Attachment B7(c)

Urban Design and Public Domain Study Part 3 – Waterloo Estate (South) – Land and Housing Corporation

6.0

Fig. 6.0.1 Indicative CGI: Waterloo Common
Source: Virtual Ideas, 2020

6.0 PLACE

PLANNING PROPOSAL REQUIREMENT	ADDRESSED IN
The built form should be developed in line with the design process described in the NSW Government Architect Better Placed strategy.	Urban Design Report Appendix 7.10
A precinct plan that integrates: • Public domain • Infrastructure • Staging • Building types • Height distribution and massing	Chapter 4.0 -5.0 Appendix 7.3 Appendix 7.4 Appendix 7.8 Appendix 7.5, Chapter 6.2 Chapter 6.2
Provide a Public Domain Plan identifying any proposed public spaces, walkways, laneways, shared paths and streets, including an accurate CAD set-out showing the boundaries of any streets, walkways or other public spaces and servicing considerations to the public domain.	Chapter 4.0 Chapter 6.0 Appendix 7.3

SSP STUDY REQUIREMENT		ADDRESSED IN
Urban Design		
2.6	Prepare a precinct plan that integrates: the public domain plan, community facilities plan, indicative subdivision plan, infrastructure plan, staging plan and building types and massing for the site. Demonstrate how this fits within the overall State Significant Precinct and surrounding context.	Chapter 4.0 - 6.0 Appendix 7.3 Appendix 7.4 Appendix 7.5 Appendix 7.7 Appendix 7.8
2.10	Provide sufficient detail of the building types to demonstrate future compliance with amenity standards including the Apartment Design Guide and to support any calculations that convert building envelopes to gross floor area and development yields	Chapter 6.0 Appendix 7.5 Appendix 7.7
2.11	Demonstrate how the urban design principles have informed the allocation and location of proposed land uses.	Chapter 4.0 - 6.0 Appendix 7.4
2.12	Integrate the public domain plan identifying proposed public park, square and streets and pedestrian/cycle paths.	Chapter 4.0 - 6.0 Appendix 7.3
Public Domain: Public Open Space & Streets		
3.4	Provide an open space plan for the precinct, locating precinct park(s) derived from site analysis, benchmarking assessment and urban design principles. Demonstrate how accessibility to the new park(s) is maximised by surrounding street interfaces, and location in relation to slope; and how the flexibility and extent of use is maximised by locating away from busy roads, noise and pollution, how size is suitable for the number and types of users, and location in relation to existing parks optimises use for the surrounding community	Chapter 4.0 Chapter 6.0 Appendix 7.3 Appendix 7.2.1
3.6	Provide a layout plan of the public streets, lanes and walkways, identifying street hierarchy, typologies, movement patterns for all modes of travel, connectivity to existing context and the development lots. Provide detailed sections and plans for typical conditions in each type of street, demonstrating innovative and best practice design for high density, highly connected, and active transport priority environments.	Chapter 4.0 Chapter 6.0 Appendix 7.3
3.9	Provide a public domain plan incorporating the open space plan and street layout and demonstrate how it responds to the analysis and the urban design principles.	Chapter 4.0 - 6.0 Appendix 7.3
3.13	In all of the above, demonstrate consideration and application of City of Sydney public domain codes where appropriate, including the Streets Code and Technical Specifications, Legible Sydney Wayfinding Strategy and Design Manual, and any other relevant City of Sydney draft Codes.	Chapter 4.0 - 6.0 Appendix 7.3

“Make sure you understand the people who live here first. Take time to get to know us...”

*Survey respondent**

This chapter describes the character of:
- The key public domain spaces
- The urban and built form that is shaped by them
- The interface of these with adjacent areas or items for particular consideration.

The key components within the Indicative Concept Proposal, and the three sub-precinct character areas of Waterloo South, contribute to the character of the sub-precinct through their relationship to other open spaces, the street and lane network, and how they relate to adjacent built form. They also identify a range of opportunities for activation and community life that each place can support.

The proposed urban and built form is shaped by the open space and public domain structure, responses to topography and landscape features, and the urban experience of street-life, street-walls and perceptions of height and density.

The Estate is currently an island site in terms of its connectivity to the adjacent areas, its urban framework of streets and block,s and its unique built form typologies, and so presents a contrast to the surrounding areas. The public domain and built form interfaces with the adjacent context at the neighbourhood scale stitch Waterloo South into the surrounding context. The public and private domain interfaces relate to the pedestrian scale and defines the relationship between the activity and privacy of places and spaces.

* “Let’s Talk Waterloo - Visioning Report Key Findings”, KJA, May 18, p42.

Fig. 6.1.1 Idicative CGI: Waterloo Village Green 'Big Roof'
Source: Virtual Ideas, 2020

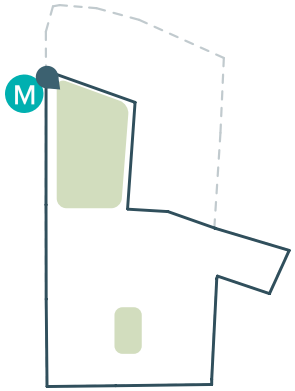
6.1 KEY PLACES AND STREETS

“The green space in between the buildings is very important to us. It is a meeting point for friends. We like that we can see this green space from our balconies”

*Survey respondent**

This section describes the key places of Waterloo South; the Village Green, Waterloo Common and the George Street activity street which connects them. The key places are hubs of activation, engagement and social connectedness, and are complemented by mixed-use community hubs that will provide activation and programming to support the social life of the community.

The street typologies that connect and support the key places are regarded as places in themselves which contribute to the range of public domain spaces that can accommodate activities and opportunities for social connectedness. These range from local streets, shared slow streets and laneways to pedestrian only laneways and through-site links.



* “Let’s Talk Waterloo - Visioning Report Key Findings”, KJA, May 2018, p76

Fig. 6.1.2 Indicative CGI: Waterloo Village Green community garden
Source: Virtual Ideas, 2020

6.1.1 VILLAGE GREEN

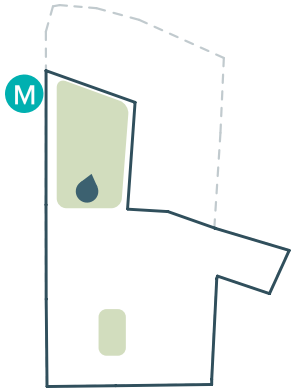
A place to come together

Located next to the Waterloo Metro Station, the Village Green maximises its spatial opportunity by providing a community area (Gadigal Garden) for gathering under the Big Roof pavilion (4), central lawn (1) for active recreation and community breakout space, as well as the opportunity to provide a large community garden (3). Activity zones (2) to the park's south take advantage of the topography to overlook the central lawn and provide opportunities for play space, picnic areas, fitness and youth zones. Smaller, passive zones within the park balance the active zones and provide for passive uses.

The big roof (4) on the north-western corner of the park provides a temporary public exhibition space with the potential to host key cultural and community events. Pavilions along the western edge of the park help define the park and provide an urban interface between the Metro Quarter and the central area of the park. The pavilions create areas of breakout space for uses such as cafes and retail to spill out into, taking advantage of the aspect and providing day to night activation.

The water story is woven through WSUD treatments and water play (5). A strong connection is provided through program. The location of the park retains significant high and moderate value trees to provide mature landscape elements and retain the character of the existing streets.

Refer to Appendix 7.3 for further information



2.25Ha
CENTRAL PARK
WSUD COMMUNITY GARDENS
PLAY & YOUTH AMENITIES LAWN AREA

Fig. 6.1.3 Potential Uses in Waterloo Village Green

0m 50 N

Legend

① Open lawn
② Activity zone (i.e. play spaces Multi-sports courts, picnic areas)
③ Community garden/small urban farm
④ Big roof pavilion, Gadigal Garden
⑤ Blue line water story
⑥ Park Amenities (i.e. BBQ, picnic areas)

Fig. 6.1.4 Indicative CGI: Waterloo Common activtiy area
Source: Virtual Ideas, 2020

6.1.2 WATERLOO COMMON

Waterloo South's local park

Connected to the Village Green by the George Street activity street, Waterloo Common will provide additional social and cultural amenity for the community who live, work and, play in the southern part of Waterloo South. Opportunities for social interaction will be strengthened by a series of programmed spaces within the park that will provide a vibrant local community hub for all ages. These include community gardens, an urban plaza, play space and passive shaded lawns for community use. A tree retention zone will retain a cluster of existing high and moderate value trees adjacent to the park. These trees, along with those retained within the park will provide enhanced shade amenity.

Refer to Appendix 7.3 for further information

Fig. 6.1.5 Potential Uses in Waterloo Common

Legend

① Urban plaza
② Activity zone
③ Youth and fitness facilities
④ Community gardens
⑤ Lawn + existing trees
⑥ Blue Line water story

Fig. 6.1.6 Indicative CGI: Pedestrian laneway (6m)
Source: Virtual Ideas, 2020

6.1.3 STREETS

Streets as active places and energised spaces

The streets of Waterloo South are extensions of, and connections to, the public domain that serves to connect the community to all facilities, services and public open spaces. Across Waterloo South the street typologies promote a Pedestrian Priority Precinct. The street network comprises the following:

George Street (20-25m)
- Transformation of George Street into an activity street, with a varying width between 20 - 25 metres.
- Provides the primary north-south movement corridor, activated at street level by retail and services and activity zones along the street.

Local Streets (20.2m)
- Existing local streets of 20.2m redefined as slow streets with footpath widening, traffic calming devices, street planting and reduced vehicular speeds.
- Prioritises pedestrian safety and a safe environment for the community.

Shared Slow Street (20m)
- Shared Slow Streets include a shared carriageway buffered by planting on either side.
- The design speed of all slow streets is below 40 kilometres per hour.

Neighbourhood Laneways (9 - 10m)
- Wider laneway connection between existing local streets.
- The carriageway is a pedestrian priority shared zone for pedestrians, cyclists and vehicles.

Park Laneways (9m)
- Park Laneways run alongside Waterloo Common.
- Provides secondary connections north - south within Waterloo South.

Pedestrian Laneways (9m)
- Shared laneways for pedestrians and cyclists only.
- Shaded by tree planting alternating with seating offset to one side.

Pedestrian Laneways (6m)
- Pedestrian only laneways.
- Shaded by a single line of street trees and seating along their centre.

Refer to Appendix 7.3 for further information

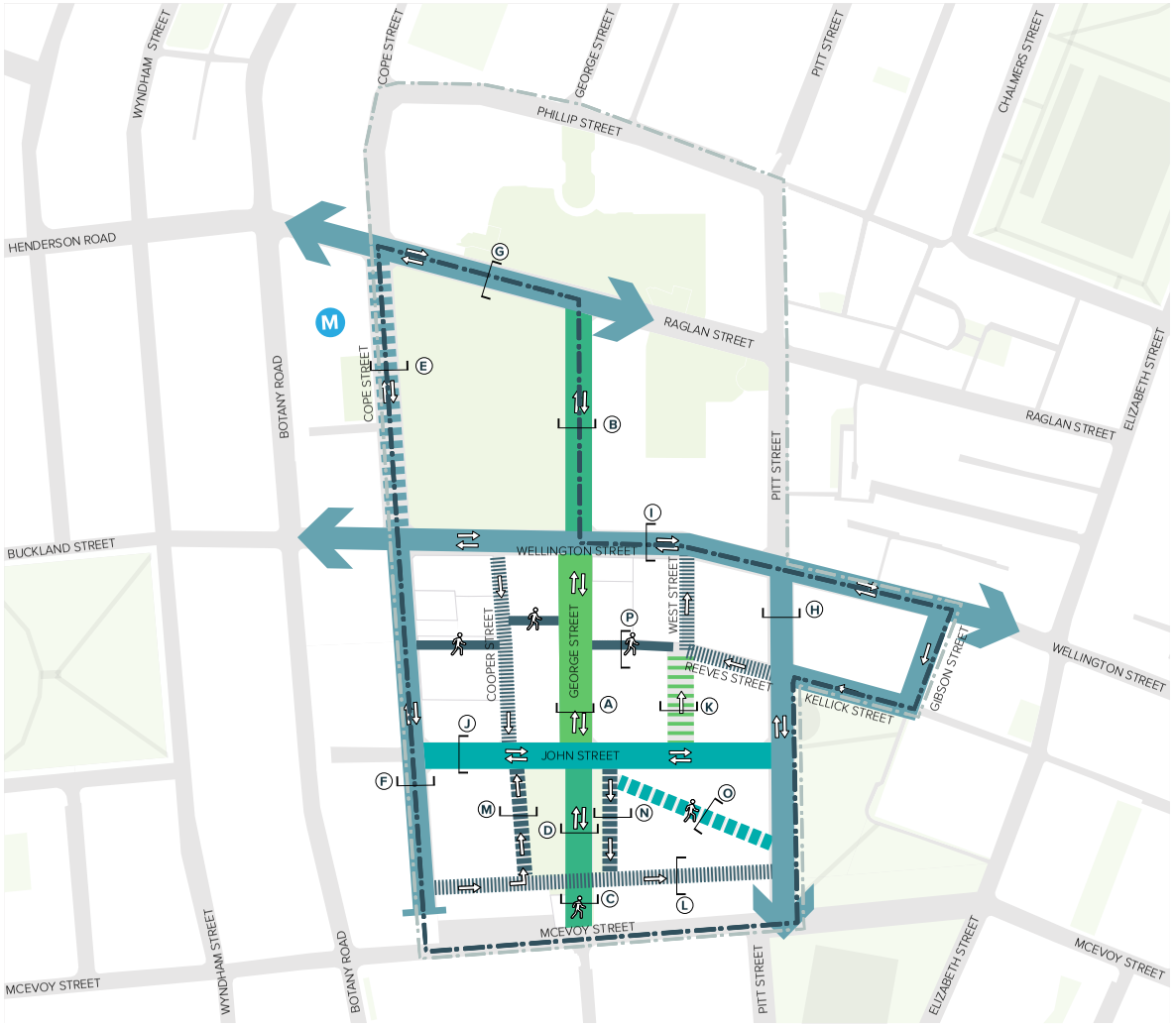


Fig. 6.1.7 Street Typologies

Legend

- George Street 20.2m
- George Street 25m
- Local Street 20.2m
- Local shared street 20.2m
- Shared Slow Street 20.2m
- Laneway (One-way) 20.2m
- Neighbourhood Laneways 9m
- Park Laneways 9m
- Pedestrian Access Laneway 9m
- Pedestrian Laneway 6m
- Pedestrian Only

Fig. 6.1.8 Indicative CGI: George Street, community hub plaza
Source: Virtual Ideas, 2020

6.1.4 GEORGE STREET

A future activated and connected green community spine

George Street is an activated street that will become the primary north-south movement corridor that connects the Estate. George Street will connect Waterloo South's two primary open spaces, the Village Green and Waterloo Common, strengthening Waterloo's Green Grid and pedestrian connections.

A future flexible framework of publicly accessible spaces will allow George Street to evolve into a Pedestrian Boulevard, be responsive to future development and act as a catalyst for activity along the corridor. These spaces can evolve and change over time, responding to the community's changing needs. Play spaces, outdoor gym facilities, food production and incidental play are equitably distributed along the corridor, with the Blue Line water story designed and arranged to meet water sensitive urban design (WSUD) best practice.

Refer to Appendix 7.3 for further information

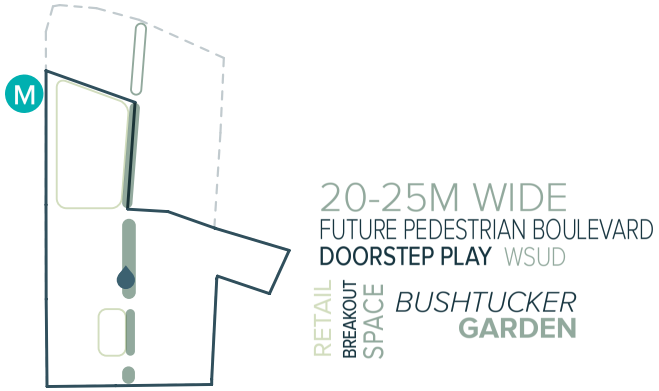


Fig. 6.1.9 George Street

Legend

① Blue Line water story
② Plaza
③ Retained trees

6.1.5 STREET TYPOLOGIES

GEORGE STREET

KEY PUBLIC DOMAIN ELEMENTS
STREET TYPE
George Street 20-25m wide.
STREET GEOMETRY
Refer to Appendix 7.3.
FOOTPATH, KERB + CARRIAGEWAY
Footpath: Paved, Concrete Unit Paver with Brick Inlay. **Kerb:** 150mm **Carriageway:** 6-6.5m
FURNITURE TYPE
To City of Sydney Standards for 'Village Centre' areas.
LIGHTING TYPE
City of Sydney: Bronze Smart Pole Refer to Appendix 7.3
STREET TREE TYPE
Refer to Appendix 7.3 for further information

GEORGE STREET MID (25.0M)

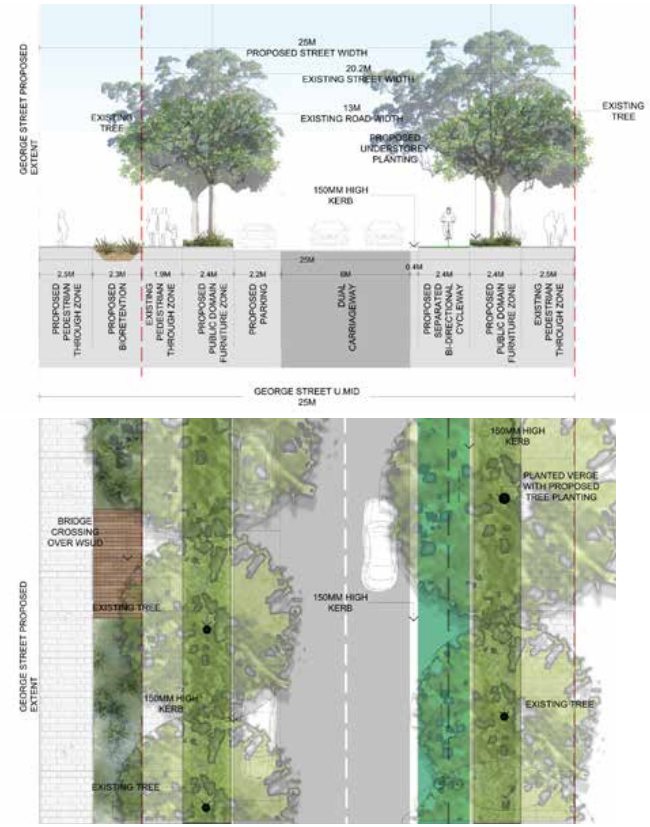


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Fig. 6.1.10 George Street Mid 25.0m

The southern section of the Pedestrian Boulevard connects Wellington and John streets. It contains a number of urban plazas, a community building and other activation opportunities such as fitness, cafe breakout, doorstep play. Similar to the northern section of the Pedestrian Boulevard, the southern section presents a 'green' character and forms part of the ALMR. The WSUD initiatives found in the northern section, run the entire length of the Boulevard and continue through the southern section into Waterloo Common.

