

REDWatch Waterloo State Significant Precinct Combined Requirements

Two sets of study requirements were set for Waterloo as part of the State Significant Precinct Requirements. One was for the Waterloo Estate and the other was for the Metro Quarter. UrbanGrowth and Land and Housing have advised that their studies will be undertaken across the combined requirements with their final report showing how their studies address the two study requirements. Land and Housing Corporations summary reports also address the combined study requirements.

To make it easier for community members to understand the requirements being used for the study REDWatch has produced this combined set of requirements. In preparing this, we have ignored minor differences where the meaning is the same.

In the combined document below, we have used a colour code to show the origins of the differences. The Colour code is as follows:

- Items only in the **Waterloo Estate** requirements are **green**.
- Items only in the **Waterloo Metro Quarter** requirements are in **red**.
- Items in **both sets of requirements** are **black**.

The Official version of the Study Requirements from Waterloo can be downloaded from the NSW Planning and Environment from [Study requirements](#).

Study Requirements Nominated State Significant Precinct Waterloo May 2017

List of Acronyms

BASIX	Building Sustainability Index
CAD	Computer Aided Design
CPTED	Crime Prevention Through Environmental Design
DCP	Development Control Plan
DECCW	Former Department of Environment Climate Change and Water (now OEH)
EPA	NSW Environmental Protection Agency
ESD	Ecologically Sustainable Development
FACS	NSW Department of Family and Community Services
FSR	Floor Space Ratio
ICOMOS	International Council on Monuments and Sites
LAHC	NSW Land and Housing Corporation
LEP	Local Environmental Plan
OEH	NSW Office of Environment and Heritage
PMF	Probable Maximum Flood
RMS	NSW Roads and Maritime Services
SDCP	Sydney Development Control Plan
SEPP	State Environmental Planning Policy
SLEP	Sydney Local Environmental Plan
SSP	State Significant Precinct
SSA	Social Sustainability Assessment
UGNSW	UrbanGrowth NSW
WSUD	Water Sensitive Urban Design
1% AEP	Statistical flood event occurring once every 100 years

Introduction

Waterloo contains large areas of government-owned land and is an area of state importance in achieving key government policy objectives, particularly those relating to increasing delivery of housing and jobs and the renewal of social housing.

