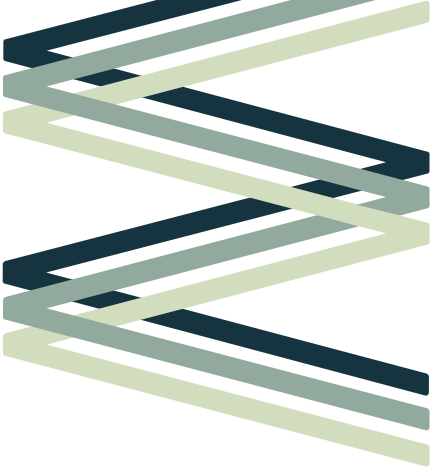


Attachment B7(a)

**Urban Design and Public Domain Study
Part 1 – Waterloo Estate (South) – Land and
Housing Corporation**



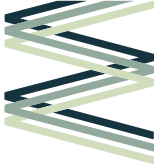
WATERLOO ESTATE WATERLOO SOUTH

URBAN DESIGN & PUBLIC DOMAIN STUDY

08 APRIL 2020

URBAN DESIGN REPORT

PLANNING PROPOSAL



QUALITY ASSURANCE

REPORT CONTACT

Dan Swzaj

dszwaj@turnerstudio.com.au

QUALITY CONTROL

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

Reviewed by:

Karl May

28.03.2020

Dan Swzaj

20.03.2020

REPORT DETAILS

Job No

17018

Version:

Planning Proposal Submission

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



Fig 0.11 The future Metro Quarter and Waterloo Station
Source: Narratives Illustrative CGI, 2018

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.

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.

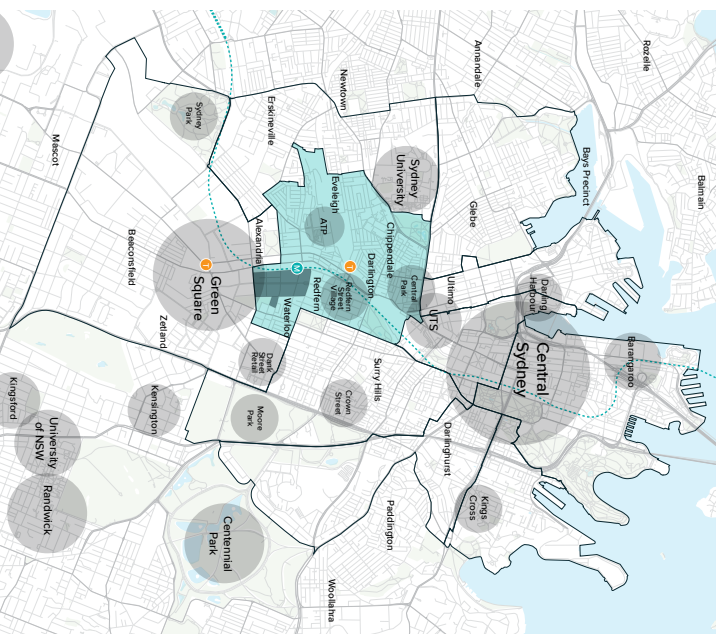


Fig. 012 Waterloo within City of Sydney's Villages & Activity Centres
Source: Adapted from City of Sydney, 2018

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.

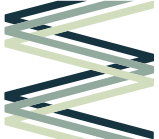
Promote a sense of wellbeing and connection to nature.

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. 01.13 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.

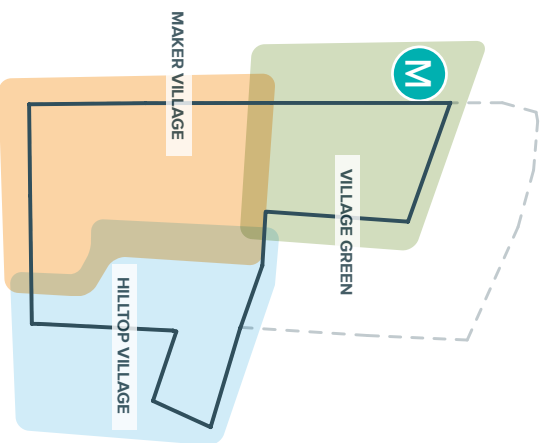


Fig. 01.4 Waterloo South character sub-precinct areas

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.

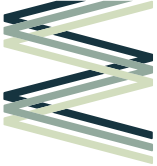
Placemaking activities defined three **sub-precinct character areas** for Waterloo South, based on their existing and future place characteristics: Village Green, Maker Village and Hilltop Village. Within these sub-precincts reside key places of the Estate: the Village Green and Waterloo Common while 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-walks 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 iteration, the masterplan has become more refined, responsive and technically robust, culminating in an Indicative Concept Proposal that is uniquely Waterloo.

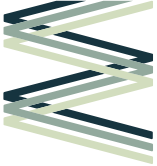
COMMUNITY ENGAGEMENT KEY LEARNINGS:

- 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 77 Masterplan Drawings, Appendix 79 Solar Analysis and Appendix 710 Assessments for further information.



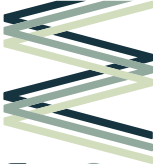
Fig. 01.5 Indicative CGI, Waterloo Village Green: 'Big Roof'
Source: Virtual Ideas, 2020



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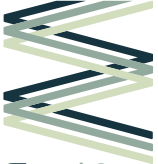
CITY OF SYDNEY PLANNING PROPOSAL REQUIREMENTS

URBAN DESIGN

PLANNING PROPOSAL REQUIREMENT	ADDRESSED IN	PLANNING PROPOSAL REQUIREMENT	ADDRESSED IN
<p>The Urban Design Report must be prepared in accordance with Study Requirements - Nominated State Significant Precinct – Waterloo (Revised March 2018)</p> <p>Key components include (but are not limited to):</p> <p>The built form should be developed in line with the design process described in the NSW Government Architect Better Placed strategy</p>	Refer SSP Study requirements		
<p>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:</p> <ul style="list-style-type: none"> A detailed site and context analysis Opportunities and constraints mapping A full review of design options, including redevelopment, renovation and adaptive re-use options The urban design principles that underpin the proposed development 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 	<p>Urban design report</p> <p>Appendix 7I0</p> <p>Appendix 7I</p> <p>Chapter 2.0</p> <p>Chapter 3.0</p> <p>Appendix 7.2</p> <p>Chapter 1.0</p> <p>Appendix 7I0</p>		
		<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 A landscape concept plan A staging plan 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. Overshading 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. Proposed distribution of gross floor area, development yields, building typologies, building envelopes and heights. 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. 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. 	<p>Chapter 4.0</p> <p>Appendix 7.3</p> <p>Appendix 7.4</p> <p>Appendix 7.8</p> <p>Appendix 7.5, Chapter 6.2</p> <p>Chapter 6.2</p> <p>Appendix 7.3</p> <p>Appendix 7.8</p> <p>Appendix 7.1</p> <p>Provided as a separate study by Cardno</p> <p>Appendix 7.9</p> <p>Appendix 7.5 & 7.8</p> <p>Chapter 6.2</p> <p>Appendix 7.5</p> <p>Appendix 7.5</p> <p>Provided as a separate study by Windtech</p>

PUBLIC DOMAIN

PLANNING PROPOSAL REQUIREMENT	ADDRESSED IN	PLANNING PROPOSAL REQUIREMENT	ADDRESSED IN
<p>The following urban design analysis should also be supplied to the City:</p> <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. 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. 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 	<p>To be provided to CoS separately</p> <p>To be provided to CoS separately</p> <p>Appendix 77 Appendix 78</p>	<p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>Provide an indicative design strategy and material and furniture palette for new streets and public spaces.</p>	<p>Consultation was undertaken through engagement with CoS throughout the SSP Process. Public Domain Plan has been submitted for endorsement.</p> <p>Chapter 4.0 - 6.0 Chapter 6.0 Appendix 7.3</p> <p>Appendix 7.3</p>
<p>Scale Drawings</p> <ul style="list-style-type: none"> Plans Sections Elevations Perspectives Envelope drawings Indicative residential layout Massing and structure plan options Overshadowing and solar access to proposed development, open spaces and neighbouring buildings (showing existing and proposed) 	<p>Appendix 7.7 Appendix 7.7</p> <p>Throughout the report and in Appendix 7.7</p> <p>Appendix 7.7 Appendix 7.5 Appendix 7.2, Chapter 3.0 Appendix 7.9</p>	<p>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.</p>	<p>Chapter 4.0 Chapter 6.0 Appendix 7.3</p>
<p>Survey Plan The survey plan needs to be to scale, showing relative levels to AHD and include details of adjoining development</p>	<p>To be provided to CoS separately</p>		



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. 101 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. 10.2 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 (LAHQ). 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

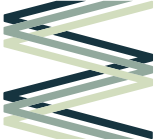
In depth needs analysis of the infrastructure required to service the needs of the future community including open space, community facilities and servicing infrastructure.

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 1.11). 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

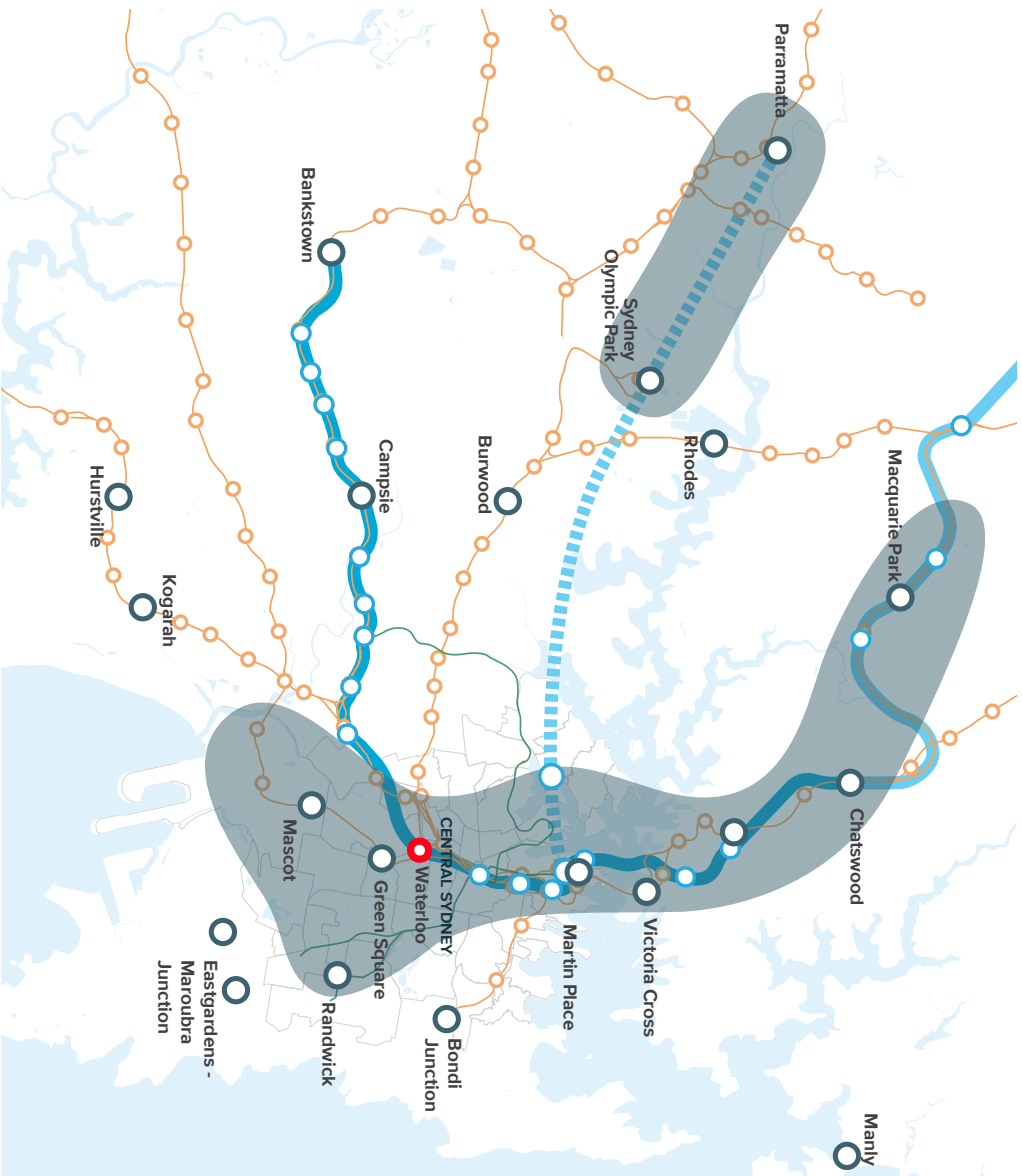


Fig1.11 Waterloo's strategic location
Source: Adapted from Eastern City District Plan, Greater Sydney Commission, 2018

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 12.1.

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.