GEORGE STREET NORTH (20.2M)

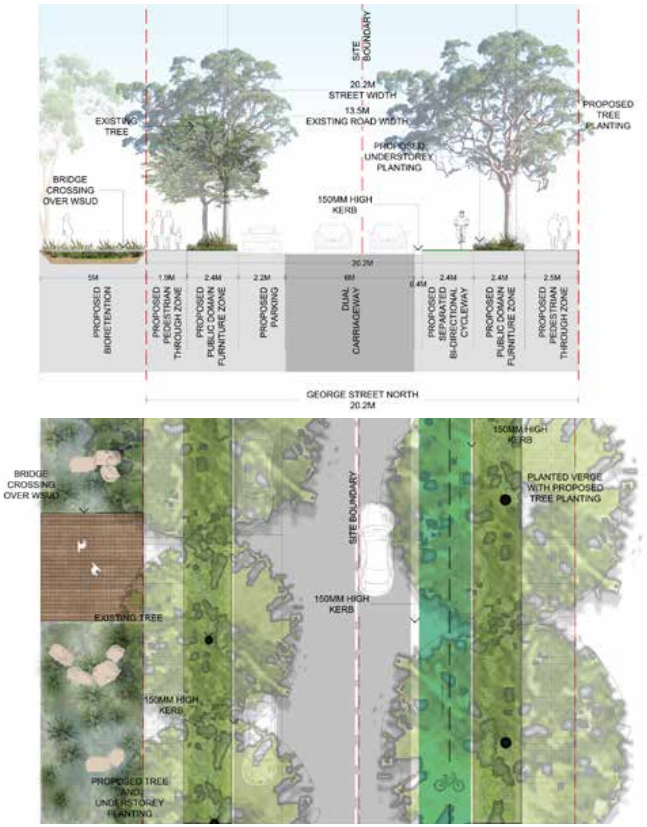

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Fig. 6.1.11 George Street North 20.2m

The northern section of the Pedestrian Boulevard adjoins the Waterloo Gateway Plaza and includes a series of active micro spaces along its length. A community building on the western edge encourages activation and breakout space, strengthening the relationship between the community and public domain. The Pedestrian Boulevard presents a 'green' character, delivering ample shade cover, the blue Line water story and pocket lawns. The northern Pedestrian Boulevard is also an important movement route towards the Metro Quarter and Village Green, and contributes to the Accessible Local Movement Route (ALMR).

GEORGE STREET SOUTH (20.2M)

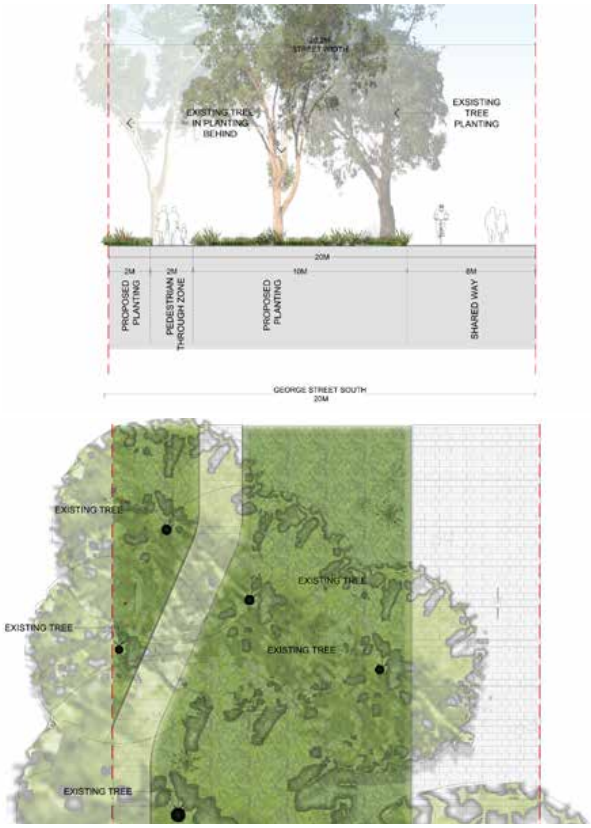

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Fig. 6.1.12 George Street South 20.2m

The northern section of the Pedestrian Boulevard adjoins the Waterloo Gateway Plaza and includes a series of active micro spaces along its length. A community building on the western edge encourages activation and breakout space, strengthening the relationship between the community and public domain. The Pedestrian Boulevard presents a 'green' character, delivering ample shade cover, the blue Line water story and pocket lawns. The northern Pedestrian Boulevard is also an important movement route towards the Metro Quarter and Village Green, and contributes to the Accessible Local Movement Route (ALMR).

GEORGE STREET LOWER (20.2M)

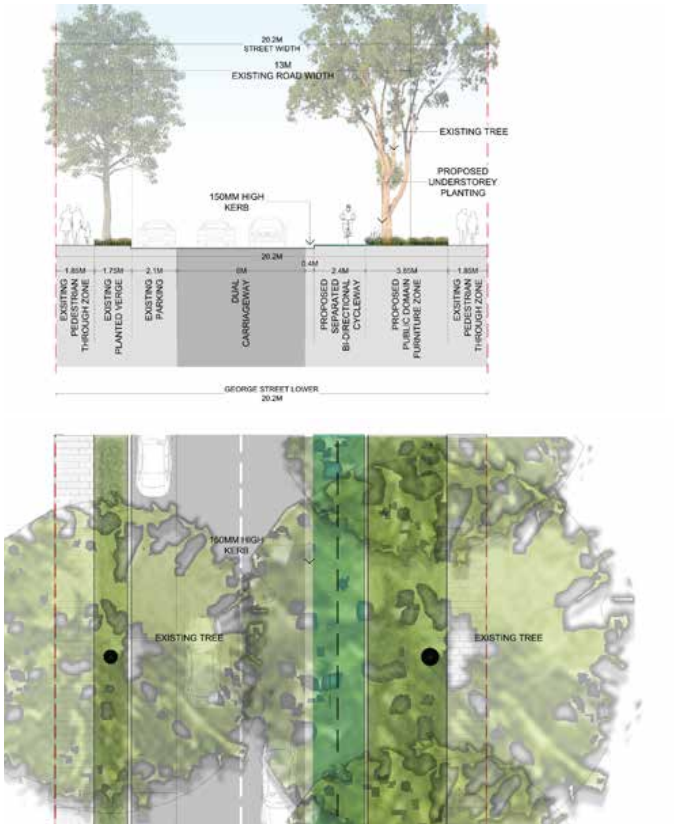

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Fig. 6.1.13 George Street Lower 20.2m

The northern section of the Pedestrian Boulevard adjoins the Waterloo Gateway Plaza and includes a series of active micro spaces along its length. A community building on the western edge encourages activation and breakout space, strengthening the relationship between the community and public domain. The Pedestrian Boulevard presents a 'green' character, delivering ample shade cover, the blue Line water story and pocket lawns. The northern Pedestrian Boulevard is also an important movement route towards the Metro Quarter and Village Green, and contributes to the Accessible Local Movement Route (ALMR).

LOCAL STREETS

KEY PUBLIC DOMAIN ELEMENTS

STREET TYPE

Local Street 20.2m wide

STREET GEOMETRY

Refer to Appendix 7.3 Local Streets

FOOTPATH, KERB + CARRIAGEWAY

Footpath (Varies) :
Pitt, Cope, Wellington & Raglan Street: Insitu Concrete Paving to match existing
Cope Street (Metro): Concrete Unit Paver
Kerb (Varies) :
Pitt, Cope, Wellington & Raglan Street: Insitu Concrete Kerb to match existing
Cope Street (Metro): Concrete Unit Paver
Carriageway (Varies):
Pitt, Cope, Wellington & Raglan Street: Dual Carriageway to match existing
Cope Street (Metro): Shared Carriageway

FURNITURE TYPE

To City of Sydney Standards for 'Village Centre' areas.

LIGHTING TYPE

(Varies) Pitt, Cope, Wellington & Raglan Street:
City of Sydney: Endeavour Energy Pole
Cope Street (Metro & South)
City of Sydney: Bronze Smart Pole
Refer to Appendix 7.3

STREET TREE TYPE

Refer to Appendix 7.3 for further information

COPE STREET (METRO - 20.2M)

Between Raglan and Wellington streets

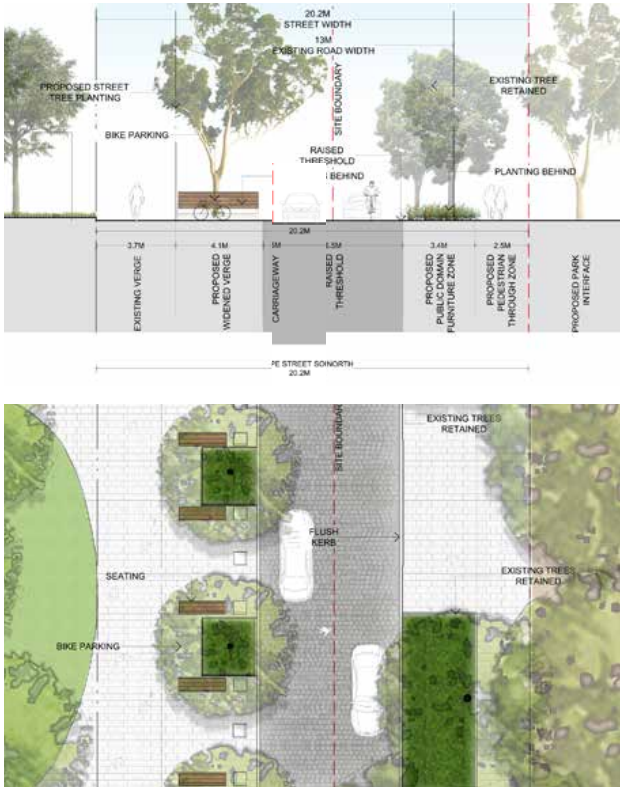

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Fig. 6.1.14 Cope Street, Metro

Cope Street Metro, as the threshold between the Metro Quarter and Village Green, is a shared slow street for pedestrian and cyclist safety. Ample bicycle parking, shade and seating options and the widening of the existing verge, will accommodate the high pedestrian traffic and provide the range of amenities needed in this area. This highly active street connects the Metro Quarter to the Estate, through the Activity Centre Plaza.

COPE STREET (SOUTH - 20.2M)

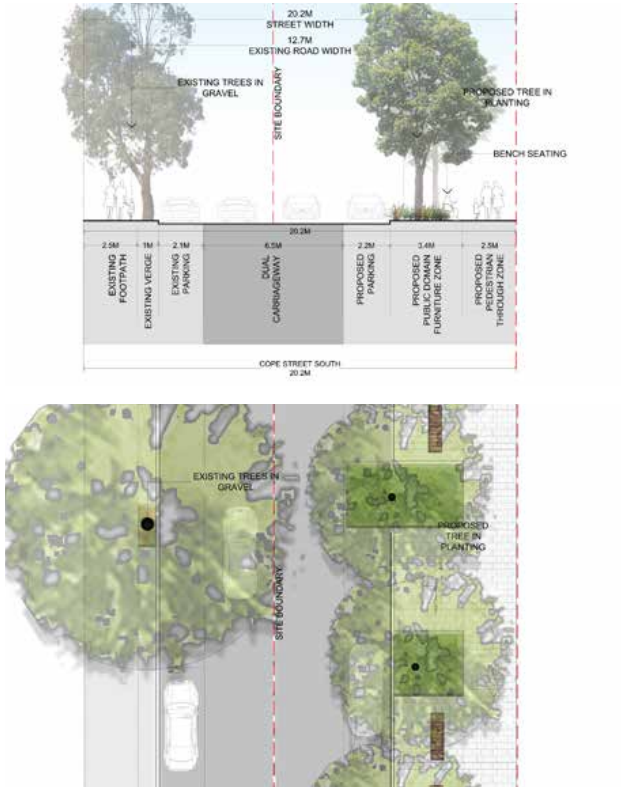

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Fig. 6.1.15 Cope Street, North and South

The remaining sections of Cope Street both north and south, possess a more residential character. A dedicated regional cycleway distinguishes these sections of the street from Cope Street Metro. Bicycle parking and bench seating are provided along the edges, along with widened pedestrian through zones. A combination of existing and new street trees provides shade from their canopies.

RAGLAN STREET (20.2M)

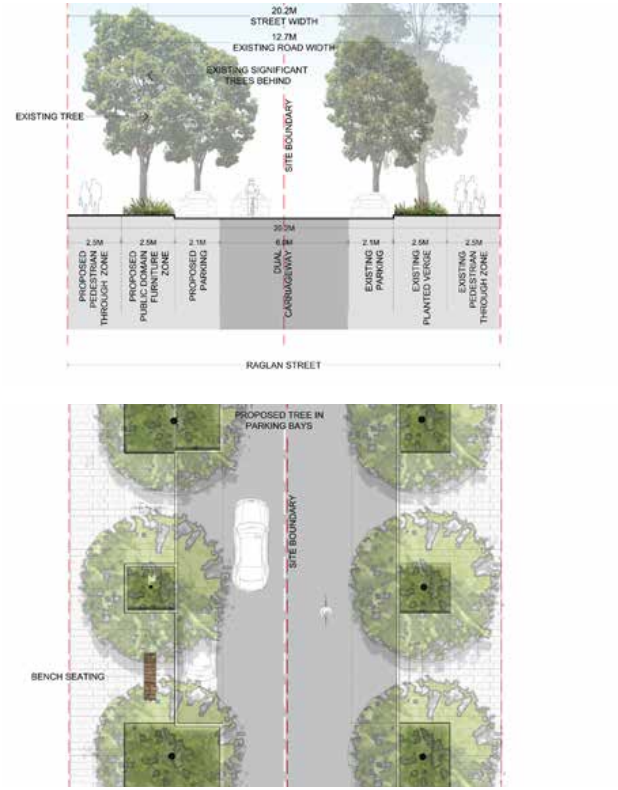

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Fig. 6.1.16 Raglan Street

Raglan Street serves as a key east - west connection through the Estate. Parking bays will be provided in selected areas along this major local street, buffered by planting and tree pits. Larger building setbacks along Raglan Street accommodates the retention of existing trees which, combined with the street tree canopies, provides a ‘green’ street character.

PITT STREET (20.2M)

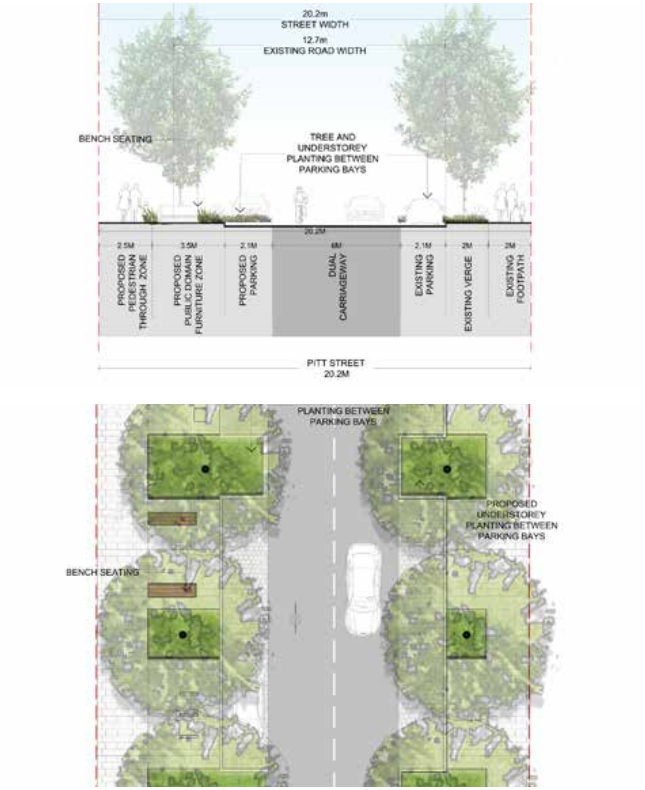

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Fig. 6.1.17 Pitt Street

Running along the Estate’s eastern boundary, Pitt Street provides a dual carriageway, parking on both sides of the street and new amenities on the western side. Existing parking, verge and footpath are maintained on the street’s eastern side, whilst a wider pedestrian through zone, bench seating and new street trees comprises the western side. Overall, the street exhibits a more residential character.

WELLINGTON STREET (20.2M)

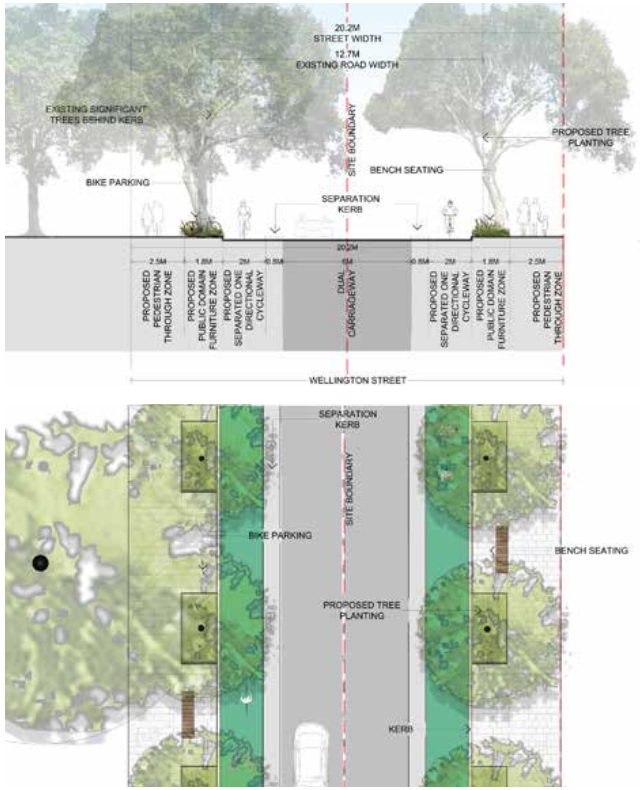

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Fig. 6.1.18 Wellington Street

Along both sides of Wellington Street are dedicated separated cycleways. A separation kerb distinguishes the cycleway from the roadway, whilst planting and street trees buffer the cycleway from pedestrian through zones. Similar to Raglan Street, building setbacks have been increased to accommodate the retention of existing trees which, combined with the street tree canopies, provides Wellington Street with a ‘green’ street character.

