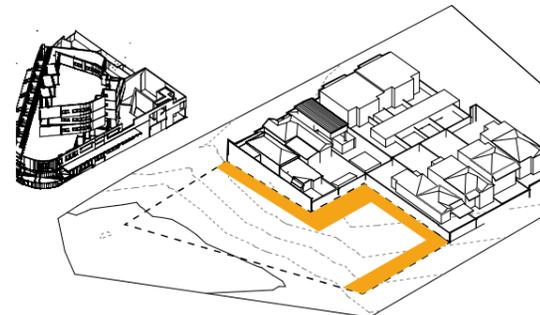
Perspective _ From South East

Proposal Preliminary Massing Test

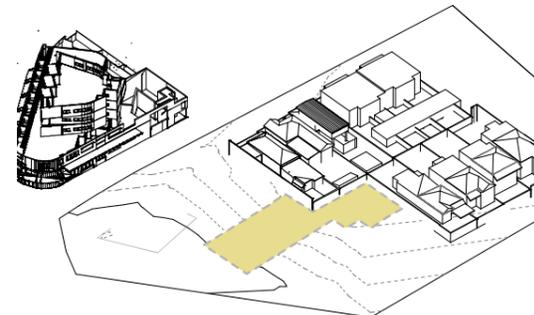


The proposed massing on the right demonstrating its sympathy in its height, building length and massing in the existing context.

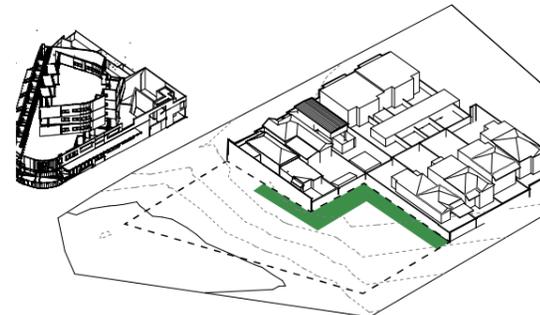




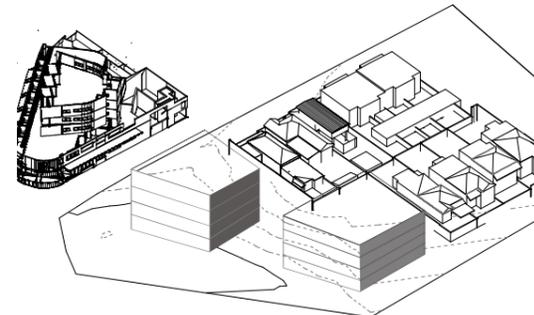
1. 4 meters from southern site boundary



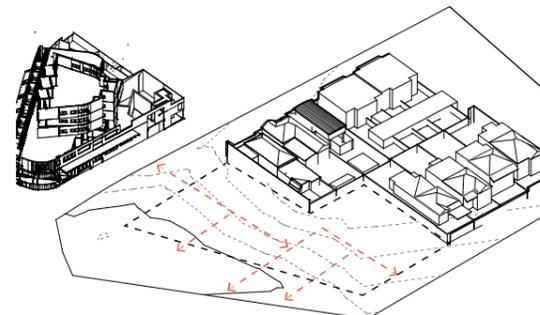
4. Large consolidated communal open space