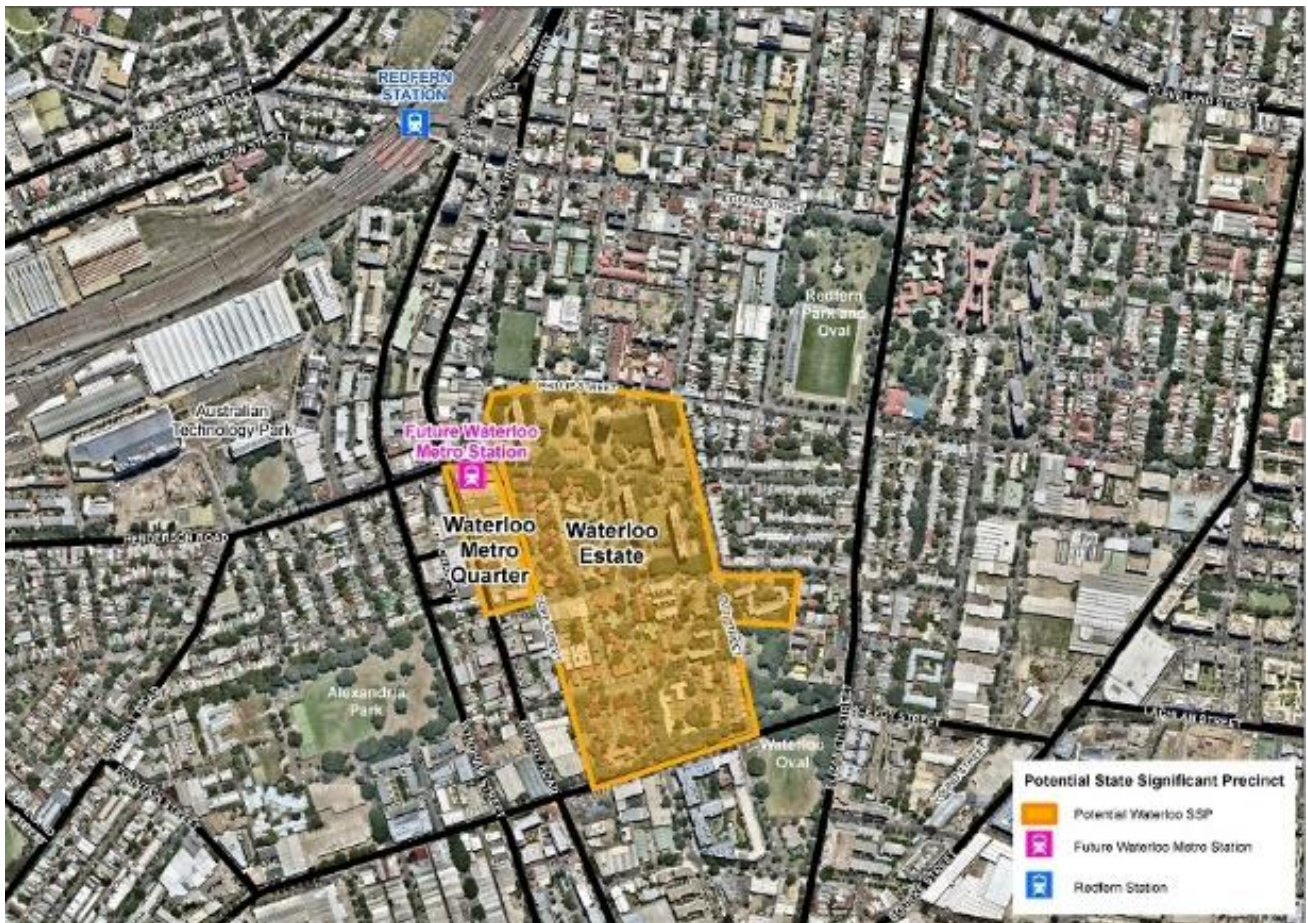
The Minister for Planning has determined that parts of Waterloo are of State planning significance, which should be investigated for rezoning through the State Significant Precinct process. This rezoning investigation area is known as the Nominated State Significant Precinct – Waterloo (refer Map 1).

NSW Government agencies are working together to deliver a program of highly-integrated, but individually-delivered projects within the nominated precinct. These projects include the redevelopment of the Waterloo Estate, the construction of the new Waterloo Metro Station, and the creation of the Waterloo Metro Quarter (the area above and around the new metro station).

The Department of Planning and Environment has established a Project Review Panel for the Nominated State Significant Precinct - Waterloo. Membership includes representatives of the Department of Planning and Environment, the City of Sydney Council, NSW Government Architect's Office, and Transport for NSW.

The Study Requirements for the nominated precinct have been prepared with the City of Sydney Council, in consultation with relevant State agencies and endorsed by the Waterloo Project Review Panel.

Map 1 - Nominated State Significant Precinct – Waterloo



Waterloo Estate

Waterloo Metro Quarter

Introduction

Future Directions for Social Housing in NSW [\[Link - REDWatch\]](#) [sets out the Government's vision for social housing over the next 10 years. A key program of Future Directions is Communities Plus, which includes a \$22 billion renewal program to build more social housing alongside private and affordable housing to create sustainable mixed communities. The Waterloo Estate has been included in this building program.

The NSW Department of Family and Community Services, through the NSW Land and Housing Corporation have engaged UrbanGrowth NSW to assist with technical work involved in developing the master plan. The master plan for the Waterloo Estate will be integrated with the master plan for the Waterloo Metro Quarter.

Through Sydney Metro, the NSW Government will provide a new generation of trains to connect people across Sydney. The new Waterloo Metro Station will be located underground, with an entrance near the corner of Raglan and Cope Streets, Waterloo.