SHARED STREET AND LANEWAYS

KEY PUBLIC DOMAIN ELEMENTS
STREET TYPE
Shared Streets & Lanes 9 - 20.2m wide
STREET GEOMETRY
Refer to Appendix 7.3 Shared Streets & Lanes
FOOTPATH, KERB + CARRIAGEWAY
Footpath (Varies): Lanes: Brick Paving with Granite sets Shared Streets: Granite Unit Paving with Concrete Unit Paving **Kerb (Varies):** Lanes: Flush Shared Streets: Raised faced to match adjacent Unit Paver **Carriageway (Varies):** Lanes: Shared Dual Carriageway Shared Streets: Shared Single Carriageway
FURNITURE TYPE
(Varies) East-West Lanes & Shared Streets: To City of Sydney Standards for 'Village Centre' areas. **North-South Lanes:** Unique & Site Specific
LIGHTING TYPE
(Varies) East-West Lanes Wall mounted / Catenary Lighting **North-South Lanes:** Unique & Site Specific **Shared Streets:** City of Sydney: Bronze Smart Pole Refer to Appendix 7.3
STREET TREE TYPE
Refer to Appendix 7.3 for further information

SHARED SLOW STREET (20.2M)

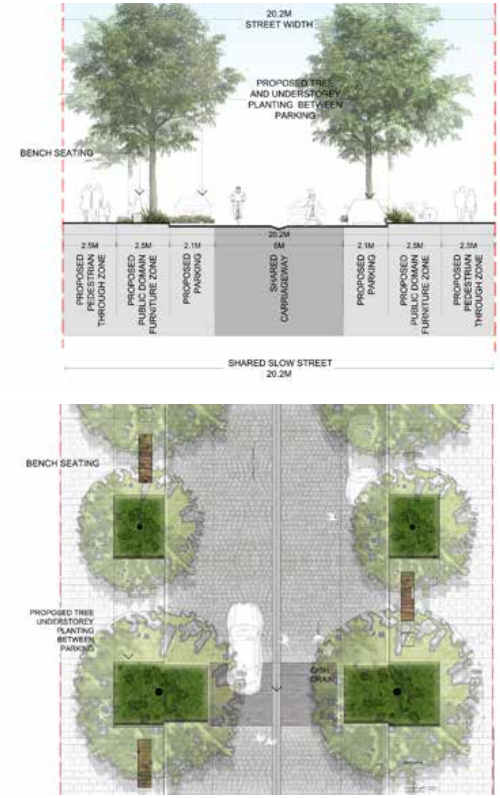

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Fig. 6.1.19 Shared Slow Street

Variation in pavement treatment distinguishes shared slow streets from the surrounding streetscape. Concrete sets are used within the shared carriageway, with a contrasting brick strip visually dividing the shared carriageway. Bench seating, planting and street trees complete the streetscape and buffer the carriageway from the pedestrian through zones on either side.

LANEWAY ONE WAY (20.0M)

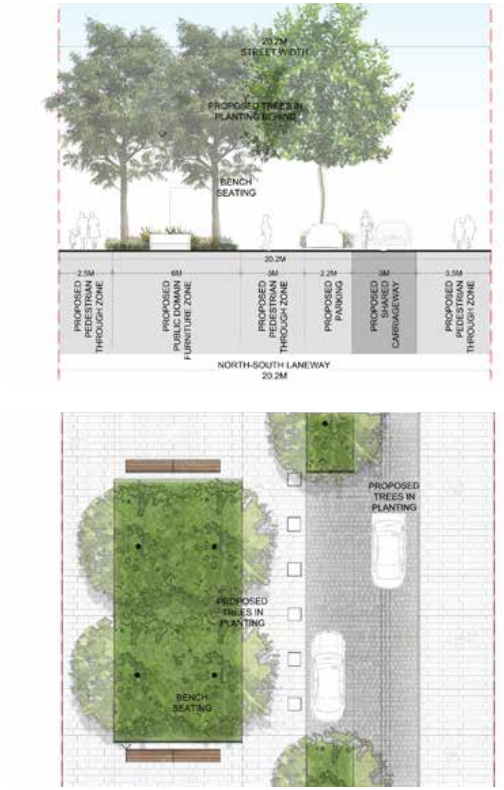

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Fig. 6.1.20 Laneway One Way 20m

The Neighbourhood Laneways provide a single direction shared carriageway. Concrete blocks provide safety barriers on the carriage edge, buffering the carriageway from the pedestrian through zone. Street trees, planted in pits, alternate between the blocks and provide shade amenity as well as visually softening the streetscape.

NEIGHBOURHOOD LANEWAY (9.0-10.0M)

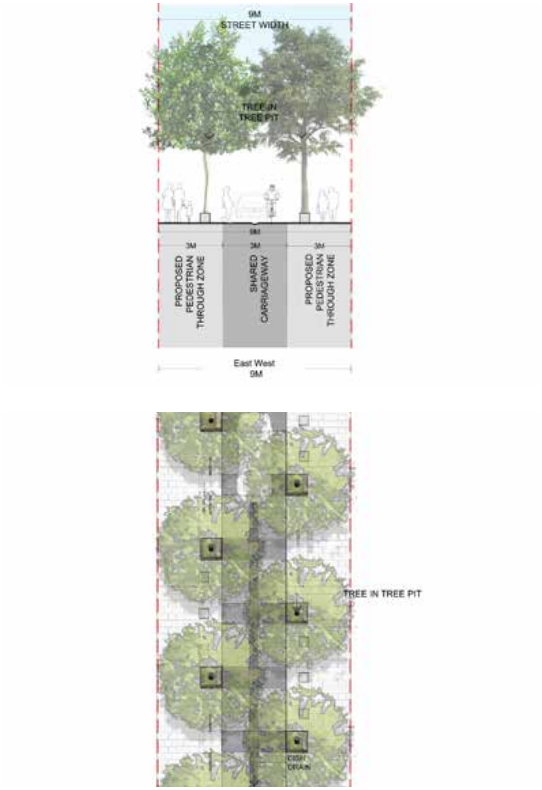

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Fig. 6.1.21 Neighbourhood Laneway

The Neighbourhood Laneways provide a single direction shared carriageway. Concrete blocks provide safety barriers on the carriage edge, buffering the carriageway from the pedestrian through zone. Street trees, planted in pits, alternate between the blocks and provide shade amenity as well as visually softening the streetscape.

PARK LANEWAY (WEST - 9.0M)

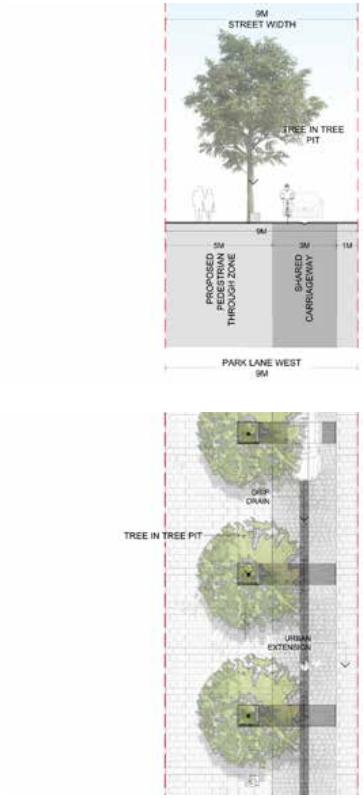

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Fig. 6.1.22 Park Laneway (West)

The Park Laneway on the western edge of Waterloo Common provides a single shared carriageway with ample bicycle parking, seating options and canopy planting.

PARK LANEWAY (EAST - 9.0M)

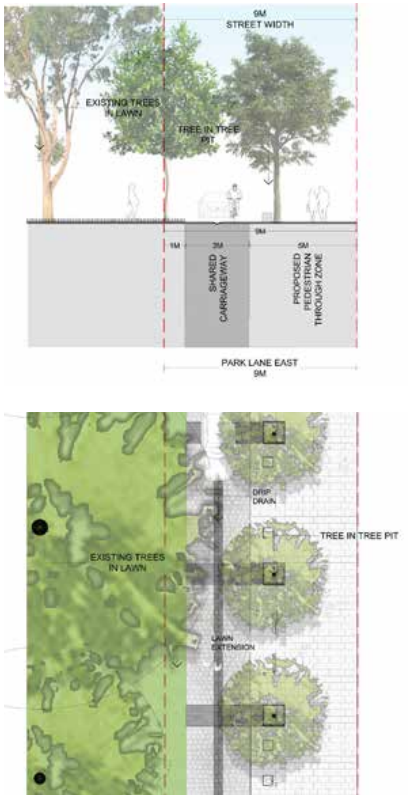

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Fig. 6.1.23 Park Laneway (East)

The Park Laneways to the east of George Street provides ample pedestrian through zones, adding to the public open space.. A single shared carriageway is buffered to the pedestrian through zone by street tree planting, bicycle parking and seating options.

PEDESTRIAN LANEWAYS

KEY PUBLIC DOMAIN ELEMENTS
STREET TYPE
Pedestrian Lane 6m - 9m wide
STREET GEOMETRY
Refer to Appendix 7.3 Pedestrian Lanes
FOOTPATH, KERB + CARRIAGEWAY
Footpath: Brick Paving with Granite Sets **Kerb:** Flush **Carriageway:** None Pedestrian Only Street
FURNITURE TYPE
Unique & Site Specific
LIGHTING TYPE
Unique & Site Specific Refer to Appendix 7.3
STREET TREE TYPE
Refer to Appendix 7.3 for further information

PEDESTRIAN LANEWAY (9.0M)

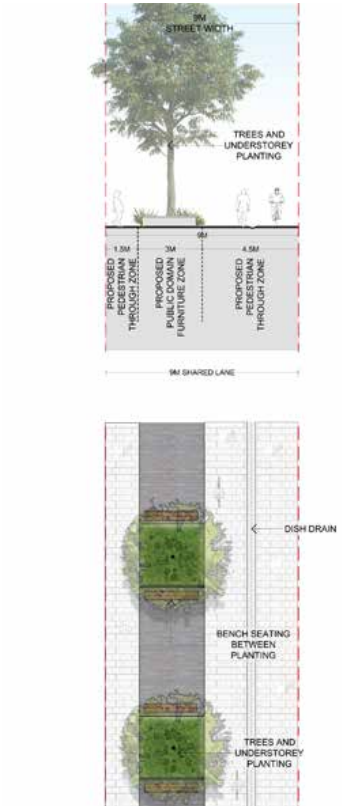

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Fig. 6.1.24 9m Pedestrian Laneway

The Pedestrian Laneway contains designated movement corridors for cyclists and pedestrians. Trees planted in tree-pits, and bench seating, are offset along the length of the lane, distinguishing the cycle corridor from the pedestrian through zones on either side. Brick pavement treatment in these areas identifies the nature of the street as a 'pedestrian only' zone.

PEDESTRIAN LANEWAY (6.0M)

Ⓟ

Fig. 6.1.25 6m Pedestrian Laneway

These narrower laneways are primarily for pedestrians only, using a darker brick pavement treatment to indicate this. A single line of trees in pits and bench seating, down the centreline of the laneway provides two equally wide spaces for pedestrian movement.

Fig. 6.1.26 Indicative CGI: Neighbourhood laneway (9m)
Source: Virtual Ideas, 2020

Fig. 6.2.1 Indicative CGI: George Street pocket park
Source: Virtual Ideas, 2019

6.2 URBAN AND BUILT FORM

"...make it a place where we can be proud to live."

*Survey respondent**

This section describes the urban and built form strategies that underlie the Indicative Concept Proposal. Together with the public domain and open space elements, the urban and built form elements frame the public domain. The massing and height strategy across the masterplan provides for varied heights across Waterloo South to create visually interesting urban forms that respond to the opportunities and challenges of the site, builds upon the existing context, responds to environmental constraints, and provides amenity to both the public and private domain.

Urban and built form elements, shaped by the open space and public domain configuration, promote a diversity of built form, clear definition of the public domain, and street-walls that frame the experience at eye level, whilst taller buildings provide markers, landmarks and height diversity.

* "Let's Talk Waterloo - Visioning Report Key Findings", KJA, May 18, p23.

Fig. 6.2.2 Indicative CGI: Waterloo Common facing east
Source: Virtual Ideas, 2020

6.2.1 APPROACH TO HEIGHT

As a pedestrian priority precinct, Waterloo South will be experienced as a walkable place. The form, proportion, articulation, variation, modulation, depth, materiality, texture and colours of the urban elements, together with the public domain, shape the pedestrian experience.

The public domain has been arranged with a focus on the public realm experience through varied open space, street and movement networks. The private domain is arranged with a focus on providing diverse and flexible urban and built forms that allow for a range of architectural responses.

Urban and built form elements, shaped by the open space and public domain configuration, promote a diversity of built form responses, clear definition of the public domain, and street-walls that frame the experience at eye level, whilst taller buildings provide markers, landmarks and height diversity.

Blocks contain a variety of built form which allows for different options to accommodate a variety of housing, as well as satisfy considerations for ground level activation, relationship to context, and solar access provisions to public, communal, and private open space.

Building heights across Waterloo South are distributed to define the street edge at the pedestrian scale and provide legibility and orientation at the local and neighbourhood level. The mix and range of tall buildings will create a visually interesting skyline with slender forms,achieved through small floor plates that respond to solar access and wind mitigation.

Low rise typologies frame the public space and create the street level pedestrian experience. Mid rise typologies define the public domain and create the local level experience. Tall buildings define Waterloo South at the neighbourhood level. Built form diversity operates at Street (low-rise; 1 to 4 storeys + attic), Local (mid-rise; 6 to 8 storeys + attic), Neighbourhood (tall; 15 to 20 storeys and district / landmark buildings; 29 to 32 storeys) levels, as buildings heights are experienced differently at the street or eye level.

Refer to Appendix 7.5 and 7.7 for further information

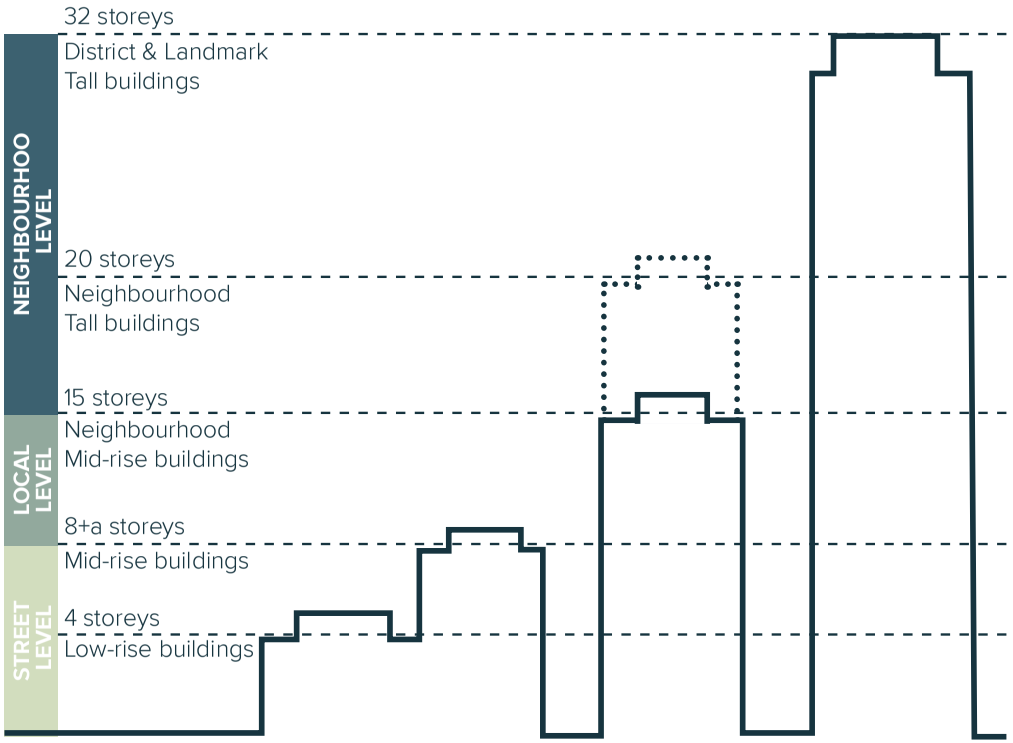


Fig. 6.2.3 Building height diagram

6.2.2 TALL BUILDINGS

Focusing height close to the new Waterloo Metro Station supports liveability by placing people close to transport, jobs, retail, education and recreation opportunities

A MULTI-CENTRE CITY[1]

With the new metro station, and increased services and amenities, Waterloo South will become a new urban village and local centre contributing to the City of Sydney's network of villages and multi-centre city strategy. Waterloo South is set within a context that will fundamentally change over the next 40 years.

The Central Sydney Strategy 2016 - 2036 Key Move 4 provides for employment growth in new tall building clusters in areas of Central Sydney that are less constrained by solar access requirements. This allows opportunities for growth, efficient land use, delivery of community infrastructure and innovative design[2]. New tower clusters are envisaged to form southwards towards Redfern as the future southern gateway to Central Sydney that supports the City of Sydney's multi-centre city strategy[1]. The proposed distribution of heights work within the multi-centre city strategy's hierarchy of heights.

With the renewal of Waterloo South into a new urban village and the Metro Quarter's over station development (OSD) into an activity centre, at the same time the new metro station delivers increased connectivity, Waterloo South has the potential to grow into a new strategic centre within the City's multi-centre strategy. This capacity is provided through the adaptable basement, ground and level 1 that allows for non-residential uses to increase in pace with the increased demand required by a growing population as part of the

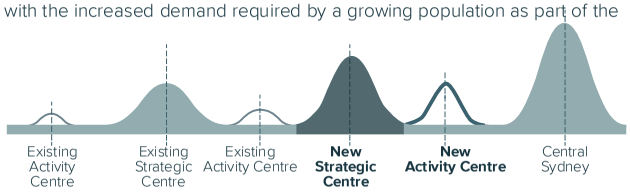


Fig. 6.2.4 A multi-centre city diagram

[1] Adapted from Central Sydney Strategy 2016 - 2036, City of Sydney, p219.
[2] Central Sydney Strategy 2016 - 2036, City of Sydney, p201.
[3] Refer Appendix 7.4 for further details on the retail strategy.