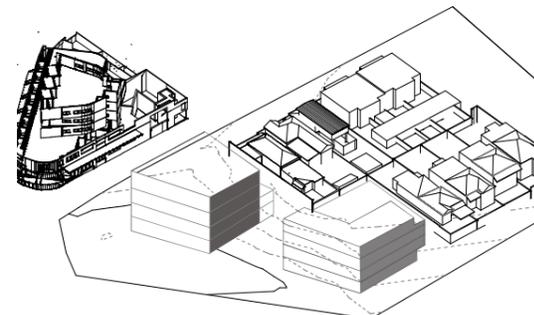
2. Retention of trees & deep soil zone



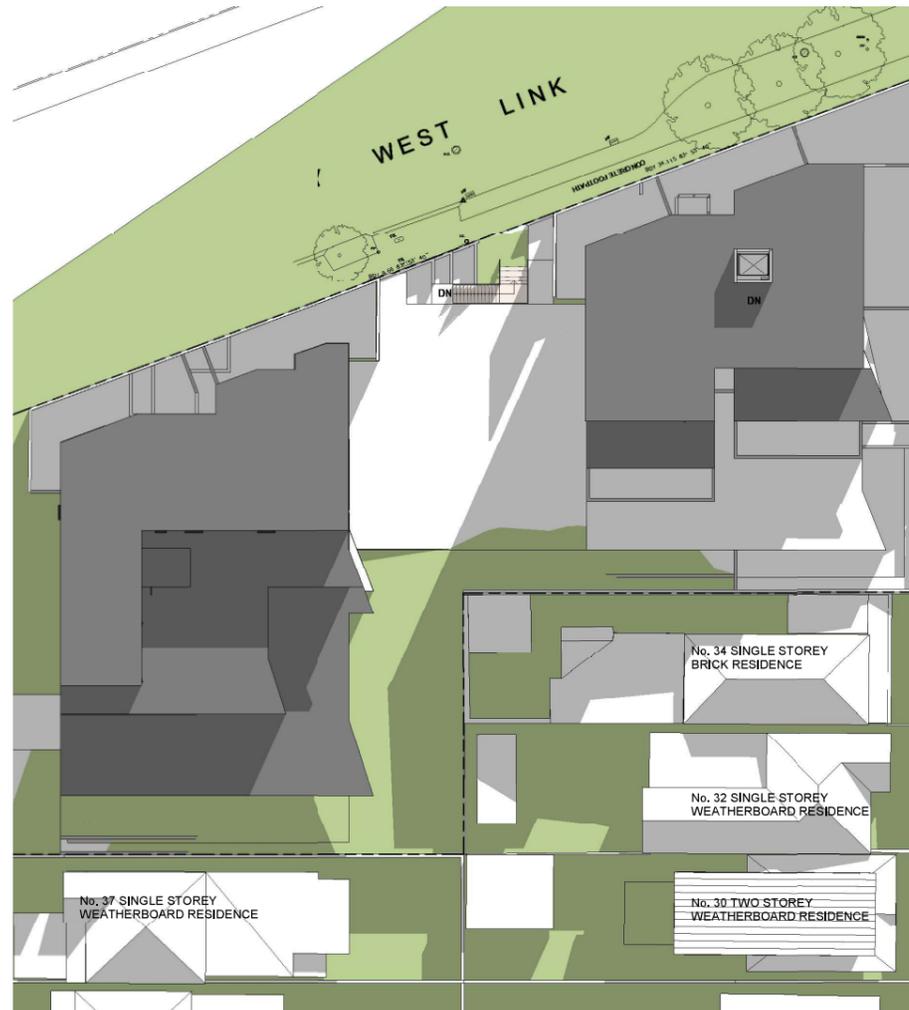
5. Building A & B break-up



3. Enable circulations through three main pedestrian entries on ground level



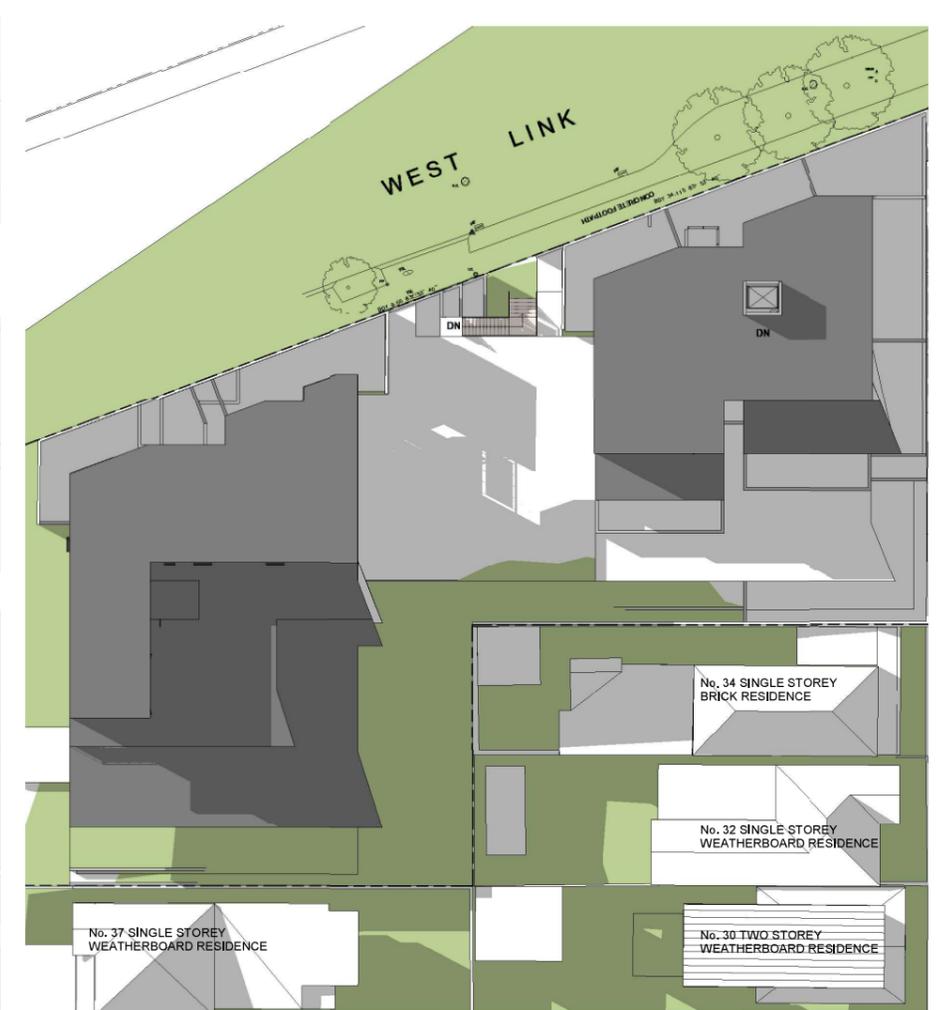
6. Cut-out mass from building envelope



9 am June 21



12 pm June 21



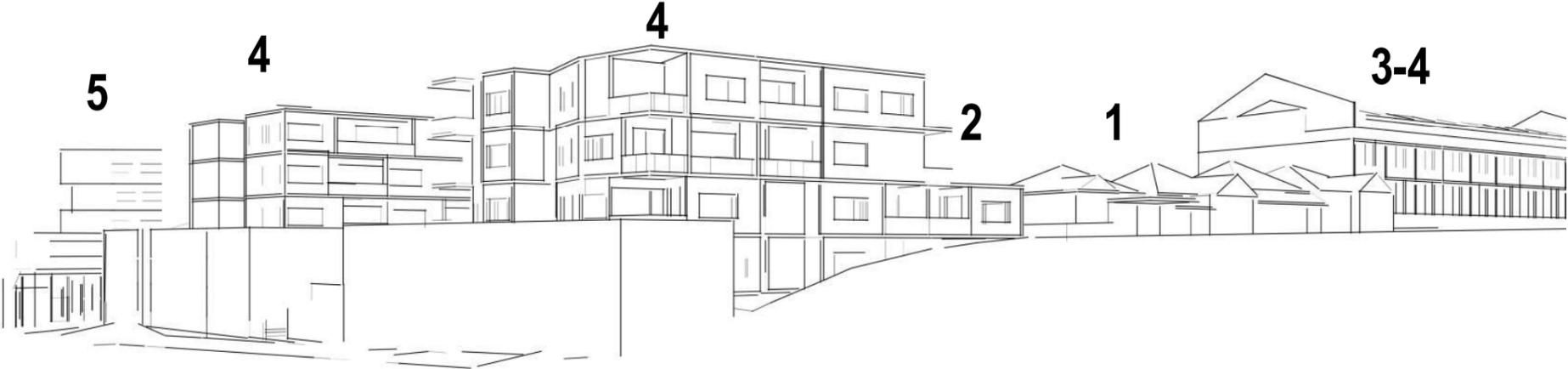
3 pm June 21

Based on the current building massing in a bulk form, DRA has tested zero overshadowing impacts (mid winter) to neighbouring properties.

Proposal Building Height Transition



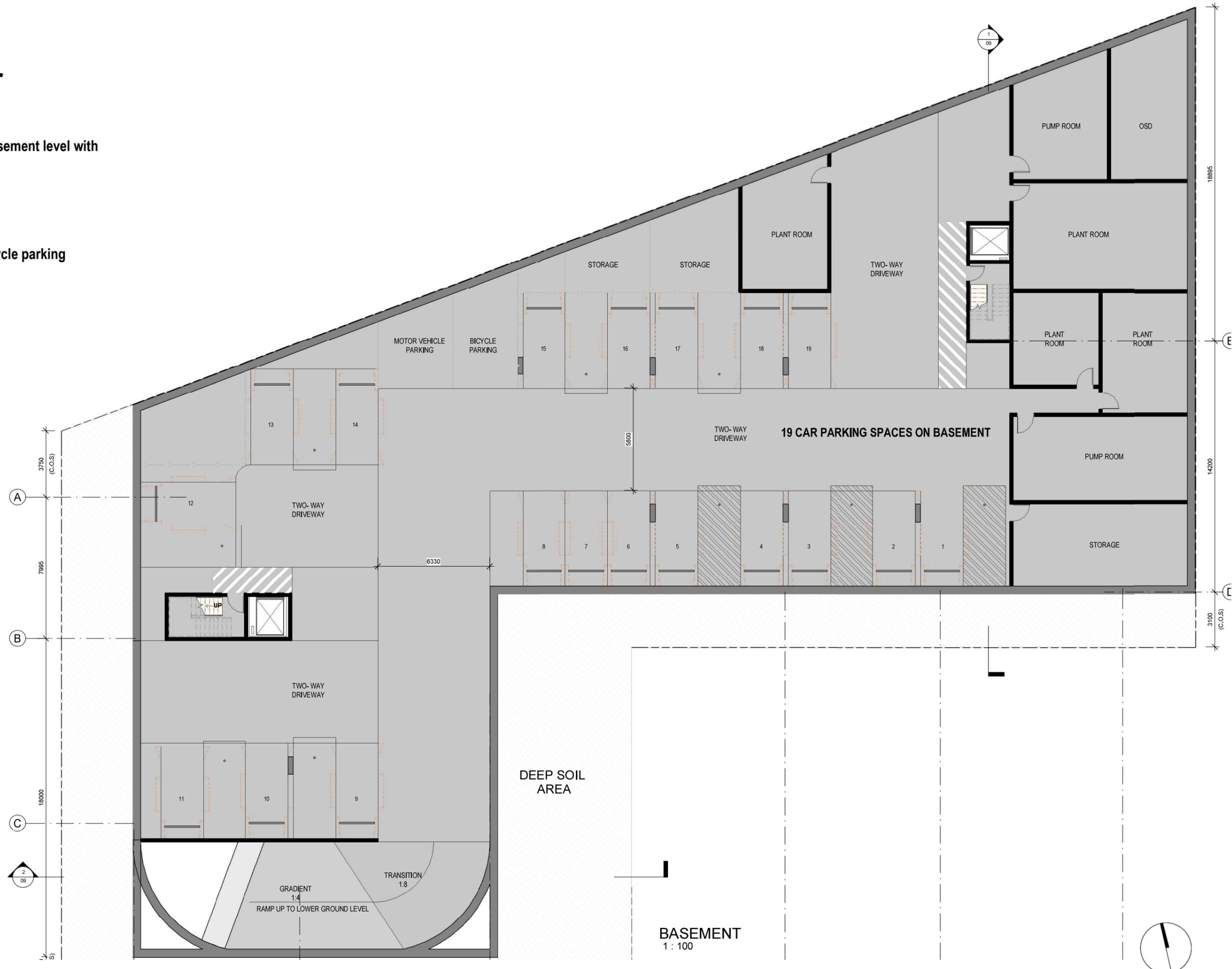
The reduced height to no more than five storeys in total including a lower ground level.



Proposal Basement Floor

The proposal includes one basement level with provision for:

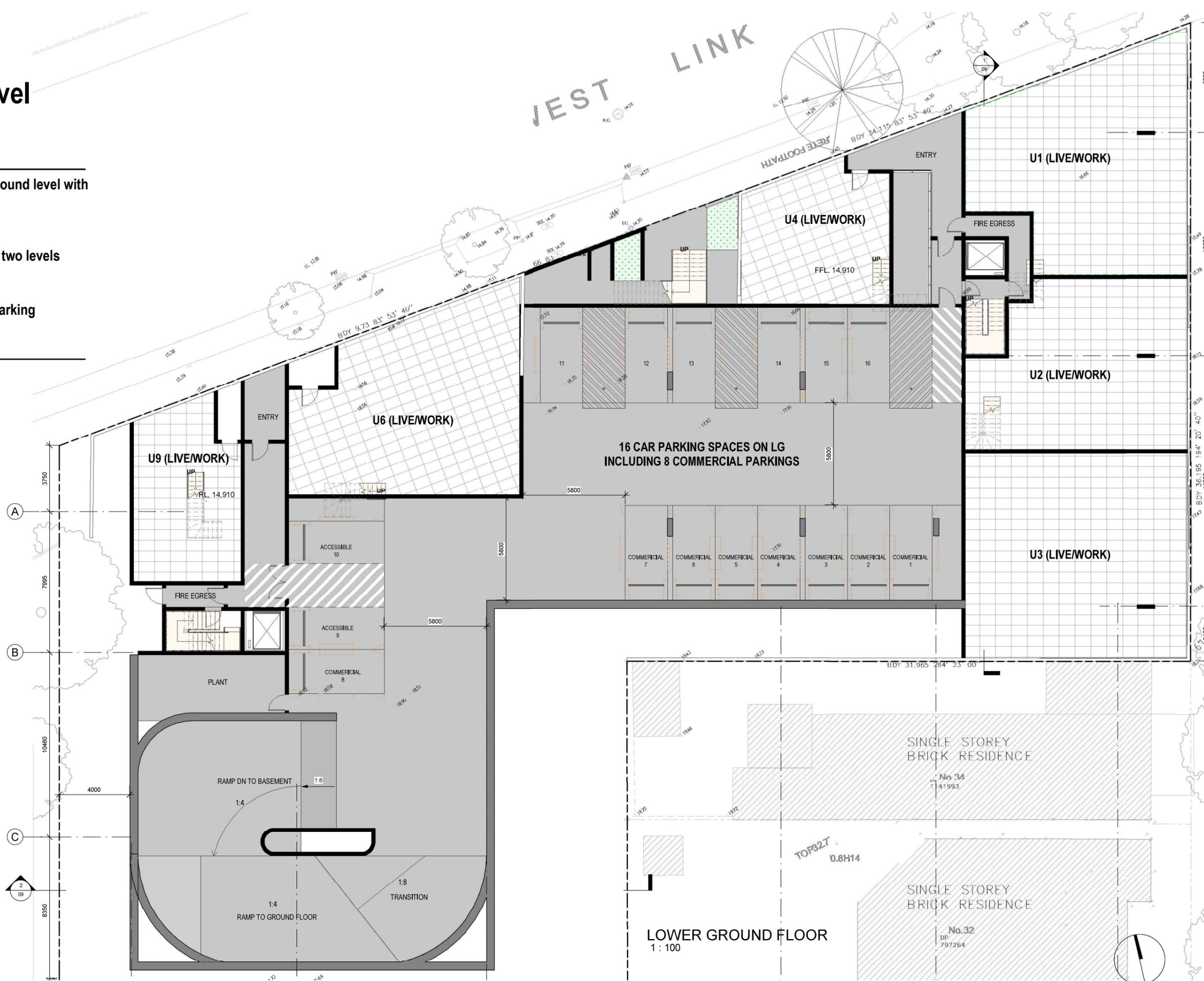
- Plant & services
- Residential parking
- Storage
- Lift & egress/fire stairs
- Disable, Motorcycle and Bicycle parking
- Stormwater detention
- Shared zones



