



WATERLOO ESTATE WATERLOO SOUTH

URBAN DESIGN & PUBLIC DOMAIN STUDY

08 APRIL 2020

URBAN DESIGN REPORT
PLANNING PROPOSAL



QUALITY ASSURANCE

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QUALITY CONTROL

This document is for discussion purposes only unless signed and dated by a Director of Turner

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REPORT DETAILS

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File Name:	17018 Waterloo South: Urban Design & Public Domain Study
Date:	08 April 2020

CLIENT / TEAM /



Fig. 0.01 Family & Culture Day, October 2015
Source: Counterpoint Community Services Facebook Page, 2018



EXECUTIVE SUMMARY

An urban village which respects the character of Waterloo, connects people to nature and enhances access to amenities, services and transport

Waterloo South is home to many people from different walks of life, each with a connection to the place. As a place it is distinctive, characterised by its topography, landscape, extensive social housing and strong sense of community. It has evolved over time to adapt to the needs of the changing community. The arrival of Sydney Metro is the catalyst for the next cycle of renewal to enable Waterloo to better support the diverse needs of the current community as well as a growing and changing population.

WATERLOO SOUTH

Waterloo Estate (the Estate) is located approximately 3.3km south of Central Sydney, in the suburb of Waterloo, within the City of Sydney Local Government Area. Surrounding the Estate are the heritage conservation areas of Alexandria Park to the west separated by Botany Road, Redfern Estate to the north and Waterloo to the east. Further to the south is the strategic centre of Green Square, currently undergoing substantial urban renewal. The Australian Technology Park, a substantial employment centre to the west, is also currently being redeveloped with 3 new buildings nearly completed and recent approval for conversion of the Locomotive Workshops into a mixed-use retail, commercial, educational and recreational precinct.

The Estate includes separate but contiguous and inter-related parts, being the Waterloo Social Housing Estate and a number of private sites. The proposed rezoning of the Estate is to be staged over the next 20 years to enable a coordinated renewal approach that minimises disruption for existing tenants and allows for the up-front delivery of key public domain elements such as public open space. Aligned to this staged approach, the Estate comprises three separate, but adjoining and inter-related stages, Waterloo South, Waterloo Central and Waterloo North.

With the lowest density spread over a relatively large area, Waterloo South is the first stage for renewal, allowing new housing to be provided with the least disruption for existing tenants and early delivery of key public domain elements. The social housing dwellings were constructed from the 1950s to the mid 1980s with an average age of 44 years against a benchmark economic life of 60 years. A new approach is required to replace the existing dwellings with new social housing in a new mixed community.



Fig. 011 The future Metro Quarter and Waterloo Station
Source: Narratives Illustrative CGI, 2018

DRIVERS FOR RENEWAL

Future Directions for Social Housing in NSW sets out the NSW Government's vision for social housing. Through its Communities Plus program, it will deliver on Future Directions to transform social housing in NSW. The Communities Plus program collaborates with private and non-government partners in financing, owning and managing, social housing assets.

As Sydney's population grows, available land in suitable locations, especially around new transport infrastructure, is being renewed to accommodate more homes and jobs in a more dense urban form. The Estate is well positioned to provide new homes, jobs, services and amenities, close to transport, being strategically located in NSW's greatest economic corridor that connects Macquarie Park through Central Sydney to the airport. It is a key growth site for future housing close to Central Sydney, especially when compared to the low-growth potential of the surrounding heritage conservation areas, or nearby areas that are already substantially developed.

The Waterloo Metro Station is the catalyst for the renewal and a key part of delivering the increased connectivity that will make Waterloo part of the 30-minute city, connecting to jobs, services, education and recreation. With this connectivity Waterloo will become a new urban village and local centre, contributing to the City of Sydney's network of villages and multi-centre city strategy. Located next to the City of Sydney Innovation Corridor, which is set to contribute new jobs by 2036, the Estate is set within a context that will also fundamentally change over the next 40 years.

A NEW APPROACH

Waterloo Estate was originally determined by the Minister for Planning to be of State planning significance and investigated for a new planning framework through the State Significant Precinct (SSP) process. The new Waterloo Metro Station was the catalyst for this investigation, to leverage the benefits of the increased connectivity, services and amenities. As a substantial area for renewal, the Estate has the capacity to accommodate more housing growth over time compared to the surrounding heritage conservation areas that have low capacity for growth.

A separate SSP study for the Metro Quarter was lodged by UrbanGrowth NSW (now known as Infrastructure NSW) in July 2018, in advance of lodgement of the SSP study for the Estate, to enable delivery of the Metro Quarter and Waterloo Metro Station as an Integrated Station Development (ISD). New planning controls for the Metro Quarter over station development were approved and finalised in December 2019.

In November 2019, the NSW Department of Planning, Industry and Environment (DPIE) developed a new approach to precinct planning. This has led to a change in the planning approach for the Estate, from a State-led rezoning process (through a State Significant Precinct Study) to a Council-led Planning Proposal process.

The approach to the renewal of the Estate is in three stages, with Waterloo South to be delivered first, ahead of Waterloo Central and Waterloo North precincts subject to separate Planning Proposals. The Waterloo South Urban Design & Public Domain Study, as one of the key planning proposal requirements, draws upon the vision, objectives and comprehensive baseline investigations prepared for the whole Estate, but only assesses the proposed planning framework amendments and Indicative Concept Proposal for Waterloo South.

Investigation of Waterloo South has been undertaken by NSW Land and Housing Corporation (LAHC). The proposed planning framework and Indicative Concept Proposal for Waterloo South have been informed by NSW Government policies, including those of the Greater Sydney Commission, Department of Planning and Environment and Government Architect NSW, together with the local government policies of the City of Sydney Council.

LAHC COMMITMENTS

- The renewal of Waterloo South is part of the Communities Plus program under Future Directions.
- The renewal of Waterloo will be staged over the next 20 years.
- The renewal will deliver more and better social housing to the area. All current social housing residents have the right to return to the Waterloo Estate.
- Residents will be given 6 months notice before relocation.
- Family and Community Services (FACS) will start the renewal in low density areas.
- Matavai, Turanga, Cook, Banks, Solander and Marton buildings are not part of the Waterloo South Planning Proposal.

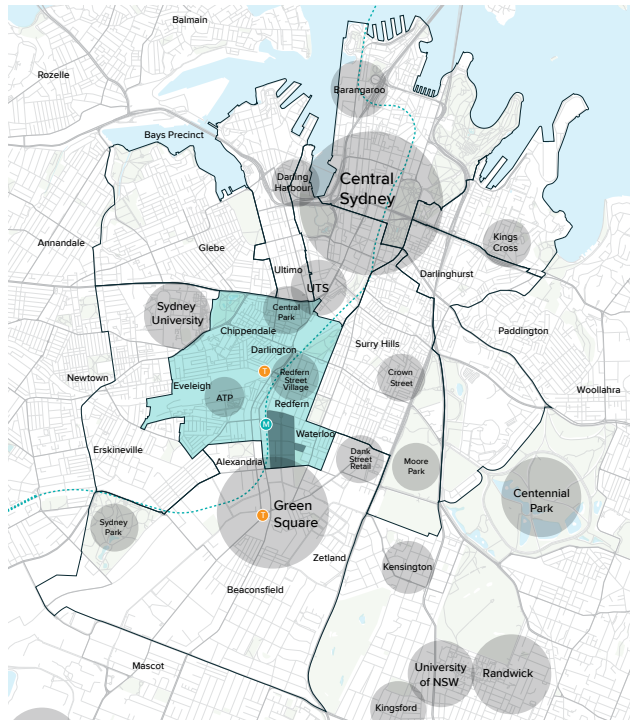


Fig. O1.2 Waterloo within City of Sydney's City of Villages & Activity Centres
Source: Adapted from City of Sydney, 2018

VISION

The vision for Waterloo has been developed through engagement with the community about the vision for the renewal of the Estate. The outcomes from the visioning process have been distilled into the following vision that the community would like for the future Waterloo.

Waterloo South **Urban Village** is a place that...

- **strengthens** the current character of Waterloo, reflecting its **diverse community** and built environment, where the old and the new are **layered** together;
- **encourages active transport** options with the new station as the gateway and **civic heart** to the precinct;
- **provides housing choice** with buildings that respond to the diverse community of existing and future residents, that are creative, **environmentally sustainable** and contribute to vibrant, attractive and **safe neighbourhoods**;
- **supports** the diverse **community** with a range of social and human **services, employment** opportunities, **affordable** amenities, spaces for **cultural** events and activities that **strengthen community spirit**;
- increases **community cohesion** and **well-being** by providing high quality and **sustainable open spaces** that are safe, welcoming, accessible and **connects people to nature and**,
- **celebrates** Waterloo's **Aboriginal** history and culture, provides opportunities for Indigenous people to live and work and builds upon a living **cultural heritage**.

DESIGN PRINCIPLES



HOUSING:

Locally responsive, distinctive and adaptable buildings, homes and spaces.

Diversity of homes and living choices underpinned by innovative delivery and tenure models.

Emphasise Waterloo's character areas and neighbourhoods.

A variety of indoor and outdoor shared spaces that support resident needs and wellbeing.



SERVICES & AMENITIES:

Local services to meet everyone's everyday needs.

Flexible and adaptable land uses, infrastructure and buildings that are responsive to opportunities and needs over time.

Foster local economies and productive environments to create, learn and share.



CULTURE & DESIGN:

A significant place shaped by the community for gathering in Waterloo.

Activated and engaging places for all.

Aboriginal people are intrinsic to Waterloo.

Embed local stories of people and place.



OPEN SPACE & ENVIRONMENT:

Celebrate Waterloo's unique green attributes including topography, water and trees.

Promote a sense of wellbeing and connection to nature.

A high performing resilient environment.



TRANSPORT AND CONNECTIVITY:

An active transport hub and local centre working as one.

Highly connected neighbourhood that prioritises walking and cycling for all.



WATERLOO SOUTH

17,900m²
RETAIL, SERVICES &
COMMUNITY

3,048
DWELLINGS

LEGEND

- ① **VILLAGE GREEN**
Supports community gatherings, events, recreation, productive landscape and water management
- ② **WATERLOO COMMON**
Provides open space for neighbourhood gathering, productive landscape, play and water management
- ③ **GEORGE STREET ACTIVE SPINE**
A 20 - 25m wide tree lined, landscaped movement corridor connecting the community to key destinations
- ④ **WATERLOO METRO STATION**
Sydney Metro station
- ⑤ **RETAIL AND SERVICES HUBS**
Provide a mix of local retail and services
- ⑥ **COMMUNITY HUBS**
Provide community gathering space and community services
- ⑦ **BLUE LINE** — — — —
A pedestrian connection between key destinations that reflects the local water story
- ⑧ **COMMUNITY GARDENS**
Provide productive opportunities for the community to grow and harvest produce
- ⑨ **ACTIVITY PLAY ZONES**
Provide opportunities for active uses including play space, picnic areas, fitness and youth zones
- ⑩ **ACCESSIBLE LOCAL MOVEMENT ROUTE** ● ● ● ● ●
Provides a route that connects key spaces, destinations and amenities that is safe and accessible for all ages and abilities

INDICATIVE CONCEPT PROPOSAL



Fig. 0.1.3 Waterloo South Indicative Concept Proposal

WATERLOO SOUTH URBAN VILLAGE

Waterloo South will become a distinct urban village experience which **connects people** to each other, to nature and the greater city of Sydney.

With the metro station on Waterloo's doorstep, the Metro Quarter **active transport hub** will facilitate the regional gateway and provide a central location for retail, community services and community spaces. The Village Green will provide **a green arrival** and gateway into Waterloo.

A distinct public domain will have a strong local character, with a large Village Green and Waterloo Common positioned along George Street active spine. Within the **pedestrian priority precinct**, public open space will be accessible to the community and support community belonging through spaces for gathering and a range of active and passive uses.

The green public domain will **celebrate the layered natural and cultural history of Waterloo and its proud community**. From the Waterloo wetlands, to the history of industry and innovation, to the lofty trees, the diversity of cultural backgrounds and the network between neighbours, the stories and community voice will be shared and act as a link through the community.

A **liveable and mixed community will be supported by local retail and community services & facilities** and will include a variety of housing choices and building typologies. **Active streets** and small neighbourhood areas will reflect community character and respond to place, supporting the daily life of the community.

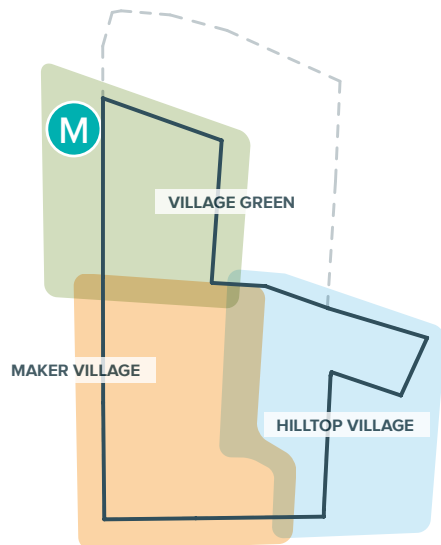


Fig. 01.4 Waterloo South character sub-precinct areas

FEATURES

Waterloo South Urban Village is structured around diverse new open spaces, streets and lanes to make a more connected place in all senses; connected to the traditional landscape, connected to environment, connected to its history, connected to its industrial heritage, connecting people to community, places, services and transport, and connecting Waterloo to greater Sydney.

The **Village Green (1)** and **Waterloo Common (2)**, the primary public open spaces, reflect the community's strong desire for multiple spaces and **equitable access to open space**. This includes a larger open space to host community events located adjacent to, but separated from, the Metro Quarter to allow a local community focus. This is supported by the smaller, more intimate, local scale open space provided by Waterloo Common located to serve the southern part of the Estate.

The Village Green and Waterloo Common are supplemented with a **variety of other open spaces** distributed throughout the Estate including urban plazas, pocket parks and social corners that satisfy a range of community desires. These spaces are enhanced by **dispersed community hubs and facilities**, as well as landscaped spaces that promote the retention of significant trees. The public open spaces and variety of other open spaces facilitate a range of activities, host productive landscapes, **integrate water management**, and provide **landscaped setbacks, tree retention zones and an urban forest strategy**. The range of gathering areas and communal spaces support social connectedness and community interaction.

Integral Aboriginal culture and placemaking is reflected in the provision of features like the 'Gadigal Gateway' that provides space for and celebrates Aboriginal cultural practices. The mix of housing choice includes flexible typologies that support evolving family structures.

Health and well-being are prioritised by providing **open space access to the community within 200m** of building entries. The **urban forest** strategy creates a **highly landscaped environment** that connects people to nature and at a broader scale connects to the regional Green Grid. **Productive landscapes** that includes bush tucker species and **community gardens (8)** within the public open space provide places for community interaction and connect back to traditional Aboriginal practices.

George Street (3) is modified into an 'active spine' that connects the diverse mix of open spaces together. From George Street a number of pedestrian laneways diverge to connect to significant open spaces adjacent to the Estate. George Street integrates water as a landscape element that references the traditional landscape, and serves as a direct connection from parts of the Estate to the Village Green and the Metro Quarter. The increase in streets, lanes and links leads to a more **permeable pedestrian and cycle friendly environment**. An **accessible local movement route** promotes an all-ages inclusive and accessible route, enabling community interaction, and connects the primary public open spaces, a range of urban plazas, pocket parks and social corners, with community facilities, retail and services, and active transport options.

Placemaking activities defined three **sub-precinct character areas** for Waterloo South, based on their existing and future place characteristics; Village Green, Maker Village and Hilltop Village. Within these sub-precincts reside key places of the Estate; the Village Green and Waterloo Common while George Street connects them all together. The key places are hubs for activation, engagement, and social connectedness, and are anchored by mixed-use community hubs that will provide activation and programming of those spaces.

All key places are supported by streets that are designed as active places and which improve the pedestrian and cycling experience. Their diversity of width and design reflect their range of purposes and activities, from 6-9m wide landscaped pedestrian laneways to 20.2m local streets and the 20-25m wide modified George Street. This provides a pedestrian priority walkable precinct where everyone feels welcome.

The **pedestrian priority movement network (3, 7, 10)**, involving new streets, laneways and links to the existing network, reconnects Waterloo South to the surrounding context with the re-establishment of a finer grain network of links and lanes, drawing people to the main open spaces, the Metro Quarter and transport connections. Streets are designed as slow streets, with new and upgraded pedestrian crossings, to encourage walking and cycling. The **high performing and activation ready public domain** and non-residential uses supports the everyday experience through active frontages, a pedestrian scale, lot diversity and finer grain of the urban and built form. The connected green network with integrated **biophilic design principles** create a walkable pedestrian priority precinct that promotes active transport modes.

Community facilities, services and shops (5, 6) provide accessible jobs, retail, amenities and education opportunities. They are clustered along the George Street Activity Street as an 'active spine' with other community facilities and **Community Hubs (6)** dispersed and located around primary public open spaces, plazas and social corners. The association of community facilities with public open space responds to the community desire to facilitate activation of those spaces and their potential for programming as places for public art and community involvement. Retail and services along George Street provide for equitable access. Smaller retail and services provision distributed throughout the Estate has the flexibility to increase in size over time. **Flexible built forms** provide the flexibility for the ground plane to evolve to non-residential uses over time and **respond to changing needs** as the community grows.

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 slender buildings provide markers, landmarks and height diversity. **A mix and choice of tenure blind social (affordable rental) and private dwellings** is provided. **Flexible dwelling typologies** respond to the existing and future community's needs. Vertical neighbourhoods provide additional communal open spaces for residents to meet and interact.



INDICATIVE CONCEPT PROPOSAL

The Indicative Concept Proposal for Waterloo South is the result of an extensive, evidence based, investigative and iterative process that has looked at best practice and case studies in Australia and globally to benchmark and measure its performance, and has been shaped by the outcomes of significant community engagement. The process commenced with analysis of the existing social, environmental and physical context of Waterloo which established ten key design insights, and the creation of a project vision, objectives and principles.

Early design thinking shaped around six unique scenarios explored very different approaches, leading to the strategic directions, and culminated in the preparation of the three Concept Plan Options; Waterloo Estate, Waterloo Village Green and Waterloo Park. **Extensive options testing with the community and stakeholders**, expressed through five themes, provided valuable feedback to guide preparation of the Indicative Concept Proposal. The Indicative Concept Proposal has been measured against the **Place Performance Measures** developed from world's best practice and case studies, and shaped by the Key Design Drivers specific and unique to Waterloo. The result is the world class Waterloo South Urban Village, a new village and local centre, that will make a positive contribution to the City of Sydney's network of villages and multi-centre city strategy.

The Indicative Concept Proposal for Waterloo South has been assessed on its own amenity performance and its effect on the adjacent areas through analysis of solar access, overshadowing, wind effects, flooding and acoustic amenity*. The existing and proposed public open spaces achieve **4 hours solar access** between 9am - 3pm at the winter solstice, to a minimum **fixed 50 percent of the overall area**. The existing and future residential dwellings are able to achieve a minimum **2 hours solar access** between 9am - 3pm at the winter solstice, to at least **70 percent of dwellings**. The Apartment Design Guide, National Construction Code, and City of Sydney DCP 2012 were used as appropriate guidelines. The NSW Government Architect's Better Placed guidelines informed the development of a number of strategies to ensure that the future natural and built environment of Waterloo South will be healthy, responsive, integrated, equitable and resilient.

The Waterloo South Indicative Concept Proposal represents a **public domain led, evidence based approach** to planning and has been **shaped by the outcomes of extensive community consultation**. The urban design for Waterloo South has considered the City of Sydney Planning Proposal requirements, reflected in the 26 specialist studies and it has been presented to panels including representatives from the City of Sydney, state agencies, and the NSW Government Architect iteratively through the planning proposal process. Through this continuous process of assessment, review and reiteration, the masterplan has become more refined, responsive and technically robust, culminating in an Indicative Concept Proposal that is uniquely Waterloo.

COMMUNITY ENGAGEMENT KEY LEARNINGS:

- Respond to community desire for open spaces, gardens, trees and bird life
- Address request to accommodate multiple public realm uses such as shaded resting areas, private courtyards, play spaces, active recreation and community events
- Support need for cultural event spaces, a large community centre and recognition of Aboriginal culture and heritage
- Respond to resident's aspirations for culture and community life with an abundance of communal spaces for arts, recreation and recognition of Aboriginal Culture and Heritage
- Acknowledge desire for improved housing and neighbourhood design with limited through traffic for quieter streets
- Recognise and celebrate the significant Aboriginal culture and heritage of the area
- Support need for a diverse range of outdoor features for all peoples and ages
- Prioritise a choice of housing types
- Ensure everyone has good access to open space and amenity
- Create a diversity of building types and reduce heights
- Design larger and better apartments and ensure balconies are included
- Plan for a large park within close proximity to Waterloo Station for community events
- Provide a diverse range of open spaces for everyone to enjoy
- Water and landscaping features should be included
- Retain as many of the mature existing trees as possible
- Provision for learning, health and childcare is important
- Ensure local facilities, shops and services are accessible and affordable
- Plan for diversity by providing multi-purpose community spaces
- Consider the inclusion of aged-care housing services
- Foster opportunities for community life, true to the character of Waterloo
- Community gardens are important for health and well-being
- Recognise and respect Aboriginal culture in Waterloo and acknowledge its significance
- Celebrate Waterloo's multi-cultural diversity
- Make Waterloo a pedestrian priority precinct with easy access to public transport
- Develop safe cycle paths
- Ensure adequate provision of on-site parking for residents
- Focus on slow / shared streets in the neighbourhood

* Refer to:
Appendix 7.7 Masterplan Drawings, Appendix 7.9 Solar Analysis and Appendix 7.10 Assessments for further information.



Fig. 0.1.5 Indicative CGI, Waterloo Village Green: 'Big Roof'
Source: Virtual Ideas, 2020



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	SSP Study Requirements			
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	Introduction and outline of the purpose of the report.			Provides a description and overview of the design methodology and process, from early design thinking through to options testing, to arrive at an Indicative Concept Proposal for Waterloo South.
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CITY OF SYDNEY PLANNING PROPOSAL REQUIREMENTS

URBAN DESIGN

PLANNING PROPOSAL REQUIREMENT	ADDRESSED IN	PLANNING PROPOSAL REQUIREMENT	ADDRESSED IN
The Urban Design Report must be prepared in accordance with Study Requirements - Nominated State Significant Precinct – Waterloo (Revised March 2018)	Refer SSP Study requirements	<ul style="list-style-type: none"> A precinct plan that integrates: <ul style="list-style-type: none"> Public domain Infrastructure Staging Building types Height distribution and massing 	Chapter 4.0 Appendix 7.3 Appendix 7.4 Appendix 7.8 Appendix 7.5, Chapter 6.2 Chapter 6.2
Key components include (but are not limited to):			
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	<ul style="list-style-type: none"> A landscape concept plan 	Appendix 7.3
An urban design report should be provided to show how the design process resulted in the built form outcome, and specifically incorporate the following aspects:		<ul style="list-style-type: none"> A staging plan 	Appendix 7.8
<ul style="list-style-type: none"> A detailed site and context analysis 	Appendix 7.1	<ul style="list-style-type: none"> A view and visual impact assessment. Use eye level views from public parks and footpaths and compare to existing views. Include a map identifying all chosen view lines. 	Appendix 7.1 Provided as a separate study by Cardno
<ul style="list-style-type: none"> Opportunities and constraints mapping 	Chapter 2.0	<ul style="list-style-type: none"> Overshadowing and sun access analysis. Test compliance with minimum solar and daylight access requirements to new and existing open space and dwellings as set out in the Apartment Design Guide and Sydney DCP 2012. 	Appendix 7.9
<ul style="list-style-type: none"> A full review of design options, including redevelopment, renovation and adaptive re-use options 	Chapter 3.0 Appendix 7.2	<ul style="list-style-type: none"> Proposed distribution of gross floor area, development yields, building typologies, building envelopes and heights. 	Appendix 7.5 & 7.8 Chapter 6.2
<ul style="list-style-type: none"> The urban design principles that underpin the proposed development 	Chapter 1.0	<ul style="list-style-type: none"> Floor plans and built form detail to demonstrate future compliance with amenity standards, including the Apartment Design Guide, to support gross floor area and development yield calculations. 	Appendix 7.5
<ul style="list-style-type: none"> An assessment of the built form against the seven design objectives in Better Placed: <ul style="list-style-type: none"> Better fit: Contextual, local and of its place Better performance: Sustainable, adaptable and durable Better for community: Inclusive, connected and diverse Better for people: Safe, comfortable and liveable Better working: Functional, efficient and fit for purpose Better value: Creating and adding value Better look and feel: Engaging, inviting and attractive 	Appendix 7.10	<ul style="list-style-type: none"> A review of the wind impacts of the proposed built form, demonstrating that wind will not have an unacceptable impact on the proposal, and the proposal will not generate unacceptable wind impacts on the public domain, communal open space or dwellings. 	Appendix 7.5 Provided as a separate study by Windtech

PUBLIC DOMAIN

PLANNING PROPOSAL REQUIREMENT	ADDRESSED IN
The following urban design analysis should also be supplied to the City:	
<ul style="list-style-type: none"> A 3D massing model in Revit, SketchUp or similar, with a fly through and photomontages of key parts of the proposal from eye level positions in the public domain. 	To be provided to CoS separately
<ul style="list-style-type: none"> Physical (scale 1:500 or 1:10000) and 3D CAD models to fit the City of Sydney's physical and 3D CAD model. Consult with the City of Sydney to confirm technical requirements. 	To be provided to CoS separately
<ul style="list-style-type: none"> Draft building-by-building development controls, including height, floor space ratio, residential and non-residential split and maximum floor plate with all schedules and calculations provided for each block 	Appendix 7.7 Appendix 7.8
Scale Drawings	
<ul style="list-style-type: none"> Plans Sections Elevations 	Appendix 7.7 Appendix 7.7
<ul style="list-style-type: none"> Perspectives 	Throughout the report and in Appendix 7.7
<ul style="list-style-type: none"> Envelope drawings 	Appendix 7.7
<ul style="list-style-type: none"> Indicative residential layout 	Appendix 7.5
<ul style="list-style-type: none"> Massing and structure plan options 	Appendix 7.2, Chapter 3.0
<ul style="list-style-type: none"> Overshadowing and solar access to proposed development, open spaces and neighbouring buildings (showing existing and proposed) 	Appendix 7.9
Survey Plan	
The survey plan needs to be to scale, showing relative levels to AHD and include details of adjoining development	To be provided to CoS separately

PLANNING PROPOSAL REQUIREMENT	ADDRESSED IN
Consult closely with the City of Sydney and obtain endorsement of any public domain planning aspects, as the ultimate owner and manager of the public domain.	Consultation was undertaken through engagement with CoS throughout the SSP Process. Public Domain Plan has been submitted for endorsement.
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 - 6.0 Chapter 6.0 Appendix 7.3
Provide a (Water Sensitive Urban Design) WSUD strategy that integrates with the flood study, the public domain and private open spaces, show any measures on plans and detail street sections.	Appendix 7.3
Demonstrate how the public domain will be designed to be legible, connected and safe for pedestrians and cyclists at all times of the day and night, considering Crime Prevention through Environmental Design (CPTED) principles.	Appendix 7.3
Provide an indicative design strategy and material and furniture palette for new streets and public spaces.	Appendix 7.3
Note: In all the above, demonstrate consideration and application of City of Sydney public domain codes where appropriate, including the Streets Code and Technical Specifications, Inclusive and Accessible Public Domain Policy, Inclusive and Accessible Public Domain Guidelines, Legible Sydney Wayfinding Strategy and Design Manual, and other relevant City of Sydney draft Codes.	Chapter 4.0 Chapter 6.0 Appendix 7.3



STATE SIGNIFICANT PRECINCT STUDY REQUIREMENTS

URBAN DESIGN

No.	STUDY REQUIREMENT	ADDRESSED IN	No.	STUDY REQUIREMENT	ADDRESSED IN
2.1	Prepare a detailed site and context analysis.	Chapter 2.0 Appendix 7.1	2.9	Provide an analysis of proposed distribution of gross floor area, development yields, building types, building envelopes and heights.	Appendix 7.8
2.2	Prepare a review of relevant best practice case studies of areas of similar size, land use and approximate dwelling density to the proposal, outlining transferable principles from the process and development proposed.	Appendix 7.6	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
2.3	Prepare comprehensive opportunities and constraints mapping overlays.	Section 2.4	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
2.4	Prepare a set of urban design principles that underpin the proposed development.	Section 1.4 - 1.6	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
2.5	Prepare an options analysis that examines a variety of appropriate options for the distribution of land use and building bulk in relation to the layout of the public domain. Document the various options including an assessment of how the options respond to the identified constraints and opportunities, and have been used to inform the final proposal.	Chapter 3.0 Appendix 7.2	2.13	Provide physical and 3D CAD models to fit the City of Sydney's physical and 3D CAD model. Include animations and photomontages of key parts of the proposal from eye level positions in the public domain. Consult with the City of Sydney to confirm technical model requirements.	Chapter 4.0 - 6.0 To be provided to CoS separately
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	2.14	Prepare an indicative subdivision plan that promotes future variety and distributes the social (affordable rental) and private housing.	Appendix 7.1 Appendix 7.6
2.7	Provide a view and visual assessment, with particular focus on significant views to, from and within the site. Use eye level views from public parks and street footpaths, simulate a focal length of 55mm, to approximate the correct proportions of the elements of views as experienced by the human eye, compare to existing views and analyse the relative quantity of visible sky Include analysis of any visual impacts on the conservation areas and surrounding areas, and any mitigation measures.	Appendix 7.1 Provided as a separate study by Cardno	2.15	Outline the proposed staging, including showing how the progressive delivery of the public domain (park and streets) is integrated with the progressive release of private development lots.	Appendix 7.8.3
2.8	Provide a sun access analysis at the winter solstice for the site and its surroundings, for: the new public park and square, and existing surrounding parks; and, new and existing private open space and dwellings, against standards in the Apartment Design Guide for apartments and the Sydney Development Control Plan 2012 for open space and residential buildings not subject to the Apartment Design Guide.	Appendix 7.7 Appendix 7.9 Section 7.10.1	2.16	Outline how the staging of the redevelopment of the Waterloo Estate will be integrated with the staging of the Waterloo Metro Quarter.	Appendix 7.8
			2.17	Integrate the findings of other parts of this study and demonstrate how these have shaped the Public Domain Plan and the building typologies to meet their requirements. In particular, how the design of building types respond to ESD, wind, flooding, noise and pollution issues.	Appendix 7.5.2

PUBLIC DOMAIN: PUBLIC OPEN SPACE & STREETS

No.	STUDY REQUIREMENT	ADDRESSED IN	No.	STUDY REQUIREMENT	ADDRESSED IN
3.1	Consult closely with and obtain endorsement, for the extent that it relates to the approval of the planning framework, from the City of Sydney for all aspects of the Public Domain as the ultimate owner and manager of the Public Domain.	Consultation was undertaken through engagement with CoS throughout the SSP Process. Public Domain Plan has been submitted for endorsement.	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
3.2	Provide a site analysis of existing physical features and conditions influencing the location and design of the new park(s), including but not limited to topography, slope (including consideration of universal access), flooding, location of and walking distance to existing surrounding parks, noise and busy roads, canopy and trees, heritage, character, function and use. Provide and compare location options. Refer to the Open Space Acquisition Criteria and Rationale and the Waterloo Precinct Open Space directions in volume 2 of the City of Sydney's Open Space Sports and Recreational Needs Study.	Chapter 2.0 Appendix 7.1 Appendix 7.2.1	3.7	Identify key intersections where there are high numbers of pedestrians, cyclists and/or vehicles, and provide detail of how pedestrian and cyclists safety and comfort will be prioritised in these locations. Include any intersections that will be used by children to access schools as pedestrians and cyclists.	Appendix 7.1 Appendix 7.3 Provided as a separate study by Jacobs
3.3	Provide a benchmarking assessment of the proposed development against international best practice precedent studies for open space design in similar high dwelling density environments.	Appendix 7.3 Appendix 7.6	3.8	Provide a general arrangement plan for streets locating proposed kerb alignments, including intersection arrangements and mid-block crossing arrangements, overlaid with existing and future ownership boundaries.	Appendix 7.3 Chapter 6.1
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	3.9	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
3.5	Provide an analysis of existing physical features and conditions of the existing street layout including connections, former streets, street hierarchy, topography, flooding, canopy and trees, heritage and character to identify opportunities for improvements to the street layout. Consider reopening former streets, reconnecting existing streets and street widening where beneficial. Provide and compare options for the street layout.	Chapter 2.0 Appendix 7.1 Appendix 7.2 Appendix 7.3	3.10	Demonstrate how the public domain will be designed to be legible, connected and safe for pedestrians and cyclists at all times of the day and night, considering Crime Prevention through Environmental Design (CPTED) principles.	Appendix 7.3
			3.11	Provide a (Water Sensitive Urban Design) WSUD strategy that integrates with the flood study the public domain and private open spaces, show any measures on plans and detail street sections.	Appendix 7.3
			3.12	Provide an indicative material and furniture palette for the park and the various street types.	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



Fig. 1.0.1 Waterloo Estate.

1.0 INTRODUCTION

- 1.0 Introduction
- 1.1 Strategic Context
- 1.2 Waterloo Estate
- 1.3 Waterloo South
- 1.4 Vision
- 1.5 Objectives
- 1.6 Principles



Fig. 1.0.2 Waterloo Estate from the Waterloo Metro Station site

1.0 INTRODUCTION

The renewal of Waterloo Estate will provide new, modern, social (affordable rental) housing, mixed with private housing in a well-located community close to the future Waterloo Station and Metro Quarter

The Greater Sydney Region Plan and Eastern City District Plan seek to align growth with infrastructure, including transport, social and green infrastructure. With the catalyst of Waterloo Metro Station, there is an opportunity to deliver urban renewal to Waterloo Estate that will create great spaces and places for people to live, work and visit.

The proposed rezoning of Waterloo Estate is to be staged over the next 20 years to enable a coordinated renewal approach that minimises disruption for existing tenants and allows for the up-front delivery of key public domain elements such as public open space. Aligned to this staged approach, Waterloo Estate comprises three separate, but adjoining and inter-related stages:



Fig. 1.01 Waterloo Estate and sub-precincts

Waterloo South has been identified as the first stage for renewal. The lower number and density social housing dwellings, spread over a relatively large area, makes Waterloo South ideal as a first sub-precinct as new housing can be provided with the least disruption for existing tenants and early delivery of key public domain elements, such as public open space.

A planning proposal for Waterloo South is being led by NSW Land and Housing Corporation (LAHC). This will set out the strategic justification for the proposal and provide an assessment of the relevant strategic plans, state environmental planning policies, ministerial directions and the environmental, social and economic impacts of the proposed amendment. The outcome of this planning proposal will be a revised planning framework that will enable future development applications for the redevelopment of Waterloo South.

The proposed planning framework that is subject of this planning proposal, includes:

Amendments to the Sydney Local Environmental Plan (LEP) 2012

This will include amendments to the zoning and development standards (i.e. maximum building heights and floor space ratio) applied to Waterloo South. Precinct-specific local provisions may also be included.

A Development Control Plan (DCP)

This will be a new part inserted into 'Section 5: Specific Areas' of the Sydney DCP 2012 and include detailed controls to inform future development of Waterloo South.

An Infrastructure Framework

In depth needs analysis of the infrastructure required to service the needs of the future community including open space, community facilities and servicing infrastructure.

PURPOSE OF THIS REPORT

This report relates to the Waterloo South Planning Proposal. While it provides comprehensive baseline investigations for Waterloo Estate, it only assesses the proposed planning framework amendments and Indicative Concept Proposal for Waterloo South.

The key matters addressed as part of this study, include:

- The **Study Requirements - Nominated State Significant Precinct – Waterloo (Revised March 2018)** by the Department of Planning and Environment
- The **City of Sydney Planning Proposal requirements** by the City of Sydney

1.1 STRATEGIC CONTEXT

Waterloo is strategically located in the Eastern City's economic corridor

Waterloo Estate is located approximately 3.3km south-south-west of the Sydney CBD in the suburb of Waterloo (refer to Figure 1.1.1). It is located entirely within the City of Sydney local government area (LGA).

The Estate is located on the new Sydney Metro line, and is a short walk from Redfern Station to the north and Green Square to the south. It is located within close proximity to the University of Sydney and the Australian Technology Park to the west and Moore Park to the east. Green Square is the closest strategic centre.

Waterloo is strategically located in the Eastern City's economic corridor. Its close proximity to Central Sydney provides the opportunity to support the vision set out in the Greater Sydney District Plan to provide housing, employment opportunities and services close to transport. As Sydney continues to grow, existing zoning patterns will need to be revised to better reflect the renewal of inner-city areas that include Waterloo. The renewal of Waterloo South will contribute to the development of the 30 minute city as a new urban village providing essential access to day-to-day goods and services close to where people live.

WATERLOO'S STRATEGIC LOCATION

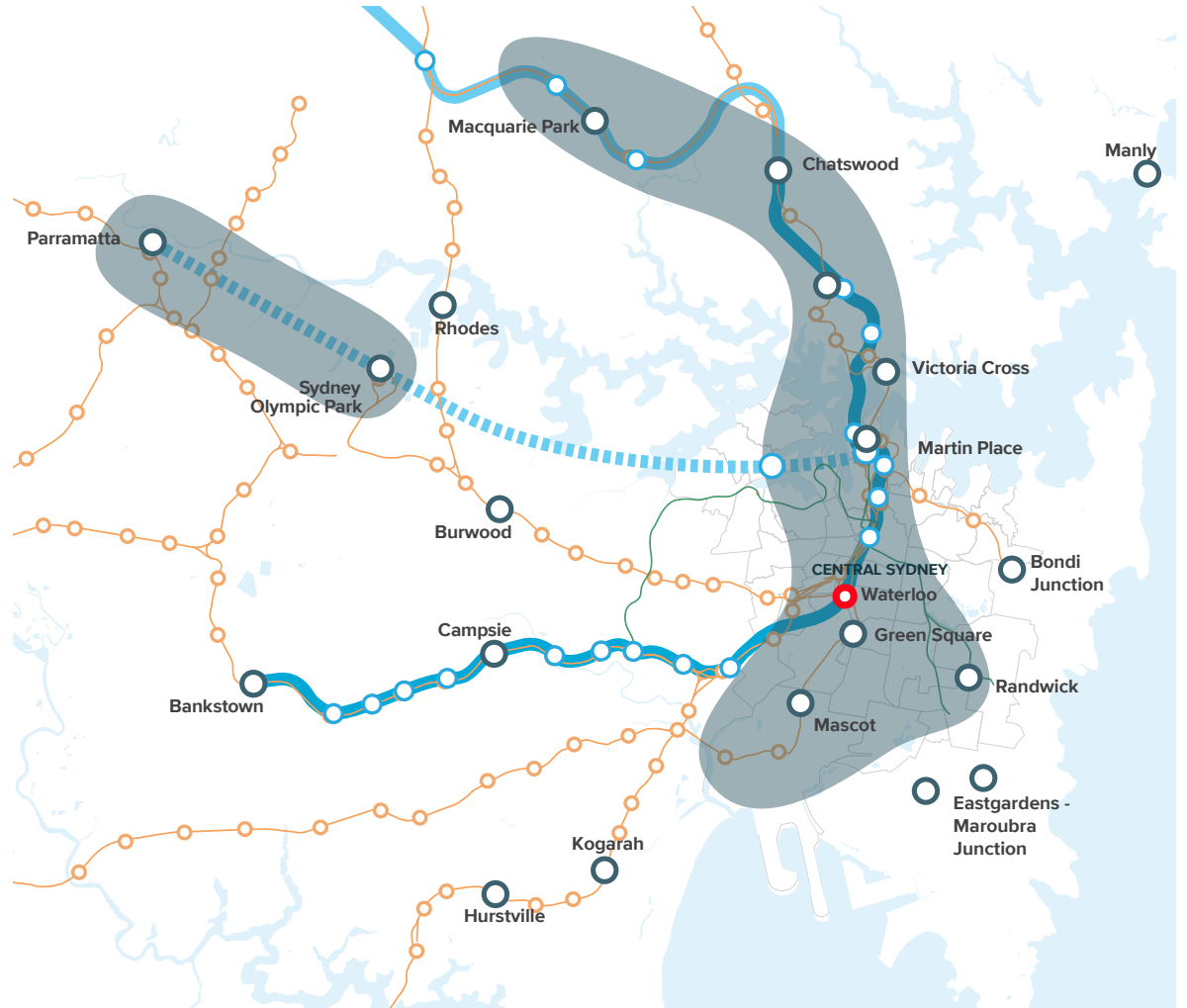


Fig.1.1.1 Waterloo's strategic location
Source: Adapted from Eastern City District Plan, Greater Sydney Commission, 2018

- Legend**
- Waterloo Estate
 - Strategic Centre
 - Local Centre
 - Metro Station
 - Integrated Station Development (ISD)
 - Sydney Metro Northwest/ City & Southwest Line
 - - - Sydney Metro West Line
 - Train Station
 - Train Line

0km 1 2

1.2 WATERLOO ESTATE

Waterloo Estate has an approximate gross site area of 18.98 hectares.

THE WATERLOO ESTATE

Waterloo Estate is situated approximately 0.6km from Redfern train station and 0.5km from Australia Technology Park. The precinct adjoins the new Waterloo Metro Station, scheduled to open in 2024. The Waterloo Metro Quarter adjoins Waterloo Estate and includes the station and over station development, and was rezoned in 2019.

The Estate comprises land bounded by Cope, Phillip, Pitt and McEvoy Street, including an additional area bounded by Wellington, Gibson, Kellick and Pitt Streets. It has an approximate gross site area of 18.98 hectares (14.4 hectares excluding roads). The Estate currently comprises 2,012 social housing dwellings owned by LAHC, private dwellings, a small group of shops and community uses on the corner of Wellington and George Streets, and commercial properties on the south-east corner of Cope and Wellington Streets.

A map of Waterloo Estate and relevant boundaries is illustrated in Figure 1.2.1.

The 2,012 dwellings in the Waterloo Social Housing Estate are owned by and managed by LAHC. These are located within a mixture of low to medium rise walk-up buildings, three medium rise apartment buildings (4–7 storeys high) and six high rise apartment buildings (two 30 storey and four 17 storey).

Private Sites

There are a number of sites within the Estate under private ownership containing 125 private dwellings and commercial uses. The private sites are located at:

- ① 221-223 Cope Street - with existing commercial uses
- ② 116 Wellington Street - with existing commercial uses
- ③ 225-227 Cope Street - with existing residential uses
- ④ 233-239 Cope Street and 123-131 Cooper Street - with existing multi-residential uses
- ⑤ 111 Cooper Street - with existing residential uses
- ⑥ 291 George Street - with existing multi-residential uses
- ⑦ 110 Wellington Street - with existing multi-residential uses

Waterloo Station and the Waterloo Metro Quarter

The Waterloo Metro Quarter (the Metro Quarter) is located adjacent to the Estate between Cope Street and Botany Road east to west, and between Raglan Street and Wellington Street north to south. The site excludes the Waterloo Congregational Church at 103 Botany Road.

Sydney Metro are leading the development process for the Metro Quarter - development above and adjacent to the station as well as the metro station itself and associated infrastructure. Most of the station will be located underground as a 'cut and cover' between Raglan and Wellington Street. The primary station entrance will be located near the corner of Raglan Street and Cope Street and the secondary entrance is located mid block on Cope Street.

WATERLOO ESTATE



Fig. 1.2.1 Waterloo South private sites

Legend

- Waterloo South boundary
- Train station
- Waterloo Congregational Church
- Waterloo Station and Metro Quarter
- Waterloo South
- Private sites



1.3 WATERLOO SOUTH

Waterloo Estate will to be delivered in three stages over the next 20 years to enable a coordinated renewal approach that minimises disruption for existing tenants and up-front delivery of key public domain elements such as public open space.

WATERLOO SOUTH

Waterloo South includes land bounded by Cope, Raglan, George, Wellington, Gibson, Kellick, Pitt and McEvoy Streets, and has an approximate gross site area of 12.32 hectares (approximately 65% of the total Estate).

Waterloo South currently comprises 749 social housing dwellings owned by LAHC, 125 private dwellings, and commercial properties on the south-east corner of Cope and Wellington Streets. Existing social housing within Waterloo South is predominantly walk up flat buildings constructed in the 1950s and '60s, and mid-rise residential flat buildings (Drysdale, Dobell & 76 Wellington Street) constructed in the 1980s.

Listed Heritage Items within Waterloo South include:

- ① The Duke of Wellington Hotel
- ② The Electricity Substation 174 on the corner of George and McEvoy Streets
- ③ The Former Waterloo Pre-School at 225-227 Cope Street
- ④ The terrace houses at 229-231 Cope Street
- ⑤ The State Heritage listed 'Potts Hill to Waterloo Pressure Tunnel and Shafts' passes underneath the precinct.

A map of Waterloo South and relevant boundaries is illustrated in Figure 1.3.1.

WATERLOO CENTRAL

Waterloo Central includes land bounded by Raglan, George, Wellington and Pitt Streets, and has an approximate gross site area of 2.58 hectares.

Existing social housing within Waterloo Central is within the 17 storey slab buildings Joseph Banks and James Cook.

WATERLOO NORTH

Waterloo North includes land bounded by Phillip, Raglan, Cope and Pitt Streets, and has an approximate gross site area of 4.08 hectares.

Existing social housing within Waterloo North is within the 17 storey slab buildings Marton and Daniel Solander and the 30 storey towers Matavai and Turanga.

WATERLOO SOUTH



Fig. 1.3.1 Waterloo South heritage assets



WATERLOO SOUTH PLANNING PROPOSAL

The planning proposal will establish new land use planning controls for Waterloo South, including zoning and development standards to be included in Sydney LEP 2012, a new section in Part 5 of DCP 2012, and an infrastructure framework.

Turner and Turf has prepared an Urban Design and Public Domain Study which establishes an Indicative Concept Proposal presenting an indicative renewal outcome for Waterloo South. The Urban Design and Public Domain Study provides a comprehensive urban design vision and strategy to guide future development of Waterloo South and has informed the proposed planning framework. The Indicative Concept Proposal has also been used as the basis for testing, understanding and communicating the potential development outcomes of the proposed planning framework.

The Indicative Concept Proposal comprises:

- Approximately 2.57 hectares of public open space representing 17.8% of the total Estate (Gross Estate area – existing roads) proposed to be dedicated to the City of Sydney Council, comprising:
 - **Village Green** – a 2.25 hectare park located next to the Waterloo Metro Station; and
 - **Waterloo Common** and adjacent landscape reserve – 0.32 hectares located in the heart of the Waterloo South precinct.
- The 2.57 hectares all fall within the Waterloo South Planning Proposal representing 32.3% of public open space (Gross Waterloo South area – proposed roads)
- Retention of 52% of existing high and moderate value trees (including existing fig trees) and the planting target of three trees to replace each high and moderate value tree removed.
- Coverage target of 30% of Waterloo South by tree canopy.
- Approximately 257,000 sqm of GFA on the LAHC land, comprising:
 - Approximately 239,100 sqm GFA of residential accommodation, providing for approximately 3,048 dwellings (comprising a mix of market and social (affordable rental) housing dwellings);
 - Approximately 11,200 sqm of GFA for commercial premises, including, but not limited to, supermarkets, shops, food & drink premises and health facilities;
 - Approximately 6,700 sqm of community facilities and early education and child care facilities.

INDICATIVE CONCEPT PROPOSAL

The key features of the Waterloo South Indicative Concept Proposal are:

- It is a design, open / public domain space led approach.
- Creation of two large parks of high amenity by ensuring good sunlight access.
- Creation of a pedestrian priority precinct with new open spaces and a network of roads, lanes and pedestrian links.
- Conversion of George Street into a landscaped pedestrian and cycle friendly activity street and creation of a walkable loop designed to cater to the needs of all ages.
- A new local retail hub located centrally within Waterloo South to serve the needs of the local community.
- A target of 80% of dwellings to have local retail services and open space within 200m of their building entry.
- A target of a 6 Star Green Star Communities rating, with minimum 5-star Green Star – Design & As-Built (Design Review certified).
- A range of Water Sensitive Urban Design (WSUD) features.

The proposed land allocation for the Waterloo South precinct is described in **Table 1**.

LAND ALLOCATION	EXISTING	PROPOSED
Roads	3.12 Ha / 25.3%	4.38 Ha / 35.5%
Developed Area (Private Sites)	0.86 Ha / 4.5%	0.86 Ha / 7.0%
Developed Area (LAHC)	8.28 Ha / 67.2%	4.26 Ha / 34.6%
Public Open Space (proposed to be dedicated to City of Sydney)	Nil / 0%	2.57 Ha / 20.9% (32.3% excluding roads)
Other publicly accessible open space (including former roads and private / LAHC land)	0.06 Ha / 0.5%	0.25 Ha / 2.0%
TOTAL	12.32 Ha	12.32 Ha

Table 1 Breakdown of allocation of land within Waterloo South

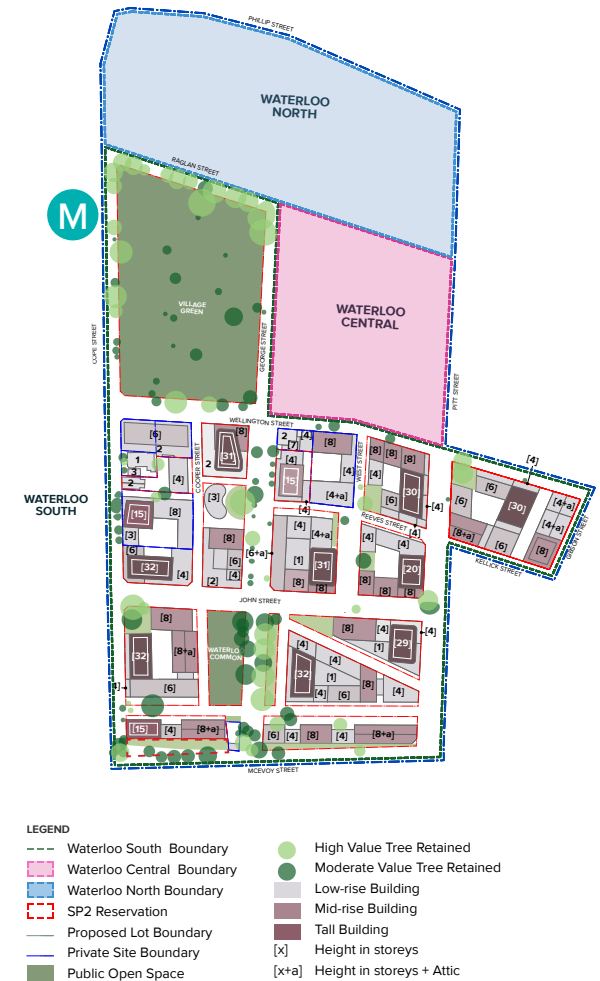


Fig. 1.3.2 Waterloo South Indicative Concept Proposal

W 1.4 VISION

The vision for Waterloo reflects the community's values and desires and guides the masterplan process for the renewal of the Estate

The vision for Waterloo has been developed through the 'Let's Talk Waterloo' engagement program that was launched in October 2017 to actively and meaningfully engage with the community about the vision for the renewal of the Waterloo Estate and to provide an opportunity for those affected to have influence and be heard. The vision provides an overarching framework to support the development of the masterplan that will guide Waterloo's renewal over the next 20 years. The outcomes from the visioning process have been distilled into the following vision that the community would like for the future Waterloo.

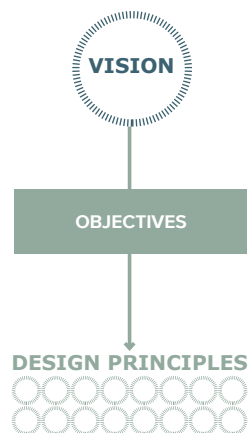


Fig. 1.4.1 Vision, objectives and principles framework diagram



Fig. 1.4.2 Vision for Waterloo



RENEWAL VISION

The transition of Waterloo Estate will occur over a 20-year timeframe, replacing and providing fit for purpose social (affordable rental) housing as well as private housing to create a new integrated and inclusive mixed-tenure community.

This aligns with Future Directions for Social Housing in NSW – the NSW Government’s vision for social housing. It also aligns with LAHC’s Communities Plus program, which is tasked with achieving three key objectives:

1. Provide more social housing
2. Provide a better social housing experience
3. Provide more opportunities and support for social housing tenants

The following is LAHC’s Redevelopment Vision for Waterloo Estate, which was derived from extensive consultation and technical studies:

CULTURE AND HERITAGE

Recognise and celebrate the significance of Waterloo’s Aboriginal history and heritage across the built and natural environments.

Make Waterloo an affordable place for more Aboriginal people to live and work.

Foster connection to culture by supporting authentic storytelling and recognition of artistic, cultural and sporting achievements.



COMMUNAL AND OPEN SPACE

Create high quality, accessible and safe open spaces that connect people to nature and cater to different needs, purposes and age groups.

Create open spaces that bring people together and contribute to community cohesion and wellbeing.



MOVEMENT AND CONNECTIVITY

Make public transport, walking and cycling the preferred choice with accessible, reliable and safe connections and amenities.

Make Waterloo a desired destination with the new Waterloo Station at the heart of the Precinct’s transport network – serving as the gateway to a welcoming, safe and active community.



CHARACTER OF WATERLOO

Strengthen the diversity, inclusiveness and community spirit of Waterloo.

Reflect the current character of Waterloo in the new built environment by mixing old and new.



LOCAL EMPLOYMENT OPPORTUNITIES

Encourage a broad mix of businesses and social enterprise in the area that provides choice for residents and creates local job opportunities..



COMMUNITY SERVICES Including Support for Those Who Are Vulnerable

Ensure that social and human services support an increased population and meet the diverse needs of the community, including the most vulnerable residents.

Provide flexible communal spaces to support cultural events, festivals and activities that strengthen community spirit.



ACCESSIBLE SERVICES

Deliver improved and affordable services that support the everyday needs of the community, such as health and wellbeing, grocery and retail options.



DESIGN EXCELLENCE

Ensure architectural design excellence so that buildings and surrounds reflect community diversity, are environmentally sustainable & people friendly – contributing to lively, attractive and safe neighbourhoods.

Recognise and celebrate Waterloo’s history and culture in the built environment through artistic and creative expression.

Create an integrated, inclusive community where existing residents and newcomers feel welcome, through a thoughtfully designed mix of private, and social (affordable rental) housing.

Source: Let’s Talk Waterloo: Waterloo Redevelopment (Elton Consulting, 2019)

W 1.5 OBJECTIVES

The objectives to deliver the vision for the Waterloo Estate

Five over-arching Objectives have been identified to deliver the vision for the Estate. In delivering these project objectives, Waterloo will be renewed into one of Sydney's most engaging and liveable contemporary neighbourhoods. The new metro station will provide the connectivity required to support a higher-density neighbourhood with a diverse range of people, services and facilities.



TRANSPORT AND CONNECTIVITY:

A well connected inner city location.

Integrate the new metro station and other modes of transport in such a way that anyone who lives, works or visits Waterloo can get around easily, safely and efficiently.



OPEN SPACE AND ENVIRONMENT:

High quality public spaces and a sustainable urban environment.

A place that promotes a walkable, comfortable and healthy lifestyle with high quality, well designed and sustainable buildings, natural features and safe open spaces for everyone to enjoy, regardless of age, culture or ability.



CULTURE AND DESIGN:

A safe and welcoming place to live and visit.

A place where there is activity day and night, where people feel safe, at ease and part of a cohesive and proud community. A place that respects the land and Aboriginal people by showcasing and celebrating Waterloo's culture, history and heritage.



HOUSING:

A fully integrated urban village of social (affordable rental) and private housing.

A place that meets the housing needs of people with different backgrounds, ages, incomes, abilities and lifestyles - a place where everyone belongs. New homes for social (affordable rental) and private residents that are not distinguishable and are modern, comfortable, efficient, sustainable and adaptable.



SERVICES AND AMENITIES:

New and improved services, facilities and amenities to support a diverse community.

A place that provides suitable and essential services and facilities so that all residents have easy access to health, wellbeing, community support, retail and government services.

1.6 DESIGN PRINCIPLES

The urban design principles set out the key design strategies to achieve the objectives.

Developed by the design team as a response to the project vision and objectives, the design principles respond to the Objectives and set out key design strategies for the public domain and urban and built form response.



TRANSPORT AND CONNECTIVITY:

An active transport hub and local centre working as one.

Highly connected neighbourhood that prioritises walking and cycling for all.



OPEN SPACE AND ENVIRONMENT:

Celebrate Waterloo's unique green attributes including topography, water and trees.

Promote a sense of well-being and connection to nature.

A high performing resilient environment.



CULTURE AND DESIGN:

A significant place shaped by the community for gathering in Waterloo.

Activated and engaging places for all.

Aboriginal people are intrinsic to Waterloo.

Embed local stories of people and place.



HOUSING:

Locally responsive, distinctive and adaptable buildings, homes and spaces.

Diversity of homes and living choices

Emphasise Waterloo's character areas and neighbourhoods.

A variety of indoor and outdoor shared spaces that support resident needs and well-being.



SERVICES AND AMENITIES:

Local services to meet everyone's everyday needs.

Flexible and adaptable land uses, infrastructure and buildings that are responsive to opportunities and needs over time.

Foster local economies and productive environments to create, learn and share.



Fig. 2.0.1 View of Sydney
Source: City of Sydney Archives [SRC2331], 2018

2.0 CONTEXT ANALYSIS

PLANNING PROPOSAL REQUIREMENT

The built form should be developed in line with the design process described in the NSW Government Architect Better Placed strategy.

The urban design principles that underpin the proposed development

ADDRESSED IN

Urban Design Report
Appendix 7.10

Chapter 1.0

SSP STUDY REQUIREMENT

Urban Design

2.1 Prepare a detailed site and context analysis.

ADDRESSED IN

Chapter 2.0
Appendix 7.1

2.3 Prepare comprehensive opportunities and constraints mapping overlays.

Section 2.4

Public Domain: Public Open Space & Streets

3.2 Provide a site analysis of existing physical features and conditions influencing the location and design of the new park(s), including but not limited to topography, slope (including consideration of universal access), flooding, location of and walking distance to existing surrounding parks, noise and busy roads, canopy and trees, heritage, character, function and use. Provide and compare location options. Refer to the Open Space Acquisition Criteria and Rationale and the Waterloo Precinct Open Space directions in volume 2 of the City of Sydney's Open Space Sports and Recreational Needs Study.

Chapter 2.0
Appendix 7.1
Appendix 7.2.1

3.5 Provide an analysis of existing physical features and conditions of the existing street layout including connections, former streets, street hierarchy, topography, flooding, canopy and trees, heritage and character to identify opportunities for improvements to the street layout. Consider reopening former streets, reconnecting existing streets and street widening where beneficial. Provide and compare options for the street layout.

Chapter 2.0
Appendix 7.1
Appendix 7.2
Appendix 7.3

Waterloo is made special by its rich tapestry of stories and layered history

This chapter provides an analysis of the existing Estate to provide a baseline for understanding the many physical, environmental and social layers that comprise the Estate and the community that lives and works there.

It considers the role of the Estate at state, local and neighbourhood levels to confirm its strategic alignment with urban renewal policies, and its relationship to the past, current and future physical context of adjacent areas and what role it should play with a new metro station.

The social context of the community is explored to understand their history and connection to the place, how they have grown to be a culturally diverse, strong and resilient community and how the sense of place can be characterised as Layered, Proud, Distinct and Resilient. These place characteristics encapsulate the specific, fundamental qualities that define Waterloo and make it special. They draw upon the social, environmental, economic and social aspects of Waterloo as a place today and relate it to the vision going forward, to encourage stewardship, belonging and retain a sense of authenticity as the Precinct grows and evolves over time.

The many physical characteristics of the place itself are analysed under five thematic areas of investigation to understand and identify the key opportunities and challenges to be addressed in the renewal of the Estate, resulting in the ten Key Design Insights.



WATERLOO TODAY

PEOPLE



Fig.2.0.2 Sunshine on Waterloo Green
Source: The South Sydney Herald, March 2015

Waterloo is home to many people from different walks of life, each with a connection to the place

PLACE



Fig.2.0.3 Existing fig tree, Waterloo Estate

Waterloo is distinctive, characterised by its topography, landscape, extensive social housing and strong sense of place

TIME



Fig.2.0.4 Family & Culture Day, October 2015
Source: Counterpoint Community Services Facebook Page, 2018

Waterloo has evolved over time to adapt to the needs of the changing community. The arrival of the metro station will bring the next cycle of renewal in the 21st Century

WATERLOO IN A CHANGING CITY

A GROWING CITY



Fig.2.0.5 A global Sydney
Source: "Eastern City District Plan", Greater Sydney Commission, 2018, p.61

By 2031, Sydney's population will grow by 1,740,400 people and need 680,000 new homes to meet this demand

Waterloo is part of this change

The annual population growth in the Eastern City District over the next 18 years is estimated to be 16,250 per year. Waterloo Estate will contribute up to 3.6 percent of the Eastern City District's total growth over the next 20 years.