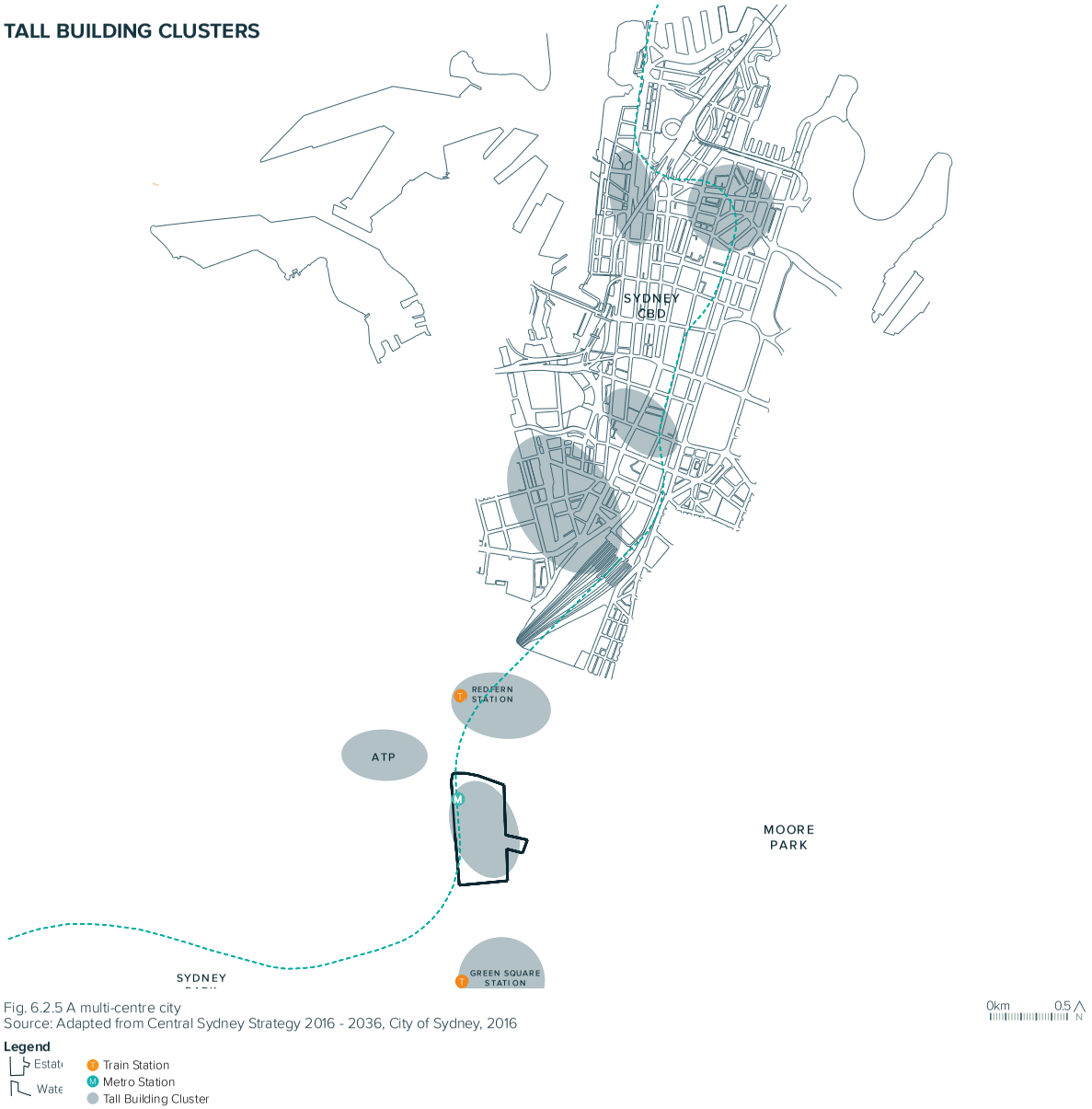


Fig. 6.2.5 A multi-centre city
Source: Adapted from Central Sydney Strategy 2016 - 2036, City of Sydney, 2016

Within the surrounding context, tall buildings reinforce an area's identity and support way-finding and legibility. Some become landmarks that identify and are intrinsically linked to it's locality

Through considered design and location, tall buildings can be distinct and defining components of an area's character contributing to a visually interesting skyline and as recognisable landmarks that assist legibility and wayfinding. In the local vicinity, these buildings include:

- Central Park (34 storeys) in Chippendale
- The TNT buildings (18 storeys) in Redfern
- Ovo (28 storeys) in Green Square

This is consistent with the City of Sydney's tall building strategy in areas surrounding the Estate that includes provisions for tall buildings as part of the City's strategy[1] to achieve built form diversity. When completed, the skyline around the Estate will comprise:

- Buildings between 20-25 storeys in Lachlan Precinct
- Buildings up to 20 storeys in Danks Street South Precinct
- Buildings up to 28 storeys in Green Square
- Buildings up to 24 storeys in Redfern

[1] Refer to City of Sydney DCP 2012 and planning documents.

LANDMARK BUILDINGS AT DISTRICT LEVEL

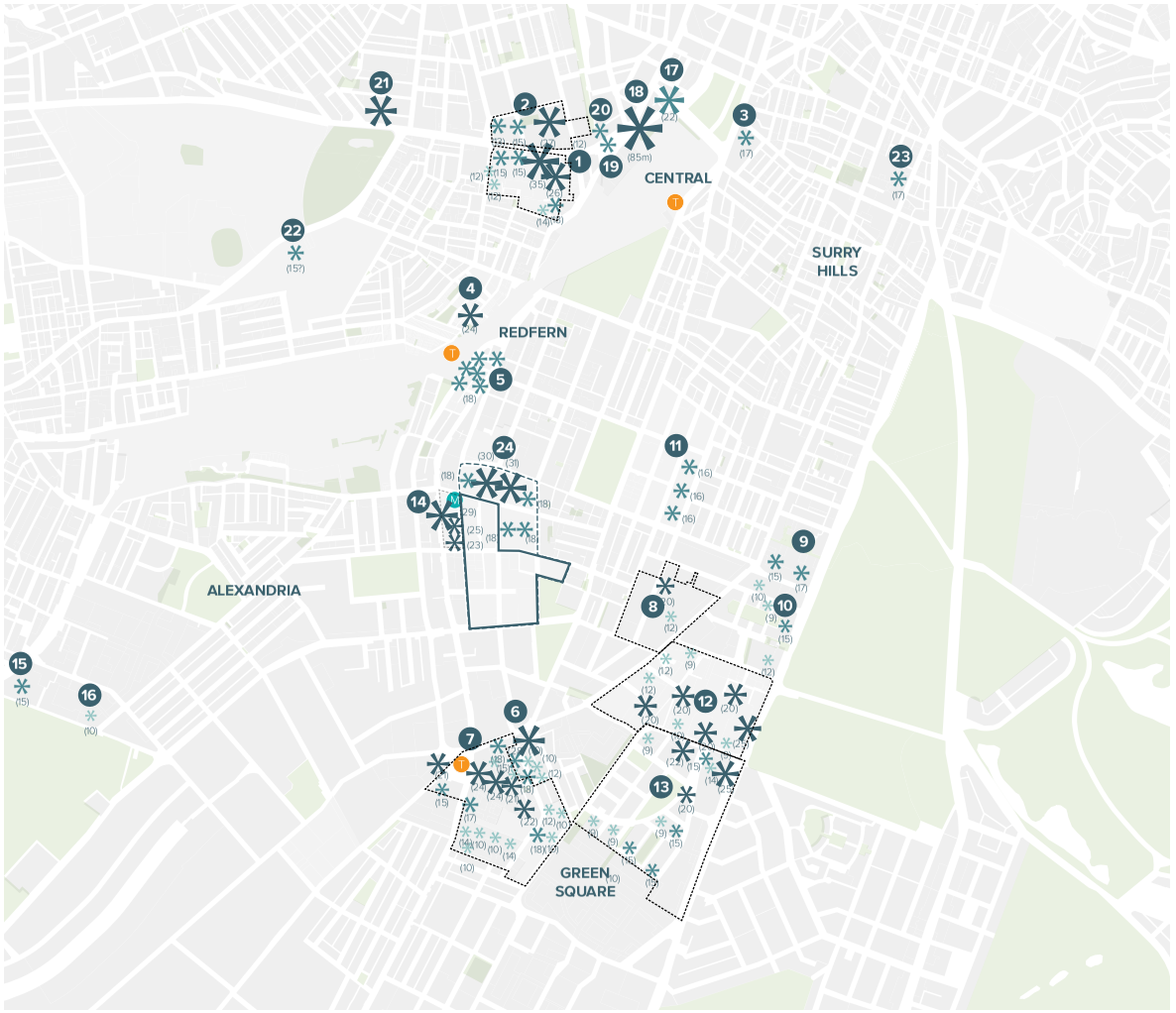


Fig. 6.2.6 Landmark, local and tall buildings around Waterloo Estate
Source: Relevant DAs and Planning Proposals, City of Sydney and Department of Planning & Environment, 2019

Legend

- Landmark Building (>20 Storeys)
- Neighbourhood Tall Building (15-19)
- Neighbourhood mid-rise Building (9-14 Storeys)
- 1 Central Park
- 2 UTS Tower within UTS Broadway Precinct
- 3 Centennial Plaza
- 4 Col James Student Accommodation
- 5 TNT Apartments
- 6 OVO by Mirvac
- 7 Green Square Town Centre
- 8 Danks Street South Precinct
- 9 Moore Park Gardens
- 10 Chevron Crown Square by Meriton
- 11 Redfern Social Housing Estate
- 12 Lachlan Precinct
- 13 Victoria Park Zetland
- 14 Waterloo Metro Quarter
- 15 Zenix Apartments
- 16 Sydney Park Village
- 17 Service NSW
- 18 Central Station Clock
- 19 Mercure Sydney Tower
- 20 Marcus Clarke Building TAFE NSW
- 21 Broadway Shopping Centre Clock Tower
- 22 Jane Foss Russell Building USYD
- 23 St Margarets
- 24 Matavai, Turanga, Daniel Solander, Marton, James Cooks and Joseph Banks,

Tall buildings, like those in a similar context in Redfern, Green Square and Central Park, have the potential to become landmarks that reinforce Waterloo South's identity and support wayfinding and legibility

Tall buildings locate people closer to infrastructure that includes transport, open space, retail, services and facilities. Tall buildings have been organised across Waterloo South in response to the street, local and neighbourhood level experience. Key influences to their location, configuration and placement are:

Street Level:
- To provide a comfortable and engaging pedestrian environment

Local Level:
- To respond to existing and future context
- To respond to key views and vistas
- To align to key view corridors
- To define the public domain experience

Neighbourhood Level:
- To locate district maximum heights next to key entry points into the Estate
- To respond to solar access requirements
- To respond to solar access requirements fo:
  - Existing public open space
  - Proposed Raglan Street Plaza at the Metro Quarter
  - Proposed public open space
  - To existing and future surrounding context

District Level:
- To provide landmarks that assist in way-finding and orientation through the Estate and in the skyline
- To locate district maximum heights next to new open space, and along George Street and Blue Line connecting to the future metro station
- To respond to solar access requirements
- To respond to solar access requirements fo:
  - Existing public open space
  - Proposed Raglan Street Plaza at the Metro Quarter
  - Proposed public open space
  - To existing and future surrounding context

Refer to Appendix 7.5 for further information

TALL BUILDINGS

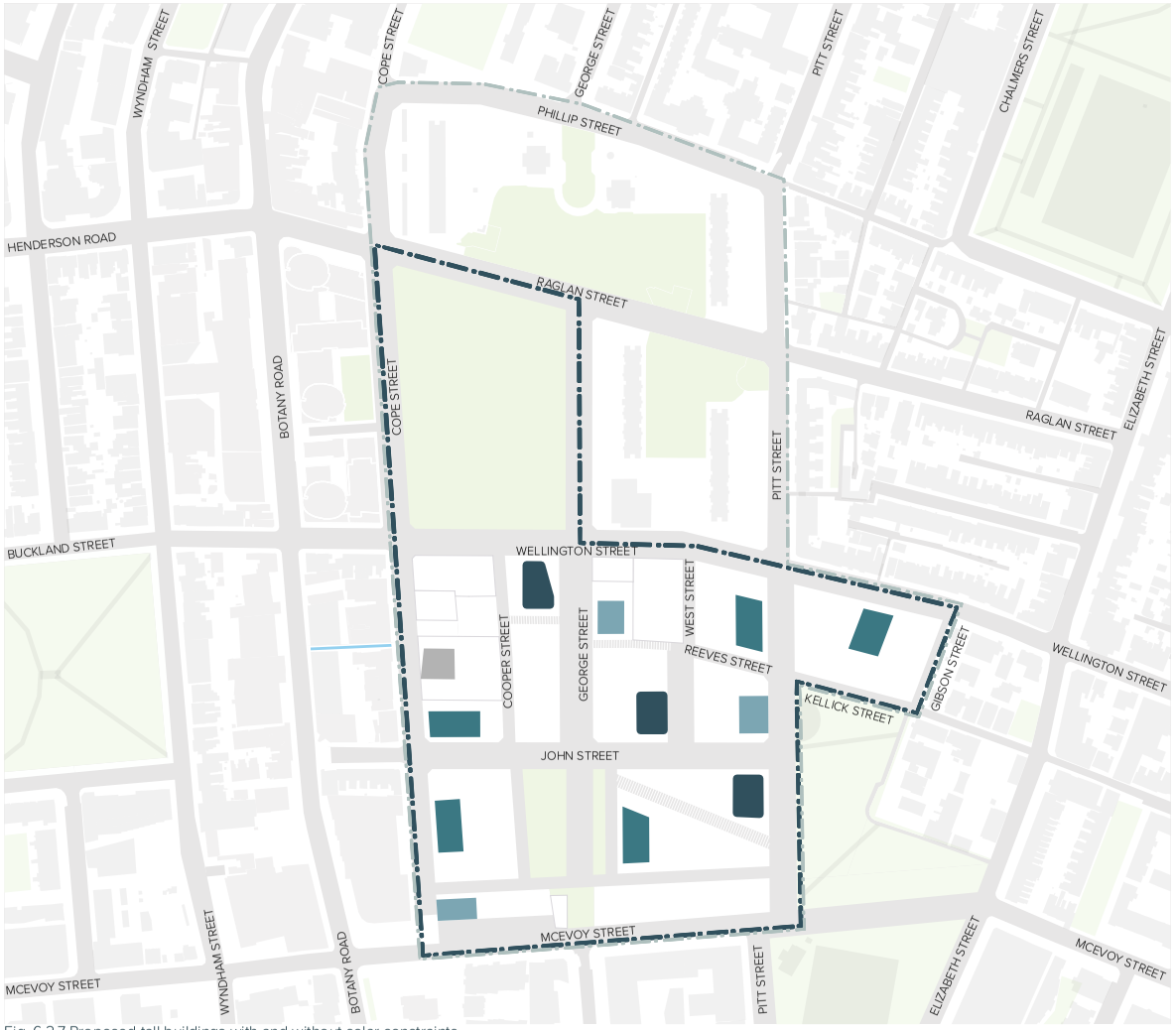


Fig. 6.2.7 Proposed tall buildings with and without solar constraints

Legend

- Waterloo Estate
- Waterloo South
- Waterloo Metro Station
- Private Sites
- Proposed Tall Building within Private Sites (15)
- Tall Building (Neighbourhood - 15-20 storeys)
- Tall Building (District & Landmark - 29-32 Storeys)

TALL BUILDING STRATEGY

15 - 20 Storeys (Neighbourhood Tall Buildings)

Neighbourhood buildings are distributed across Waterloo South in close proximity to the open space network that includes both existing and future public open space.

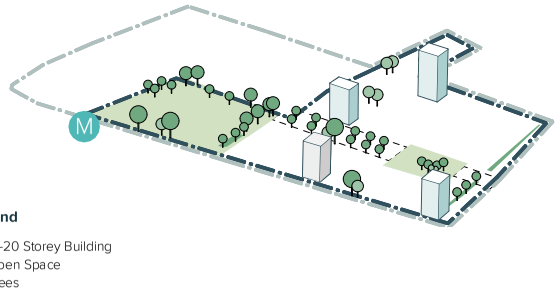


Fig. 6.2.8 Proposed neighbourhood buildings in close proximity to open spaces

30 - 32 Storeys (District Tall Buildings)

District buildings are located at key entry points into Waterloo South as local markers.

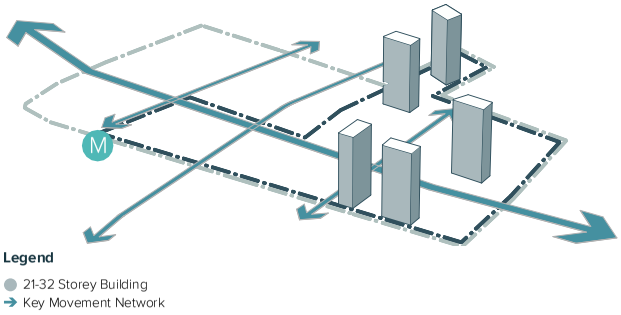


Fig. 6.2.9 Proposed district tall buildings along key streets

29 - 31 Storeys (Landmark Tall Buildings)

Landmark buildings are focused along topographical features such as Waterloo Park North and the Blue Line that connects surrounding neighbourhoods directly to the future metro station and provides landmarks at key locations on the skyline.

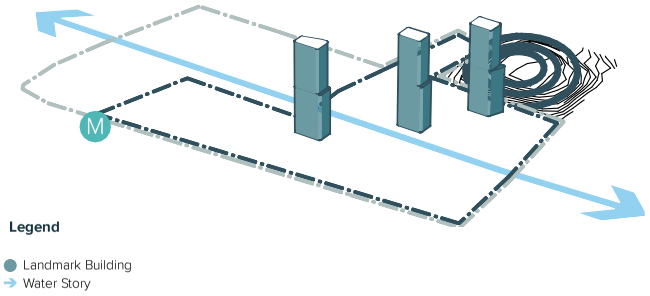


Fig. 6.2.10 Proposed landmark buildings along Blue Line

BUILDING SEPARATION STRATEGY

Building separation amenity to adjacent built form.