The Waterloo Metro Quarter is the area above and around the station bounded by Botany Road, Cope Street, Raglan Street, and Wellington Street. As the NSW Government's urban transformation agency, UrbanGrowth NSW will develop a comprehensive master plan for the Waterloo Metro Quarter, which will be integrated with the metro station design and the master plan for the Waterloo Estate.

City of Sydney Council considerations

Where practical and to the extent that it relates to the rezoning of the land, the State Significant Precinct Study should have regard to the following considerations from the City of Sydney Council and demonstrate how the considerations have been addressed:

- Ensure that the current number of social housing homes is maintained
- ensure that the affordable housing targets set in the draft Central District Plan [\[Link - REDWatch\]](#) be a minimum requirement for the renewal of this precinct; specifically, the target of 5-10% (subject to development feasibility) be applied at the rezoning stage
- ensure the historical connections and importance of the Waterloo area to our First Nations people is maintained and strongly reflected in the design of the precinct, the services and employment opportunities provided and maintaining Waterloo as a welcoming and culturally inclusive place
- ensure that social housing tenants are supported and relocated temporarily together and within the local area, where practical to retain the strong community connection and cohesion that currently exists
- ensure that the redevelopment process delivers a mix of public, affordable rental and private housing, arranged through the site to promote equity, social cohesion and inclusivity, with essential tenant support services available locally, and
- ensure that throughout the planning and development of the precinct, the capacity building and information sharing with residents (social housing tenants and private owner/occupiers), businesses, Aboriginal elders and local Aboriginal organisations, community organisations, local service providers and other stakeholders is transparent, supportive and open.

Purpose of study

Investigate preparation of a new planning framework for the renewal of the Waterloo Estate to provide social, affordable and private housing, local retail and commercial spaces, improved streets, new public open space and community facilities to form a highly walkable connected neighbourhood. In addition, investigate how the Waterloo Estate will be successfully integrated with the proposed new metro station and associated development on the adjacent Waterloo Metro Quarter.

Investigate preparation of a new planning framework for the **Waterloo Metro Quarter**, and how this will be integrated with the Waterloo Estate to facilitate new above ground mixed use development above and adjacent to an underground metro station, including retail, local commercial, possible community and residential uses including affordable housing.

Site

The Waterloo Estate is an area of approximately 18 hectares of primarily government owned land containing low, medium and high rise social housing, one site owned by Ausgrid and several privately-owned sites. It is within the City of Sydney Local Government Area and is part of the Central to Eveleigh Urban Transformation Strategy [\[Link - REDWatch\]](#). It is generally bounded by Philip Street, Cope Street, McEvoy Street and Pitt Street and includes one block east of Pitt Street bounded by Wellington, Gibson and Kellick Streets.

The Nominated State Significant Precinct – Waterloo consists of the Waterloo Estate and the Waterloo Metro Quarter. The Waterloo Metro Quarter portion of the precinct is located on the opposite side of Cope Street bounded by Botany Road, Wellington and Raglan Streets.

The Waterloo Metro Quarter constitutes the western area of the Nominated State Significant Precinct - Waterloo. It is situated within the City of Sydney Local Government Area and is part of the Central to Eveleigh Urban Transformation Strategy [\[Link - REDWatch\]](#). It covers an area of nearly 2 hectares between Botany Road Wellington, Cope and Raglan Streets. The nominated precinct consists of the Waterloo Estate and the Waterloo Metro Quarter. The Waterloo Estate adjoins on the east side of Cope Street. The Waterloo Congregational Church is within the nominated precinct boundary, but is not part of the rezoning proposal.

Applicants

NSW Land and Housing Corporation and UrbanGrowth NSW

Date of issue

19 May, 2017.

Scope of study

The following issues listed below will be considered and assessed as part of the study:

- (1) State or regional planning significance of the site.
- (2) Suitability of the site for any proposed land use, and the intensity of any use; taking into consideration the public domain, transport, heritage, arts and culture, environmental, social, health, economic and urban design factors, the principles of ecological sustainable development, a healthy built environment and any State, regional or local planning strategy, policy or plan.
- (3) Implications of any proposed land use for infrastructure and service delivery.
- (4) Means by which developer contributions should be secured for the site.
- (5) Local and regional economic, social, health and environmental impacts of the proposed development.
- (6) Recommended land uses and development controls for the site.
- (7) Evidence of comprehensive planning for the entire nominated precinct and effective linkages between the Waterloo Estate and the Waterloo Metro Quarter. between the Waterloo Metro Quarter and the Waterloo Estate.
- (8) Staging strategy for the Waterloo Estate Metro Quarter in the context of the entire Waterloo State Significant nominated precinct and other projects planned in the area.