A DIVERSE CITY



Fig.2.0.6 A multi-cultural Sydney
Source: Sam Ali, for The Commune, 2018

The city will need to support the diverse needs of a growing and changing population

Waterloo is part of this change

The annual population growth in the City of Sydney over the next 18 years is estimated to be 4,650 per year. Waterloo Estate will contribute up to 12.7 percent of the City of Sydney's total growth over the next 20 years.

A CONNECTED CITY



Fig. 2.0.7 The future Waterloo Station
Source: "Waterloo Station", Sydney Metro, 2018

The city is investing in the infrastructure to connect people. The Sydney Metro is a key part of this connectivity

Waterloo is part of this change

The population growth in the Estate will be staged and delivered through a masterplan that will be supported by improvements to infrastructure over the 20 year staged development. With the lowest density spread over a relatively large area, Waterloo South is the first stage for renewal, allowing new housing to be provided with the least disruption for existing tenants and early delivery of key public domain elements.



Fig.2.11 View from Green Square to Waterloo Estate towards Central Sydney

Source: Mirvac, 2018. The Green Square development site shown in this image is an indicative artist's impression only, not to scale, subject to approvals and may change. No warranty or representation is given as to its accuracy or completeness. To the maximum extent permitted by law, Landcom and Mirvac (including its agents and employees) disclaims any liability whatsoever in connection with reliance upon or the use of this image.

2.1 POLICY

- 2.1.1 Strategic Alignment
- 2.1.2 Drivers for Renewal
- 2.1.3 A Strategic Response
- 2.1.4 Complementary Urban Renewal
- 2.1.5 Policy Opportunities and Challenges

“...this precinct presents an incredible opportunity to build a healthy, happy place to live - as long as the balance between heritage and gentrification is right so it retains a bit of character.”

Survey respondent*

This section outlines the policy framework to understand the Estate's future role within Greater Sydney. It provides an overview of its strategic alignment with existing policies, the drivers for renewal, the Estate's relationship to other centres, the constraints that face urban renewal at the local level and the opportunities and challenges that the Estate presents to achieve its strategic potential.

Sydney's population is growing. As it grows, there will be demand for more housing, employment and increased connectivity. There are few sites within close proximity to Central Sydney that have the opportunity to provide, at a large scale, for the additional needs of the growing population. The Estate is one of the few sites with the opportunity for regenerative renewal at a larger scale. Urban renewal has the potential to successfully transform and rejuvenate the Estate through careful planning, genuine engagement, intelligent design and good placemaking processes that work with the existing community and leverage existing qualities that are valued, and contribute to Waterloo's character, to balance gentrification.

Renewal of Waterloo South into a new urban village is consistent with the NSW Government's vision for Greater Sydney and the City of Sydney's multi-centre city strategy. Place-based planning and design excellence that builds on local characteristics is required to renew Waterloo South as a great urban place that contributes to improving the city's liveability.

* "Let's Talk Waterloo - Visioning Report Key Findings", KJA, May 18, p56.



2.1.1 STRATEGIC ALIGNMENT

The Waterloo Estate vision and objectives align with the strategies and goals set out across State and Local policies

The key strategic policies relevant to the site include:

NSW Government

- State Environmental Planning Policy (State Significant Precincts), 2005
- State Environmental Planning Policy (Urban Renewal), 2010
- Greater Sydney Region Plan 2018
- Our Greater Sydney 2056: Eastern City District Plan, 2018
- Future Directions for Social Housing in NSW, 2014
- Future Transport Strategy 2056, 2018
- Apartment Design Guide, 2015
- Create in NSW, 2015
- Greener Places, 2017
- Better Placed, 2017
- Sydney Green Grid, 2016
- Central to Eveleigh Urban Transformation Strategy, 2016
- A Liveable Framework for Sydney, 2017

City of Sydney Council

- Sustainable Sydney 2030, 2017 - 2021
- Environmental Action Plan 2016 - 2021
- Central Sydney Planning Strategy, 2016 - 2036
- Sydney Development Control Plan, 2012
- Urban Ecology Strategic Action Plan, 2014
- Urban Forest Strategy, 2013
- Street Tree Masterplan, 2011
- Open Space, Sports and Recreation Needs Study, Vol 1, 2016
- Open Space, Sports and Recreation Needs Study, Vol 2, 2016
- Creative City, 2014 - 2024
- Cycle Strategy and Action Plan, 2007 - 2017
- Digital Strategy, 2017
- Public Domain Manual, 2017
- Sydney Landscape Code, 2017
- Community Garden Guidelines, 2016
- Sydney Street Code, 2013
- Sydney Streets Technical Specification, 2016
- Inclusive and Accessible Public Domain Policy Guidelines, 2019
- Legible Sydney Design Manual, 2016
- Sydney Lights, 2015
- The Liveable Green Network, 2011
- Sydney Local Environmental Plan, 2012
- Housing for All, 2019
- Development Capacity Study, 2019
- City Plan 2036 LSPS, 2019

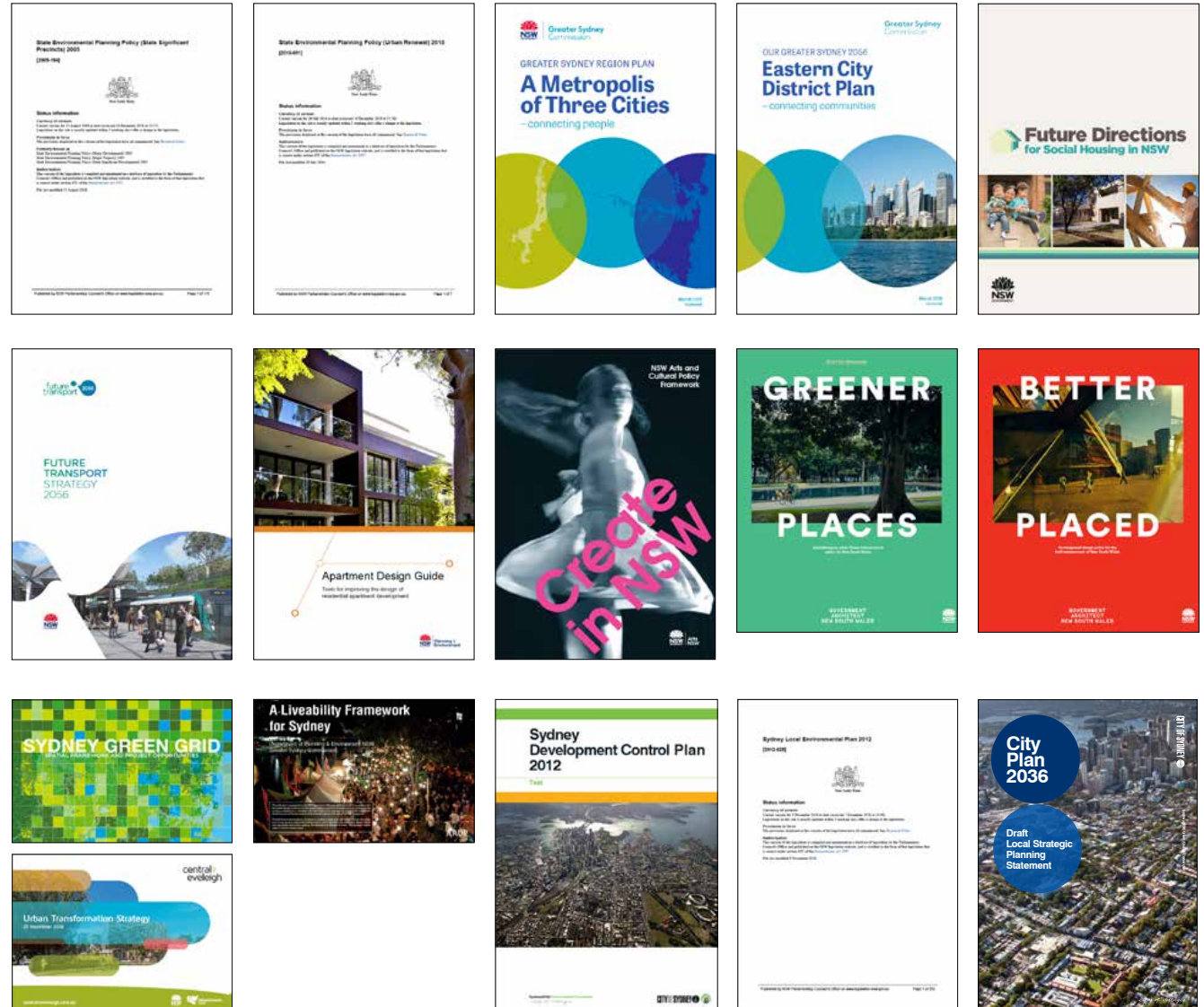
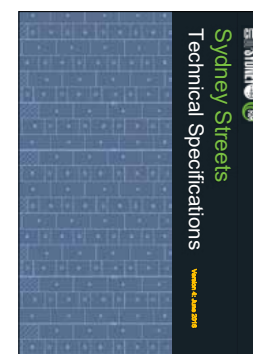
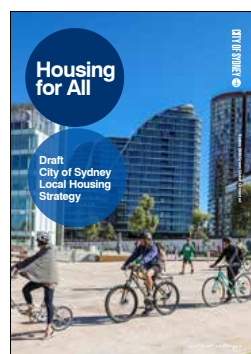
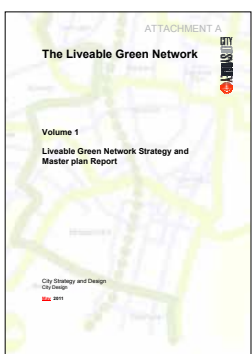
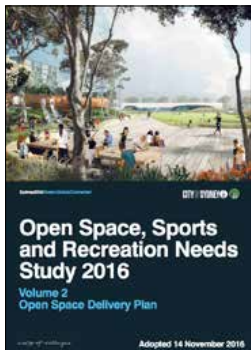
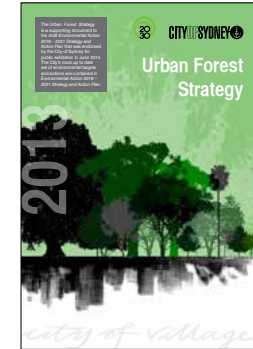
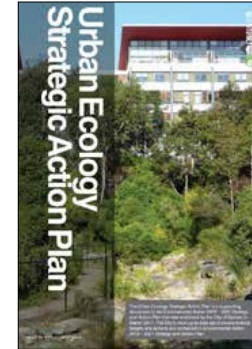
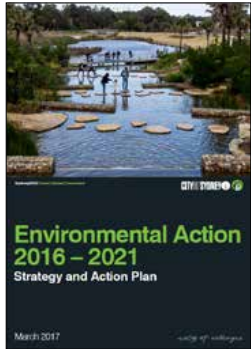
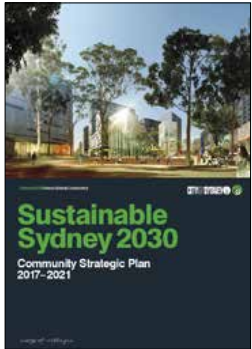


Fig. 2.1.2 Key strategic policies
Sources: NSW Government, Office of Government Architect NSW and City of Sydney





2.1.2 DRIVERS FOR RENEWAL

Waterloo is well positioned to deliver on the NSW Government’s vision for more housing, employment and increased connectivity

Waterloo’s close proximity to Central Sydney provides the opportunity to support the vision set out in the Greater Sydney District Plan to provide housing, employment opportunities and services close to transport. As Sydney continues to grow, existing zoning patterns will need to be revised to better reflect the renewal of inner-city areas that include Waterloo. The renewal of Waterloo South will contribute to the development of the 30 minute city as a new urban village providing essential access to day-to-day goods and services close to where people live.

STRATEGIC LOCATION

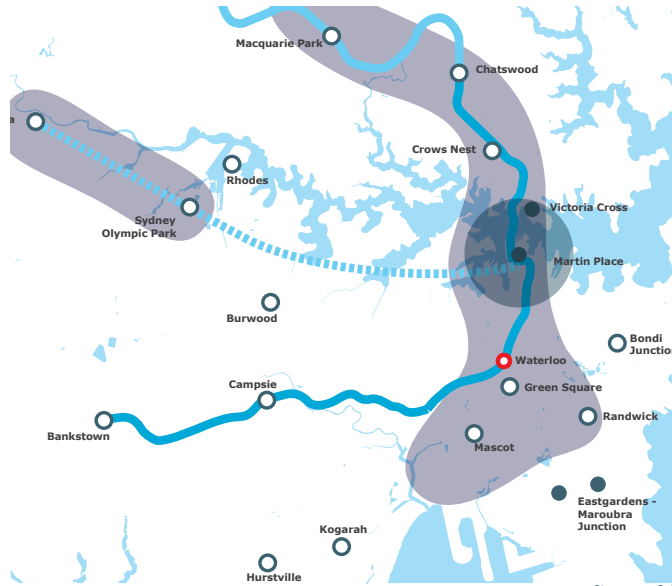


Fig. 2.1.3 Waterloo within the eastern economic corridor
Source: Adapted from Eastern City District Plan, Greater Sydney Commission, 2018

- Legend**
- Waterloo Estate
 - Strategic Centre
 - Local Centre
 - Metro Station
 - Integrated Station Development (ISD)
 - Sydney Metro West Line
 - Sydney Metro Northwest/ City & Southwest Line
 - Train Station
 - Train Line

Waterloo is strategically located in the State’s greatest economic growth corridor

By 2036, Sydney will grow by 1,740,400 people, support an additional 840,000 jobs and will need 680,000 new homes. This will fundamentally change the city’s fabric. As Sydney continues to grow, the provision of additional housing, connected to jobs and educational opportunities, will be key to meeting the needs of the growing and changing population by increasing liveability.

Waterloo sits within the Eastern Economic Corridor that connects from Macquarie Park through Central Sydney to the airport. The renewal of Waterloo South will deliver additional housing and employment opportunities at the same time that Waterloo Station provides increased connectivity.

THE 30 MINUTE CITY

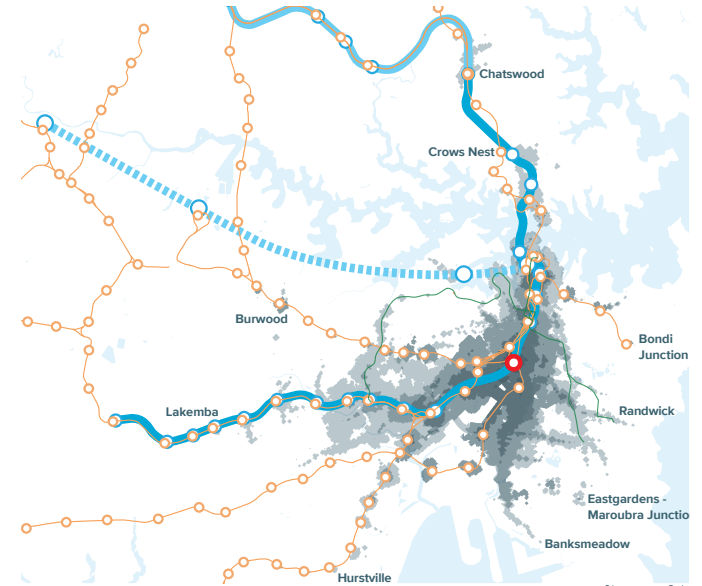


Fig. 2.1.4 Waterloo within the 30 minute city
Source: Adapted from Eastern City District Plan, Greater Sydney Commission, 2018

- Parramatta Light Rail Route
- Eastern Economic Corridor
- The 30-minute City
- Major Development
- Urban Renewal Precinct

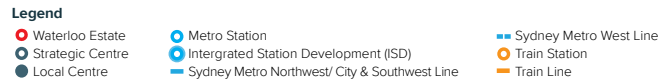
The new Sydney Metro station will make Waterloo part of the 30 minute city, connecting to opportunities for jobs, services and recreation

Waterloo Station, as part of the Sydney Metro City & Southwest project, is a key part of delivering the increased connectivity that is part of the Greater Sydney Region Plan 2018 to create three interconnected 30 minute cities. The vision for the 30 minute city is one where people can conveniently access jobs and services within 30 minutes by public or active transport, 7 days a week. Integration of land use, transport and infrastructure planning will be required to achieve this. Co-location of jobs and services, better access to education, and greater housing choice and affordability will provide opportunities for people to live closer to their jobs and improve liveability.

METRO AS CATALYST



Fig. 2.1.5 Sydney Metro integrated station developments (ISD)
Source: Adapted from Eastern City District Plan, Greater Sydney Commission, 2018



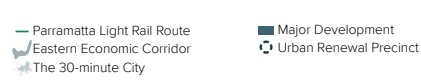
Waterloo Metro Station is the catalyst for unlocking Waterloo's unique renewal potential

The renewal of Waterloo South will support the diverse, vibrant and growing community into the future and provide a choice of highly liveable housing options, as well as new community facilities, retail, services and public domain. The new Sydney Metro station at Waterloo and the re-development of the Metro Quarter as an integrated station development will put in place improved connectivity, retail and services. The new activity centre ensures that the infrastructure will be in place to support the increased population.

SYDNEY'S FRAMEWORK OF CENTRES



Fig. 2.1.6 Waterloo within the Greater Sydney framework of centres
Source: Adapted from Eastern City District Plan, Greater Sydney Commission, 2018



Waterloo South has the opportunity to deliver a new urban village within the City of Sydney's network of villages with the Metro Quarter supporting the new activity centre within Greater Sydney's framework of centres as the first stage of the renewal

Located next to the City of Sydney's Innovation Corridor, Waterloo South will deliver transformative urban renewal as a new urban village, with the new metro station acting as a catalyst. Place-based planning and design excellence that builds on local characteristics is required to renew Waterloo South as a great urban place that contributes to improving the city's liveability.



2.1.3 A STRATEGIC RESPONSE

The height for transit corridors outside of Central Sydney and Parramatta ranges from 25 to 50 storeys

With the projected population and employment growth in Sydney over the next 40 years, well-located housing, public spaces, transport, local infrastructure and planning that is people and place focused will be key to ensuring that the liveability of the city is enhanced.

The emerging activity centres sit within Sydney's framework of metropolitan, strategic and local centres. The highest density and heights are focused in the Sydney and Parramatta CBD's as the key metropolitan centres. In planning the location of Sydney Metro stations, consideration was given to

the locations and objectives of these metropolitan, strategic and local centres. The new Sydney Metro stations will provide Sydney with more connected and liveable centres.

The strategy for higher densities in well-connected centres will bring greater vibrancy, reduced travel times and increased economic opportunities by locating people closer to jobs and education. Changing the heights and densities along transit corridors supports this growth strategy, with heights at or around stations (outside of Central Sydney and Parramatta CBD) ranging from 25 to 50 storeys.

EXISTING & FUTURE HEIGHT ALONG TRANSIT CORRIDORS

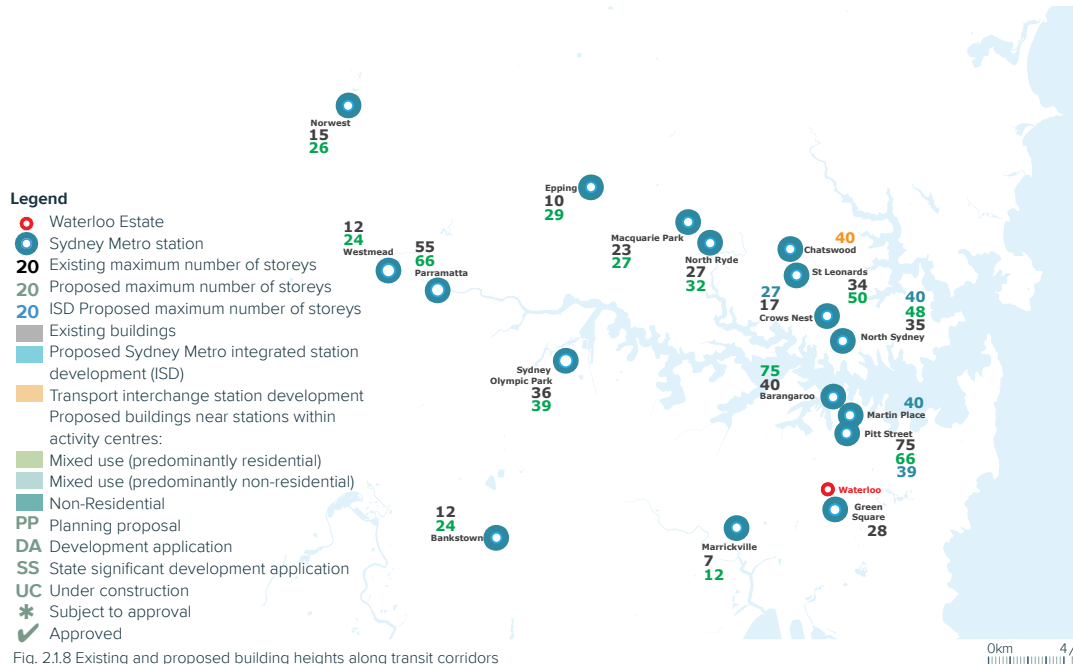


Fig. 2.1.8 Existing and proposed building heights along transit corridors
Sources: Development applications and Planning Proposals sourced from the Department of Planning and Environment, 2018

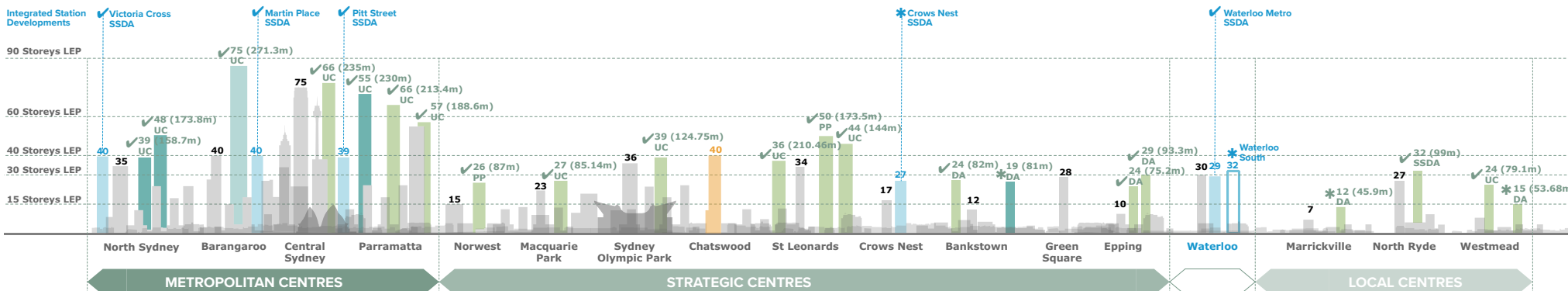


Fig. 2.1.7 Existing and proposed building heights along transit corridors
Sources: Development Applications and Planning Proposals sourced from the Department of Planning and Environment up to Feb 2020

Waterloo South’s renewal will provide a future strategic centre to complement the City of Sydney’s multi-centre city strategy

The City of Sydney’s Central Sydney Strategy 2016 - 2036 identifies the Central to Eveleigh and Bays Precinct urban renewal projects as opportunities to secure the future growth of Central Sydney¹. The Bays Precinct (currently under investigation) is set to become a fully integrated innovation and transport hub along the Sydney Metro West.

Central to Eveleigh provides:

- Proximity to Central Sydney
- Proximity to existing and growing employment and educational clusters
- Existing and future connectivity

Central to Eveleigh comprises five discrete precincts:

Redfern Station

Works include the already completed upgrade to the existing station and future mixed-use development.

North Eveleigh West, South of Carriageworks

To be developed for residential, cultural, education and work-related activities, including the repurposing of existing heritage buildings.

South Eveleigh

The future redevelopment of the South Eveleigh social housing estate.

Central Station

Set for comprehensive redevelopment over a 15 year period, involving a new metro station, remodelling of the main station and mixed-use development above.

Waterloo Estate (previously Waterloo SSP)

In late 2019, the NSW Department of Planning, Industry and Environment (DPIE) developed a new approach to precinct planning to provide certainty and a way forward for precincts across Greater Sydney. This has led to a change in the planning approach for Waterloo Estate, from a State-led rezoning process (through a State Significant Precinct Study) to a Council-led Planning Proposal process.

Located in the City Fringe under the City of Sydney’s City Plan 2036 (LSPS, 2019)², the Estate is within close proximity to key investigation areas in the **Innovation Corridor** which include:

Camperdown-Ultimo Health Precinct

Identified as a key area to attract high growth sectors, new jobs and investment that make a major economic and social contribution through research, discovery, collaboration and innovation.

Eastern Creative Precinct

Creative industries concentrated in Surry Hills (around Central Station) and in ‘high streets’ throughout Redfern Street, Crown and Baptist streets and Oxford Street villages.

Botany Road Corridor

To be investigated for increased non-residential capacity and to grow the Eveleigh node of the Camperdown-Ultimo Health and Education precinct to support the NSW Government’s Sydney Technology and Innovation precinct and link to the future Waterloo Metro Station.

The renewal of Waterloo South provides the opportunity to provide housing, employment opportunities and services close to transport and future employment hubs.

A MULTI-CENTRE CITY



Fig. 2.1.9 A multi-centre city
Source: Adapted from Central Sydney Strategy 2016 - 2036, City of Sydney, 2016

0km 0.5km

Legend

- Waterloo Estate
- Train Station
- Metro Station

¹ Central Sydney Strategy 2016 - 2036, City of Sydney, 2016, p219.

² City Plan 2036 LSPS, City of Sydney, 2019, p148-158.



2.1.4 COMPLEMENTARY URBAN RENEWAL

Waterloo South is well placed to deliver a vibrant urban village, complementary to surrounding precincts and the proposed Metro Quarter integrated station development

The City of Sydney is made up of 10 villages, reflecting the historic growth of Sydney. Each has its own character and contributes to the wide diversity of housing, jobs, services and recreation available to residents. Village areas typically have a centre or high street that provides services, fresh food, entertainment options and infrastructure for the community within a 5 to 10 minute walk for most people.

The City of Sydney City Plan 2036 identifies housing growth to 2036 will be delivered in 3 key areas, with the majority of housing provided as medium to high density apartment buildings. Green Square Urban Renewal Area will deliver over one third of the housing, with the rest of the housing growth focused on Central Sydney and the City Fringe area of Redfern-Waterloo (which includes Redfern Street Village).

City Fringe is a leading place for investment and innovation and is known for its specialised economic role, knowledge intensive clusters, urban amenity and character and is located next to the Innovation Corridor. The Innovation Corridor includes places conducive for innovation and knowledge intensive growth such as the Camperdown-Ultimo Health and Education Precinct and areas within Pyrmont through to Central including the Sydney Innovation and Technology Precinct, Redfern, and Waterloo, including the Botany Road Corridor. These places benefit from proximity to the dense economic activity in Central Sydney, major health and education institutions and significant private and public investment, including existing transport infrastructure and urban amenities to attract a talented labour force.

The City of Sydney has committed to investigate opportunities to increase non-residential capacity in the Innovation Corridor and the Botany Road Corridor as an opportunity to grow the Camperdown-Ultimo Health and Education precinct to support the NSW Government's Sydney Technology and Innovation Precinct and link to the future Waterloo Metro Station. The Botany Road Corridor has the potential for private sector business and investment to leverage off and support the offering of Australian Technology Park.

Walkable, high amenity and technologically connected places support knowledge sharing and collaboration between diverse businesses, institutions and global talent. Genuine mixed-use village areas celebrate distinct economic, social, heritage and cultural characteristics.

The Estate is within Redfern Street Village, which includes city fringe suburbs south of Central Sydney, and is home to a creative, education, high technology and research industry cluster. Its historic residential areas are interspersed by new residential and retail developments. The future delivery of the Waterloo Metro Station is set to rapidly transform parts of the village, including the social housing estate at Waterloo.

This, in conjunction with its location next to the Innovation Corridor, provides Waterloo South the opportunity to leverage on its key location to place people close to future work, educational and recreational opportunities.

SITES WITH LIMITED RE-DEVELOPMENT POTENTIAL CLOSE TO CENTRAL SYDNEY

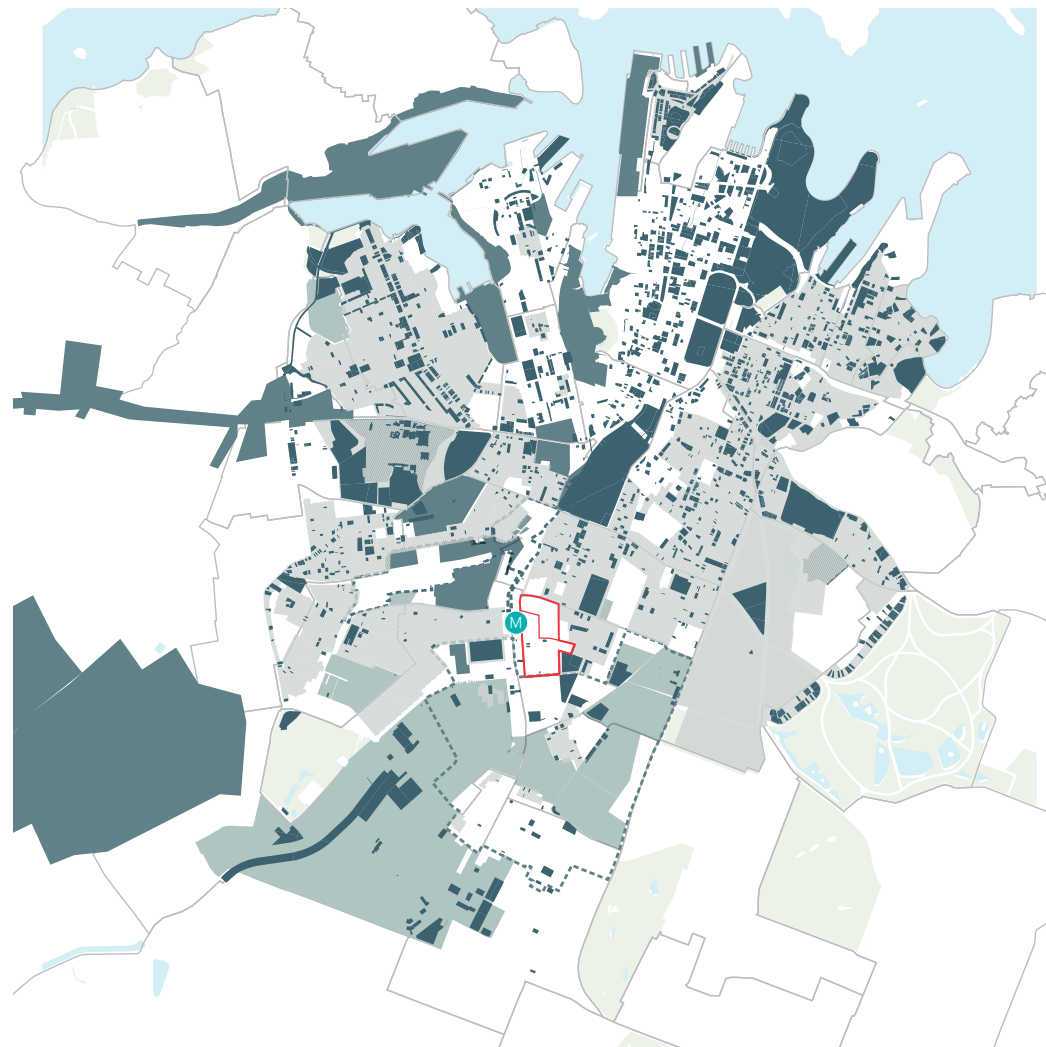


Fig. 2.110 Sites with limited redevelopment potential close to central Sydney
Source: Adapted from Sydney LEP 2012 Heritage Map, City of Sydney, 2012



Legend

- Waterloo Estate
- Waterloo South
- Train Station
- Metro Station
- Urban Renewal Precincts
- State Significant Precinct
- LGA Urban Renewal Project
- Heritage Item
- Heritage Conservation Area

HERITAGE

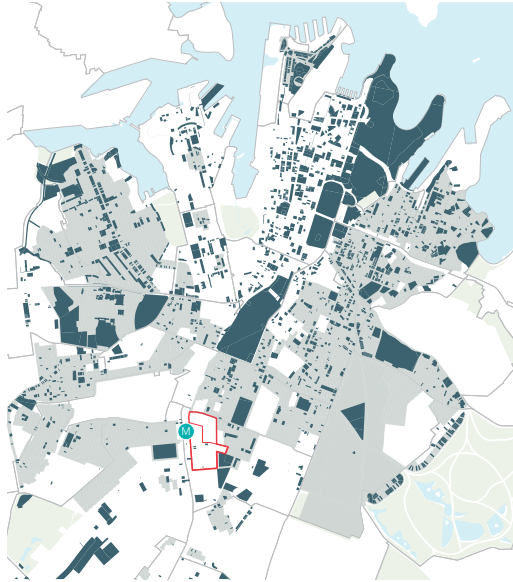


Fig. 2.111 Heritage items and conservation areas
Source: Sydney LEP 2012 Heritage Map, City of Sydney, 2012

Legend

- Waterloo Estate Waterloo Estate
- Waterloo South Waterloo South
- Train Station
- M Metro Station
- Heritage Item
- Heritage Conservation Area

The potential for growth and renewal is limited due to Heritage Conservation Areas surrounding the Estate

The Heritage Conservation Area (HCA) status of land to the north, east and west of the Estate means that the immediately adjacent urban fabric is not expected to significantly change over the coming years. Their current redevelopment potential is limited.

STATE SIGNIFICANT PROJECTS

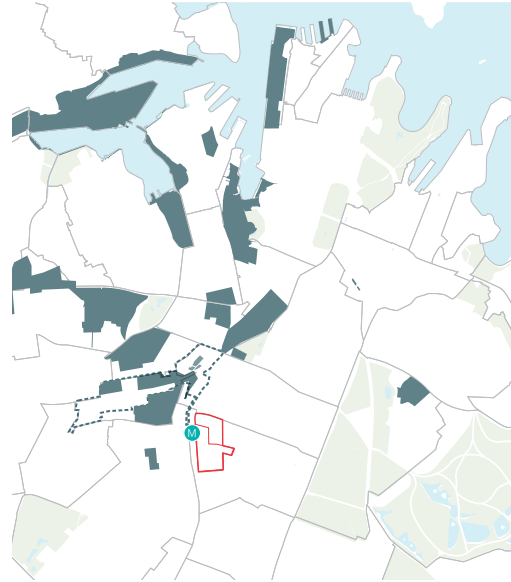


Fig. 2.112 State Significant Precincts or Major Projects
Source: Department of Planning and Environment, 2019

Legend

- State Significant Precinct
- Growth Area

There has been significant investment in delivering transport, employment, educational and cultural opportunities close to Waterloo. The renewal of Waterloo South will enable people to live close to transport, work, educational and recreational opportunities

State Significant projects and developments around the Estate are focused on delivering transport, increased employment, enhanced educational facilities, student accommodation, cultural and work-related spaces, community and open spaces, with some residential development. These precinct strategies support the City of Sydney's long term plan to extend Central Sydney's growth south.

URBAN RENEWAL

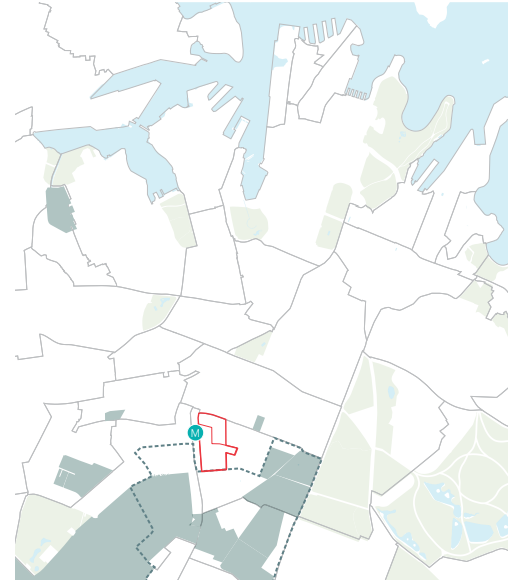


Fig. 2.113 Urban renewal areas within City of Sydney
Source: City of Sydney, 2019

Legend

- LGA Urban Renewal Project
- Green Square Urban Renewal

The potential for densification of adjacent local precincts and urban renewal areas is limited to sites that are still undeveloped. The Estate is one of the last sites in close proximity to Central Sydney with the opportunity for regenerative renewal at a large scale

The City of Sydney precincts and urban renewal areas around the Estate are focused on delivering increased employment, community and open spaces alongside residential developments. Most of these areas have been recently developed.

INNOVATION CORRIDOR

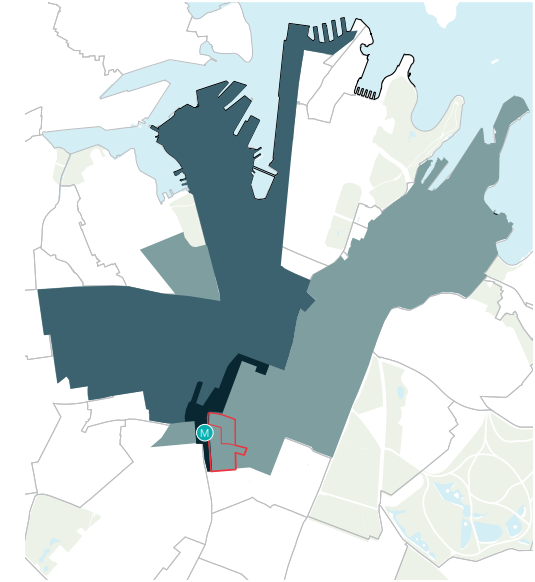


Fig. 2.114 Proximity to future employment growth
Source: City of Sydney LSPS, 2019

Legend

- City Fringe
- Innovation Corridor
- Botany Road Corridor

Located in the City Fringe, the Estate is one of the largest sites next to the Innovation Corridor that can locate people in close proximity to future employment opportunities

The NSW Government's commitment to creating a globally competitive innovation and technology precinct in the Central to Eveleigh corridor will deliver catalytic economic outcomes by connecting employment clusters in Central Sydney to those within the Innovation Corridor. Waterloo South's renewal will support this growth.

W 2.1.5 POLICY

The key policy opportunities and challenges in renewing Waterloo South as a great urban place are outlined below:

OPPORTUNITIES:

Design Led and Place Focused

Deliver on state and local policy for the renewal of Waterloo South.

Cultural Heritage & Diversity

To respect the Estate's special Aboriginal, European and Asian heritage within the design process.

Renewal Context

To grow Waterloo as an emerging centre that is connected to and complements the surrounding special-use districts, including the global economic corridor.

Active Transport Hub

To leverage major new public transport capacity in support of the renewal of the Estate.

Community Connection and Cohesion

To build on the strengths of the Waterloo community and its neighbouring context.

Integrated Grid Strategies

To embed the strategic Ochre and Green Grid principles within the design process.

CHALLENGES:

Complementary Uses

To define a new centre that does not compete with but complements surrounding centres.

Effect of Perceived Gentrification

To address uncertainty within the community through the design and engagement process.

Social and Community Support Facilities

To ensure the needs of the current community are met alongside those of the future residents of Waterloo.

Balanced Development

To ensure the right balance between density, liveability and financial feasibility.

CENTRES HIERARCHY



Fig. 2.115 A hierarchy of centres around Waterloo Estate
Source: Adapted from Central Sydney Strategy 2016 - 2036, City of Sydney

Legend

- Waterloo Estate
- Waterloo South
- Train Station
- Metro Station



Fig. 2.116 40,000 years mural, redfern
Source: Jennifer Yiu photography, 2018



Fig. 2.2.1 View towards Central Park from Redfern.

2.2 PHYSICAL CONTEXT

2.2.1 Neighbourhood Context

“...no one wants to live in an anonymous cookie cutter neighbourhood...”*

Survey respondent*

This section considers the Estate at the neighbourhood level to understand its role in relation to adjacent areas as it is currently an ‘island’ in nature with roads physically disconnected, an atypical block structure and built form, and typologies that are distinctly different from the surrounding areas. This is also an opportunity as the Estate doesn’t have the constraints of the adjacent heritage conservation areas of Alexandria Park, Redfern Village or Waterloo that have lower densities and limited potential for growth.

Waterloo South has the opportunity to be a new activity centre with local retail, services and amenities to serve these lower density surrounding areas as well as the Eveleigh and Australian Technology Park employment areas for which the metro station will provide greater connectivity.

* “Let’s Talk Waterloo - Visioning Report Key Findings”, KJA, May 18, p37.



2.2.1 NEIGHBOURHOOD CONTEXT

Connecting four diverse catchment areas, Waterloo South is well placed to realise the area’s local and strategic value

The renewal of Waterloo South into a new urban village within the City of Sydney’s villages will serve four primary catchment areas around the future Waterloo Metro Station that includes Eveleigh / ATP, Redfern, Alexandria and Waterloo.

Eveleigh / Australian Technology Park (ATP)

Providing employment, cultural uses and open space, the ATP is the nearest employment hub. The re-development of the ATP will increase employment opportunities, provide additional open space, as well as new cultural and retail opportunities. Eveleigh, as part of the Central to Eveleigh Corridor is also set to become a cultural and innovation hub.

Redfern

The nearest strategic centre providing retail, employment, educational and living opportunities.

Alexandria

A heritage conservation area (HCA) with predominantly low rise residential uses, other parts of Alexandria are also set to be renewed as part of the Green Square urban renewal.

Waterloo

A largely residential area with local services, community and cultural facilities.

WATERLOO SOUTH CATCHMENT AREA

EVELEIGH / ATP



REDFERN



WATERLOO SOUTH



ALEXANDRIA



WATERLOO

Fig. 2.2.2 Waterloo South Catchment Area



Fig. 2.2.3 View of the Estate from Botany Road

JAMIES



Fig. 2.3.1 Social gathering outside of the James Cook building, Waterloo Estate.
Source: LAHC, 2018.

2.3 PLACE

2.3.1 A Growing Population

2.3.2 Community

2.3.3 Aboriginal Heritage

2.3.4 History

2.3.5 The Water Story

2.3.6 Productive Landscapes

2.3.7 Evolution of the Street

2.3.8 Place

**“...Waterloo is my country and my home...
I always want to come back to my
Waterloo.”**

Turanga resident*

This section provides an understanding of Waterloo through its people and their connection to place. It illustrates the characteristics that have defined the Estate’s community, both historically and today, that has resulted in its diversity as well as its common bonds.

The place has also undergone significant changes environmentally as well as physically with the natural landscape being changed radically over time, from a wetland to an urban environment, and the building stock being renewed several times as the needs changed from industry to workers housing to the social housing developments evident today.

Waterloo’s people and place have been shaped by continuous cycles of change and renewal, which is reflected in the diversity of both the community and built form that is evident today. The convergence of social, economic, environmental and cultural qualities inform a place character that is layered, proud, distinct and resilient. Layered through its many physical and environmental changes, proud of its diversity, distinct through its many unique characters and environmental features and resilient through the opportunities and challenges that have been presented over time.

This presents an opportunity for the Waterloo South Indicative Concept Proposal to recognise and celebrate the history and many layers of the people and place, to build upon the attributes that makes the Estate unique and to retain the qualities and characteristics that will make it a distinctive, welcoming and authentic place.

* Turanga resident who has lived in Waterloo estate for 45 years, “Let’s Talk Waterloo - Visioning Report Key Findings”, KJA, May 18

W

2.3.1 A GROWING POPULATION

The renewal of Waterloo South will provide housing, services, employment and recreational opportunities to support the diverse needs of the growing community

Residents

Historically a working class neighbourhood, the resident population is characterised by an ethnically diverse mix of low income residents, Aboriginal and Torres Strait Islanders, ageing citizens who have been long-term residents in the area, young professionals, students and families. The residents come from a wide range of socio-economic status and diverse backgrounds including Chinese, English, Russian and European.

The current residential population is set to grow with the redevelopment of precincts around Green Square and Alexandria and the urban renewal of Waterloo South.

Workers

Employment hubs around Waterloo such as the Australian Technology Park (ATP) contain a large population of workers that comprises white collar, pink collar, new blue collar and creatives. This is set to increase with the re-development of ATP and the surrounding innovation corridor.

Visitors

The connectivity provided by the new metro station and urban renewal of Waterloo South will bring a wide range of visitors to the area.

WATERLOO SOUTH CATCHMENT: RESIDENTS & WORKERS

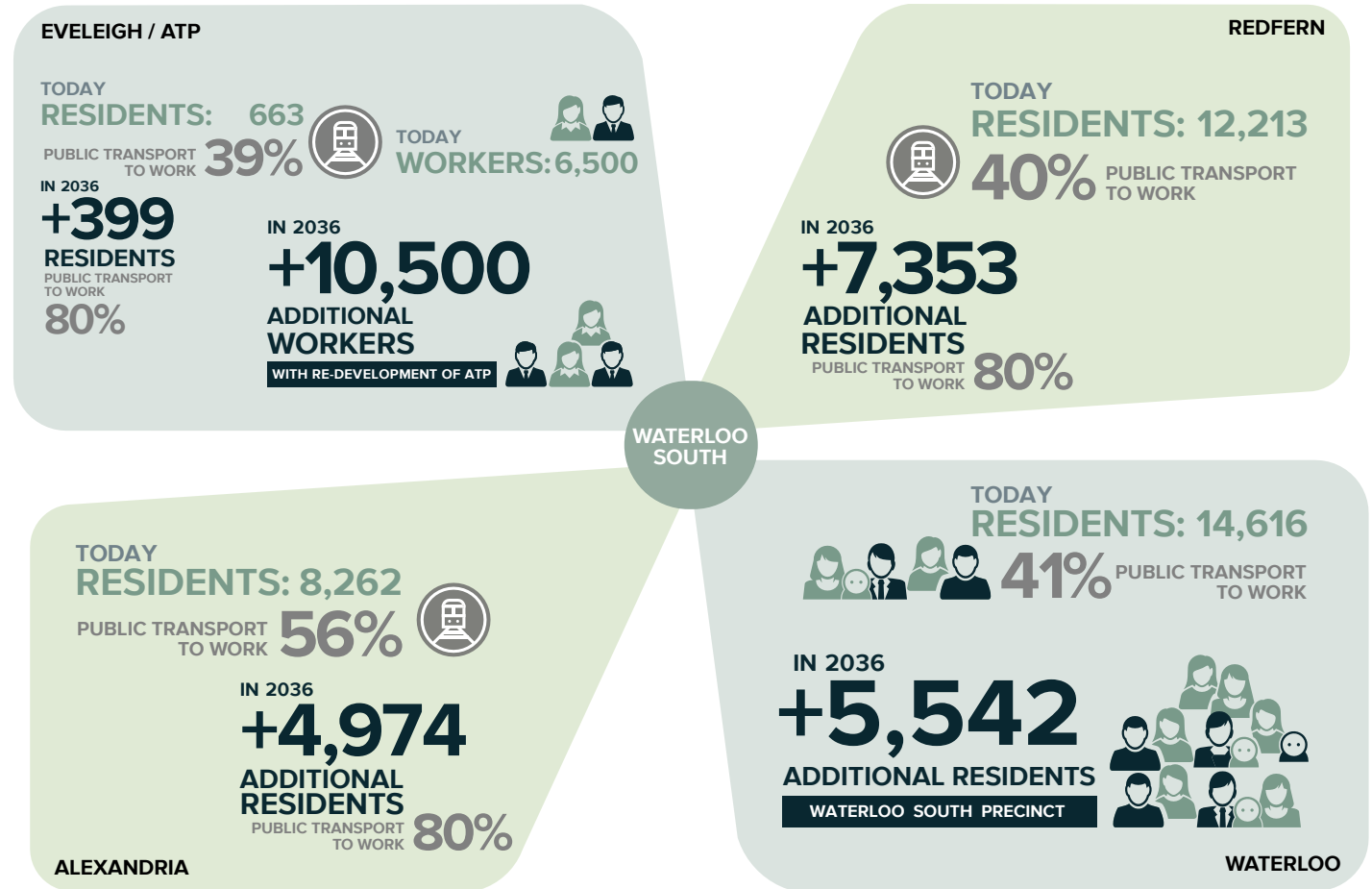


Fig. 2.3.2 Existing and future resident and worker population for the Waterloo South catchment areas
 Source: Population figures are sourced from Census 2016 data Australian Bureau of Statistics.
 2036 population numbers have been calculated using 2016 Annual population growth rates, Department of Planning
 Waterloo South 2036 population is sourced from Population id report, 2020

2.3.2 COMMUNITY

Waterloo’s diverse community of cultural clusters has led to a deep and complex identity

The complex character that defines the Estate today has been shaped by many aspects including the diverse population that has been developed through:

- The convergence of diverse demographic backgrounds and ‘waves’ of people over time. These shared experiences have developed into complex social networks and long standing bonds.
- The concentration of specific demographic groups, the concentration of high levels of social disadvantage and the multicultural and multilingual population.
- The deeply embedded local community and the high proportion of long-term residents.

CULTURAL DIVERSITY

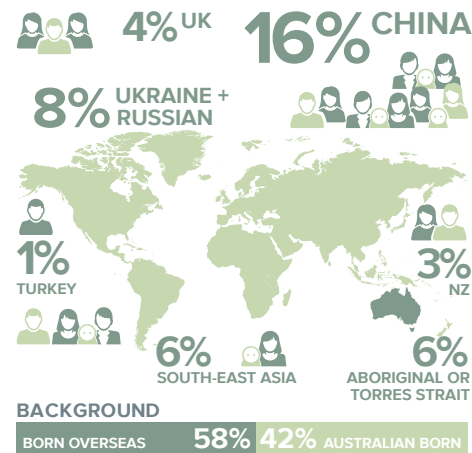


Fig. 2.3.3. Waterloo’s cultural diversity
Source: Waterloo South - Population and Demographic Study, .id, 2020

Legend
 ● Waterloo Estate
 ● City of Sydney

Like much of Inner Sydney, the Estate is highly multicultural

58 percent of residents were born overseas. This is a significant increase from 2011, when 45 percent were born overseas. This compares with 47.7 percent for City of Sydney and 36.7 percent for Greater Sydney. The majority of residents that were born overseas arrived in the 1980s and 1990s with a significant influx of migrants in the past five years, largely from China.

There is a decline in the Ukrainian population, this community is now just 5 percent of the Estate population (from 8 percent in 2011). There were also higher proportions of Russian and Chinese born persons compared to Greater Sydney with a significant increase in the Chinese population between 2011 and 2016 (317 people or 226%).

INDIGENOUS POPULATION



Fig. 2.3.4. Local Aboriginal and Torres Strait population
Source: Waterloo South - Population and Demographic Study, .id, 2020

Legend
 ● Waterloo Estate

There is a larger proportion of Aboriginal peoples and/or Torres Strait Islanders in the Estate

227 residents of the Estate (or 6 percent) identified as Aboriginal and/or Torres Strait Islander. This represents a higher proportion than the 2 percent average across Greater Sydney. There is a concentration of middle aged adults and young families, with a high proportion of children aged 10 to 14 years.

AN AGEING POPULATION

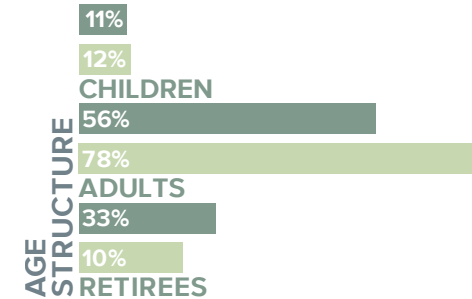


Fig. 2.3.5. Local population age diversity
Source: Waterloo South - Population and Demographic Study, .id, 2020

Legend
 ● Waterloo Estate
 ● City of Sydney

There is a larger proportion of people over 65 in the Estate

Over 33 percent of residents were aged over 65 years in 2016, compared to 10 percent in the City of Sydney and 14 percent across Greater Sydney. This proportion is slightly lower than it was in 2011. The older demographic in the Estate influences the service needs in the area. In 2016, 12.5 percent of residents had need for assistance, much higher than the City of Sydney (2.4 percent) and Greater Sydney rates (4.9 percent). The majority in need were 65 or over (63 percent).



SOCIAL TENURE PREDOMINATES

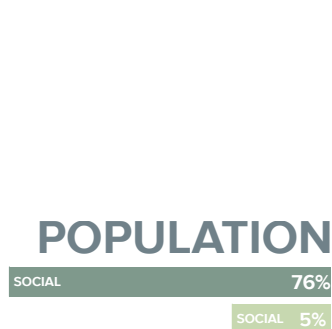


Fig. 2.3.6 Tenure mix

Legend
 ● Waterloo Estate
 ● City of Sydney

There is a higher proportion of social housing in the Estate with 76 percent of the households renting from Public Housing

76 percent of the households in the Estate are rented from Public Housing, compared to less than 5 percent across Greater Sydney. However, private rentals and mortgages have increased since 2011. Currently, around 9 percent of dwellings are rented from a real estate agent, and 5 percent are owned with a mortgage.

DWELLING STOCK

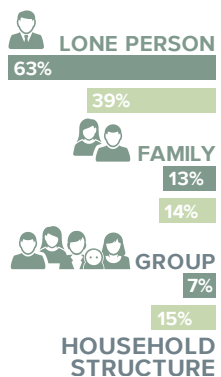


Fig. 2.3.7 Dwelling occupant mix

Legend
 ● Waterloo Estate
 ● City of Sydney

There are 2,545 dwellings recorded in the Estate, which represents 2.3 percent of the City of Sydney's dwelling stock

Just over 90 percent of dwellings in the Estate are high density (as defined by Australian Bureau of Statistics, Census of Population and Housing, 2016.) This is slightly higher than the City of Sydney and far higher than Greater Sydney. As a result of the primarily residential flat accommodation, less than 1 percent of dwellings are separate houses, compared to 55 percent across Greater Sydney.

There is a large (32.3 percent) proportion of single bedroom accommodation, with a very high proportion of lone person households (63 percent). 16 percent of households comprise couples without children and 10 percent comprise one parent families.

EDUCATION AND ATTAINMENT

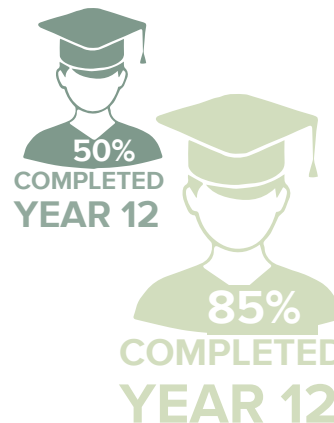


Fig. 2.3.8 Educational attainment rate

Legend
 ● Waterloo Estate
 ● City of Sydney

There is a lower education rate in the Estate, with just over 50 percent completing Year 12 or equivalent

Just over 50 percent of residents in the Estate completed Year 12 or equivalent, compared to 85 percent in the City of Sydney and 65 percent across Greater Sydney. This rate has improved since 2011. Almost 20 percent did not complete Year 9 or below, including those that did not attend school at all. Of those with post school qualifications, 43 percent had a bachelor degree or higher; this is far lower than the average for the City of Sydney (74 percent), and less than Greater Sydney (54 percent)

LOW INCOME

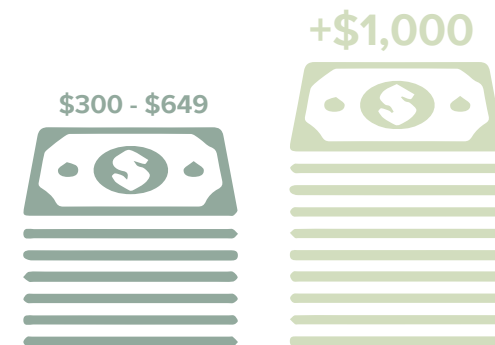


Fig. 2.3.9 Average income levels

Legend
 ● Waterloo Estate
 ● City of Sydney

Household incomes are much lower in the Estate, with 50 percent of the residents earning between \$300 - \$649 per week

Household incomes are much lower in the Estate when compared to City of Sydney and Greater Sydney. Around 50 percent of residents earn between \$300 and \$649 per week. Only 13 percent earn \$1,000 or more per week, compared to 62% across the City of Sydney.

HIGHLY CONTAINED EMPLOYMENT



Fig. 2.310 Employment rate

Legend

- Waterloo Precinct
- City of Sydney

The Estate has a low employment participation rate with 34 percent of residents in the labour force, which reflects the older age structure

34 percent of the Estate residents are in the labour force, reflecting the older age structure. The main employment industries for working residents in Waterloo are Health Care and Social Assistance (13 percent); Professional, Scientific and Technical Services (13 percent) and Accommodation and Food Services (11 percent).

Most journeys to work are made within the City of Sydney; nearly 25 percent of working residents work in Central Sydney. Over 50 percent work in neighbouring locations within the City of Sydney and 12 percent work in the Waterloo - Beaconsfield area. 26 percent of working residents travel to work by car, slightly higher than in City of Sydney. Only 30 percent of households in Waterloo own a car, much lower than Greater Sydney and City of Sydney.



Fig. 2.311 Waterloo Green



2.3.3 ABORIGINAL HERITAGE

The Waterloo story is a collective story of the struggle towards self-determination and recognition that has forged a strong and resilient community with much to offer the future Waterloo

Waterloo's story also includes the surrounding neighbourhoods (Redfern, Erskineville, Green Square, Mascot, Surry Hills, Zetland, Botany and Circular Quay) with Waterloo and Redfern at the centre of the Aboriginal rights struggle in Australia.

Understanding the local Aboriginal story is important to ensure that Aboriginal cultural values, principles, perspectives and aspirations are interpreted and integrated.

The Waterloo Estate is a place of cultural and historic significance for Aboriginal people. Renewal of Waterloo South is an opportunity to provide improved housing and community services, better social housing and support to improve the social, economic and, health and wellbeing of all people living in Waterloo. To ensure the renewal of Waterloo South supports the future needs of Aboriginal people, Land and Housing Corporation have engaged an experienced Aboriginal team to consult with Aboriginal community members. The aim of the consultation is to engage and involve Aboriginal people living in Waterloo in planning and design for their future.¹

¹ "Waterloo Aboriginal Housing and Cultural Needs Strategy", 2018

STORIES OF PLACE

Resilience



Fig. 2.3.12 March for justice for TJ Hickey, Feb 2015
Source: <https://warriorpublications.wordpress.com>, 2018

Waterloo has a complex cultural identity, on the one hand as home to disadvantaged families and on the other to a strong, resilient community that continually strives for self determination and empowerment

Waterloo is located in the traditional homeland of the Gadigal people, who were amongst the first Indigenous people to be dispossessed by colonisation and European settlement.

Cultural Landscape



Fig. 2.3.13 A layered landscape
Source: Victoria Machado, Pinterest, 2010

The Gadigal cultural landscape is characterised by bushland, sandstone cliffs and ridges, bays and coves, sandy ocean beaches, rocky headlands, mangrove swamps, creeks and tidal lagoons

Aboriginal cultural landscapes are defined by relationships between past and present histories and cultures and how this helps preserve cultural values. It includes the extent of traditional homeland boundaries.

For the Gadigal, this cultural landscape spanned between Georges River and Botany Bay to the south, to Sydney Harbour, north to Pittwater and west to Parramatta, and was shaped by a common language, kinship ties, a rich saltwater economy and a life as knowledgeable cultivation of the land.

Connection to Country



Fig. 2.3.14 Bush tucker
Source: Aboriginal Heritage Tour, City of Sydney, 2019

Connection to Country is embedded and alive in the many layers and history of Waterloo, with Aboriginal people holding the knowledge, understanding, obligation and custodianship of a landscape of sustainable abundance

Connection to Country is multi-dimensional, deeply personal and familial, connecting Aboriginal people to everything and to each other in unity.

OPPORTUNITIES FOR DESIGN INTEGRATION
Storylines And Songlines

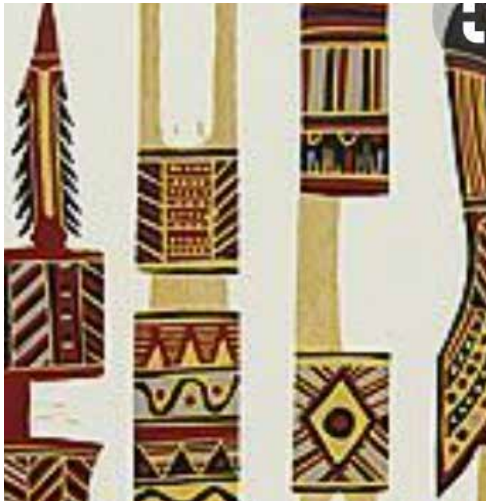


Fig. 2.3.15 Totems
 Source: Bede Tungutalum Pukumani poles, ABC NEWS, 2018

Belonging



Fig. 2.3.16 Mural, Redfern
 Source: Torsten Blackwood/AFP/GettyImages, 2018

Past, Present And Future



Fig. 2.3.17 Aboriginal Housing
 Source: Ezra Shaw/Getty Images, 2016

Storylines and songlines connect to Indigenous cultural practices and heritage

Understand and integrate cultural lines, the cultural landscape, layers of history and connections to place.