Minimum 24 metres separation between neighbourhood tall buildings

Fig. 6.2.11 Proposed location of local buildings

Minimum 40 metres separation between district tall buildings

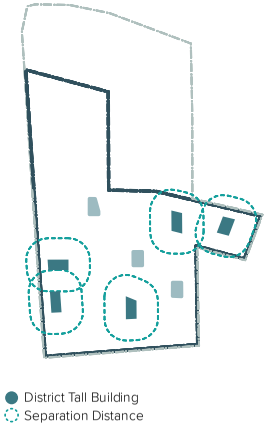


Fig. 6.2.12 Proposed location of district tall buildings

Minimum 60 metres separation between landmark tall buildings

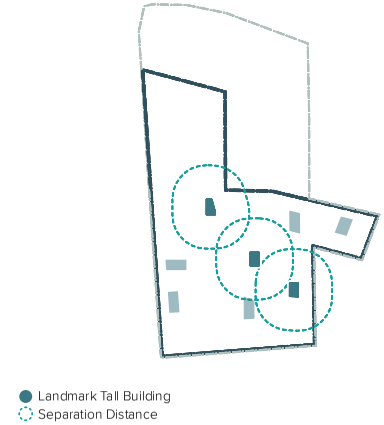


Fig. 6.2.13 Proposed location of landmark tall buildings

6.2.3 BUILDING HEIGHTS

A range of heights are distributed across Waterloo South to provide diversity of building forms. From streetwall buildings that frame the street level experience to taller buildings that are visible landmarks within the district skyline

Building heights across Waterloo South are distributed to define the street edge at the pedestrian scale and provide legibility and orientation at the local and neighbourhood level. Key strategies include:

- Height provided in less constrained areas to allow for lower heights to more critical interfaces.
- A fine grained, enriched and activated public domain provided through built form massing, scale and height that supports variety in architectural design and character.
- Open space amenities (including the Village Green, Waterloo Common and George Street).
- Built form along the key Blue Line alignment through Waterloo South that connects the surrounding context to the new Waterloo Metro Station and key destinations within Waterloo South.
- Places that are appropriately scaled and achieve solar access requirements.
- Respond to key views and vistas by creating a varied and visually interesting skyline.
- Buildings stepped in response to the topography and key view corridors.
- Transition in massing and scale to the existing context that includes the adjacent heritage conservation areas of Alexandria, Redfern and Waterloo.
- Transition in massing and scale to the future public domain.
- Creating a comfortable and engaging pedestrian environment.

Refer to Appendix 7.5 for further information

BUILDING HEIGHTS

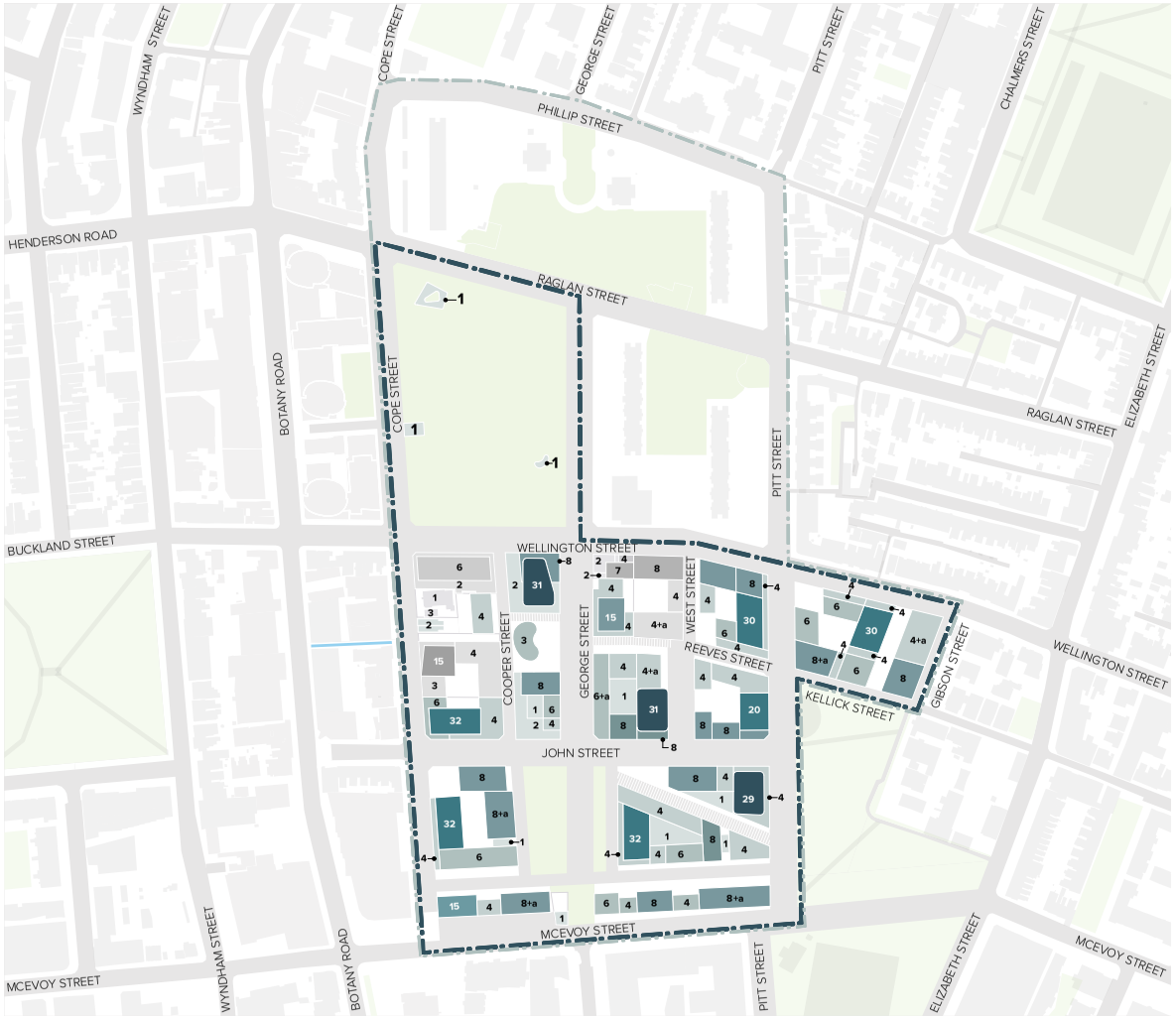


Fig. 6.2.14 Proposed building heights (in storeys)

0m 100 N

Legend

- Waterloo Estate
- Waterloo South
- Waterloo Metro Station
- 1.2.3.. No of Storeys for Buildings within Precinct
- Buildings within Private Sites
- Low-rise Buildings (1-4+attic storeys)
- Mid-rise Buildings (6-8+attic storeys)
- Neighbourhood Tall Buildings (15-20 storeys)
- District and Landmark Tall Buildings (29-32 storeys)

Fig. 6.2.15 Kensington Street, Chippendale

6.2.4 BUILDING HEIGHT DISTRIBUTION

A variety of built form distributed across Waterloo South provides diversity and supports a rich and varied ground plane

Building forms and heights across Waterloo South are structured to define the street edge at the pedestrian scale, whilst providing legibility and orientation at the local and neighbourhood level. Their position and orientation respond to building separation, street setbacks and location adjacent to open space or along major movement corridors. Building forms respond to topography and maximum heights, floorplate sizes and block lengths, articulation requirements and through site link requirements. Technically they respond to environmental considerations including solar access to adjacent areas, mitigation of wind effects, and relationship to key views and vistas, and contextually to the interface with the existing context both within the Estate and in adjacent areas.

A set of approaches, unique to Waterloo South, have been developed to respond to the interfaces to heritage items and the adjacent Heritage Conservation Areas. These include physical separation where it is possible, the setback of taller buildings above street-wall heights where they directly relate to adjacent buildings to be retained, and the transition in scale through a series of stepped forms where they form a continuous street wall.

Refer to Appendix 7.5 for further information

LOW RISE - STREET LEVEL (1-7 STOREYS)

- Low rise typologies define the street edge.
- Buildings frame the fine grained network of streets, through site links, public open spaces and private open spaces.

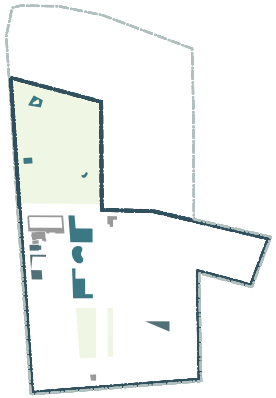


Fig. 6.2.16 Buildings of 1 to 3 storeys

1 - 3 Storeys

- 1-2 storey buildings and streetwalls form podium base for taller buildings, define the street edge and assist with wind mitigation.

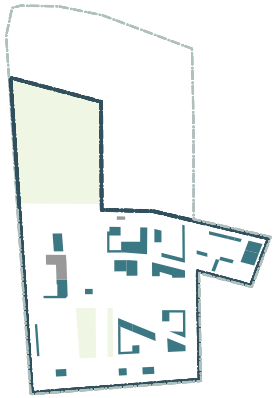


Fig. 6.2.19 Buildings of 4 storeys

4 - 4+a Storeys

- 4 storey buildings and streetwalls define the street edge.
- Buildings frame the network of streets, through-site links and publicly accessible open space, and provide a human scale at street level.

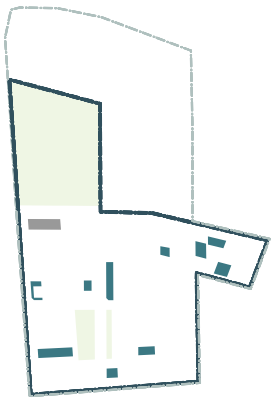


Fig. 6.2.21 Buildings of 6 to 6+attic storeys

6 - 6 + attic Storeys

- 6 storey buildings and streetwalls define the street edge.
- Setbacks and changes in plane and/or materials to upper storeys provide a transition to existing context, where contextually appropriate, and reduce the visual bulk and scale at street level through variation in form and materiality.

Fig. 6.2.17 1 Waterloo Street, Carlton
Source: Milieu Property, 2016

Fig. 6.2.18 Palencia Cultural Civic Centre
Source: Exit Architects, 2018

Fig. 6.220 Tjornely, Greve, Denmark by Studio Local
Source: World Architecture News, 2018

Fig. 6.2.22 South Kilburn Estate by Alison Brooks
Source: Paul Riddle, 2017

MID RISE - LOCAL LEVEL (8-14 STOREYS)

- Mid rise typologies define the public domain.

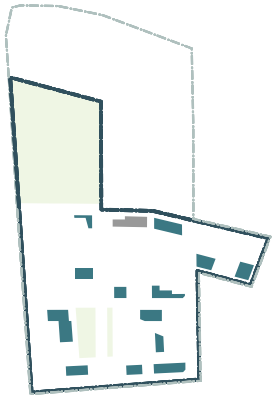


Fig. 6.2.23 Buildings of 8 to 8+attic storeys

8 - 8 + Attic Storeys

- 8 storey buildings and streetwalls defines the public domain
- Setbacks and changes in plane and/or materials to upper storeys provide a transition to existing context, where contextually appropriate, and reduce the visual bulk and scale at street level through variation in form and materiality.

Fig. 6.2.24 Camden Courtyards, UK
Source: Sheppard Robson, 2017

TALL BUILDINGS - NEIGHBOURHOOD / DISTRICT LEVEL (15-32 STOREYS)

- Tall building typologies provide identity through vertical diversity as integrated neighbourhood and free-standing markers.

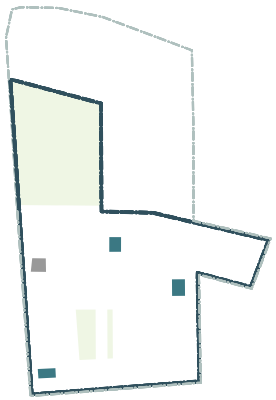


Fig. 6.2.25 Neighbourhood buildings of 15 to 20 storeys

15 - 20 Storeys (Neighbourhood)

- Neighbourhood tall buildings provide for a pencil 'infill' form that meets the ground, forming an 'extruded' fine grain pattern along the street that provides visual interest.

Fig. 6.2.26 Building Pueyrredón 1101
Source: Estudio Pablo Gagliardo, 2017

Fig. 6.2.27 The Book Company Headquarters. Source: N.E.E.D Architecture, 2017

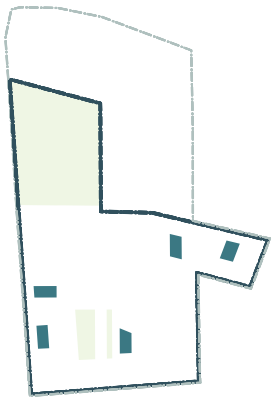


Fig. 6.2.28 District buildings of 30 to 32 storeys

30 - 32 Storeys (District)

- District tall buildings provide a transition in scale to create a diverse and attractive skyline.
- Heights relate to existing heights already within the area.
- Buildings are set back from the street edge on low to mid-rise podiums that define the street edge.

Fig. 6.2.29 Geysir, Stockholm
Source: C.F. Møller, 2017

Fig. 6.2.30 Geysir, Stockholm.
Source: C.F. Møller, 2017

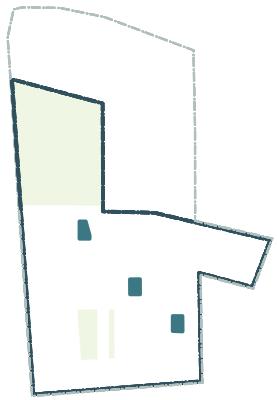


Fig. 6.2.31 Landmark buildings of 29 to 31 storeys

29 - 31 Storeys (Landmark)

- Landmark hybrid buildings provide visual connection to the wider urban area.
- Landmark tall buildings define key places within Waterloo South along the Blue Line that connects to the Waterloo Metro Station.
- Buildings are set back from the street edge with mid-rise podiums that define the street edge.

Fig. 6.2.32 Santa Fe Tower, Mexico City
Source: Sordo Madaleno Architects, 2018

Fig. 6.2.33 Bosco Verticale
Source: Stefano Boeri Architetti, 2014

6.2.5 BUILDING TYPOLOGIES

A range of building typologies provide flexible urban forms that allow for a range of architectural responses

Low-rise buildings of 1 to 4+attic storeys includes retention of existing terrace houses, heritage buildings and items that contribute to the streetscape. These buildings define the street edge, provide a transition to lower scale buildings and provide the immediate eye level experience. Low to mid-rise buildings of up to 6 + attic storeys define the street edge, frame the fine grain network of streets, lanes, links and public domain spaces, and are the predominant pedestrian experience when combined with awnings, active frontages, and landscaping within the public domain or building setbacks.

Mid-rise local buildings up to 8 + attic storeys complete the street-wall and define the street at a local level. The majority of buildings are 4 to 8+ attic storeys.

Tall buildings at a neighbourhood level serve as markers at various scales. Three Neighbourhood tall buildings from 15 to 20 provide slender fine grain infill forms, height diversity, and opportunities for dwellings at higher levels that benefit from district views. Other tall buildings act as geographic markers and landmarks to Waterloo South. District tall buildings, between 30 to 32 storeys, relate to the existing heights already within the area and are located at gateways to Waterloo South, whilst Landmark tall buildings, between 29 to 31 storeys, define key places within Waterloo South and also correspond to the key alignments that connect surrounding areas to George Street, the Village Green and the Metro Quarter.

Refer to Appendix 7.5 for further information

COMMUNITY ANCHORS

Community buildings play an important role in improving the quality of life by providing facilities and affordable services to meet the community's needs

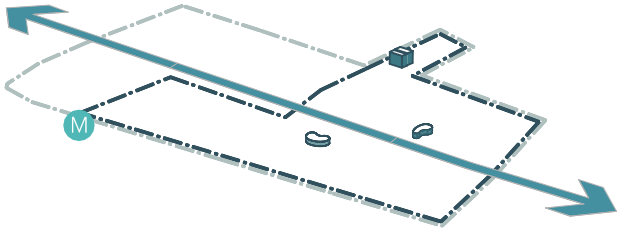


Fig. 6.2.34 Community buildings

Legend

- Waterloo Estate
- Waterloo South
- Waterloo Metro Station
- Community Facilities
- Water Story
- Sub-precincts

Three key community hubs are proposed, co-located with retail and open space amenities, to provide a community focused hub within the sub-precinct character areas. One is a building in the round (experienced on all sides) but all and have the opportunity to become community anchors within the sub-precinct area.

Fig. 6.2.35 The Word, UK
Source: Faulkner Brown, 2016

Fig. 6.2.36 Royal Arena, Denmark
Source: 3XN & HKS, 2017

ROW APARTMENTS

Row apartments have a smaller number of dwellings per core and have the flexibility to respond to changes in topography and the height of the surrounding context

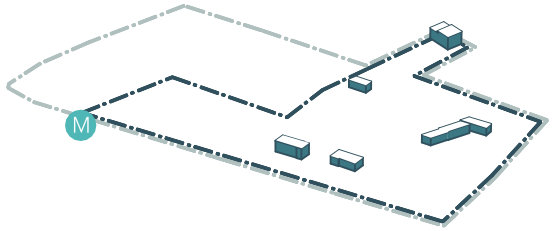


Fig. 6.2.37 Row apartment buildings

Legend

- Metro Station
- Row Apartments

Row apartments typically comprise 2-4 apartments and have the flexibility to be stepped to suit changing topographical conditions. Building alignments can respond to the heights of adjacent buildings, with changes in material or upper level setbacks aligned to adjacent properties, to maintain a consistent and integrated neighbourhood character. This typology is suited to areas where there is a significant change in level and adjacent to existing context.

Fig. 6.2.38 North Melbourne Townhouses
Source: Freadman White, 2014

Fig. 6.2.39 Union Balmain

LINEAR

The linear typology provides opportunities for consistent setbacks to the street, a sense of address and passive surveillance of the public domain

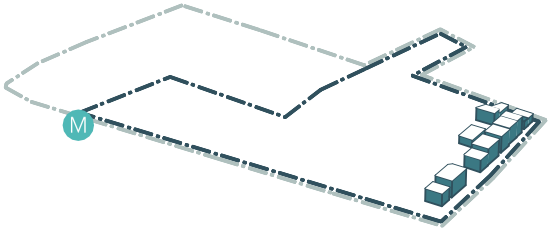


Fig. 6.2.40 Linear buildings

Legend

- Linear Building

The linear typology provides multiple entries to the front and rear, opportunities for consistent setbacks to the street, a sense of address and passive surveillance of the public domain.

Fig. 6.2.41 Camden Courtyards
Source: Sheppard Robson, 2017

Fig. 6.2.42 Residence Ham
Source: CAAN Architects, 2012

COURTYARD

The courtyard typology provides increased social interaction opportunities for residents, and multiple street addresses that activate the street and rear laneways by encouraging activity and passive surveillance.