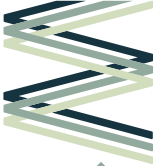
Sydney Metro are leading the development process for the Metro Quarter - development above and adjacent to the station as well as the metro station itself and associated infrastructure. Most of the station will be located underground as a 'cut and cover' between Raglan and Wellington Street. The primary 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. 12.1 Waterloo South private sites

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



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 55% 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

- Legend**
- Waterloo South boundary
 - Waterloo Station and Metro Quarter
 - Train station
 - Waterloo Congregational Church
 - Waterloo South
 - Private sites
 - Waterloo North
 - Waterloo Central

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:

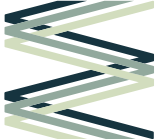
- It is a design, open / public domain space led approach.
 - Creation of two large parks of high amenity by ensuring good sunlight access.
 - Creation of a pedestrian priority precinct with new open spaces and a network of roads, lanes and pedestrian links.
 - Conversion of George Street into a landscaped 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



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.

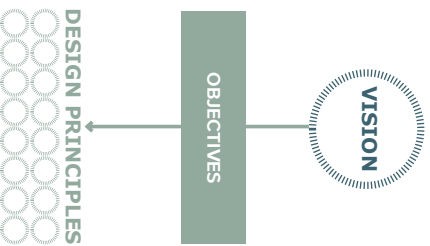


Fig. 14.1 Vision, objectives and principles framework diagram

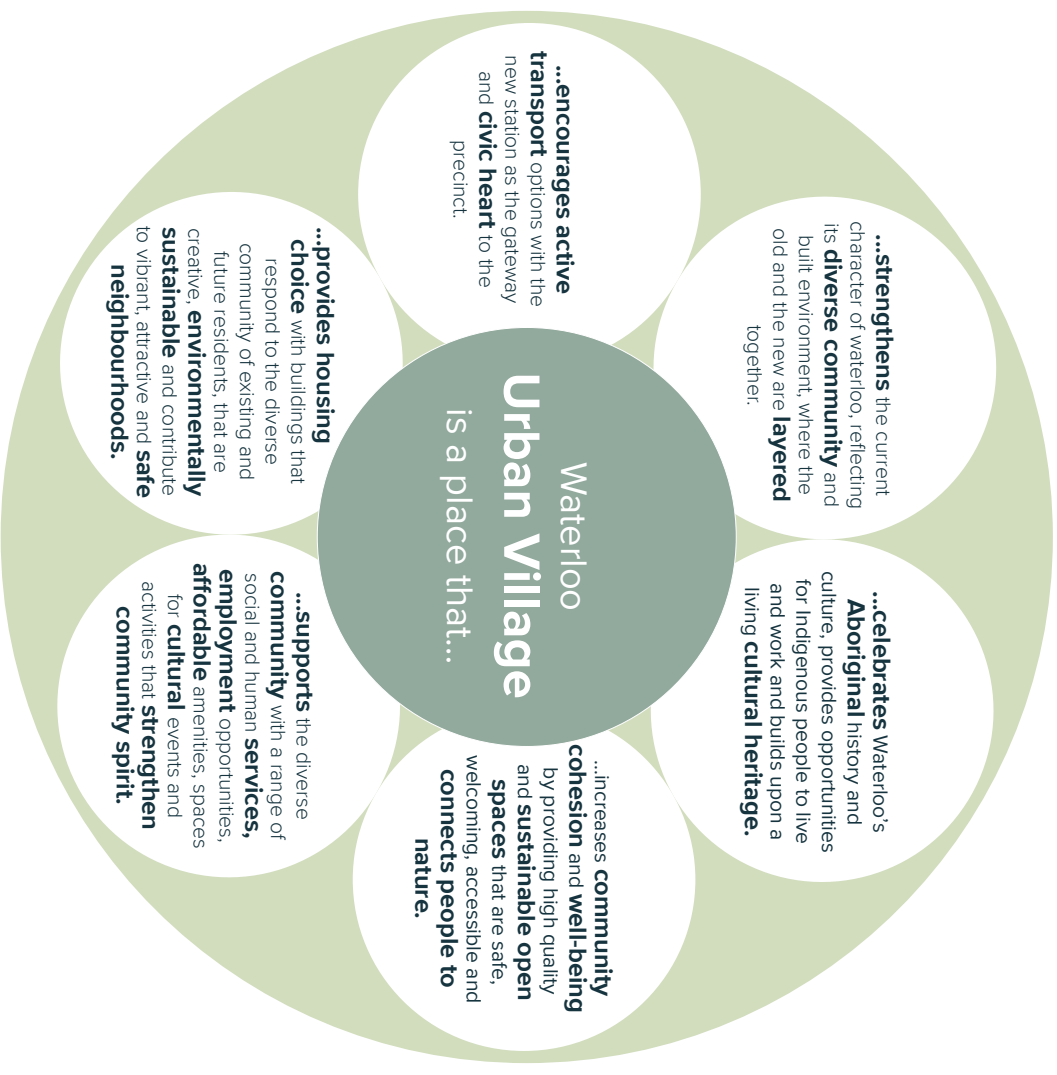


Fig. 14.2 Vision for Waterloo



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.



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..



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.



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.



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 Precincts’ transport network – serving as the gateway to a welcoming, safe and active community.



ACCESSIBLE SERVICES

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



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.

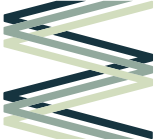


DESIGN EXCELLENCE

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.



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. 2.01 View of Sydney

Source: City of Sydney Archives [SRC2331], 2018

2.0 CONTEXT ANALYSIS

PLANNING PROPOSAL REQUIREMENT	ADDRESSED IN
The built form should be developed in line with the design process described in the NSW Government Architect Better Placed strategy.	Urban Design Report Appendix 70
The urban design principles that underpin the proposed development	Chapter 10

SSP STUDY REQUIREMENT

ADDRESSED IN

Urban Design

2.1 Prepare a detailed site and context analysis.

Chapter 2.0
Appendix 71

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 71
Appendix 72,1

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 71
Appendix 72
Appendix 73

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.2.02 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.2.03 Existing fig tree, Waterloo Estate

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

TIME



Fig.2.04 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.2.05 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.2.06 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. 2.07 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.

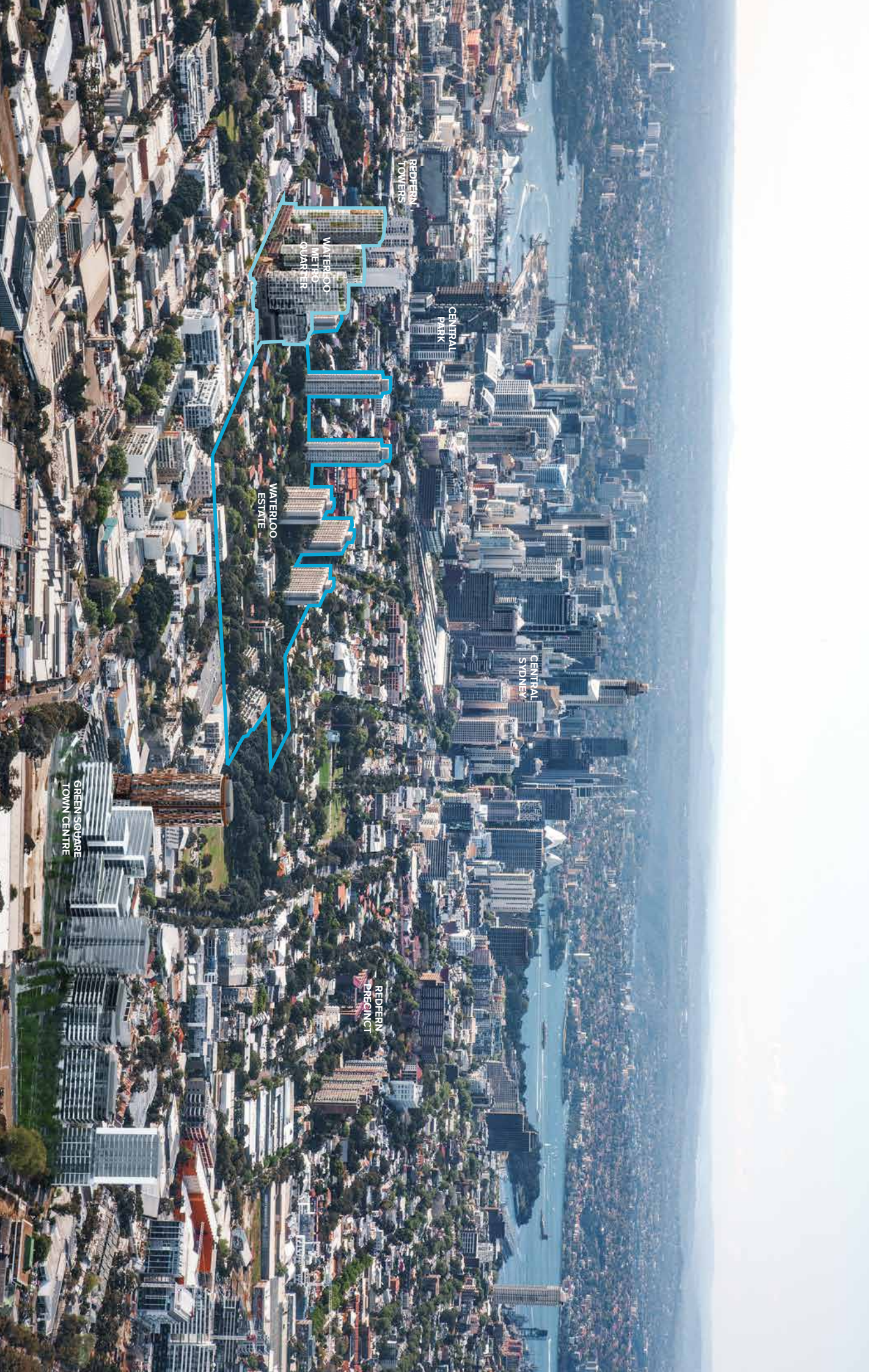


Fig.2.11 View from Green Square to Waterloo Estate towards Central Sydney

Source: Mivac, 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 Mivac (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

Refer to Appendix 71 for further information

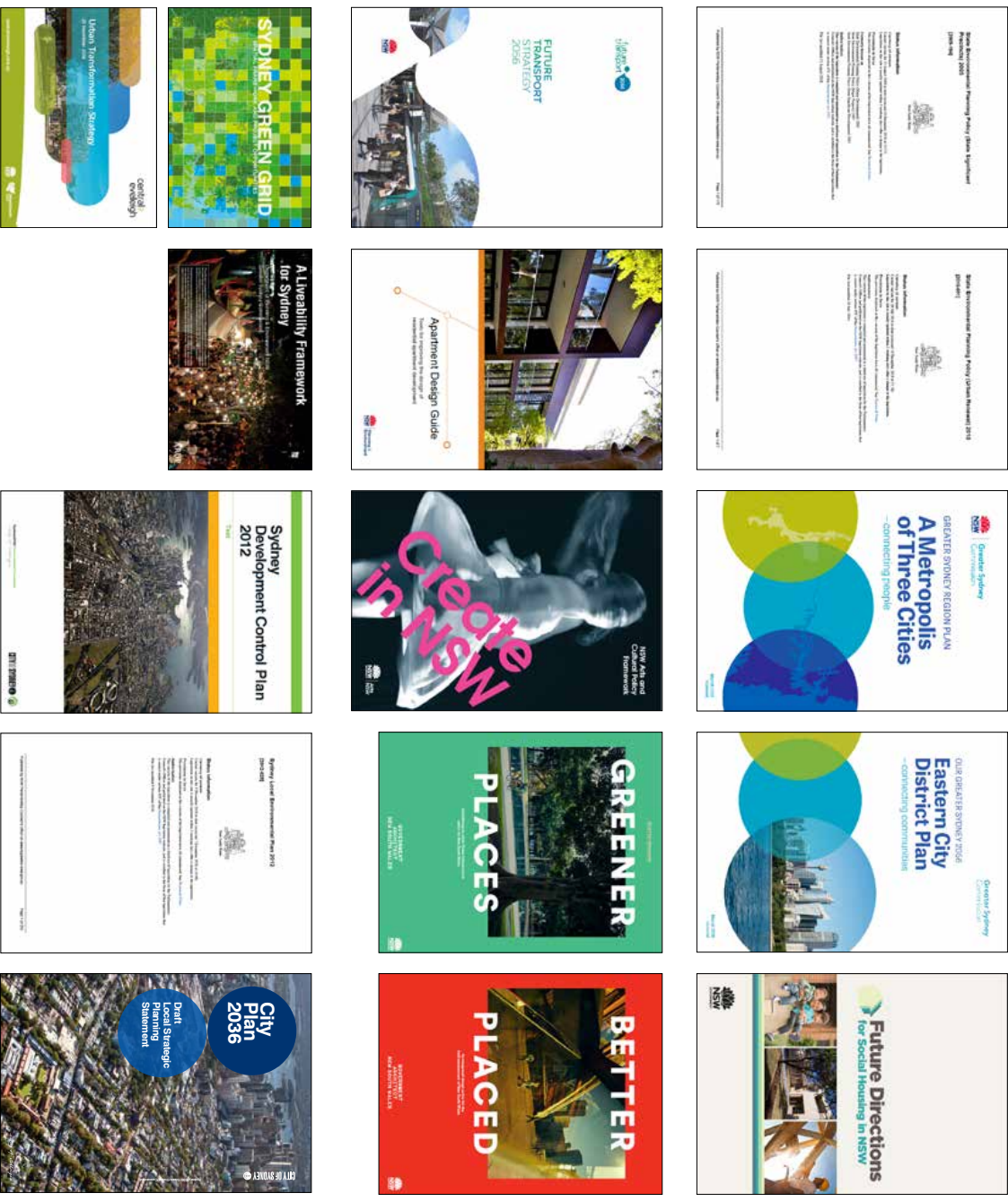
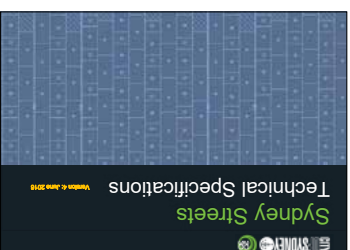
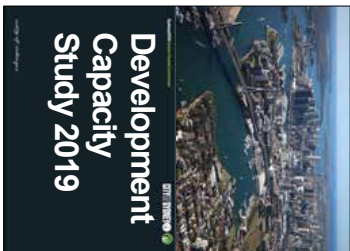
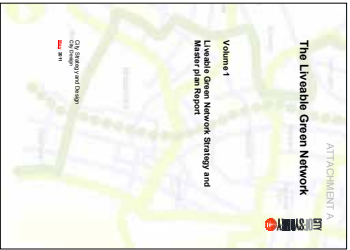
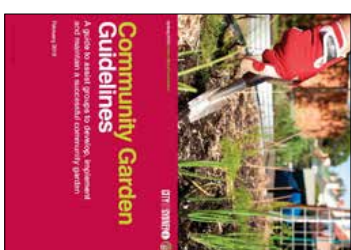
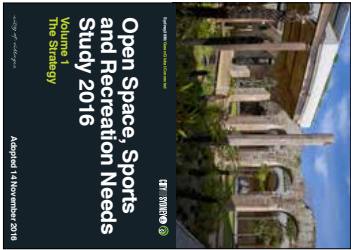
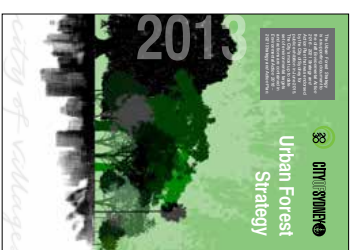
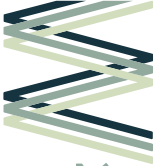