Belonging story

The echo of the physical, spiritual and social landscape of pre European Gadigal culture lives on in the strong belonging story of all Aboriginal people who have more recently called the place home or been connected with it.

Concept of Interdependence

The connection between the natural and built environment needs to be viewed holistically.

Building upon Waterloo’s existing history as a welcoming place for all people

Foster a sense of belonging and community where Aboriginal people can see themselves and feel they belong.

Connect Waterloo’s future with the past and present to reflect Aboriginal concepts of time

Embrace inter and trans-generational thinking - past, present and future - building on this enables expression of the present, learning from the past and consideration of the future generation.

Reflect contemporary Aboriginal culture, looking forward and looking back while being rooted in the present generation. Design as an expression of our current time, learning from history and those who came before us while taking into account the generations to come.

W

2.3.4 HISTORY

Waterloo has a strong history of change and renewal, creating a rich tapestry evolved over time

Waterloo's place story is grounded in a historic understanding of the Estate and the surrounding area and how it has changed over time. The place story explores the people that lived in Waterloo, the uses, landscape and buildings and the events that have shaped its character. The place story provides a contextual understanding of Waterloo that can be used to celebrate and acknowledge the narrative of the past as well as influence future development.

A THRIVING WETLAND

Pre 1788 - Aboriginal habitation



Fig. 2.3.18 A plentiful land
Source: John W. LEWIN, Art Gallery of South Australia, 1813

An abundant, pre-colonial landscape serves as a place for hunting, gathering and cultivation of the land

Before settlement, Waterloo consisted of a network of dunes, swamps, pools and creeks. For the Gadigal people, Waterloo was a thriving marshland that provided food, medicinal remedies and the raw materials required for daily life, and was used as a cultural hub and place for hunting, gathering and cultivation. The environment, in turn, was shaped by the Gadigal through pro-active and deliberate land management.

SETTLEMENT & EXPLORATION

Early European Settlement

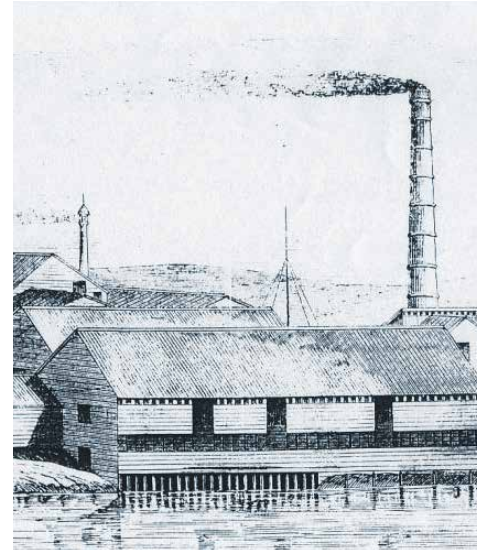


Fig. 2.3.19 The first mills
Source: Australian Town and Country Journal, 16 June 1877

Waterloo Estate sees the start of mill based industry and associated settlement

With European settlement from 1788, the marshlands of Waterloo became a refuge for the Gadigal, displaced from their traditional settlements along the harbour for the expansion of the colony. In 1823, 1,400 acres of land that included Waterloo was granted to William Hutchinson, a former convict. Botany Road, which followed the original tracks used by the Gadigal for trade and movement, ran through the centre of the land. Waterloo was later used to house water powered industrial operations such as local mills and the natural run-off from Waterloo Swamp was treated as the city's waste drain.

CULTURAL CLUSTERS

1840 onwards



Fig. 2.3.20 The Bedford Hotel, Redfern, 1893
Source: The Australian Town and Country Journal

Ad-hoc growth of clustered communities takes place, with residents living next to employment

From the 1840s, Waterloo's context saw rapid change. Rural lands developed into strips of terraced housing for the working class and villas for the emerging professional and merchant classes. 1850 saw the construction of Australia's first railway in Redfern. Pubs became social gathering spaces and gave rise to a distinct 'pub culture'. Chinese immigrants working as market gardeners arrived from 1870 onwards. Clustered communities of dwellings emerged next to tanneries, glass works, wool washing establishments and soap and candle factories.

UNIFIED IN ADVERSITY

Early 20th Century



Fig. 2.3.21 People of Alexandria, 1934
Source: Hood Collection, Mitchell Library, State Library of NSW

INDUSTRIAL BOOM AND RENEWAL

1940s onwards



Fig. 2.3.22 BMC Leyland Factory
Source: sites.google.com/site/wolseleycarclubofnsw/

NEW LIVING APPROACHES

1970s onwards



Fig. 2.3.23 The first blocks
Source: City of Sydney Archives; 19 July 1961; File 032/032693

PROUD AND DIVERSE

The last 20 years



Fig. 2.3.24 Community Day at Waterloo Green
Source: The South Sydney Herald, March 2015

Residents find strength through community, despite poor living conditions and the effects of the Depression

Waterloo's unplanned and chaotic development epitomised Sydney as the 'accidental city', with Waterloo labelled a slum. The influx of immigrants to the area gave rise to a range of ethnically diverse businesses such as Lebanese merchants, Greek cafés and Chinese grocers. The Aboriginal population also increased as work became scarce in rural areas and many sought refuge with relatives in Redfern. Despite this, strong communities were formed by the working class and Waterloo became fertile ground for the Aboriginal Civil Rights movement in the 20s and 30s.

Erosion of fine grain urban pattern with the start of urban renewal and continued industrialisation

By the 1940s Waterloo was the third largest centre for industry in Sydney with an immigrant workforce that continued to grow. The emergence of social housing as a social service saw terrace houses in Waterloo demolished to make way for construction of new low rise walk-up apartments. This pattern continued for the next 30 years. The fine grained urban pattern established earlier in the century began to be eroded as blocks were selected for slum clearance and flat development.

Shift in housing typology and scale to campus style with high rise building in open parklands

By the 70s, the focus for social housing shifted to mixing high density with the amenity of light and air. This approach was delivered through new high rise buildings set in open parklands such as the existing towers Matavai and Turanga. The new approach required reworking the street pattern, with Phillip Street extended and widened and a series of older streets and lanes closed. The densely built nineteenth century suburb was transformed to a modern, high rise neighbourhood.

Respecting the past, building for the future, Waterloo South Urban Village

The last 20 years has seen the urban renewal and redevelopment of areas around Waterloo. This includes the establishment of community markets and development of ATP, the transformation of Redfern Public School into the National Centre for Indigenous Excellence (NCIE) and the urban renewal of Green Square to include new residential flat buildings housing up to 53,190 residents as well as office and retail areas for an estimated workforce of 22,000.



2.3.5 THE WATER STORY

The wetlands of Waterloo are a key part of the areas cultural and environmental heritage

Waterloo Swamp once dominated the landscape of Waterloo and Zetland. In the 1800s, it was dammed to provide water for high pressure pipes and reduced to a series of dams that included Little Waterloo Dam, located in the area now occupied by Waterloo Park. Today there is only a remnant presence of water within the Estate with the heritage listed pressure tunnel that crosses Waterloo South and the flooding that occurs during flood events.

1840: PRE-SETTLEMENT EXPANSION

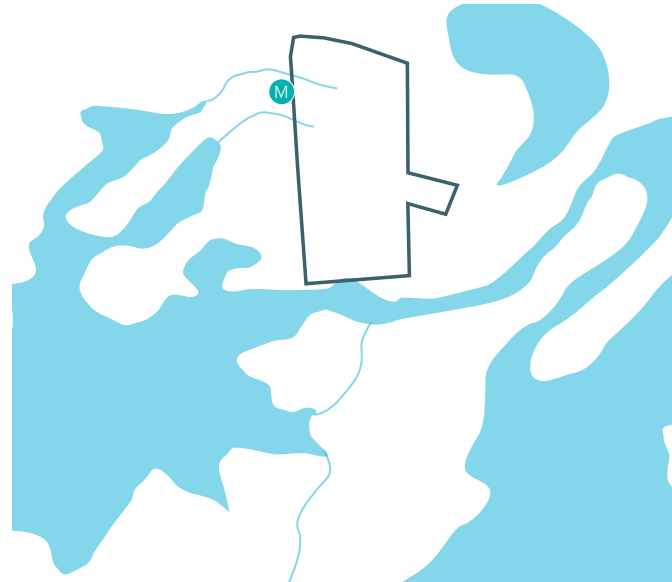


Fig. 2.3.25 1840: Pre-Settlement Expansion
Source: Plan of the Waterloo Estate, c.1840
© State Library of NSW

Legend

- Waterloo Estate
- Metro Station
- Current Water Network
- Previous Water Network

Pre-settlement, Botany Basin (that includes Waterloo) was characterised as a network of wetlands, shrub lands and dune complexes. Local Aboriginal people relied on the area for hunting, foraging and potentially cultivated food production.

1887: EARLY SETTLEMENT EXPANSION

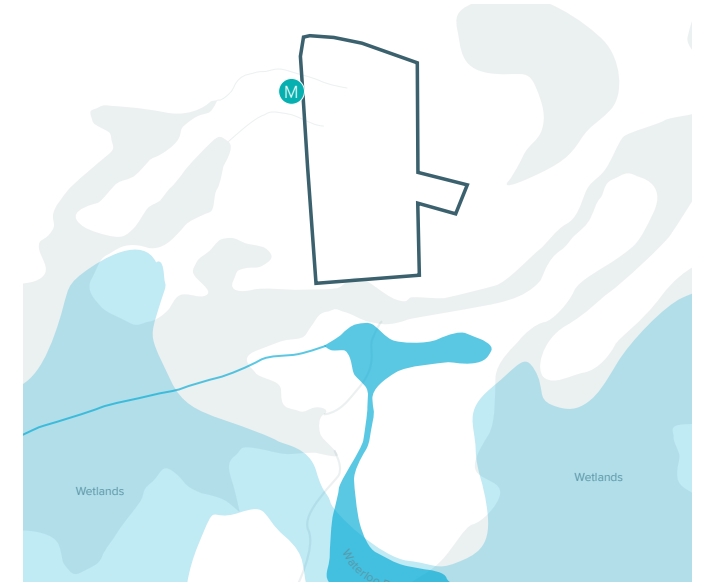


Fig. 2.3.26 1887: Early settlement Expansion
Source: Sand's Directory Map of the City of Sydney & Suburbs, City of Sydney, 1887

Early settlers saw little value in Waterloo beyond use for drinking water and as a power source for watermills. By the 1900s any visual evidence of the wetlands had been lost. An underground pressure tunnel (completed in 1931) brought drinking water in from Potts Hill Reservoir to Waterloo pumping station. A network of dams developed over time to store drinking water and maintain flows for the mills.

1900'S: POST EXPANSION

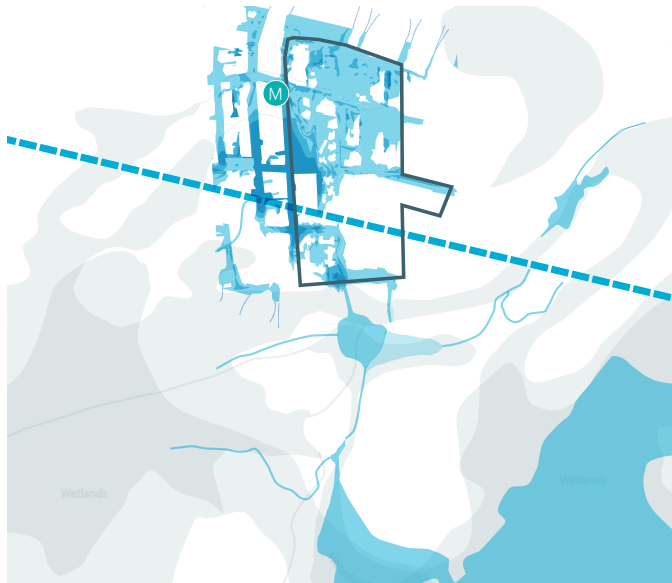


Fig. 2.3.27 1900's: Post expansion
Source: Waterloo South - Flooding and Stormwater Study, AECOM, 2020

- Legend**
- Waterloo Estate
 - Metro Station
 - Heritage listed underground Pressure Tunnel
 - Current Water Network
 - Previous Water Network

Continued settlement expansion placed increased pressure on the natural environment and the area soon became an industrial waste ground, dramatically changing the natural character. Today the only remaining suggestion of this key part of Waterloo's character and heritage is a small hidden drainage channel, the heritage listed underground pressure tunnel and areas vulnerable to flash flooding as a low point in the local topography.

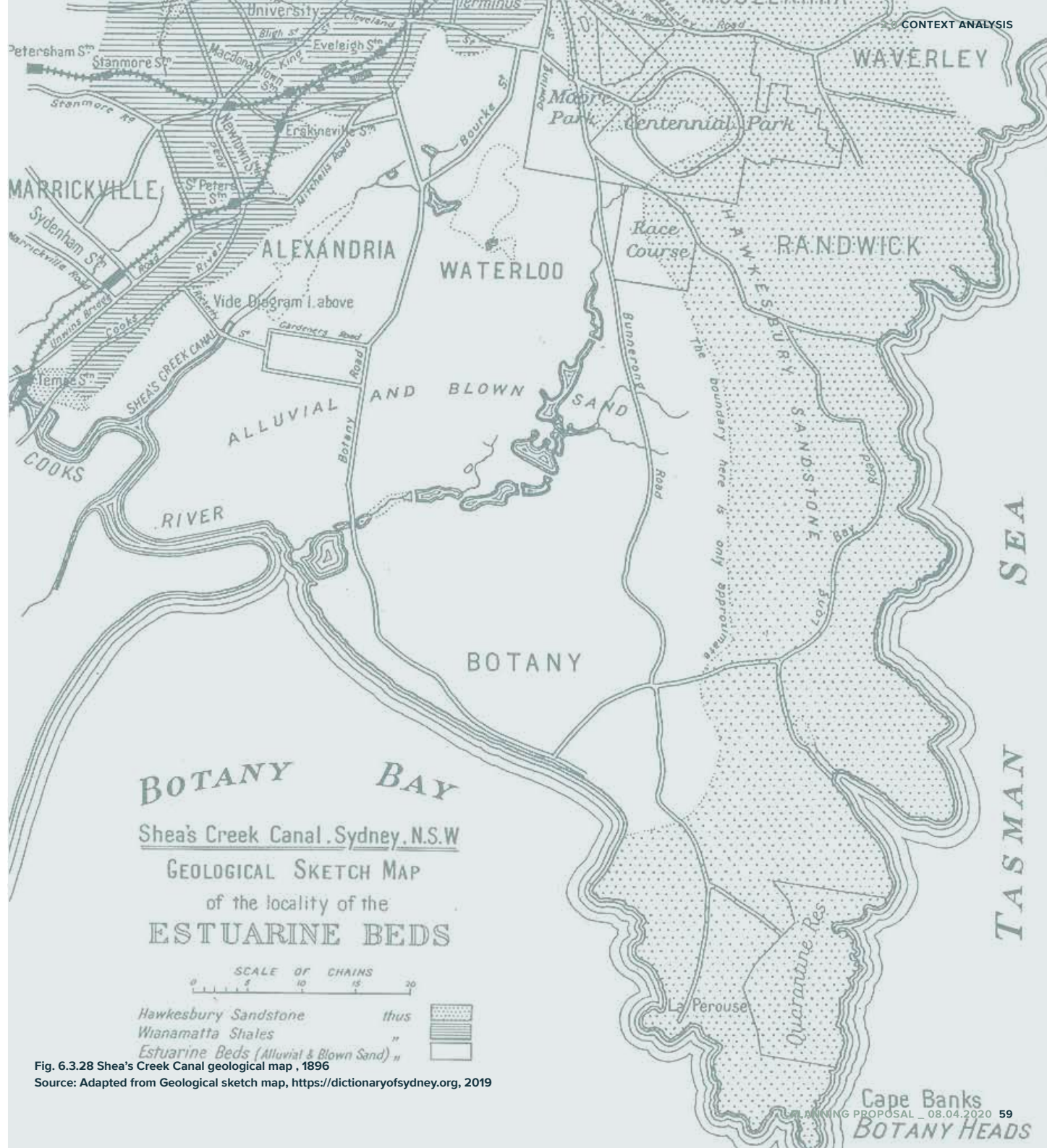


Fig. 6.3.28 Shea's Creek Canal geological map , 1896
Source: Adapted from Geological sketch map, <https://dictionaryofsydney.org>, 2019

2.3.6 PRODUCTIVE LANDSCAPES

Waterloo and the surrounding areas have long been associated with productive landscapes. Pre-colonisation they were the marshlands supplying food and resources to the Aboriginal people and more recently Chinese market gardeners

Layered elements of water, greenery, topography and productive land uses define the landscape character of the Estate and surrounding area. A marshland in its original form, and more recently defined by its urban forest, Waterloo has always been an adaptive landscape. Over time, the landscape has been a place of production; for growing food, for industrial and manufacturing uses, and for communal greening. This presents opportunities to reinterpret the landscape qualities of the place across time and deliver a vibrant public realm that is productive and hyper-functional.

A PRODUCTIVE AND ADAPTIVE LANDSCAPE



Fig. 2.3.29 Pre-settlement mural, Redfern, 2019

Responding to Waterloo's heritage as a productive place will offer opportunities for learning, employment and creativity

The 19th Century was marked by industry with production, manufacturing, and innovative uses. Historic maps of Waterloo reveal the 'rich tapestry' of uses which would have brought its streets to life and given the place its unique character. Manufacturing spaces housed uses such as:

- Shop fitters
- Coach makers
- Furniture makers
- Bakers
- Soap makers
- Metal stampers
- Cable makers
- Glass merchants
- Coppersmiths
- Box makers
- Cotton merchants
- Electrical platers
- Timber yards
- Cordial factories
- Shop fitters
- Paper processors

Rediscovering Waterloo as a productive place will respond to historic uses, activate the city for pedestrian use, encourage creativity, and offer opportunities for meaningful learning and employment.

HISTORIC MANUFACTURING SPACES

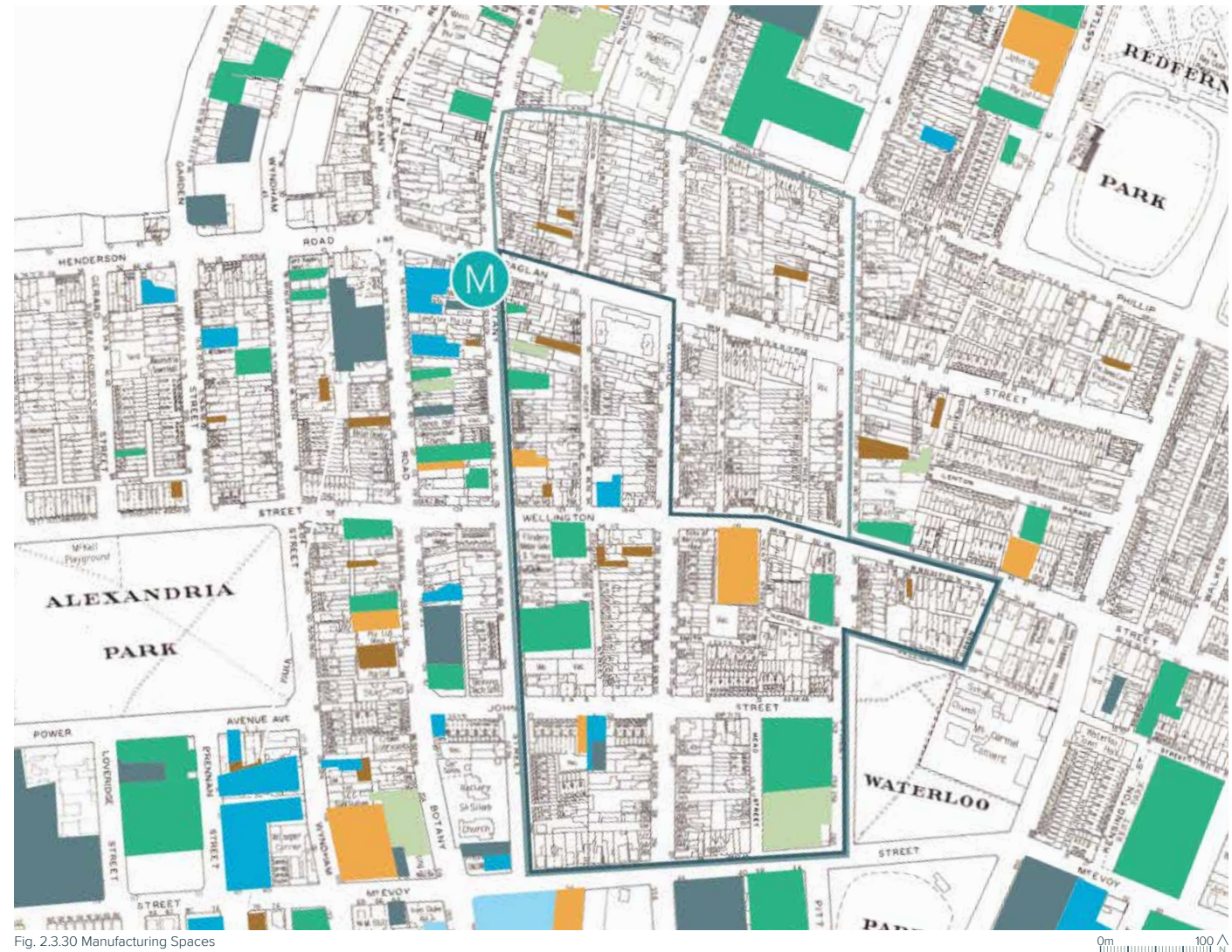


Fig. 2.3.30 Manufacturing Spaces
Source: City of Sydney Survey, 1938 - 50

Legend

- | | | | | |
|-----------------|----------------|----------------|----------------------------|------------------------|
| Waterloo Estate | Waterloo South | Train Station | Food and drink | Sheds and yards |
| Metro Station | Stationery | Metal and wood | Electrical and engineering | Furniture and products |
| | | | Clothing | |



2.3.7 EVOLUTION OF THE STREET

The existing street network retains some of the remnants of the original laneway system, though many have been redeveloped or closed off

The Estate's north-south streets have been disconnected from McEvoy Street at their southern ends. John Street has been disconnected from Pitt Street and George Street has been disconnected north of Raglan Street to make way for Waterloo Green. The net effect is to sever the area from its context – reinforcing the campus style nature of the Estate.

1825

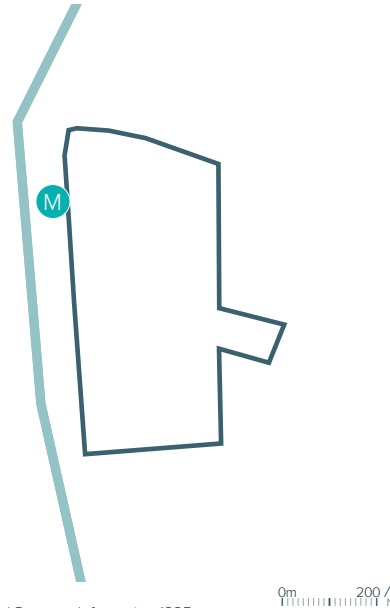


Fig. 2.3.31 1825
Source: Land and Property Information 1825



South of the main settlement of Sydney, what became Waterloo was a series of wetlands and scrubland considered of little value by Europeans, beyond drinking water and a power source for water mills

The first formal road was completed in 1821 by a local officer, Major Durrutt, along with Waterloo Mill, connecting the colony in the north to what became the Waterloo Estate. The road followed the route of an Aboriginal track which continued south to Botany Bay through the wetlands. In 1825 William Hutchinson, a convict who had been granted 1,400 acres (comprising the majority of the current Estate sites), sold his land to Daniel Cooper and Solomen Levey, including the watermill. Later the land would fully pass in to the sole ownership of the Cooper Estate.

1840

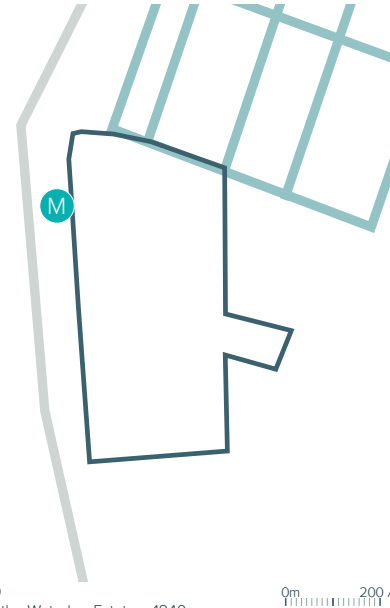


Fig. 2.3.32 1840
Source: Plan of the Waterloo Estate, c.1840
© State Library of NSW



Through the mid-late 1800s sub-division began to spread south from the City of Sydney in a loose grid form. The disjointed and uncoordinated nature of the expansion led to problems of sanitation

The 1850s saw speculative sub-division occur along the northern edges of the Estate while the southern portion remained undeveloped until the 1880s. Sporadic development led to poor and often non-existent public sanitation leading to high rates of disease and crime. However, fuelled by population growth, in part by the construction of the Parramatta to Sydney rail-line attracting labourers with limited housing options, Waterloo continued to grow.

1887

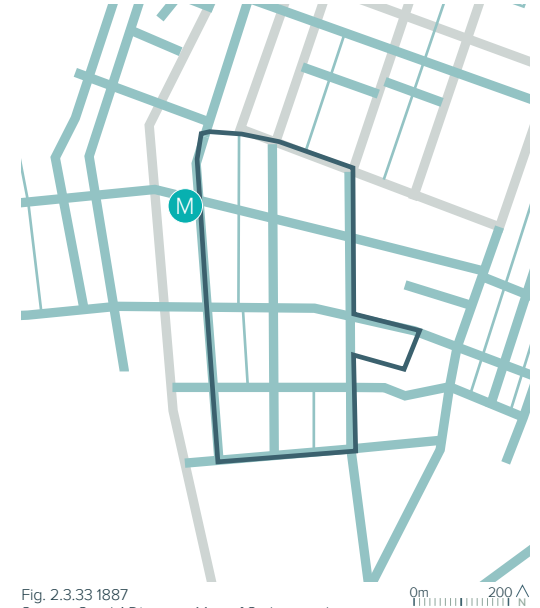


Fig. 2.3.33 1887
Source: Sands' Directory Map of Sydney and Suburbs, Historical Atlas of Sydney, 1887



Sub-division continued with narrow linear plots typical of the Victorian period built speculatively with a focus on the working class

A primary grid of roads now extended across the Waterloo area connecting into the surrounding estates. Key roads continued southwards towards the main water sources such as Shea's Creek where watermills continued to appear.

1890

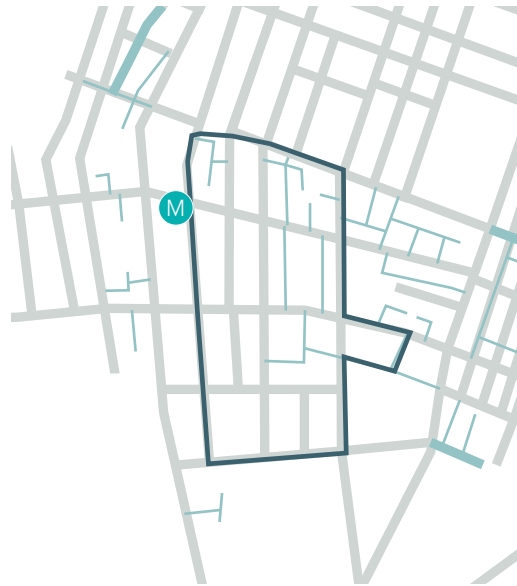


Fig. 2.3.34 1890
Source: Waterloo Parish of Alexandria, Higinbotham & Robinson, Sydney State Library of NSW, 1890



A finer grain emerged with time as spaces between building sites became back-streets and laneways. Increasing immigration and general population growth further added to residential densities

The population continued to grow, and despite Waterloo's reputation as a slum, a proud and tight-knit community formed, often working together in the mills nearby or on the expanding railways. The adjacent waterways however were suffering heavily from over use, both in the dams for drinking water and the outlets into Botany Bay with industrial pollution.

1941

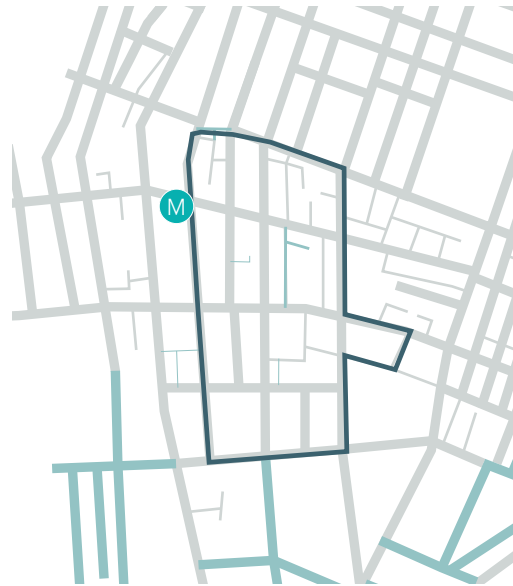


Fig. 2.3.35 1941
Source: Building Surveyor's Detail Sheets, City of Sydney, 1941



Sydney continued to expand in all directions with public transport following in support. Areas such as Waterloo now became a focus of concern following the impact of war and the 'Great Depression'

The area was now well established as a working class district, dense with narrow linear plots, intricate back streets, and still limited sanitation. Discussions of slum clearance began officially in 1928 by the City Commission to resolve the health and crime concerns which peaked during the depression of the 1930s when unemployment in Waterloo hit 43 percent (Sydney average of 28 percent). Running down the west side of the current Estate, the Alexandria tram-line opened in 1902 connecting to Central Sydney in the north. The growth of private car ownership brought its closure in 1959. To the south the road network continued to expand amongst the ever growing industry.

1950

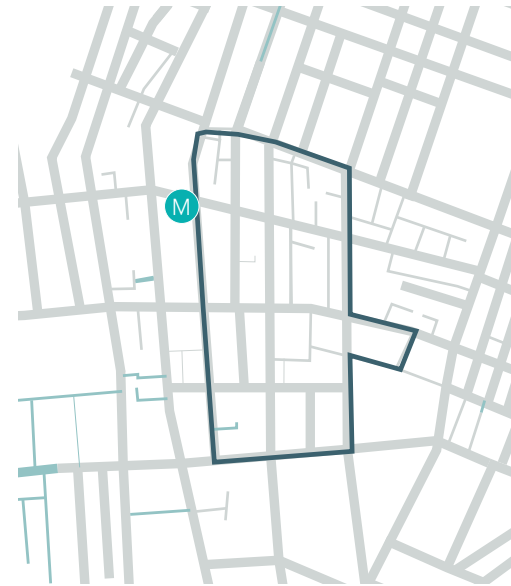


Fig. 2.3.36 1950
Source: Civic Survey, City of Sydney, 1950



'Slum clearance' begins removing large swathes of Victorian terraces, replacing them with spaced out three storey residential apartment blocks

The first stages of 'slum clearance' began along the southern and western edges of the current Estate boundary. This saw the removal of the dense Victorian linear housing plots, replaced with larger three storey 'walk-up' buildings, spread within the established urban blocks, losing the finer grain of back streets and a key part of local character. The new streets exhibited large set-backs and reduced relationships between built form and open space. By 1963 a total of 363 flats had been provided in low rise developments. A key pressure was housing the increasing number of elderly residents amongst general population growth.

1982

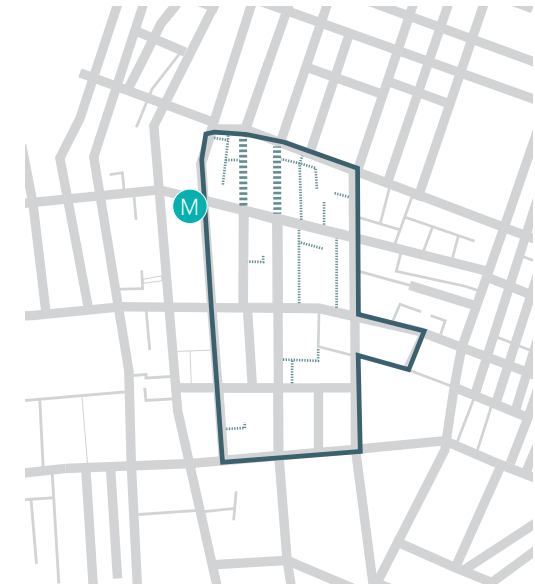


Fig. 2.3.37 1982
Source: NSW Land Registry Services, LTO Charting Maps, South Sydney, Sheet 11, 1982



A period of major social housing provision saw the loss and disconnection of several surrounding streets and large new housing blocks formed to create the Waterloo recognised today

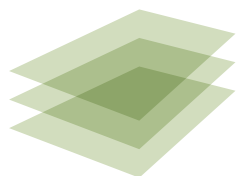
From 1967 to 1976 the northern and eastern quarters of the Estate saw block amalgamation and major housing projects as four 17 storey slab blocks and two 30 storey towers were completed. These signalled the final phase of this period of urban reformation. Eventually all vehicular access to McEvoy Street would also be removed with only pedestrian access maintained. A number of small back streets were also closed to provide new housing. Although the primary grid remained, the formation of larger urban blocks and the severing of connections to the surrounding context created a 'campus village', disconnected in form, scale and movement from neighbouring areas.

W

2.3.8 PLACE

Waterloo is layered, proud, distinct and resilient. The convergence of social, economic, environmental and cultural qualities inform this local character

The place character encapsulates the fundamental qualities that define Waterloo and make it special today, drawn from social, environmental, economic and cultural aspects, to inform the character and future vision for Waterloo South. Waterloo is made special by its rich tapestry of stories and layered history. Understanding how the place character defines the past and present will help to inform the future Waterloo.

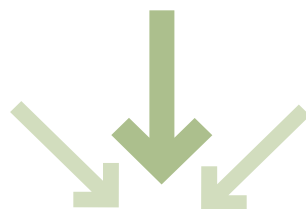


Layered

A rich tapestry

Waterloo is the legacy of many hands and many stories

Waterloo has been shaped by layers of physical and environmental change, as displayed through the juxtaposition of Victorian terraces with warehouse buildings and 20th century social housing. It has also been shaped by people over time (including the many generations of Aboriginal people, Chinese market gardeners, Soviet migrants and many others who have lived and worked there), and of meaning embodied into Waterloo itself. These layers are distinctly different but weave together to form a rich tapestry.

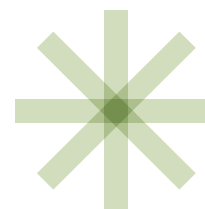


Proud

A place that is home

Waterloo is a place deeply embedded in its locality

Waterloo is a deeply embedded community that has civic and local pride, celebrated through festivals, gatherings and other happenings. The diversity of cultures who live and work in Waterloo is a major source of pride, and the Estate is characterised by the cluster of different communities. These groups display their own identities, but are bonded by common experiences and the networks of neighbours living in proximity to one another.



Distinct

An unmistakable place

Waterloo is different and that difference is worth celebrating

Waterloo is shaped by the unique characters who left their mark on the place, and its distinct environmental features such as the wetlands, topography, fig trees and tall buildings. Anecdotes and historic sources capture Waterloo's distinct qualities. They describe the Estate by its appearance and association to different people, such as Michael O'Riordan, the entrepreneurial Irishman after whom O'Riordan Street is named.



Resilient

An enduring place

Waterloo is grounded by its perseverance over time

Waterloo has remained resilient through opportunity and united through challenge over time. This can be seen through its history, as a place where Aboriginal people found work in the construction of the first railway, a place for disadvantaged families to access shelter, a place of industrial innovation and of activism. The resilience of the natural landscape can also be seen in the trees that can be found throughout the Estate, which offer respite and shelter.



Fig. 2.3.38 Waterloo Estate Markets



Fig. 2.4.1 Existing building facade in Waterloo Estate

2.4 SITE

- 2.4.1 Environment and Open Space
- 2.4.2 Transport, Streets and Connectivity
- 2.4.3 Housing Diversity and Liveability
- 2.4.4 Employment, Services, Retail, Arts and Culture
- 2.4.5 Sustainability and Infrastructure

“I’d like to see a welcoming and safe place for all people of all demographics.”

Matavai resident*

This section provides an analysis of the existing Estate under the five thematic areas of investigation established through the Technical and Innovation Working Groups.

- **Environment and open space** considers the key elements that define the existing urban fabric. These include the network of open spaces, the existing trees, heritage conservation areas (HCAs) and heritage items.
- **Transport, streets and connectivity** considers pedestrian connectivity, public transport and cycle routes and the existing street hierarchy. These are the key elements for transit oriented development.
- **Housing diversity and liveability** considers land ownership patterns and the existing housing typologies to understand the existing building mix across the Estate.
- **Employment, services, retail, arts and culture** considers the Estate’s relationship to adjacent activity centres and maps locations of existing non-residential uses in and around the Estate. This will assist in providing and locating uses that complement what is already existing.
- **Sustainability and infrastructure** addresses the environmental challenges and opportunities. This includes topography, flooding, wind, air quality, noise and aeronautical constraints.

Ten key design insights are drawn from the analysis to inform the development of the Waterloo South Indicative Concept Proposal, including Waterloo’s role in Greater Sydney; the need for more public spaces and streets; increased pedestrian permeability and ground level activation; the integration of sustainability and the natural environment; the incorporation of Aboriginal heritage and design; flexible and adaptable built form; the need for activity centre hubs; and, the need to support the health and well-being of a diverse community through new social and cultural infrastructure.

* “Let’s Talk Waterloo - Visioning Report Key Findings”, KJA, May 18, p39.



2.4.1 ENVIRONMENT AND OPEN SPACE

Many physical layers of the Estate were explored and investigated to understand the opportunities and constraints to be considered in the renewal of Waterloo South. These include the traditional landscape and what is still evident, the evolution of the block structure and its degree of permeability, the surrounding open space network and its connectivity, existing trees and opportunities for retention, interfaces with adjacent areas and what may change over time, important views and vistas to and from the Estate, and the distribution of built form density and scale.

TRADITIONAL LANDSCAPE - PAST AND PRESENT

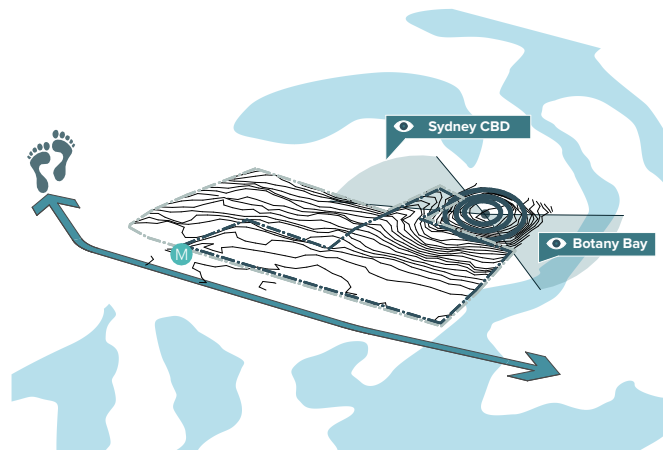


Fig. 2.4.2 Traditional Landscape - Past And Present

- Legend**
- Waterloo South
 - Waterloo Estate
 - M Waterloo Metro Station and Metro Quarter
 - Historical Water Network
 - Aboriginal Walking Track
 - 👁 Views

There are remnants of the original Gadigal landscape still in evidence, while other previously dominant elements have disappeared. Connecting to the cultural significance of traditional landscape elements will be a key aspect in the renewal of Waterloo South into a great urban environment that is 'of its place'

Traditional landscape elements are still in evidence within the Estate today. These elements include the topography that falls from Pitt Street to George Street, Mount Carmel as an Aboriginal look-out and the alignment of Botany Road following a traditional Aboriginal track. The marsh land that dominated the Waterloo landscape, and provided food and supplies to the Aboriginal people before European settlement, has been subsumed by the progressive development of the area into the urban setting of today.

OPEN SPACE NETWORK

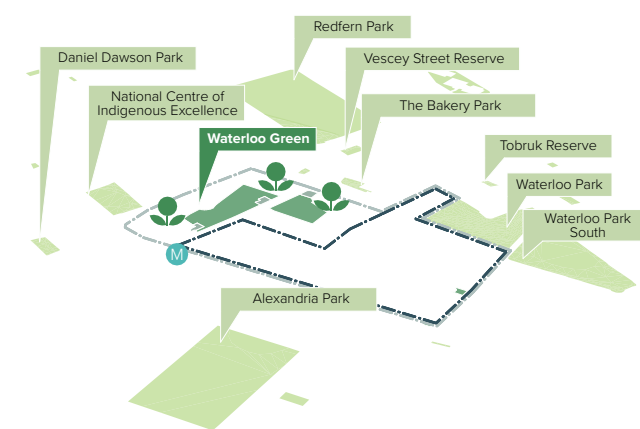


Fig. 2.4.3 Open Space Network

- Legend**
- Existing Open Space
 - Community Garden
 - Publicly Accessible Private space

Future development of open space will need to consider strengthening pedestrian connections to the existing network of open spaces, and the need for additional local public open space, to serve the needs of the community

Waterloo South is surrounded by a public open space network of district, local and pocket parks within 5-10 minute walking distance, including Redfern Oval, Mt Carmel, Waterloo Park North and South and Tobruk Memorial Reserve. Facilities and amenities vary between local and district parks with Alexandria Park providing the most extensive range of passive and active facilities. Whilst Alexandria Park and Waterloo Park are within a 500 metre walking distance from the Estate, Botany Road and McEvoy Street hinder pedestrian perceptions of safety due to high traffic volumes, resulting in longer walking times. The City of Sydney's Open Space, Sports and Recreation Needs Study recommends prioritising improvements to Alexandria Park and Waterloo Park as part of forward planning across the open space network.

SIGNIFICANT TREES

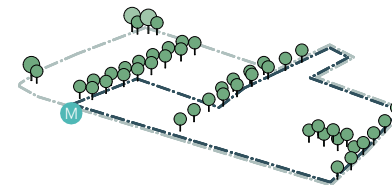


Fig. 2.4.4 Significant Trees

- Legend**
- Trees

Significant fig groupings are located at key corners and contribute significantly to the canopy cover. Key tree lines along Raglan, Wellington and George streets as a group provide scale, canopy and amenity. Retaining these will provide a framework with mature elements for the proposed landscape from the start

The majority of significant and important trees are located in the existing road verge or setbacks between the road reserve and buildings. The figs are significant, civic scaled trees that dominate the surrounding open space and streets. They require ample space above and below ground but are robust and will tolerate disturbances during construction. The significant Eucalypts provide scale and amenity and their retention would add value by helping to deliver mature landscapes to future development, but their retention will be challenging due to their low tolerance to construction disturbances. Construction work should be avoided within identified tree protection zones for trees that are to be retained.

CRITICAL INTERFACES

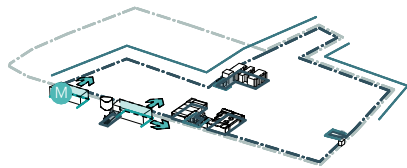


Fig. 2.4.5 Critical Interfaces

- Legend**
- Waterloo South
 - Waterloo Estate
 - Waterloo Metro Station and Metro Quarter
 - Critical Interface
 - Waterloo Metro Station Interface
 - Heritage Item

Future development will need to provide an appropriate response to the existing and future context. These include HCAs located next to Waterloo South, heritage listed items and the private sites within Waterloo South. Interfaces to the future Waterloo Metro Station and the Metro Quarter will also require a considered approach

Future development that is located adjacent to a heritage conservation area (HCA) or a heritage item will need to consider the scale and character of significant buildings/items, and respond appropriately. In the areas of Waterloo South that do not interface directly with listed items or HCAs, there will be greater development opportunity in terms of scale and density. There are a number of sites within Waterloo South that are under private or strata ownership, outside of LAHC ownership. Consideration of appropriate controls and responses will need to be provided as these sites present a medium to long term development opportunity. The future metro station and Metro Quarter interface will also need to be considered.

VIEWS AND VISTAS

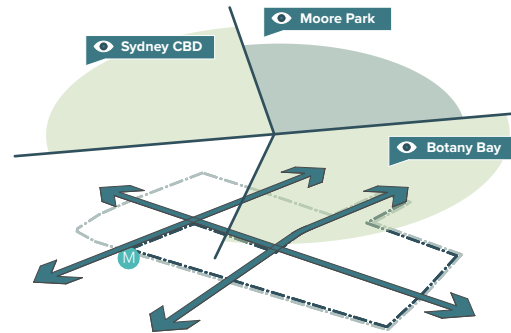


Fig. 2.4.6 Views And Vistas

- Legend**
- ↔ Major Vista
 - 👁 View

When viewed from key points around Sydney, the existing Estate has a unique visual character and distinctive visual qualities that differentiate it from its surroundings. Maintaining key views, vistas and view corridors are important considerations in the renewal of Waterloo South

The topography within the Estate creates key view corridors along the high points on Raglan and Wellington streets from east to west over the tops of the existing tree canopy lines. George Street is a key north to south view corridor with a significant tree line to the southern end. Retention of significant large scale trees at street level will be a priority. Tall buildings within the surrounding context can be seen in specific locations rising above the low to medium rise datum of the area's existing urban fabric. Renewal of Waterloo South provides the opportunity to build on the precedent of tall buildings in a landscape setting to create a visually distinctive built environment. Avoiding continuous walls of built form that can be seen in local and regional views will also be important.

DENSITY AND SCALE

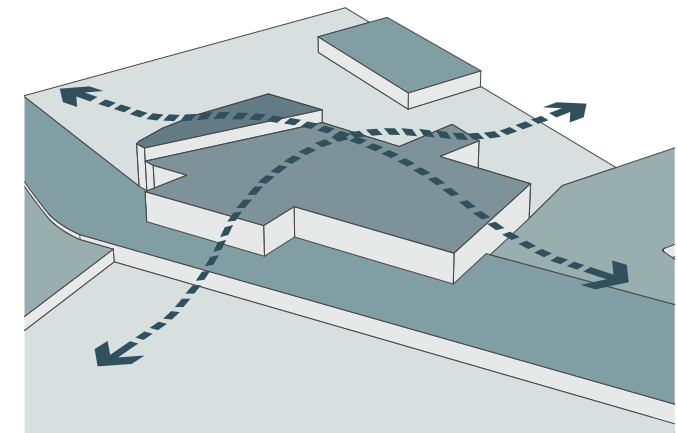


Fig. 2.4.7 Density And Scale

- Legend**
- Low-rise
 - Mid-rise
 - Mid-to-High-rise
 - High-rise

To align to key regional strategies, focus height and density on and around the new metro station to promote the role of transit oriented development

The location of Waterloo South, next to the future Waterloo Metro Station, provides the opportunity to promote the role of the Estate as an emerging activity centre, through transit oriented development. This will leverage the enhanced connectivity created by the new Waterloo Metro Station. The Metro Quarter and potential future development along the Botany Road corridor will provide a transition in scale, height and uses from Waterloo South westwards towards the lower scale Alexandria Park HCA. South of McEvoy Street, the mid-high rise scale of recent urban renewal development provides a transition towards Green Square. Our Lady of Mount Carmel Catholic School provides a transition to the HCA of Waterloo to the east. North of Wellington Street, the existing tower and slab buildings provide a transition towards the Redfern HCA.



ENVIRONMENT AND OPEN SPACE

The key opportunity for Waterloo South is to build upon the existing open space network and provide connections to the wider open space network surrounding the Estate.

OPPORTUNITIES:

Connectivity to the Regional Open Space Network

To build upon the existing and new strategic Ochre and Green Grid and open space network to create a new public domain that is the basis of a world class urban precinct.

New Open Space Assets

To build upon the existing open space network which underpins the Estate, in order to support the health and well being of residents, as well as meet the active and passive needs of the future community.

Enhancement of Urban Ecology and Green Network Values

To improve ecological and social resilience through retaining and enhancing the urban forest where appropriate, providing character, diversity and abundance of plant and animal species, and climatic benefits to the public realm.

Traditional Stories

To work with the Aboriginal history and stories that are embedded in the existing landscape and open space, including the importance of water to the area.

Continuity of the Landscape

To connect and maintain green links, landscape and wildlife corridors through the site.

Placemaking and Community Building Initiatives

To enable and promote food production and bush tucker for enhanced connection among community members within the Estate. This includes retention or replacement of community gardens and planting Indigenous wild food throughout the public domain.

Provision of Green Infrastructure

The inclusion of future built forms that are green and adopt innovative means of achieving open space for Estate inhabitants e.g. green walls, trees on upper podiums, vertical forests etc.

Leverage Existing Open Space

Reallocating land within Waterloo South to create connections with adjacent public open space, fostering increased accessibility for community members and more considered zoning of land uses.

Refer to Appendix 71 for further details

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CHALLENGES:

Retail Assets and Open Space to Co-Exist

Developing retail assets in a 'main street' format to create a more substantial active street frontage and dispersed ground level activation across the site that promotes seamless integration with other community, ancillary non-retail facilities and public open space.

Retention of Ecological Assets

To balance the retention of trees and ecology with increased areas of built form.

Open Space Program

To deliver the appropriate quality and quantity of open space within an inner city urban renewal context.

Flood Management

To leverage open space and green infrastructure to manage existing flood issues where possible, while maintaining the quality and performance of public open space.

Effective Landscape Management

To deliver a high performing, quality public domain with increased infrastructure and programming requirements.

Urban Forest

To intensify the urban forest where appropriate within a constrained urban context

Enhancement of Urban Ecology and Green Network Values

To provide strong green connections to and from the wider open space network.

Community Engagement

To engage and educate the local community on maintenance and custodianship of local ecology.



Fig. 2.4.8 Existing Trees in Waterloo Park, 2019



2.4.2 TRANSPORT, STREETS AND CONNECTIVITY

Over time, the street and block structure have been modified by the social housing developments that gradually replaced Waterloo's terrace houses and altered the fine grain block pattern to what it is today. Today, the Estate is an 'island', physically disconnected from the surrounding context and comprised of large blocks that discourage walking and cycling. With an increase in residents, services, amenities and employment opportunities, an increase in ground level permeability for pedestrian and cyclists will better connect people to places and other forms of active transport including the new metro station.

STREET CONNECTIVITY



Fig. 2.4.9 Street connectivity

- Legend**
- Waterloo South
 - - - Waterloo Estate
 - Waterloo Metro Station and Metro Quarter
 - Major Street Network
 - ⊘ No-through Road

The Estate is currently 'an island', physically disconnected from its surrounding context at key entry points into the Estate

The existing tall buildings set in a landscaped setting reinforce the 'campus style' nature of the Estate. The Estate's north-south streets have been disconnected from McEvoy Street to the south. John Street has been disconnected from Pitt Street and access is blocked to Botany Road. North of Raglan Street, George Street is disconnected from Phillip Street by Waterloo Green. This has resulted in large blocks that discourage walking through the Estate.

PERMEABILITY

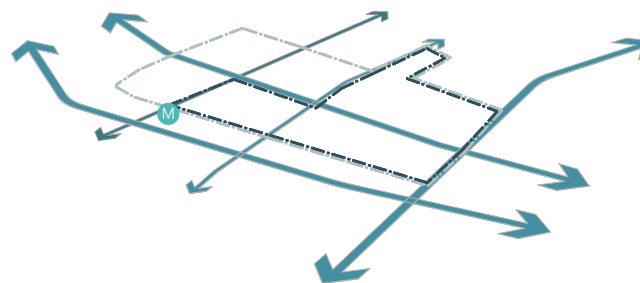


Fig. 2.4.10 Permeability

- Legend**
- ↔ Major Street Network

The amalgamation of blocks within the Estate as part of the renewal of the last Century has led to a coarsening of the grid. This has reduced the Estate's walkable permeability and its ability to accommodate a mixture of uses and evolve to changing use requirements over time

Whereas much of the urban grain, resulting from the area's historical evolution of the Estate's surrounding urban context, remains intact, the Estate is composed of a disconnected street network with introverted mono-use buildings. The primary barriers to movement are streets with speeds above 30 kilometres per hour. These include Botany Road / Regent, Lawson and McEvoy streets. The renewal of Waterloo South provides the opportunity to draw from and re-interpret the original fine grained street network. The traditional two-tiered hierarchy of a primary grid of streets and secondary laneways has the potential to provide a highly walkable network, that meets present and future needs for increased connectivity, and provide continuity and connection to the past.

ACTIVE TRANSPORT NETWORK

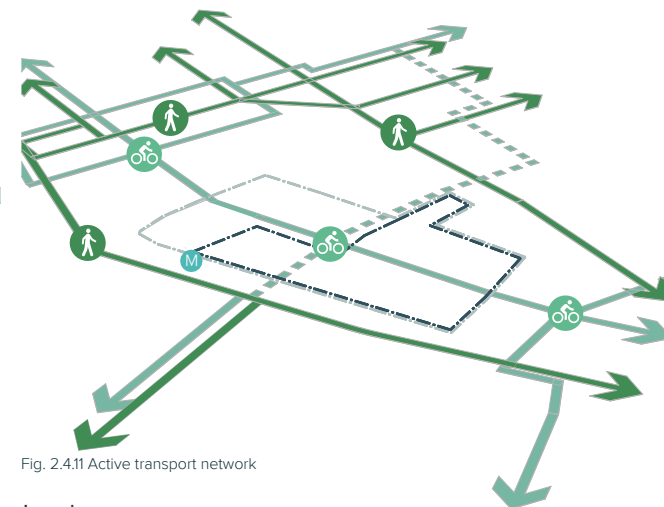


Fig. 2.4.11 Active transport network

- Legend**
- Existing Walking Network
 - Existing Cycle Network
 - Future Walking Network
 - Future Cycle Network

There is potential for active transport to play a significant role in short and medium distance trips to, from and within the Estate. With increased density, promoting and facilitating walking and cycling are important considerations to accommodate future demand on the public domain and avoid congestion

The cycle network is vital to the city's commercial health, providing access to jobs, retail and leisure activities in Central Sydney and Green Square. A dedicated north-south cycle route runs along George Street, though there is no dedicated link through Waterloo Green where cyclists are supposed to dismount. A priority regional cycle route from Sydney Park to Central Park, one of 10 identified in the City of Sydney's regional cycling network, passes through the Estate in an east-west direction. Upgrades are identified on Buckland, Wellington, Morehead and Phillip streets. This will potentially create conflicts with existing regional and local pedestrian routes and place greater demands on the public domain.

MOVEMENT NETWORK

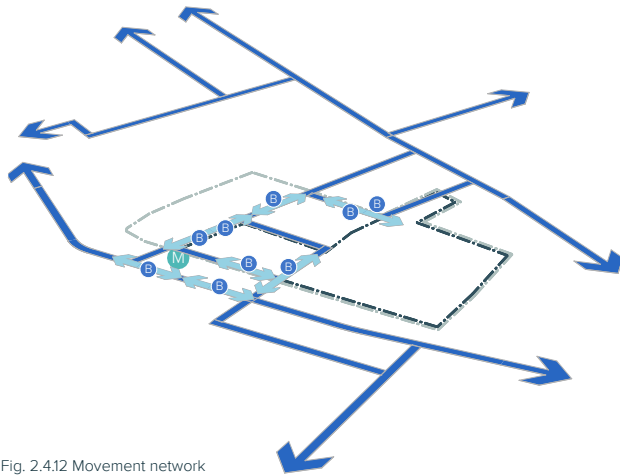


Fig. 2.4.12 Movement network

- Legend**
- Waterloo South
 - Waterloo Estate
 - M Waterloo Metro Station and Metro Quarter
 - Bus Route
 - B Bus Stop
 - P Pedestrian Flow To and From Bus Stop

The Estate is already highly connected with local bus routes and its proximity to Redfern Station and Green Square Station. Greater demand will be imposed on the public domain with the increased passenger flows that the new metro station will bring as a transport interchange

Currently, the highest demand on local bus services is along routes that connect north-south towards Central Sydney, with some demand for routes serving east-west connections from Green Square Station to local destinations that include the University of New South Wales (UNSW). The highest number of route boardings occurs on routes serving trips travelling away from the city – with people interchanging at Redfern Station and boarding buses connecting to employment areas along Botany Road. Some of these trips may occur on the new metro, with interchange from Waterloo Station rather than Redfern. Waterloo Station will function both as an origin and destination station, with estimated passenger flows in the AM peak hour of up to 3,700 entering and 2,350 exiting.

ACTIVE TRANSPORT HUB

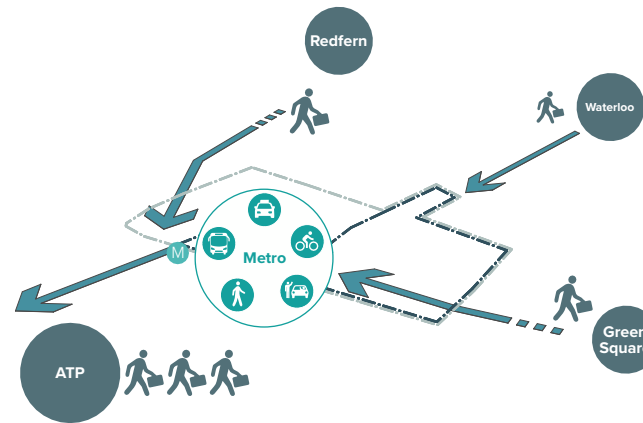


Fig. 2.4.13 Active transport hub

- Legend**
- Pedestrian Flow

The new Waterloo Metro Station and future development at the Metro Quarter will create a new active transport hub. Waterloo Metro Station will bring increased connectivity. At the same time, the Metro Quarter will bring new residents, workers and visitors to the area

Bus services can be accessed with relative ease and the dedicated community bus service is well used. There is a good cycle network, though the area around Waterloo Green provides a conflict point. The arrival of the metro provides the opportunity to further enhance active transport facilities – providing an interchange hub that combines metro station, bus stops and cycle parking accessed via enhanced pedestrian and wheelchair friendly connections. New pedestrian and cycle ‘desire lines’ will be created to / from the metro station and various trip origins and destinations within the neighbourhood. The current Estate layout inhibits these routes in places, which will need to be addressed as part of the renewal of Waterloo South.

PARKING AND SERVICING

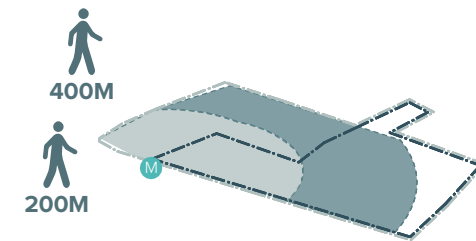


Fig. 2.4.14 Parking and servicing

- Legend**
- 400m Walking Catchment
 - 200m Walking Catchment

Parking and servicing for future development with the Estate will need to be considered

Under SLEP 2012, parts of the Estate are currently zoned Category B for car parking, while the existing Estate is uncategorised. Reducing the parking provision as part of the renewal of Waterloo South is supported by government policy due to a range of factors, including its inner city location, proximity to Central Sydney and the future access provided by the future Waterloo Metro Station. Servicing requirements will need to be addressed for non-residential uses in a way that doesn't conflict with a pedestrian-priority public realm.



TRANSPORT, STREETS AND CONNECTIVITY

The key opportunity for Waterloo South is to build upon the new connectivity of the future metro station and promote active transport modes.

OPPORTUNITIES:

People Oriented Streets

To increase the quality, connectivity and safety of the walking and cycling network.

30 Minute City

To connect Waterloo Metro Station to the surrounding community to unlock the 30 minute city/regional connections.

Connectivity

To provide a transport interchange between bus and metro services that meets the transport needs of the new community, supports surrounding neighbourhoods and regional connections.

Active Transport Hub

To prioritise active transport links to local public transport, services, amenities and jobs, reducing the requirement for private car journeys.

Road Corridors

To implement strategies that manage vehicle travel demand to, from and within the Estate to minimise effects on the surrounding road network.

Reduced Private Car Use

Plan for the adoption of autonomous vehicles and community shared bikes and cars.

Active Transport Crossing

Support improved active transport crossing to facilitate movement and connection of the Estate to local destinations.

Self-Containment

To enable a greater level of trip self-containment within the Estate through a considered balance and mix of land uses providing more opportunities to work, shop, and engage in recreational pursuits in and around the Estate.

Lower than Legislated Maximum Parking Rates

Target to reduce parking for residential parking rates below the City of Sydney's strictest parking rates.

CHALLENGES:

Connectivity

To ensure that the movement system has sufficient capacity to address the residential demand.

Increased Links and Connections

To ensure prioritisation of walking, cycling and recreation for an increased population.

Noise & Air Quality Mitigation

To ensure microclimate effects of noise, air quality is managed and mitigated.

Walkability and Cycling

To ensure high quality pedestrian and cycle experience in the context of the renewal.

Parking and Loading

To address parking and servicing so as not to negatively effect public domain, streetscape and built form outcomes.

Future Proofing

To properly plan for and adapt to future disruptions in urban mobility.