Proposal Lower Ground Level

The proposal includes one lower ground level with provision for:

- Entries for Live/work units
- Plant & services
- Residential parking on the remain two levels
- Storage
- Lift & egress/fire stairs
- Disable, Motorcycle and Bicycle parking
- Stormwater detention
- Shared zones



Proposal Ground Floor

The ground floor consists of 9 units (Unit 1 - 9)
Pedestrian access and corridors act as a central spine.

UNIT MIX (GF)		
Name	Area	BEDROOMS
U1 (LIVE/WORK)	66 m ²	1
U2 (LIVE/WORK)	62 m ²	1
U3 (LIVE/WORK)	146 m ²	2
U4 (LIVE/WORK)	78 m ²	2
U5	97 m ²	3
U6 (LIVE/WORK)	79 m ²	2
U7	58 m ²	1
U8	57 m ²	1
U9 (LIVE/WORK)	59 m ²	1
GROUND LEVEL: 9		



GROUND FLOOR
1 : 100

- 1 BEDROOM UNIT
- 2 BEDROOM UNIT
- 3 BEDROOM UNIT

Proposal First Floor Plan

The first floor consists of 12 units (Unit 10- 21)
Pedestrian access and corridors act as a central spine.

UNIT MIX (FF)		
Name	Area	BEDROOMS
U10	56 m ²	1
U11	56 m ²	1
U12	57 m ²	1
U13	97 m ²	3
U14	62 m ²	2
U15	76 m ²	1
U16	50 m ²	1
U17	50 m ²	1
U18	60 m ²	1
U19	75 m ²	2
U20	53 m ²	1
U21	53 m ²	1

LEVEL ONE: 12



LEVEL ONE
1 : 100

- 1 BEDROOM UNIT
- 2 BEDROOM UNIT
- 3 BEDROOM UNIT

Proposal Second Floor Plan

UNIT MIX (SF)		
Name	Area	BEDROOMS
U22	38 m ²	3
U23	27 m ²	1
U24	25 m ²	1
U25	35 m ²	2
U26	35 m ²	1
U27	36 m ²	2
U28	63 m ²	1
U29	61 m ²	1
U30	70 m ²	2
U31	50 m ²	1
U32	73 m ²	2

LEVEL TWO: 11

The second floor consists of 11 units (Unit 22 - 32). Unit 22 to Unit 27 are walk-up loft units with the entrance access on this level. Pedestrian access and corridors act as a central spine.



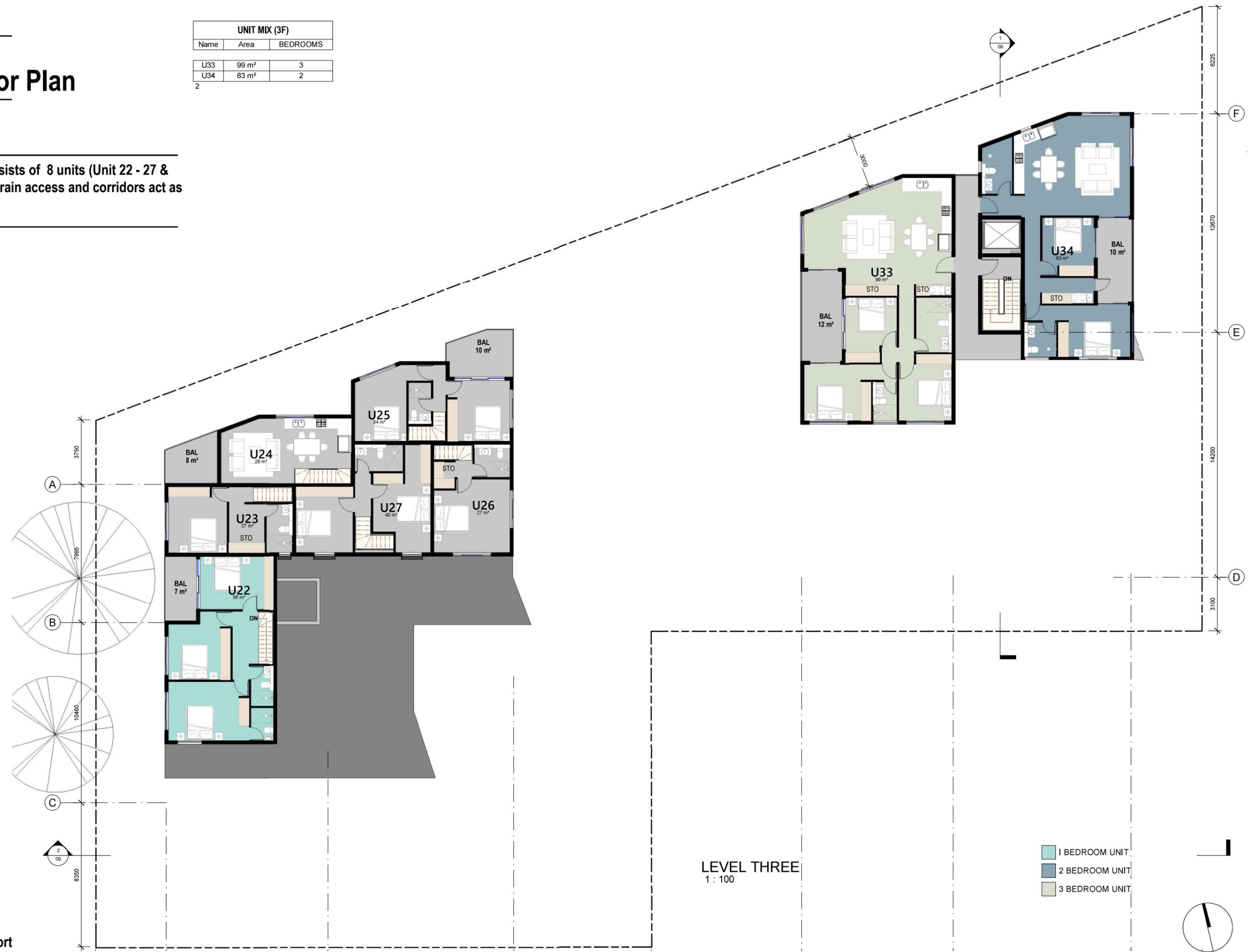
LEVEL TWO
1 : 100

- 1 BEDROOM UNIT
- 2 BEDROOM UNIT
- 3 BEDROOM UNIT

Proposal Third Floor Plan

UNIT MIX (3F)		
Name	Area	BEDROOMS
U33	99 m ²	3
U34	83 m ²	2

The third floor consists of 8 units (Unit 22 - 27 & Unit 33- 34) Pedestrian access and corridors act as a central spine.



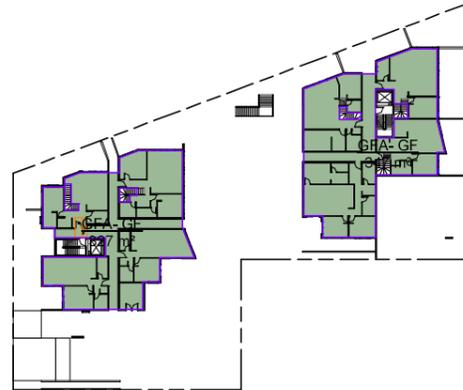
Proposal Gross Floor Area



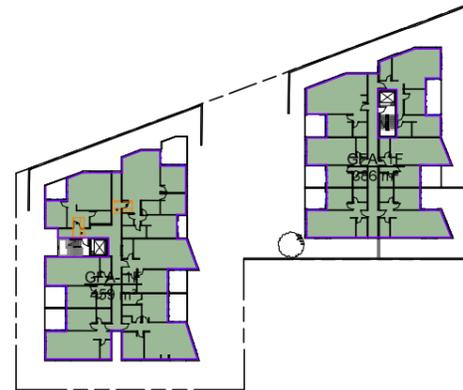
The gross floor area totals to 3,213 m² over a site area of 2,145m², equalling a FSR of 1.50.