Fig. 21.2 Key strategic policies
Sources: NSW Government, Office of Government Architect NSW and City of Sydney





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

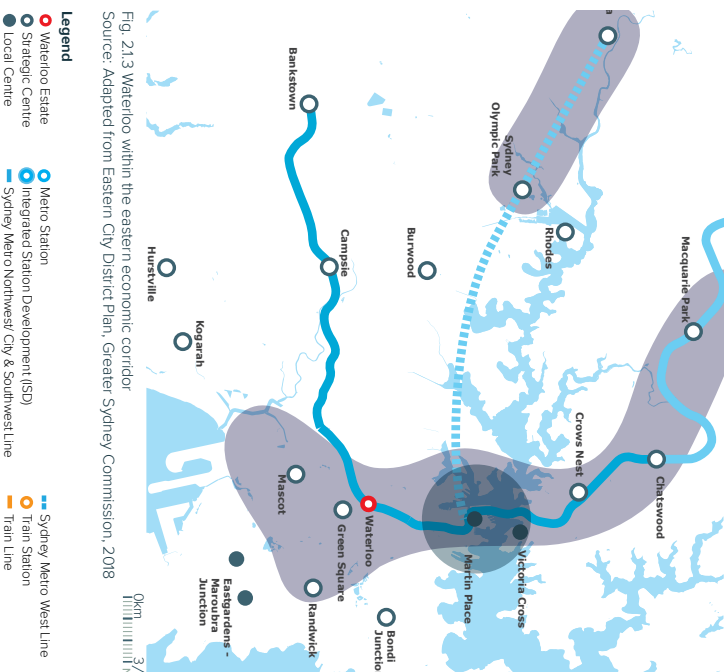


Fig. 21.3 Waterloo within the eastern economic corridor
Source: Adapted from Eastern City District Plan, Greater Sydney Commission, 2018

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

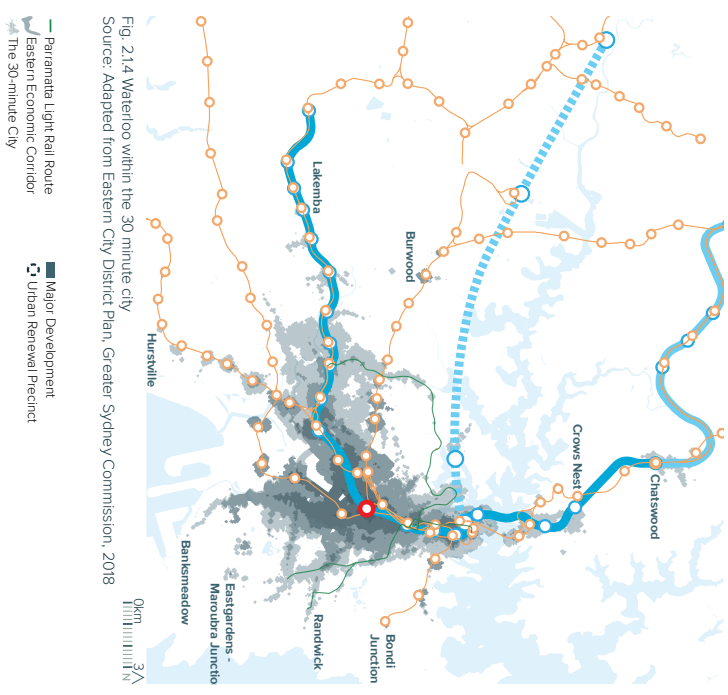


Fig. 21.4 Waterloo within the 30 minute city
Source: Adapted from Eastern City District Plan, Greater Sydney Commission, 2018

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

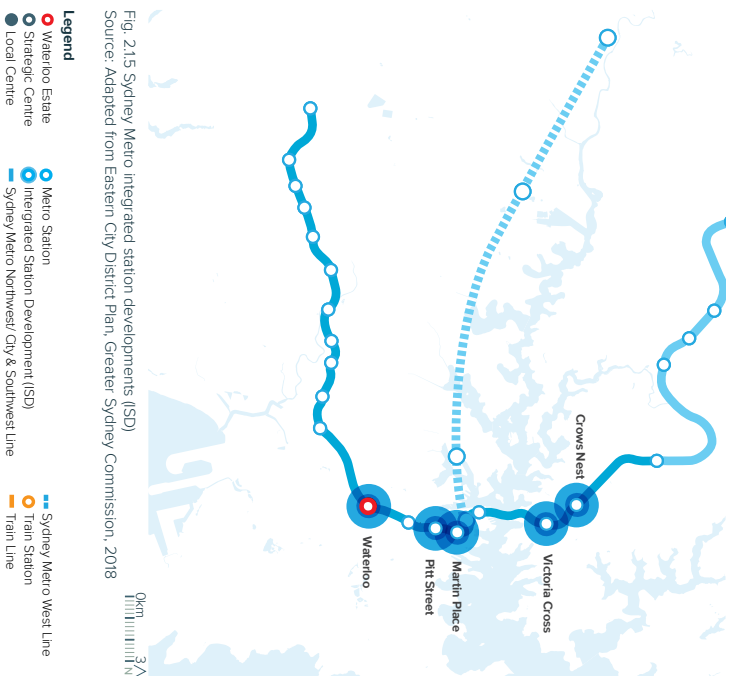


Fig. 2.115 Sydney Metro integrated station developments (ISD)
Source: Adapted from Eastern City District Plan, Greater Sydney Commission, 2018

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

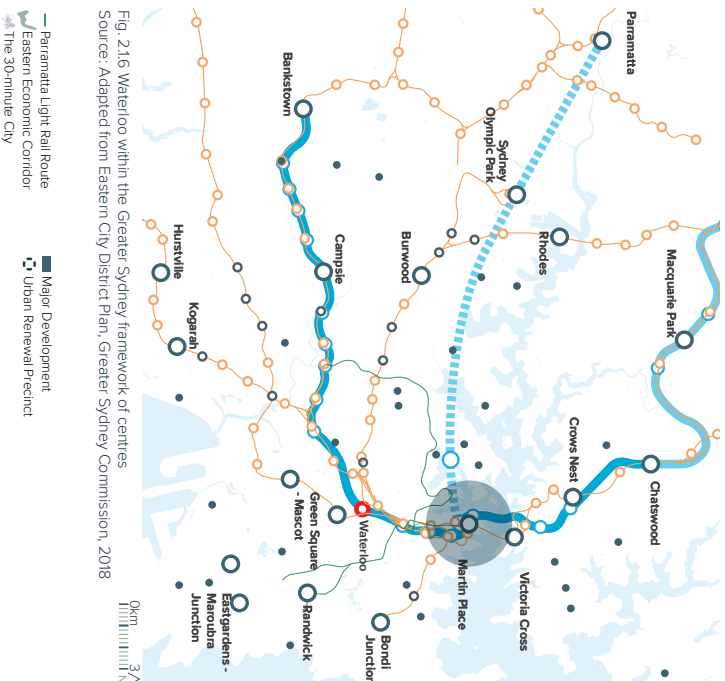


Fig. 2.116 Waterloo within the Greater Sydney framework of centres
Source: Adapted from Eastern City District Plan, Greater Sydney Commission, 2018

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

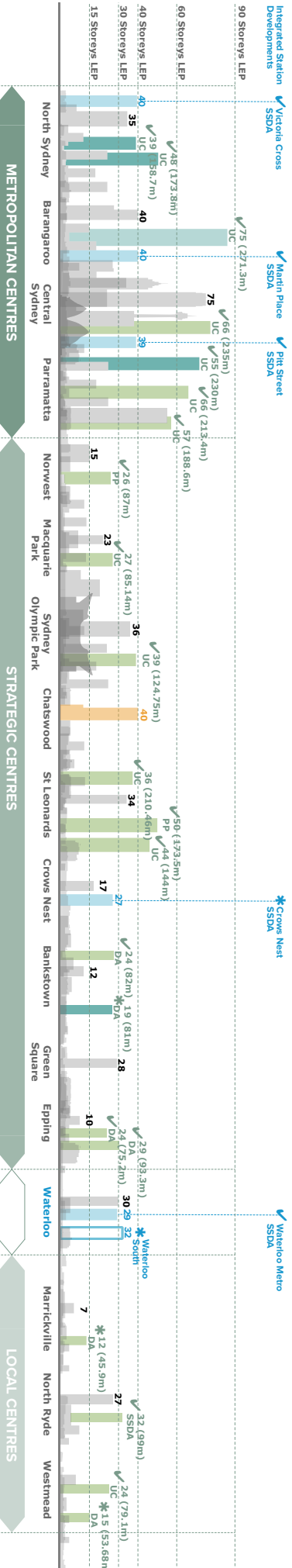
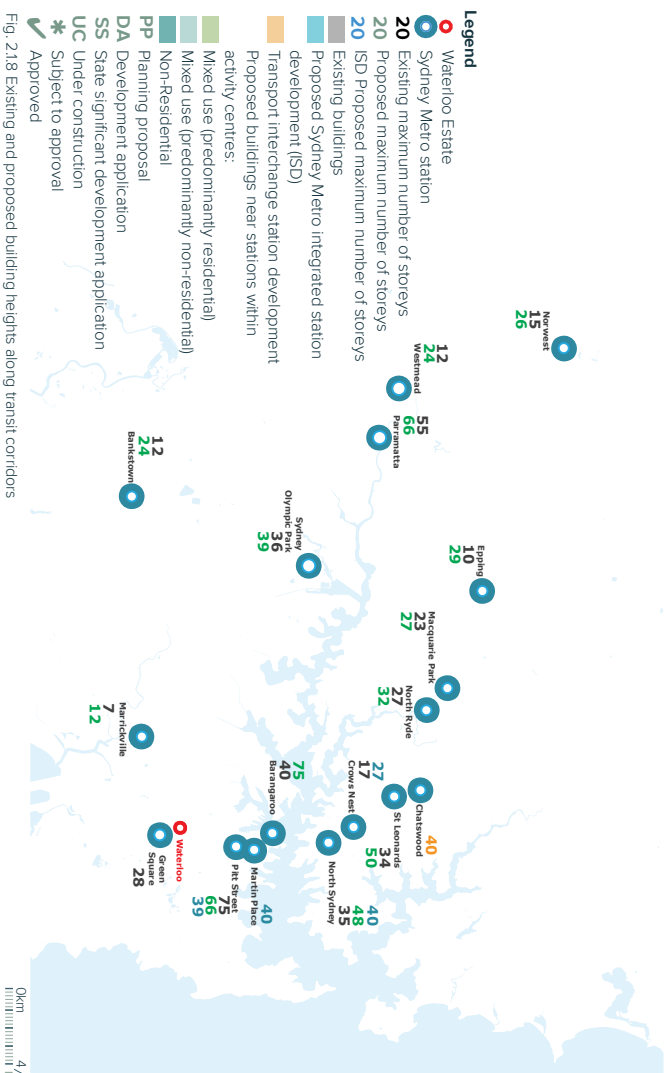
With the projected population and employment growth in Sydney over the next 40 years, well-located housing, public spaces, transport, local infrastructure and planning that is people and place focused will be key to ensuring that the liveability of the city is enhanced.