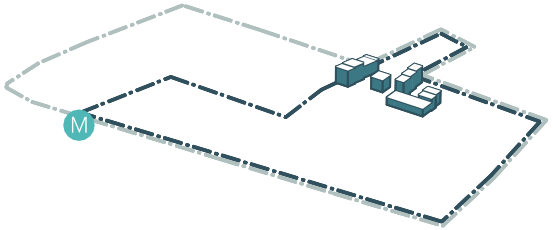


Fig. 6.2.43 Courtyard buildings

Legend

- Courtyard Building

Fig. 6.2.44 Massy - Co
Source: MFR Architects, 2012

Fig. 6.2.45 Divercity

MIXED-USE COURTYARD

The mixed-use courtyard typology extends the public domain with through-site connectivity and ground level non-residential uses that promote activity, passive surveillance and social interaction opportunities for the community

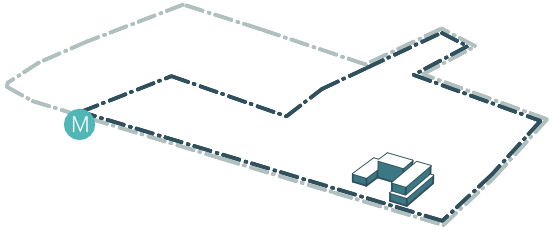


Fig. 6.2.46 Mixed-use courtyard buildings

Legend

- Mixed Use Building with Publicly Accessible Courtyard

Fig. 6.2.47 Casba Danks Street by SJB Architects

Fig. 6.2.48 Casba by SJB

TALL BUILDING

The tall building 'neighbourhood' typology provides a small footprint that reinforces the fine grain urban pattern vertically by meeting the ground, with the opportunity to become a local marker

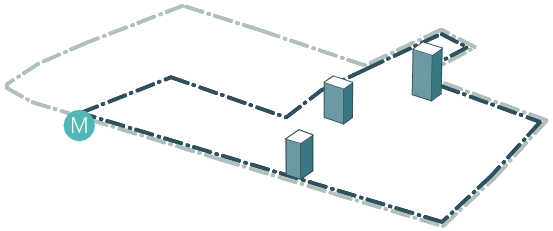


Fig. 6.2.49 Neighbourhood tall buildings

Legend

- Waterloo Estate
- Waterloo South
- Waterloo Metro Station
- Neighbourhood Tall buildings

TALL BUILDING (PODIUM)

The tall building podium typology responds to the street, local and neighbourhood scale by providing setback tall building forms, that are visible on the skyline, on podiums that relate to the scale of the pedestrian experience

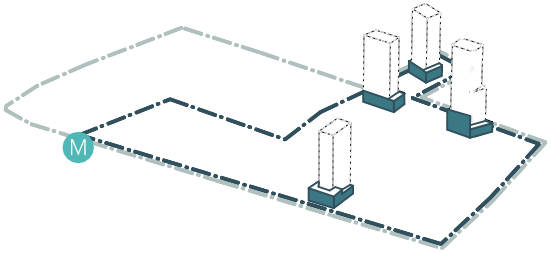


Fig. 6.2.53 Tall buildings with podium

- Landmark Building with Podium

The ground level provides the street level interface and pedestrian experience, the podium provides a consistent streetwall to define the public domain, and the tall building above has the potential to be a local marker.

HYBRID BUILDING

The hybrid typology provides an integrated mix of uses, a clear street address with active frontages, and a stepped, varying form that is environmentally responsive

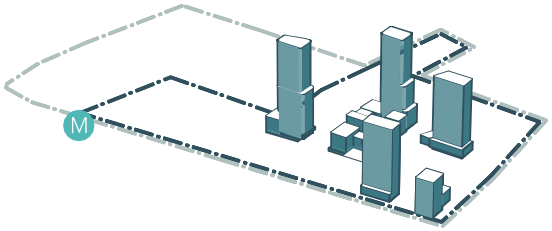


Fig. 6.2.56 Hybrid buildings

- Hybrid Building

Fig. 6.2.50 The Address-Taiga
Source: Turner, 2019

Fig. 6.2.51 Unitt Urban Living
Source: Basiches Arquitetos Associados, 2014

Fig. 6.2.52 10, Hanover Street
Source: Squire & Partners, 2013

Fig. 6.2.54 Paragon, Zetland
Source: Turner, 2018

Fig. 6.2.55 East Village, Zetland
Source: Turner, 2018

Fig. 6.2.57 One Central Park Sydney by Fosters & Partners, Ateliers Jean Nouvel and PTW
Source: Nikkei Asian Review, 2018

Fig. 6.2.58 Lombard Wharf, London by Patel Taylor
Source: Designboom, Peter Cook, 2017

Fig. 6.2.59 Affordable family Housing in Railway Lands West Precinct, Toronto
Source: Architizer, KPMB Architects, 2012

6.2.6 LOT S INDIVIDUAL LOT ANALYSIS

Lot S was selected to test outcomes and verify the projected yield targets

The individual lot study tests the design ideas and strategies, their outcomes and verifies the projected amenity for the existing and future context against the Place Performance Measures, Apartment Design Guide and the City of Sydney Development Control requirements.

LOT S

Lot S was chosen for detailed site study as it contains a mix of built form heights and typologies with a mix of building uses that includes residential, retail and supermarket uses.

A summary of the key criteria has been provided in Table 2.
Refer to Appendix 7.5 for the Lot S Individual Lot Analysis

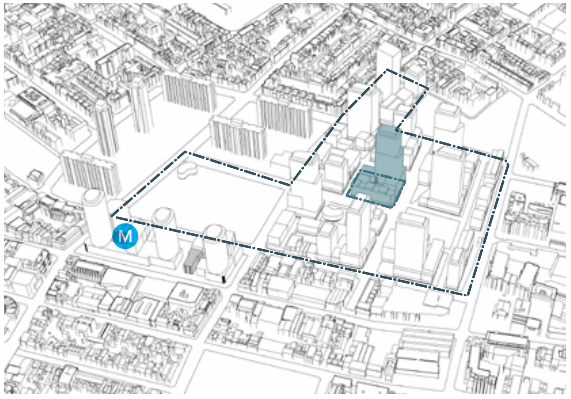


Fig. 6.2.60 Selected lot analysis

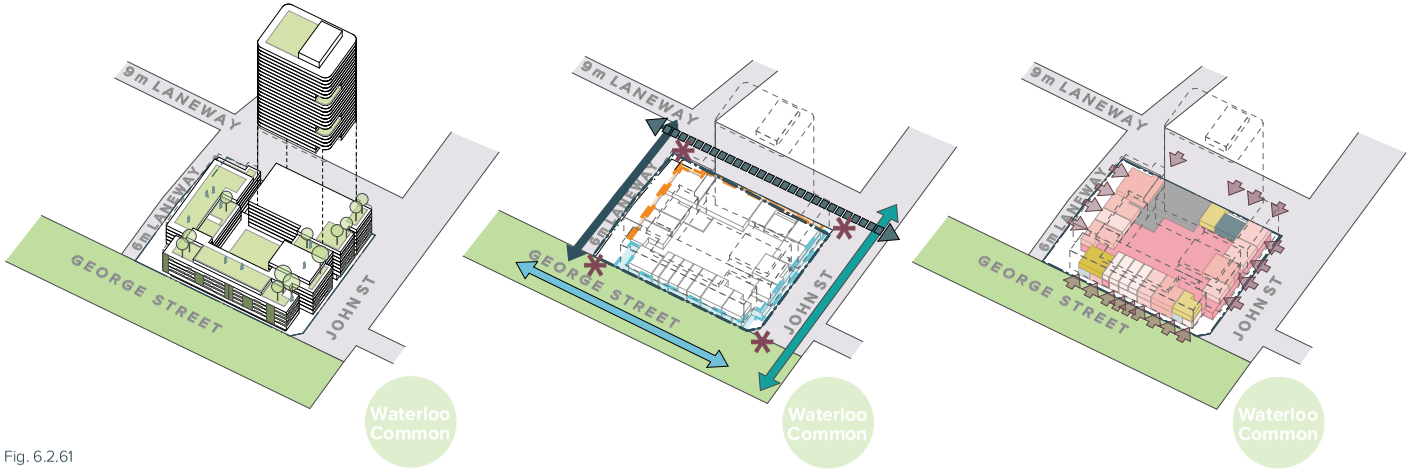


Fig. 6.2.61

PUBLIC DOMAIN INTERFACE	**Urban Forest**	Setback and landscape zones provide for new trees
	Open Space	1,570 m² (38% of site area)
	Landscape Replacement Area (LRA)	Additional 1,690 m² (42%) landscape area (To achieve target 80% of site area LRA)
	Ground Level Connectivity	Corner set-backs provide social corners and view lines between routes
	Active Frontages	193 m (87%)
PRIVATE DOMAIN	**Lot Efficiency**	Efficiency ranges from 63% to 70% for residential uses and 90% for non-residential uses
	Gross Floor Area (GFA)	27,620 m²
	Dwellings	304
ADG DESIGN CRITERIA	**Solar Access to Communal Open Space**	Complies receive 2 hours between 9am to 3pm at mid-winter
	Solar Access to Building Façades	Complies 73% primary facades receive 2 hours between 9am to 3pm at mid-winter
	Cross Ventilation	Complies 60-63% of dwellings achive cross-ventilation
	Solar Access	Complies 71-75% of dwellings receive 2 hours between 9am to 3pm at mid-winter
	Apartments with No Direct Winter Sun	7%
	Maximum Number of Apartments per Core	12

Table 2

6.3 INTERFACES

“More of everything and space for it.”

*Waterloo community participant**

The Estate is currently an island site disconnected by its street network and block structure from the finer grain of the surrounding area. The built form of free-standing buildings with significant slab and tower forms is also unique and in contrast to the lower residential dwellings of adjacent areas. This presents an opportunity for contrast to the surrounding context whilst also creating a considered relationship to that context.

This section describes the Indicative Concept Proposal response to various interfaces. The masterplan provides a transition to interfaces with **heritage conservation areas** (HCAs) and heritage items. Adaptive re-use of existing buildings helps to retain and build upon heritage items or buildings that contribute to the **character of the street**. Contextual interfaces respond to the **adjacent existing and future context**. **Public and private domain interfaces** provide transition areas of semi-private space that support social interaction and protects the amenity of residents.

* “Let’s Talk Waterloo - Visioning Report Key Findings”, KJA, May 18, p71.

Fig. 6.3.1 Indicative CGI: Cope Street facing north, Waterloo Village Green pavilion
Source: Virtual Ideas, 2019

6.3.1 LANDSCAPE, URBAN GRAIN & BUILT FORM

Waterloo's place character is reflected in the eclectic lot structure and built form that has evolved over time.

The urban fabric of Waterloo and surrounding areas comprises a network of open spaces and streets, with a range of building types and sizes that is mixed, and reflects its' history of ad hoc growth over time. The existing open spaces and trees within the Estate were established as part of the Endeavour Estate. The original vegetation within the Estate had been cleared as part of the early subdivision of the late 19th century and the 'slum clearance' of the 1940s.

The street network reflects the original layoutestablished with the first systematic development of the area, circa 1880s. The major changes to the street network were undertaken with the 'slum clearance' program undertaken with the construction of the Endeavour Estate, north of Raglan Street. As part of the re-development, a number of the original streets were closed off.

The built form is a mix of building typologies. Low rise typologies define the pedestrian scale of the street. They comprise the terraces in the heritage conservation areas, Victorian townhouses and warehouses. Medium rise typologies define the street wall edge. They comprise the new residential flat buildings and commercial / retail buildings of the adjacent urban renewal and employment hubs. High rise typologies mark the location of key activity centres. They comprise new residential flat buildings.

1943 LOT STRUCTURE

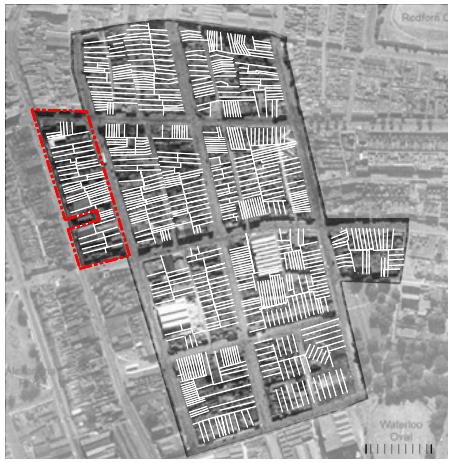


Fig. 6.3.2
Source: Waterloo Estate South - Urban Forest Study, Arterra, 2020

1943 aerial clearly indicating the trees in the nearby parks while there appears to be no significant trees within the Estate.

1975 LOT STRUCTURE

Fig. 6.3.3
Source: Waterloo Estate South - Urban Forest Study, Arterra, 2020

1975 aerial indicating the trees in the nearby parks. Note there appears to be very few trees within the Estate. Some young trees are noted along George Street, John Street and the corner of Pitt Street and Philip Street.

2017 LOT STRUCTURE

Fig. 6.3.4
Source: Waterloo Estate South - Urban Forest Study, Arterra,

2017 aerial of the site illustrating the relatively dense tree canopy, dominated primarily by Hill's Weeping Figs, Tallowoods and some other scattered Eucalyptus (Nearmap, February 2017)

URBAN FABRIC ELEMENTS

Tree canopy and open space

Low density heritage streetscape

Medium density urban renewal and employment hubs

High density urban renewal and employment hubs

A layered urban fabric

Fig. 6.3.5

6.3.1 LANDSCAPE, URBAN GRAIN & BUILT FORM

Adjoining neighbourhoods are composed of a layered urban fabric

REDFERN

Fig. 6.3.6 Redfern Street Village low density retail strip with towers at Redfern Station

Fig. 6.3.7 Low rise character strip next to Redfern Waterloo Commercial Zone towers, view from Raglan Street

The area of Redfern is largely residential. The civic and commercial centre is Redfern Street, which cuts across the area and contains major civic, religious and commercial buildings. The Redfern Estate Heritage Conservation Area (HCA) to the north of the Metro Quarter has single storey cottages, Victorian terraces and recent medium rise developments. Factories and warehouses are scattered throughout.

ALEXANDRIA

Fig. 6.3.8 The Alexandria Park HCA from Henderson Road, with Waterloo Estate beyond

Fig. 6.3.9 Medium density residential development on Botany Road, with low scale building between

Alexandria is largely an industrial suburb with medium to high density residential areas. Distributed within this fabric are pockets of industrial buildings and terrace housing that are part of the Alexandria Park HCA to the west of the Metro Quarter.

GREEN SQUARE

Fig. 6.3.10 Zetland HCA, directly adjacent to new high density residential development

Fig. 6.3.11 Low density dwellings in Elizabeth Street adjacent to urban renewal high denisty residential development

One of Sydney's oldest industrial lands, Green Square is evolving into a new town centre, with a mix of low, mid and high rise buildings. It is part of an overall masterplan that sets out the built form structure and grain that connects to, and integrates with the surrounding residential Zetland and Alexandria HCAs.

WATERLOO

Fig. 6.3.12 Terrace houses adjacent to urban renewal Estate at the corner of McEvoy and Kensington Street

Fig.6.3.13 Redfern Estate HCA near Redfern Oval with Waterloo Estate beyond; view from Phillip Street

Waterloo's urban fabric has been shaped by a history of growth and renewal, with the resulting diverse mix of housing typologies reflecting evolving models for living. This narrative is reflected in the environment and comprises a diverse mix of built form, grain and uses adapted over time to meet changing housing demands.

6.3.2 RESPONDING TO THE EXISTING AND THE FUTURE LOCAL CONTEXT

Waterloo's urban fabric has been shaped by a history of growth and renewal. We can learn from and incorporate this past while contributing a new layer that responds to existing and future needs and builds upon Waterloo's unique character

Waterloo's urban fabric has been shaped by a history of growth and renewal, with the resulting diverse mix of housing typologies reflecting evolving models for living. This narrative is reflected in the environment and comprises of a diverse mix of built form, fine grain and mix of uses adapted over time to meet changing housing demands.

The Alexandria Park and Redfern Estate Heritage Conservation Areas (HCA) are characterised by 1, 2 and 3 storey, low scale residential dwellings and similarly low-scale industrial warehouse typologies with heights comparable to the surrounding residential scale.

Tall buildings are clustered around the existing railway stations at Redfern and Green Square. The Estate also has a grouping of tall buildings to the northern portion, with the tall buildings forming a gateway at the bottom of George Street.

Likely future development along Botany Road Corridor - running between the Redfern and Green Square Station Precincts - and the proposed Metro Quarter development serves as a transition zone to the Alexandria Park HCA to the west, beyond Wyndham Street.

EXISTING AND FUTURE CONTEXT

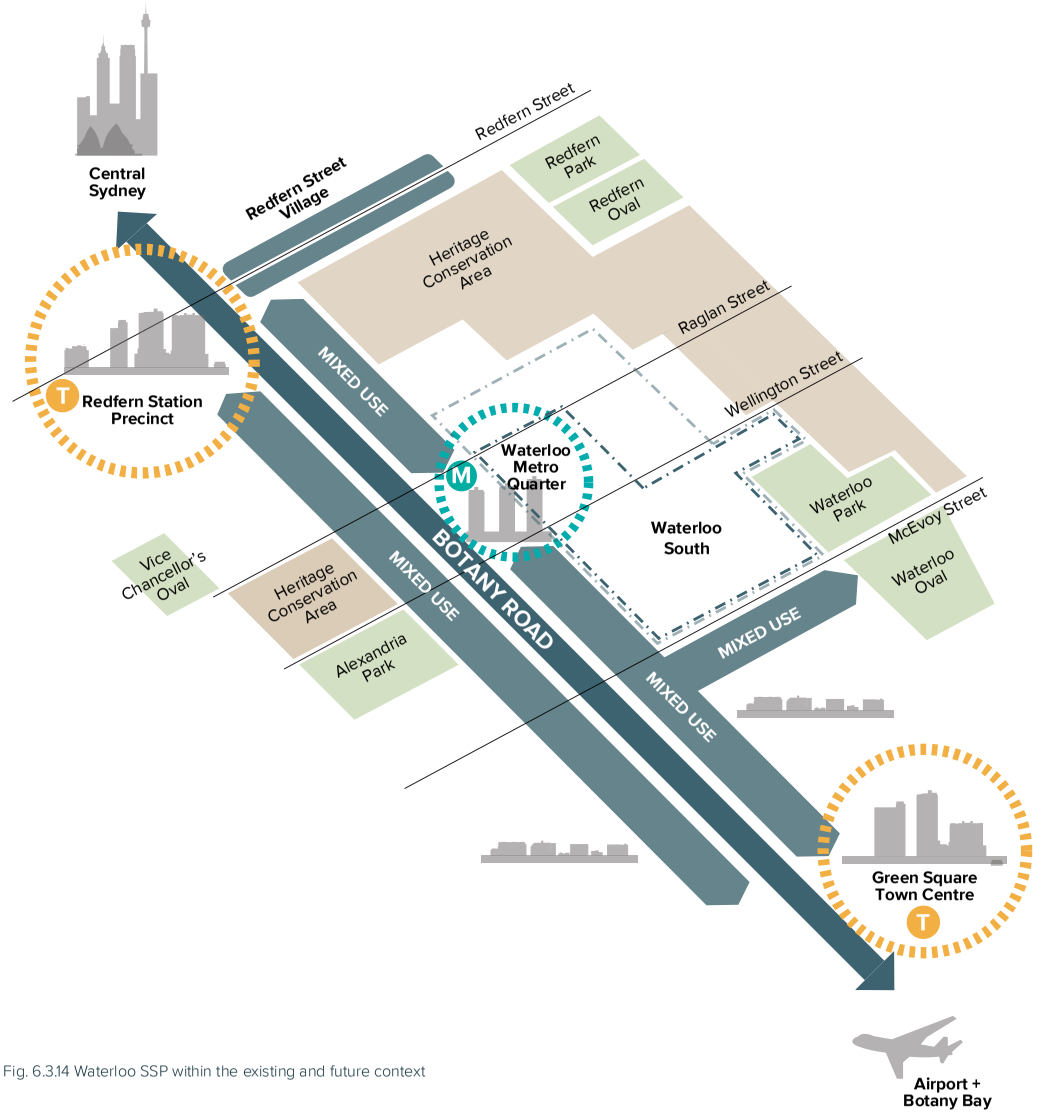


Fig. 6.3.14 Waterloo SSP within the existing and future context

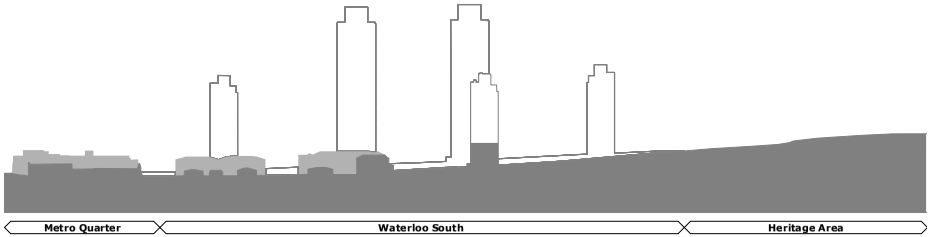
Height defined in response to local context and amenity

The nearest centres of activity to Waterloo South have heights ranging from 18 storeys in Redfern (TNT building located at 161 Redfern Street, Redfern) and 28 storeys at Green Square (Ovo building at 30 Ebsworth Street, Zetland). Although the surrounding context is a mix of built form typologies and densities, the pre-dominance of heritage conservation areas (HCAs) with low rise buildings, and the airspace constraints, have modified the height range of existing strategic centres.