GFA Diagram - Lower Ground Floor Plan
1 : 500



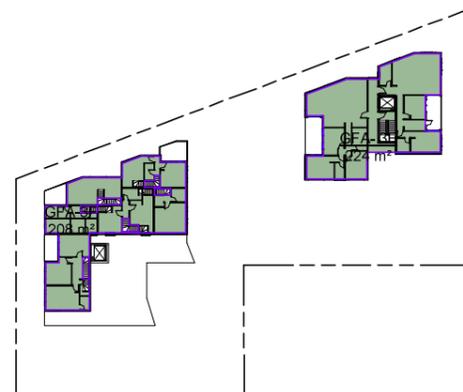
GFA Diagram - Ground Floor Plan
1 : 500



GFA Diagram - First Floor Plan
1 : 500



GFA Diagram - Second Floor Plan
1 : 500



GFA Diagram - Third Floor Plan
1 : 500

AREA CALCULATION - GROSS FLOOR AREA				
SITE AREA	TOTAL AREA	FSR	REQ FSR	
2145 m ²	3213 m ²	1.50	1.5	PASS

GROSS FLOOR AREA

means the sum of the floor area of each floor of a building measured from the internal face of external walls, or from the internal face of walls separating the building from any other building, measured at a height of 1.4 metres above the floor, and includes—

- (a) the area of a mezzanine, and
- (b) habitable rooms in a basement or an attic, and
- (c) any shop, auditorium, cinema, and the like, in a basement or attic, but excludes—
 - (d) any area for common vertical circulation, such as lifts and stairs, and
 - (e) any basement—
 - (i) storage, and
 - (ii) vehicular access, loading areas, garbage and services, and
 - (f) plant rooms, lift towers and other areas used exclusively for mechanical services or ducting, and
 - (g) car parking to meet any requirements of the consent authority (including access to that car parking), and
 - (h) any space used for the loading or unloading of goods (including access to it), and
 - (i) terraces and balconies with outer walls less than 1.4 metres high, and
 - (j) voids above a floor at the level of a storey or storey above.

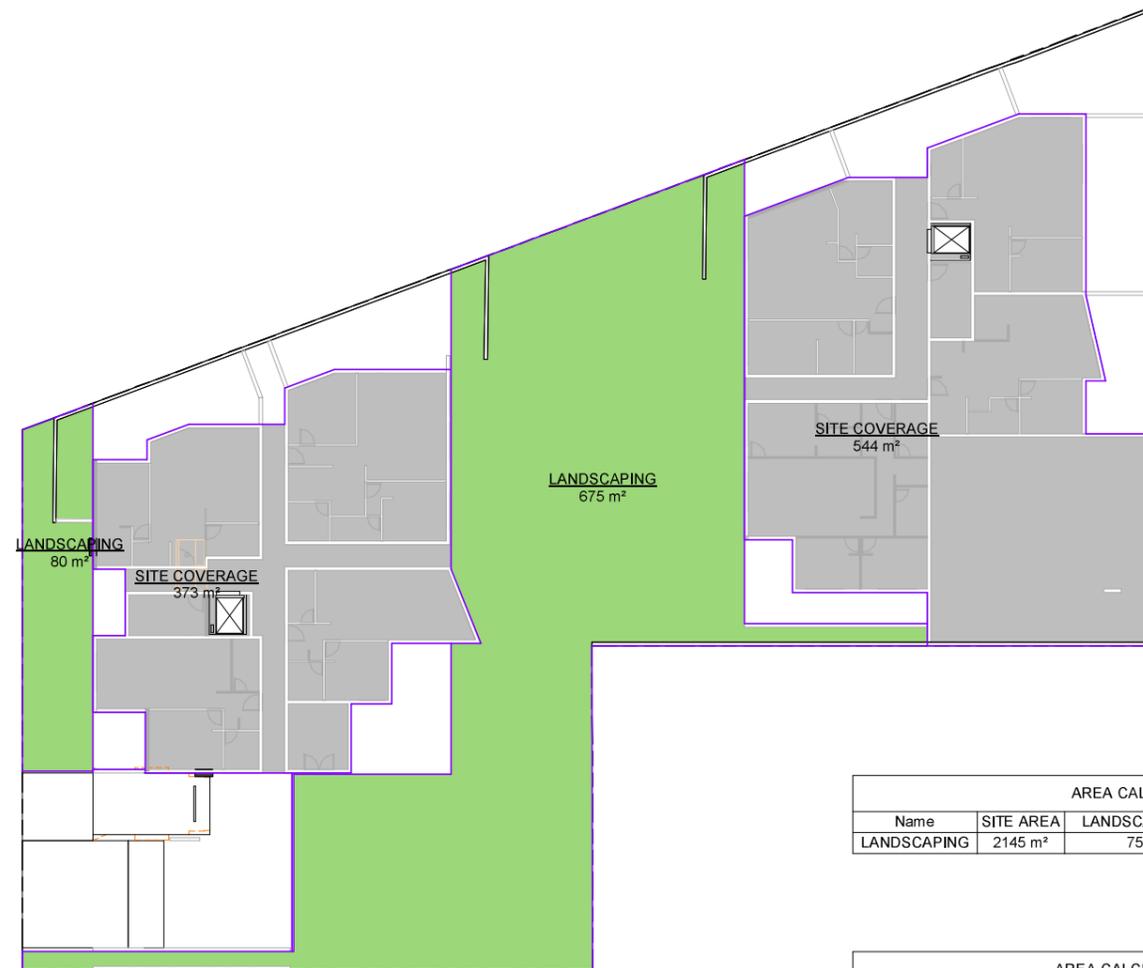
 FLOOR AREA FOR WORK USE
= 621.5 m²



Proposal Site Coverage



The site coverage of the complex totals 916 m², or 43 % of the site area, in compliance with the LEP's requirement of less than 60%. The landscape area covers 755 m² (35%) of the site area, comfortably exceeding the LEP's requirement of 20%.



AREA CALCULATION - LANDSCAPE					
Name	SITE AREA	LANDSCAPE AREA	Total %	DCP REQ.	
LANDSCAPING	2145 m ²	755 m ²	35%	20%	PASS

AREA CALCULATION - SITE COVERAGE					
SITE AREA	SITE COVERAGE AREA	Area	%	DCP REQ.	
2145 m ²	916 m ²	373 m ²	43%	60%	PASS
2145 m ²	916 m ²	544 m ²	43%	60%	PASS



Proposal Building Separation



Objective 3F-1

Adequate building separation distances are shared equitably between neighbouring sites, to achieve reasonable levels of external and internal visual privacy

Design criteria

- Separation between windows and balconies is provided to ensure visual privacy is achieved. Minimum required separation distances from buildings to the side and rear boundaries are as follows:

Building height	Habitable rooms and balconies	Non-habitable rooms
up to 12m (4 storeys)	6m	3m
up to 25m (5-8 storeys)	9m	4.5m
over 25m (9+ storeys)	12m	6m

Note: Separation distances between buildings on the same site should combine required building separations depending on the type of room (see figure 3F.2)

Gallery access circulation should be treated as habitable space when measuring privacy separation distances between neighbouring properties

Design guidance

Generally one step in the built form as the height increases due to building separations is desirable. Additional steps should be careful not to cause a 'ziggurat' appearance

For residential buildings next to commercial buildings, separation distances should be measured as follows:

- for retail, office spaces and commercial balconies use the habitable room distances
- for service and plant areas use the non-habitable room distances

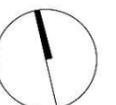
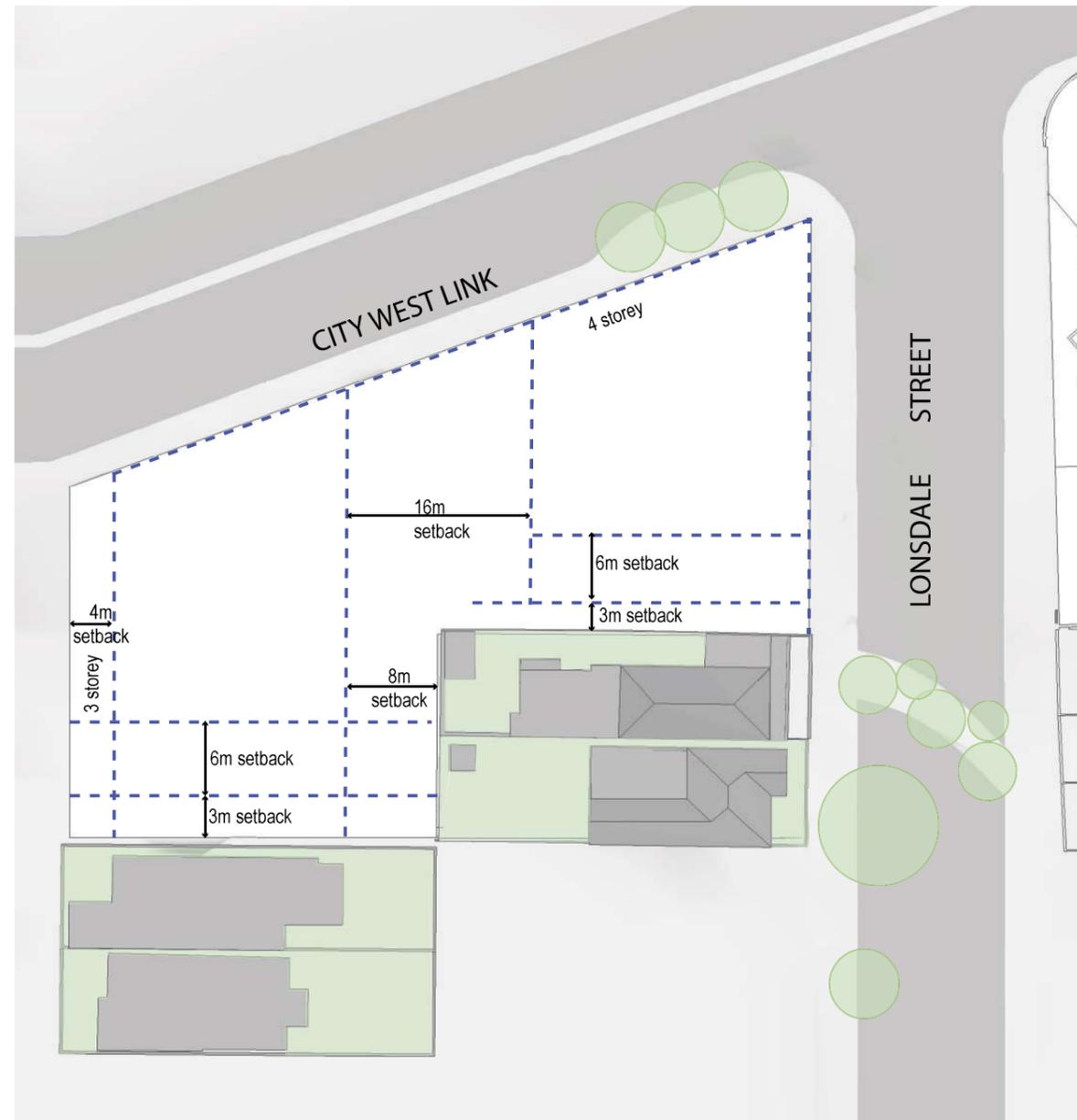
New development should be located and oriented to maximise visual privacy between buildings on site and for neighbouring buildings. Design solutions include:

- site layout and building orientation to minimise privacy impacts (see also section 3B Orientation)
- on sloping sites, apartments on different levels have appropriate visual separation distances (see figure 3F.4)

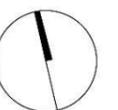
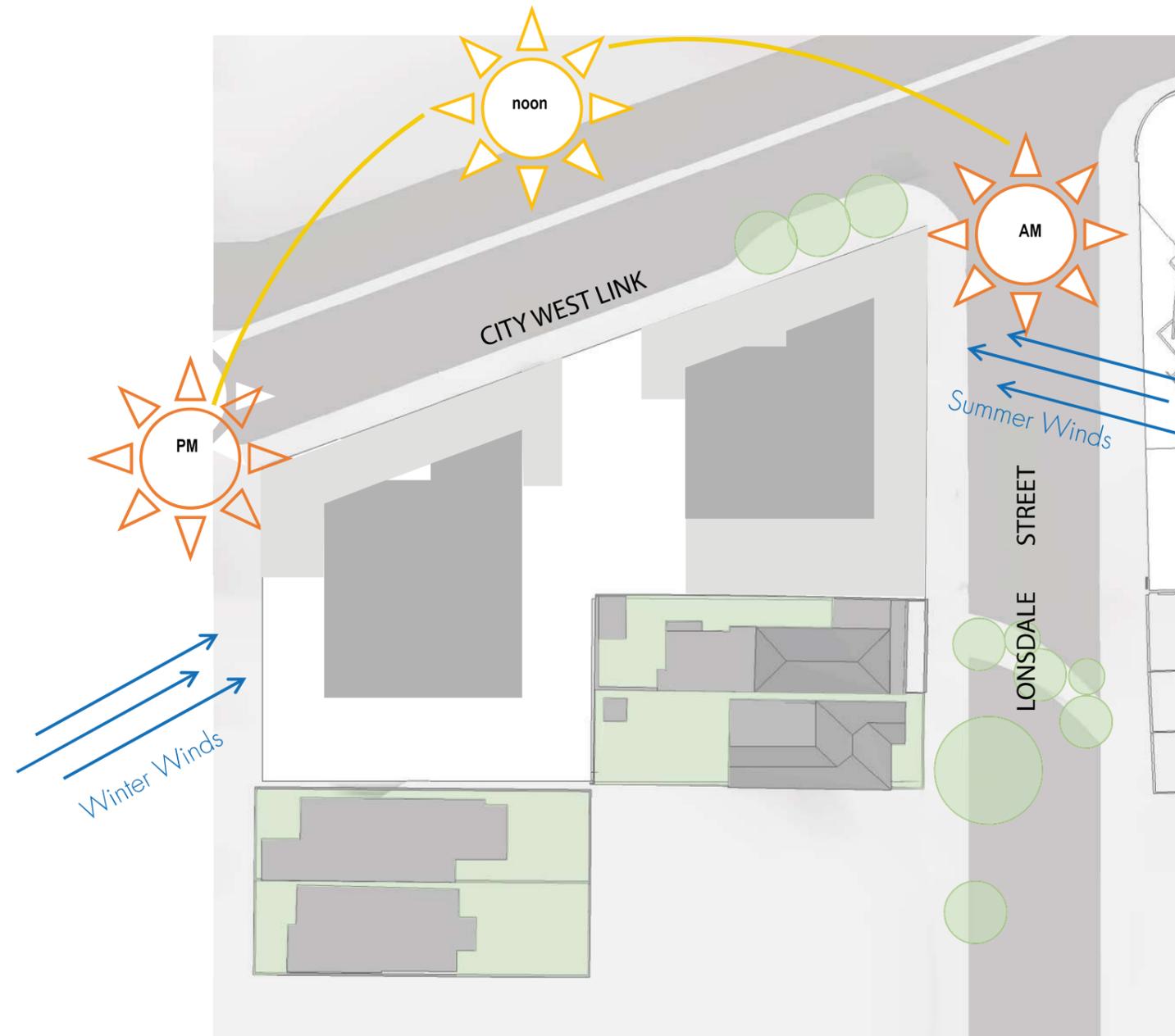
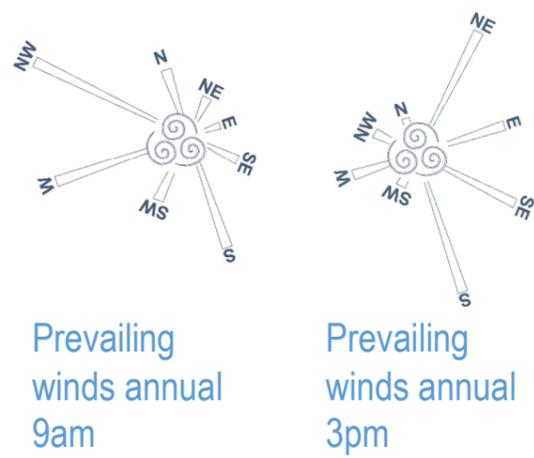
Apartment buildings should have an increased separation distance of 3m (in addition to the requirements set out in design criteria 1) when adjacent to a different zone that permits lower density residential development to provide for a transition in scale and increased landscaping (figure 3F.5)

Direct lines of sight should be avoided for windows and balconies across corners

No separation is required between blank walls



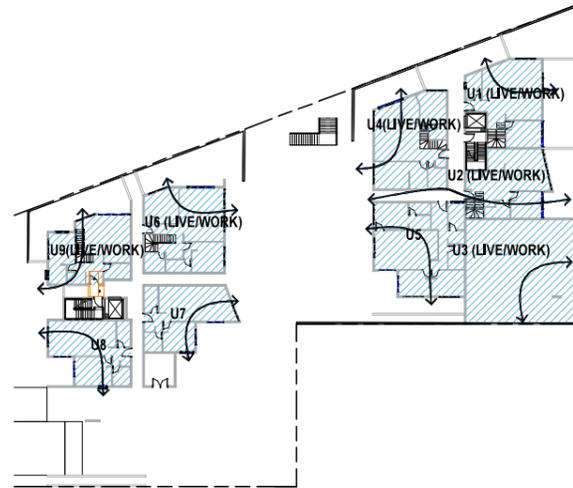
Proposal Solar and Wind Access



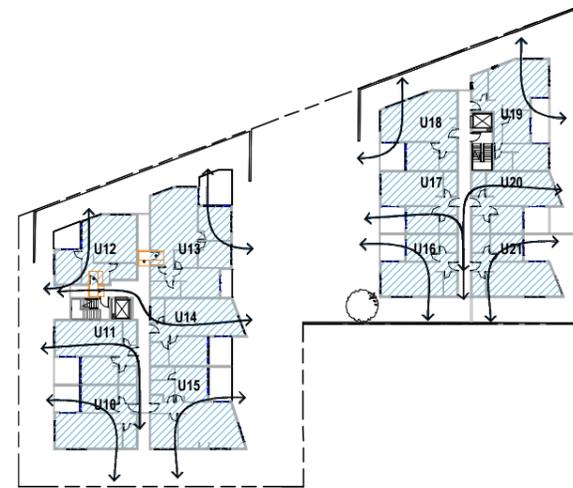
Proposal Natural Ventilation



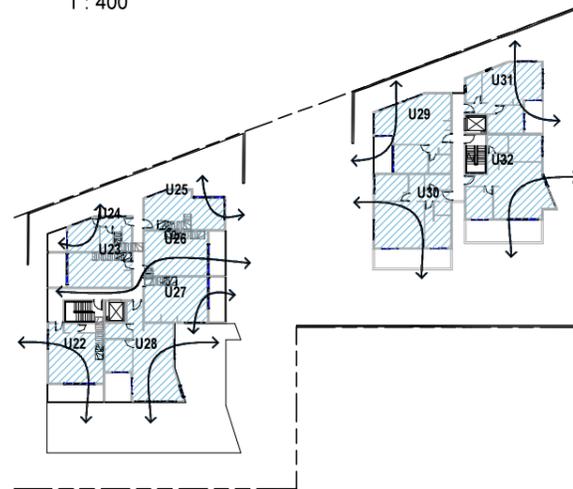
“Natural ventilation is the movement of sufficient volumes of fresh air through an apartment to create a comfortable indoor environment. Natural cross ventilation is achieved by apartments having more than one aspect with direct exposure to the prevailing winds or windows located in significantly different pressure regions, rather than relying on purely wind driven air.”*