Sustainable Strategies

To plan for the convergence of solar energy, electric vehicles and battery storage.



Fig. 2.4.15 Existing cycle path on George Street, 2019



2.4.3 HOUSING DIVERSITY AND LIVEABILITY

The existing buildings, that met the standards of the time when constructed, are distributed across the Estate in distinct groupings ranging from low-rise 3-4 storey apartments, medium rise buildings of 5-8 storeys, to taller slab and tower buildings of 17-32 storeys, with an average age of 44 years against a benchmark economic life of 60 years.

HOUSING STOCK

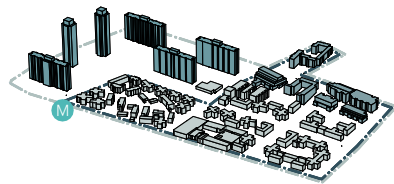


Fig. 2.4.16 Housing stock

- Legend**
- Waterloo South
 - Waterloo Estate
 - Waterloo Metro Station and Metro Quarter
 - Low-rise
 - Mid-rise
 - High-rise

Housing typologies are distributed across the Estate and generally tend to be grouped into distinct categories of low, medium and high rise. The arrangement of built form creates significant shared open spaces and a relatively undefined street edge

The distribution of built form across the Estate, reflects the sequence of renewal that occurred in the last Century, and the changing urban approaches. The taller 'campus style' buildings are located within the blocks to the north. Medium rise buildings, which tend to be deeper in plan and integrate private amenity space in balconies, are located to the east of the site as the topography rises up to Mount Carmel. The low rise typologies are predominantly composed of cross form, double cross form and short low bar forms that accommodate walk up units, and are located to the west and south of the Estate, within Waterloo South.

HOUSING AGE

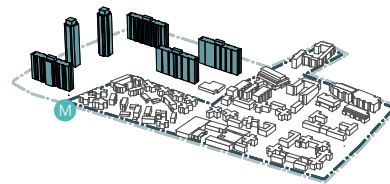


Fig. 2.4.17 Housing age

- Existing Building with Useful Economic Life

Buildings that still have a useful economic life contain the most dense population and are concentrated within Waterloo North and Waterloo Central.

The existing Estate was developed over four decades with the low rise walk-up apartments generally built in the 50s and 60s, the taller buildings (tower and slab buildings) built in the mid-70s and the medium rise developments in the 70s and 80s. The average age of the existing buildings in the Estate is 44 years (the median 45 years) against a benchmark economic life of 60 years.

HOUSING DENSITY

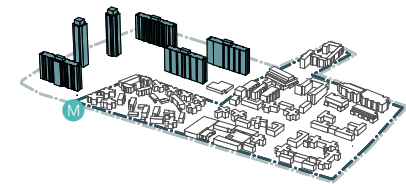


Fig. 2.4.18 Housing Density

- Existing Building with 66% of total Social Dwellings in the Estate

Two thirds of the total existing social dwellings within the Estate are located within roughly one-third of the land area of the Estate

Distributed across the Estate, there are 2,012 existing social dwellings within the Estate and 125 private dwellings within the 7 private sites.

Of the social dwellings, 66 percent are concentrated to the north and east of the Estate across 6 buildings (Marton, Turanga, Matavai, Solander, Banks, and Cook), located within Waterloo North and Waterloo Central. 7 percent are distributed within mid-rise buildings located to the east of the Estate (Drysdale, Camelia Grove and Dobell). The remaining 27 percent of the dwellings are distributed within low-rise buildings across Waterloo South.

POPULATION DENSITY

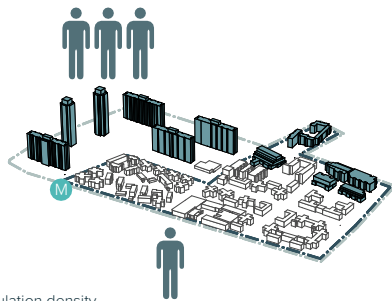


Fig. 2.4.19 Population density

- Legend**
- Waterloo South
 - Waterloo Estate
 - Waterloo Metro Station and Metro Quarter
 - Existing Building with Dense Population

72 percent of the Estate’s existing residents are concentrated in 13 percent of the existing buildings (9 out of 70 total existing buildings)

Distributed across the Estate, there are 2,617 residents within the existing social housing and approximately 239 residents within the 7 private sites.

Of the social residents, 62 percent are concentrated to the north and east of the Estate across the 6 taller buildings (Marton, Turanga, Matavai, Solander, Banks, and Cook) located within Waterloo North and Waterloo Central. 10 percent are distributed within the mid-rise buildings located to the east of the Estate (Drysdale, Camelia Grove and Dobell). The remaining 28 percent of residents are distributed within the low-rise buildings across Waterloo South.

CONNECTION TO PUBLIC TRANSPORT (200-400M)

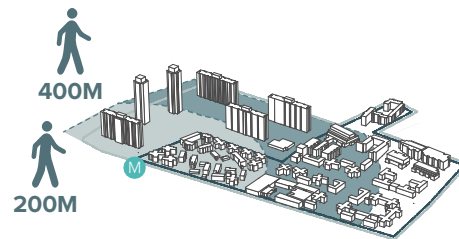


Fig. 2.4.20 Connection to public transport (200-400m)

- 400m Walking Catchment
- 200m Walking Catchment

The new Waterloo Metro Station will make the Estate highly connected and enable Waterloo to become a quick and easy destination of choice, opening up the potential for the area to be further enhanced as an employment, cultural and leisure local centre

The Estate’s accessibility will be significantly boosted with the arrival of the Waterloo Metro Station, significantly increasing accessibility to job opportunities within 30 minutes travel time (from 380,000 jobs currently to approximately 1,000,000 by 2036). North Sydney and Central Sydney (including Barangaroo) would be within easy reach, as would the Inner West and Chatswood. Access to educational opportunities will also be enhanced, including the University of Sydney, University of Technology and University of New South Wales.

Within a 200 and 400 metre walking catchment (that equates to a 2-4 minutes walk) of the new metro station, there is the opportunity to provide for a mix of flexible building typologies.

AGEING COMMUNITY

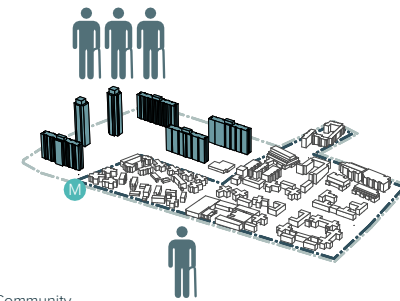


Fig. 2.4.21 Community

- Existing Building with High Elderly Population

The population within the Estate is ageing

Within the existing Estate, 58 percent (1,547) of residents are aged over 55. Out of this, 72 percent (1,121) of the elderly population are concentrated in the 6 taller buildings located within Waterloo North and Waterloo Central. The remaining 27.5 percent (426) of the elderly population are distributed in the mid-rise and low-rise buildings within Waterloo South.



HOUSING DIVERSITY AND LIVEABILITY

The key opportunity and challenge for Waterloo South is to deliver a mixed use community that integrates social (affordable rental) and market housing.

OPPORTUNITIES:

Best Practice

To set a global benchmark for dynamic mixed-tenure urban revitalisation.

Social Housing

To deliver new social housing that addresses contemporary standards and lifestyles.

Liveability & Well-Being

To deliver LAHC outcomes that lead to greatly improved housing liveability, health and quality of life outcomes for tenants. To address the Greater Sydney Commission (GSC) and Department of Planning & Environment (DPE) principles of equity, inclusion and shared benefit.

Mixed-Tenure Community

To deliver a sustainable, mixed-tenure community that can improve social outcomes through a balanced offering of social (affordable rental) and market housing, supporting a broad and diverse range of people.

Mix of Housing Typologies

The opportunity to explore a range of long life & loose fit housing typologies that are flexible and adaptable to changing generational needs and circumstances.

Housing Affordability Mechanisms

To explore the delivery of housing affordability mechanisms that can provide mixed community outcomes, including use of existing policies and programmes, in particular the NSW Communities Plus initiative.

Community Safety and Well-Being

To plan for the integration of housing and social infrastructure that promotes community safety, wellbeing and social cohesion.

Liveable Housing Standards

To ensure housing opportunities for peoples of all ages and abilities through adherence to Liveable Housing Australia standards for universal design.

CHALLENGES:

Integrated Private and Social Housing

To deliver a successful tenure mix, targeting a 30:70 mix between social (affordable rental) and private housing types.

Sustainable Community

To achieve a balanced and sustainable community with mixed tenures.

Renewal Process

To provide a successful process of rehousing the existing community and welcoming new residents into the renewed Estate over time.

Re-Housing Strategy

To enable a re-housing process that is able to be flexibly delivered through the development process.

Adaptable Mix and Use

To provide adaptable places and buildings that can evolve over time.

Affordability

To support a range of affordable housing and retail options in the context of increased market value.

Community Cohesion

To ensure desired social bonds and cultural significance of existing community remain intact throughout the renewal process.

Active Ground Plane

To create an active and diverse ground plane in a predominantly residential environment.

Governance Structure

To achieve sustainable and acceptable maintenance and management over mixed tenure communities.



Fig. 2.4.22 Waterloo Estate, 2019



2.4.4 EMPLOYMENT, SERVICES, RETAIL, ARTS AND CULTURE

The Estate's predominantly residential character acts as a buffer between the two growing commercial centres of Redfern and Green Square and the employment and urban services land at Green Square-Mascot. The retail and commercial offering along Regent and Redfern streets has seen a resurgence with the increase in creative industries and small bars and restaurants. This resurgence is more limited along the north-south thoroughfare of Regent Street/Botany Road which lacks the presence of a cohesive main street and lack of identifiable commercial centre.

RETAIL

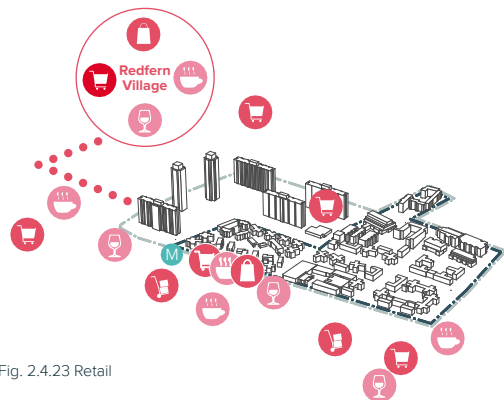


Fig. 2.4.23 Retail



FAMILY

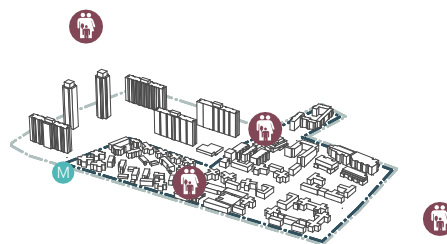


Fig. 2.4.24 Family



YOUTH

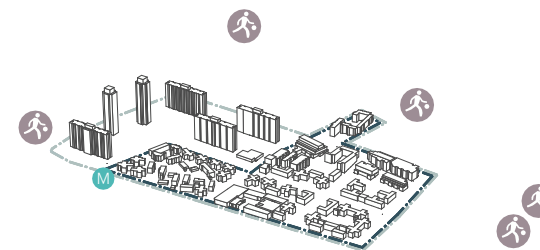


Fig. 2.4.25 Youth



There are a limited number of retail offerings within Waterloo South. The majority of local businesses are located along Botany Road and connect to Redfern Street Village to the north

Retail and commercial offerings along Regent and Redfern streets has seen an increase in creative industries and small bars and restaurants. This is limited along the north-south thoroughfare of Regent Street/Botany Road which lacks the presence of a cohesive main street and lack of identifiable commercial centre. With the predominate residential land uses and few immediate economic uses, Waterloo South's challenge is to link to established economic centres by increasing links either north towards Redfern or south to Green Square and to provide complementary uses to existing services.

There are existing family community facilities and services inside and outside Waterloo South

There are a small number of services that cater to families around the Estate. Two of these services are located within Waterloo South.

Existing youth community facilities and services are located to the north, south and east of Waterloo South

Youth services are particularly vital as they create access to support services and enable participation in recreation and leisure programs. With a growing population, there will be increased demand for sport and recreation amongst other activities.

ELDERLY

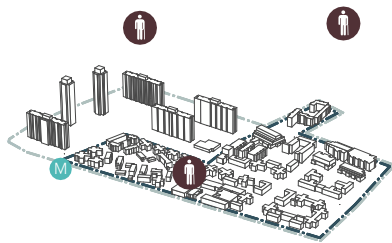


Fig. 2.4.26 Elderly

Legend

- Waterloo South
- Waterloo Estate
- M Waterloo Metro Station and Metro Quarter
- 👴 Elderly Community Facilities

Existing community facilities and services serving the elderly are located in Redfern to the east and north, with one located within Waterloo South’s boundary

Existing services that cater to the ageing population are located within close proximity to Waterloo South. These range from aged care services to social and leisure programs. Most of the health-related care delivered to older people is provided directly by the SLHD Aged Care and Rehabilitation (AC&R) service.

ABORIGINAL

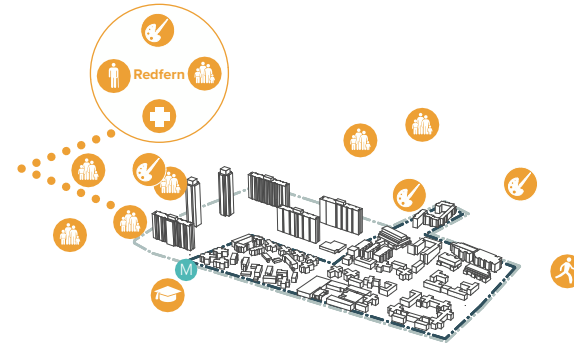


Fig. 2.4.27 Aboriginal

- 👥 Community Facilities
- 🎓 Education
- 🏥 Arts and Culture
- 🏥 Medical
- 👥 Youth Community Facilities

There are a range of existing community facilities and services serving the Aboriginal community to the north, east and west of Waterloo South

The Estate has a strong existing Aboriginal presence in its local community and culture as well as in its history but there are a lack of programs and facilities that showcase and inform the Aboriginal culture and history. There are a range of services that serve the local Indigenous Australian communities but are not restricted to the local community outside the Estate boundaries

ARTS AND CULTURE

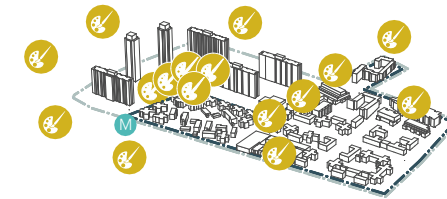


Fig. 2.4.28 Arts and Culture

- 🎨 Arts and Culture

There are a number of existing arts and culture facilities, venues and creative businesses around Waterloo South

Although the existing Estate has limited arts and cultural facilities, the area is rich in its local community culture, shown through the range of art networks, public art and creative spaces within close proximity to Waterloo South



EMPLOYMENT, SERVICES, RETAIL, ARTS AND CULTURE

With predominantly residential land uses and few immediate economic uses, the challenge for Waterloo South is to link this community with the established economic centres by increasing links either north towards Redfern or south to Green Square.

OPPORTUNITIES:

Cultural Heritage

To celebrate and integrate the rich cultural heritage of the area in the planning, delivery and management of Waterloo South's renewal.

New Centre

To deliver a balanced new centre that supports the different needs of a diverse community and provides adequate access to services and employment activities for the Estate's residents.

Complimentary Uses

To deliver the retail and services functions required, complimenting the use of surrounding centres.

Day and Night Economy

To create a vibrant evening economy and local experiences.

Enhanced Social Infrastructure

To provide new and improved social infrastructure with stronger local service and community networks.

Co-Location of Uses

To deliver increased physical, mental health and education benefits, by co-location of social infrastructure with high quality new public spaces.

Increased District Connectivity

To create links to established centres including employment, retail, services, creative industries and arts and culture hubs such as the Australian Technology Park (ATP), Danks Street and Redfern Village.

Sharing Economy

To explore innovative new retail schemes and community use facilities predicated on the sharing economy (based on trading for goods and services) to reduce the overall cost of living for residents.

Meaningful Employment

To provide for the local employment and business needs of Aboriginal and Torres Strait Islander people and the future community beyond just retail assets.

CHALLENGES:

Contributing to and Maintaining a Sense of Place

To establish retail and commercial ventures without impinging upon the existing cultural character of Waterloo. To ensure that creative placemaking initiatives animate both public open spaces and private spaces to improve local business viability, public safety, and bring diverse people together to celebrate, inspire and be inspired by the use of the arts so that Waterloo South remains a vibrant place.

Addressing Needs

To ensure that the centre will address the differing needs of the community, including ensuring amenities and services for the portion of the population with higher needs.

Balanced Mix of Uses

To ensure a range of retail services are provided that are balanced across the range of customers within the Estate.

Programming for Flexibility and Adaptability

To deliver flexible service, retail and cultural activities that can adapt to and support the needs of the community over time and trend shifts.

Staging

To ensure the staging of Waterloo South's renewal delivers social infrastructure and services at the right time in order to support the transitioning and incoming community.

Day and Night Economy

To create a vibrant evening economy within a predominantly residential environment.



Fig. 2.4.29 Waterloo Estate Community garden mural



2.4.5 SUSTAINABILITY AND INFRASTRUCTURE

Other broader considerations, related to the potential for new buildings, include the maximum height of buildings in relation to Sydney Airport's PanOps (Procedures for Air Navigation Services - Aircraft Operations), solar access to areas within and adjacent to Waterloo South, and the effects of external noise sources, wind conditions, and air quality at different heights.

HEIGHT CONSTRAINTS

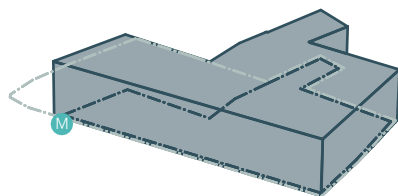


Fig. 2.4.30 Height constraints

- Legend**
- Waterloo South
 - Waterloo Estate
 - M Waterloo Metro Station and Metro Quarter
 - Envelope

The PANS-OPS is a key constraint that limits the potential maximum permissible building height including crane heights

There are three height constraints that currently limit the maximum permissible building height (including cranes) that would be approved by aviation authorities due to the Estate's proximity to the airport. The PANS-OPS Circling Surface for Category A & B Aircraft covers the majority of the Estate and limits heights to 126.4 metres AHD. The Radar Terrain Clearance Chart / Minimum Vector Altitude (RTCC/MVA) covers a small portion of the Estate at the north-east corner and limits heights to 152.4 metres. Approval would need to be obtained from the relevant authorities for any variation to these two height constraints.

SOLAR ACCESS

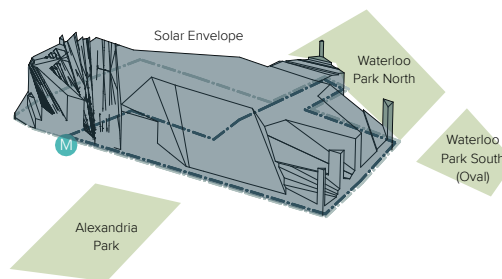


Fig. 2.4.31 Solar access

- Solar Envelope

Solar access to the existing open space and surrounding context will need to be considered as part of the renewal of Waterloo South. These will need to satisfy ADG objectives where relevant

There is a network of existing open space surrounding the Estate. Public open space within this network that influence the potential building envelopes include Waterloo Park North and South and Alexandria Park. Solar access will need to be provided to meet the City of Sydney's DCP requirements. Future development within Waterloo South will also need to consider the surrounding existing and future context. These include the existing residences in the adjacent heritage conservation areas (HCAs), the future Metro Quarter development, existing and future development along the Botany Road corridor and the urban renewal areas to the south and west. Within Waterloo South, the existing and future development within the private sites will also need to be considered.

MICROCLIMATE

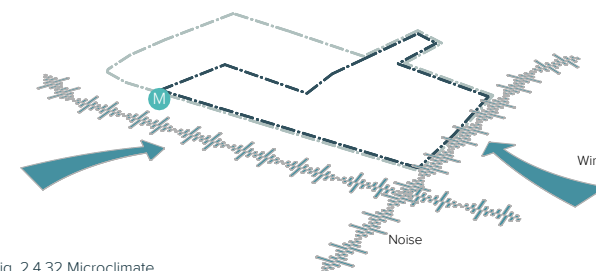


Fig. 2.4.32 Microclimate

- Wind
- ||| Noise

Considerations for the renewal of the Estate are the effect of wind, as well as air and noise pollution, to the future public domain and development

Key considerations for the renewal of Waterloo South include the effect of wind on the future public domain and development. Other considerations include noise and air pollution from heavily trafficked roads next to Waterloo South - Botany Road and McEvoy Street.

FLOODING

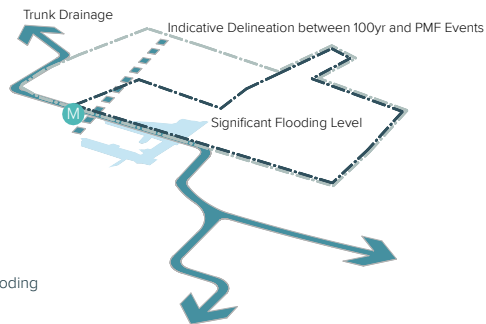


Fig. 2.4.33 Flooding

- Legend**
- Waterloo South
 - Waterloo Estate
 - M Waterloo Metro Station and Metro Quarter
 - Trunk Drainage
 - Significant Flooding Level
 - Indicative Delineation between 100yr and PMF Events

There is significant flooding within the Estate, particularly along Cope and Wellington streets and Botany Road, caused in part by the trunk drainage outlet being constrained at the existing open channel

The existing trunk drainage through the Estate runs along the eastern boundary of the existing Estate, along Raglan and Cope streets before it diverts along the existing Cope Street open channel (2,030 x 1,750 millimetres) that discharges to a smaller concrete culvert (1,650 x 1,650 millimetres) under Botany Road. This reduction in size provides a constraint on the trunk drainage system.

KEY SERVICE NETWORKS

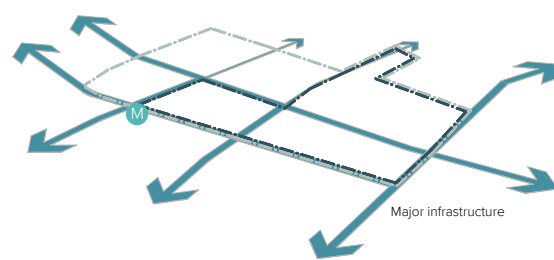


Fig. 2.4.34 Key service networks

- Legend**
- Streets with major infrastructure

George, Cope, McEvoy, Raglan and Wellington streets as well as Botany Road are heavily constrained with services

Although there is existing service infrastructure located within all existing streets, key streets in the Estate are more constrained than others. These include George, Cope, McEvoy, Cooper, Raglan and Wellington streets as well as Botany Road. Future tree planting along these streets and roads will need to consider the location of service infrastructure, which may limit the locations for street trees.

INFRASTRUCTURE CONSTRAINTS

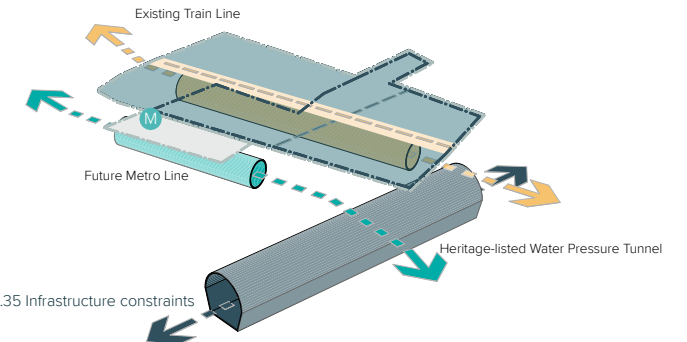


Fig. 2.4.35 Infrastructure constraints

- Legend**
- Heritage-listed Water Pressure Tunnel
 - Future Metro Line
 - Existing Train Line
 - Rail Protection Zone

The existing train line and water pressure tunnels that cross the Estate are two infrastructure constraints that will affect future development within Waterloo South. The new metro line is located outside the Estate boundaries and will affect future development on the Metro Quarter and along the Botany Road corridor.

Existing infrastructure constraints on Waterloo South includes the existing train line running parallel to and below George Street and the heritage listed water pressure tunnel that crosses diagonally through Waterloo South from Waterloo Park North to Alexandria Park. A 30 metre wide rail protection zone applies along the existing train line and affects any development work 2 metres below existing ground levels. The Sydney Water heritage listed water pressure tunnel will also limit excavation levels above it.



SUSTAINABILITY AND INFRASTRUCTURE

Key opportunities and challenges to the renewal of Waterloo South will be the response to amenity for both the public domain and urban and built form.

OPPORTUNITIES:

Green Star Community

Implement strategies to create a Green Star rated community aligned to the Greater Sydney Commission's objectives for a productive, liveable and sustainable Sydney.

Carbon Reduction & Climate Change Strategies

To explore strategies that deliver carbon reduction outcomes and plan for long term reduction of the effects of climate change.

Water Management

To integrate water management systems with open space and streetscapes that mitigate the risk of flooding both within and surrounding Waterloo South.

Best Practice Urban Green Infrastructure

To develop best practice design, delivery and management of urban green infrastructure within a predominantly residential Estate.

Sustainable Strategies

To explore and adopt where appropriate new technologies and trends that can benefit energy and carbon footprint reduction over time.

Traditional Knowledge and Connection to the Land

To leverage traditional knowledge systems and the practice of custodianship to support a culture of sustainability within the Estate.

CHALLENGES:

Management of Renewal Process

To comply with Green Star requirements for the duration of a long term renewal process.

Flexibility and Adaptability

To retain the flexibility to adapt to new technologies and innovations within the context of large scale renewal.

Integration with Existing Infrastructure

To deliver precinct-wide infrastructure in the context of an existing urban infrastructure system.

Aeronautical Constraints

To integrate renewal within established technical constraints such as the OLS & PANS-OPs

Flooding

To respond to the flood constraints and deliver an active ground plane.

Wind, Noise and Pollution

To respond to the noise, wind and air pollution constraints.

Solar Access

To ensure solar access to the existing and future context satisfactorily addresses the relevant objectives set by the Apartment Design Guide and the City of Sydney.



Fig. 2.4.36 Shared bicycles in Redfern, 2019



WHAT IF...
- MAXIMIZE OPEN SPACE
- 15% OPEN SPACE
- 2 ha (T)
- 1 ha (T) } TO BE GREATER THAN STANDARD
- KEEP ALL moderate + significant trees (SSA)
- MAX 250 m from apartment to P.O.S
- CANOPY REPLACEMENT (66%) - ADD 30% IN
+30% ON CURRENT TREE NUMBERS
- 30,000 m³ INTEGRATED WATER STORAGE
- WATER SENSITIVE USE - beyond min standard
- KEEP WATER TO GREEN
[- RADIAL (INDI)]

WHAT IF...
- AVERAGE DENSITY OF 12 STOREYS (1-1)
- KEEP EXISTING STREET STRUCTURE
- MIN 50% WITH RELATIVE HEIGHT
- NO TOWERS?
- NO BIG PARK

Fig. 3.01 Design Workshop

3.0 APPROACH

PLANNING PROPOSAL REQUIREMENT

The built form should be developed in line with the design process described in the NSW Government Architect Better Placed strategy.

A full review of design options, including redevelopment, renovation and adaptive re-use options

ADDRESSED IN

Urban Design Report
Appendix 7.10

Chapter 3.0
Appendix 7.2

SSP STUDY REQUIREMENT

Urban Design

2.5 Prepare an options analysis that examines a variety of appropriate options for the distribution of land use and building bulk in relation to the layout of the public domain. Document the various options including an assessment of how the options respond to the identified constraints and opportunities, and have been used to inform the final proposal.

ADDRESSED IN

Chapter 3.0
Appendix 7.2

The renewal of Waterloo South into a great urban place that delivers on the Waterloo vision and objectives is a key part of Waterloo South's transformation that requires a unique, balanced and evidence based approach

This chapter provides an overview of the balanced and evidence based approach to the development of an Indicative Concept Proposal for Waterloo South. This informs every stage of the masterplan process from early design thinking, where unique scenarios and ideas are investigated, through strategic directions to be tested against the project vision and principles, to concept plan options that respond to key design drivers and explore different approaches to illustrate the vision and design principles for Waterloo South. A holistic approach to the Estate was used during options testing to develop a Preferred Masterplan that considered the renewal of the overall Estate. The staging of planning for the Estate into three stages, with Waterloo South being delivered ahead of Waterloo Central and Waterloo North provides the opportunity to renew areas of the Estate that will have the least impact on existing residents whilst allowing key public domain infrastructure to be delivered early.

The approach to the renewal of Waterloo South into a great urban place is based on:

- An integrated multidisciplinary project team, with project specific skills and experience, passionate about making a difference and being part of a broader purpose, to benefit our cities and neighbourhoods
- A diverse project team including experienced and emerging multi disciplined designers and technical specialists, with an emphasis on attracting those from an Aboriginal heritage background to support cultural diversity and thought leadership
- Leading best practice methodology with an evidence based and public domain led approach
- An iterative design process of analysis, propositions, evaluation, benchmarking and review
- Technical planning studies and Technical and Innovation Working Groups (TIWGs) that provide an evidence base for decision making and space for innovation, recognising the interrelationship between different technical considerations
- Placemaking best practice in place based integrated urban design
- Engagement with stakeholders and the community
- Governance comprised of collaborative advisory groups and Design Review Panels

3.1 METHODOLOGY AND DESIGN PROCESS

A methodology bespoke to the masterplan process that is tailored to the unique qualities of the project, place and community, to ensure best practice public domain led and evidence based design excellence approaches are embedded in the process

AN INTEGRATED AND INNOVATIVE APPROACH

The methodology for the Waterloo Estate is an **Integrated Working Model** that encompasses:

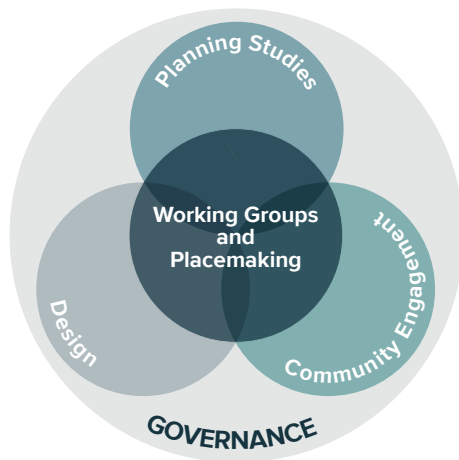


Fig. 3.1.1 Integrated working model

Planning studies comprised of global, best-practice case-study research and analysis at every stage to understand the elements that make up great urban places and to establish a unique set of benchmarks appropriate to Waterloo.

Stakeholder and community engagement throughout the process, from establishing a vision, through baseline summaries and options testing, to a preferred option, to provide feedback on key issues and inform the development of the Waterloo South Indicative Concept Proposal.

A **Design Process** that is public domain led, unique, balanced and evidence based, exploring a range of propositions and scenarios, including technical consultant studies to establish baselines, opportunities for innovation, and review of proposals for technical performance.

Design **Working Groups** that synthesise the Planning Studies, Community Engagement feedback and Design Process, to measure the performance of different options and guide design development.

Placemaking framework and strategy, using case study analysis, to develop a set of Place Performance Measures specifically for Waterloo to aid decision making and support a balanced and evidence based approach.

Governance comprised of Design Review Panels and advisory groups that provide an ongoing review at each stage of the process, as an integral part of a design excellence pathway approach.

PROJECT FRAMEWORK

The methodology commences with the establishment of the Project Proposition and the formation of the Project Vision, Objectives and Principles with the client, through stakeholder and community engagement.

An analysis of the context including specialist technical consultant studies provides a baseline that, with the Project Proposition, Vision Principles and Objectives, sets the Project Framework. This becomes the evidence base for the design process and the organisation of the many technical streams into five main themes which are used throughout the design process to present the design work and gather feedback.

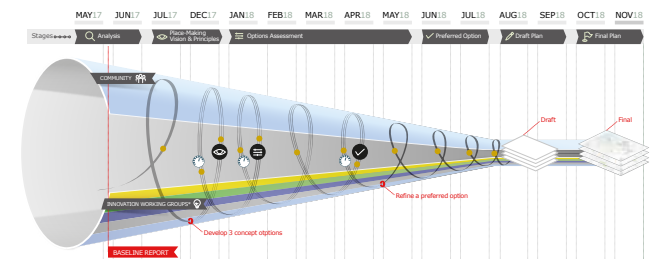


Fig. 3.1.2 The masterplan design process

- Legend:
- Assessment against performance measures
 - Charrettes
 - Options testing
 - Preferred option
 - Stakeholders' reviews and workshops
- Technical and Innovation Working Groups (TIWGs):
- Sustainability & Infrastructure
 - Environment & Open Space
 - Transport, Streets & Connectivity
 - Economics, Retail, Services & Arts/Culture
 - Housing Diversity & Liveability

The methodology is a unique, balanced and evidence based approach to the development of the Waterloo South Indicative Concept Proposal, comprised of the Project Framework which establishes a base and the Design Process that subsequently follows

DESIGN PROCESS

The design process that follows integrates propositions with technical inputs, testing, workshops, community and stakeholder engagement, and design reviews in an iterative process that, along with analysis and performance measures, guides the development from early propositions, to plausible options to be explored and tested, to a preferred option.

Technical and Innovation Working Groups (TIWGs) of different consultants explore key cross-disciplinary themes, to investigate opportunities for innovation and interrogate the Baseline Analysis, whilst ongoing Placemaking and Aboriginal cultural studies continue to further augment and refine the design approach.

The Baseline Analysis presents opportunities and challenges that, along with the Placemaking Framework, results in Key Design Insights and early design ideas to guide development of the design thinking. The Placemaking Framework is used to tell the special story of the place and the community, so that the design process recognises and strengthens the existing attributes that makes them unique and special, in a balanced and evidence based approach that is unique to the Estate.

Early design thinking (refer to Appendix 7.2) tests various scenarios and combinations of parameters to explore the resultant outcomes in terms of spatial organisation, built form responses and urban character. Uniquely different approaches are tested to their limits in order to understand the place characteristics, opportunities and challenges that emerge from each.

Stakeholder and Design Workshops, and reviews with Project Working Groups and the Government Architect of NSW, provides critical analysis and feedback in an ongoing governance model. Place Performance Measures, derived from ongoing Case Study

analysis (refer to Appendix 7.6) integrated with the Placemaking Strategy, is used to measure the performance of Scenarios against unique Place Performance Measures established for the Estate. The analysis, feedback and Performance Measures are part of an iterative design process that guides the synthesis of early design thinking into the more definitive concepts of the Strategic Directions. These begin to illustrate distinct and uniquely different approaches to delivering on the Waterloo Estate vision and objectives.

Further Stakeholder and Design Workshops and comparisons against the Performance Measures continue to refine the Strategic Directions into a number of unique and plausible Concept Options that have different place characteristics, built form responses and urban character. Key Design Drivers, specific to the Estate, are defined in order to inform the masterplan and build upon the unique qualities revealed through the design process of context analysis, visioning, early design thinking, placemaking, options testing, case studies and performance measures.

A comprehensive evaluation of the Concept Options against the Place Performance Measures and Key Design Drivers, analysis by stakeholders and design review panels, and engagement with the community and key stakeholders, establishes the elements of the Concept Options to be progressed into a Preferred Masterplan. Consideration of the impact to existing residents and early delivery of public infrastructure for the Estate established a three stage approach to the renewal of the Estate, with Waterloo South to be delivered ahead of Waterloo Central and Waterloo North.

This represents a bespoke, balanced and evidence based approach that integrates best practice public domain led and evidence based design excellence approaches into a process unique to the development of the Indicative Concept Proposal for Waterloo South.

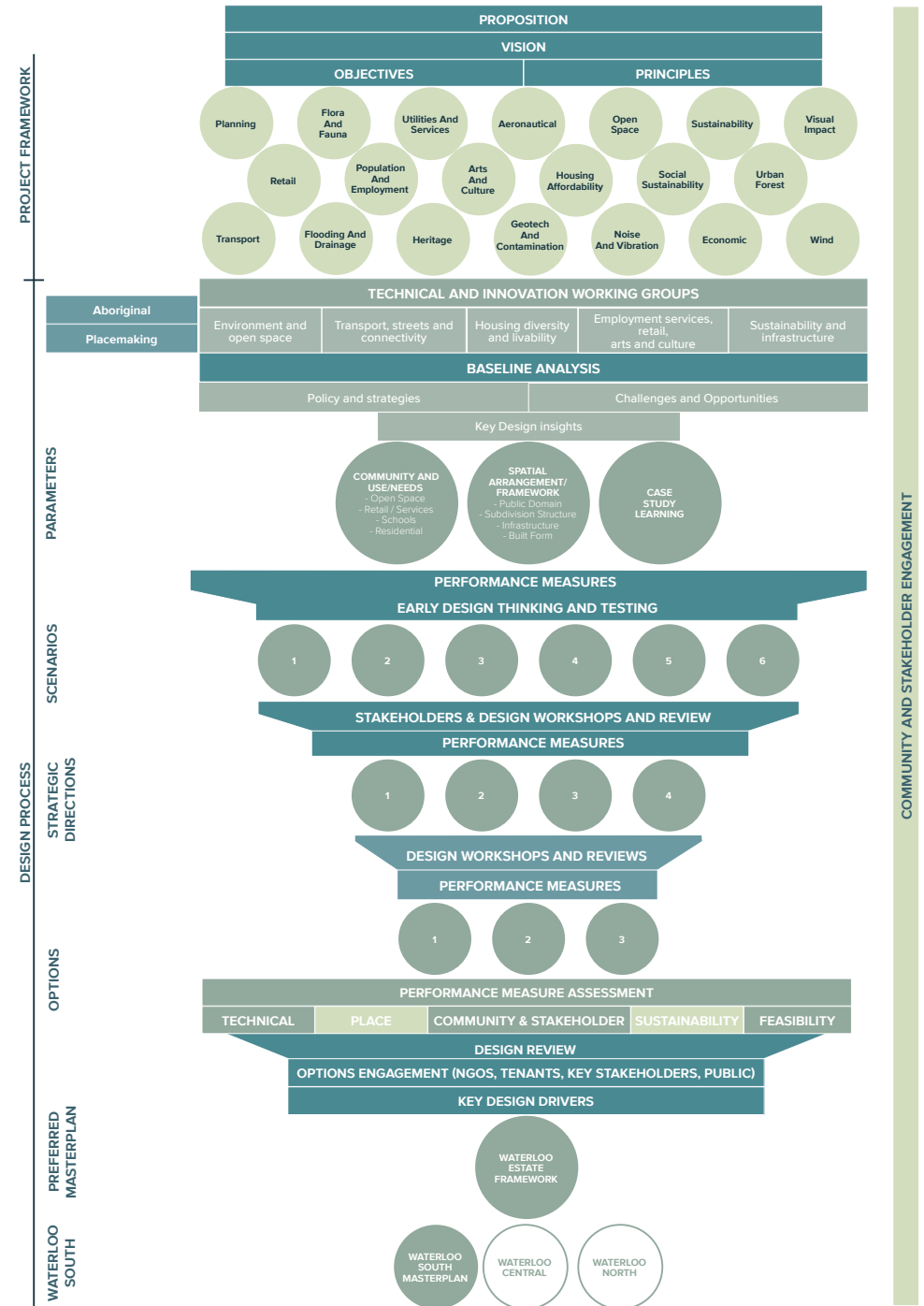


Fig. 31.3 Methodology Map



Fig.3.2.1 Options testing models

3.2 MASTERPLAN PROCESS

- 3.2.1 Baseline and Context Analysis**
- 3.2.2 Visioning and Engagement**
- 3.2.3 Placemaking and Case Study Analysis**
- 3.2.4 Early Design Thinking and Scenarios**
- 3.2.5 Strategic Directions**
- 3.2.6 Concept Plan Options**
- 3.2.7 Options Testing**
- 3.2.8 Preferred Masterplan 2019**
- 3.2.9 City of Sydney Alternate Plan**
- 3.2.10 Consultation with City of Sydney**
- 3.2.11 Kit of Parts (Non-Residential Uses)**
- 3.2.12 Features**

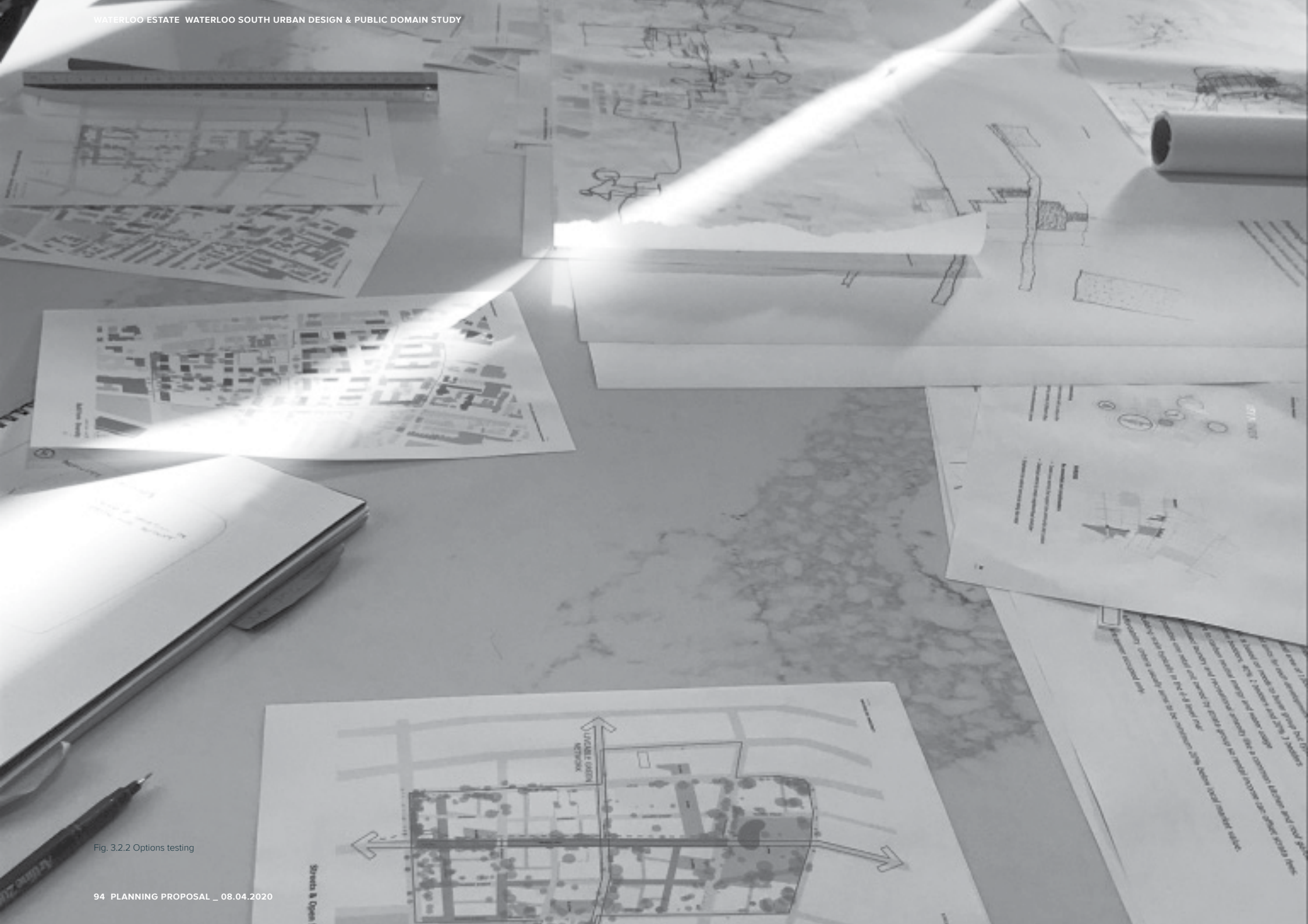


Fig. 3.2.2 Options testing

3.2.1 BASELINE AND CONTEXT ANALYSIS

The masterplan process for Waterloo South has been evidence based, technically integrated, iterative, consultative, and benchmarked against global best practice case studies and Place Performance Measures developed uniquely for the Estate

The Estate is home to many people from different walks of life, each with a connection to a place that is distinctive in its topography, landscape, extensive social housing and strong sense of community. It has evolved over time and is comprised of many layers. The first step in the masterplan process has been to explore and analyse those social and physical layers to understand the unique qualities of the people and place.

Waterloo has a complex cultural identity, being an important place for Aboriginal people as the traditional homeland of the Gadigal people, and a significant place for many other Indigenous people through more recent, cultural and political, events and movements. It is highly multicultural, with 58% of residents born overseas compared to 47.7% in the City of Sydney and 36.7% in Greater Sydney. Currently there is also a high proportion of residents over 65 compared to the City of Sydney and Greater Sydney, which influences the needs in the area, and so the quantum and types of housing, services and amenities provided will need to grow and evolve over time to meet the needs of changing demographics.

Many physical layers of the Estate have been explored and investigated to understand the opportunities and constraints to be considered in its renewal. These include the traditional landscape and what is still evident, the evolution of the block structure and its degree of permeability, the surrounding open space network and its connectivity, existing trees and opportunities for retention, interfaces with adjacent areas and what may change over time, important views and vistas to and from the Estate, and the distribution of built form density and scale. Related to these layers were also considerations for stormwater and flooding mitigation, and the location of existing infrastructure and potential upgrade requirements.

The many layers were grouped and investigated by **Technical and Innovation Working Groups (TIWGs)** under five themes; Environment and open space; Transport, streets and connectivity; Housing diversity and liveability; Employment, services, retail, arts and culture; and, Sustainability and infrastructure. The TIWGs were comprised of consultants from different disciplines who examined the layers from different perspectives to understand their broader implications and apply those insights to an understanding of the opportunities and constraints as part of the context and baseline analysis.

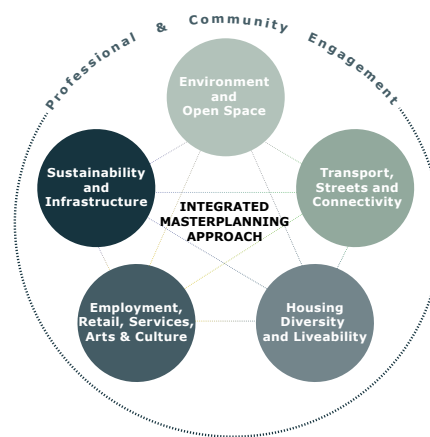


Figure 3.2.3 The Technical and Innovation Working Groups (TIWGs)

One of the key layers is the street and block structure. The social housing developments gradually replaced Waterloo's terrace houses and altered the fine grain block pattern to what it is today. Currently the Estate is an 'island', physically disconnected from the surrounding context and comprised of large blocks, which does not encourage walking and cycling. With an increase in residents, services, amenities and employment opportunities, an increase in ground level permeability with priority for pedestrians and cyclists will better connect people to places and other forms of active transport including the new metro station.

Another key layer is housing diversity and liveability. The existing buildings, that met the standards of the time when constructed, are distributed across the Estate in distinct groupings ranging from low-rise 3-4 storey walk-up to medium-rise 5-8 storey apartment buildings, to high-rise 17 storey slab buildings

and tall 30 storeys tower buildings, with an average age of 44 years against a benchmark economic life of 60 years. Their design and construction are not inherently flexible and their campus style setting with poorly defined private, communal and public open space does not make a positive contribution to the quality of the open space or public domain. None of the existing buildings would meet the current expectations for liveability, servicing and amenity that new buildings would offer, and constraints such as poor orientation, low ceiling heights, inadequately sized or no balconies, low noise and thermal insulation, and inflexible layouts and construction, does not currently make them very suitable or desirable for adaptation into social or private housing.

Other broader considerations, related to the potential for new buildings, include the maximum height of buildings in relation to Sydney Airport's PanOps (Procedures for Air Navigation Services - Aircraft Operations), solar access to areas within and adjacent to the Estate, and the effects of external noise sources, wind conditions, and air quality at different heights.

The context and baseline analysis reveals Waterloo's ongoing cycle of growth and renewal. It has changed from a thriving wetland, to a refuge for displaced Gadigal people, to a place of early industry and workers housing that accommodated many new immigrants, to the larger social housing developments in its current form. The last evolution 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. The context and baseline analysis suggests that a layered response, with a diversity of uses, height and built form, could be both appropriate and contextual in the ongoing cycle of renewal.

Refer to Appendix 7.1 for further information



KEY DESIGN INSIGHTS

Insights drawn from the context analysis inform the renewal of Waterloo into a great urban place

The key design insights draw together the research, analysis and investigation of the twenty one technical studies and other supporting technical studies and combine the constraints, opportunities and key aspects of the context analysis. They develop themes that cross cut between the technical aspects of the analysis that inform the masterplan urban design and public domain response.

Out of the context and baseline analysis of the Estate, **Ten Key Design Insights** have been established to inform the development of a masterplan that would support a diverse and growing community. These cover a broad range of considerations including:

- Waterloo's role in the '30 minute city'
- The need for new and hard working public spaces
- Streets that both connect and are places in themselves
- Increased pedestrian permeability to connect people, places and transport
- Increased ground level activation and access to services
- Integration of the natural environment, sustainability and access to nature
- The celebration, respect and incorporation of Aboriginal heritage and design
- Built form that is flexible and adaptable over the life of the masterplan
- Need for activity centres with more services, retail, cultural, and leisure opportunities
- The need to support the health and well-being of a diverse community through new social and cultural infrastructure

1 Waterloo needs to work for global and local Sydney



Fig. 3.2.3 Key design insight 1
Source: Eveleigh Railway Workshops 1926, Alchemy, Eveleigh Stories

Increased density at Waterloo supports Sydney's growth as set out in 'A Metropolis of Three Cities'. Connecting Waterloo to local and global opportunities is vital

The analysis shows how significant emerging employment areas are walkable or within 30 minutes on public transport from Waterloo.

- Connections to surrounding employment areas can be reinforced to help increase access to opportunities for Waterloo residents and those who reside in surrounding neighbourhoods. In fostering such connections with and around Waterloo, new opportunities for employment, retail, services, infrastructure can emerge.
- Social infrastructure is required to support increased and healthy access to opportunities, and the education and health needs that a diverse community requires for people to take advantage of them.
- Diverse housing models can also support workspaces.
- The culture and heritage of 'productive' Waterloo can be celebrated as 'Made in Waterloo'.

2 Waterloo needs new and harder working public spaces



Fig. 3.2.4 Key design insight 2
Source: City of Sydney, 2012

The Waterloo community will grow significantly over time and will place greater pressure on existing and future public spaces

The built form that will be delivered to house this larger community will place greater pressure on the public spaces people share. The analysis sets out the needs for new public domain as part of this growth.

- Enhanced connections can be made to surrounding parks like Alexandria Park and Redfern Park.
- A new public park can provide facilities for all ages to play, relax and exercise.
- New pocket parks and green spaces can be integrated.
- New and existing trees and landscape features can give character to the public spaces and support the areas' important ecology.
- New community gardens and allotments can celebrate the 'productive' history of Waterloo and offer the community the opportunity to grow their own food.
- The design of streets and spaces can adapt over time to the changing needs of the community.
- The integration of art and culture through the public domain can reflect the identity of Waterloo and assist in developing a sense of place for residents.

3 Waterloo's streets need to be great to move through and enjoy



Fig. 3.2.5 Key design insight 3
Source: Eats Beats Street, Kensington Street, 2018

With a larger community, the existing streets will need to adapt to balance dual roles, providing legible and safe movement and as active places for people to use

The study shows how the existing streets, although varied in character and use, are primarily residential, with little active frontage. In places of increased density, the streets need to be both legible and safe for movement, as well as active places for people to use.

- Streetscape design can support people using the street and those moving through it.
- Integrated movement systems for pedestrians, cyclists and public transport can help to reduce reliance on and use of private cars.
- Streets can support public use by incorporating places to sit, meet and play.
- Integrated infrastructure can support the programming of the public domain for art, cultural and community activities.
- New public open space can be connected with regional walking and cycling paths.
- Traditional public space offerings can be complemented by vertical green spaces that utilise innovative approaches.

4 Waterloo needs to be a more walkable place

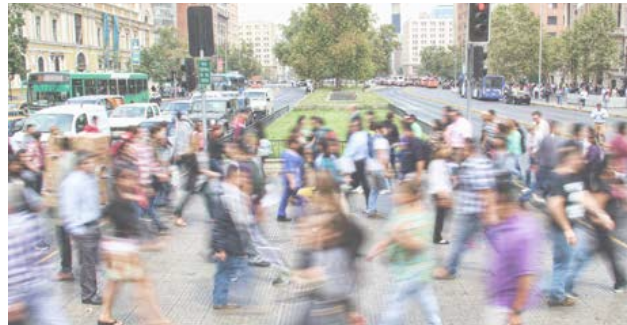


Fig. 3.2.6 Key design insight 4
Source: Want Community? Build Walkability. Sara h Kobos, 2016

A larger Waterloo community will require enhanced walkability with new connections and a finer grain network for increased health and well being

Waterloo is already well located for walking, to local amenities, centres and activities. Increased walkability will help create healthy communities where the things you need and use will be closer and more accessible.

- Better walking environments help reduce private car usage, with good walkable connections to local transport including the metro, bus links and car share schemes.
- Trees and landscape elements can create shade and cover for walking routes all year round.
- Routes and loops can be made legible and clear with good way-finding, places of interest and activities at key points.
- Active frontages and a diversity of uses can create interest at ground level.

5 Waterloo's ground level needs to work hard



Fig. 3.2.7 Key design insight 5
Source: Preview: Sydney Contemporary 2018, Andrew McIlroy, 2018

Over time, the size of the Waterloo community will increase, but the area of the Estate will not change

The 'ground level' of the Estate therefore will need to work hard to deliver the increased services the community needs. Increased residential density needs the ground plane to balance safety and accessibility with activity and enjoyment.

- Community spaces and community buildings can be flexible and multi-functional. They can adapt to a growing community's needs over time.
- Achieve 'activation ready' spaces.
- Streets and public spaces can be programmed with uses and activities that help create safe, vibrant and interesting places throughout the day and night.
- Local shops, services, health centres and public places can be integrated with residential buildings.



6 Waterloo needs to integrate sustainable design

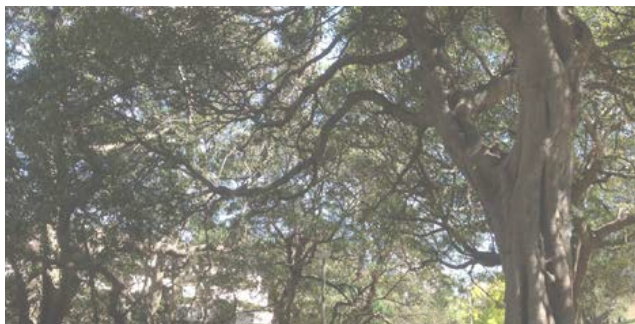


Fig. 3.2.8 Key design insight 6

Waterloo Estate has existing natural assets, and increased connectivity provides opportunities for planning and design by integrating the natural environment from the outset

The renewal of urban areas requires new buildings and spaces to meet sustainability targets throughout the process.

- To reduce the cost of living through energy efficient spaces and places.
- The urban forest can be enhanced to enrich the cultural, ecological and social importance of the canopy.
- The Estate can contribute to the Sydney 'Green Grid'.
- Design can integrate climate change mitigation and adaptation for more extreme weather, specifically flooding and heat waves.
- Design can integrate green walls, green pavements and roofs, and bio-retention systems.
- Planning can be adaptable to new technologies that create opportunities for cleaner and more efficient living, such as electric vehicles.
- The community can learn from traditional knowledge systems and practice of custodianship to instill a culture of sustainability within the Estate.
- Streetscape design can use the natural topography and integrate water sensitive urban design (WSUD) strategies to assist with flood mitigation.
- Biophilic design can help contribute to health and productivity through access to nature.

7 Waterloo celebrates and respects its' Aboriginal heritage



Fig. 3.2.9 Key design insight 7

Waterloo and the Redfern area has significant meaning for the Aboriginal and Torres Strait Islander people. This important history must be respected

Aboriginal culture should be incorporated into the design of the future Waterloo Estate from the outset.

- To recognise and acknowledge the key events in Aboriginal and Torres Strait Islander history that have taken place within the Estate's buildings and public spaces, and in adjoining areas.
- To recognise the history of the Aboriginal community's displacement, and their part in the creation of a diverse and inclusive community, through inclusion of support and employment services specifically geared towards Aboriginal people.
- To embed Waterloo within Sydney's emerging Ochre Grid.
- To celebrate the Gadigal landscape features such as Mount Carmel that have strong physical connections to the use of the landscape as a 'place of abundance' and as a strategic look out connecting Sydney Harbour to Botany Bay.
- To incorporate the Aboriginal seasons when designing spaces and buildings.
- To appreciate, learn from and support contemporary urban Aboriginal lifestyles through the inclusion of facilities and services that cater to the needs of the ongoing Aboriginal population in the area.

8 Waterloo's built form needs to be adaptable to change over time

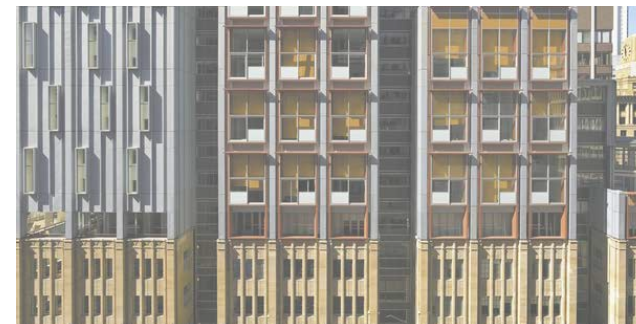


Fig. 3.2.10 Key design insight 8
Source: TonkinZulaikhaGreer Architect, 2005

Waterloo's lot structure and buildings have adapted through cycles of renewal – today the overlay of terraced streets and campus buildings give the Estate a distinctive residential character

In the coming cycle, the increase in the size of the community will require flexible plots, flexible buildings and flexible unit typologies.

- To plan for the range of housing types, tenures and providers that will help create a mixed community.
- To build adaptable accommodation that meets the specific needs of the diverse communities.
- To design buildings that are suitable for the changing needs of occupants, throughout their lifetime.
- To recognise the Aboriginal concepts of kinship and extended family that require homes to be flexible to accommodate regular temporary guests.
- To incorporate the smaller, historic plot structures alongside large plots to encourage fine grain housing models in contrast to larger sites.

9 Waterloo needs a balanced new activity centre



Fig. 3.2.11 Key design insight 9
Source: This Month in Atlanta: July 2018, Emory University, 2018

Waterloo's community will require new activity centres with new retail, culture and leisure services

Although there are clusters of existing services nearby, and adjoining centres in Redfern Village and Green Square, Waterloo doesn't currently have a defined centre. Communities of increased density require increased retail services to support daily needs.

- To address the under provision of services within the Estate and deliver the policy requirements for retail, social infrastructure and amenity.
- To support the valuable existing retail and cultural places that the community already enjoys.
- To strengthen walkable links to adjoining centres such as Green Square and Redfern Village.
- Waterloo Metro Station can be a centre of gravity and meeting place for the community.
- Activity centres need to be adaptable to future trends in retail and social infrastructure.

10 Waterloo needs to promote health and well being across the diverse community



Fig. 3.2.12 Key design insight 10
Source: The soulcialista, Home Interior Design & Decoration Ideas

Waterloo is a community of many different cultures, but within the Estate there are many similar social challenges that these communities face

As the Estate changes – bringing people with different backgrounds together – new social, creative and cultural infrastructure is required to address these challenges and promote physical and mental well-being for all.

- The existing cultural diversity of Waterloo can be an important part of its future.
- New social infrastructure can promote the well-being of both existing and new people within a diverse community.
- New cultural and creative infrastructure to support the social cohesion and well-being of the diverse community.
- To address the shortage of community facilities and increase access to services that target people's physical and mental well-being.



Fig. 3.2.13 Bakery Lane, Brisbane

W 3.2.2 VISIONING AND ENGAGEMENT

Key issues raised by community and stakeholders inform the masterplan response

The approach to early design thinking, after completion of the Estate wide context and baseline analysis, followed an extensive visioning and engagement process. This was designed to ensure input from a broad range of people of different ages and cultural backgrounds, as well as non-Government organisations, and community groups with a strong presence in the area. The visioning phase of the community engagement program was extensive, with a range of opportunities for the community to have their say, with approximately 1,570 participants that included residents from the Waterloo Social Housing Estate, residents from the private sites within the Estate, the surrounding neighbourhood as well as from the broader community, reflecting the diversity of the area.

The findings from the visioning phase were organised and presented according to five themes that were developed with key community and other stakeholders; Culture and community life; Transport, streets and connections; Housing and neighbourhood design; Community facilities, services and shops; and Environment and open space. The findings highlight the community desire for a safe, welcoming and vibrant place that:

- Captures Waterloo's unique identity
- Retains and strengthens its culture and diversity
- Respects its Aboriginal culture and history
- Maintains its strong sense of community

The community also value the natural environment, green open space and trees. The visioning and engagement process informed a set of vision principles, reflecting the community's vision for the area, that guided early design thinking and preparation of scenarios for further design work.