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 CBDs 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



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-Ultimeo 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-Ultimeo 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

- Legend**
- Waterloo Estate
 - Train Station
 - Metro Station

¹ Central Sydney Strategy 2016 - 2036, City of Sydney, 2016, p.219.

² City Plan 2036 LSPS, City of Sydney, 2019, p.148-158.

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-Ulimo 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-Ulmo 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

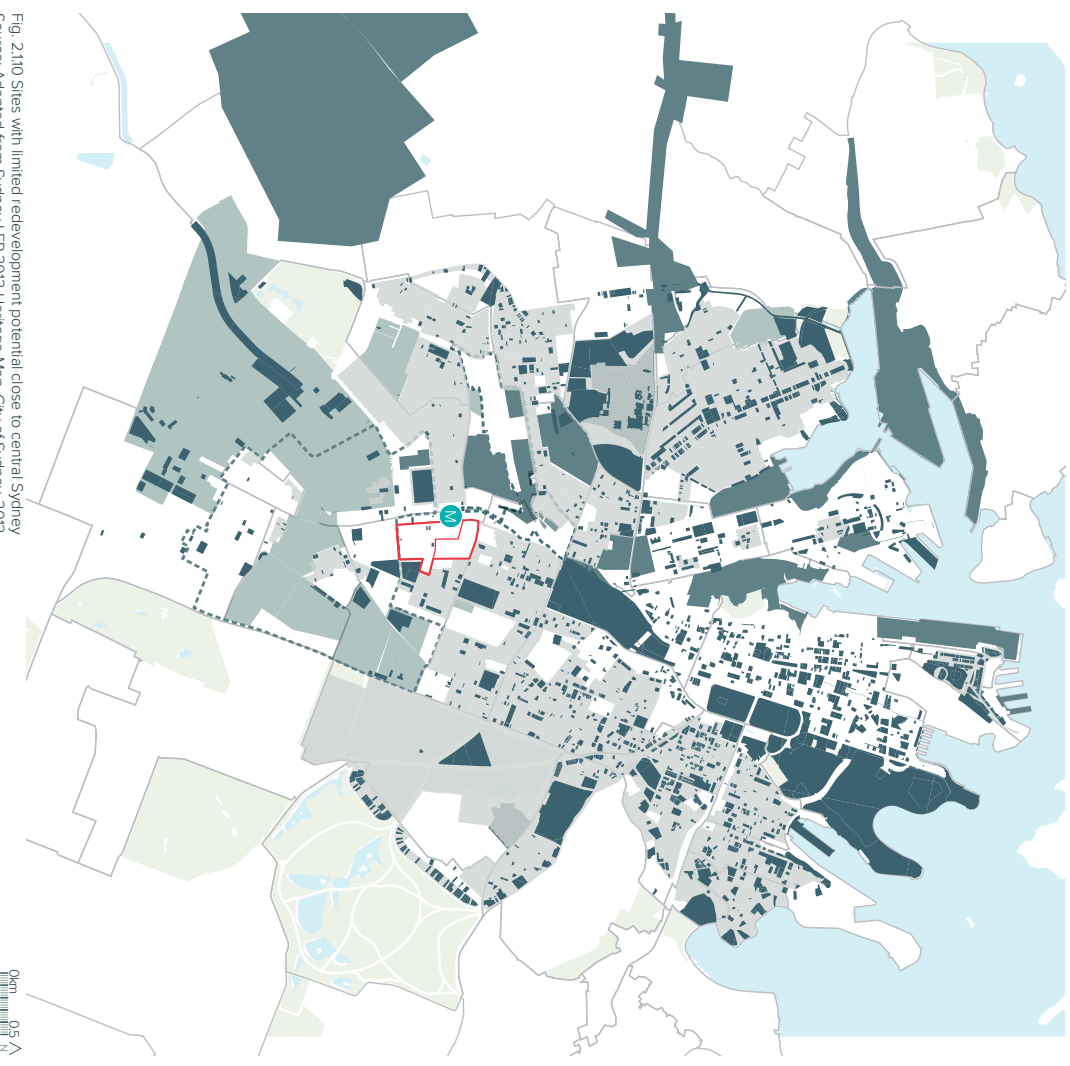


Fig. 2.110 Sites with limited redevelopment potential close to central Sydney
Source: Adapted from Sydney LEP 2012 Heritage Map, City of Sydney, 2012

Legend

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

HERITAGE

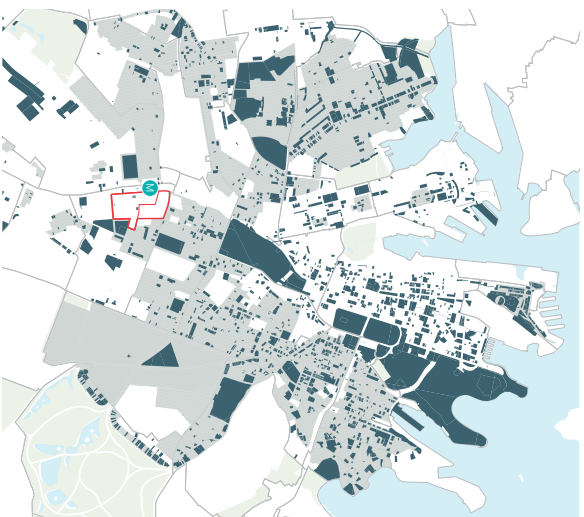


Fig. 2.111 Heritage Items and conservation areas
Source: Sydney LEP 2012 Heritage Map, City of Sydney, 2012



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

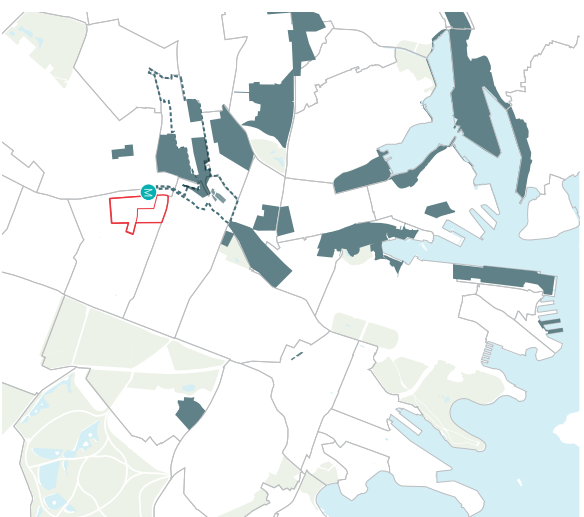


Fig. 2.112 State Significant Precincts or Major Projects
Source: Department of Planning and Environment, 2019



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

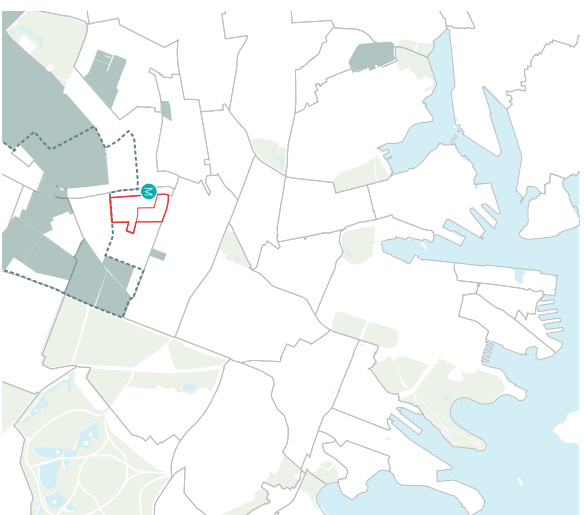


Fig. 2.113 Urban renewal areas within City of Sydney
Source: City of Sydney, 2019



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

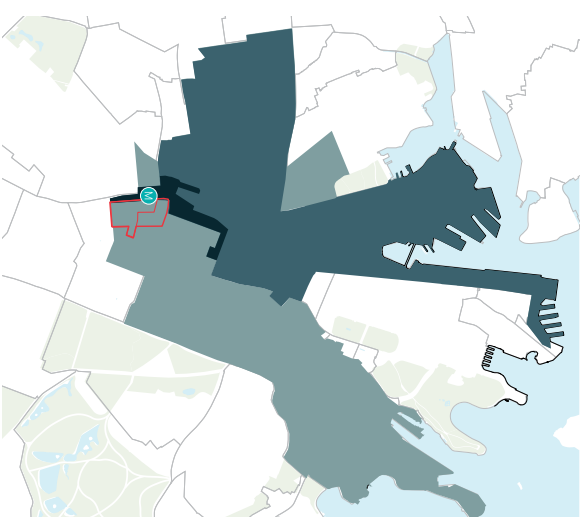


Fig. 2.114 Proximity to future employment growth
Source: City of Sydney/LSPS, 2019



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.



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 Ockre 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

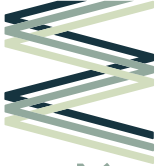
2.2.1 Neighbourhood Context

“...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

JAVIERES



Fig. 2.34 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*

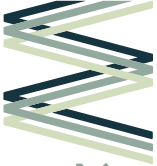
This section provides an understanding of Waterloo through its people and their connection to place. It illustrates the characteristics that have defined the Estate's community, both historically and today, that has resulted in its diversity as well as its common bonds.

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



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

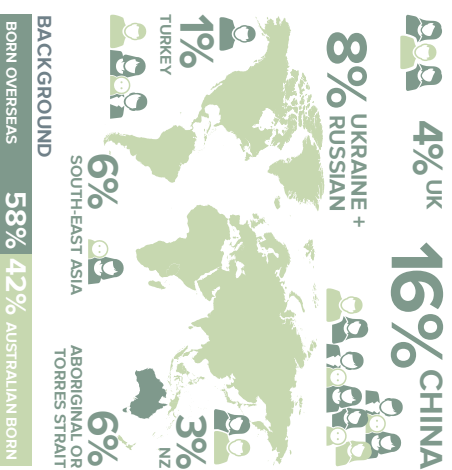


Fig. 2.3.3. Waterloo's cultural diversity
Source: Waterloo South - Population and Demographic Study, .id, 2020
Legend
● Waterloo Estate
● City of Sydney

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 22.6%).

INDIGENOUS POPULATION



Fig. 2.3.4. Local Aboriginal and Torres Strait population
Source: Waterloo South - Population and Demographic Study, .id, 2020
Legend
● Waterloo Estate
● City of Sydney

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.

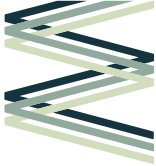
AN AGEING POPULATION



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

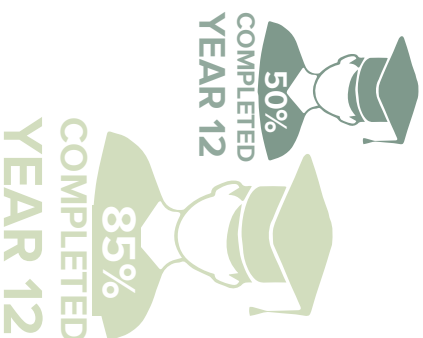


Fig. 2.3.8 Educational attainment rate

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

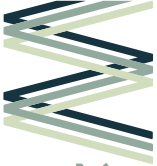
The Estate has a low employment participation rate with 34 percent of residents in the labour force, which reflects the older age structure

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, Eskinville, 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

STORIES OF PLACE

Resilience



Fig. 2.3.12 March for justice for TJ Hickey, Feb 2015
Source: <https://wainpublications.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 displaced by colonisation and European settlement.

Cultural Landscape



Fig. 2.3.13 A layered landscape
Source: Victoria Machado, Printrest, 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.

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

OPPORTUNITIES FOR DESIGN INTEGRATION

Storylines And Songlines



Fig. 2.315 Totems
Source: Bede Tunggalium Pukunani poles, ABC NEWS, 2018

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.

Belonging



Fig. 2.316 Mural, Redfern
Source: Torsten Blackwood/AFP/Gettyimages, 2018

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.

Past, Present And Future

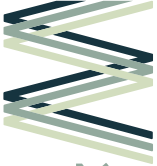


Fig. 2.317 Aboriginal Housing
Source: Ezra Shaw/Getty Images, 2016

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.



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 proactive and deliberate land management.