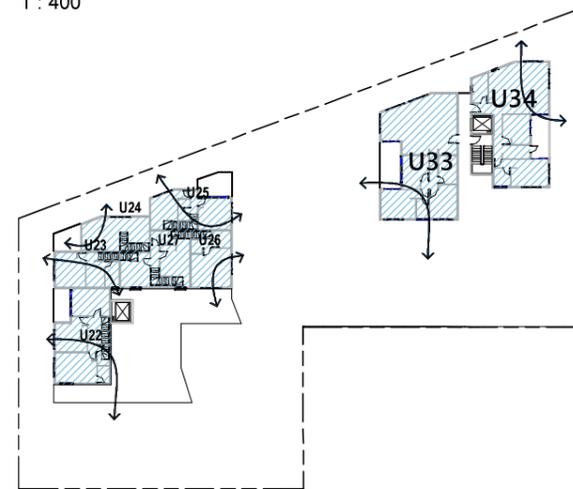
Ground Floor Cross Ventilation
1 : 400



Level 1 Cross Ventilation
1 : 400



Level 2 Cross Ventilation
1 : 400



Level 3 Cross Ventilation
1 : 400

ADG CROSS VENTILATION REQUIREMENTS
34 OUT OF 34 UNITS = 100%

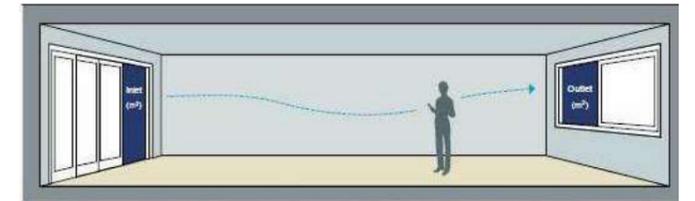


Figure 4B.3 Effective cross ventilation is achieved when the inlet and outlet have approximately the same area, allowing air to be drawn through the apartment using opposite air pressures on each side of the building.

Objective 4B-3
The number of apartments with natural cross ventilation is maximised to create a comfortable indoor environment for residents.

Design criteria

- At least 80% of apartments are naturally cross ventilated in the first nine storeys of the building. Apartments at ten storeys or greater are deemed to be cross ventilated only if any enclosure of the balconies at these levels allows adequate natural ventilation and cannot be fully enclosed.
- Overall depth of a cross-over or cross-through apartment does not exceed 15m, measured glass line to glass line.

Design guidance

The building should include dual aspect apartments, cross through apartments and corner apartments and limit apartment depths.

In cross-through apartments external window and door opening sizes/areas on one side of an apartment (inlet side) are approximately equal to the external window and door opening sizes/areas on the other side of the apartment (outlet side) (see figure 4B.4).

Apartments are designed to minimise the number of corners, doors and rooms that might obstruct airflow.

Apartment depths, combined with appropriate ceiling heights, maximise cross ventilation and airflow.

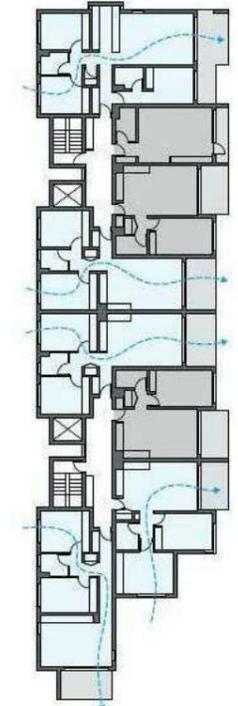


Figure 4B.4 The floor plan above demonstrates one approach for how five of a total of eight apartments achieve natural cross ventilation.

SEPP65 - CROSS VENTILATION	
UNIT No.	
U1 (LIVE/WORK)	Yes
U2 (LIVE/WORK)	Yes
U3 (LIVE/WORK)	Yes
U4(LIVE/WORK)	Yes
U5	Yes
U6 (LIVE/WORK)	Yes
U7	Yes
U8	Yes
U9(LIVE/WORK)	Yes
U10	Yes
U11	Yes
U12	Yes
U13	Yes
U14	Yes
U15	Yes
U16	Yes
U17	Yes
U18	Yes
U19	Yes

SEPP65 - CROSS VENTILATION	
UNIT No.	
U20	Yes
U21	Yes
U22	Yes
U23	Yes
U24	Yes
U25	Yes
U26	Yes
U27	Yes
U28	Yes
U29	Yes
U30	Yes
U31	Yes
U32	Yes
U33	Yes
U34	Yes



Proposal Solar and Daylight Access



TYPICAL LEVEL

A minimum of at least 70% of apartments in the building will receive at least 2 hours of direct sunlight between 9am and 3pm at mid winter.



Objective 4A-1

To optimise the number of apartments receiving sunlight to habitable rooms, primary windows and private open space

Design criteria

1. Living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 2 hours direct sunlight between 9 am and 3 pm at mid winter in the Sydney Metropolitan Area and in the Newcastle and Wollongong local government areas
2. In all other areas, living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 3 hours direct sunlight between 9 am and 3 pm at mid winter
3. A maximum of 15% of apartments in a building receive no direct sunlight between 9 am and 3 pm at mid winter

Design guidance

The design maximises north aspect and the number of single aspect south facing apartments is minimised

Single aspect, single storey apartments should have a northerly or easterly aspect

Living areas are best located to the north and service areas to the south and west of apartments

To optimise the direct sunlight to habitable rooms and balconies a number of the following design features are used:

- dual aspect apartments
- shallow apartment layouts
- two storey and mezzanine level apartments
- bay windows

To maximise the benefit to residents of direct sunlight within living rooms and private open spaces, a minimum of 1m² of direct sunlight, measured at 1m above floor level, is achieved for at least 15 minutes

Achieving the design criteria may not be possible on some sites. This includes:

- where greater residential amenity can be achieved along a busy road or rail line by orientating the living rooms away from the noise source
- on south facing sloping sites
- where significant views are oriented away from the desired aspect for direct sunlight

Design drawings need to demonstrate how site constraints and orientation preclude meeting the design criteria and how the development meets the objective

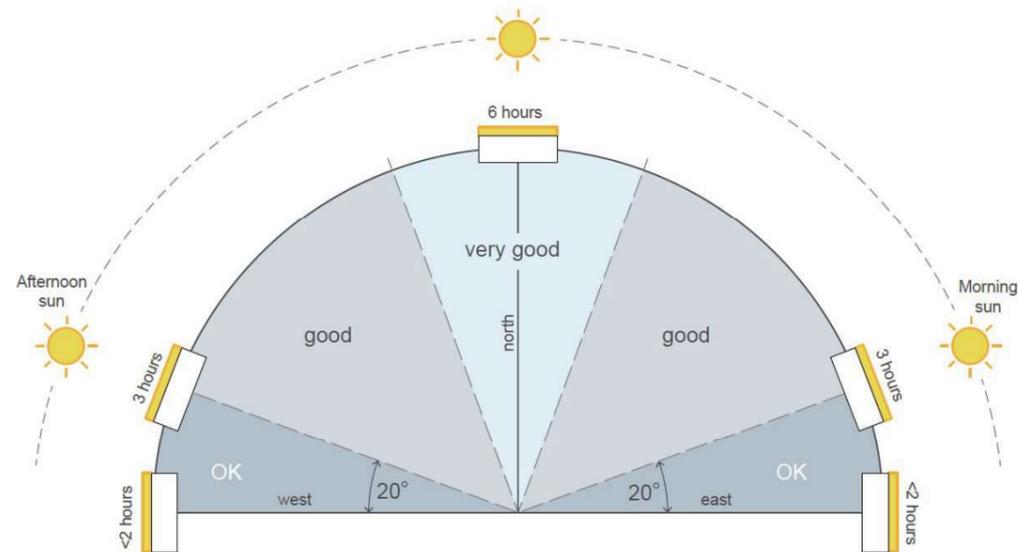


Figure 4A.1 The hours of sunlight that can be expected in mid winter are directly related to the orientation of the facade. This diagram shows the optimal orientation for habitable rooms and balconies
Note: An additional design and assessment tool is provided at Appendix 5 to assist in confirming the level of sunlight access to apartments