Fig. 3.2.14 Visioning engagement snapshot



Fig. 3.2.15 Residents at the Community Day
Source: 'Let's Talk Waterloo'. KJA, 2018



3.2.3 PLACE MAKING AND CASE STUDY ANALYSIS

Case studies and best practice across a variety of themes inform the masterplan framework and provide an understanding on how design elements can be integrated to create a specific urban experience

Placemaking has been an integral part of the evidence based and best practice approach, commencing with the Waterloo Placemaking Framework which early in the masterplan process established the Place Story and Place Drivers which evolved into the Place Character and Place Principles. The framework is the basis for the Waterloo Placemaking Strategy which proposes the future look and feel for Waterloo South, as well as strategy recommendations and guidance on management and governance. The strategy provided the foundation for development of the Place Performance Measures which is used to implement the strategy as well as measure the success of different options against each other in creating a place with meaning and authenticity.

Places and projects from Australia and around the world have been used as case studies to look at best practice and learnings to inform the masterplan framework. These are organised under the five themes, established in the early visioning phase, that have been carried through the entire masterplan process. The use of case studies is an integral part of the evidence based approach that has been undertaken to establish benchmarks, understand mechanisms that enable particular outcomes, and compile a method to measure the performance of masterplan options against each other and the various benchmarks.

Refer to Appendix 7.6 for further information

ENVIRONMENT AND OPEN SPACE



Fig. 3.2.16



Fig. 3.2.17



Fig. 3.2.18



Fig. 3.2.19



Fig. 3.2.20

Source: Refer Appendix 7.6 Case Studies for details

Joynton Avenue Tree Retention, Zetland

- Maintaining significant existing trees within the public domain as Waterloo's future green urban setting.
- Lowering urban heat island effect through shade provided by plantings and bio swale systems.
- Activating street frontage for communities to create a pedestrian prioritised central spine on George Street.

Passeig De St Joan Boulevard, Barcelona

- Promoting the street as a sustainable urban open space, plenty of tree plantings to create natural shade and introduces native species to achieve biodiversity.
- Adapting multi-use open spaces along the pedestrian prioritised street as a new urban green zone that activates building frontage and neighbourhoods as well.

Square Roots, Brooklyn

- A high-tech indoor farming accelerator in the heart of Brooklyn, New York, working to ensure that city residents can source fresh, sustainable produce twelve months a year.
- In a major urban centre like New York City, where fresh produce can be tough to find Square Roots is proving the potential of indoor, climate-controlled agriculture.

Green Laneways, Melbourne

- Melbourne City is greening its existing laneways to be more liveable
- Reduces heat island affect. Mitigates and filters stormwater whilst providing habitat.
- Where greening is not achievable, invited world-class street artists compliment laneway greening with murals chosen by the community.

Singapore

- The city-state has made considerable efforts to integrate nature into its vertical spaces to help reduce the effects of urban heat island.
- The city manages biophilic design through its Landscaping for Urban Spaces and High-Rises (LUSH) Programme.

TRANSPORT, STREETS AND CONNECTIVITY



Fig. 3.2.21



Fig. 3.2.22



Fig. 3.2.23



Fig. 3.2.24



Fig. 3.2.25

Passeig de St Joan, Barcelona

- Promoting the street as a sustainable urban open space, plenty of tree plantings to create natural shade and introduces native species to achieve the biodiversity aspect.
- Adapting multi use open spaces along the pedestrian prioritised street as a new urban green zone that activates building frontage and neighbourhoods as well.

Hammarby Sjöstad, Stockholm

- Hammarby Sjöstad demonstrates the capacity for a strong urban community to exist in association with an environmentally considered precinct and, a variably programmed communal space.
- Urbanspace, greenspace and programmed space are reliant on one another to perform, with each finding benefits from the presence of the other.

Southeast False Creek, Vancouver

- A range of uses provide a mix of active and passive frontages across the precinct supported by a range of public and private open spaces for increased amenity.
- Slim residential towers and human scaled street walls create a built environment that responds to the eye level view.

City Of Vingé, Fredrikssund

- The Delta District in the future city Vingé is an example of how landscaping can create dual functions: promote better communities and prevent flooding. A man-made delta and creeks handle rainwater and provide the city district with unique qualities for residents to gather around.

Copenhagen Cycle Strategy

- City of Copenhagen Bicycle Strategy 2011-2025 is a comprehensive policy to support infrastructure and growth of bicycle use as an everyday means of transport. Aims:
- Increase commuters that cycle to work or education to 50%.
- Increase number of cycle tracks by 80%.
- Reduce cyclist average travel time by 15 minutes.

HOUSING AND LIVEABILITY



Fig. 3.2.26

Central Park, Sydney

- Open space more intensively used and supported.
- Green space is folded vertically onto walls and up to rooftop gardens, not just on the ground plane.
- Sustainable features at different scales.



Fig. 3.2.27

Herzberg Public Housing, Vienna

- Variety of residential typologies facilitating different ways of living.
- Different urban-design typologies: Point block buildings; residential courtyard building with access balconies & a multi-family townhouse. The range of apartment types allows for flexibility / combinations according to present needs. Large outdoor terraces, communal gardens at ground level.



Fig. 3.2.28

L101 Baugruppe, Berlin

- Cooperative building, engaged occupants. Below market price units.
- Flexible combination of floor plans enables small residential units as well as large units.
- Floor plans can adapt to various living conditions and requirements.
- Shared communal open spaces at ground level and sense of communal ownership.
- Neighbourliness.



Fig. 3.2.29

Safe Streets, Safe City, Calgary

- A pioneering report published in 2007 to recommend actions to address public safety and social issues which negatively affect the Calgary community.
- Recommendations are offered to improve the general situation in Calgary. They range from short-term policing-oriented actions to long-term community revitalization actions.



Fig. 3.2.30

Tanner Springs, Portland, Oregon

- Site includes important references to the previous heritage and form.
- Integration between nature and passage, with the wetlands serving as an important visual and practical feature for the site.
- WSUD does not have to be atypical, it can work as a feature within the site, when combined with public art and boardwalk.

EMPLOYMENT, SERVICES, RETAIL, ARTS AND CULTURE



Fig. 3.2.31

Bryant Park, New York

- Bryant Park is a place to stretch out, dine and relax. It also provides a multitude of free and engaging activities.
- Create social opportunities at a centre of the city: To make Waterloo a liveable city having a role of offering a place for interaction, cooperation and participation of communities.



Fig. 3.2.32

Kings Cross Masterplan, London

- Mixed-use, urban regeneration project in central London and a major transport hub for the city. Located on the site of former rail and industrial facilities, the 67-acre (27 ha) redevelopment is ongoing, involving restoration of historic buildings and new construction, with the entire plan organised around internal streets and 26 acres (10.5 ha) of open space to form a new public realm for the area.



Fig. 3.2.33

Indigenous Portraits by Matt Andate

- Matt Andate's street murals depict indigenous figures inspired by time spent in Aboriginal communities in the Northern Territory.
- The placement of the art work in highly visible areas is deliberate, it is a method of reminding the people in the inner city of the Indigenous heritage and the voices of those past and present.



Fig. 3.2.34

Public Space Booking, Helsinki

- Nearly every Helsinki City Library has space which can be rented for different purposes, such as meetings, activities, exhibitions, team work, sports, making and lectures.
- The meetings rooms are specifically designed for holding meetings and gatherings. Multi-purpose facilities and team work spaces are suitable for team work, meetings and gatherings.



Fig. 3.2.35

Elephant Park, London

- A 22-hectare development site within a strategically important 122-hectare opportunity area. The development has been guided by a planning document produced in conjunction with the Greater London Authority which outlines specific delivery objectives including market and affordable housing and commercial floorspace amounts, job targets and sustainability requirements.

SUSTAINABILITY AND INFRASTRUCTURE



Fig. 3.2.36

Chophouse Row, Seattle

- A world-class example of fine grain mixed-use and transformational placemaking.
- Although part of a larger development area, Chophouse Row feels like its 'own place' with intimate and activated laneways.



Fig. 3.2.37

Enghaveparken, Copenhagen

- A historic neoclassic park in the Vesterbro district going through a modernisation and climate adaptation upgrade.
- The new park design is adaptable to storing large amounts of rainwater. The main defining characteristic is the one-meter terrain drop from west to east, which basically shapes the park into a gigantic dustpan.



Fig. 3.2.38

Low2no, Helsinki Finland

- An approach to engineering and construction which results in a sustainable built environment and creates the preconditions for ecological urban life.
- Comes from the phrase "from low carbon to no carbon". It is an ongoing development project in Helsinki Finland which seeks to promote a gradual transition from low-carbon to carbon-free urban construction.



Fig. 3.2.39

Rad Lab Pocket Park, San Diego

- Creating various uses that people have been seeking in the vacant spaces in order to enliven the precinct as an 'urban room'.
- Variety of sizes, purposes and users: understanding different needs and demands from all ages to encourage social interaction and engagement.



Fig. 3.2.40

Cheonggyecheon River Transformation Incheon, South Korea

- Environmental benefits included increased floor protection, reduced urban heat island effect and pollution.
- Economic benefits through increased surrounding land prices by 30-50%
- Social benefits by encouraging use of public transport and as an attraction that draws visitors



PLACE CASE STUDY LEARNINGS

The best-practice placemaking case studies have been selected and analysed based on how the learnings inform the development of Waterloo's place character - layered, proud, distinct and resilient - which are the fundamental qualities which define the Estate and make it special.

Refer to Appendix 7.6 for further information

HINDLEY WEST, ADELAIDE

Adelaide's first main street has dramatically changed over time. The Hindley West placemaking pilot was a project to facilitate a shared future vision between multiple stakeholders in a rapidly changing precinct.

JEWELL STATION PRECINCT, MELBOURNE

An example of 'urban acupuncture' - a small scale intervention to tackle multiple challenges. It is a successful pocket park that started as a community-focused design process to activate an underutilised space near a train station. The learnings from these projects are:

Provide on-the-ground support

A place facilitator can help to develop partnerships between community and council face to face.

Share the story

Communication and engagement with the community and stakeholders throughout the process is important through an iterative design development process to establish appetite for the project, garner energy and optimism for change and bring multiple stakeholders together

Guide delivery and negotiation

Simplify the bureaucracy and process of delivering the community's ideas through negotiating leases and dual tenancies, meeting with property owners to share the vision for the precinct, arranging the co-funding of art, cultural and revitalisation programs.

Anticipate the unexpected

Provide flexible spaces that allow the space to be used and loved even when no events are taking place, providing a sense of ownership to the community.

Co-locate with other uses

Co-location to provide a linking element between activity hubs and the station and connect these through a public domain that encourages play and lingering.



Fig. 3.2.41 Hindley West Placemaking Pilot, Adelaide
Source: <https://citimag.indaily.com.au>, 2019



Fig. 3.2.42 Jewel Station precinct, Melbourne
Source: <https://www.pps.org>, 2019

MURU MITTIGAR, PENRITH

An Indigenous-owned social enterprise supporting local Darug people and the wider Aboriginal community. It is committed to making a significant, measurable and lasting difference in advancing Aboriginal culture.

'WYNYARD QUARTER PLACEMAKING', AUCKLAND

The guiding framework for the urban regeneration of a 37 hectare area over 20+ years that uses important Maori concepts as principles for the redevelopment and has extended into all decision-making, such as the naming of the spaces. The learnings from these projects are:

Focus on doing and implementing

Develop programs that activate the public spaces to encourage early visitation that includes children's workshops, food trucks and markets to engage the community.

Get hands-on and make learning fun

Provide a range of engaging educational programs for the community that includes a bush resources walk, art classes, and cultural talks to share Indigenous culture and knowledge.

Provide pathways to financial security

Provide a dedicated space for community financial services which include counselling, education and community services.



Fig. 3.2.43 Muru Mittigar, Penrith
Source: <https://Murumittigar.com.au>, 2018



Fig. 3.2.44 Wynyard Quarter Placemaking, Auckland
Source: <https://www.wynyard-quarter.co.nz>, 2019

ARCOLA THEATRE, LONDON

An experimental theatre located in a culturally diverse area which encourages innovative ideas, and celebrates the diverse local community. By rethinking the theatre building as a platform open to engaging in a wider range of innovative projects, and by mixing income streams, they have created a space which is socially, environmentally and financially sustainable.

ONE LOVE CITY, COPENHAGEN

A crowd-sourced public event which transformed a public square into a lively cultural marketplace and social meeting place. The adventure-playground style installation was left intentionally flexible to encourage spontaneity. The learnings from these projects are:

Ensure equitable access

Provide opportunities to residents who may not usually be able to afford it, e.g., 'pay what you can' days for services, edible landscapes.

Build strong partnerships

Recognise and build on existing community initiatives and help drive local sustainability initiatives by building connections to existing organisations.

Keep things local

Retain and build upon the existing local businesses and sharing economy to instil a sense of pride and establish a local micro-economy through local bars, shops and cafés, and markets populated with local artisan goods.

Facilitate shared learning

Bring community and cultural organisations together, to equip people with lessons learnt, and act as a catalyst for institutions involved to rethink broader cultural and public space strategies across the Precinct.

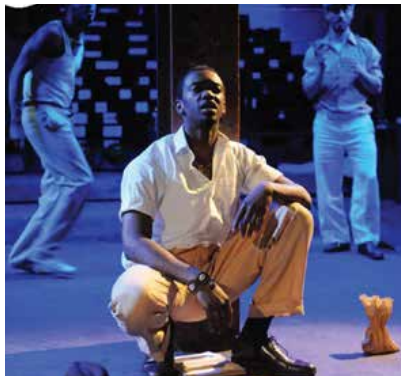


Fig. 3.2.45 Arcola Theatre, London
Source: <https://www.arcolatheatre.com>, 2019



Fig. 3.2.46 One Love City, Copenhagen
Source: <https://detours.biz/projects/one-love-city>, 2019

ECO CARLTON PROJECT, MELBOURNE

A platform between residents, local action groups, architects, and developers that focused on environmental efficiency and sustainability.

INCREDIBLE EDIBLE, TODMORDEN

A movement of food growing across the town's public spaces and among the town's people, challenging traditional notions of the public realm. The learnings from these projects are:

Make sustainability practical

Deliver on-the-ground projects that could include the establishment of community gardens, a coffee grounds collection and composting scheme with local businesses.

Tailor teaching to tenure type

Deliver workshops specifically directed at the existing community, offering advice on simple things for environmental savings.

Orient new communities

Bring together a diverse mix of residents (age, ethnicity, housing tenure) in a safe and small-scale environment, to facilitate bonding between neighbours and to establish a socially-inclusive united front in advocating environmentally friendly living practices.

Engender civic pride

Engendering a sense of belonging and ownership will make Waterloo everyone's responsibility, and help increase safety and reduce crime and vandalism.

Generate tourism to generate revenue

Make Waterloo a destination.



Fig. 3.2.47 Eco Carlton Project, Melbourne
Source: <https://www.bioregional.com>, 2019



Fig. 3.2.48 Incredible Edible Todmorden, Todmorden
Source: <http://calmfulliving.com>, 2019



DENSITY CASE STUDY LEARNINGS

Case studies were analysed using a range of metrics to understand density in different contexts. The case studies have been analysed based on how the learnings inform the masterplan response to the design and experience of the Estate.

Refer to **Appendix 7.6** for further information

DESIGN

Everyone feels welcome

Design for diversity, equality and variety.



Fig. 3.2.49 Nine Elms, London
Source: <http://www.onenineelms.com>, 2019

Design for all ages and abilities

Diversity can be preserved and nurtured through tenure, mix and size of, both residential and non-residential uses that are provided in the area and the range of community facilities provided to support them.

A welcoming and inclusive precinct

Delivery of social facilities in the first stage will enable the master plan to adapt and deliver on the right to return for social residents.

Social connectedness

Connections to a broader network of places linking to the wider area need to be considered to strengthen diversity.

Keep it flexible

Renewal takes time and passes through many hands.



Fig. 3.2.50 Elephant & Castle, London
Source: <https://www.elephantandcastle.org.uk>, 2019

Flexible ground plane

Flexibility needs to be built into the public domain and urban form. Allow room for flexibility, rather than setting strict and prescriptive requirements.

Public domain

The public domain needs to provide a variety of spaces and diverse programme to allow for different users and activities.

Flexible dwellings

Within buildings, flexibility needs to be considered to allow for the reconfiguration of floor plans for different numbers of people per dwelling, or different life stages. This will allow for adaptive reuse of buildings beyond its original design life.

Mix it up

A range of uses, typologies, tenures and site densities.



Fig. 3.2.51 Woodward's, Vancouver
Source: <http://vancouverneon.com>, 2019

Mixed use in podiums

As density increases, the offering must be intensified, including transport, open space, and mix of uses. Providing supporting land uses (such as retail, social infrastructure, entertainment and businesses) will create vibrancy.

Tenure blind

Social housing works best in a mixed community that allows for different tenures to be provided.

Intermediate dwelling typologies

Flexibility needs to be built into the lot structure to support intermediate typologies in the future.

Good things come in small packages

Successful urban environments are often complex places made of simple elements.



Fig. 3.2.52 Joyce Collingwood, Vancouver
Source: <https://vancouver.ca>, 2019

Micro and vertical neighbourhoods

Vertical mixed use within a single structure supports different scales of social interaction and helps to engender a sense of belonging and ownership.

Character areas

Distinct architecture, use of green elements, provision of open space and of areas of activity create a vibrant mixed- use precinct.

Access to daily needs within 200 metres of building entries

Providing supporting land uses (such as retail, social infrastructure, entertainment and businesses) will serve the needs of the local population as well as those who pass by everyday.

Communal spaces and social corners

Urban precincts don't need to rely on the ground plane to provide all of their 'green' needs, a range of open space typologies supports different scales of social interaction.

Connected green infrastructure network

Biophilic design.



Fig. 3.2.53 Tanjong Pagar, Singapore
Source: <https://thehoneycombers.com>, 2019

Biophilic design principles

Integrate biophilic design to connect people to nature for increased health and well-being.

Contributory open space

Provide access to identifiable open space within 200 metres of building entries to encourage active transport modes and increased health and well-being.

Urban forest and green grid

The greenery of parks and tree-lined streets help to temper the intensity of built form. To mitigate heat island effects and provide urban relief for residents, green walls and roofs should be considered.

Productive landscapes and community gardens

The public domain needs to work harder. Productive landscapes provide multiple benefits that includes connecting people to nature, reducing living costs for increased liveability and promoting social interaction.

EXPERIENCE

Know your community

Who are the users and what do they need?



Fig. . 3.2.54 Regent Park, Toronto
Source: <http://urbantoronto.ca>, 2019

Community vision and needs response

To ensure the experience of a place is positive and responds to the community's requirements, the community's needs and desires need to be understood. Understanding the Waterloo community's vision and desires for gathering areas, flexible dwelling typologies, staging, local services, safety, sense of community, accessibility and specific public domain programming help inform the masterplan response.

Options testing engagement

Design with sufficient community engagement from the outset to ensure the community is taken through the journey and that their voices are heard.

Start with the spaces

"First life, then spaces, then buildings"
Jan Gehl



Fig. . 3.2.55 Hudson Yards, New York
Source: hudsonyardsnewyork.com, 2019

Public domain led design process

The public domain will have to work hard. Consideration needs to be given to the quality of the public realm, its scale to function as gateways to transit, while still being intimate and activated so as not to be overbearing or empty outside peak hours.

Walkable pedestrian priority precinct

Consider how people dwell within spaces - liveable places allow social interaction. Once these spaces have been shaped, then use the spaces to shape the buildings.

The eye level view

Perceived density is a matter of human scale



Fig. . 3.2.56 Central Park, Sydney
Source: Turf Design, 2019

Everyday experience

Design with the pedestrian in mind. The experience of users needs to be prioritised by streets. The quality of these spaces together with programmatic activities will inform the overall sense of place and level of safety.

Pedestrian scale and fine grain detailing

Provide a fine grain to allow more frequent variation in the ground floor activity to be seen at walking speed, and different sections of a street to build up and be replaced over time, creating a more complex place over time.

Active frontages

Concentrate activation on building corners to create an interface between buildings of different developments.

Lot diversity

Provide lot diversity to create a fine urban texture for permeability that supports pedestrian networks. Slim residential towers, podium-level courtyards, and human-scaled street walls result in a built environment that is sensitive to the eye level view.

Celebrate the past and the present

Avoid generic responses to specific places



Fig. 3.2.57 Bercy, Paris
Source: <https://en.convention.parisinfo.com>, 2019

Cultural, environmental and heritage retention and representation

Understanding the complexity of the area's layered history will assist in ensuring existing assets (both physical and social e.g. the community skill base and cultural diversity) are leveraged in the renewal of the place and celebrate its local identity.

Storytelling and integrated public art

Public art needs to relate to its context and reflect local identity, to interpret an area's history and make it accessible to the community. Key aspects for Waterloo include:

- Multi-cultural diversity
- Placemaking
- Local making
- Food production
- Integral aboriginal culture

Lead with public benefits

Build trust and liveability from the outset



Fig. . 3.2.58 Woodberry Down
Source: <https://propertyhouse.co.uk/>, 2019

Transport

Higher densities close to transport options locate people closer to opportunities and reduce dependence on cars.

Public benefits

Lead with public benefits such as social infrastructure that meets an identified need within the existing community. Public benefit projects may be physical or programmatic and set an important foundation for trust as well as supporting collective well-being and a benchmark for quality. This includes:

- Public domain and open space
- Local community facilities
- Services and shops
- Employment

Staging

The scale of transformation in renewal areas means that existing and incoming residents and visitors may be subject to decades of construction. Consider staging to minimise disruptions to existing residents.



PLACE PERFORMANCE MEASURES

The renewal of Waterloo South provides the opportunity to create a great and inspiring inner city community for the 21st century, a place where residents can lead full and satisfying lives in a growing Sydney

Through the analysis of case studies, global best practice place metrics and local place making research, a set of Place Performance Measures has been developed specifically for Waterloo to aid decision making and support a balanced and evidence based approach. A short list was adopted for concept options testing whilst a long list of place performance measures has informed the planning framework and Indicative Concept Proposal for Waterloo South and will help support future decision making.

The suite of Place Performance Measures have been developed specifically for the Estate to aid decision making. They are indicators, and when used in conjunction with other community building measures, facilitate an understanding of how Waterloo as a place will perform and be experienced. They are one of a suite of measures for Waterloo that includes the project proposition, feasibility, stakeholder and community feedback, sustainability and technical measures. Used collectively, they provide a balanced and evidence based decision making approach to the renewal of Waterloo South and in the future, the renewal of Waterloo Central and Waterloo North.



Fig. 3.2.59 The relationship of Placemaking to other performance measures

METHODOLOGY

The process of selecting Place Performance Measures for Waterloo starts with Waterloo's Placemaking Framework & Strategy that identifies the future place character, place principles and strategy themes for Waterloo. A focus on qualities highly valued by the community, and features that promote health and happiness, give the performance measures local Waterloo relevance.

The Place Performance Measures are a compilation of recognised global best practice place metrics and local place making research. They are organised under the Waterloo objectives and principles under the five overarching objectives for Waterloo; Environment and Open Space; Transport and Connectivity; Housing; Culture and Design; and Services and Amenities.

A rationale, method and measure relevant to Waterloo is further expanded under this framework. A short list was adopted for concept options testing. A long list of Place Performance Measures was adopted for the Preferred Masterplan for the Estate. The Place Performance Measures were further refined through consultation with the City of Sydney, this refined long list informs the planning framework and the Waterloo South Indicative Concept Proposal, and will help support future decision making. The Place Performance Measures evolved throughout the masterplan process, where measures have been embedded into the masterplan framework, they have been excluded from the refined long list. This long list informs the Development Control Plan, future tender EOI packages, the design excellence process, and development agreements.

KEY FINDINGS

Through an analysis of the case studies and global best practice, Place Performance Measures were identified across a variety of elements that could add to Waterloo as a unique place within Sydney and enable Waterloo to be benchmarked against the world's most progressive precincts. These measures provide an understanding of how Waterloo South as a place will perform and be experienced.

Refer to Appendix 7.6 for further information

PLACE PERFORMANCE MEASURES

The list of Place Performance Measures that inform the Waterloo South Indicative Concept Proposal:

Open Space and Environment

- Landscape Replacement Area Control
- Urban Forest
- Skyview Factor
- Sunlight to Parks
- Sunlight to Streets

Transport and Connectivity

- Intersection Density & Small Block
- Parking
- Mobility on Demand Network

Housing

- Sub Precinct Completeness
- Vertical Village
- Open Space Accessibility

Culture and Design

- Community Resilience
- Adaptable Ground Floors
- Building Entries
- Building Frontage

Services and Amenities

- Productive Landscapes
- Parks as Places
- Edible Landscapes
- Ground Plane Space Diversity
- Ground Plane Transparency

Refer to Appendix 7.10 for further information



Fig. 3.2.60 Incredible Edible Todmorden
Source: <https://ourlocality.org/>, 2020



KEY DESIGN DRIVERS

Waterloo has been shaped over time and these influences set the context for change going forward

Key Design Drivers, specific to Waterloo, were defined to inform the masterplan, and create an authentic place, that reflects and builds upon the unique qualities that were revealed through the masterplan process of context analysis, visioning, early design thinking, placemaking, options testing case studies, and performance measures. These are a Shared Community, Living Culture, Blue/Green, Keep It Local, and Urbanity.

SHARED COMMUNITY



Fig. 3.2.61 Family Day on Waterloo Green
Source: Counterpoint Community Services Facebook Page, 2018

A culturally diverse community bonded through adversity, resilience and active engagement. Waterloo already has a distinct neighbourhood character and this is a notable strength to retain and build upon for the future renewal of the Estate for the existing and evolving community

People in Waterloo are diverse in age, culture and background. Waterloo has historically been a welcoming place for people from all places. The cycles of renewal and waves of immigration over time has seen the influx of people of all ages, demographics and races into the Estate. This diversity has led to independent yet inclusive groups, with a common connection of stories, events and support.

This history of Waterloo has created the proud, distinct, resilient and layered community character that it has today. This diverse and hands-on community can be celebrated through opportunities for expression, storytelling and engagement.

LIVING CULTURE



Fig. 3.2.62 Bushfood
Source: Tourism Australia / Oliver Strewé, 2017

Waterloo has a distinctly embedded cultural identity that has evolved over time. The existing Estate is home to people from all places and its character is tied intrinsically to the people that have shaped its history. Recognising and reflecting the Aboriginal and multi-cultural stories will be important to connect Waterloo to the past, present and future

Waterloo is defined by over 60,000 years of continuous Aboriginal association with land and country, including contemporary cultural practice and living traditions. The Aboriginal and Torres Strait Islander population has fluctuated over time and there are themes of struggle and survival, particularly in relation to the greater Redfern area as a Koori meeting place. The waves of immigrant workers, Chinese market gardeners, Lebanese merchants, Greek and Russian workers and it's industrial past have also shaped Waterloo as a place and community. The cultural diversity of the existing community that call Waterloo home is reflected through festivals, gatherings and other events.

Aboriginal culture and heritage is intrinsic to the past, present and future of Waterloo as a place and community. The opportunity exists to embed Aboriginal culture and respond to the needs of the Aboriginal population in planning and design, in order to acknowledge and share the strong Aboriginal influence on the place's identity and at the same time recognising the other cultures that have shaped Waterloo.

BLUE / GREEN



Fig. 3.2.63 Community Garden
Source: Johnny Weeks for The Guardian, 2018

Remnants of the original Gadigal landscape can still be seen while others, like the presence of water, have disappeared. Connecting to the cultural significance of traditional landscape elements will be a key aspect in the renewal of the Estate into a great urban environment

The wetlands of Waterloo are a key part of the Estate's cultural and environmental heritage, as a source of food and materials and a place of gathering for the Aboriginal people. There are remnants of the original Gadigal landscape still in evidence within Waterloo, such as Mount Carmel and the topography, while other previously dominant elements such as the historical presence of water have disappeared.

This presents opportunities to reinterpret the landscape qualities of the place across time and deliver a vibrant public realm which is productive and hyper-functional.

KEEP IT LOCAL



Fig. 3.2.64 Waterloo Estate Market

Waterloo's heritage as a productive place is still evident in its current day sharing economy. Recognising and supporting this 'Made in Waterloo' ethos will be important for Waterloo to be 'of its place'

Waterloo has long been associated with a culture of making. From industrialisation around the mid 19th century onwards, the area has been a hotbed for entrepreneurial spirit and trade-based, utilitarian professions. More recently there has been a resurgence of crafts and innovation in the area, attributed to affordable making spaces and connection with cultural and technology institutions.

The opportunity exists to embed Waterloo's history of industry, craftsmanship, business and production. This culture of making can be reinterpreted as a guiding theme for the provision of employment, education and cultural expression in Waterloo.

URBANITY



Fig. 3.2.65 Jewell Station pop-up event, Melbourne
Source: <https://www.betterblock.org>, 2018

As Waterloo becomes denser the public domain and ground plane need to both work harder and be more flexible, to accommodate for a range of uses and users, to adapt to changing needs over time, and to support the range of social interactions that are necessary for a liveable neighbourhood

With the new Waterloo Metro Station, the Estate is set to become a new activity centre with increased density. Connecting the growing community to global and local opportunities will be vital to Waterloo's renewal into a great urban place. Hand in hand with density, urbanity will be a vital component to making it a liveable neighbourhood. Urbanity is the spatial and social interactions that combine to make up the experience of urban life. Spatial elements include the provision of physical infrastructure such as community centres, service providers and services associated with social housing. Waterloo also plays host to a number of community events which see residents come together, along with visitors, for celebrations and other purposes.

These physical elements facilitate both informal and formal connections; from friendships and interactions with neighbours, to local facilities and services. These social services, networks and connections can be supported and nurtured in Waterloo, particularly through inclusive and accessible spaces.



3.2.4 EARLY DESIGN THINKING AND SCENARIOS

Six scenarios were explored, focusing on a key approach and set of influences or circumstances to understand the place characteristics that evolved

Early design thinking explored a number of Scenarios, and stretched these ideas to their limits, in order to understand the place characteristics, opportunities and challenges that emerged from each. The Scenarios explored each focused on a set of key influences and were characterised as:

- **How Green?** Considered the optimisation of new and existing landscape and open space
- **How Low?** Looked at suppressing the building heights as low as possible with little height diversity
- **How Connected?** Considered maximised ground level connectivity and a fine grain block structure
- **How Centred?** Looked at consolidated activity and open space around the Metro Quarter
- **How Diverse?** Looked at dispersed activity centres throughout the Estate
- **How Blue?** Considered access and connection to nature and water as its key influences

This early design thinking was the starting point for developing strategic directions to be tested against the project vision and principles for the Estate.

Refer to Appendix 7.2 for further information

HOW GREEN?

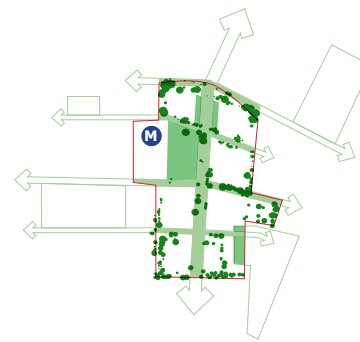


Fig. 3.2.66

How Green? Considered the benefits and outcomes of optimising the landscape, open space and contributory open spaces.

HOW LOW?

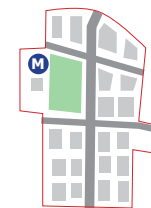
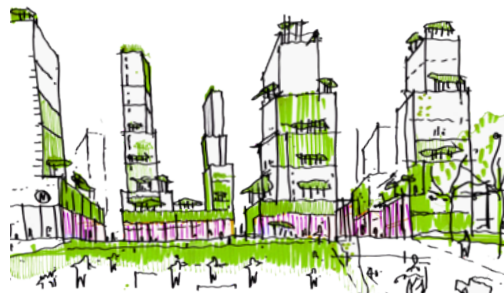


Fig. 3.2.67

How Low? Considered the potential outcomes of suppressing the height of development and reducing the number of tall buildings.



CASE STUDY LEARNINGS



Fig. 3.2.68
Park Royal Hotel
Singapore



Fig. 3.2.69
Passeig De St Joan
Boulevard



Fig. 3.2.70
Hammarby Sjöstad
Stockholm, Sweden



Fig. 3.2.71
City Of Vinge
Fredrikssund

HOW CONNECTED?

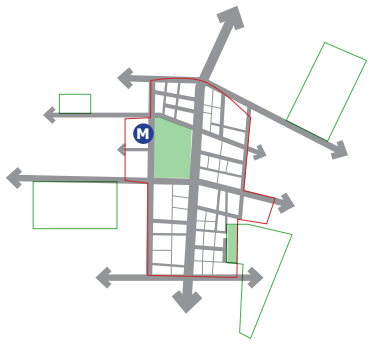


Fig. 3.2.72

How Connected? Considered the potential outcomes of maximising ground level connectivity and granular built form.

HOW CENTRED?

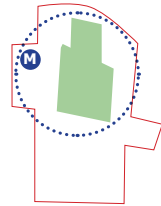


Fig. 3.2.73

How Centred? Considered the potential outcomes of a central park and activity centre.

HOW DIVERSE?

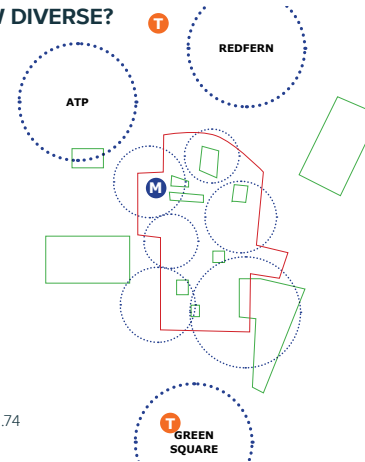


Fig. 3.2.74

How Diverse? Considered the potential outcomes of prioritising multiple new activity centres.

HOW BLUE?

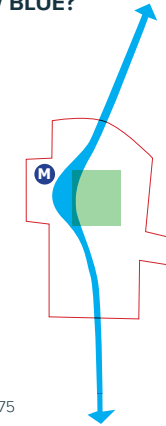


Fig. 3.2.75

How Blue? Considered the potential outcomes of prioritising health and well-being and the connection to water and nature.

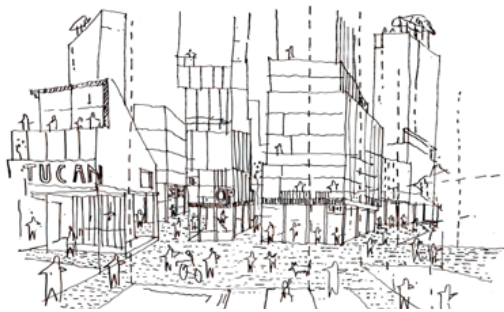


Fig. 3.2.76
Central Park, Sydney

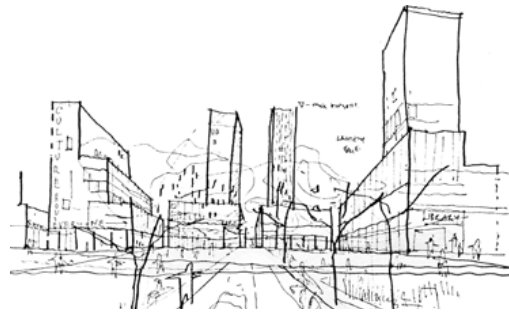


Fig. 3.2.77
Gillet Square, London, UK



Fig. 3.2.78
Lower Yonge Precinct
Toronto, Canada

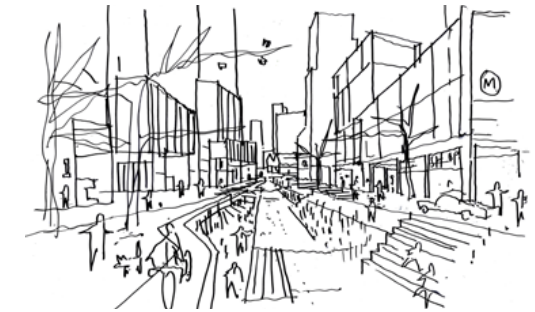


Fig. 3.2.79
Elephant Park
London, UK



Fig. 3.2.80
Chophouse Row
Seattle, Washington



Fig. 3.2.81
Bankside Urban Forest
London, UK



Fig. 3.2.82
Cheonggyecheon River
Transformation Incheon,
South Korea



Fig. 3.2.83
Tanner Springs
Portland, Oregon



CATALOGUE OF DESIGN IDEAS

Key design elements emerged that provided specific place qualities; some were interchangeable while others were unique and specific to a particular option

The catalogue of design ideas are a set of place characteristics that emerged from the testing of scenarios. These informed the development of the concept plan options, Preferred Masterplan and Waterloo South Indicative Concept Proposal.

Refer to Appendix 7.2 for further information



Fig. 3.2.84 **Pedestrian Boulevard** to retain existing canopy
Create a green spine connection that promotes community interaction through food production and edible landscapes.



Fig. 3.2.85 **Consistent street edge**



Fig. 3.2.86 **Green arrival** at metro station
Create a sense of arrival into green space by co-locating the park next to the metro station.



Fig. 3.2.87 **Shared courtyard** spaces



Fig. 3.2.88 **Built form with park address**
Provide additional amenity by increasing built form frontage to landscape.



Fig. 3.2.89 **Hierarchy of streets and social spaces**



Fig. 3.2.90 **Central park** connected to central spine



Fig. 3.2.91 **Blue Green** connections



Fig. 3.2.92 **Integrated water management**



Fig. 3.2.93 Variety of **street level interfaces**



Fig. 3.2.94 Central **activity hub**



Fig. 3.2.95 **Diversity** of open spaces



Fig. 3.2.96 **Frontage to landscape**



Fig. 3.2.97 **Fine grain uses**



Fig. 3.2.98 **Diversity** of neighbourhoods

3.2.5 STRATEGIC DIRECTIONS

The Strategic Directions explored distinctly different approaches to accommodating the project proposition

The early design work formed the starting point for developing the Strategic Directions which also were informed by the 10 Key Design Insights from the Baseline Report, key stakeholder and technical study inputs from the TIWGs, community and stakeholder engagement, and the fundamentals of the project delivery, proposition, program and concept studies. Three Strategic Directions explored distinctly different approaches to accommodating a similar project proposition and ‘kit-of-parts’ of non-residential uses.

All three Strategic Directions were tested and found to support the project vision and principles for the Estate. Each contained primary design elements, some of which were common to all, that in combination characterised each approach.

Strategic Direction 1 comprised a variety of parks, community services, spaces and events connected by fine grain pedestrian focused streets, building on Waterloo’s existing natural, social and built form diversity.

Strategic Direction 2 comprised connecting parks, community services, spaces and events through a continuous walkable ‘blue-green’ corridor connecting people to Waterloo’s unique natural and cultural heritage.

Strategic Direction 3 comprised a centralised Waterloo village around a primary park with a walkable ‘green line’ connecting people to key community services, spaces and events.

Through a process of testing, review and analysis the three Strategic Directions were all found to be worthy and plausible options which were then further developed into the three Concept Plan Options; Waterloo Estate, Waterloo Village Green and Waterloo Park.

Refer to Appendix 7.2 for further information

STRATEGIC DIRECTION 1

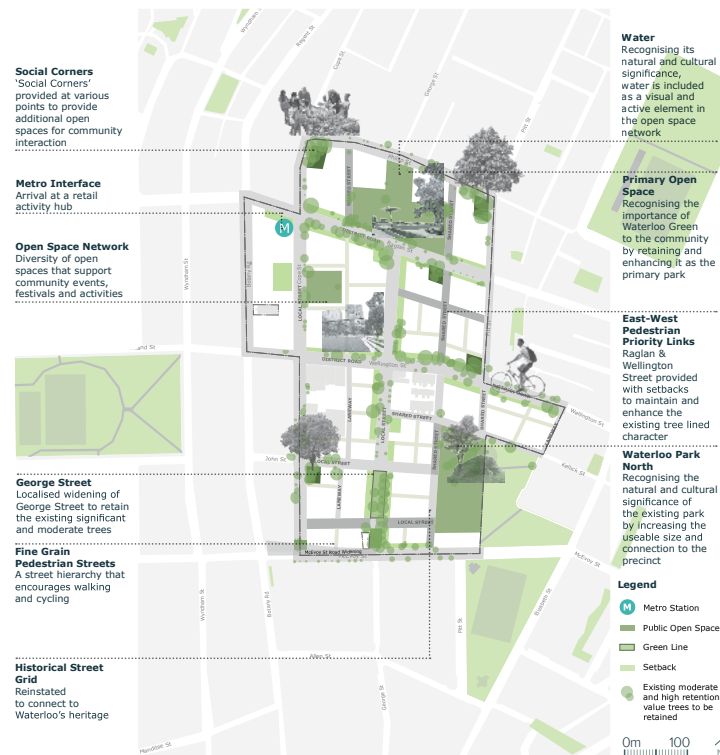


Fig. 3.2.99 Strategic Direction 1 Open Space and Public Domain

A diversity of Public Domain and Open Spaces are provided across the Estate with Waterloo Green retained as the primary park. Each space provides a specific response to the existing and future qualities of that particular part of the site, enhancing micro neighbourhoods.

Additional fine grain pedestrian focused streets provided throughout the Precinct encourage walking and cycling.

STRATEGIC DIRECTION 2

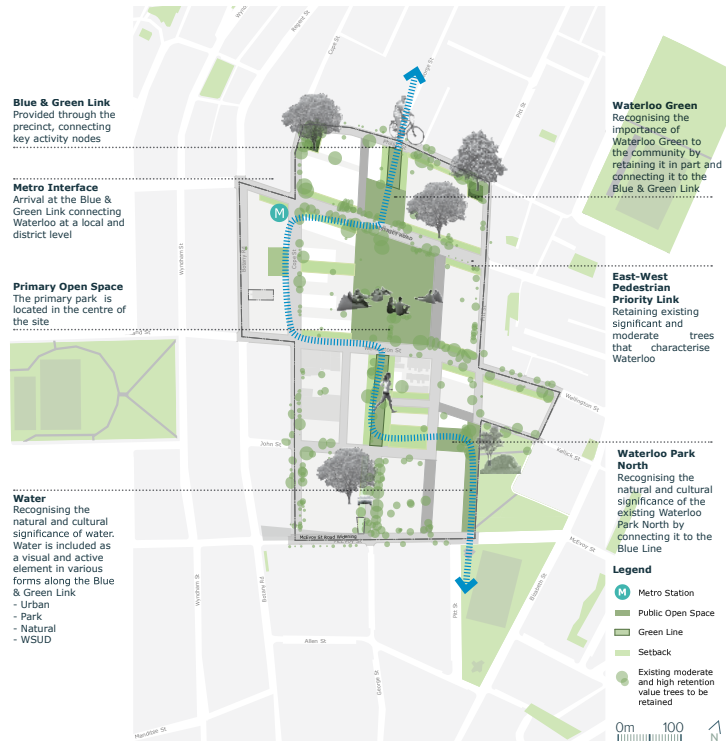


Fig. 3.2.100 Strategic Direction 2 Open Space and Public Domain

The primary open space is located within the centre of the site next to the retail, community and social services.

A 'blue-green link' connects pedestrians and cyclists to Waterloo Green, the central primary open space, Metro station and Waterloo Park celebrating the Estate's connection to nature and water.

STRATEGIC DIRECTION 3

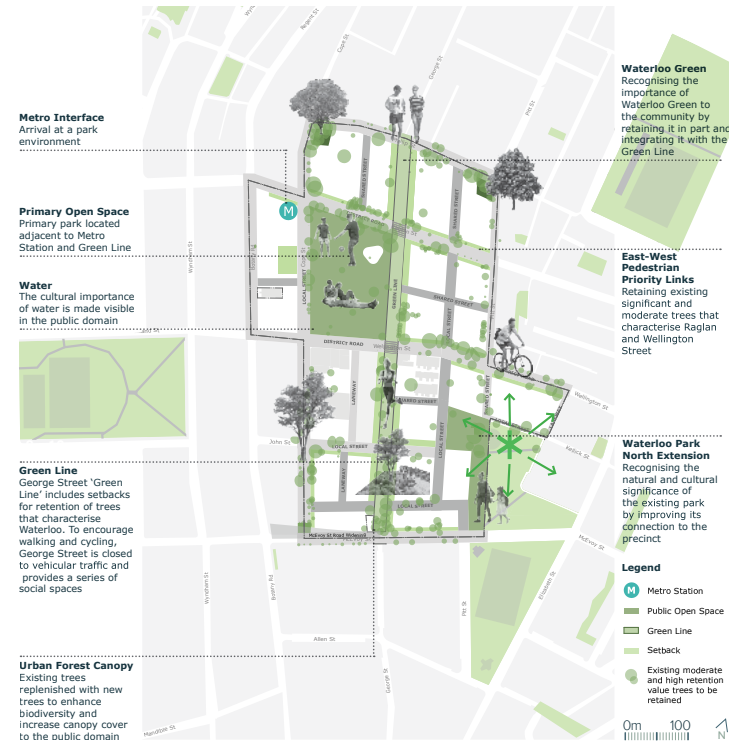


Fig. 3.2.101 Strategic Direction 3 Open Space and Public Domain

The primary open space is located adjacent to the Waterloo Metro Station providing a 'green arrival' to Waterloo. Retail, community and social services surrounding the park strengthen the focus on the 'green' character.

A continuous north-south 'green line' through the Estate provides a pedestrian and cycle friendly environment. George Street is widened to support the retention of the existing tree lined character, promote the connection to nature and create the opportunity for a variety of social and community spaces.

W 3.2.6 CONCEPT PLAN OPTIONS

The Concept Plan Options explored how to deliver the project vision, principles and project proposition for the Estate with different characteristics to create three distinct urban places

The Concept Plan Options tested three different approaches to the masterplan to deliver the vision for Waterloo. Each Concept Plan Option tested a combination of different key elements to provide an understanding of the unique place characteristics created as a result, and the strengths, opportunities and challenges of delivering these elements.

Waterloo Estate Concept Plan Option was most influenced by How Diverse and How Connected with a fine grain block structure, referencing the historic street pattern of Waterloo, and a diversity of smaller neighbourhood parks and plazas. Taller building heights, and retail, services and community facilities were dispersed evenly throughout the Estate.

Waterloo Village Green Concept Plan Option was most influenced by How Centred, How Connected, How Green, and How Blue. Landscaped links connected open space outside the Estate to the main Village Green, centred in the Estate's north, with integration

of landscape and water into the pedestrian links, and larger landscaped setbacks to retain significant trees. Taller building heights were organised around primary open spaces and links, and a significant retail, services and community hub was located adjacent to the Metro Quarter, with secondary locations around the Village Green and along a pedestrianised and landscaped George Street.

Waterloo Park Concept Plan Option was most influenced by How Centred and How Blue. Here the central park was also a landscaped arrival place to and from the Metro Quarter. George Street was widened, landscaped and pedestrianised as an open space in itself, with water integrated as both a feature and for stormwater management. The block structure was more regular and less fine grain. Taller building heights and retail, services and community facilities were organised around Waterloo Park and along the George Street Pedestrian Boulevard.

BUILT FORM AND LOT STUDY ANALYSIS

The distribution of built form and the proposed building envelopes have been tested for their potential to satisfy the controls contained in the proposed planning framework as well as applicable state and local government policies. Detailed lot studies have been conducted on a selection of different lots, chosen to represent a broad range of different lots and building types across the Estate.

This has confirmed the ability of the masterplan, and building envelopes, to satisfy SEPP65 and the Apartment Design Guide's objectives for building separation, apartment sizes, floor to ceiling heights, circulation from a core, solar access, natural ventilation, the quantum of communal open space and its solar access, and any amenity effects onto adjacent sites.

Refer to Appendix 7.2 for further information

WATERLOO ESTATE CONCEPT PLAN OPTION



KEY ELEMENTS

- ① **Urban plaza next to metro**
Arrival at a mixed-use urban plaza next to metro station.
- ② **Retention of Waterloo Green**
- ③ **Variety of streets & lots**
Supports a highly walkable neighbourhood.
- ④ **Variety of open spaces**
Distributed throughout for improved access.
- ⑤ **George Street Pedestrian Boulevard**
20 metre wide north-south connector.
- ⑥ **Variety of built form**
Supports a diverse range of housing options.
- ⑦ **Social corners**
Supports diversity of open space and retention of trees

Fig. 3.2.102 Waterloo Estate Concept Plan Option



Waterloo Estate explored a variety of parks, community services, spaces and events, connected by fine grain pedestrian focused streets, building on the diversity that characterises Waterloo's natural, social and built environment



Fig. 3.2.103 View from Cope Street to Waterloo Station
Source: Tim Throsby (Illustrator), 2018



Fig. 3.2.104 View from George Street to Waterloo Green
Source: Tim Throsby (Illustrator), 2018

WATERLOO VILLAGE GREEN CONCEPT PLAN OPTION



KEY ELEMENTS

- ① **Centralised park**
Provides a village focused primary park.
- ② **Unique street grid**
Considers future urban growth and access to the metro station.
- ③ **George Street Pedestrian Boulevard**
20 - 25 metre wide north-south landscaped connector.
- ④ **Blue-green link**
Aligns desire lines to the metro station with landscaped environment.
- ⑤ **Unique lot structure**
Supports unique architectural responses and a diverse range of building types.
- ⑥ **Environmentally responsive built form**
Supports increased amenity.

Fig. 3.2.105 Waterloo Village Green Concept Plan Option



Waterloo Village Green explored the characteristics of connecting parks, community services, spaces and events through a continuous walkable 'blue-green' corridor that connects people to Waterloo's unique natural and cultural heritage

WATERLOO PARK CONCEPT PLAN OPTION



KEY ELEMENTS

- ① **Public park next to metro**
A 'green' arrival to Waterloo provides a recreational anchor for the Estate.
- ② **George Street Pedestrian Boulevard**
Provides a 30 metre wide north-south "green spine" that provides a series of parks.
- ③ **Courtyard style blocks**
- ④ **Publicly accessible courtyards**
- ⑤ **Through site link network**

Fig. 3.2.108 Waterloo Park Concept Plan Option



Waterloo Park explored the characteristics of centralising services and amenities around the primary park with a walkable 'green spine' connecting people to key community services, spaces and events



Fig. 3.2.106 View from Cope Street to Waterloo Station
Source: Tim Throsby, 2018



Fig. 3.2.107 View from the Metro Quarter to the Estate
Source: Tim Throsby, 2018



Fig. 3.2.109 View from Cope Street to Waterloo Station
Source: Tim Throsby, 2018



Fig. 3.2.110 View along George Street Pedestrian Boulevard
Source: Tim Throsby, 2018

W

3.2.7 OPTIONS TESTING

Key feedback and issues raised by the community and stakeholders on the options inform the masterplan response

Ongoing communication and engagement with social housing residents, private landowners, local stakeholder groups and the broader community throughout the planning process, and into delivery and operation of the Estate is key to the success of the renewal of Waterloo South. The Concept Plan Options went through an options testing phase of consultation with the community and stakeholders.

Consistent with the visioning process, the options were presented and feedback collated under the five themes of Culture and community life; Transport, streets and connections; Housing and neighbourhood design; Community facilities, services and shops; and, Environment and open space. The summary of feedback from the community and stakeholder sessions highlights the key considerations and formed the basis of the development of a Preferred Masterplan.

Feedback on the three renewal options was mixed, with participants identifying a number of elements of each of the options for consideration in preparation of a preferred master plan for the Waterloo Renewal rather than a single preferred option.

Environment and open space confirmed strong support for the masterplan to include **community gardens** at ground as well as rooftop gardens, to balance **retention of existing trees** with new ones, and provide **a range of community gathering spaces**. A **diversity of different types and sizes of open spaces** should be provided rather than fewer larger spaces, with at least one large space for community events. George Street should be a series of landscaped spaces, not just a thoroughfare, and the landscaped pedestrian links should be accessible and contribute to a **walkable neighbourhood**.

Transport, streets and connections confirmed strong support for making the Estate a **pedestrian priority precinct**, integrating **safe cycle routes**, with slow to shared streets and **safe, accessible and direct**, connections to local bus stops and the metro station, services and community facilities.

Housing and neighbourhood design confirmed strong support to incorporate **more spacious and better designed dwellings with balconies**, a better mix of types and sizes, and an **even distribution of social and private** dwellings across the Estate. Views were mixed on building heights with many preferring the option with a maximum of 32 storeys, some expressing limited support for 40 storeys or higher, and others who thought the number of buildings was a more important consideration than their heights. The common factor was that the **appropriate arrangement of any tall buildings must consider the amenity** of the public, communal and private open spaces, as well as the amenity of the dwellings themselves.

Community facilities, services and shops confirmed their high level of importance to **support existing and new residents**. The masterplan should **provide more opportunities** for learning, health and childcare, and community rooms, creative and multi-purpose spaces. There should be **a primary activity hub** clustering community facilities, services and shops in the vicinity of the Metro Quarter and provision for further community facilities, services and shops to be spread out across the Estate for **equitable access and opportunities for growth** with a growing community.

Culture and community life confirmed that **a wide range of public activity areas** should be included such as ground level community gardens, youth facilities, dog parks, play areas and space for entertainment and events. The masterplan should also incorporate opportunities to **recognise and celebrate Aboriginal culture and heritage**, and to provide facilities and places that support **knowledge sharing about Aboriginal culture**.

Refer to Appendix 7.2 for further information



Fig. 3.2.111 Options Testing
Source: 'Let's Talk Waterloo', Elton, 2018



ENVIRONMENT AND OPEN SPACE

- Incorporate **green space** wherever possible.
- **Equitable access to parks and open space areas** for residents living in different parts of the precinct, including the southern part of the Precinct.
- **Safe, pleasant and welcoming** - accessible and usable for people of all ages and abilities.
- Transform **George Street** into a green **Pedestrian Boulevard as a series of interconnected parks**.
- Support **pedestrian safety**.
- Consider capital and maintenance costs to ensure **development sustainability**.
- **Stormwater strategy** needs to consider reducing maintenance requirements for the city, providing for root zones of street trees, stormwater detention within larger open space and combining in-street strategies with augmentation of the trunk drainage.
- Locate community gardens where they will achieve 6 hours sunlight every day to meet City of Sydney policy.



Fig. 3.2.112 Options Testing



Fig. 3.2.113 Options Testing



Fig. 3.2.114 Options Testing



Fig. 3.2.115 Options Testing



TRANSPORT, STREETS AND CONNECTIONS

- Easy access to a range of **transport options**.
- **Safe and direct connections** to local bus stops and Waterloo Metro Station.
- Design pedestrian paths and cycle ways to provide **equitable access** and safety.
- Provide access for **emergency services and community transport services**.
- Address **traffic congestion**.
- Include innovative parking solutions like decoupled and unbundled spaces.
- Consider bicycle parking and end of trip facilities.
- Basement, servicing and parking strategy.
- Street parking.



HOUSING AND NEIGHBOURHOOD DESIGN

- **Mixed views on building heights** and types.
- More spacious and better designed apartments - **high quality homes** that meet the diverse needs of residents, respond to changing lifecycle needs, provide indoor and outdoor space, improved safety and security, and storage space.
- **Mixed views on the retention of the existing buildings** Matavai and Turanga.
- **Aboriginal affordable housing**.
- Consider water reduction strategies and passive design to reduce energy consumption.
- Tall buildings should be slender to reduce visual bulk and scale (for solar access) and strategies to mitigate wind.
- Address operation of publicly accessible courtyards - clearly define public and private uses.



COMMUNITY FACILITIES, SERVICES AND SHOPS

- **Recognise and celebrate Aboriginal culture** and heritage as intrinsic to the past, present and future of Waterloo as a place and community.
- Support **knowledge sharing** about Aboriginal culture among the broader local community and visitors to provide opportunities for **community learning, healing and pride**.
- **Bring people together** by supporting social interaction and provide opportunities for **learning, growth and leadership**.
- Provide **a range of educational facilities and programs** to meet the needs of existing and future residents.
- Enable residents to access employment and acquire the skills to run their own businesses through **employment assistance and small business support services**.
- Assist elderly residents to **age in place** through on-site aged care facility and age-related support services.
- **Health and wellness** facilities and programs.
- **Aboriginal employment and engagement**.



CULTURE AND COMMUNITY LIFE

- Waterloo should remain **an authentic place with its own character** and where current residents continue to enjoy a strong **sense of community and belonging**.
- Provide opportunities for people to meet and socialise and for it to continue to be **a welcoming place** for all members of the community.
- Include a range of spaces to **support community life** including places for residents to meet, socialise and gather for larger scale events.
- Community gardens, dog parks, **play areas for kids and activities for young people**.
- Tell the multiple stories of Waterloo to **connect the past and future** in Waterloo.
- Recognise and reflect **Aboriginal and multicultural stories**.
- Address how **placemaking** is integrated.



3.2.8 PREFERRED MASTERPLAN 2019

A mixed urban village of approx. 6,800 new, modern homes with a mix of 30% social (affordable rental) dwellings : 70% market dwellings.

The Preferred Masterplan 2019 distilled the strengths of each of the Concept Plan Options and, together with the feedback from the community and stakeholders, a set of key elements were developed to form the basis of the masterplan approach. Placemaking activities defined five sub-precincts based on their existing and future place characteristics.

Waterloo Gateway as the transitional area between Redfern and Waterloo that includes the prominent intersection of George Street and Phillip Street.

Metro Central centred around the metro station, Metro Quarter, Activity Centre Plaza, and Village Green, as a place for commercial and social exchange, being a primary activity centre with day to evening activation.

Maker Village as the area that retains evidence of its industrial past around Cope and McEvoy streets, with Waterloo Common at its centre, and connected to the Village Green by the George Street Pedestrian Boulevard.

Parkside Village interfaces with Redfern and Waterloo. It also interfaces with the Village Green and mediates the change in level between the Village Green and Pitt Street, which becomes more pronounced moving south.

Hilltop Village, characterised by its steep topography and its interface with Our Lady of Mt Carmel Church and School, Waterloo Park and Waterloo Oval.

KEY ELEMENTS

- ① **VILLAGE GREEN**
Supports community gatherings, events, recreation, productive landscape and water management
- ② **WATERLOO COMMON**
Provides open space for neighbourhood gathering, productive landscape, play and water management
- ③ **GEORGE STREET PEDESTRIAN BOULEVARD**
A 20 - 25m wide tree lined, landscaped pedestrian corridor connecting the community to key destinations
- ④ **WATERLOO METRO STATION**
Sydney Metro station
- ⑤ **GATEWAY PLAZA**
A welcoming threshold and community gathering space
- ⑥ **ACTIVITY CENTRE PLAZA**
A community hub plaza connecting the Metro Quarter and Village Green
- ⑦ **RETAIL AND SERVICES HUBS**
Provide a mix of local retail and services
- ⑧ **COMMUNITY HUBS**
Provide community gathering space and community services
- ⑨ **BLUE LINE**
A pedestrian connection between key destinations that reflects the local water story
- ⑩ **COMMUNITY GARDENS**
Provide productive opportunities for the community to grow and harvest produce
- ⑪ **ACTIVITY PLAY ZONES**
Provide opportunities for active uses including play space, picnic areas, fitness and youth zones
- ⑫ **ACCESSIBLE LOCAL MOVEMENT ROUTE**
Provides a route that connects key spaces, destinations and amenities that is safe and accessible for all ages and abilities

PREFERRED MASTERPLAN 2019

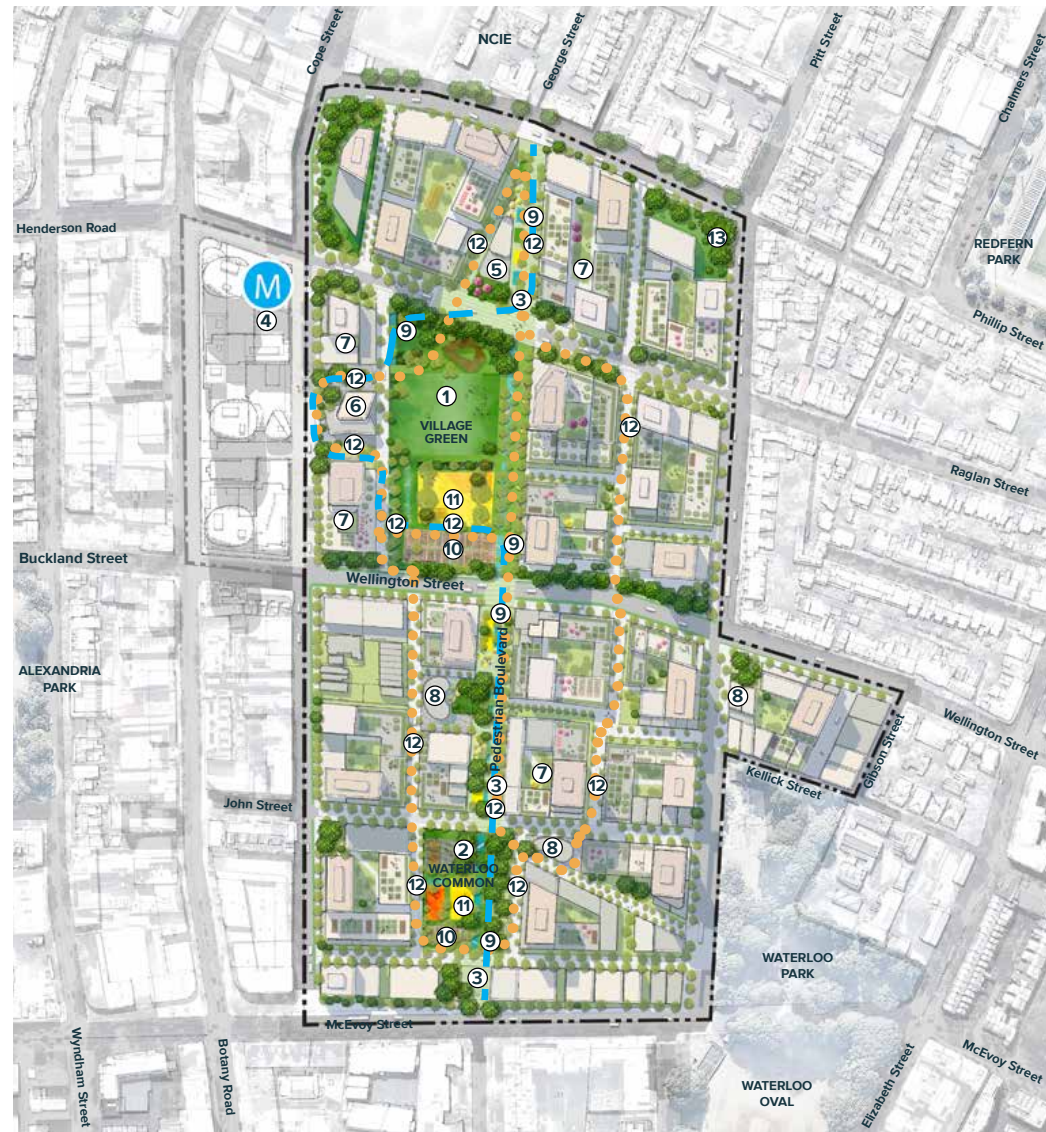


Fig. 3.2.116 The Preferred Masterplan 2019

3.2.9 CITY OF SYDNEY ALTERNATE PLAN

The alternate plan for the Estate proposed approximately 5,000 to 5,300 dwellings with a mix of 50% social : 20% affordable : 30% market dwellings.