SETTLEMENT & EXPLORATION Early European Settlement

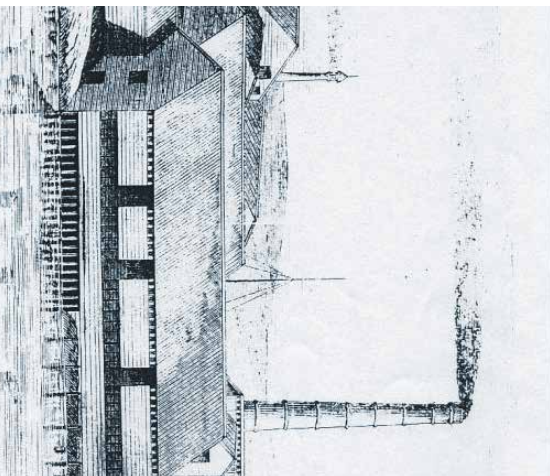


Fig. 2.3.19 The first mills
Source: Australian Town and Country Journal, 16 June 1877

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

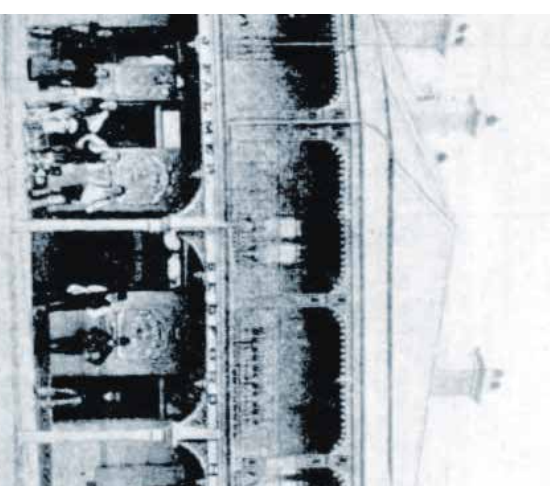


Fig. 2.3.20 The Bedford Hotel, Redfern, 1893
Source: The Australian Town and Country Journal

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

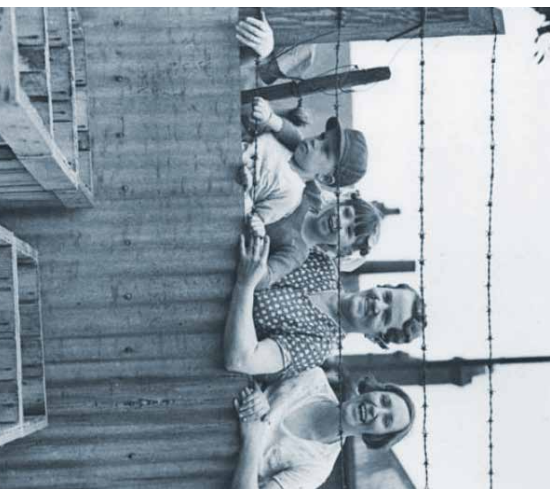


Fig. 2.3.21 People of Alexandria, 1934
Source: Hood Collection, Mitchell Library, State Library of NSW

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.

INDUSTRIAL BOOM AND RENEWAL

1940s onwards

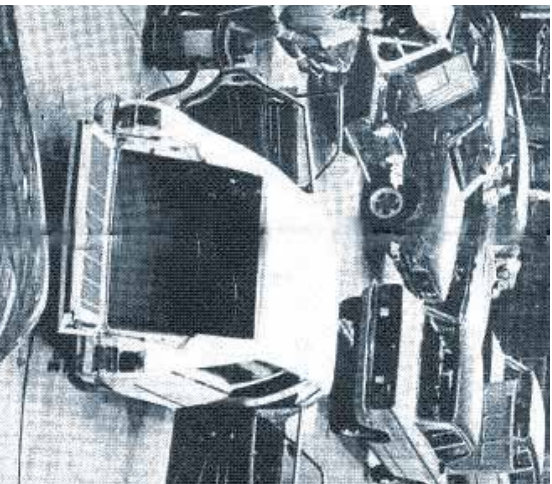


Fig. 2.3.22 BMC Leyland Factory
Source: stejs.google.com/site/vol/seleycarclubnsw/

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.

NEW LIVING APPROACHES

1970s onwards



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

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.

PROUD AND DIVERSE

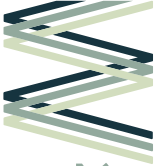
The last 20 years



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

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.

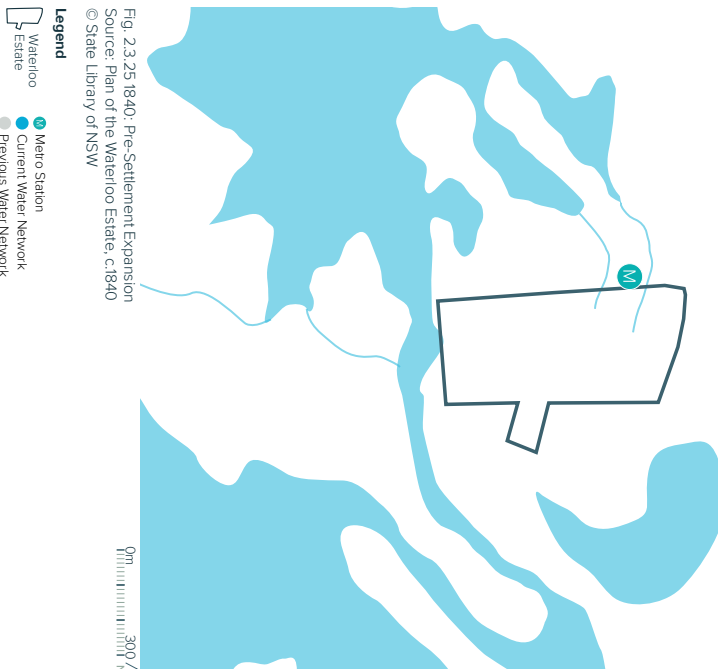


2.3.5 THE WATER STORY

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

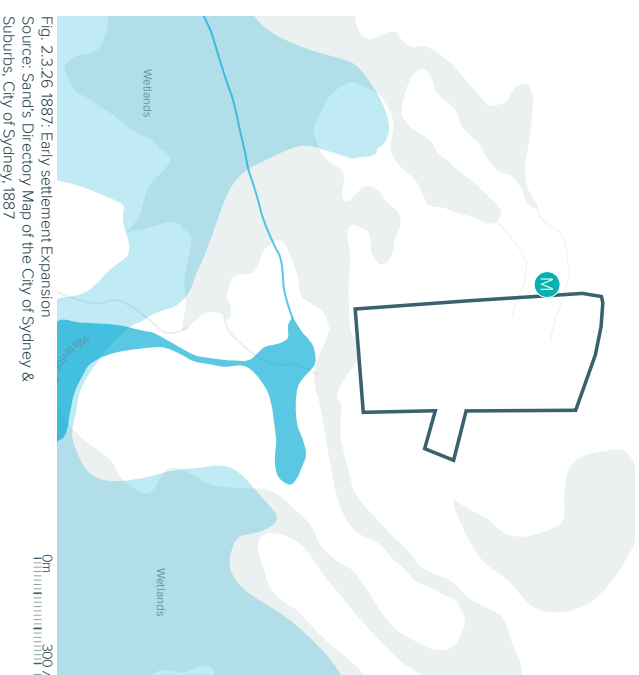
Waterloo Swamp once dominated the landscape of Waterloo and Zetland. In the 1800s, it was dammed to provide water for high pressure pipes and reduced to a series of dams that included Little Waterloo Dam, located in the area now occupied by Waterloo Park. Today there is only a remnant presence of water 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



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



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

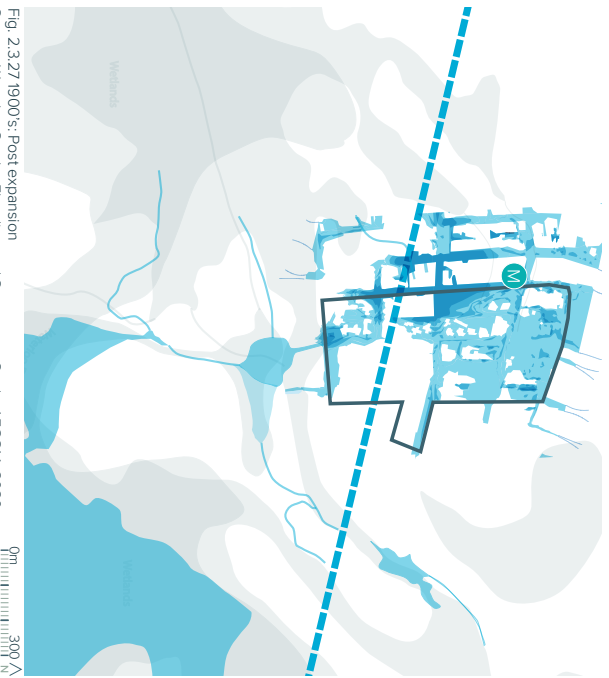


Fig. 2.3.27 1900's: Post expansion
Source: Waterloo South - Flooding and Stormwater Study, AECOM, 2020

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.

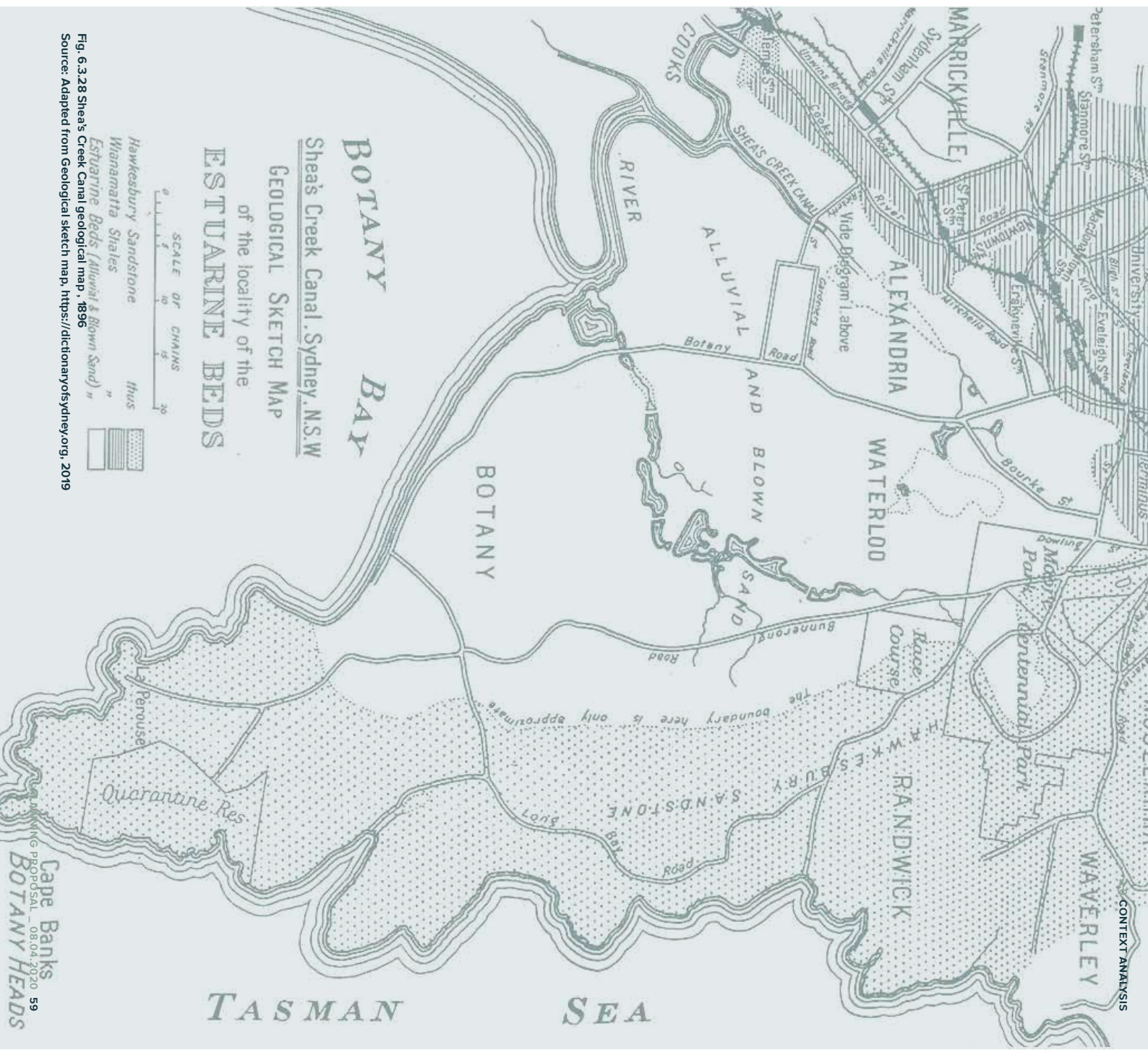
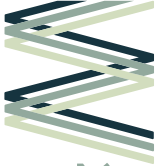


Fig. 6.3.28 Shear's Creek Canal geological map, 1896
Source: Adapted from Geological sketch map, <https://dictionaryofsydney.org>, 2019



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

HISTORIC MANUFACTURING SPACES

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
- Coppermiths
- 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.