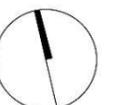
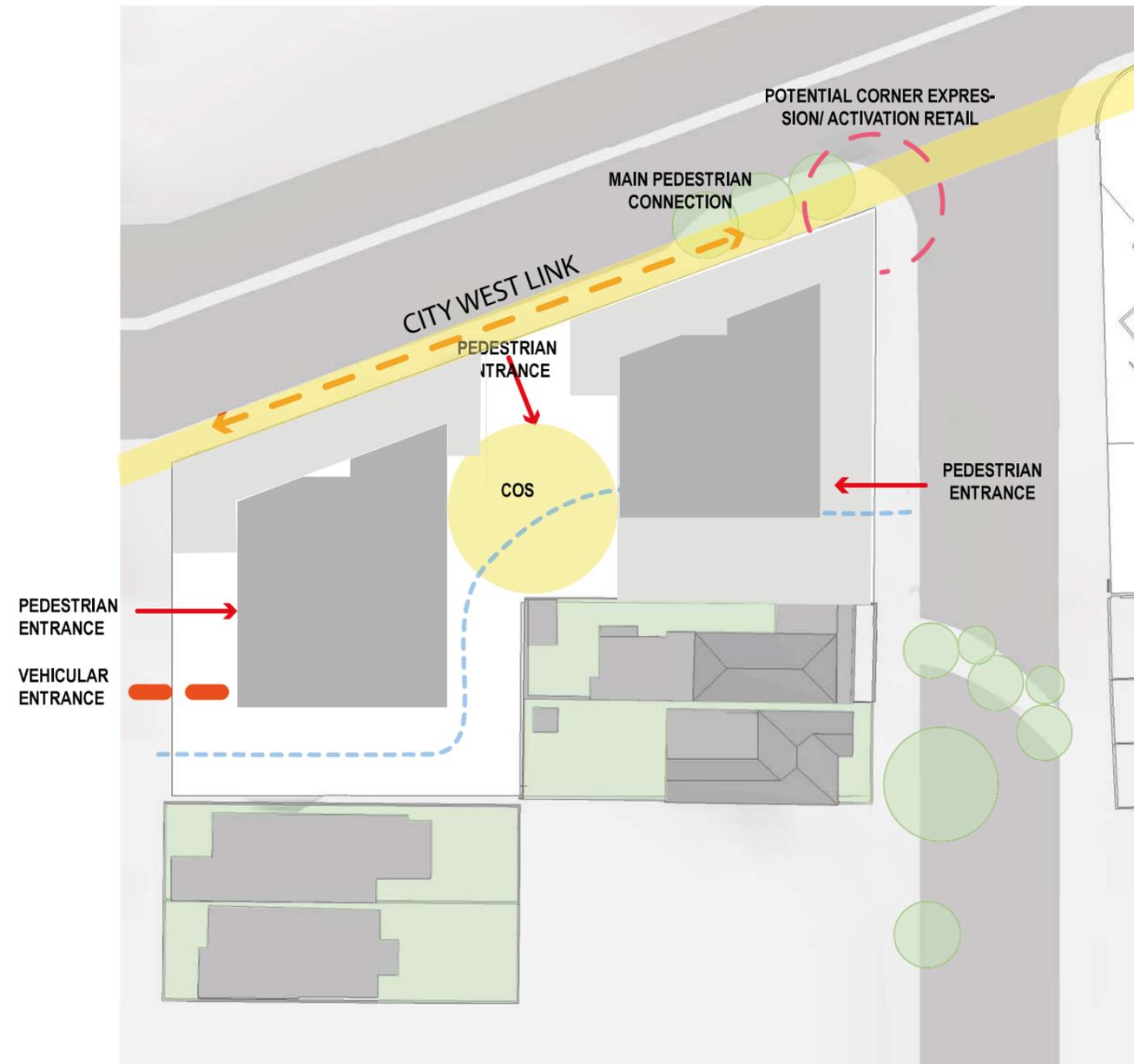
Figure 4A.2 Shading devices on balconies should shade summer sun and allow winter sun access to living areas



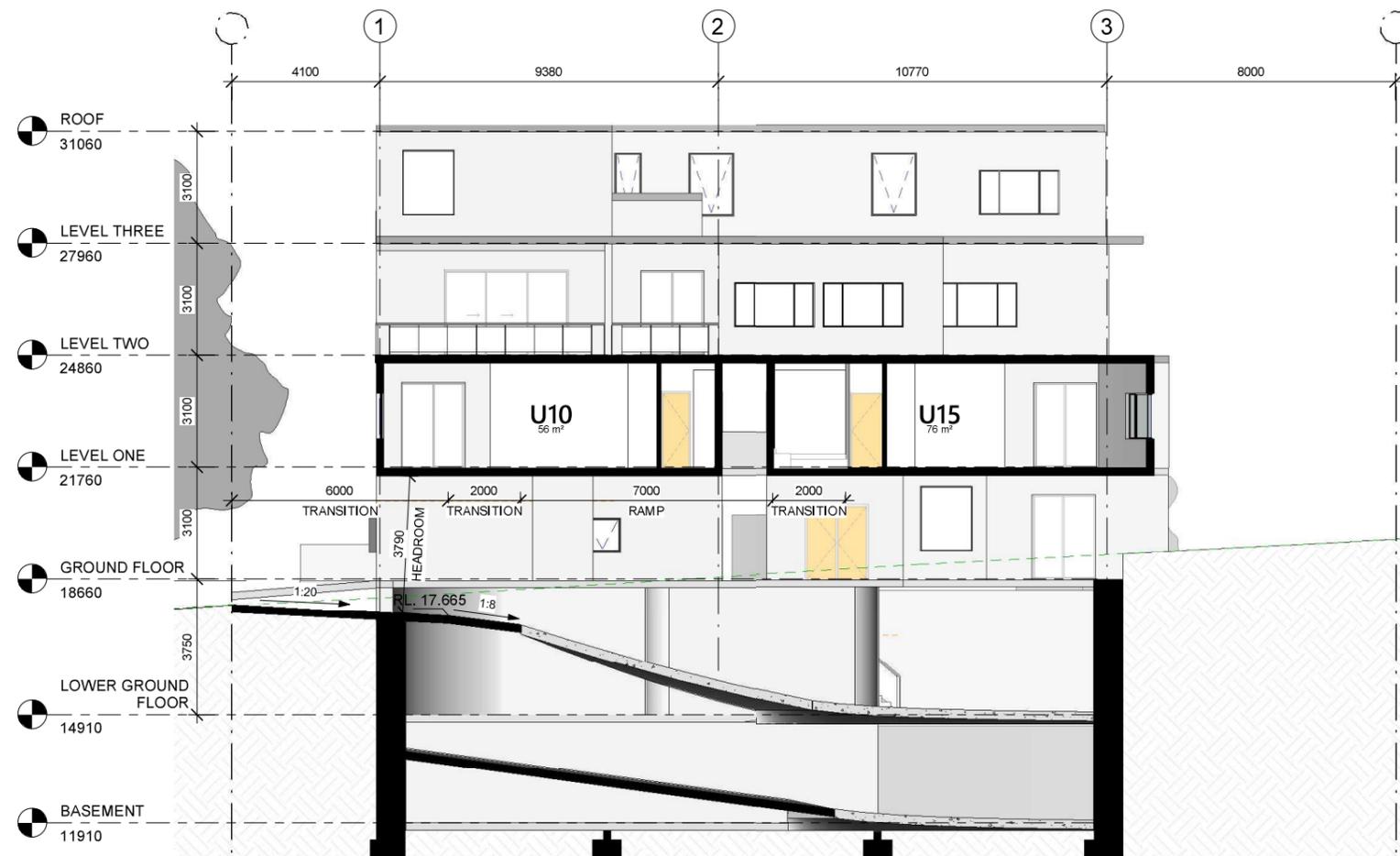
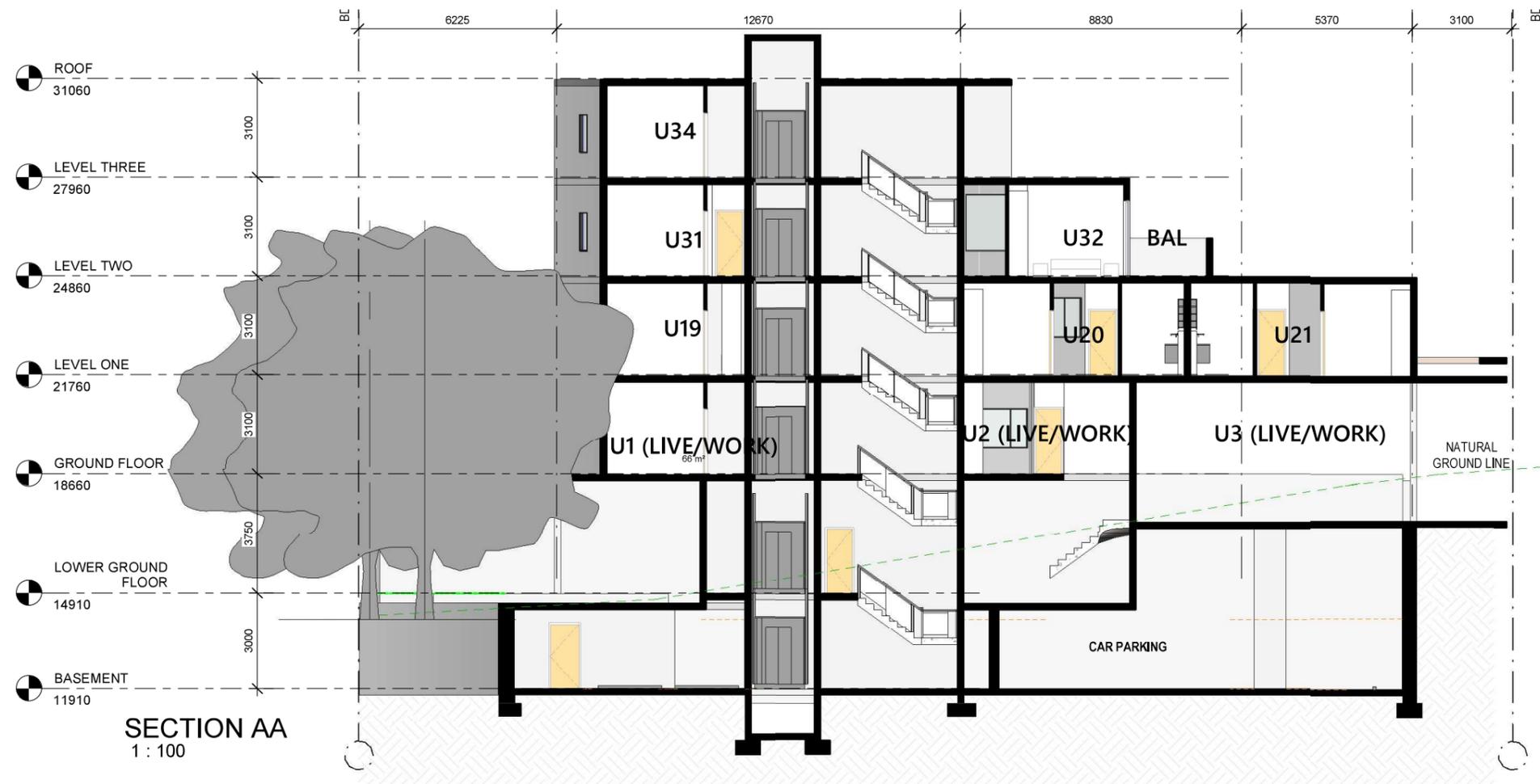
Proposal Public and Private Interface