The City of Sydney developed an Alternate Plan that was exhibited in March 2019. The Alternate Plan stated the following key principles:

Reduce community disruption.

Consider Aboriginal and Torres Strait housing.

Rescale the neighbourhood.

Reduce the need for excessive private dwellings.

Retention of existing towers & slab buildings.

Build upon the existing street grid.

Improve pedestrian connections.

Respect the existing green grid.

A larger signature park located next to the metro station.

CITY OF SYDNEY ALTERNATE PLAN



Fig. 3.2.117 City of Sydney Alternate Plan - March 2019
Source: City of Sydney, 2019





3.2.10 CONSULTATION WITH CITY OF SYDNEY

Key feedback and issues raised by the City of Sydney on the Preferred Masterplan informed the development of the Waterloo South Indicative Concept Proposal

Collaboration for shared planning outcomes

A collaborative approach to strategic planning is particularly important for precincts and corridors where 'placed based' strategies require a coordinated approach to ensure their delivery will align with the growth strategies for these areas. Effective collaboration must be underpinned by governance arrangements established in the early phases of planning to identify roles and responsibilities, resourcing, and accountability. Review processes to monitor and measure infrastructure delivery should also be put in place to ensure the collaboration process is transparent and effective. Such governance arrangements can provide greater certainty to the community that strategies and plans can be delivered within time-frames and budgets, be optimally managed into the long term, and achieve desired outcomes for industry and the community.

The Preferred Plan underwent a consultative collaborative phase with the City of Sydney to agree on a way forward. Feedback on the Preferred Masterplan identified a number of elements for consideration based on the key principles stated within the City of Sydney Alternate Plan:

Reduce community disruption

To allow all residents the opportunity to return to the Estate to maintain community cohesion. This can be better achieved through a reduction in typical building size and careful staging.

Consider Aboriginal and Torres Strait housing

Work with the various communities so that a significant and specific proportion of the social (affordable rental) housing is designated for the Aboriginal and Torres Strait Islander community

Rescale the neighbourhood

The majority of dwellings will be in buildings of comparable height and floor plate.

Reduce the need for private dwellings

Reduce the need for new' buildings by retaining, refurbishing and updating existing tower and slab buildings within the Estate.

Build upon the existing street grid

Reinforcing the existing street grid helps to define this locality by maintaining good accessibility with high legibility.

Improve pedestrian connections

The large blocks in the north should be broken down with safe through-site links for improved pedestrian permeability. George Street and its trees should be maintained for residential access.

Respect the existing green grid

It should aim to target 35per cent large trees, 10 per cent civic scale trees; with no more than 40per cent in any one family, 30 per cent in any one genius and 10 per cent in any one species for diversity and resilience. Thirty per cent of the area is City of Sydney road reserve currently providing 38 per cent of the canopy coverage (356 trees). The green grid should extend beyond the site along footpath and cycle connections.

Provide a large signature park next to the future metro station

Consolidate the small and large parks into a single park.

Preferred park location

The preferred park position would be bounded by Cope Street, Raglan, George and Wellington Streets and would involve the closing of Cooper Street.

Key outcomes from this process centred on agreement on the following:

- **Lower built form (up to 32 storeys)**
- **Larger central park**
- **Wider streets**
- **Tree retention targets**
- **Possible retention of slab and tower buildings**
- **No reduction in existing street widths**
- **George Street to remain in its current configuration in the short term with a process to move towards pedestrian prioritisation in the future.**
- **Regional cycle path to remain along George Street**
- **Location of large park adjacent to the Waterloo Metro Station**
- **Clarified definition of solar access to parks to be a fixed location**
- **A secondary park located to the south of the Estate for more equitable access**
- **Renewal of the Estate to be in three stages, with Waterloo South delivered first ahead of Waterloo Central and Waterloo North**

ALIGNMENT CONSIDERATIONS

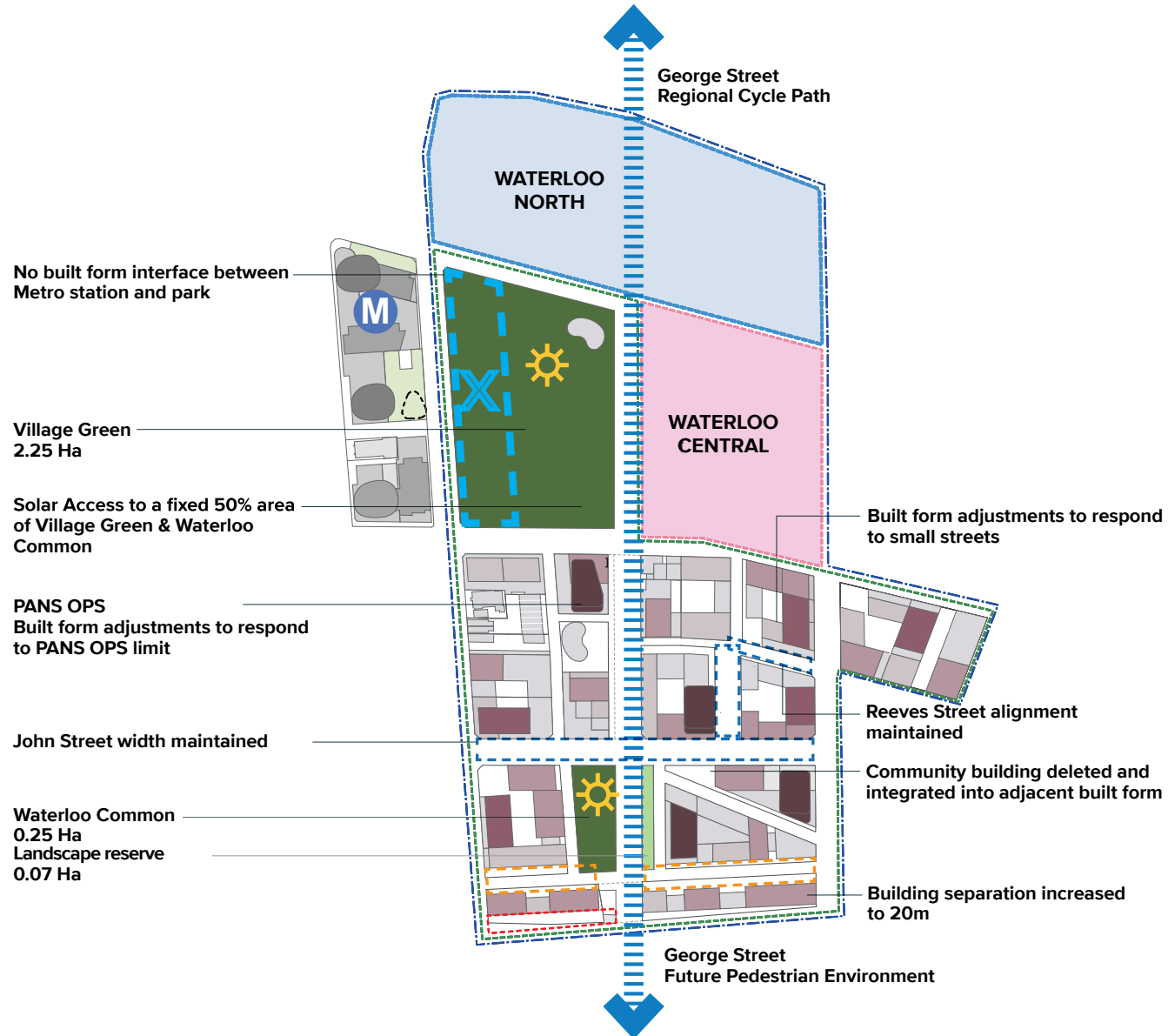


Fig. 3.2.118 Summary of Considerations



3.2.11 KIT OF PARTS (NON-RESIDENTIAL USES)

Providing supporting land uses, with a mix of uses that includes retail, social infrastructure, entertainment and businesses will be important to create vibrancy

Planning for non-residential uses for Waterloo South needs to consider the diverse needs of the existing community, and the changing characteristics of the community over time as the renewal progresses. The mix of retail, services and community uses needs to cater to the diverse local community, which consists of social housing tenants, young professionals, students and other workers, of Aboriginal and non-Aboriginal background. The kit of parts of non-residential uses has been developed throughout the masterplan process with consideration to:

- Existing community needs
- Vision and objectives for the Precinct
- The needs of the future community
- Benchmarking against the offerings at other high density residential locations across Sydney (that includes Potts Point/Macleay Street and Wolli Creek)

The retail and ancillary non-retail offer is based on meeting the needs of local residents and workers; both existing and future; and also to draw people in from across the broader region through uses that activate the Estate in the evenings and on weekends, with the future Waterloo Metro Station facilitating movements for 18 hours a day.

Community and cultural facilities will need to be flexible, and planned in partnership with local service providers who understand the needs of the local communities. This includes co-locating facilities to ensure they are well-located close to public transport and other facilities. Ongoing consultation with service providers will confirm the capacity of existing services and facilities to meet the needs of existing and future residents, including private and social housing residents.

Refer to Appendix 7.4 for further information



Fig. 3.2.119
Source: <https://esperancetide.com>, 2019



Fig. 3.2.120
Source: <https://www.firstchoicebb.com.au>, 2019



Fig. 3.2.121
Source: <http://www.thecommune.co>, 2019



Fig. 3.2.122 "It's possible to love a bank"
Source: www.marketingmag.com.au



Fig. 3.2.123
Source: LAHC, 2018



Fig. 3.2.124 Storytime
Source: <https://www.probuild.com.au>, 2019



Fig. 3.2.125
Source: <https://dynamic.architecture.com.au>



Fig. 3.2.126 Bike repair workshop
Source: LAHC, 2018



Fig. 3.2.127
Source: LAHC, 2018



Fig. 3.2.128
Source: <https://injalak.com>, 2019



Fig. 3.2.129 Easter egg painting
Source: Turner, 2019



Fig. 3.2.130
Source: <https://www.mycph.com.au>, 2019



Fig. 3.2.131 Rock climbing
Source: LAHC, 2018



Fig. 3.2.132
Source: <https://cityofsydney.nsw.gov.au>, 2019

3.2.12 FEATURES

Through the options development and testing, a range of key features for the Indicative Concept Proposal emerged that were integral to the renewal of Waterloo South into a great urban place. These are:



Fig. 3.2.133

A distinctly Waterloo public domain with a strong local character and community belonging.



Fig. 3.2.134

Integral Aboriginal culture and placemaking.



Fig. 3.2.135

A highly connected active transport hub.



Fig. 3.2.136

A pedestrian priority walkable precinct.



Fig. 3.2.137

Accessible and inclusive green environment and hierarchy of open spaces.



Fig. 3.2.138

Gathering areas and communal spaces supporting social connectedness.



Fig. 3.2.139

A high performing and activation ready public domain and non-residential uses.



Fig. 3.2.140

An accessible range of local community facilities, services and retail to meet everyday needs.



Fig. 3.2.141

Accessible jobs and educational opportunities.



Fig. 3.2.142

A mix and choice of tenure blind social, affordable and private dwellings.



Fig. 3.2.143

User and contextual responses to built form.



Fig. 3.2.144

Blue line



Fig. 4.01 Indicative CGI: Cope Street facing north, Waterloo Village Green pavilion
Source: Virtual Ideas, 2020

4.0 FRAMEWORK

PLANNING PROPOSAL REQUIREMENT

The built form should be developed in line with the design process described in the NSW Government Architect Better Placed strategy.

A precinct plan that integrates:

- Public domain
- Infrastructure
- Staging
- Building types
- Height distribution and massing

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.

SSP STUDY REQUIREMENT

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.
- 2.11 Demonstrate how the urban design principles have informed the allocation and location of proposed land uses.
Integrate the public domain plan identifying proposed public park, square and streets and pedestrian/cycle paths.
- 2.17 Integrate the findings of other parts of this study and demonstrate how these have shaped the Public Domain Plan and the building typologies to meet their requirements. In particular, how the design of building types respond to ESD, wind, flooding, noise and pollution issues.

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
- 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.
- 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.
- 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.

ADDRESSED IN

Urban Design Report
Appendix 7.10
Chapter 4.0 - 6.0
Appendix 7.3
Appendix 7.4
Appendix 7.8
Appendix 7.5
Chapter 6.2
Chapter 4.0
Chapter 6.0
Appendix 7.3

ADDRESSED IN

Chapter 4.0 - 6.0
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Appendix 7.5
Appendix 7.7
Appendix 7.8
Chapter 4.0 - 6.0
Appendix 7.4
Chapter 4.0 - 6.0
Appendix 7.3
Chapter 4.0 - 6.0
Appendix 7.3
Appendix 7.5

Chapter 4.0
Chapter 6.0
Appendix 7.3
Appendix 7.2.1

Chapter 4.0
Chapter 6.0
Appendix 7.3

Chapter 4.0 - 6.0
Appendix 7.3

Chapter 4.0 - 6.0
Appendix 7.3

An urban village which respects the character of Waterloo, connects people to nature and enhances access to amenities, services and transport

This chapter describes the Waterloo South Indicative Concept Proposal; An urban village which respects the character of Waterloo, connects people to nature and enhances access to amenities, services and transport. It illustrates the central features of the masterplan that respond to the vision and objectives and key design insights from the baseline and context analysis, their placemaking and place performance potential, and the incorporation of feedback from the community and stakeholder engagement processes and options testing as key design drivers.

The public domain, open space, urban and built form elements that define the physical character of the masterplan are also outlined. These illustrate the physical framework and layers of the masterplan, with the public domain, open space and landscaped elements shaping the built form response, all of which were uniquely derived through the masterplan process.

The Waterloo South Indicative Concept Proposal aligns with state and local government policies and strategies to locate Sydney's growing population close to active transport options, combined with employment opportunities, housing choice and access to services, amenities and open space. The balanced and evidence based approach to developing the vision, objectives, insights, principles, measures, frameworks and drivers has also resulted in a masterplan that is uniquely Waterloo, that recognises and celebrates the history and many layers of the people and place, that builds upon the attributes that makes the Estate unique and retains the qualities and characteristics that will make it a distinctive, welcoming and authentic place that will evolve over the life of the masterplan.



WATERLOO SOUTH

17,900m²
RETAIL, SERVICES &
COMMUNITY

3,048
DWELLINGS

LEGEND

- ① **VILLAGE GREEN**
Supports community gatherings, events, recreation, productive landscape and water management
- ② **WATERLOO COMMON**
Provides open space for neighbourhood gathering, productive landscape, play and water management
- ③ **GEORGE STREET ACTIVE SPINE**
A 20 - 25m wide tree lined, landscaped movement corridor connecting the community to key destinations
- ④ **WATERLOO METRO STATION**
Sydney Metro station
- ⑤ **RETAIL AND SERVICES HUBS**
Provide a mix of local retail and services
- ⑥ **COMMUNITY HUBS**
Provide community gathering space and community services
- ⑦ **BLUE LINE** — — — —
A pedestrian connection between key destinations that reflects the local water story
- ⑧ **COMMUNITY GARDENS**
Provide productive opportunities for the community to grow and harvest produce
- ⑨ **ACTIVITY PLAY ZONES**
Provide opportunities for active uses including play space, picnic areas, fitness and youth zones
- ⑩ **ACCESSIBLE LOCAL MOVEMENT ROUTE** ● ● ● ● ●
Provides a route that connects key spaces, destinations and amenities that is safe and accessible for all ages and abilities

INDICATIVE CONCEPT PROPOSAL



Fig. 4.11 Waterloo South Indicative Concept Proposal



4.1 MASTERPLAN FRAMEWORK

An urban village which respects the character of Waterloo, connects people to nature and enhances access to amenities, services and transport

The vision for Waterloo South creates a distinctive urban village that connects the community to nature and Greater Sydney. The Waterloo South Indicative Concept Proposal recognises, retains and builds upon Waterloo's heritage and existing identity. Key design drivers have informed the urban design and public domain response to create three sub-precinct character areas that respond to the surrounding neighbourhood, with distinct characteristics and experiences.

SHARED COMMUNITY

Waterloo has a strong and resilient community bonded through common experience. To build upon this strength, the public domain and built form provides for a variety and mix of uses to support social interaction at different scales. A mix of community, services and shops responds to local everyday needs and supports social connectedness. The public domain will be supported by local programs that responds to the existing and future community's needs. The tenure blind mixed community and productive landscapes support affordable living.

A variety of spaces facilitate the social life of the community and the needs of old and young. Key elements are two new public open spaces, the Village Green and Waterloo Common. The north-south George Street alignment will be renewed into an Activity Street to connect the Estate. Urban plazas provide community anchors to each sub-precinct character area, and social corners promote more intimate social interactions. An accessible local movement route (ALMR) provides safe connections to promote active transport modes.



Fig. 4.12 Waterloo Common water play and plaza
Source: Virtual Ideas, 2020

LIVING CULTURE

The vision for Waterloo South reflects and builds upon the diverse cultural identity and Indigenous heritage to connect past, present and future Waterloo. This is recognised by the inclusion of edible landscapes in the public domain, multi-cultural community gardens, the provision of services that respond to the existing and future community's needs, and a place based public art strategy for Waterloo South that reflects the diverse contemporary culture. The location of services and facilities will be refined through an on-going commitment to working with the community in further shaping the spaces and services.



Fig. 4.13 'Big Roof' within Village Green
Source: Virtual Ideas, 2020

BLUE / GREEN

Blue / Green connects to the cultural significance of the traditional landscape and provides the opportunity to re-interpret the qualities of Waterloo into the future public domain. A network of landscaped open spaces that include public spaces, publicly accessible private space and private communal space connects people to nature. The finer grain green streets and pedestrian network supports the open space network and urban forest, and promotes health and well being, by providing access to green amenity and connection to nature through natural materials and forms. The Blue Line connects to the cultural significance of water by weaving the water story into the public domain through water play, water sensitive urban design (WSUD) and bio-filtration strategies that visibly celebrate water and provide a cultural interpretation through the public domain. The integration of biophilic principles will connect people to nature.



Fig. 4.14 WSUD
Source: Virtual Ideas, 2020

KEEP IT LOCAL

Waterloo's heritage as a productive place, a productive landscape for the Aboriginal people and post settlement as a place of industry and a maker and creative area, is reflected through the fine grained urban character. A mix of building frontages provide for a diversity of active uses at street level. The retention and adaptive re-use of existing heritage buildings and items of significance retain and build on the existing street character. With an overarching ethos of 'keeping it local', the character sub-precinct character areas stitch Waterloo South into the surrounding community.



Fig. 4.15 Waterloo Common community garden
Source: Virtual Ideas, 2020

URBANITY

A mix of housing and neighbourhood character areas reflects the diverse community and provides housing choice. The urban and built form enables these uses through building types and heights that support different types and scales of use. Adaptable basement, ground and first floor levels will enable the sustainable evolution of the ground plane to non-residential uses to meet the needs of the growing community. As Waterloo South is renewed, retaining the existing local character will be important. The offering must be intensified, including transport, open space, and mix of uses. Providing supporting land uses (such as retail, social infrastructure, entertainment and businesses) will create vibrancy.



Fig. 4.16 Local shops at Waterloo South
Source: Virtual Ideas, 2020



Fig. 4.2.1 Indicative CGI: George Street pocket park
Source: Virtual Ideas, 2020

4.2 MASTERPLAN STRUCTURE

- 4.2.1 Environment and Open Space
- 4.2.2 Transport, Streets and Connectivity
- 4.2.3 Housing and Neighbourhood Design
- 4.2.4 Community Facilities, Services and Shops
- 4.2.5 Culture and Community Life

“Cities have the capability of providing something for everybody, only because, and only when, they are created by everybody”

Jane Jacobs*

—

This section illustrates the key elements of the masterplan under the five thematic layers that were identified by the community and stakeholders as critical to ensuring that the masterplan will deliver a great urban place.

The underlying framework for the masterplan is the size and location of the main public open spaces, the Village Green and Waterloo Common, and the secondary open space network of pocket parks, social corners and landscaped setbacks, all of which support the retention of the tree canopy and provide locations for its replenishment, which will enhance Waterloo South's landscape character.

Waterloo will become a distinct urban village experience which connects people to each other, to nature and the greater city of Sydney. With the Metro Station on Waterloo's doorstep, an active transport hub surrounding the Metro Quarter will facilitate the regional gateway and provide a central location for retail, community services and community spaces.

With a large Village Green and Waterloo Common positioned along the George Street activity street and within a pedestrian priority precinct, public open space will be accessible to the community and support community gathering and a range of active and passive uses.

The green public domain will celebrate the layered natural and cultural history of Waterloo and its proud community. From the Waterloo wetlands, to the history of industry and innovation, to the lofty trees, the diversity of cultural backgrounds and the networks between neighbours, the stories and community voice will be shared and act as a link through the community.

A liveable and mixed community will be supported by local retail and community services and facilities including a variety of housing choices and building typologies. Active streets and small neighbourhood areas which reflect community character and responses to place support the daily life of the community.



4.2.1 ENVIRONMENT AND OPEN SPACE

Strengthening community and highlighting Waterloo's unique and resilient characteristics by creating an active, welcoming and safe environment

Waterloo South's public domain framework and strategy draws upon its existing significant and unique features to create an active, safe, adaptive and resilient public domain. This will promote community interaction and enable flexibility of use, catering to the diverse needs and lifestyles of the Estate's existing and future community.

Contributing to the existing network of open spaces, two new local parks provide distributed and equitable open space in the north and south of Waterloo South. Public open spaces are supported by a diverse range of open space typologies that include urban plazas, pocket parks, social corners, publicly accessible private spaces and private communal spaces.

Productive landscape opportunities are maximised throughout Waterloo South both within the public and private domain. This includes community gardens provided within the two local parks that cater for community members, irrespective where they reside, and promote social interactions at a community level.

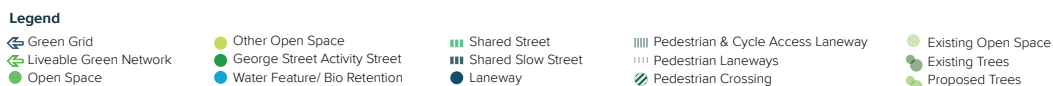
Smaller community gardens are provided within private communal space both at ground and roof levels that serve and promote social interactions between residents. Edible landscape and bush tucker will be provided throughout the public and private domain as a resource for the community and connection back to Indigenous land management practices.

Water sensitive urban design (WSUD), water play and detention under the two new parks celebrates the historical and cultural significance of water. It provides a public domain with an ecological and sustainable response that aligns with regional and local strategies set by the NSW Government and the City of Sydney.

Refer to Appendix 7.3 for further information



Fig. 4.2.2 Environment and Open Space



PRIMARY PARKS

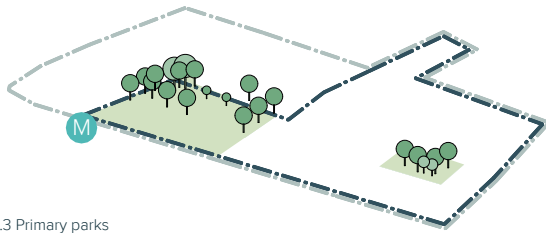


Fig. 4.2.3 Primary parks

Two key defining open spaces for Waterloo - the Village Green and Waterloo Common - provide an equitable distribution across Waterloo South

The two major parks within the Estate are the Village Green and Waterloo Common. Both parks offer active and passive spaces for the community. The tree-lined spaces are connected to one another via the George Street activity street. 2.5 hectares of public open space are provided in these two parks, with an additional 0.07 hectares of landscaped open space next to Waterloo Common to retain existing trees.

URBAN FOREST STRATEGY

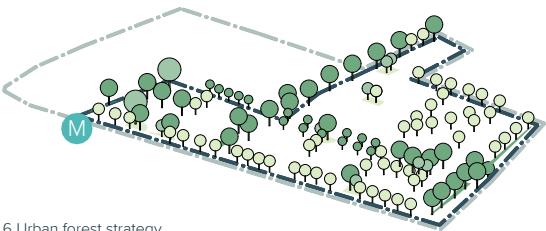


Fig. 4.2.6 Urban forest strategy

Building upon the City of Sydney's urban forest strategy, Waterloo South will provide a mature canopy that will provide shade and greenery to a target 30 percent of the total area of Waterloo South

The canopy cover will provide respite from the heat of the summer sun and will shade the streets across Waterloo South to reduce the effects of the urban heat island effect. A 3 : 1 replacement ratio for every high and moderate value tree will target 30 percent canopy cover, with 50% trees within the public domain. The types and diversity of species provided support flora and fauna and productivity through edible species. Bush tucker species will connect back to Indigenous culture.

PRODUCTIVE LANDSCAPES



Fig. 4.2.4 Productive landscapes

Respecting the area's history as a productive landscape, edible planting and a range of community gardens are provided at different scales to promote social interaction among residents

The hierarchy of productive landscape includes community gardens provided in the Village Green and Waterloo Commons for the wider community and communal gardens, private food gardens and rooftop gardens within development lots for residential community within blocks. Thirty percent of the landscape will be provided as edible landscape both within the public and private domain.

TREE LINED VIEW CORRIDORS

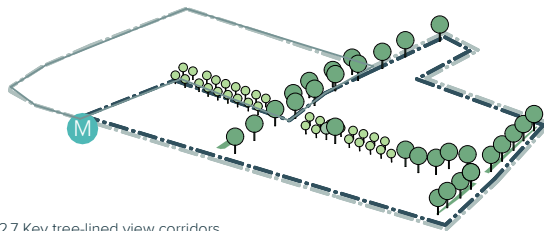


Fig. 4.2.7 Key tree-lined view corridors

Key tree lines along major view corridors are retained and enhanced through landscape setbacks that retain significant tree groupings

Landscape setbacks are provided for the retention of significant tree lines located along major view corridors in Wellington, Cope and George streets. The key tree lines along Raglan, Wellington and George streets as a group provide scale, canopy and amenity.

BLUE LINE

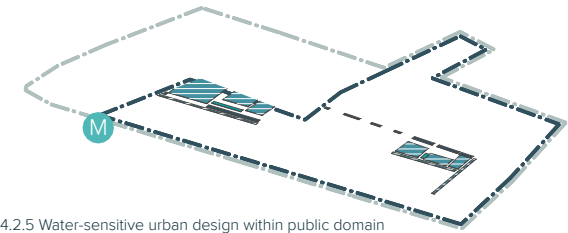


Fig. 4.2.5 Water-sensitive urban design within public domain

The cultural significance of water is celebrated through integrated water management that is embedded as part of the public domain through WSUD, water play and detention under the two local parks

Integrated water management will weave the site's water story. Technical flood management, WSUD strategies and play and learning features or elements will be integrated and provide interpretation of the Indigenous cultural significance of water, as a gathering place and a place for food and resources.

TREE RETENTION ZONES



Fig. 4.2.8 Tree retention zones.

Significant tree clusters are retained through tree retention zones for medium and high value trees within development lots that balance flexibility for a range of architectural responses

Tree retention zones are provided for the retention of significant individual trees as well as clusters of trees located at the interface of the public and private domain. Significant fig groupings are located at key corners within Waterloo South and contribute significantly to the canopy cover.



4.2.2 TRANSPORT, STREETS AND CONNECTIONS

Establishing the Estate as a pedestrian priority precinct, Waterloo Station will connect the community to Greater Sydney, and the Metro Quarter active transport hub will provide retail, community services and facilities

Waterloo South will support a connected community, with ease of movement for pedestrians of all ages and abilities, cyclists and those using public transport. The present pedestrian network limits efficient connections between key locations within the Estate and Greater Sydney through topographical and traffic challenges. With a renewed movement strategy, Waterloo South will become a pedestrian priority precinct. This will be through the adaptation of key movement networks (pedestrian, public transport and cycle) alongside considered locations for, and rates for car parking, an accessible movement route, and implementation of safe design principles.

The pedestrian and cycle network will bring activation to Waterloo's streets. Movement will be simplified and includes an Accessible Local Movement Route. This route has been designed to offer clear, safe and accessible connections, to all key destinations and activation hubs across Waterloo South, for all people of all ages and abilities. New shared slow streets, pedestrianised laneways and widened footpaths, will significantly improve active transport connections. The existing cycleway along George Street will be retained.

The existing public transport and cycle network will be strengthened by additions to the street grid and increased street functionality. Currently the main public transport service to the Estate is the Sydney bus network. The pedestrian connections towards these stops could be improved. With strengthened street connections, and the introduction of the Waterloo Metro Station, the connections between active transport modes, including cycling and walking, will be greatly improved. The future metro station is critical to Waterloo becoming part of the 30 minute city, as well as being an activity centre and hub for services itself. This is a primary consideration in the layout of key open spaces, connections and uses throughout Waterloo South.

Refer to Appendix 7.3 for further information

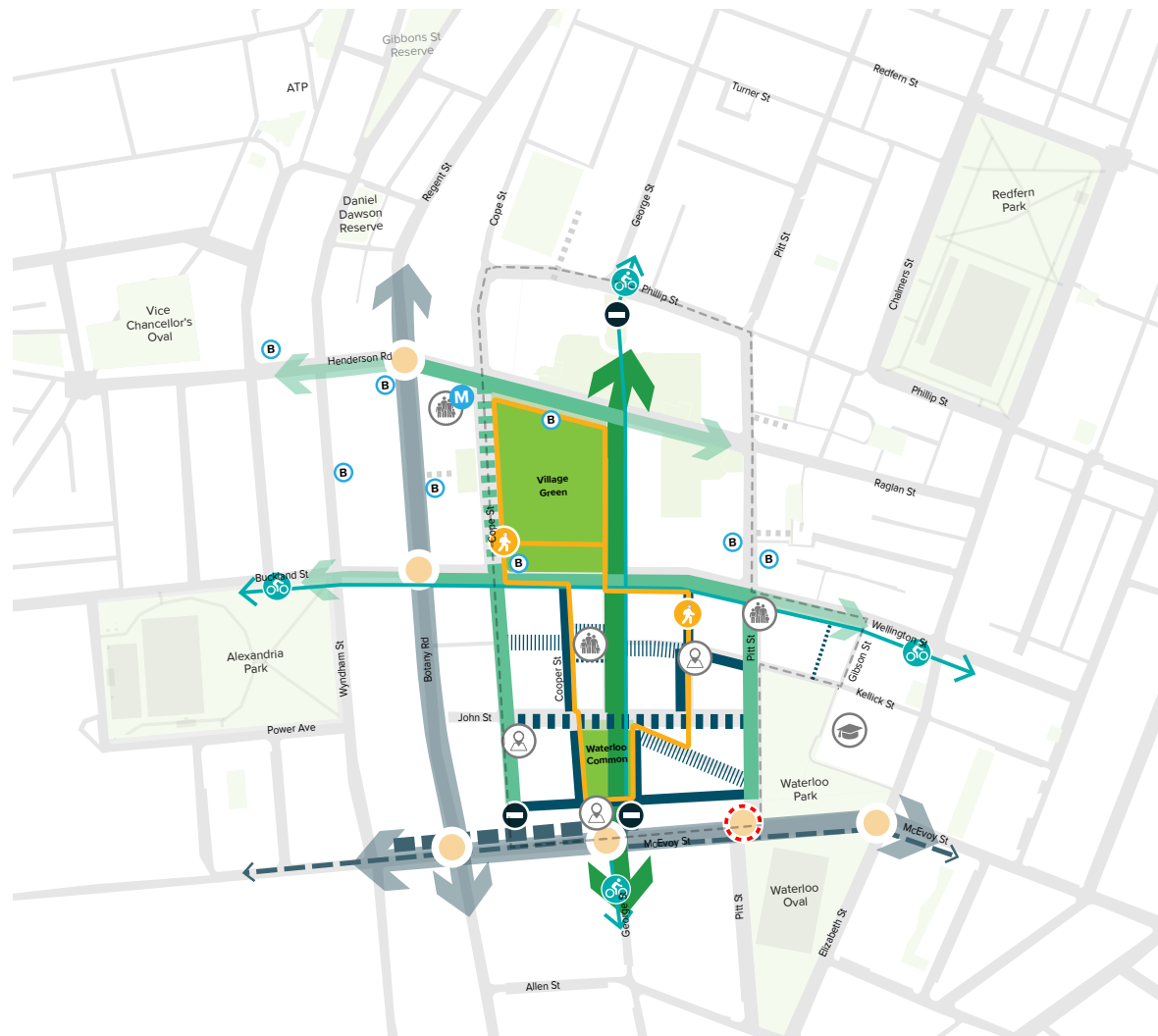
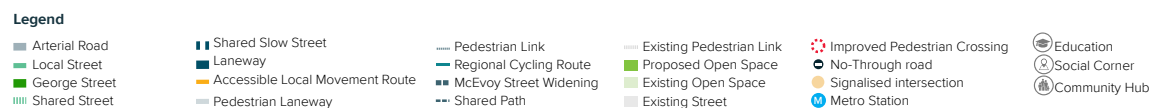


Fig. 4.2.9 Transport, street and connections



PEDESTRIAN PRIORITY PRECINCT

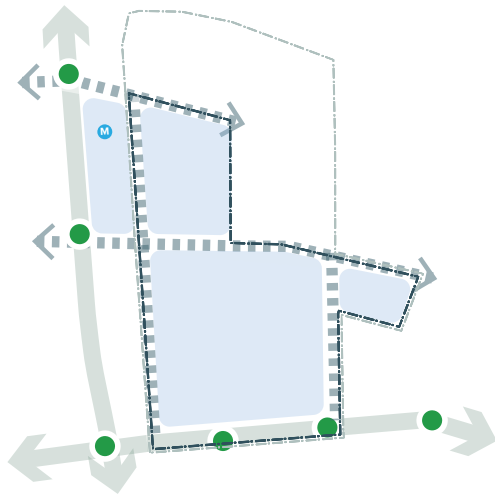


Fig. 4.2.10 Pedestrian priority precinct

- Legend**
- Pedestrian Priority Zone
 - Local Streets
 - Signalised Intersection
 - Waterloo Station
 - Arterial Road

Re-establishing Waterloo’s streets as places for people, to provide a walkable urban place with 82 percent of Waterloo South’s streets as slow streets

The fine grain street network and hierarchy has been developed with local streets, shared slow streets and laneways. Streets across Waterloo South will function at reduced speed levels, ranging from pedestrian only traffic to a maximum of 40 kilometres per hour along existing local streets.

The connected street network focuses on re-establishing the fine grain nature of Waterloo, providing safe and accessible corridors into residential areas of Waterloo South. With wider footpaths, shared paths, and increases in signalised and marked crossings, the ease of access for all people will be vastly improved. The clarity, safety and diversity of movement offered will promote and encourage active transport modes and connectivity.

ACCESSIBLE LOCAL MOVEMENT ROUTE

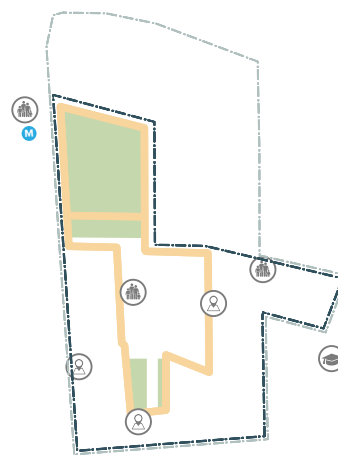


Fig. 4.2.11 Accessible local movement route

- Accessible local movement route
- Major Public Open Space
- Waterloo Station
- Educational Building
- Community Hub
- Social Corner

A place that is equal for all, with safe and accessible movement throughout the Estate

The Accessible Local Movement Route (ALMR) provides a safe and accessible walking and cycling route for all ages that connects key public spaces, destinations and amenities. The ALMR will facilitate an active community, encouraging movement and providing walkability throughout Waterloo South.

The ALMR will be characterised by clear wayfinding strategies, amenity stations, safe lighting, sun and shade, connection to key places (including the Metro Quarter, major parks and community buildings), public art and interpretation and ground level activation.

CYCLE NETWORK

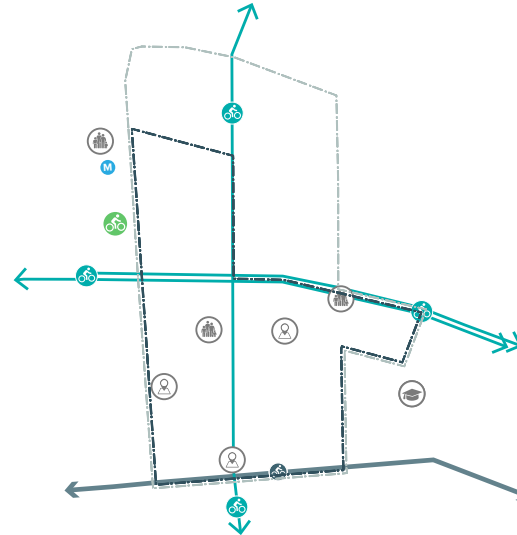


Fig. 4.2.12 Cycle network

- Dedicated Cycle Routes
- Shared Cycle Routes
- Sydney Park to Centennial Park
- Cycle Storage Location
- Metro Cycle Storage
- Pedestrian Movement Zone
- Waterloo Station
- Educational Building
- Community Hub
- Social Corner

As a pedestrian priority precinct, cycle safety will be greatly increased, promoting a well connected and cycle friendly environment

All cycle paths will be part of the shared pathway network. Separated cycleways, pedestrian priority streets, and bicycle storage areas (short and long term) will encourage and promote active transport modes. With the improvements to George Street the north-south regional cycle route will be retained and provide direct access to the future Waterloo Metro Station along Raglan and Wellington streets.

PUBLIC TRANSPORT NETWORK

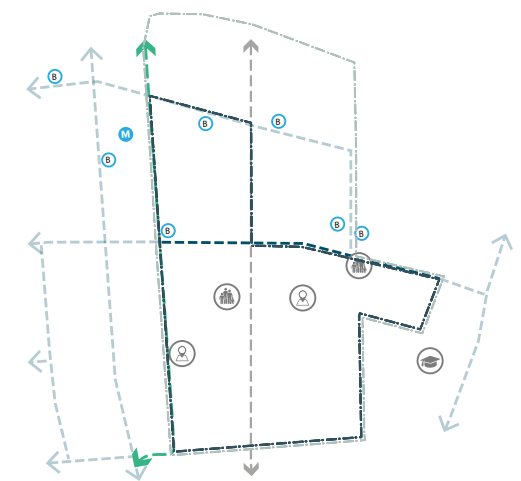


Fig. 4.2.13 Public transport network

- Bus route (outside Estate)
- Train alignment
- Metro alignment
- Bus Stop
- Waterloo Station

A connected community, both locally and regionally

The Metro Quarter will be an important activity centre, connecting the Estate to the Greater Sydney area. Botany Road bus services will connect Central Sydney, Green Square and Redfern, from north to south, to the Estate and the Waterloo Metro Station. Bus routes east and west along Raglan and Wellington streets, with the inclusion of new stops, provides good bus connections to and from the adjacent areas of Waterloo and Alexandria.

The future Waterloo Metro Station will connect the Estate to key destinations within Greater Sydney, within 30 minutes of travel. These include Central Sydney, Chatswood to the north, Hurstville to the south and Parramatta to the west.



4.2.3 COMMUNITY FACILITIES, SERVICES AND SHOPS

Local retail, community services and facilities support a mixed community. Active streets and character areas create a liveable local neighbourhood that reflects the strong, resilient community

In order to renew Waterloo South into a complete neighbourhood that promotes a variety of social interactions the land use strategy focuses activity and social interaction along key routes. It connects key destinations and encourages the community to engage with and experience the public domain through active transport modes. The retail vision and strategy for Waterloo South weaves together what residents, workers and visitors will experience as a place of connection and quality, providing the foundation for a sustainable community.

A mixed use zoning across Waterloo South allows for flexibility of uses over time to support a high performing and activation ready public domain. The future metro station will provide access to jobs, education and learning opportunities. Community facilities, services and the retail offer will balance convenience and neighbourhood character to meet the everyday needs of the existing and future community.

The opportunity at Waterloo South is the bringing together of people of different ages, means and cultures in a tolerant and universally enriching community. At its core it will be a place for people to connect where people truly want to spend time. The non-retail uses balance Waterloo's local neighbourhood qualities and character through a distinctive retail high street that supports the Metro Quarter's activity centre that prioritises convenience. Retail and community uses associated with public domain spaces create community hubs that are dispersed throughout Waterloo South. Non-residential uses along the key connections through Waterloo South - the George Street activity street and the Blue Line - provide an activated connection between community hubs and the anchor supermarket to the south, locating 80 percent of daily needs within 200m of building entries.

Adaptable basement, ground and first floors allow for the sustainable growth and evolution of Waterloo South's ground plane to non-residential uses to respond to the increasing amenity needs of the growing community. This will support connection over time to neighbouring activity centres and future development along Botany Road, in Green Square and Redfern. **Refer to Appendix 7.4 for further information**



Fig. 4.2.14 Community facilities, services and shops

- Legend**
- Retail Corridor
 - Activity Centre
 - Community Hub
 - Existing Community Facilities
 - Community Facilities
 - Retail & Commercial
 - Park
 - Existing Open Space
 - George Street Activity Street
 - Metro Station
 - Education



HIERARCHY OF CENTRES AND HUBS

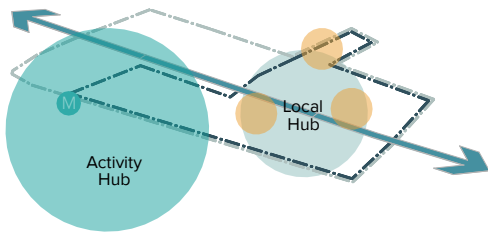


Fig. 4.2.15 Neighbourhood and local hubs of activities

- Legend**
- Waterloo Estate
 - Waterloo South
 - M Waterloo Metro Station
 - Activity hub
 - Local hub
 - Community Hub

A hierarchy of activity hubs within Waterloo South supports social interactions at various levels - neighbourhood, local and street

The Metro Quarter neighbourhood scale activity hub focused around the future Metro Station along Cope Street is supported by the George Street activity street - a local scale retail high street with a supermarket anchor.

The activity hub and spine are supported by small scale retail and community space located next to community anchors, pocket parks and social corners to support local social interactions. The scale of activity hubs respond to the sub precinct character areas to provide for a broad range of community and social interactions that are distributed across Waterloo South for equitable access and choice.

SHOPS AND SERVICES

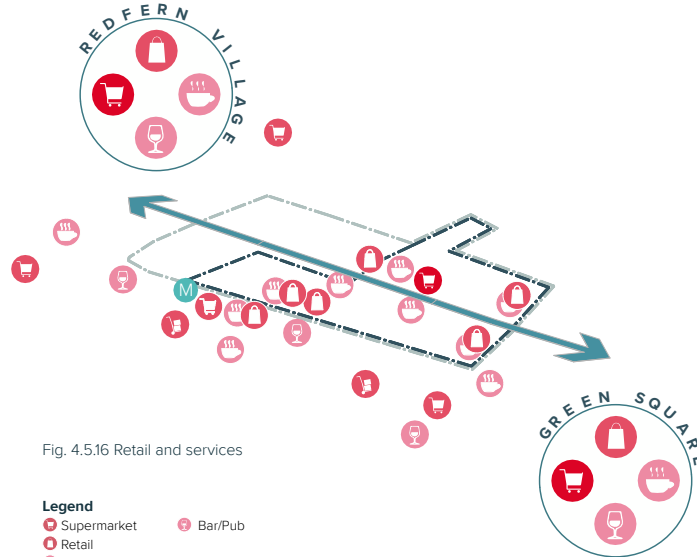


Fig. 4.5.16 Retail and services

- Legend**
- Supermarket
 - Retail
 - F&B
 - Bar/Pub

Retail and services are connected directly to the future metro station by the new Blue Line that weaves the water story and associated public amenity through Waterloo South

Retail, community and cultural uses are distributed throughout Waterloo South along the Blue Line that provides direct connection from the future metro station, to the key places in Waterloo South, and onwards to the surrounding areas.

The distribution of local retail and services throughout Waterloo South provides equitable access to, and responds to the needs of, the community. A broad mix of frontage widths support diversity of scale and affordability.

SOCIAL AND COMMUNITY FACILITIES

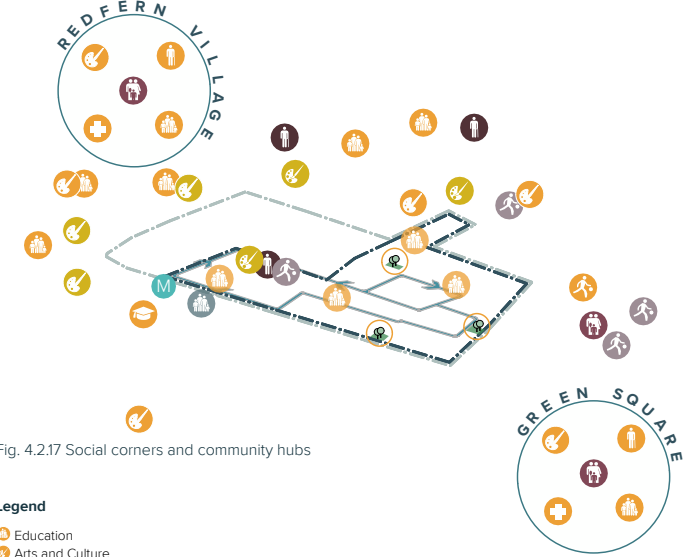


Fig. 4.2.17 Social corners and community hubs

- Legend**
- Education
 - Arts and Culture
 - Youth Community Facilities
 - Social Corner
 - Medical
 - Community Facilities

An Accessible Local Movement Route provides safe, accessible and attractive connection that links social, community and cultural facilities

Key community buildings within each sub-precinct provide a community focus or anchor, and are co-located with larger open space typologies to provide for active and passive uses, and to support a range of social interactions.

In addition to the main community hubs, community uses associated with smaller open space typologies - pocket parks and social corners - provide for more intimate interactions. The Accessible Local Movement Route provides a safe, attractive and well-designed connection between these facilities (and amenities).



4.2.4 HOUSING AND NEIGHBOURHOOD DESIGN

A mixed community is provided in a variety of building typologies. Vertical neighbourhoods place more residents closer to nature and provide a liveable and distinct private domain to balance social life in the public domain

Waterloo South will provide approximately 3,048 new tenure blind dwellings in an urban village of mixed social (affordable rental) and private dwellings. This is supported by a mix of non-residential uses that responds to the needs of the existing and future community. 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.

The framework for Waterloo South creates three distinct sub precinct areas, each with an identifiable place character, that retains and builds on the strengths of the surrounding neighbourhood.

The Village Green's location next to the Metro Quarter and Waterloo Metro Station reinforces its role as a neighbourhood activity centre with a civic character by providing 'a green arrival'. An urban transition zone (urban filter) supports and extends the Cope Street Plaza and accommodates active uses. At ground level, non-residential uses within the Metro Quarter provides day and night activation.

Maker Village in the south-west provides a transition between Waterloo Common to future development along Botany and Cope streets, with a mix of mid rise courtyard typologies and heights up to 32 storeys. Mid rise buildings provide a height transition and social corners provide landscaped buffers.

Hilltop Village in the south-west responds to the topography and existing mix of open space and historical built forms. The built form typologies respond to the adjacent residential character and scale as well as the change in topography.

Refer to Appendix 7.5 and 7.7 for further information



Fig. 4.2.18 Indicative CGI: George Street facing north, Community hub plaza
Source: Virtual Ideas, 2019

STREET LEVEL EXPERIENCE

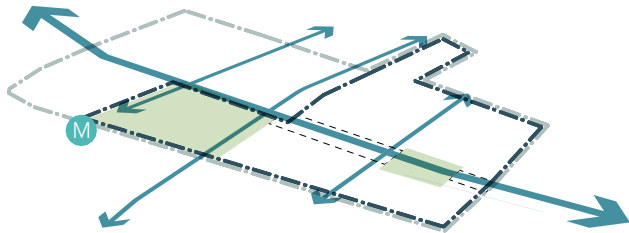


Fig. 4.2.19 Publicly accessible courtyards extend the public domain

The character of Waterloo South will be defined by the street level experience. Attractive public spaces and a well-designed connected street network will be supported by ground level activation along key routes

The public domain-led approach provides a localised environmental response that connects Waterloo South to its context and provides for a uniquely Waterloo public domain, to support the needs of the diverse and unique existing and future community. The open space and fine grain street network is supported by through site link connections across blocks for a high performing and activation ready ground plane.

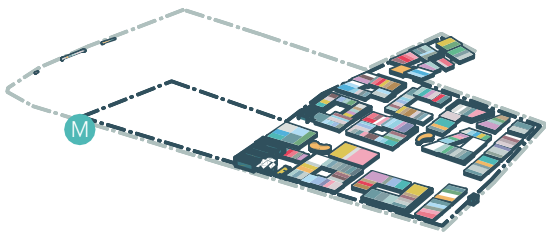


Fig. 4.2.22 A mix of frontages and uses provides a fine grain experience

Non-residential uses provide activation at street level. A mix of lot sizes and frontage widths creates a varied and fine grained pedestrian experience

The diversity of lot sizes, minimised vehicle and service entries and flexible building typologies supports a fine grained urban experience through a highly activated street level. Mixed use podiums provide for activation of the public domain. The diversity of frontages support a range of uses for variety and mix of experiences, providing for 'local' retail, services and facilities.

LOCAL LEVEL EXPERIENCE

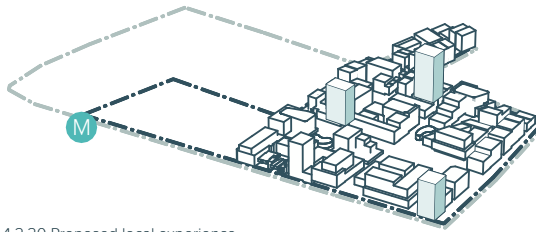


Fig. 4.2.20 Proposed local experience

At the local level, streetwall heights define the public domain and frame the street level experience

Heights between 4 - 8 storeys are provided across most of Waterloo South. To provide a human scale to the street experience, a maximum perceived height of 6 storeys is provided for buildings that are 8 storeys or 8 storeys with attics. Along key streets, this is achieved through setbacks, in other areas, a change in plane or material is provided. Flexible dwelling typologies are provided in a mixed and tenure blind community.

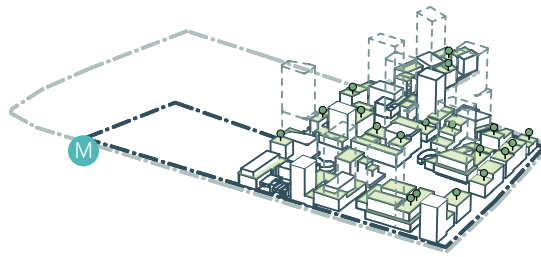


Fig. 4.2.23 Proposed community rooftop areas on podium level

Landscaped podium roofs and building façades provide increased greenery to Waterloo South and connects people to nature

Taller neighbourhood (15-20 storeys) buildings provide for a slender 'infill' form that meets the ground, to form an 'extruded' fine grain pattern along the street. Rooftop gardens on low-rise and mid-rise buildings increase community access to open space and provide additional typologies to the open space network. Enhanced amenity is provided due to their location, including increased solar access and views.

NEIGHBOURHOOD AND DISTRICT LEVEL EXPERIENCE

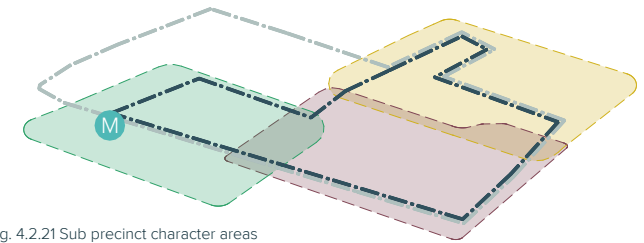


Fig. 4.2.21 Sub precinct character areas

At the neighbourhood level, the mix of building heights and typologies work with the three sub-precinct character areas and connect to the surrounding context

Each sub-precinct character area has a community building as an anchor and is characterised by a different mix of built form typologies and uses. Responding to the local past, present and future character, the sub-precinct character areas stitch Waterloo South into its surrounding context.

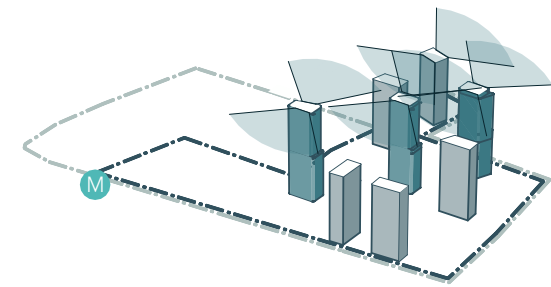


Fig. 4.2.24 Vertical villages

Tall, free-standing and landmark buildings will contribute distinct landmarks to the skyline that will reinforce the identity of Waterloo South and support wayfinding

Within taller buildings, vertical villages provide spaces that supports social interaction at a smaller scale, creating micro-neighbourhoods. Biophilic principles integrated into the building design can connect the community to nature through green façades and roofs.



4.2.5 CULTURE AND COMMUNITY LIFE

A landscaped and highly connected public domain will support community life and interaction, providing a range of opportunities to reflect on culture, engage the local community and keep residents active

Numerous activation opportunities are provided as part of the renewal of Waterloo South, to build upon existing opportunities. These include leveraging the existing maker and creative industries, the strong local character, the community's strong sense of belonging and the integral Aboriginal culture.

The key places will be hubs for activation within Waterloo South, providing equitable access to a mix of spaces for people of all ages. Community buildings are co-located next to public spaces including parks, plazas and social corners to facilitate community activities and interaction and create community anchors within each sub-precinct character area. The community buildings will provide spaces for local residents to access key services, promote artistic responses and maintain connections to surrounding residents and communities. The high performing and activation ready public domain and non-residential uses support social connectedness.

Play spaces and water-play, multi-sport, social areas, community gardens and temporary event spaces cater to all ages and abilities. The Blue Line integrates the water story throughout Waterloo South, offering a continuous stream of activation and reference to the Indigenous water story, with a strong focus along the George Street activity street, the Village Green and Waterloo Common. The Accessible Local Movement Route will make accessible the range of local community facilities and services, as well as educational opportunities (both spatially and through the integration of the water story and bush tucker plants, within the public domain that relate back to the original landscape features of Waterloo.

The public art strategy for the public domain will embrace, reflect and celebrate the past, present and future Waterloo to create a welcoming new urban village. The existing multicultural diversity and the stories of the past and present will be celebrated through storytelling, integrated public art and activation of the public domain. The cultural and community life of Waterloo South is supported by the highly permeable and active ground plane that promotes community engagement and a sense of belonging. Refer to Appendix 7.3 and 7.4 for further information

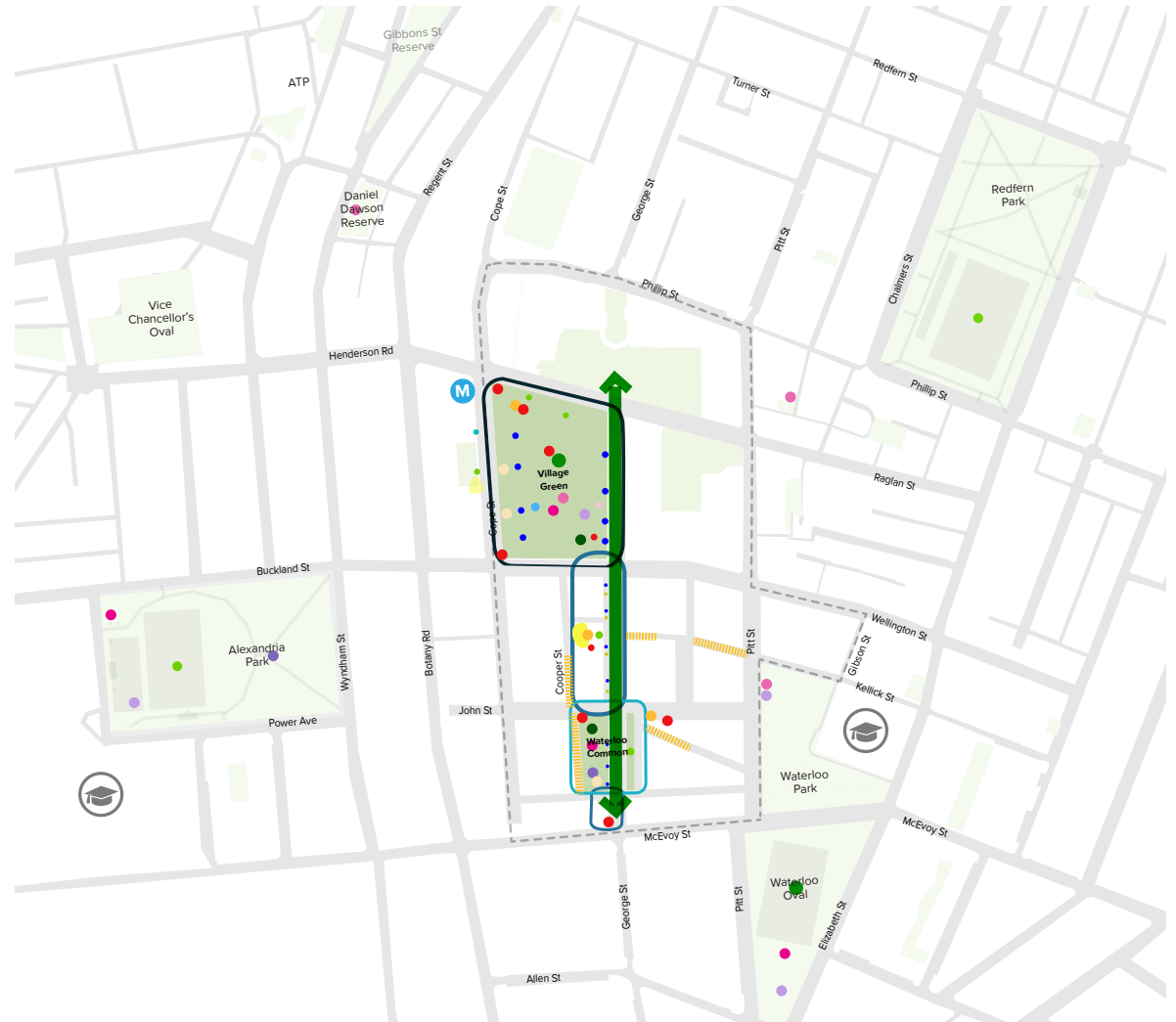


Fig. 4.2.25 Culture and community life



- Legend**
- Community Anchor
 - Community Gardens
 - Youth Facilities
 - Temporary event space (markets, outdoor cinema, performance space)
 - Waterloo Common
 - Waterloo Station
 - Passive Lawn Space
 - Water Sensitive Urban
 - Waterplay
 - Multi-sports/fitness zones
 - George Street
 - Active Lawn Space (min 50m wide)
 - Doorstep play (0-5yrs)
 - Cafe Breakout space
 - Art and Community
 - Plaza
 - Play Spaces
 - Entertainment
 - Village Green
 - Existing Street
 - Waterloo Station Education
 - New Street

4.2.5 CULTURE AND COMMUNITY LIFE

AMENITY AND ACTIVATION OPPORTUNITIES



Fig. 4.2.26 Fairfield Park, Fairfield



Fig. 4.2.27 Pink Street, Lisbon



Fig. 4.2.28 Sonder Boulevard, Copenhagen



Fig. 4.2.29 Sydney Park, Sydney



Fig. 4.2.30 Goyder Square, Palmerston



Fig. 4.2.31 Besiktas Fish Market, Turkey



Fig. 4.2.32 Passieg de Joan, Barcelona



Fig. 4.2.33 Campus Maritus, Detroit



Fig. 4.2.34 Chippendale Green, Sydney



Fig. 4.2.35 Pirrama Park, Sydney



Fig. 4.2.36 First Nations Dance Rights, 2017



Fig. 4.2.37 Bryant Park, NYC



Fig. 4.2.38 Brooklyn Grange, NYC

PUBLIC ART OPPORTUNITIES

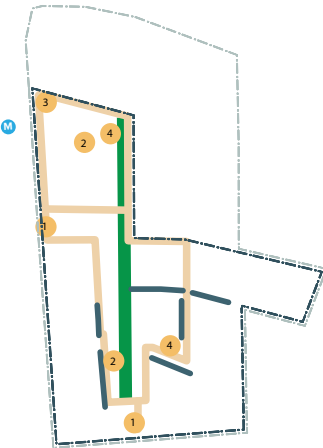


Fig. 4.1.39 Public art opportunities



- Legend**
- Public art opportunities
 - Accessible Local Movement Route (ALMR)
 - George Street Activity Street
 - Laneways
 - WSUD

Inclusive cultural integration throughout Waterloo South with public art potential for cultural expression, collaboration and wayfinding

There are many opportunities for public art to be integrated as an important element of the public domain. The primary locations for public art are streets and laneways, along the Accessible Local Movement Route and the open spaces next to community anchors, and integrated into the built environment. Whilst these areas are the primary places for public art, public art within the private domain will also contribute to the public canvas.