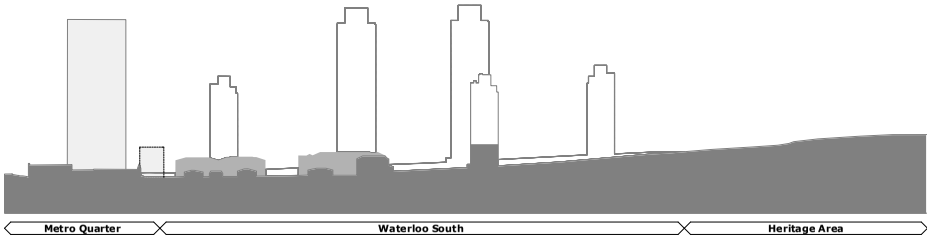
As part of the Redfern Waterloo Growth Area, Waterloo South is set within a context that will fundamentally change over the next 40 years.

These changes are all part of Waterloo's ongoing cycle of growth and renewal which has seen it change from a thriving wetland pre-colonial settlement, to a refuge for displaced Gadigal people, through the establishment of early industry and workers housing, and a place that accommodated many new immigrants, to the emergence of social housing in larger developments that gradually replaced the original buildings and block pattern. Each cycle has brought with it changes to the building stock to suit the particular needs of the time, resulting in a lot pattern and built form that is layered and diverse. A layered response, with a diversity of uses, height and built form, is considered to be both appropriate and contextual in the ongoing cycle of renewal.

EXISTING CONDITION



FUTURE DEVELOPMENT ALONG BOTANY ROAD CORRIDOR AND THE METRO QUARTER



WATERLOO SOUTH RENEWAL

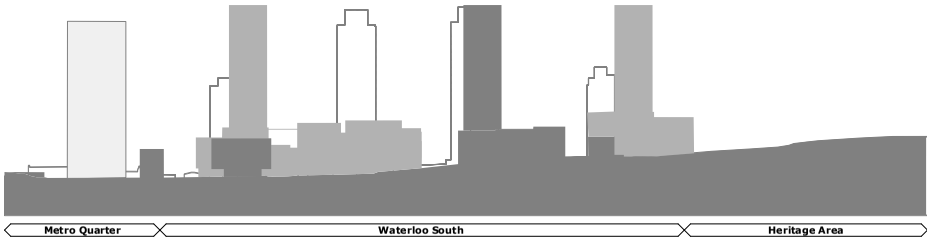


Fig. 6.3.15 Evolution of Waterloo SSP

6.3.3 HERITAGE INTERFACES

WELLINGTON STREET INTERFACE (EAST)

Fig. 6.3.16 Pitt Street looking towards Wellington Street
Source: Google Maps, 2018

A four to six storey streetwall height is provided along Wellington Street as a transition from the existing context which varies from 2-4 storeys along Wellington Street, to the taller buildings to the centre of Waterloo South

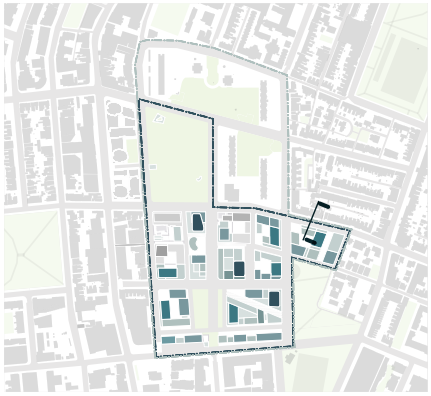


Fig. 6.3.17 Key plan

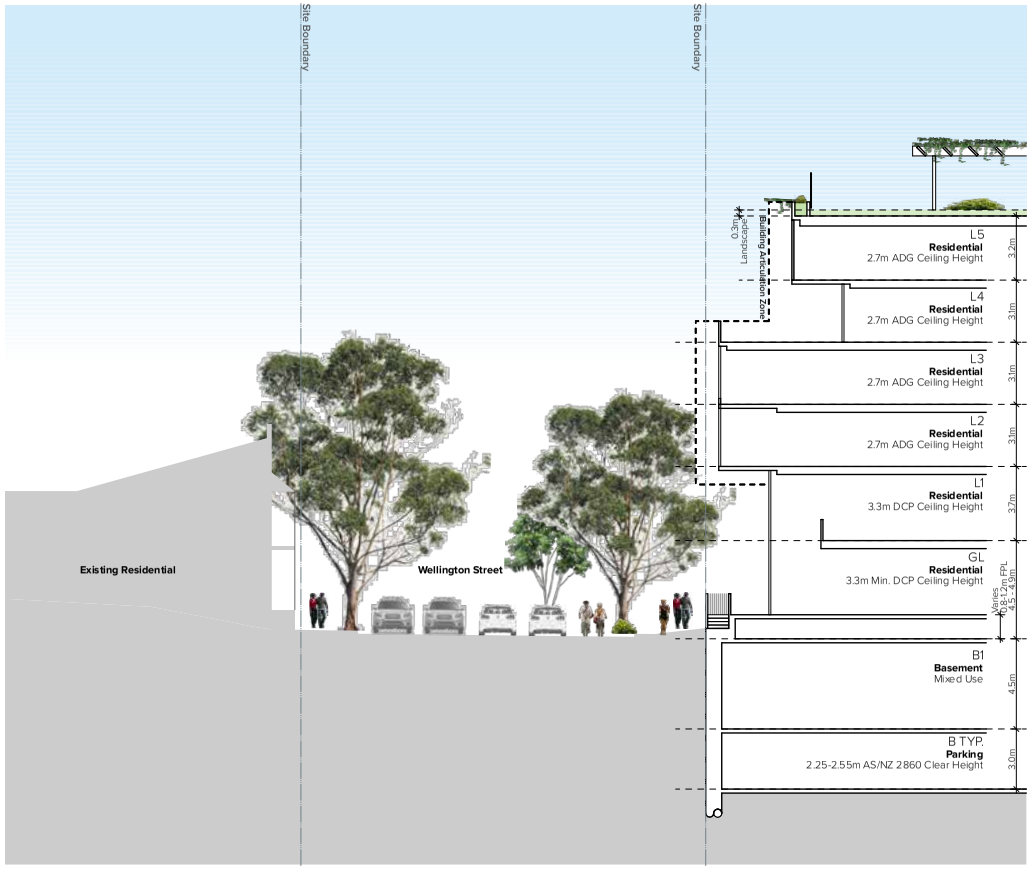


Fig. 6.3.18 Wellington Street (East) interface

PITT STREET INTERFACE (SOUTH)

Fig. 6.3.19 Pitt Street looking towards McEvoy Street
Source: Google Maps, 2018

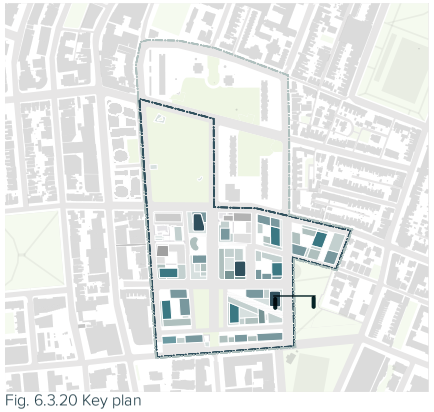


Fig. 6.3.20 Key plan

Building heights range from predominantly four to eight storeys providing a defined edge to Waterloo Park opposite. Setbacks or change in materials above six storeys provide a relationship to the canopy. Taller building forms take advantage of the park-side location for outlook and address.

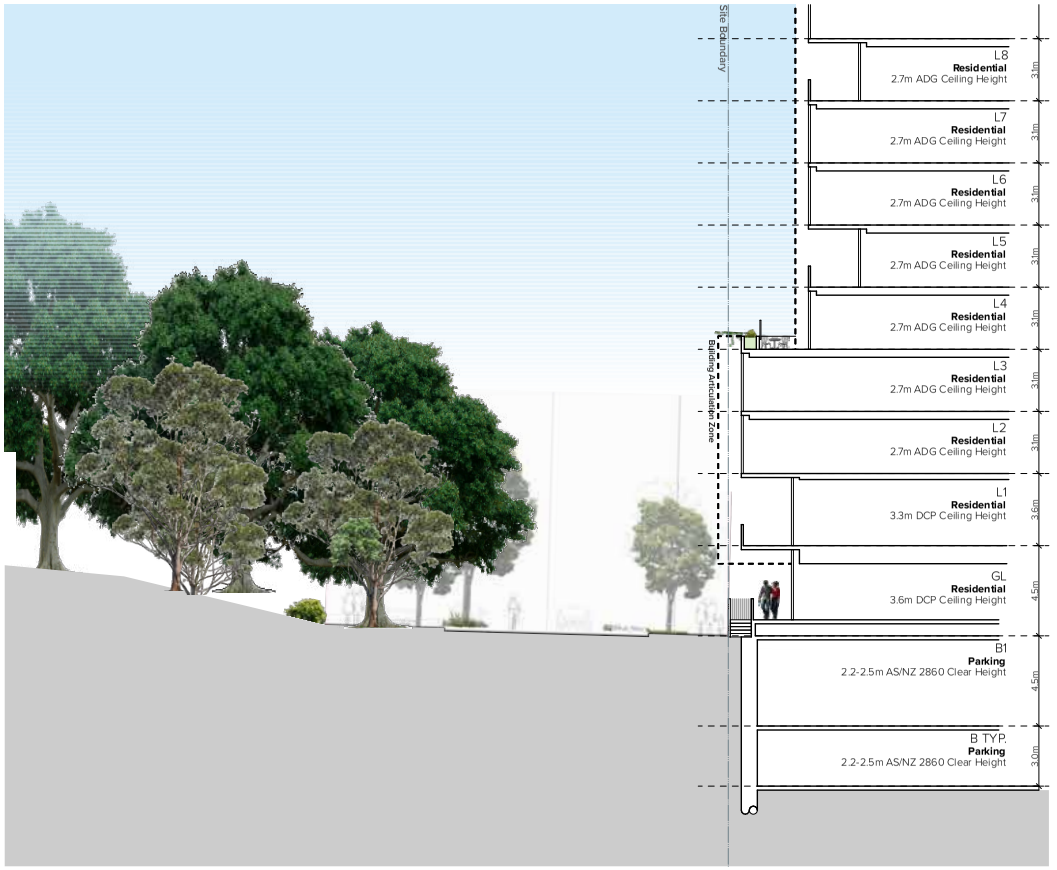


Fig. 6.3.21 Pitt Street (South) interface

6.3.4 CONTEXTUAL INTERFACES

COPE STREET INTERFACE (SOUTH)

A four storey streetwall height is provided along Cope Street as a transition from the existing context, that varies from 2 to 4 storeys along Cope Street, to the taller building forms that are setback above the streetwall.

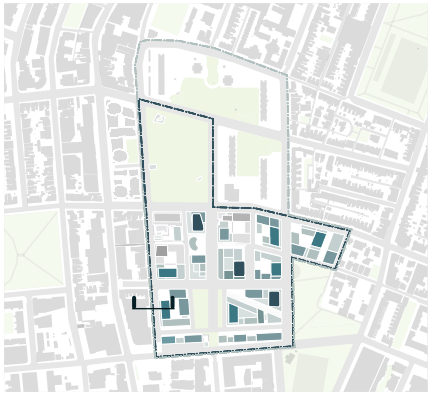


Fig. 6.3.22 Key plan

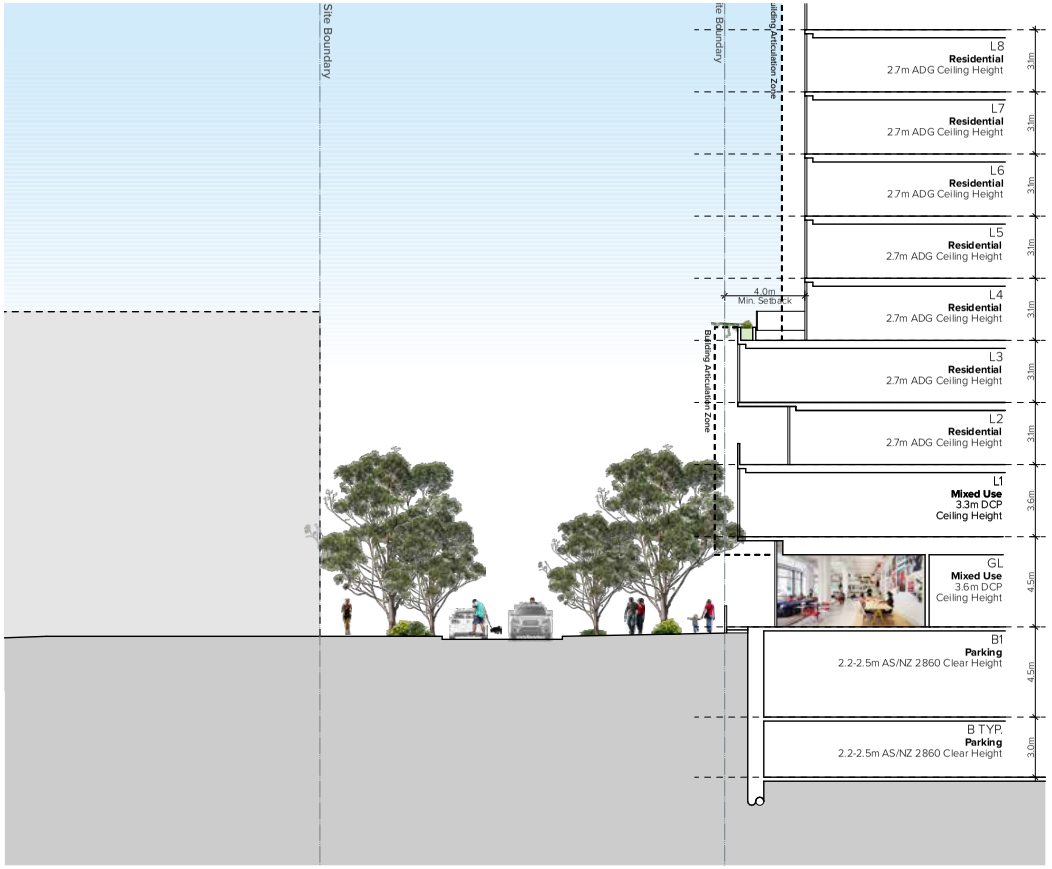


Fig. 6.3.23 Cope Steet (South) interface

COPE STREET INTERFACE (SOUTH)

Fig. 6.3.24 Cope Street looking north
Source: Google Maps, 2018

Setbacks above 6 storeys maintain the predominant streetwall height adjacent to Waterloo South, with a transition to the neighbouring context streetwall of 4 to 6 storeys.

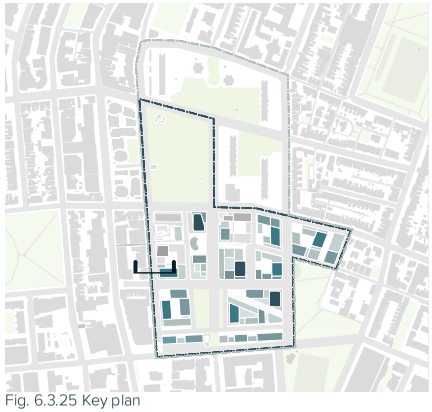


Fig. 6.3.25 Key plan

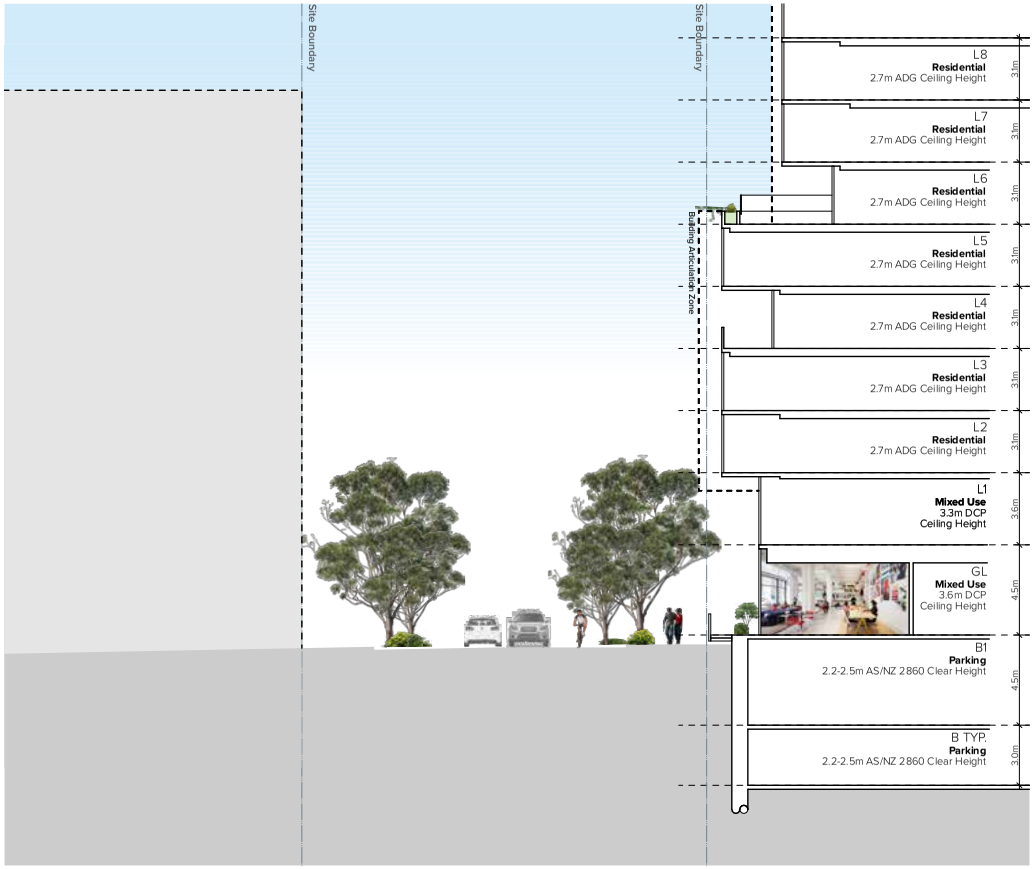


Fig. 6.3.26 Cope Street (South) interface

WELLINGTON STREET INTERFACE (WEST)

Fig. 6.3.27 Cooper Street looking towards Wellington Street
Source: Turner, 2020

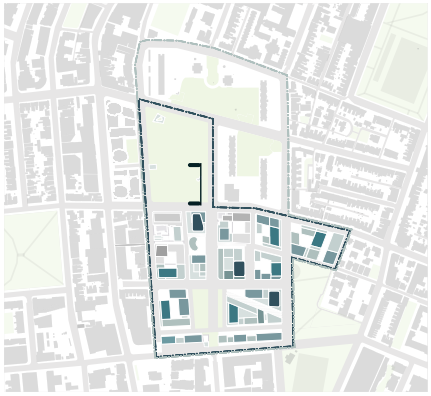


Fig. 6.3.28 Key plan

A six storey street wall height is provided along Wellington Street as a transition from the existing context to the taller buildings at the centre of Waterloo South.