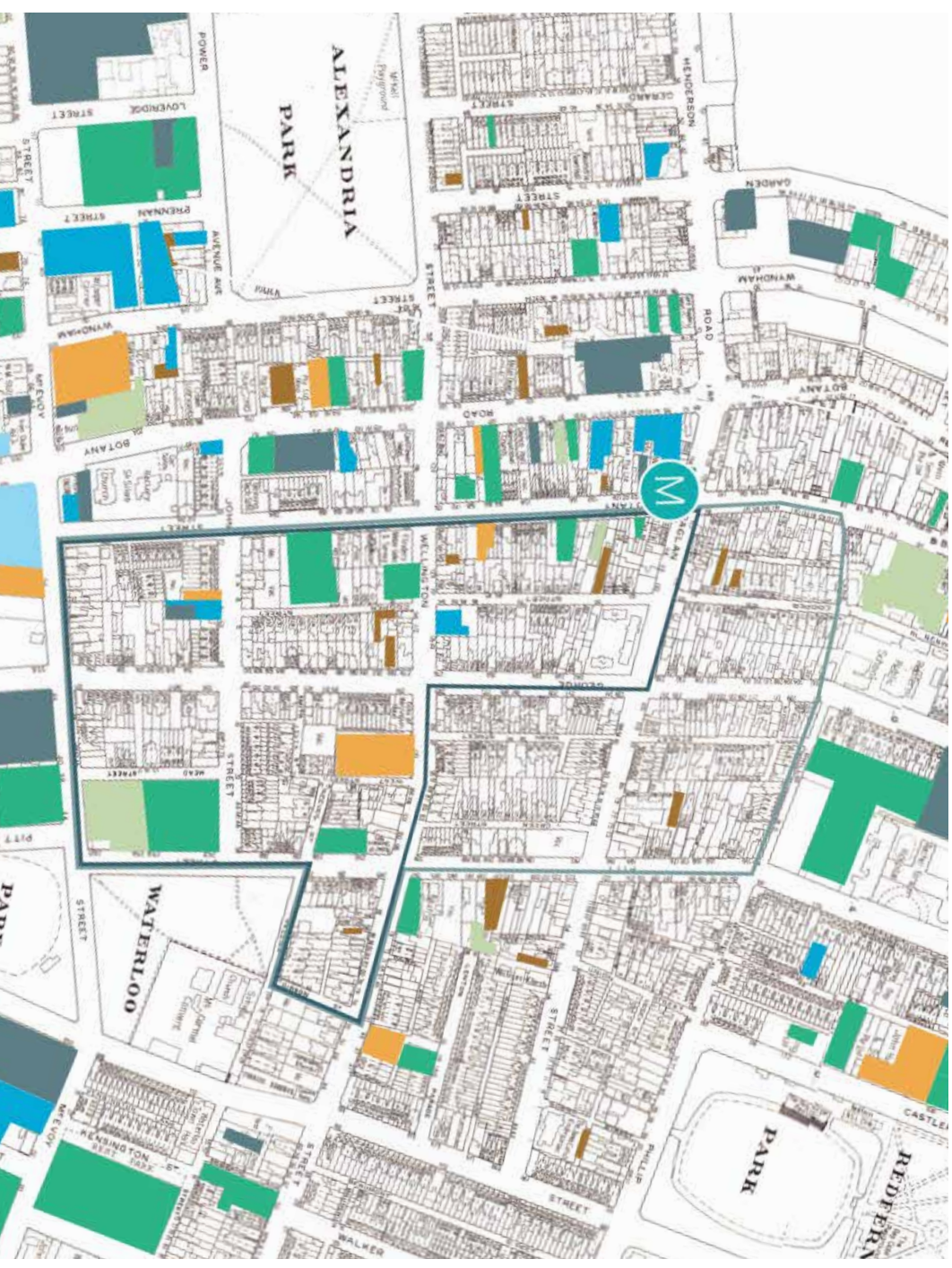
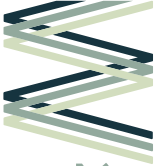


Fig. 2.3.30 Manufacturing Spaces
Source: City of Sydney Survey, 1938 - 50

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

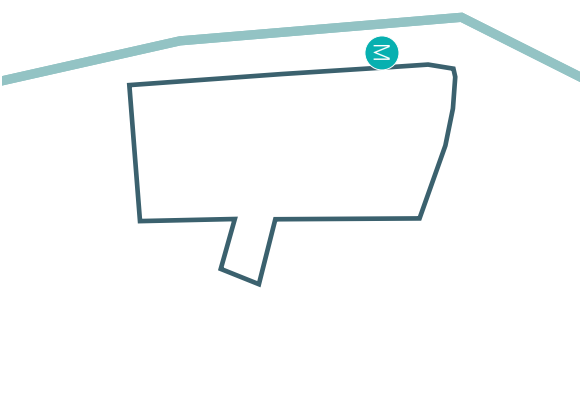


Fig 2.3.31 1825
Source: Land and Property Information 1825



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 Durrill, 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 Solomon Levey, including the watermill. Later the land would fully pass in to the sole ownership of the Cooper Estate.

1840

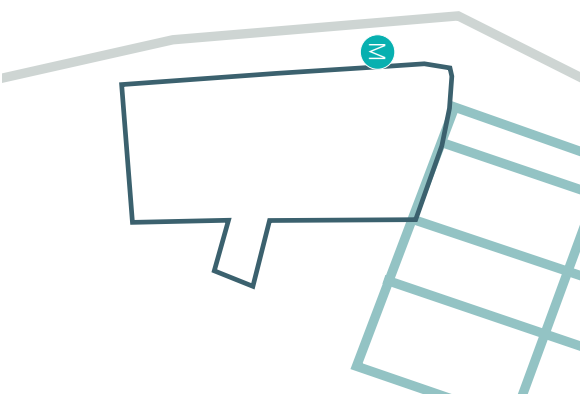


Fig 2.3.32 1840
Source: Plan of the Waterloo Estate, c.1840 © State Library of NSW



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

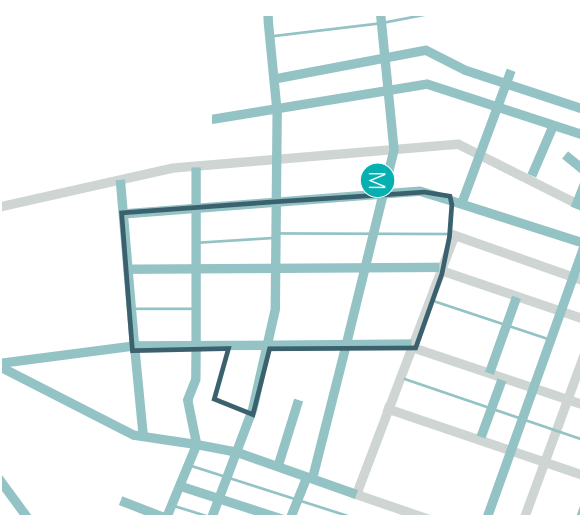


Fig 2.3.33 1887
Source: Sands' Directory Map of Sydney and Suburbs, Historical Atlas of Sydney, 1887



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 Shear Creek where watermills continued to appear.

1890

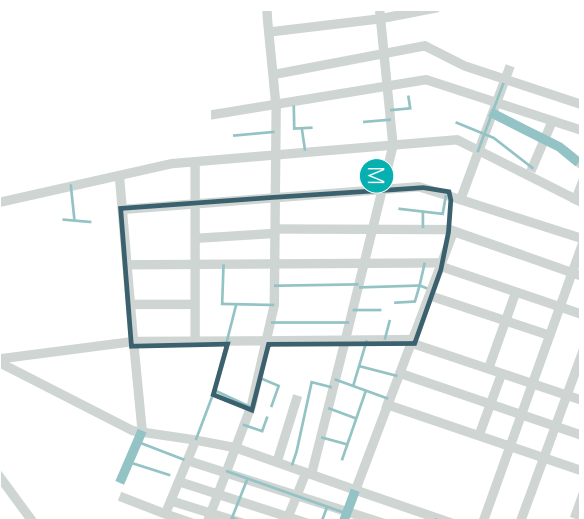


Fig. 2.3.34 1890
Source: Waterloo Parish of Alexandria, Highbottom & Robinson, Sydney State Library of NSW, 1890

Legend

- Waterloo Estate
- Metro Station
- Existing Street Network
- New Street Network

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

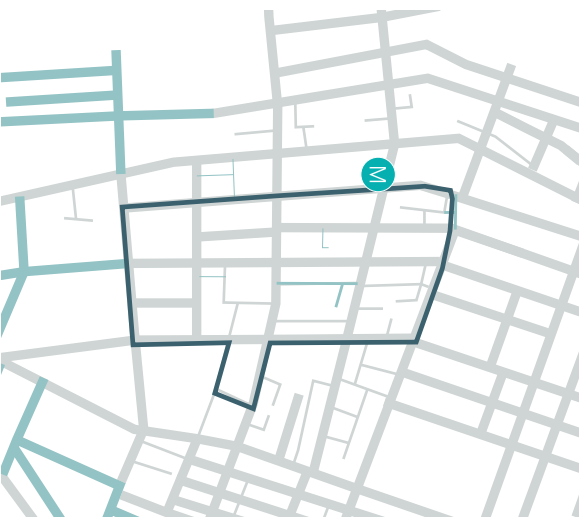


Fig. 2.3.35 1941
Source: Building Surveyor's Detail Sheets, City of Sydney, 1941

Legend

- Metro Station
- Existing Street Network
- New Street Network

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

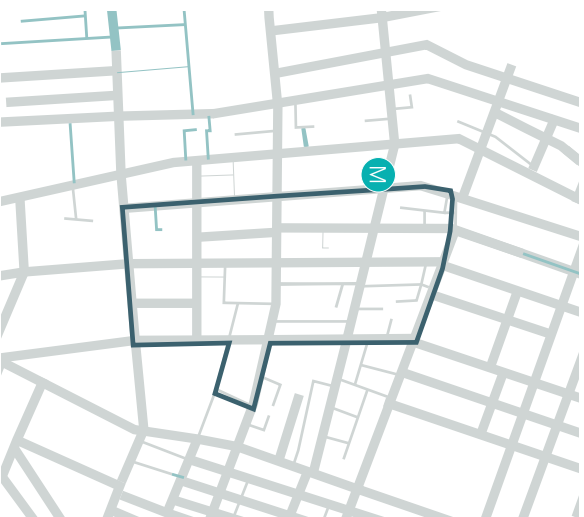


Fig. 2.3.36 1950
Source: Civic Survey, City of Sydney, 1950

Legend

- Metro Station
- Existing Street Network
- New Street Network

'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

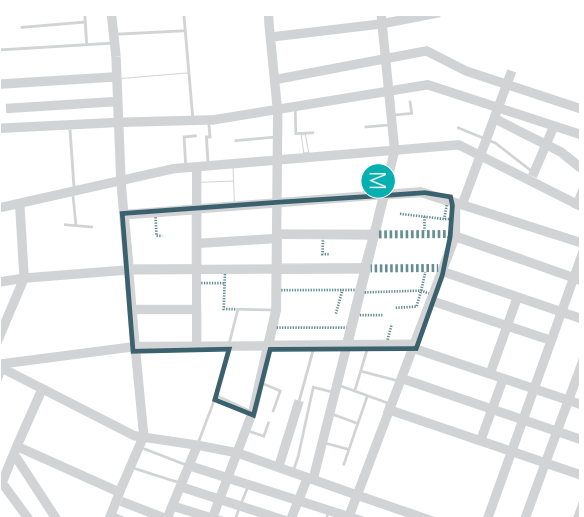


Fig. 2.3.37 1982
Source: NSW Land Registry Services, LTO Charting Maps, South Sydney, Sheet 11, 1982

Legend

- Metro Station
- Existing Street Network
- Street Network Changes (Removed)

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 McEvoxy 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.



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.

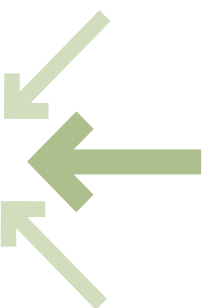


Layered

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 embedded into Waterloo itself. These layers are distinctly different but weave together to form a rich tapestry.

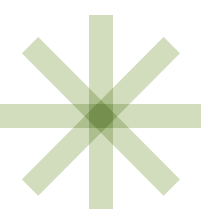


Proud

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 lishman 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

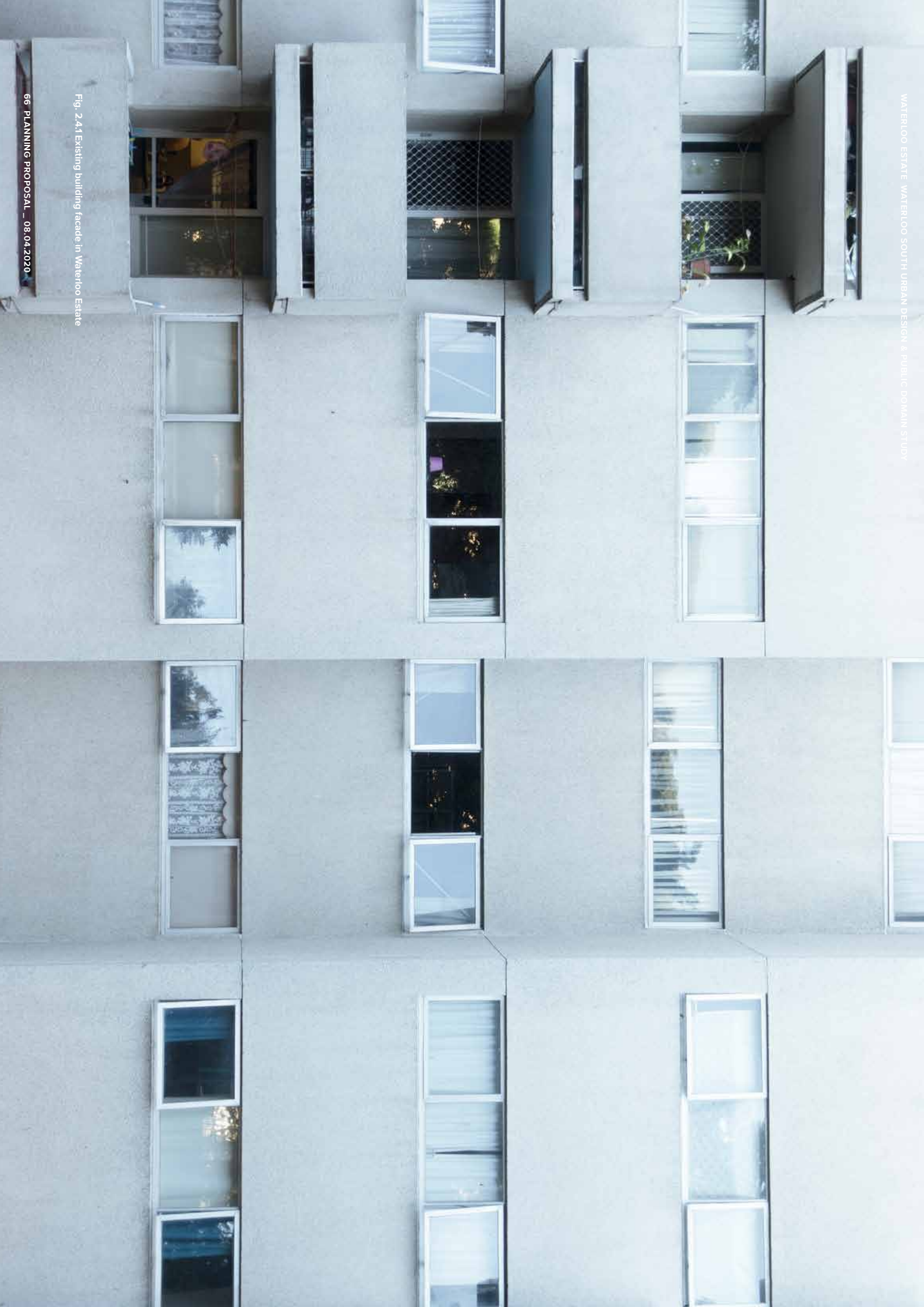


Fig. 2.4.1 Existing building facade in Waterloo Estate

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.”