Opportunities for public art are maximised through the range of public art typologies. These include sculpture, lighting, temporary and fixed art, street art, murals, performance and event areas and pavement / facade art. As a significant aspect and voice for the Estate, the public art strategy will explore the contribution of these art forms to the identity of Waterloo South.

4.3 PUBLIC DOMAIN AND OPEN SPACE ELEMENTS

The public domain will celebrate the layered natural and cultural history of Waterloo and its proud community

Sustainable and regenerative design thinking underpins the key components of the Waterloo South's open space strategy.

The open space network of public and private open space provides equitable access to the Waterloo community by locating open space within 100 meters of building entries, as well as a diversity of open space typologies, to support social interaction at various scales.

George Street creates an open space spine connecting the two primary parks - Village Green and Waterloo Common.

The Accessible Local Movement Route ensures that the community are able to access key facilities, places and spaces across Waterloo South through safe, well designed and attractive connections.

The Water Story is an important reference to the Indigenous significance of water to culture and community and the historic presence of water to the area as a marshland, pre-colonisation.

Productive landscapes facilitate community connections, and provide education on sustainable urban production, referencing Indigenous cultural values and the areas heritage as a landscape of abundance for Aboriginal people.

Refer to Appendix 7.3 for further information

PRIMARY PARKS

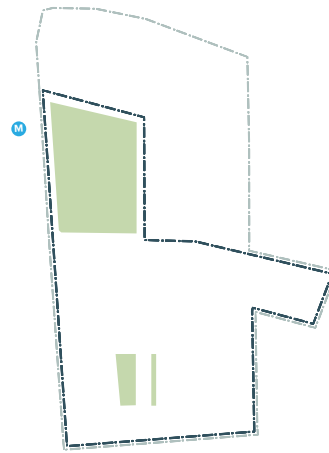


Fig. 4.3.1 Primary parks

Legend

- Waterloo South
- Primary Parks
- M Waterloo Metro Station

Waterloo's defining public open spaces

The two majors parks within Waterloo South are the Village Green and Waterloo Common. Both parks offer spaces for the community to gather, perform, create, reflect and communicate. Activation includes passive and active lawn, community gardens, play spaces and temporary event spaces.

GEORGE STREET ACTIVITY STREET

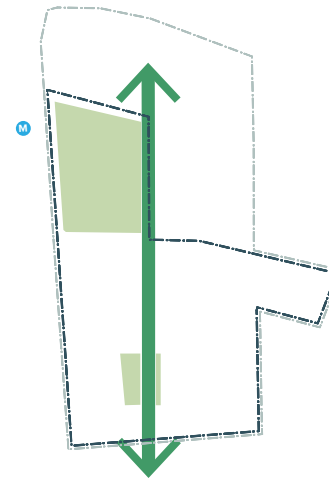


Fig. 4.3.2 George Street

- George Street Activity Street
- Primary Parks

A wide tree lined, landscaped activity spine connecting the community to key destinations

George Street is transformed into an activity street with a green, tree lined character for pedestrians and cyclists of all ages. George Street is the transitional anchor for the east - west green links and connects the network of open spaces that includes the Village Green, Waterloo Common, pocket parks and pedestrian laneways.

Active retail frontages and key community hubs are the primary contributors to activation along George Street, so that the Estate is kept active and safe, day and night. Water sensitive urban design (WSUD), tree pits and opportunities for waterplay run the length of George Street.

THE BLUE LINE (THE WATER STORY)

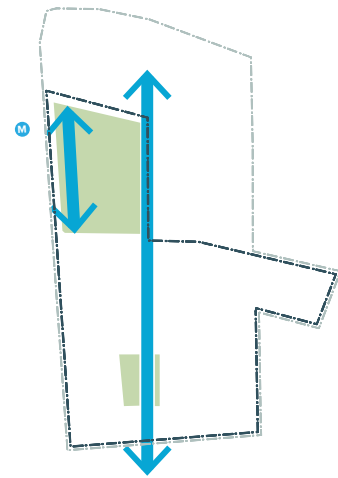


Fig. 4.3.3 Water Story

- George Street
- Blue Line
- Primary Parks

A pedestrian connection between key destinations that reflects the local water story

The Blue Line weaves itself through Waterloo South, beginning and ending at the gateway streets to the south-east and north and connecting to the surrounding neighbourhoods.

The Blue Line is defined by the presence of WSUD, water play and tree-pits. These provide environmentally responsive design solutions, increase activation and respond to the cultural significance of water to Indigenous people. Together with George Street, the Blue Line pays homage to the significance of water to the area, and anchors open space through Waterloo South.

GREEN GRID

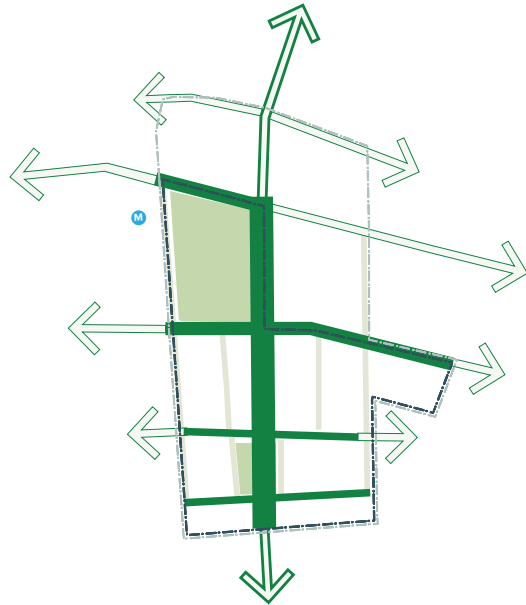


Fig. 4.3.4 Waterloo South Green Grid

Legend

- Green Streets
- Open Space Network

PRODUCTIVE LANDSCAPES

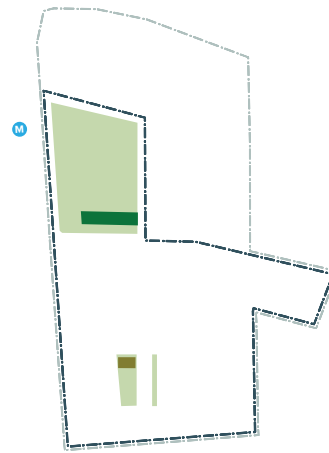


Fig. 4.3.5 Waterloo South Productive Landscapes

- Community Gardens - Village Green
- Community Gardens - Waterloo Common
- Primary Parks

URBAN PLAZAS

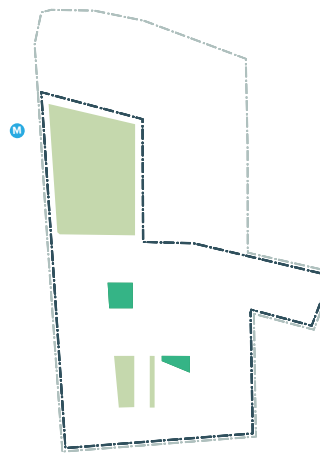


Fig. 4.3.6 Waterloo South Urban Plazas

- Plaza

POCKET PARKS AND SOCIAL CORNERS

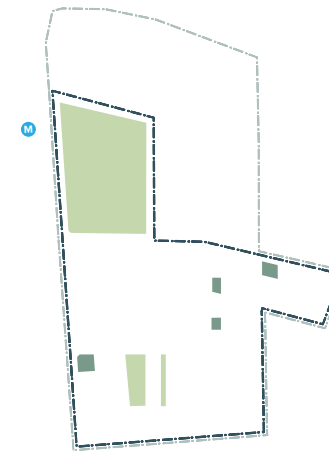


Fig. 4.3.7 Waterloo South Pocket Parks and Social Corners

- Pocket Parks & Social Corners

Green streets that connect Waterloo into Sydney's Regional Green Grid

The Green Grid weaves Waterloo South into Greater Sydney's existing Green Grid, strengthening regional open space connections. The streetscapes of Waterloo South maximise open space, and integrate Green Street policy and WSUD best practice. The greening of Waterloo South's streets will improve the streetscape conditions through shade and cooling, and offer more inviting space for public activation.

Interactive, educational and productive landscapes for Waterloo's community

The Village Green community garden will be the largest productive landscape, with its central location maximising use. A second community garden in Waterloo Common will provide a more local feel due to the size and more intimate location. A number of edible landscape initiatives are distributed along George Street, pocket parks, communal courtyards and terraces. These initiatives reference bush tucker planting schemes through a modern interpretation that connects the natural heritage of the area to Waterloo South's future. Additional smaller scale productive landscapes are distributed through the private communal open space at ground level and rooftop levels within development lots that cater for residents.

The urban addition that provides community gathering space

A number of urban plazas are located throughout Waterloo South. These are co-located with community buildings and together provide community anchors to each sub-precinct character area. The plazas support an activation ready ground plane by offering flexible event spaces that allow the community to run and host initiatives including markets, exhibitions, festivals, celebrations, street performances and urban picnics.

Facilitating social moments for the community

Throughout Waterloo South, pocket parks and social corners complete the social open spaces. Pocket parks and social corners are located next to pedestrian laneways, providing active and safe spaces for the community to entertain and inhabit amongst significant existing trees. Street art and temporary installations will enrich the spatial experience through reference to the past, present and future character of Waterloo South. Social corners are located at the intersection of two or more streets, and provide a high level of amenity through a north facing orientation and active uses at ground level. The setbacks are unique responses to the existing context and result in building forms and setbacks that are shaped by the landscape and public domain as Waterloo specific responses.

4.4 URBAN AND BUILT FORM ELEMENTS

Drawing on the historical fine grained urban context to integrate into and build upon the area's rich heritage

The urban and built form response for Waterloo South is underpinned by the provision of flexible and diverse typologies that respond to the human scale and pedestrian experience. Taller buildings provide height diversity to respond to the existing neighbourhood context as well as the emerging context of inner-city local centres.

The mix of block sizes and building heights support the open space typologies and fine grained street and pedestrian network of the public domain.

The range of building typologies respond to the sub precinct character areas and the proposed hierarchy of neighbourhood and local scaled centres.

Refer to Appendix 7.5 for further information

A VARIETY OF SETBACKS

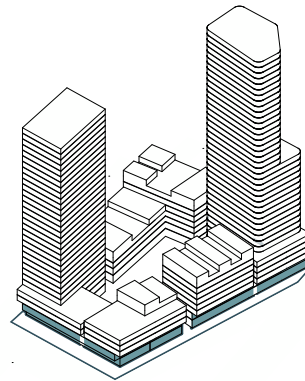


Fig. 4.4.1 Street level setbacks

Legend
● Street Setback

Public and private domain interfaces that promote social interaction

- Promotes active uses along key streets by providing space for social interaction.
- Provides space for landscaping and transition to private space along residential streets for increased privacy to dwellings.

URBAN STRUCTURE

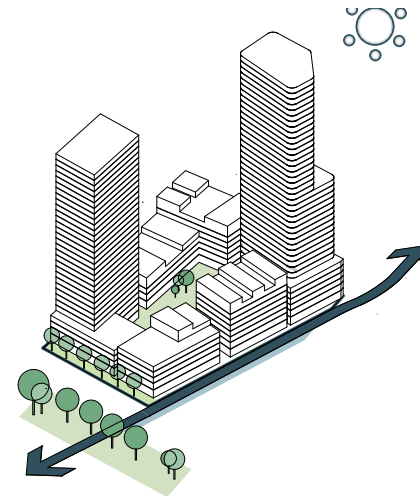


Fig. 4.4.2 Urban structure

↔ Street Alignment
● Open Space
☀ Solar Orientation

Height focused along the new alignment that connects Waterloo South to open space, the new metro station and key destinations

- Marks key junctions and alignments for greater legibility at the neighbourhood level.
- Provides amenity to dwellings through increased frontage to open space.
- Locates people close to open space, transport, services and amenities.

DIVERSITY IN SCALE

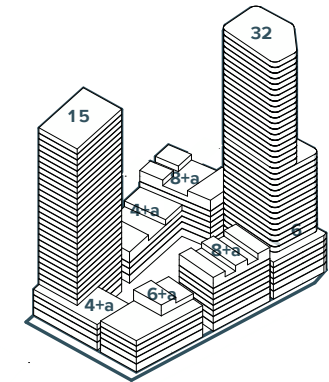


Fig. 4.4.3 Building scale

1,2. Building Height (in storeys)

Variety and a mix of scale, architectural design and character in the built form creates a diverse and enriching urban environment

- Creates a varied and visually interesting skyline.
- Defines the street edge to the existing and proposed street network.
- Provides amenity to public, semi-public spaces and streets, and private spaces.

GROUND LEVEL INTERFACE

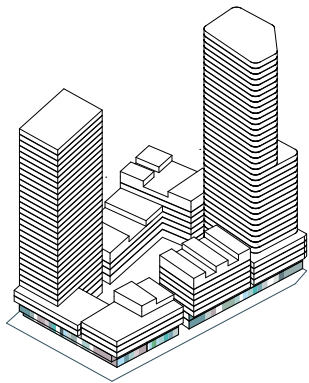


Fig. 4.4.4 Ground level interface

STREETWALLS

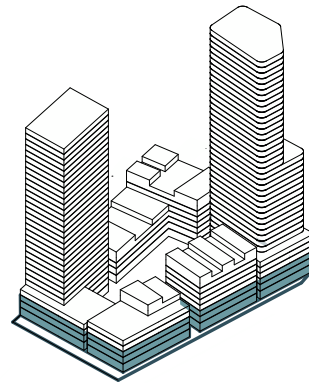


Fig. 4.4.5 Streetwall

● Streetwall

RELATIONSHIP TO CONTEXT

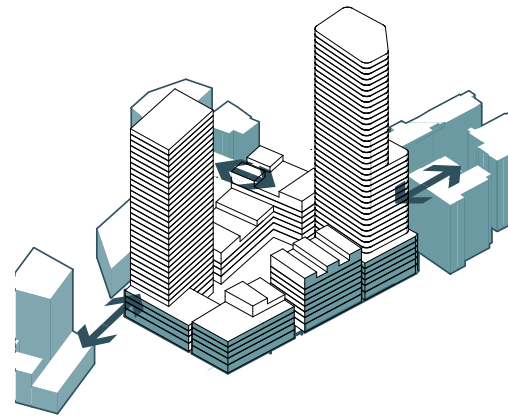


Fig. 4.4.6 Relationship to surrounding context

↔ Interface with Surrounding Context

BUILDING DESIGN

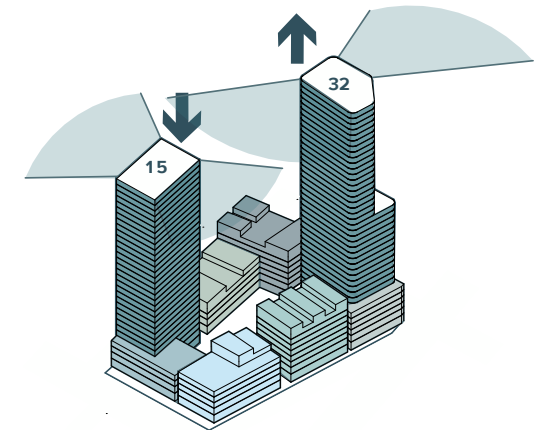


Fig. 4.4.7 Building design and composition

● Indicative Building Composition
◀ View

A fine grain ground plane that supports active uses enriches the public domain by providing a visually interesting pedestrian scaled street level experience

- Articulation and modulation provides visual diversity that promotes a vibrant environment.
- A greater number of entries every 100 metres provides for an active ground plane.
- A balance of transparent and open façades at lower levels for non residential uses creates engagement with the public domain and visibility of activities.
- Provides pedestrian through site connections and access points.
- Fine-grained, pedestrian scaled, built form amenity is provided through the mix and variety of frontage sizes.

Streetwalls that respond to the human-scale provide a well defined public domain and crafts the street level experience

- Provides a pedestrian experience that promotes walking and cycling by making it enjoyable with good amenity.
- Promotes passive surveillance for increased perception of safety.

Height and massing transition that responds to existing and future context

- Provides a relationship to the existing context and considers the future context along the Botany Road Corridor.
- Defined building heights across Waterloo South development lots allows for more diversity and grain in the streets and public domain spaces and ensures amenity in the future built form.
- Builds upon the existing surrounding character.
- Height in less sensitive areas allows for lower heights adjacent to heritage conservation areas, and heritage items.

High quality building design that provides amenity for residents

- Passive environmental design solutions provides greater amenity and reduces costs to residents.
- High quality materials reduce maintenance costs and provide greater durability for the life cycle of a building.
- Facade variation provides a change in form, proportion, position, quantity and composition to provide visual interest. This can be achieved through building massing, materials, glazing extent and proportion, material finishes and colour, or architectural detail.



Fig. 5.01 Indicative CGI: Waterloo Common
Source: Virtual Ideas, 2020

5.0 CHARACTER

PLANNING PROPOSAL REQUIREMENTS

PLANNING PROPOSAL REQUIREMENT

- A precinct plan that integrates:
- Public domain
 - Infrastructure
 - Staging
 - Building types
 - Height distribution and massing

ADDRESSED IN

Chapter 4.0 -5.0
Appendix 7.3
Appendix 7.4
Appendix 7.5
Appendix 7.7
Appendix 7.8

SSP STUDY REQUIREMENT

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 |
| 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 |
| 2.17 | Integrate the findings of other parts of this study and demonstrate how these have shaped the Public Domain Plan and the building typologies to meet their requirements. In particular, how the design of building types respond to ESD, wind, flooding, noise and pollution issues. | Chapter 4.0 - 6.0
Appendix 7.3
Appendix 7.5 |

ADDRESSED IN

Public Domain: Public Open Space & Streets

- | | | |
|------|---|-----------------------------------|
| 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 |

“You have an opportunity here to create something true to the character of Waterloo - don’t turn it into another anonymous Sydney suburb - retain its feel & heritage...”

Survey respondent*

Placemaking activities defined three sub-precincts in the Indicative Concept Proposal for Waterloo Urban Village based on their existing and future place characteristics; Village Green, Maker Village and Hilltop Village. Within these sub-precincts reside the key places of the Estate; the Village Green and Waterloo Common. A pedestrian friendly George Street Activity Street connects them all together. The key places are hubs for activation, engagement, and social connectedness, and are anchored by mixed-use community hubs that will provide activation and programming of those spaces.

Village Green, to the west is centred around the metro station and Metro Quarter, it is in the transitional area between Redfern and Waterloo, and includes the prominent intersection of George Street and Raglan Street.

Maker Village, in the southwest of Waterloo South, retains evidence of its industrial past around Cope and McEvoy streets, has Waterloo Common at its centre, and is connected to the Village Green by George Street.

Hilltop Village, in the southeast of Waterloo South, is characterised by its steep topography and its interface with Our Lady of Mt Carmel Church and School, Waterloo Park and Waterloo Oval.

* "Let's Talk Waterloo - Visioning Report Key Findings", KJA, May 2018, p23.



Fig. 5.1.1 Indicative CGI: Waterloo Village Green community garden
Source: Virtual Ideas, 2020

5.1 WATERLOO SOUTH

Waterloo Urban Village will be a group of sub-precinct character areas, that draw inspiration from the surroundings and enhances what makes them special, connected by a layered public realm

Waterloo's place character is defined by the specific, fundamental qualities that make it special. These qualities are drawn across the social, economic, cultural and environmental aspects that define the precinct as a place today that relates them to the vision going forward. The place character will provide place specific guidance to inform future development.

The place character of Waterloo is a community that is:

- Layered- Waterloo is the legacy of many hands and many stories
- Proud - Waterloo is a place deeply embedded in its locality
- Distinct - Waterloo is different, and that difference is worth celebrating
- Resilient - Waterloo is grounded by its perseverance over time

In evolving the framework for Waterloo South, sub precinct character areas have been explored as an opportunity to create unique places at the local scale, each with a distinct character. The three sub-precincts (pictured opposite) are the result of this exploration, each with an identifiable character statement as presented on the following pages.

For each sub-precinct, the current context of the surroundings as expressed through buildings, land uses, landscape elements and the street network has been analysed. The proposed future character of each sub-precinct is informed by this analysis, and offers directions for the built form and public domain that draws inspiration from the surroundings and enhances what makes the streets and places of Waterloo special.

WATERLOO SOUTH SUB-PRECINCT CHARACTER AREAS



Fig. 5.1.2 Sub-precinct character areas



5.2 VILLAGE GREEN

A green arrival into the heart of Waterloo urban village - the Village Green

CURRENT CONTEXT

Village Green is anchored by the major thoroughfare and commercial hub of Botany Road, and the area is a place of commercial and social exchange. Village Green is well-connected, with east-west streets reinforcing the traditional gridded urban structure and providing connections to destinations such as the Australian Technology Park.

At the nexus of a number of residential suburbs, the area has a transitional nature, bridging the leafy Alexandria Park and historic workers cottages of Wellington Street with Redfern Station Precinct, a contemporary transit interchange and growing urban hub. The surrounding street scape is highly varied in character, and showcases a long history of trade.

Many commercial and light industrial buildings have been modified and re-purposed to accommodate changing needs. They sit alongside heritage churches and pubs, residential and mixed use development, and a number of distinctive buildings at major intersections. The material palette includes brick, masonry and subway tiles.

Commercial buildings are low-rise, feature narrow frontages, bold sign writing, generous awnings, and some alfresco dining, all of which creates a sense of intimacy and attracts pedestrian activity, undeterred by the vehicular traffic of Botany Road. Façades, particularly on corner locations, are transparent and open up or provide visual interest to the public realm. Public art, both formal and informal, add character and express the community's sense of identity.



Fig. 5.2.7 Potential Uses in the Village Green

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)

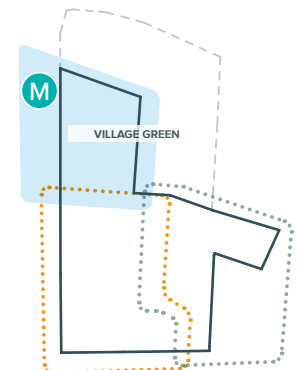


Fig. 5.2.1 The Cauliflower Hotel



Fig. 5.2.2 Corner of Botany Road & Raglan Street



Fig. 5.2.3 Street art along Raglan Street



Fig. 5.2.4 Corner of Botany Road & Buckland Street



Fig. 5.2.5 Shops along Raglan Street



Fig. 5.2.6 Corner of Botany Road & Raglan Street

The Village Green is characterised by its vibrancy and liveliness, with the Metro Quarter providing active uses and services that reflect the long history of trade and activity in the area. The Village Green will maximise connectivity with a green arrival that brings the community together and connects it to Greater Sydney

FUTURE CHARACTER

Village Green will combine the dynamism of the new Waterloo Metro Station and Metro Quarter, and the social and recreational appeal of the Village Green. The daily life of the community will be supported by an engaging mix of uses that stay active around the clock and invite activity at the street level.

The synergy between the Village Green and the transport hub will be the defining relationship which makes this sub-precinct unique. At the heart of the Village Green the proposed Gadigal Garden will combine a new distinctive community hub and multifunctional plaza, forming a continuous public realm which encourages play, exchange and engagement with the landscape.

The Blue Line weaves the area's water story along George Street and the Village Green through WSUD, water play and tree-pits. These provide environmentally responsive design solutions, increase activation and respond to the cultural significance of water to Indigenous people. Together with George Street, the Blue Line pays homage to the significance of water to the area, and anchors open space through Waterloo South.

The future character will be shaped by:

- A public domain integrated with public art to activate and differentiate the Village Green, encouraging play, exchange and engagement with the landscape.
- Cope Street will become a central seam providing both north-south and east-west connectivity, characterised by a pedestrian focus.
- The Blue Line through WSUD, water play and tree-pits.

FUTURE CHARACTER



Fig. 5.2.9 Illustrative Village Green (mood) character collage

LOOK AND FEEL



Fig. 5.2.8 Waterloo Village Green: Character collage

5.3 MAKER VILLAGE

Maker Village will be a vibrant local neighbourhood immersed in a history of manufacturing

CURRENT CONTEXT

Maker Village is steeped in a history of manufacturing. The surrounding streets, centred on Cope Street and the busy McEvoy Street, still reveal traces of an industrial past.

Contemporary apartment buildings are mixed amongst large-format commercial warehouses and low-rise industrial structures, with some repurposed and adapted. Whilst the predominant lot pattern is medium and coarse in scale, there are pockets of fine grain development, such as the early 19th Century terraces along John Street.

McEvoy Street is a defining edge and one of the earliest streets that was established in the area, forming the original boundary between residential development and the dam to the south. George Street runs perpendicular,

providing a convenient and efficient active transit link towards the emerging neighbourhood of Green Square.

Victorian terraced housing in the area is made recognisable by its ornate detailing and balconies, while newer apartment buildings along McEvoy Street feature protruding forms, dominant balconies, and a varied roof profile with some sawtooth forms. There are a number of heritage-listed buildings including the former Waterloo Pre-School.

Brick is the predominant material in the area, which reinforces the industrial character and is featured across industrial and residential buildings old and new.



Fig. 5.3.7 Illustrative Maker Village



Fig. 5.3.1 Corner of John Street and Cope Street



Fig. 5.3.2 Corner of John Street and Cope Street



Fig. 5.3.3 View south along Cope Street



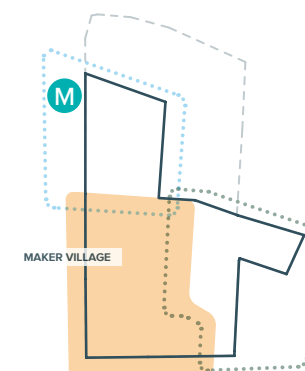
Fig. 5.3.4 Modern apartments along McEvoy Street



Fig. 5.3.5 Modern apartments along McEvoy Street



Fig. 5.3.6 Corner of John Street and Cope Street



Maker Village centres around Waterloo Common, a civic scale neighbourhood park, will house productive and creative activity and continue to celebrate Waterloo's proud spirit of industry

FUTURE CHARACTER

Maker Village will be a vibrant neighbourhood, featuring Waterloo Common and the Blue Line. It will buzz with productive and creative activity and continue to celebrate Waterloo's proud spirit of industry.

Waterloo Common will be a major community amenity, addressing the lack of usable open space to the south and connecting to the Village Green along the George Street. This neighbourhood scale park will serve as a continuation of the productive and engaging public realm.

Waterloo Common will be bound by laneways that will help establish the precinct as a pedestrian focused place and provide convenient connections to the Village Green, Hilltop Village and neighbouring communities and open spaces.

The future character will be shaped by:

- Waterloo Common, a neighbourhood scaled park.
- A highly walkable and permeable pedestrian network of laneways, providing convenient connection to the neighbouring precincts and adaptable ground floor use, s will support street trading and vitality. John Street as a defining east-west connection will frame views up towards Mount Carmel.
- Fine grain terrace typology will be reflected along Cope Street and materials and architectural elements will draw inspiration from both industrial buildings and traditional terrace houses. Defined balconies (particularly on corners) and varied roof forms to add visual variety.
- Mid-rise built form at the edges of the park will provide a transition between the open space and taller buildings.
- Fine grain retail and warehouse typologies will encourage making and production uses.
- Highly active ground floor uses surrounding the new community hub and plaza.
- Awning elements will support pedestrian activity, alfresco dining and street trading.
- Adaptable ground floor addressing the laneway to the north of McEvoy Street to mitigate the effect of heavy movement flows, allow for the preservation of mature trees, and accommodate potential future road widening.
- Retention of existing trees particularly at the corner of Cope Street and John Street.

LOOK AND FEEL



Fig. 5.3.8 Maker Village: Character collage

FUTURE CHARACTER



Fig. 5.3.9 Illustrative Maker Village (mood) character collage

5.4 HILLTOP VILLAGE

Hilltop Village is characterised by its topography and nearby historic buildings

CURRENT CONTEXT

Hilltop Village is characterised by its topography and nearby historic buildings which reflect early settlement. The area is largely residential with a mix of mid-rise apartment buildings and low-rise Victorian cottages and terraces. Some contemporary buildings make reference to the area's industrial past, with brick detailing, timber cladding, tiled façades and sawtooth roof forms.

The oldest surviving buildings still standing in Waterloo, Our Lady of Mount Carmel Church and School, are situated atop the sloped site, and the old Italianate Town Hall is nearby to the east. Little Waterloo Dam, an important resource for the early establishment of the area, would have been located to the south.

Waterloo Park and Waterloo Oval offer places for active and passive

recreation, and add to the layered landscape qualities with mature trees and undulating topography. Laneways and green street reserves in the area complement the public realm at the local scale.

Different building details and configuration brings variety and visual diversity to the streetscape to the north, despite a consistent terrace typology. A number of buildings feature ground floor courtyards and upper storey balconies, which provide passive surveillance to the street.



Fig. 5.4.7 Illustrative Hilltop Village



Fig. 5.4.1 Laneway off Pitt Street



Fig. 5.4.2 Our Lady of Mt Carmel Catholic Primary



Fig. 5.4.3 Modern apartments opposite Waterloo Oval



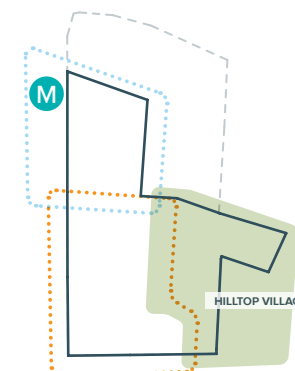
Fig. 5.4.4 Waterloo Oval



Fig. 5.4.5 Waterloo Park



Fig. 5.4.6 Dwellings along Wellington Street



Hilltop Village will be a place of discovery with laneways and pocket parks stitched into the historic surroundings and layered landscape

FUTURE CHARACTER

Hilltop Village will be a place of discovery, with laneways and pocket parks stitched into the historic surroundings and layered landscape.

Pitt Street will continue south to provide connectivity to McEvoy Street, and Wellington Street will continue to be a defining edge to the north. Connecting these major streets with the Blue Line, Accessible Local Movement Route and the neighbouring sub-precincts, new internal laneways will invite playful exploration and reference the historic grid.

The varied fine grain character of nearby terraces will be reflected in Hilltop Village. Streets will be addressed by low and mid-rise buildings with multiple street entries and façade articulation. Tower buildings will be generally set back from the street wall edge.

There will be small open spaces at street corners, and a plaza to the south anchored by a new community hub.

These interstitial outdoor places will complete the layered public realm and provide ample opportunities for creative expression and communal activity.

The character will be shaped by:

- New laneways, which are pedestrian focused, intimate in scale and intentionally offset.
- A predominantly residential precinct, it will feature low and mid-rise buildings with fine grain treatment in keeping with the existing streetscape character, particularly along laneways and the Blue Line.
- John Street as a view corridor up to the historic church and school, characterised by generous trees and considerable change in topography.
- Wellington Street and the Blue line will feature varied non-residential uses with active façades at the ground plane and awning elements to support pedestrian activity, alfresco dining and street trading.
- Tower buildings to be designed as vertical villages.
- A new community hub to provide a spectrum of places to gather and interact, reflecting the comfortable residential character of the area.

FUTURE CHARACTER



Fig. 5.4.9 Illustrative Hilltop Village (mood) character collage

LOOK AND FEEL



Fig. 5.4.8 Hilltop Village: Character collage



Fig. 6.01 Indicative CGI: Waterloo Common
Source: Virtual Ideas, 2020

6.0 PLACE

PLANNING PROPOSAL REQUIREMENT

The built form should be developed in line with the design process described in the NSW Government Architect Better Placed strategy.

A precinct plan that integrates:

- Public domain
- Infrastructure
- Staging
- Building types
- Height distribution and massing

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.

ADDRESSED IN

Urban Design Report
Appendix 7.10
Chapter 4.0 -5.0
Appendix 7.3
Appendix 7.4
Appendix 7.8
Appendix 7.5, Chapter 6.2
Chapter 6.2
Chapter 4.0
Chapter 6.0
Appendix 7.3

SSP STUDY REQUIREMENT

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 Indicative CGI: Waterloo Village Green 'Big Roof'
Source: Virtual Ideas, 2020

6.1 KEY PLACES AND STREETS

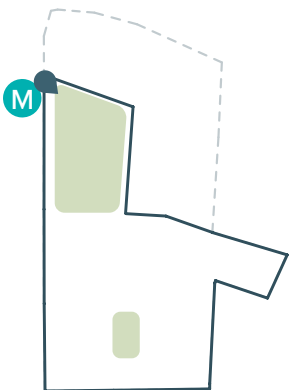
- 6.1.1 Village Green
- 6.1.2 Waterloo Common
- 6.1.3 Streets
- 6.1.4 George Street
- 6.1.5 Street Typologies

“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

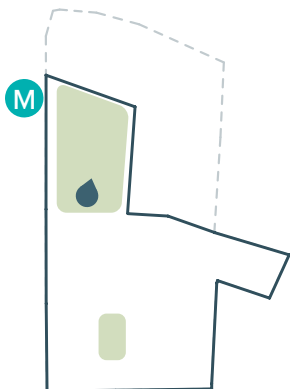
A place to come together

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



- 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 activity 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

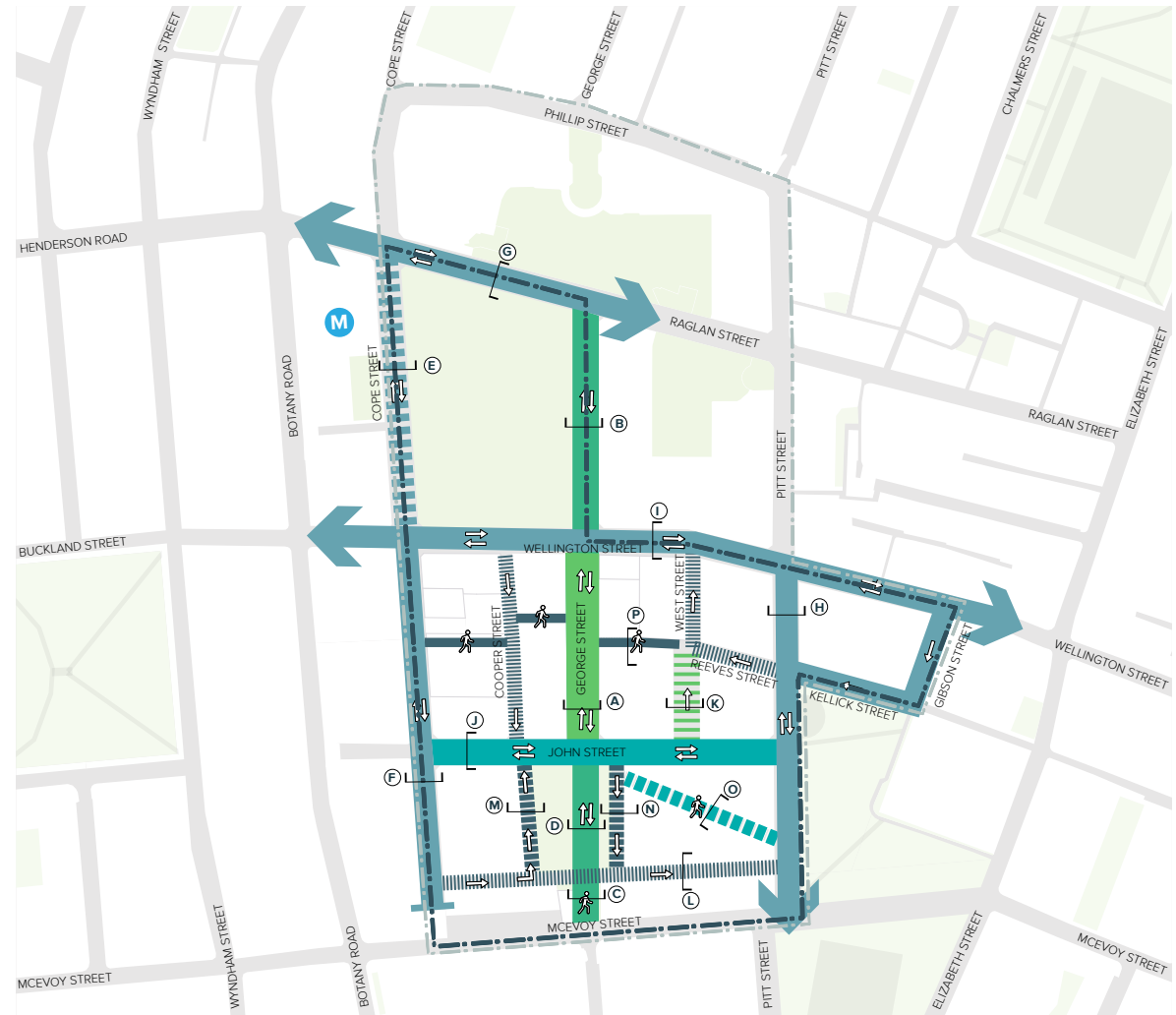


Fig. 6.1.7 Street Typologies

Legend

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



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

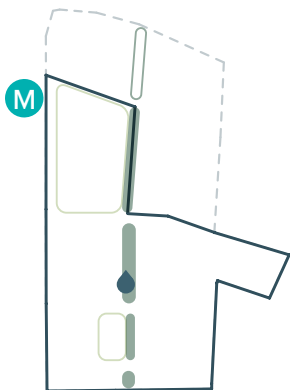
6.1.4 GEORGE STREET

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



20-25M WIDE
FUTURE PEDESTRIAN BOULEVARD
DOORSTEP PLAY WSUD
RETAIL BREAKOUT SPACE BUSHTUCKER GARDEN



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

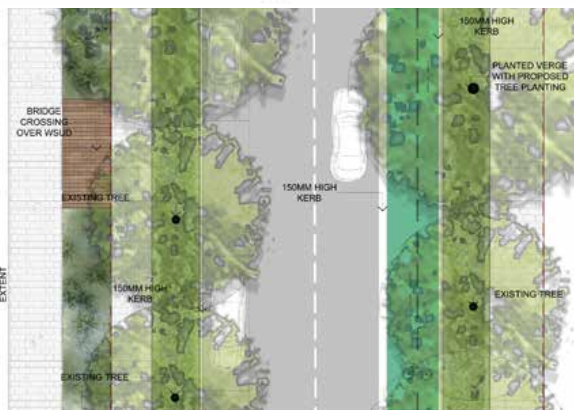
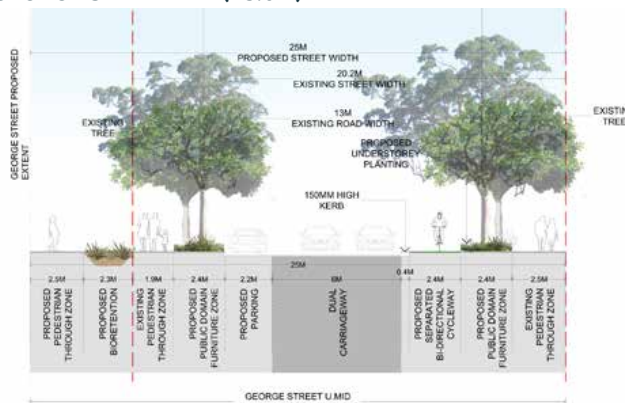
City of Sydney: Bronze Smart Pole

Refer to Appendix 7.3

STREET TREE TYPE

Refer to Appendix 7.3 for further information

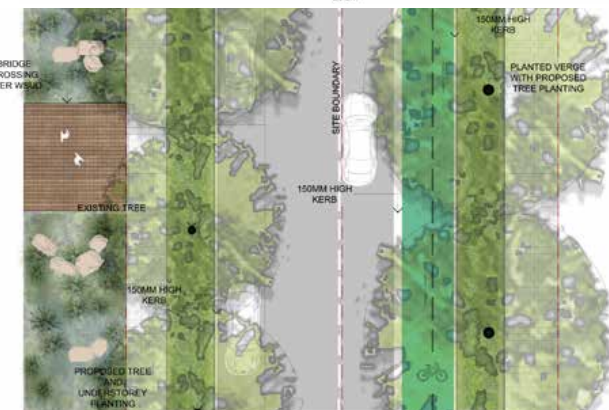
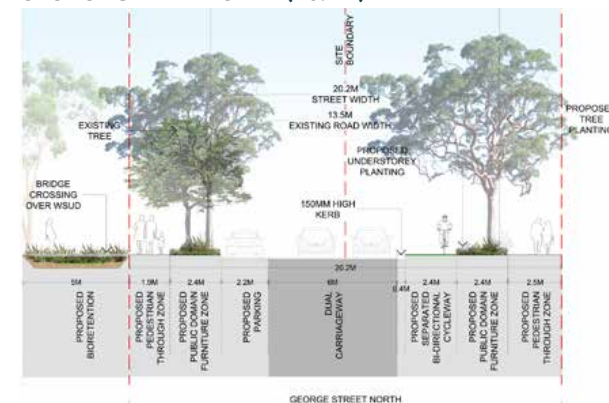
GEORGE STREET MID (25.0M)



(A) Fig. 6.110 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.

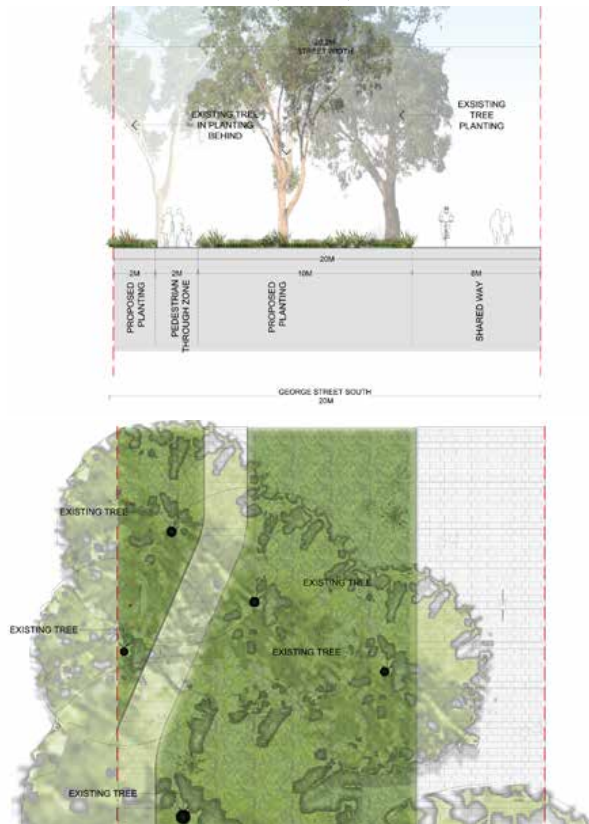
GEORGE STREET NORTH (20.2M)



(B) Fig. 6.111 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).

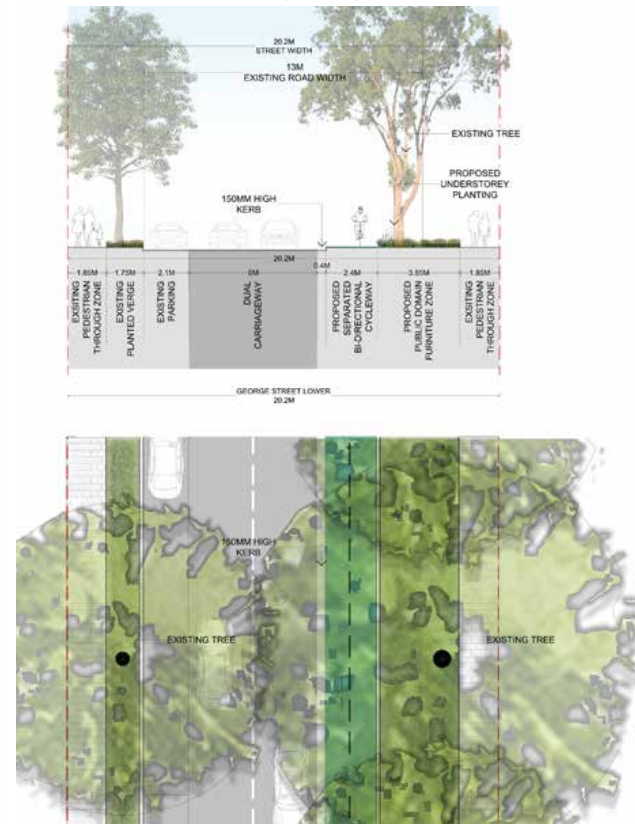
GEORGE STREET SOUTH (20.2M)



© Fig. 6.112 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)



© Fig. 6.113 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

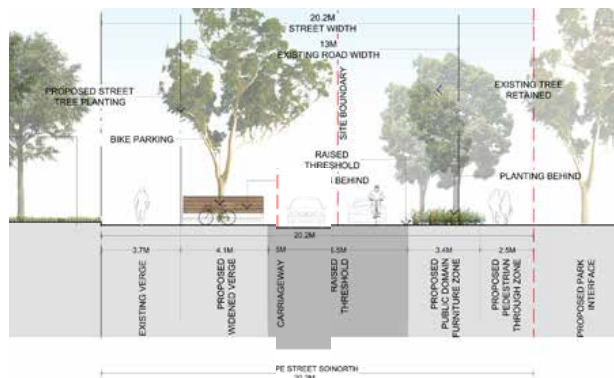
Refer to Appendix 7.3

STREET TREE TYPE

Refer to Appendix 7.3 for further information

COPE STREET (METRO - 20.2M)

Between Raglan and Wellington streets

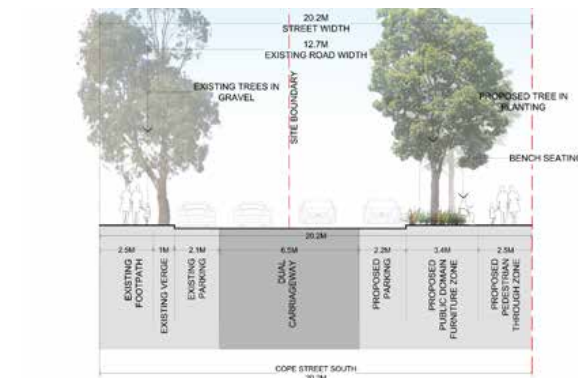


(E)

Fig. 6.114 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)

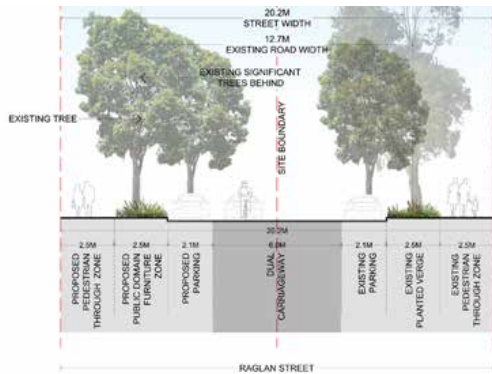


(F)

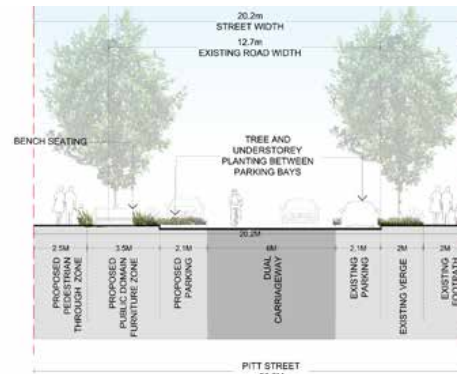
Fig. 6.115 Cope Street, North and South

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.

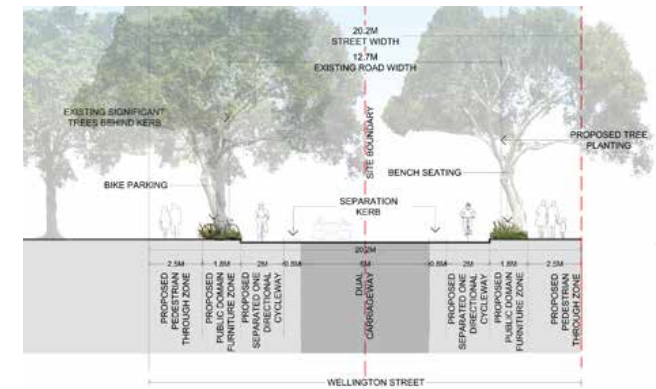
RAGLAN STREET (20.2M)



PITT STREET (20.2M)



WELLINGTON STREET (20.2M)



Ⓒ Fig. 6.116 Raglan Street

Ⓓ Fig. 6.117 Pitt Street

Ⓔ Fig. 6.118 Wellington 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.

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.

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:

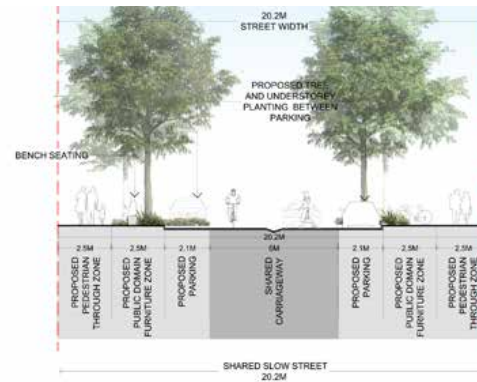
City of Sydney: Bronze Smart Pole

Refer to Appendix 7.3

STREET TREE TYPE

Refer to Appendix 7.3 for further information

SHARED SLOW STREET (20.2M)

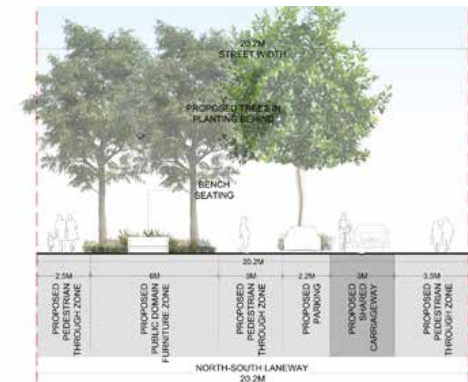


J

Fig. 6.119 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)

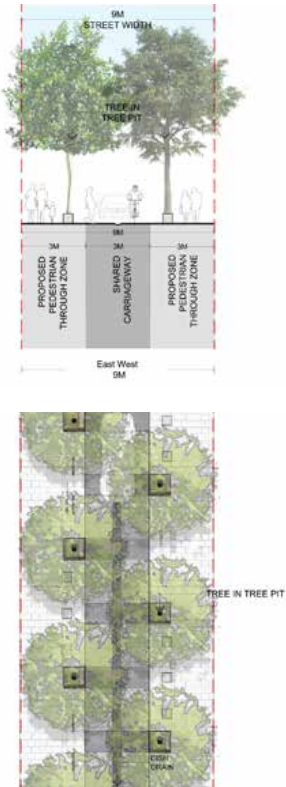


K

Fig. 6.120 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.

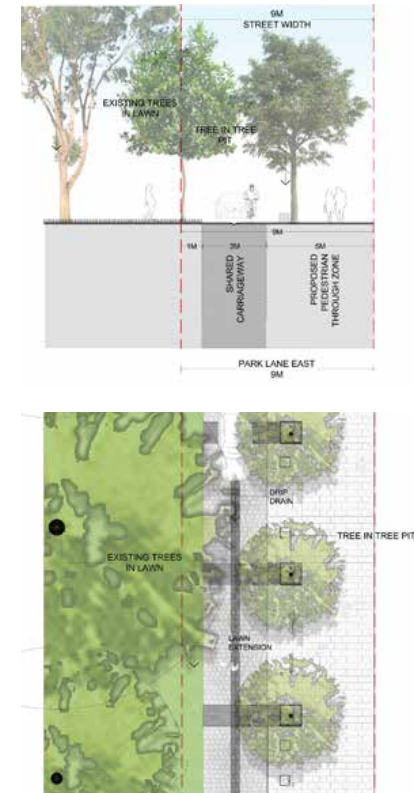
NEIGHBOURHOOD LANEWAY (9.0-10.0M)



PARK LANEWAY (WEST - 9.0M)



PARK LANEWAY (EAST - 9.0M)



L

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.

M

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.

N

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)

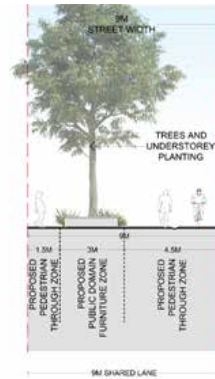


Fig. 6.1.24 9m Pedestrian Laneway

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)

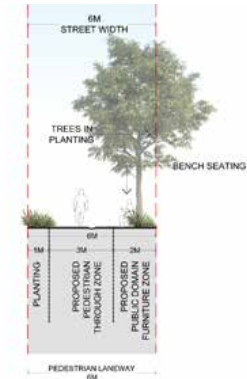


Fig. 6.1.25 6m Pedestrian Laneway

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

6.2.1 Approach to Height

6.2.2 Tall Buildings

6.2.3 Building Heights

6.2.4 Building Height Distribution

6.2.5 Building Typologies

6.2.6 Individual Lot Analysis

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

*Survey respondent**

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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

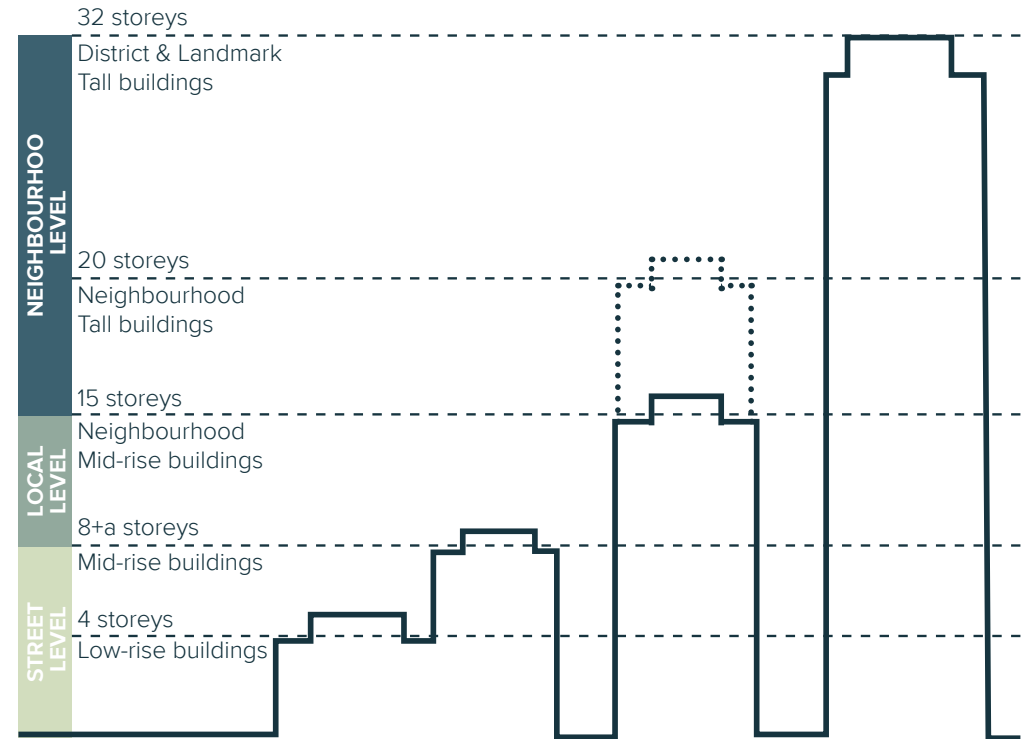


Fig. 6.2.3 Building height diagram

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 CITY¹

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 design². 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 strategy³. 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

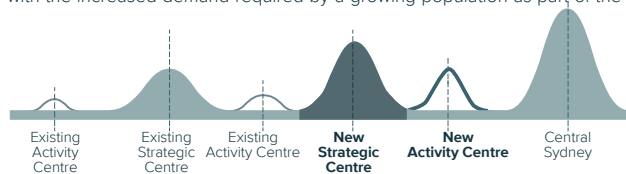


Fig. 6.2.4 A multi-centre city diagram

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.