In this analysis we depict the main public access to the subject site and the adjoining configuration.



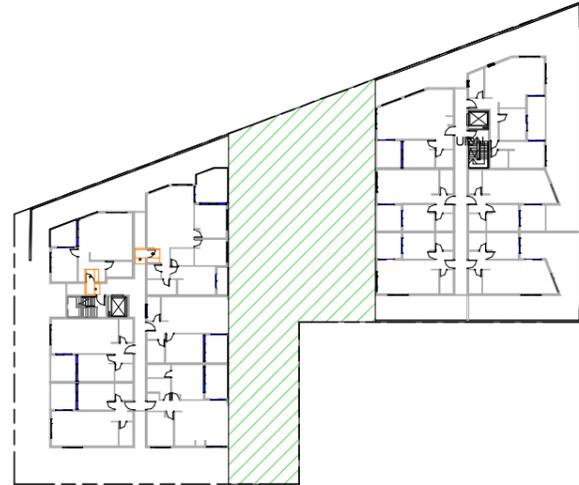
Proposal Building Separation



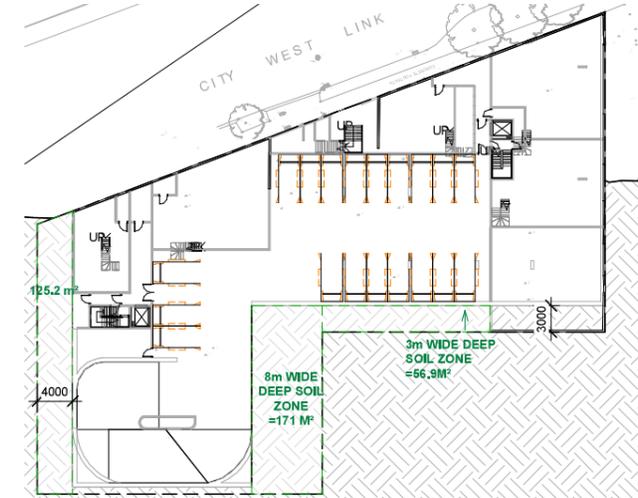
Proposal Communal Open Space



Developments achieve a minimum of 50% direct sunlight to the principal usable part of the communal open space for a minimum of 2 hours between 9 am and 3 pm on 21 June (mid winter)



C.O.S Calculation- Level 1
1 : 400



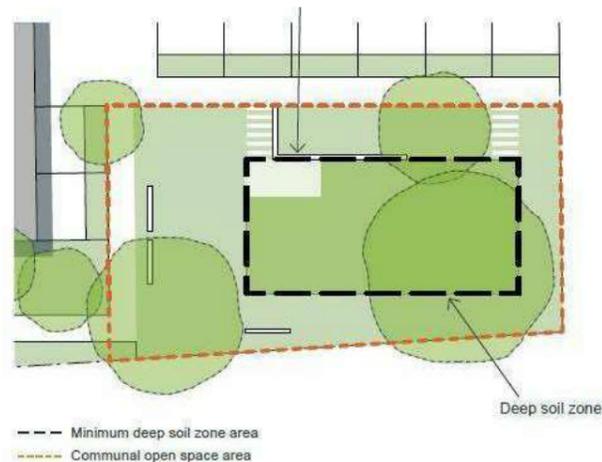
Deep Soil Calculation
1 : 400

Apartment Design Guide

Objective 3D-1	COMPLIANCE
An adequate area of communal open space is provided to enhance residential amenity and to provide opportunities for landscaping	✓
Design criteria	
1. Communal open space has a minimum area equal to 25% of the site (see figure 3D.3)	✓ (16.5%)
2. Developments achieve a minimum of 50% direct sunlight to the principal usable part of the communal open space for a minimum of 2 hours between 9 am and 3 pm on 21 June (mid winter)	✓ Refer to Drawing No.13-19
Design guidance	
Communal open space should be consolidated into a well designed, easily identified and usable area	✓
Communal open space should have a minimum dimension of 3m, and larger developments should consider greater dimensions	✓
Communal open space should be co-located with deep soil areas	✓
Direct, equitable access should be provided to communal open space areas from common circulation areas, entries and lobbies	✓ Allowing access from the street and common areas
Where communal open space cannot be provided at ground level, it should be provided on a podium or roof	
Where developments are unable to achieve the design criteria, such as on small lots, sites within business zones, or in a dense urban area, they should:	
<ul style="list-style-type: none"> provide communal spaces elsewhere such as a landscaped roof top terrace or a common room provide larger balconies or increased private open space for apartments demonstrate good proximity to public open space and facilities and/or provide contributions to public open space 	Not Applicable

AREA CALCULATION- COMMUNAL OPEN SPACE			
SITE AREA	LEVEL	AREA	%
2145 m ²	GROUND FLOOR	551 m ²	25.7%

COMPLIES



Objective 3E-1

Deep soil zones provide areas on the site that allow for and support healthy plant and tree growth. They improve residential amenity and promote management of water and air quality

Design criteria

1. Deep soil zones are to meet the following minimum requirements:

Site area	Minimum dimensions	Deep soil zone (% of site area)
less than 650m ²	-	7%
650m ² - 1,500m ²	3m	
greater than 1,500m ²	6m	
greater than 1,500m ² with significant existing tree cover	6m	

Design guidance

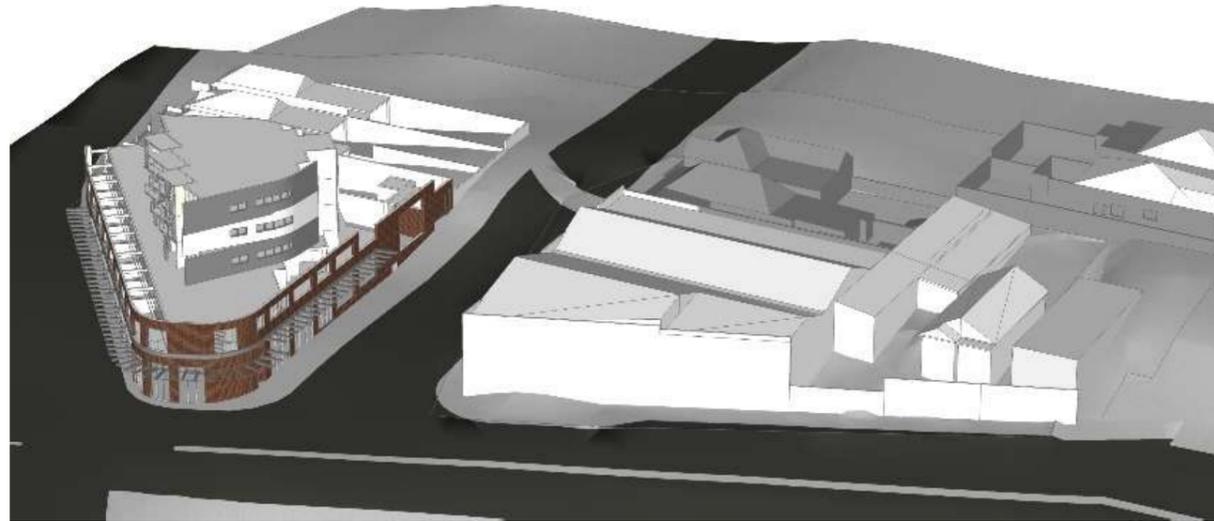
On some sites it may be possible to provide larger deep soil zones, depending on the site area and context:

- 10% of the site as deep soil on sites with an area of 650m² - 1,500m²

AREA CALCULATION- DEEP SOIL AREA			
SITE AREA	ADG REQ.%	AREA	%
2145 m ²	7%	8m WIDE - 171 m ²	8%
		3m WIDE - 56.9 m ²	
		4m WIDE - 125.2 m ²	
	15% (TOTAL)	353.1 m ²	16.5%

COMPLIES





**Diagram n.01
Existing Warehouse**



**Diagram n.02
Current Scheme**



**Diagram n.01
Existing Warehouse**



**Diagram n.02
Current Scheme**



Proposal View Analysis