Matawai 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

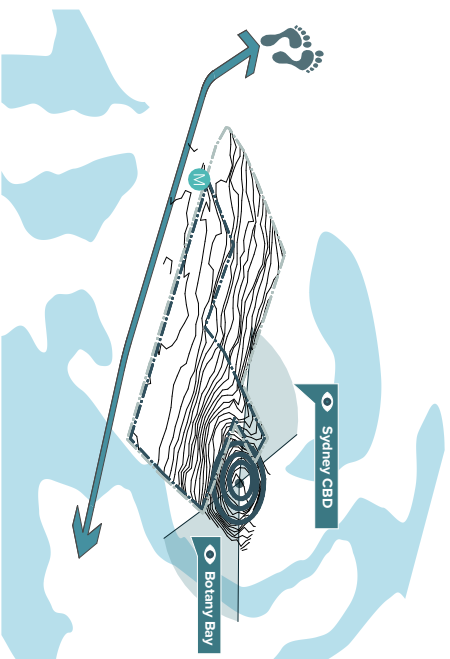


Fig. 2.4.2 Traditional Landscape - Past And Present



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.

Refer to Appendix Z1 for further details

OPEN SPACE NETWORK

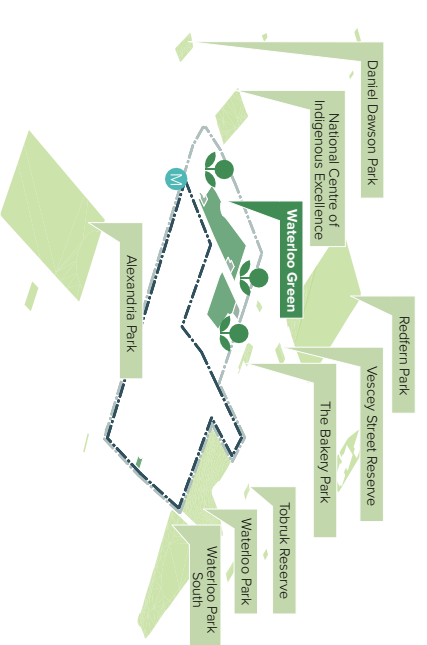


Fig. 2.4.3 Open Space Network



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

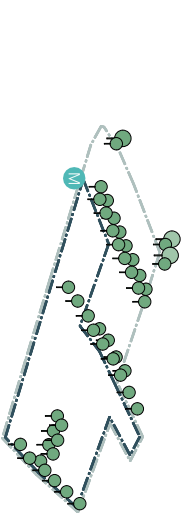


Fig. 2.4.4 Significant Trees



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

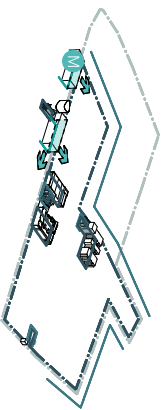


Fig. 2.4.5 Critical Interfaces

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

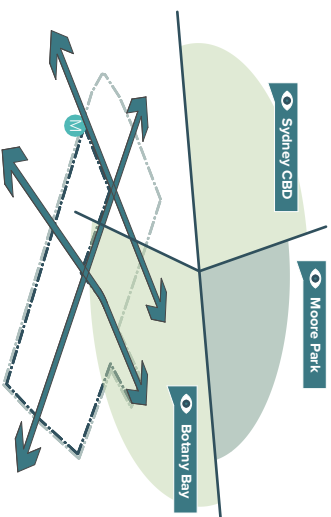


Fig. 2.4.6 Views And Vistas

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

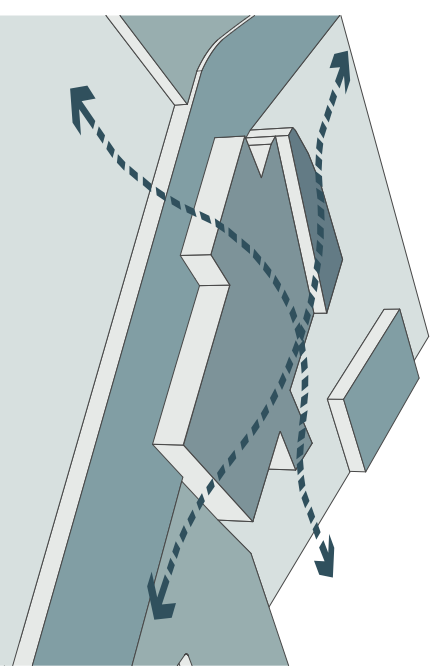


Fig. 2.4.7 Density And Scale

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 Ochrre 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 Z1 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.

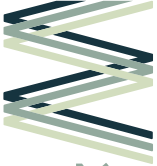
Community Engagement

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



Fig. 2.4.8: Existing Trees in Waterloo Park, 2019

2.4.4.2 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

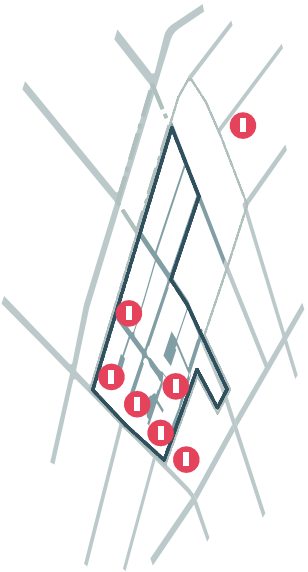


Fig. 2.4.9 Street connectivity



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

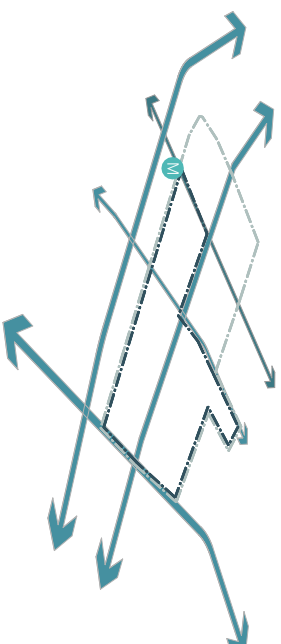


Fig. 2.4.10 Permeability



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

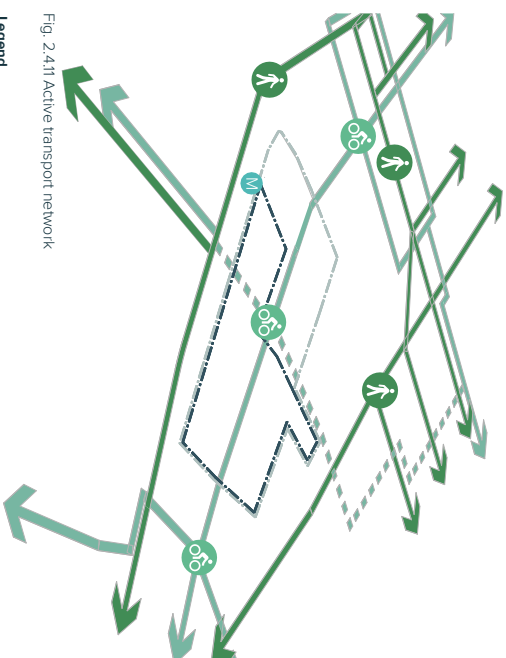
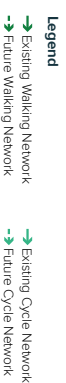


Fig. 2.4.11 Active transport network



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

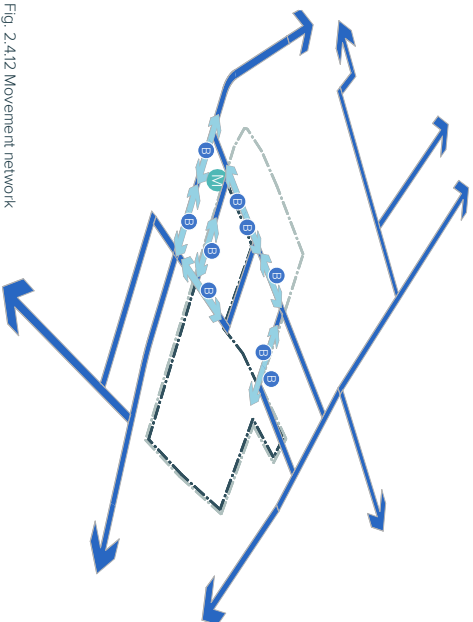


Fig. 2.412 Movement network

- Legend**
- Waterloo South
 - Waterloo Estate
 - Waterloo Metro Station
 - Waterloo Metro Station and Metro Quarter
 - Bus Route
 - Bus Stop
 - 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

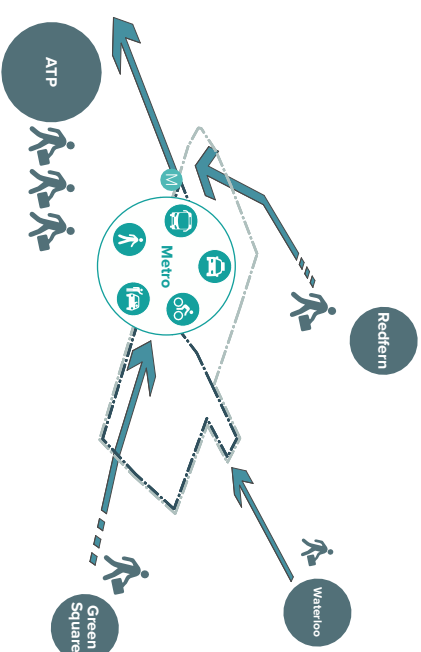


Fig. 2.413 Active transport hub

- 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

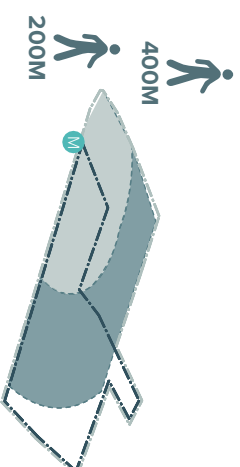


Fig. 2.414 Parking and servicing

- 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 uncategoryed. 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.

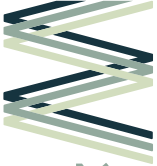
Refer to Appendix Z1 for further details

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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

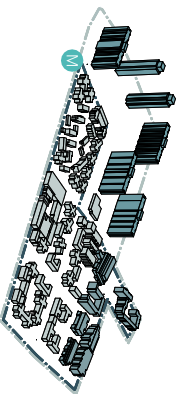


Fig. 2.416 Housing stock



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

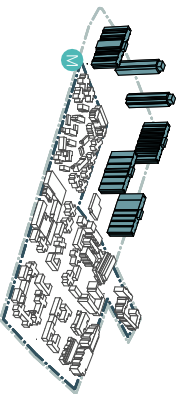


Fig. 2.417 Housing age



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

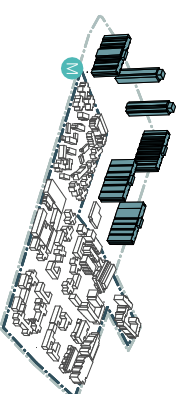


Fig. 2.418 Housing Density



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 (Marlon, Turanga, Malava, 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 (Drysedale, Carnelia Grove and Dobeil). The remaining 27 percent of the dwellings are distributed within low-rise buildings across Waterloo South.