TALL BUILDING CLUSTERS



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

- Legend**
- Estate
 - Waterloo
 - Train Station
 - Metro Station
 - Tall Building Cluster

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 its 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 strategy¹ 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

LANDMARK BUILDINGS AT DISTRICT LEVEL

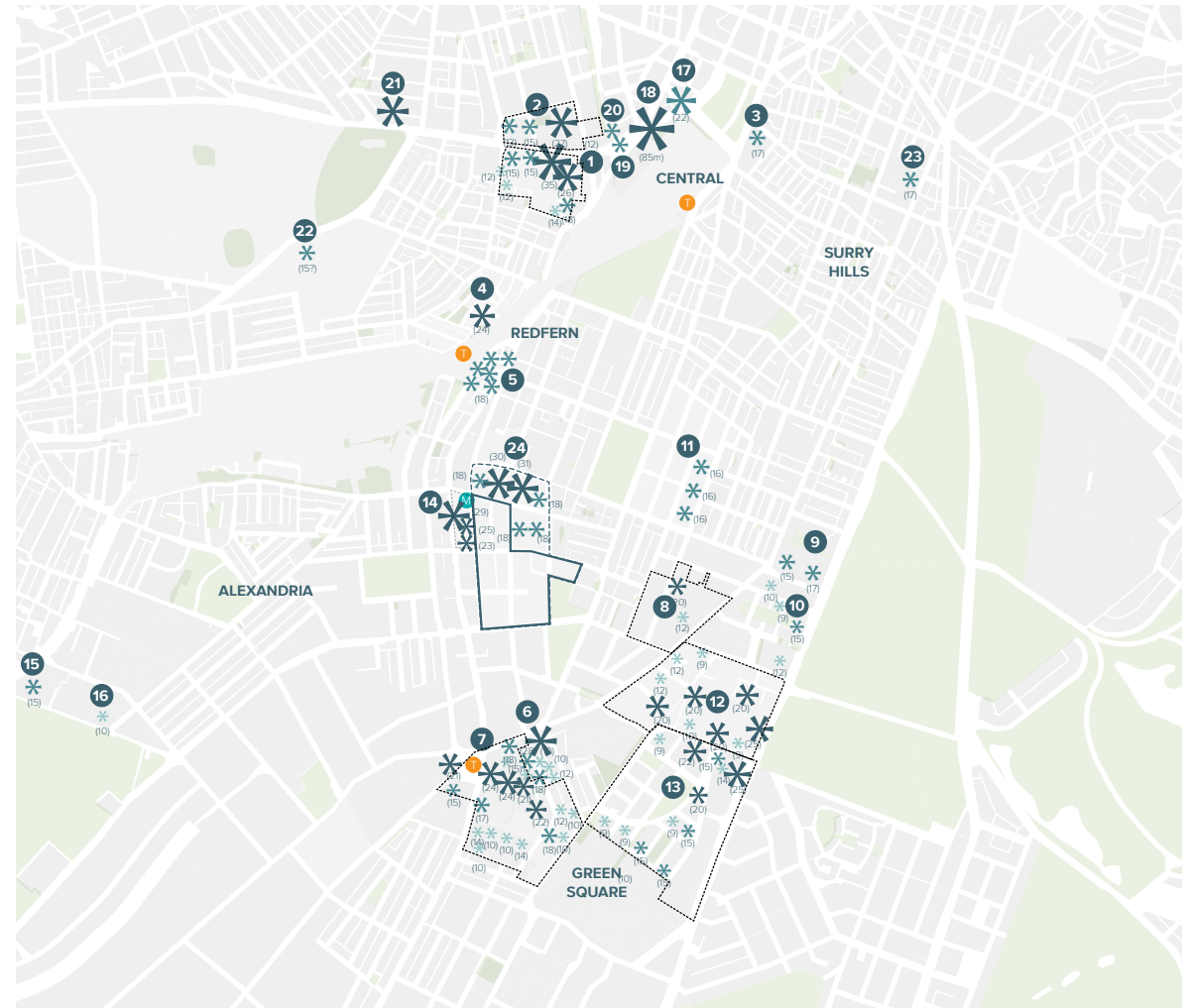


Fig. 6.2.6 Landmark, local and tall buildings around Waterloo Estate
Source: Relevant DAs and Planning Proposals, City of Sydney and Department of Planning & Environment, 2019

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

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



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

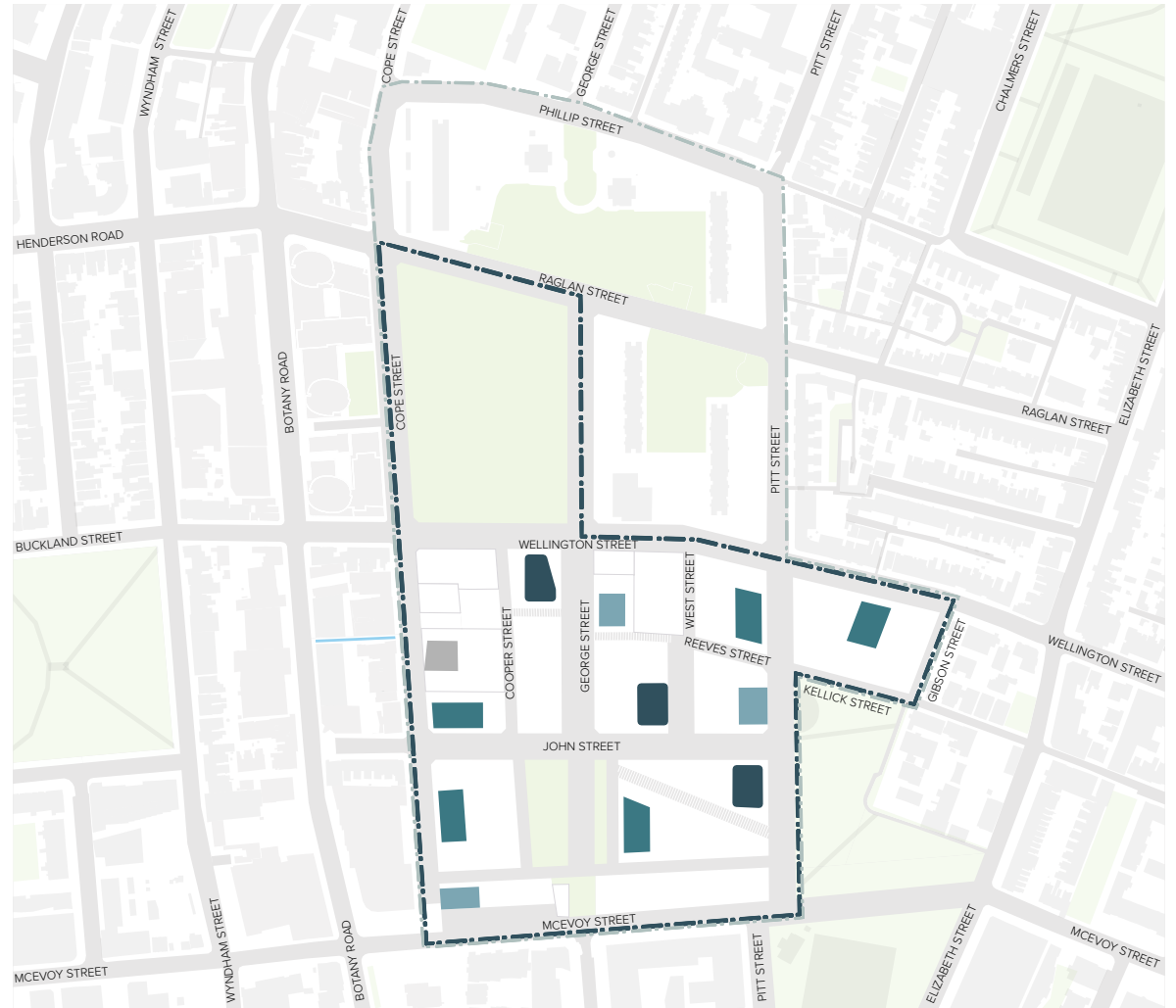


Fig. 6.2.7 Proposed tall buildings with and without solar constraints



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.

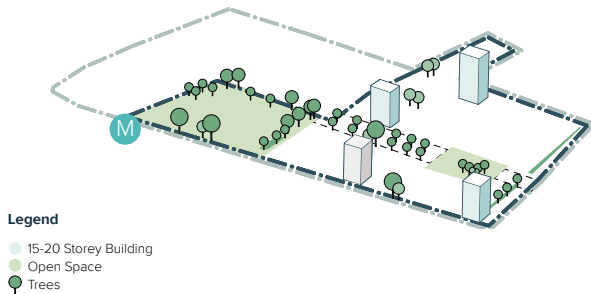


Fig. 6.2.8 Proposed neighbourhood buildings in close proximity to open spaces

30 - 32 Storeys (District Tall Buildings)

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

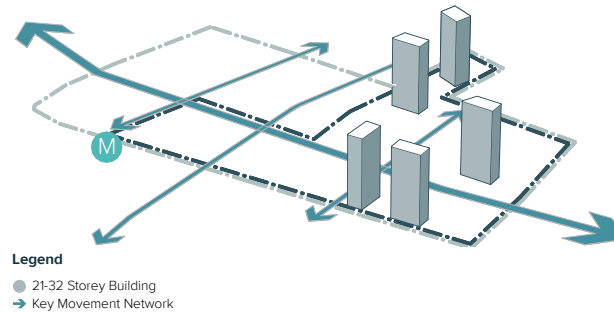


Fig. 6.2.9 Proposed district tall buildings along key streets

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.

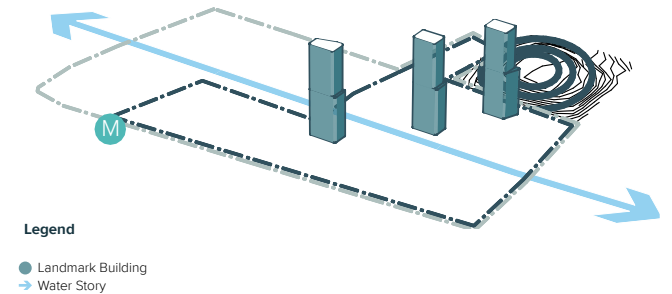


Fig. 6.2.10 Proposed landmark buildings along Blue Line

BUILDING SEPARATION STRATEGY

Building separation amenity to adjacent built form.

Minimum 24 metres separation between neighbourhood tall buildings

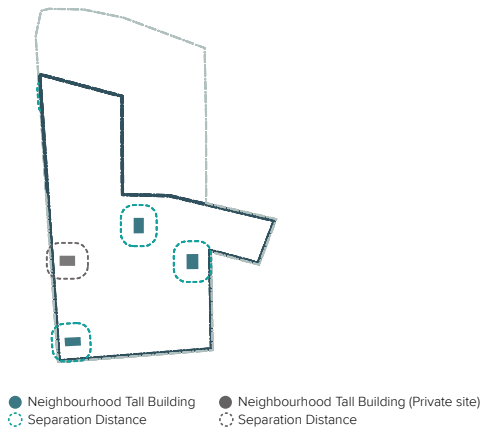


Fig. 6.2.11 Proposed location of local buildings

Minimum 40 metres separation between district tall buildings

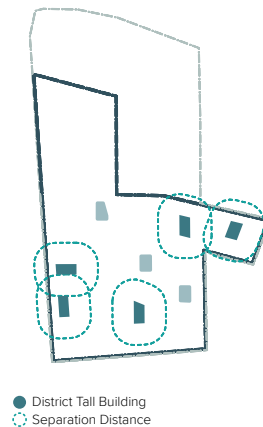


Fig. 6.2.12 Proposed location of district tall buildings

Minimum 60 metres separation between landmark tall buildings

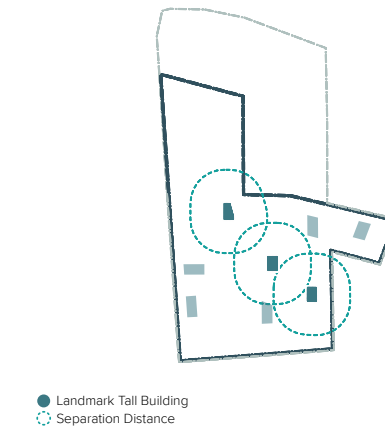


Fig. 6.2.13 Proposed location of landmark tall buildings



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

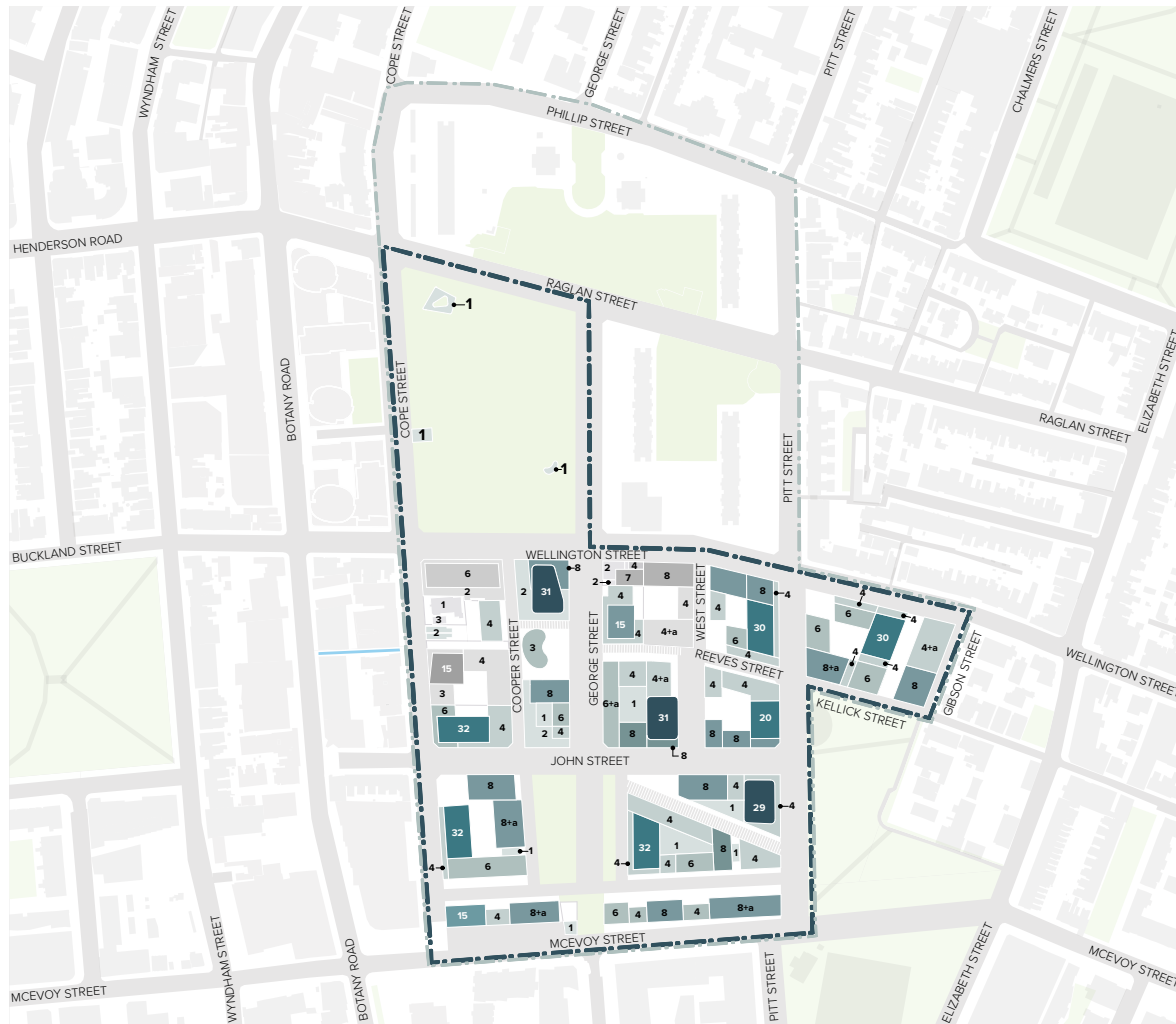


Fig. 6.2.14 Proposed building heights (in storeys)



Legend

- Waterloo Estate
- Waterloo South
- Waterloo Metro Station
- 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.

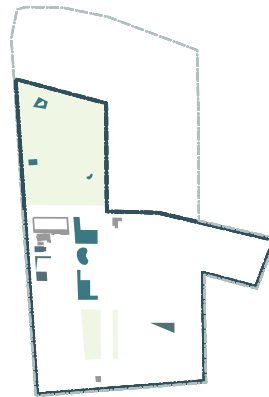


Fig. 6.2.16 Buildings of 1 to 3 storeys

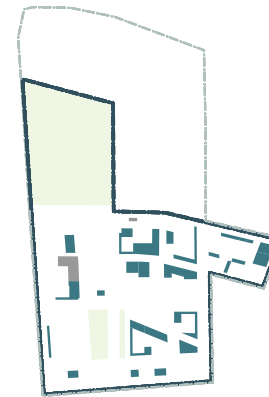


Fig. 6.2.19 Buildings of 4 storeys

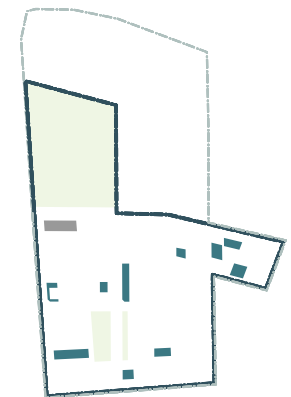


Fig. 6.2.21 Buildings of 6 to 6+attic storeys



1 - 3 Storeys

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

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.

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. 6.2.20 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.

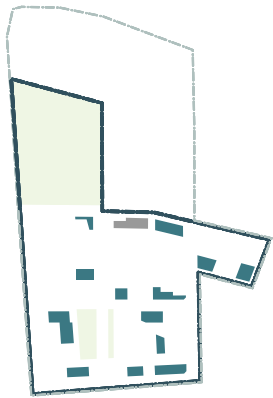


Fig. 6.2.23 Buildings of 8 to 8+attic storeys



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.

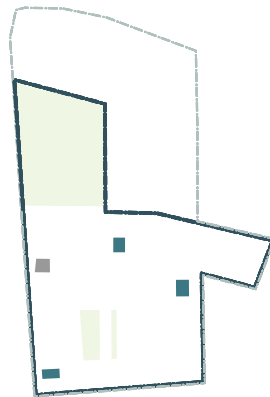


Fig. 6.2.25 Neighbourhood buildings of 15 to 20 storeys



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

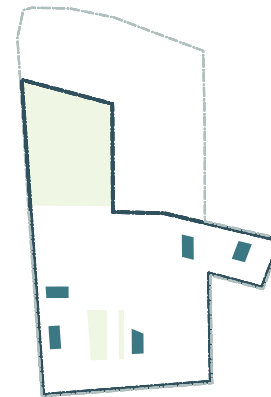


Fig. 6.2.28 District buildings of 30 to 32 storeys



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

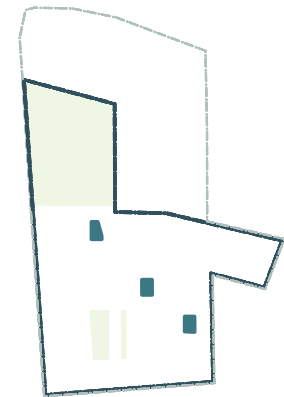


Fig. 6.2.31 Landmark buildings of 29 to 31 storeys



29 - 31 Storeys (Landmark)

- Landmark 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

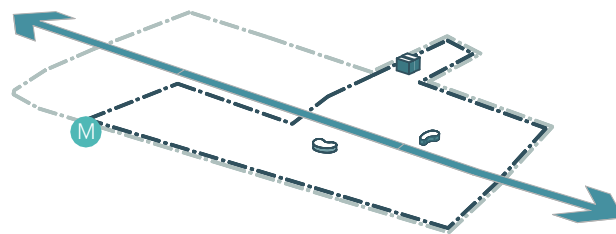


Fig. 6.2.34 Community buildings

- 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 & HK5, 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

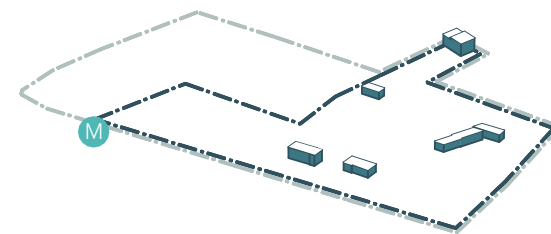


Fig. 6.2.37 Row apartment buildings

- 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

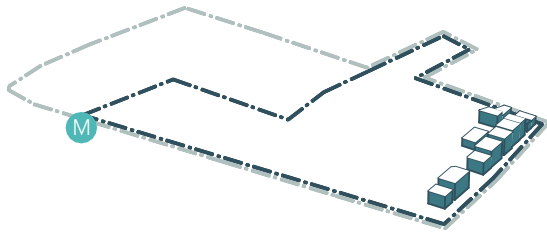


Fig. 6.2.40 Linear buildings

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.

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.

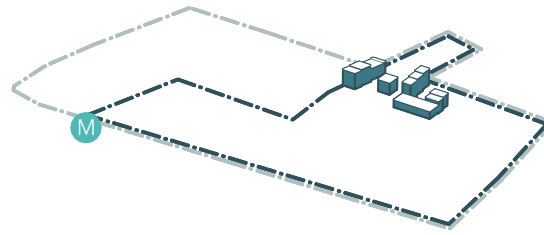


Fig. 6.2.43 Courtyard buildings

Legend

● Courtyard Building

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

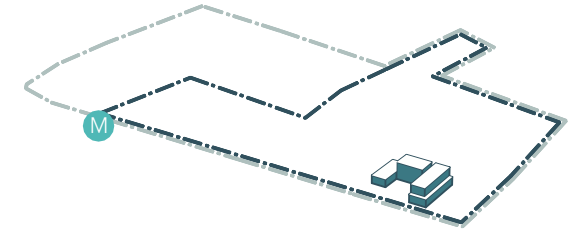


Fig. 6.2.46 Mixed-use courtyard buildings

Legend

● Mixed Use Building with Publicly Accessible Courtyard



Fig. 6.2.41 Camden Courtyards
Source: Sheppard Robson, 2017



Fig. 6.2.42 Residence Ham
Source: CAAN Architects, 2012



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



Fig. 6.2.45 Divercity



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

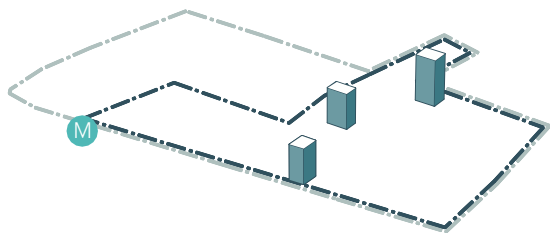


Fig. 6.2.49 Neighbourhood tall buildings

- Legend**
- Waterloo Estate
 - Waterloo South
 - Neighbourhood Tall buildings
 - Ⓜ Waterloo Metro Station

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

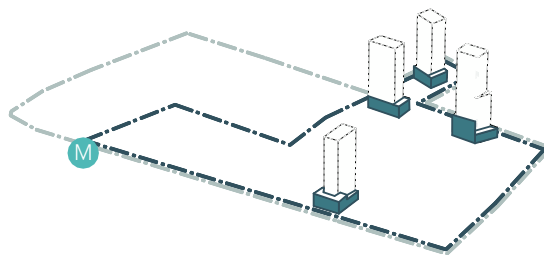


Fig. 6.2.53 Tall buildings with podium

- Landmark Building with Podium

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

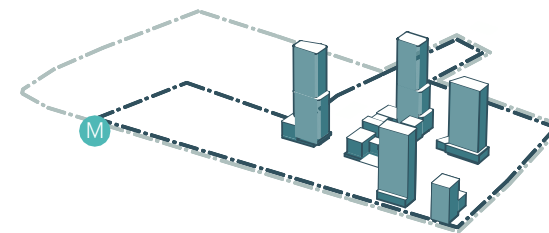


Fig. 6.2.56 Hybrid buildings

- Hybrid Building

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.



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



Fig. 6.2.51 Unitt Urban Living
Source: Basiches Arquitectos Asociados, 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

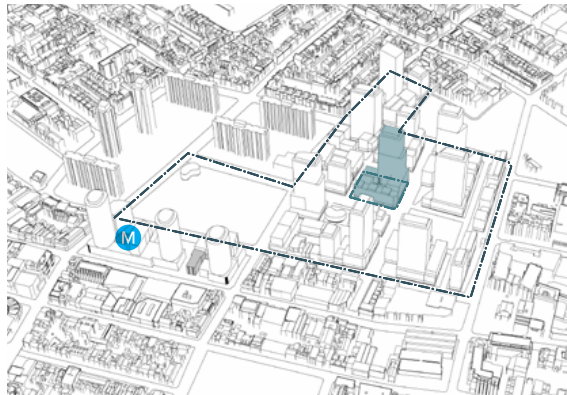


Fig. 6.2.60 Selected lot analysis

- Legend**
- Waterloo South
 - Built form
 - Ⓜ Waterloo Metro Station
 - Lot Study

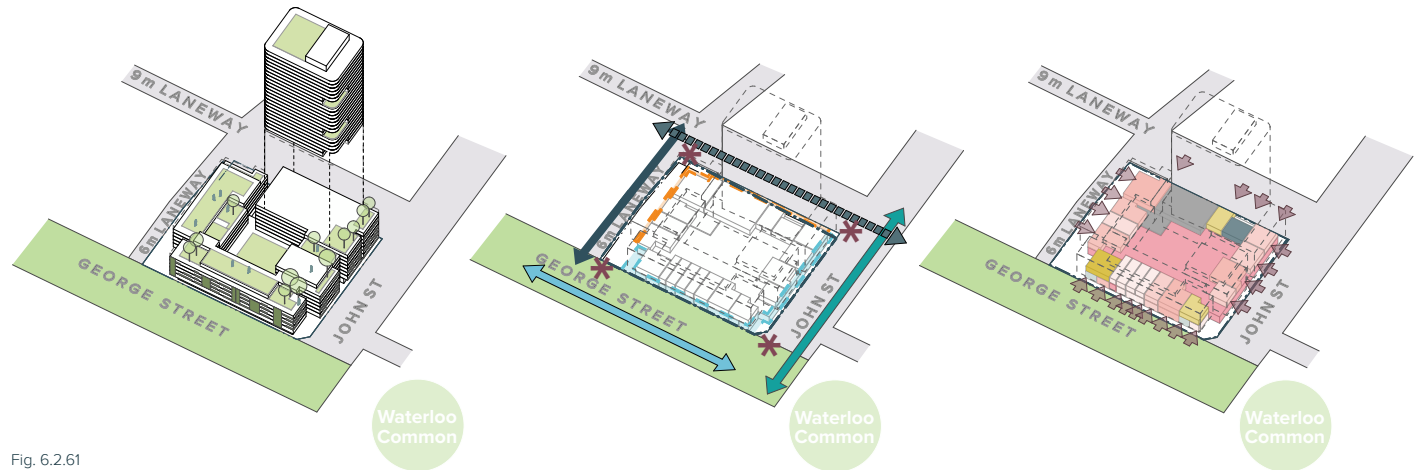


Fig. 6.2.61

PUBLIC DOMAIN INTERFACE
PRIVATE DOMAIN
ADG DESIGN CRITERIA

Urban Forest	Setback and landscape zones provide for new trees
Open Space	1,570 m ² (38% of site area)
Landscape Replacement Area (LRA)	Additional 1,690 m ² (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%)
<hr/>	
Lot Efficiency	Efficiency ranges from 63% to 70% for residential uses and 90% for non-residential uses
Gross Floor Area (GFA)	27,620 m ²
Dwellings	304
<hr/>	
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 façades receive 2 hours between 9am to 3pm at mid-winter
Cross Ventilation	Complies 60-63% of dwellings achieve 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

- 6.3.1 Landscape, Urban Grain & Built Form
- 6.3.2 Responding to the Existing and the Future Local Context
- 6.3.3 Heritage Interfaces
- 6.3.4 Contextual Interfaces
- 6.3.5 Public and Private 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.

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
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)

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 layout established 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.

URBAN FABRIC ELEMENTS



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

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



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

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.



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

GREEN SQUARE



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



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

WATERLOO



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



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



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

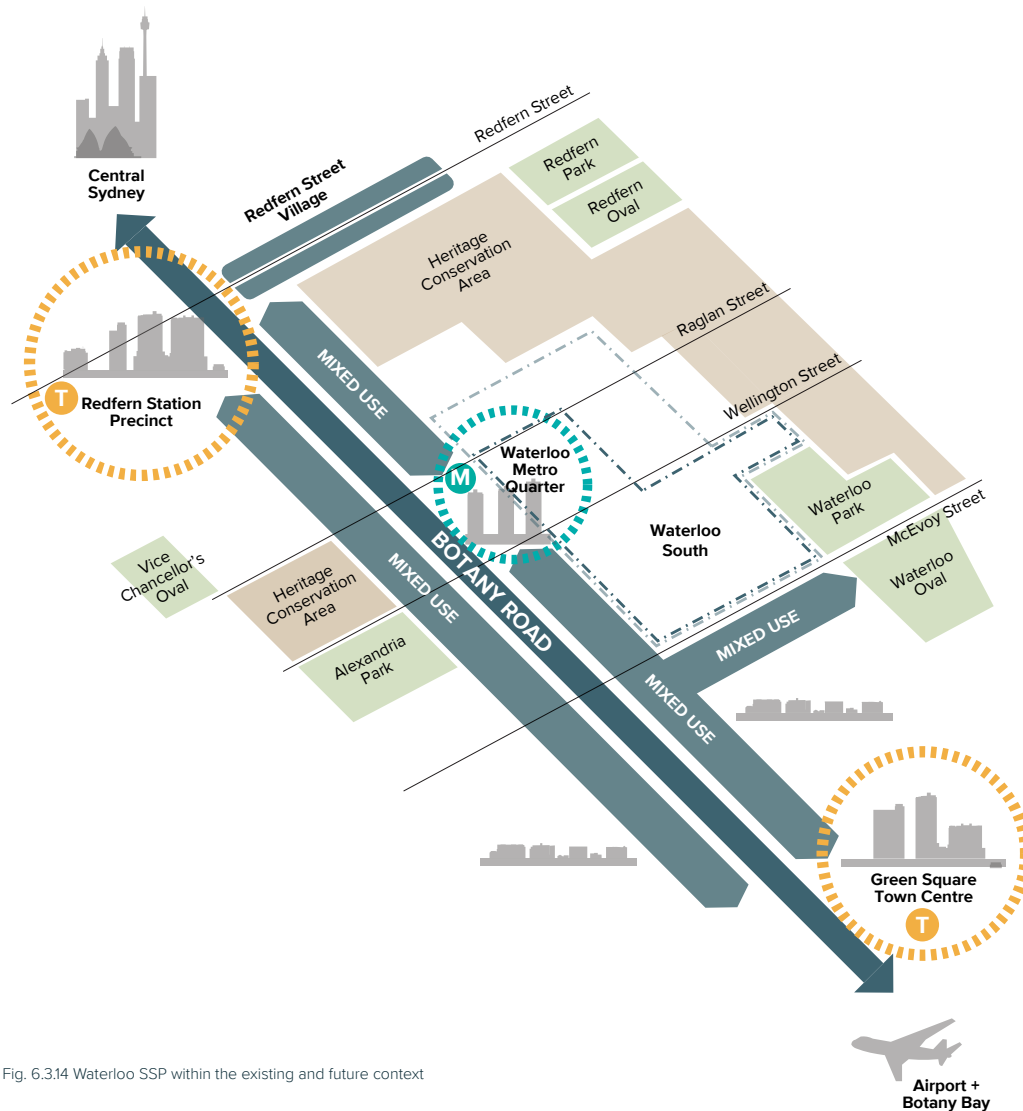


Fig. 6.3.14 Waterloo SSP within the existing and future context

Legend

- Waterloo Estate
- Train Station
- Metro Station
- Open space
- Heritage conservation area (HCA)
- Mixed use
- Existing strategic centre
- Active transport hub

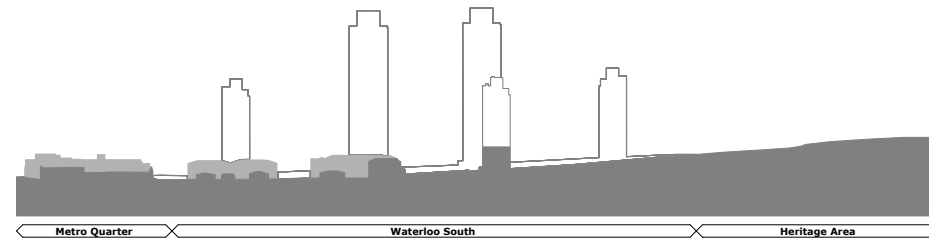
Height defined in response to local context and amenity

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.

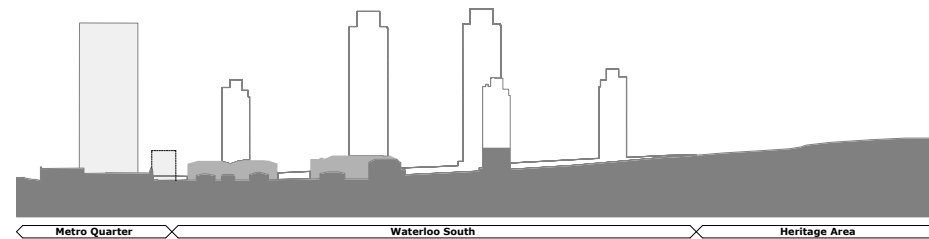
As part of the Redfern Waterloo Growth Area, Waterloo South is set within a context that will fundamentally change over the next 40 years.

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

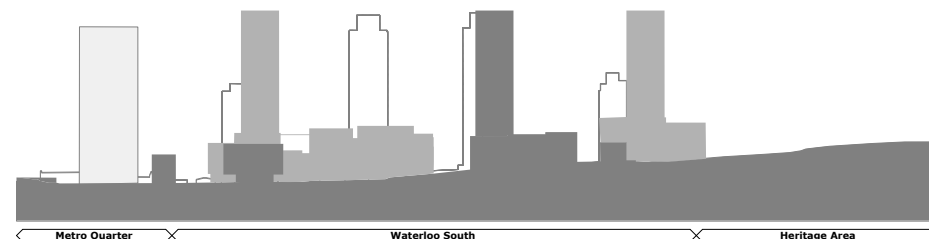


Fig. 6.3.15 Evolution of Waterloo SSP



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

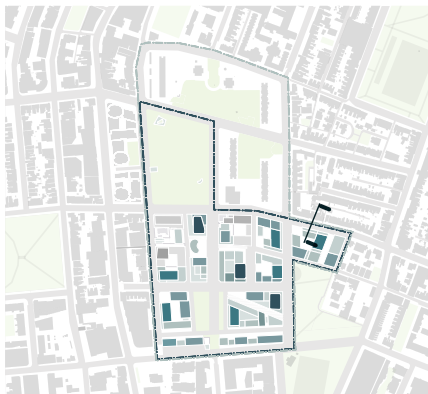


Fig. 6.3.17 Key plan

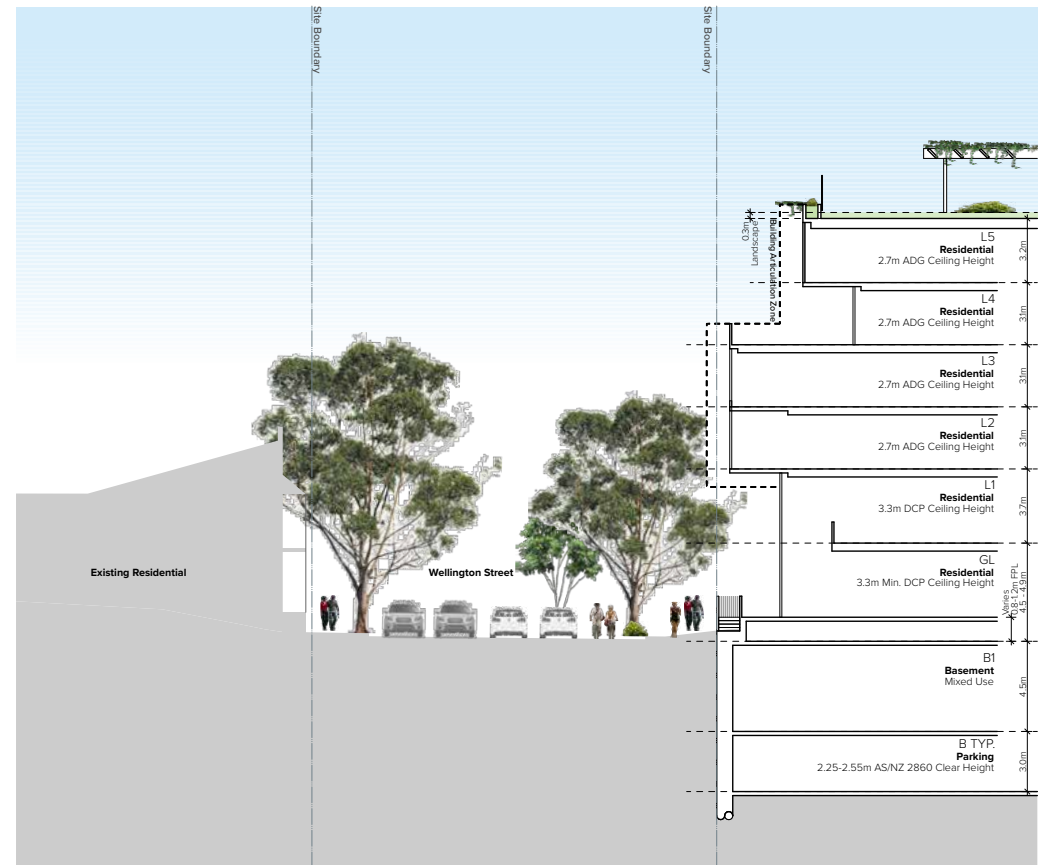


Fig. 6.3.18 Wellington Street (East) interface

PITT STREET INTERFACE (SOUTH)



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

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.

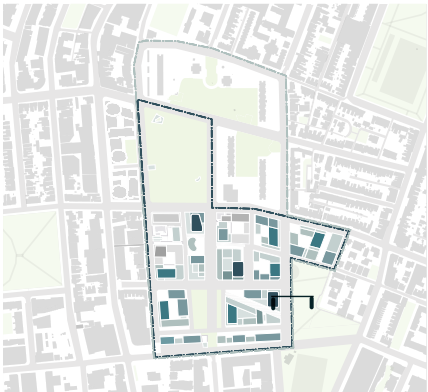


Fig. 6.3.20 Key plan

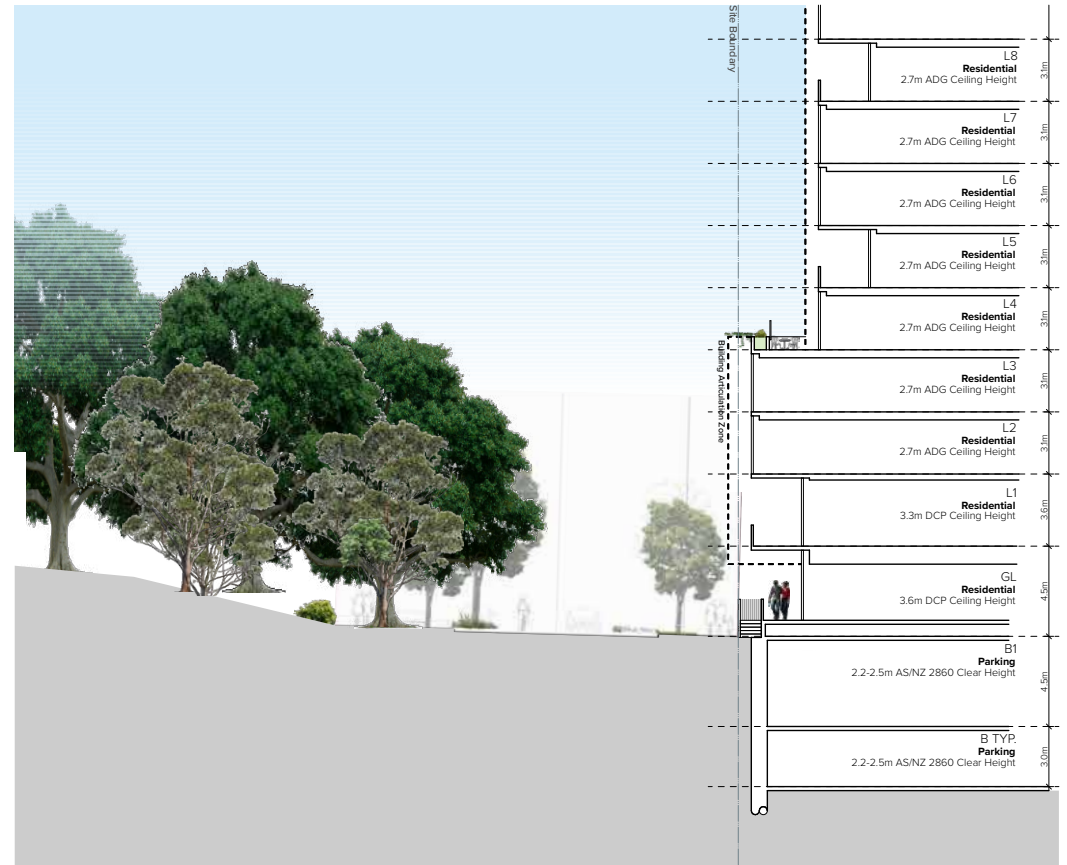


Fig. 6.3.21 Pitt Street (South) interface

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

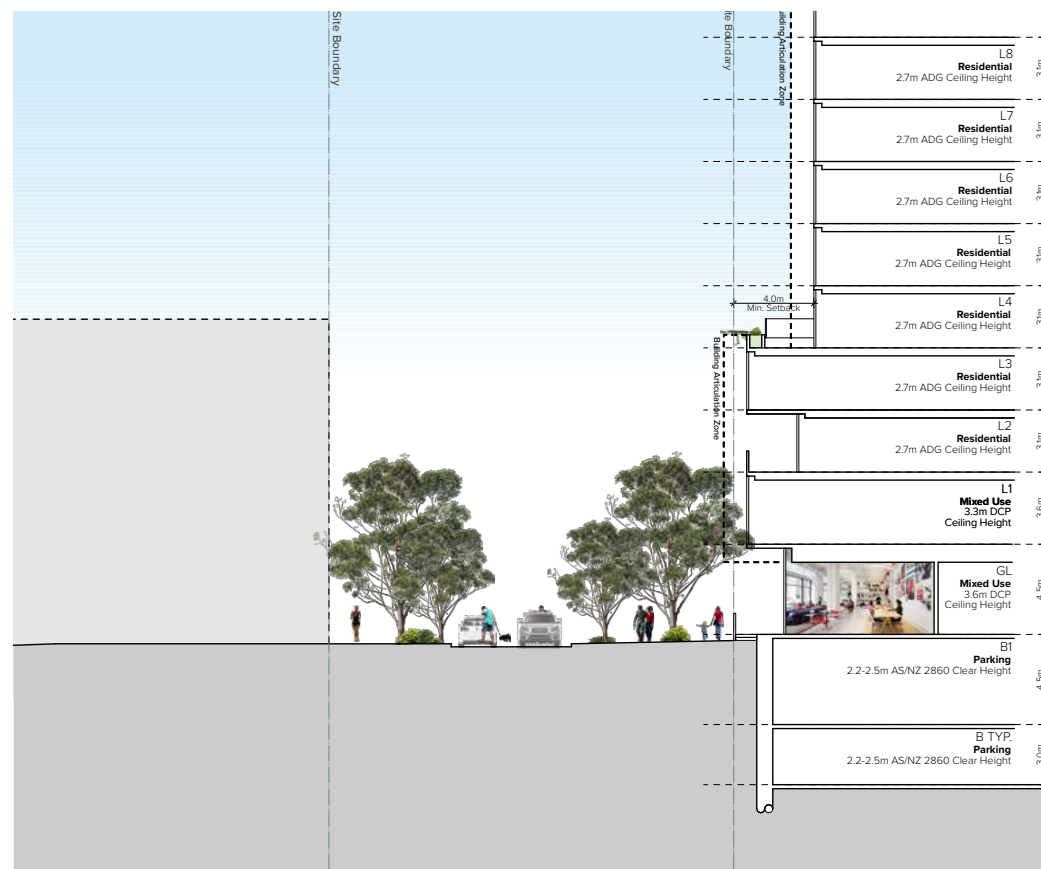


Fig. 6.3.23 Cope Street (South) interface

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.

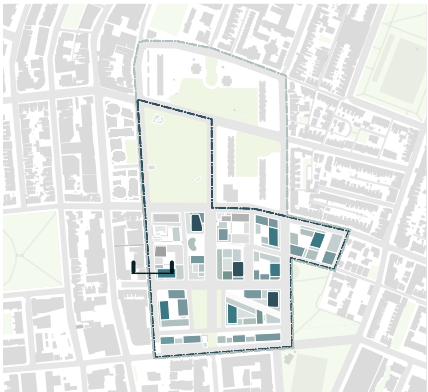
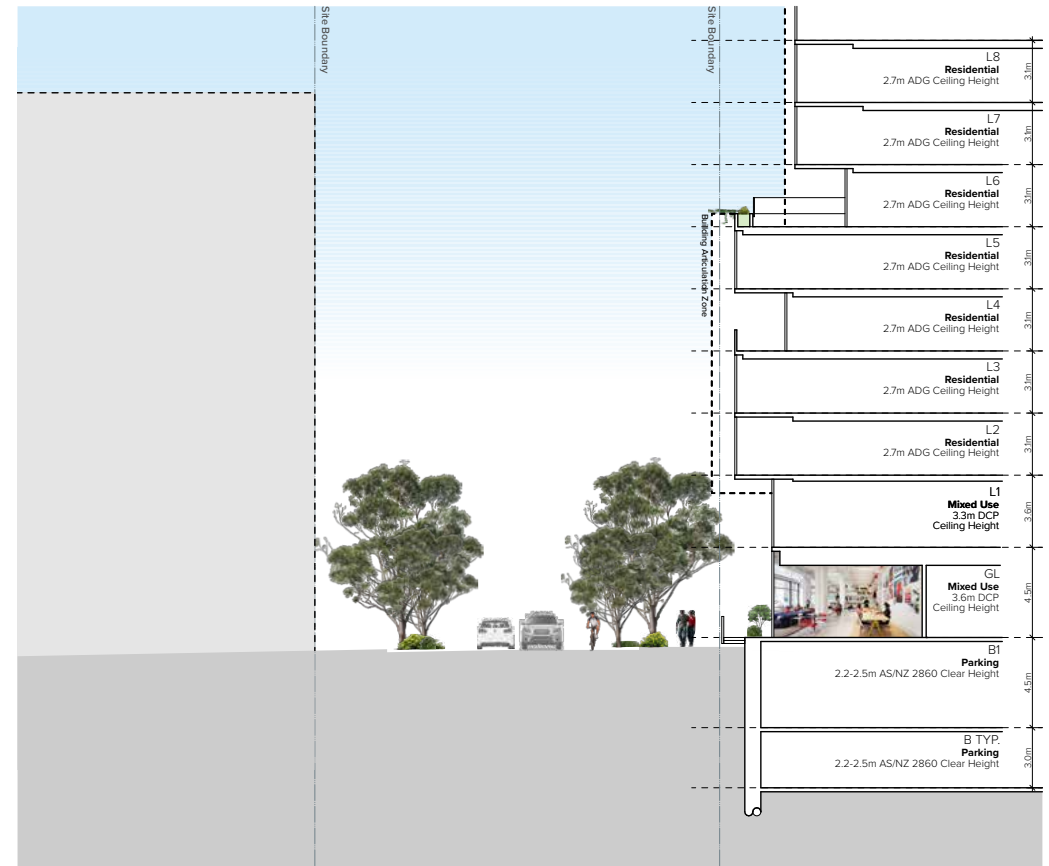


Fig. 6.3.25 Key plan





WELLINGTON STREET INTERFACE (WEST)



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

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.

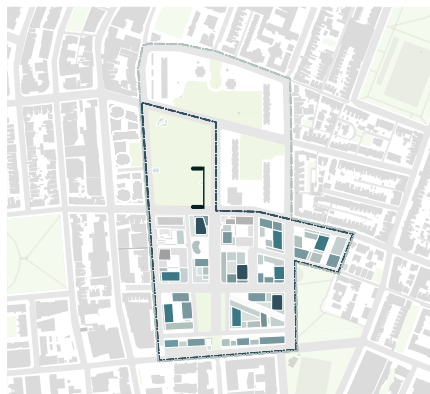


Fig. 6.3.28 Key plan

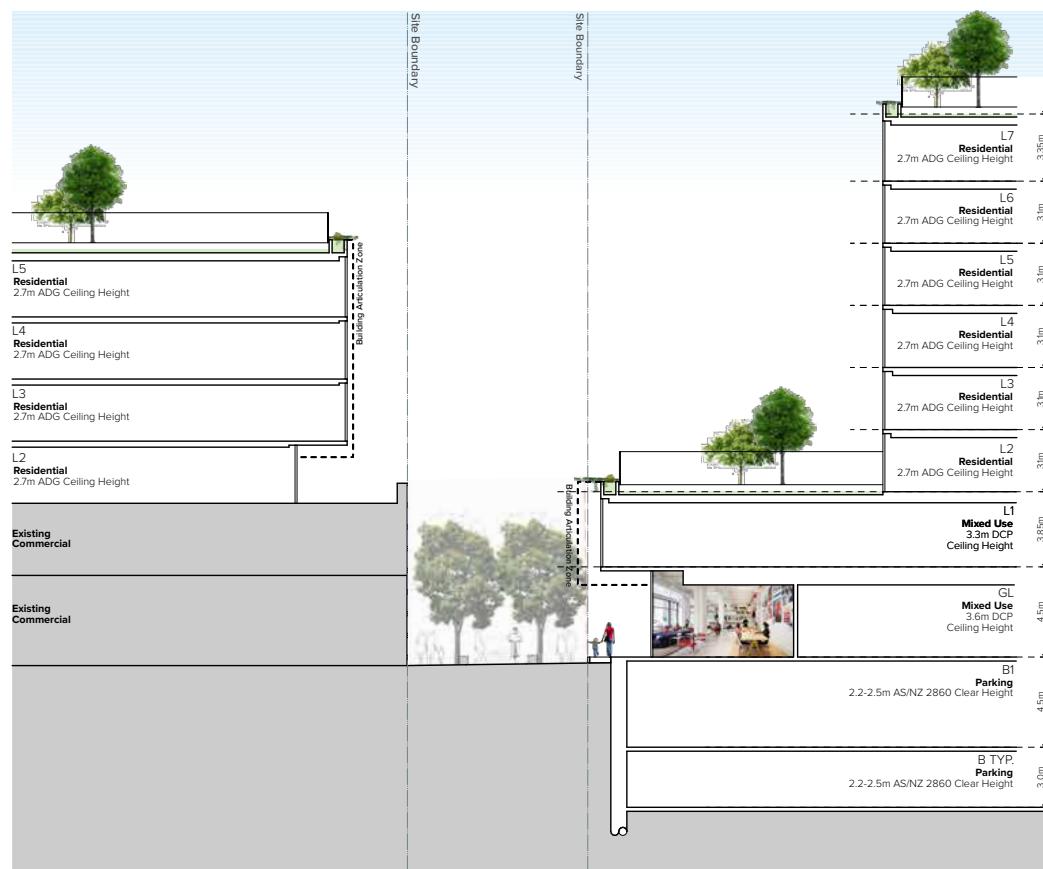


Fig. 6.3.29 Cooper Street heritage interface

KELICK STREET INTERFACE



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

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.

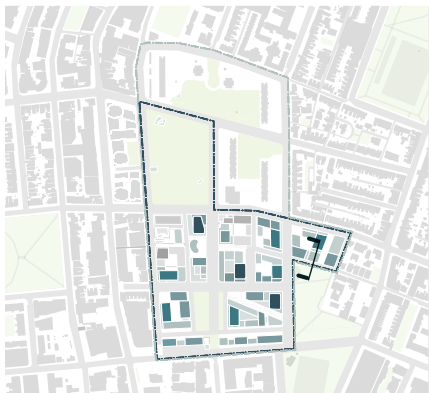


Fig. 6.3.31 Key plan

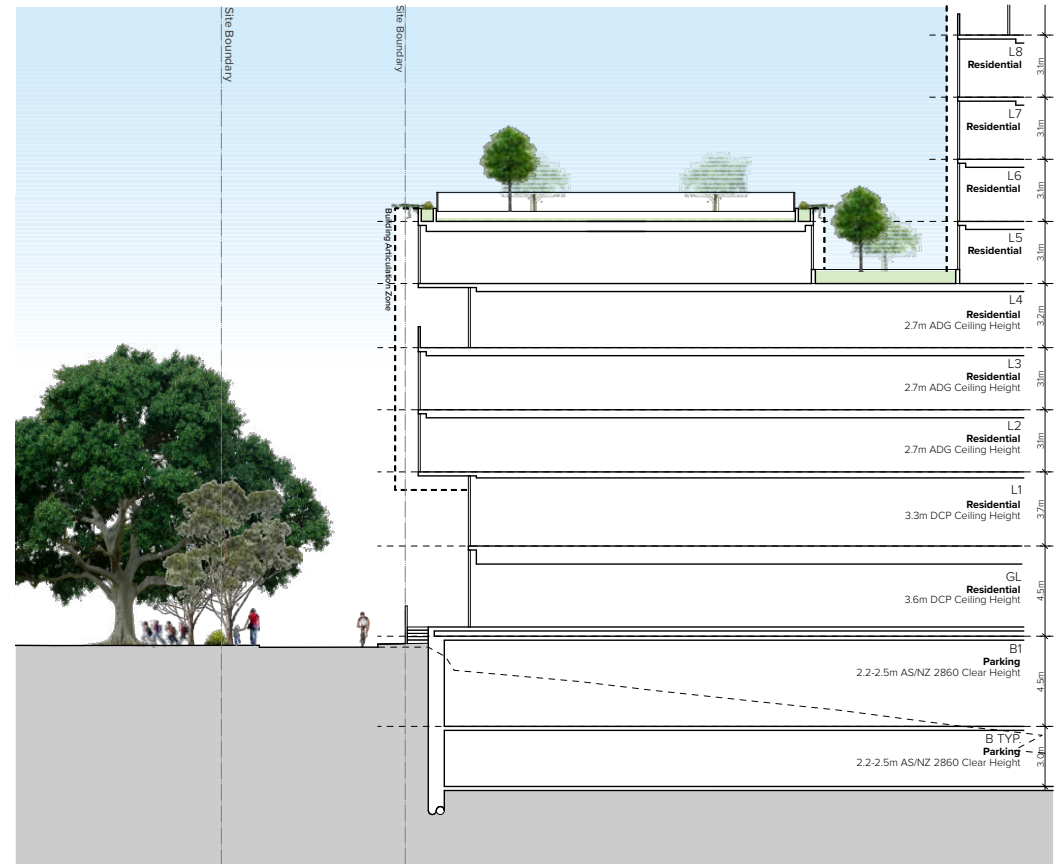


Fig. 6.3.32 Kellick Street interface



GIBSON STREET INTERFACE



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

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..

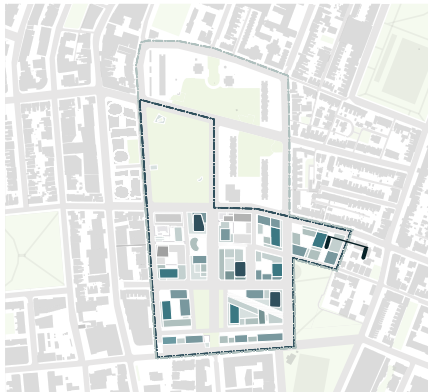


Fig. 6.3.34 Key plan

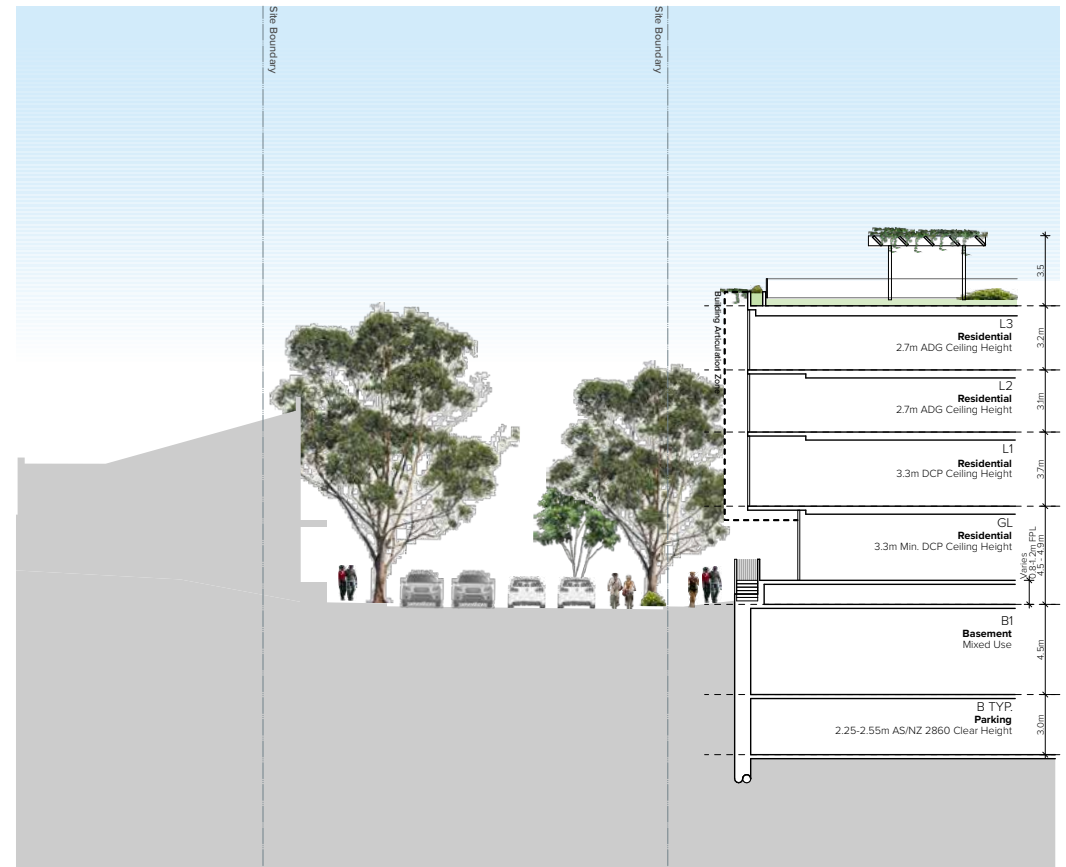


Fig. 6.3.35 Gibson Street interface

MCEVOY STREET INTERFACE (EAST)



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

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.

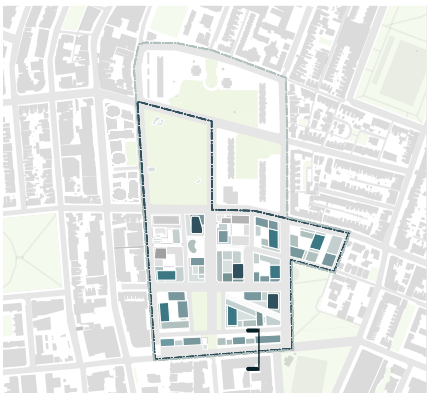


Fig. 6.3.37 Key plan

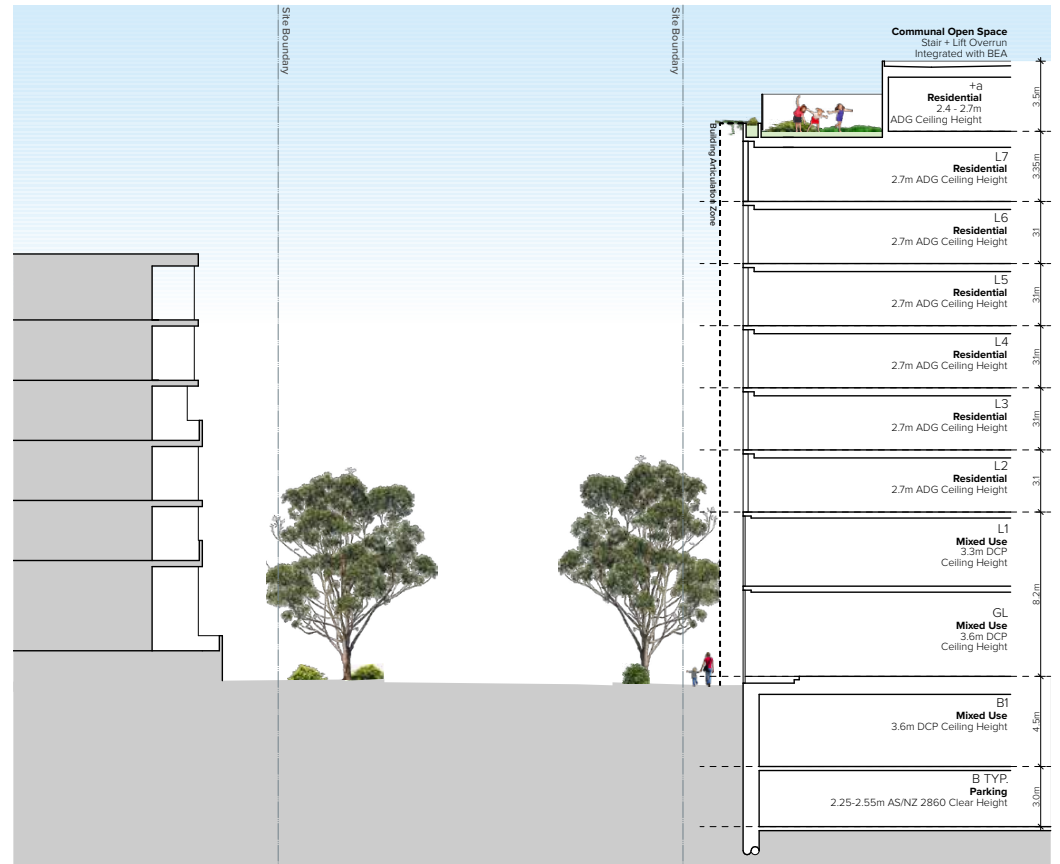


Fig. 6.3.38 McEvoy Street (East) interface



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.

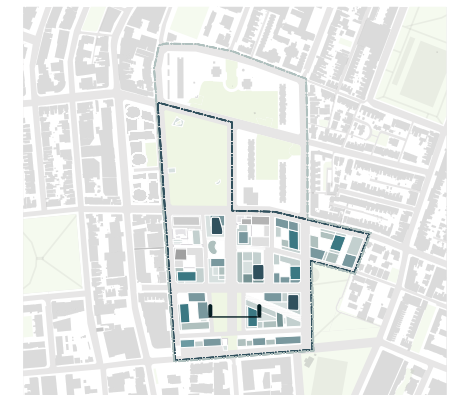


Fig. 6.3.44 Key plan

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 above nine storeys maintain a maximum perceived streetwall height of 6 storeys. Social corners / pocket parks provide additional open space typologies.

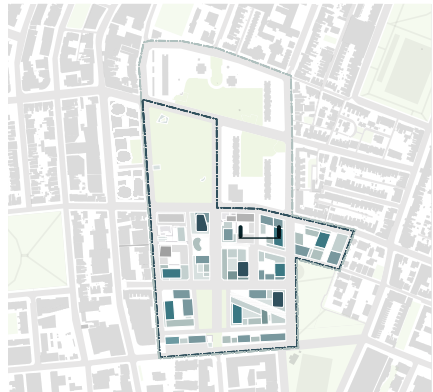


Fig. 6.3.47 Key plan



Fig. 6.3.48 Social corner interface