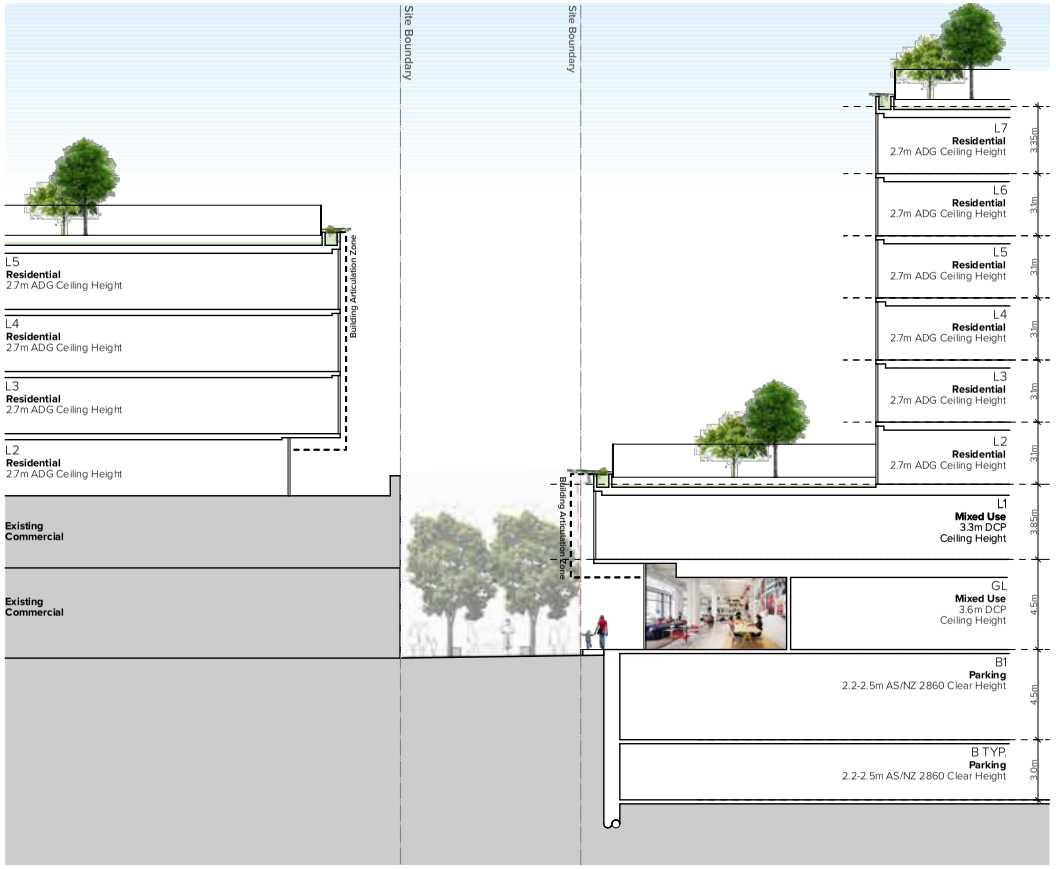


Fig. 6.3.29 Cooper Street heritage interface

KELLICK STREET INTERFACE

Fig. 6.3.30 Kellick Street looking towards Pitt Street
Source: Google Maps, 2018

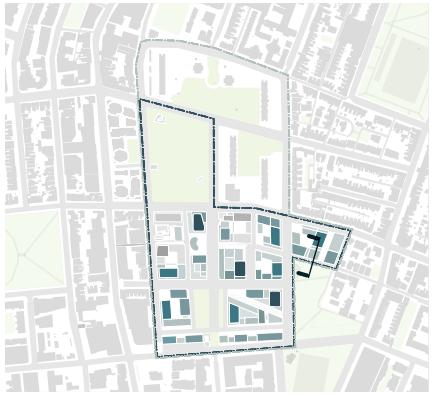


Fig. 6.3.31 Key plan

A six to eight+attic storey streetwall height is provided along Kellick Street as a transition from the existing context and neighbouring Waterloo Park to the taller buildings at the centre of Waterloo South. The streetwall provides a defined edge to the park and opportunities for good passive surveillance.

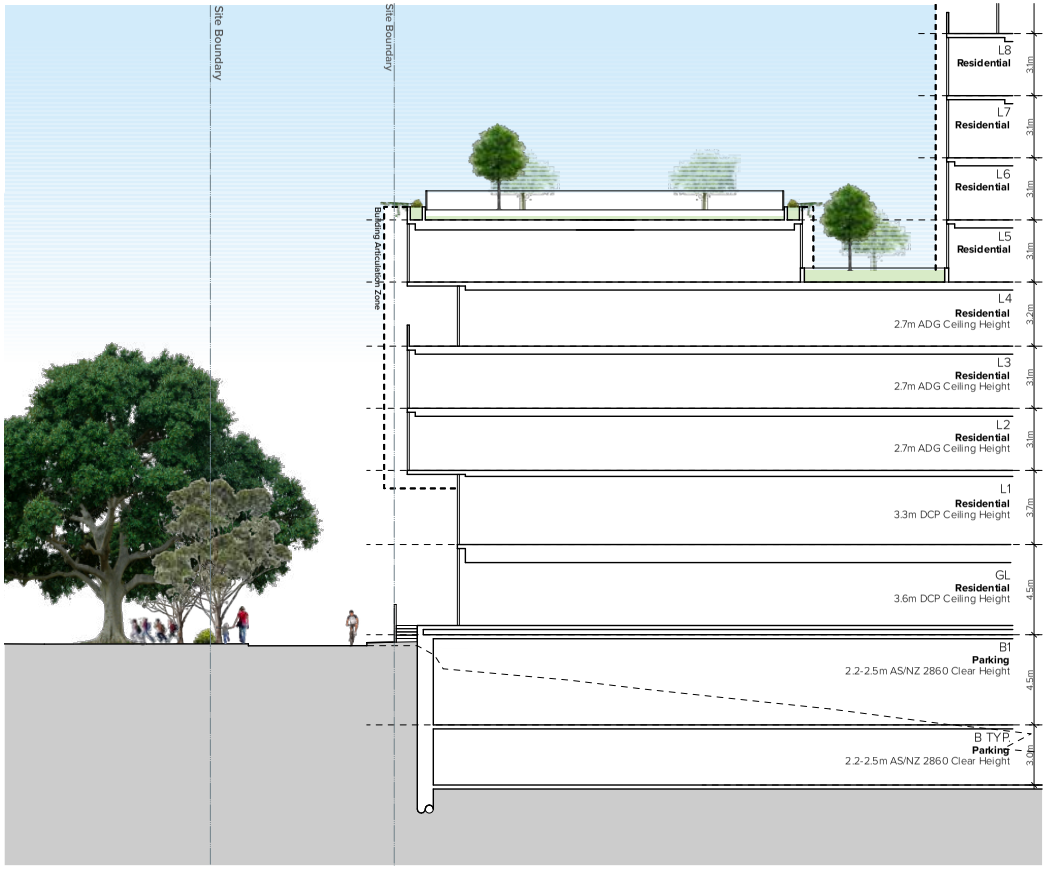


Fig. 6.3.32 Kellick Street interface

GIBSON STREET INTERFACE

Fig. 6.3.33 Gibson Street looking towards Kellick Street
Source: Google Maps, 2018

Fig. 6.3.34 Key plan

A four to eight storey streetwall height is provided along Gibson Street as a transition from the existing context, of 2 storeys along Gibson Street, to the taller buildings proposed for Waterloo South..

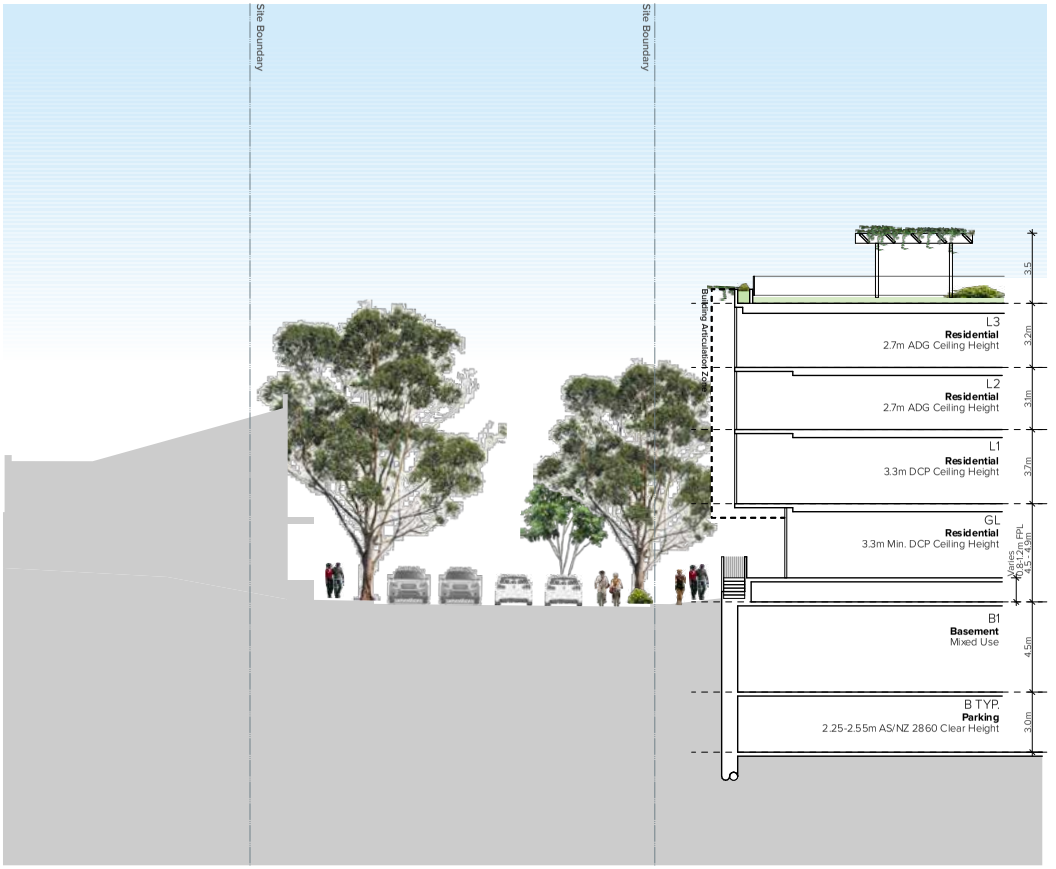


Fig. 6.3.35 Gibson Street interface

MCEVOY STREET INTERFACE (EAST)

Fig. 6.3.36 McEvoy Street looking towards Cope Street
Source: Google Maps, 2018

Fig. 6.3.37 Key plan

A streetwall height that varies from 6 to 8+a storeys along McEvoy Street is provided as a transition from the existing context, to the taller buildings of Waterloo South.

The building depth is limited to provide single loaded floorplate that is oriented to the north. This provides increased amenity for dwellings within these buildings from noise and air pollution generated by traffic along McEvoy Street as well as a buffer for Waterloo South and the Estate.

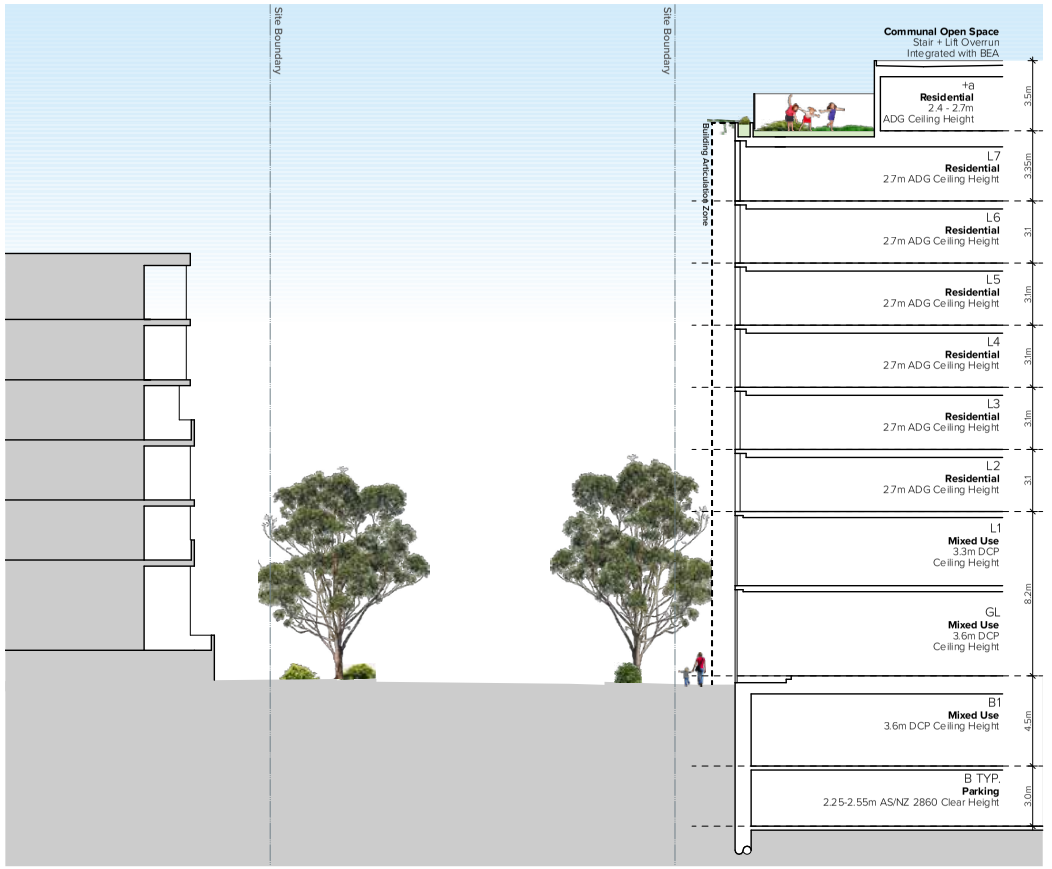


Fig. 6.3.38 McEvoy Street (East) interface

Fig. 6.3.41 Indicative CGI: George Street, community hub plaza
Source: Virtual Ideas, 2019

6.3.3 PUBLIC AND PRIVATE DOMAIN INTERFACES

25M GEORGE STREET INTERFACE TO COMMUNITY BUILDING

Fig. 6.3.41 George Street Activity Street

Fig. 6.2.43 Indicative CGI: Waterloo Common activity area
Source: Virtual Ideas, 2020

A six to eight+attic storey streetwall height is provided to the Waterloo Common interface as a transition from the park to the taller buildings. Along the Waterloo Common interface, streetwalls are varied between four to eight storeys for built form diversity. Changes in material and plane for buildings and breaks or setbacks for buildings above nine storeys maintain a maximum perceived streetwall height of 6 storeys.

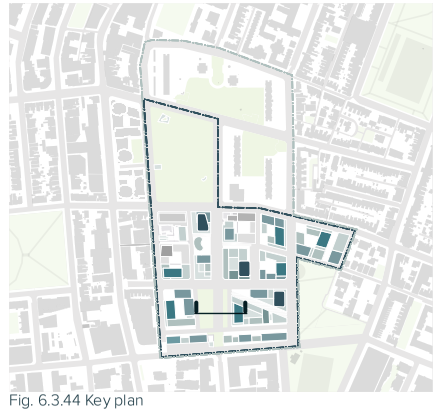


Fig. 6.3.44 Key plan

WATERLOO COMMON INTERFACE

Fig. 6.3.45 Waterloo Common interface

Fig. 6.3.46 Indicative CGI: Social corner
Source: Virtual Ideas, 2020

SOCIAL CORNER INTERFACE

Streetwalls of varying heights are provided to create variety in the street level and for improved views to the sky from the public domain. This streetwall height ranges from four to eight storeys. Changes in material and plane for buildings between and breaks or setbacks for buildings bove nine storeys maintain a maximum perceived streetwall height of 6 storeys. Social corners / pocket parks provide additional open space typologies.

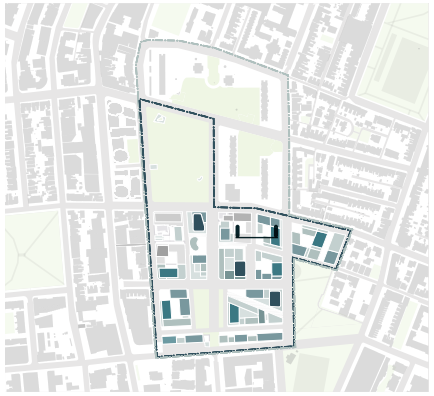


Fig. 6.3.47 Key plan

Fig. 6.3.48 Social corner interface