POPULATION DENSITY

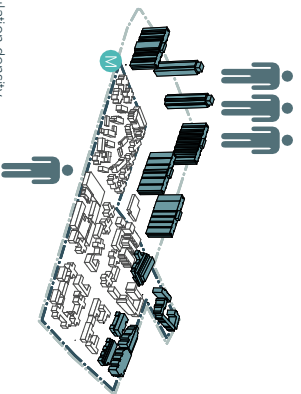


Fig. 2.4.19 Population density

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

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, Malava, 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 Dobeil). The remaining 28 percent of residents are distributed within the low-rise buildings across Waterloo South.

CONNECTION TO PUBLIC TRANSPORT (200-400M)

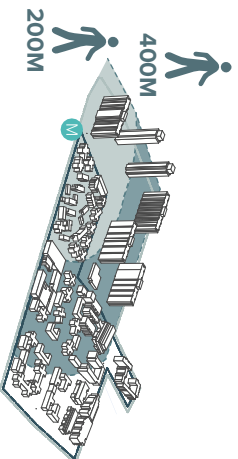


Fig. 2.4.20 Connection to public transport (200-400m)

- 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

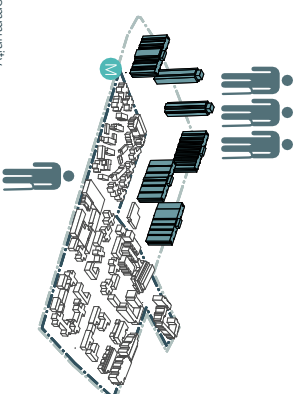


Fig. 2.4.21 Community

- 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

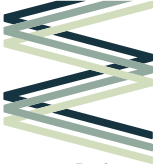
To create an active and diverse ground plane in a predominantly residential environment.

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

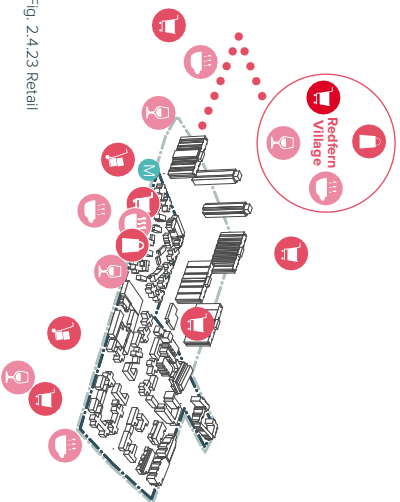


Fig. 2.4.23 Retail

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.

FAMILY

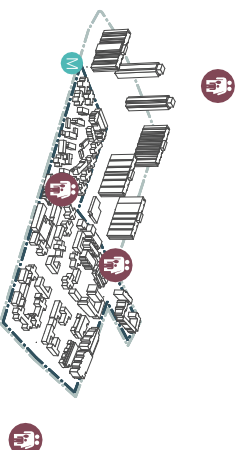


Fig. 2.4.24 Family

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.

YOUTH

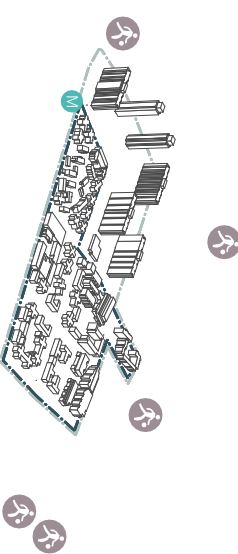


Fig. 2.4.25 Youth

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

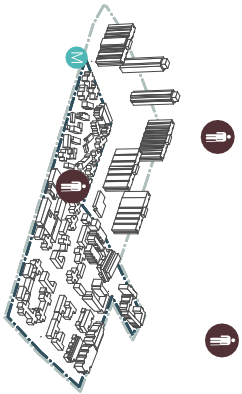


Fig. 2.4.26 Elderly

- Legend**
- Waterloo South
 - Waterloo Estate
 - 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

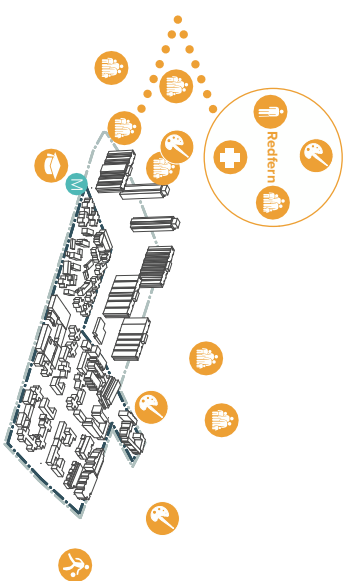


Fig. 2.4.27 Aboriginal

- Legend**
- Community Facilities
 - 👤 Medical
 - 🎓 Education
 - 🎨 Arts and Culture
 - 👥 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

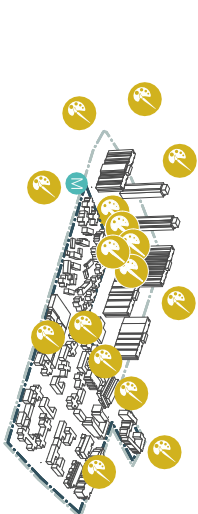


Fig. 2.4.28 Arts and Culture

- Legend**
- 🎨 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

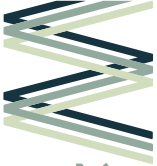
To ensure the staging of Waterloo South's renewal delivers social infrastructure and services at the right time in order to support the transitioning and incoming community.

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

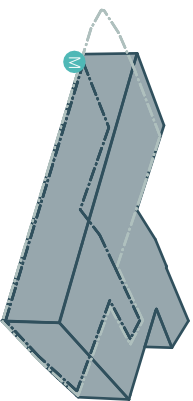


Fig. 2.4.30 Height constraints



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

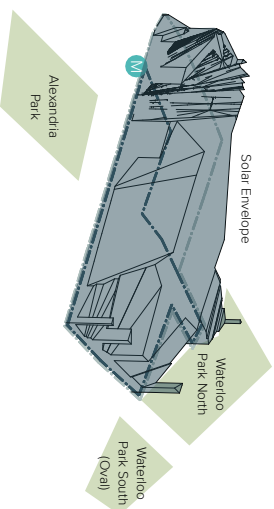
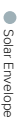


Fig. 2.4.31 Solar access



Solar 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

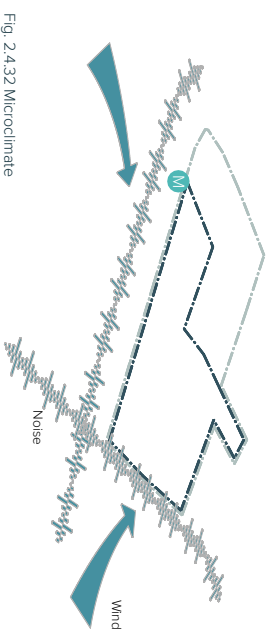


Fig. 2.4.32 Microclimate



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

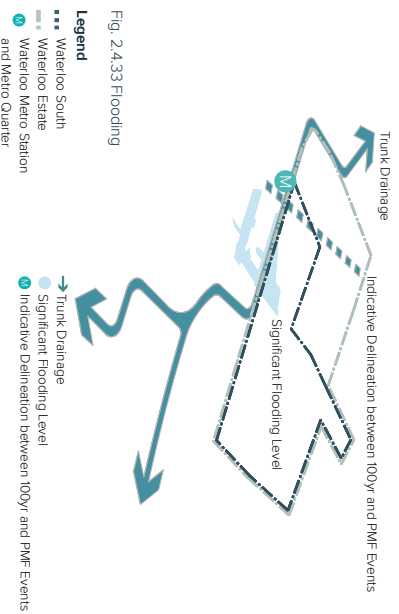


Fig. 2.4.33 Flooding

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

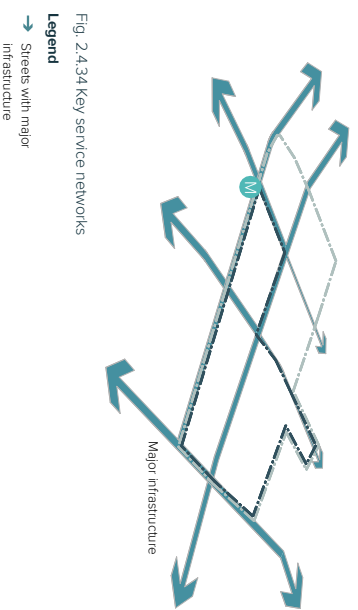


Fig. 2.4.34 Key service networks

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

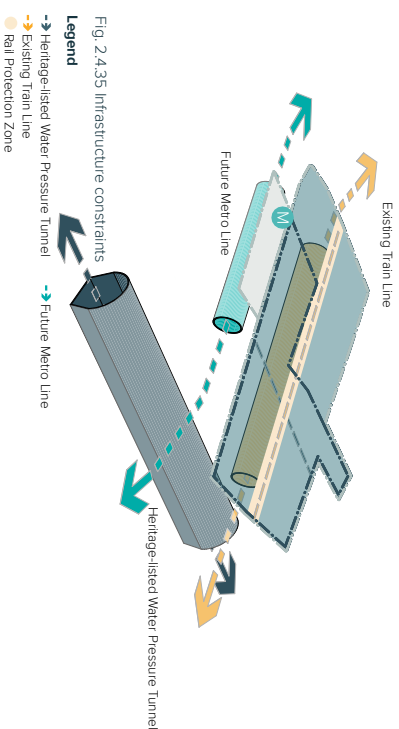


Fig. 2.4.35 Infrastructure constraints

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-OBs

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.

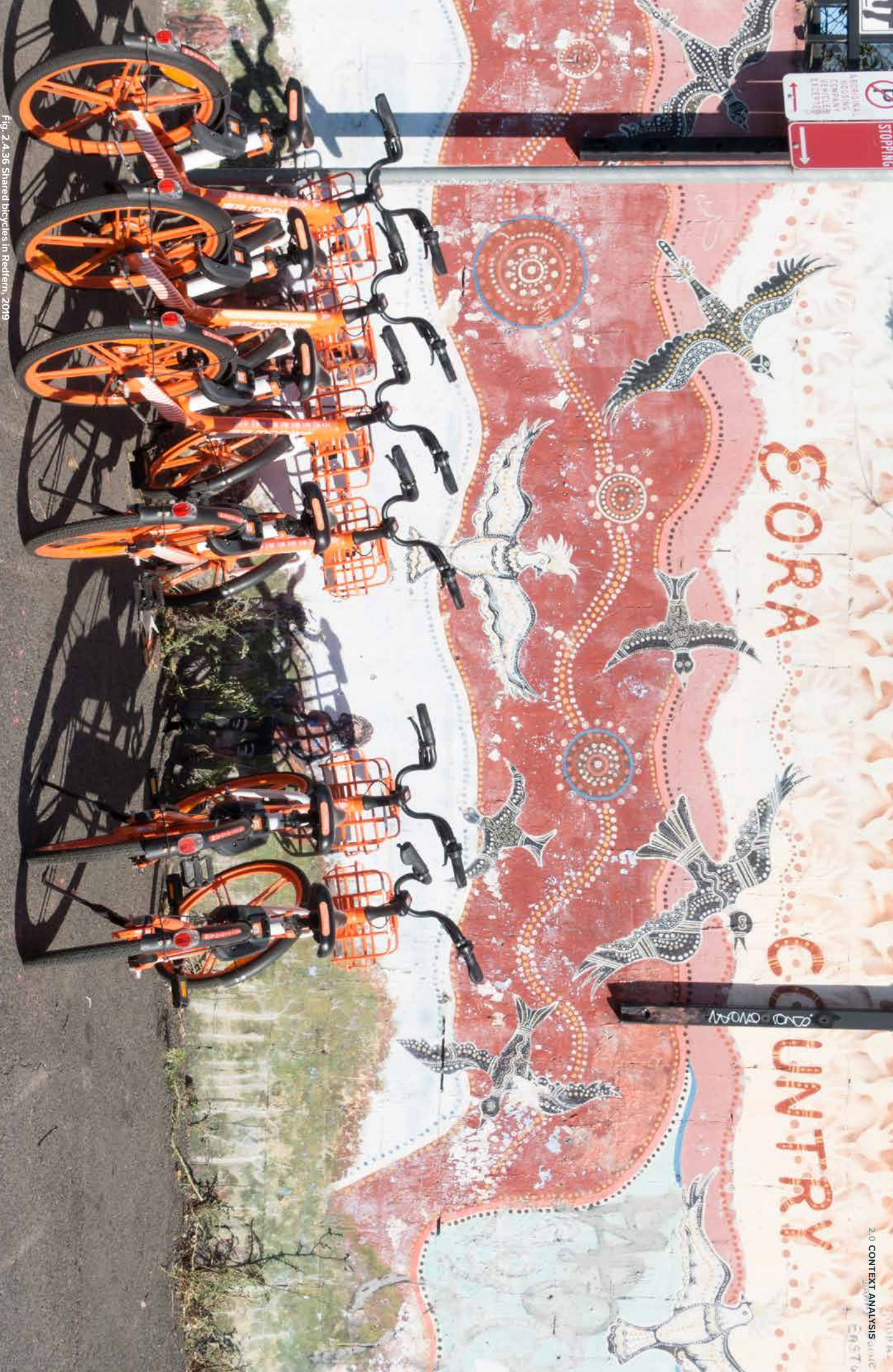


Fig. 2.4.36 Shared bicycles in Redfern, 2019