Key study requirements

The Study must address the key requirements listed below.

1. Vision, Strategic Context and Justification

- 1.1. Outline the vision for the proposal.

- 1.2. Outline the strategic planning context for the proposal including an assessment of relevant State planning documents such as:
 - o A Plan for Growing Sydney [[Link](#) - REDWatch] December 2014
 - o NSW Long Term Transport Masterplan [[Link](#) - REDWatch] December 2012
 - o Draft Central District Plan [[Link](#) - REDWatch] 2016
 - o Any Land Use and Infrastructure Strategy that includes the Waterloo Estate Metro Quarter
 - o The Green Grid – Creating Sydney’s Open Space Network [[Link](#) - REDWatch], NSW Government Architect’s Office, and
 - o Better Placed – A Design led Approach: Developing an Architecture and Design Policy for NSW [[Link](#) - REDWatch] draft version 2016.
- 1.3. Consideration of State Environmental Planning Policies (SEPPs) including, but not limited to:
 - o State Environmental Planning Policy (State Significant Precincts) [[Link](#) - REDWatch] 2005
 - o State Environmental Planning Policy (Urban Renewal) [[Link](#) - REDWatch] 2010
 - o SEPP 65 (State Environmental Planning Policy No 65 - Design Quality of Residential Apartment Development) [[Link](#) - REDWatch] 2015, and
 - o State Environmental Planning Policy (Affordable Rental Housing) [[Link](#) - REDWatch] 2009.
- 1.4. Consideration of Transport for New South Wales strategies and reports including, but not limited to:
 - o Sydney’s Rail Future [[Link](#) - REDWatch] 2013
 - o Sydney’s Bus Future [[Link](#) - REDWatch] 2013
 - o Sydney’s Light Rail Future [[Link](#) - REDWatch] 2013
 - o Sydney’s Cycling Future [[Link](#) - REDWatch] 2013
 - o Sydney’s Walking Future [[Link](#) - REDWatch] 2013
 - o Sydney City Centre Access Strategy 2013 [[Link](#) - REDWatch], and
 - o Central to Eveleigh Urban Renewal Strategic Transport and Study Plan 2014. [Not found - REDWatch]
- 1.5. Consideration of City of Sydney planning documents, strategies and policies including, but not limited to:
 - o Sustainable Sydney 2030 Community Strategic Plan 2014 [[Link](#) - REDWatch]
 - o Sydney Local Environmental Plan [[Link](#) - REDWatch] 2012
 - o Open Space, Sports and Recreational Needs Study [[Link](#) - REDWatch]’ 2016
 - o South Sydney Local Environmental Plan 1998. [[Link](#) - REDWatch]
 - o Draft Environmental Action 2016 – 2021 Strategy and Action Plan [[Link](#) - REDWatch]
 - o Connecting Our City - Transport Strategies and Actions – Summary Report [[Link](#) - REDWatch] 2012
 - o Adapting for Climate Change [[Link](#) - REDWatch] 2015
 - o Social Sustainability Policy and Discussion Paper [[Link](#) - REDWatch], June 2016
 - o Housing Issues Paper [[Link](#) - REDWatch], April 2015
 - o Sydney Development Control Plan [[Link](#) - REDWatch] 2012
 - o Public Domain Manual [[Link](#) - REDWatch]
 - o Sydney Streets Code [[Link](#) - REDWatch] 2013
 - o Cycle Strategy and Action Plan [[Link](#) - REDWatch] 2007-2017
 - o Walking Strategy and Action Plan [[Link](#) - REDWatch]

- Economic Development Strategy [[Link](#) - REDWatch] 2013
 - Eora Journey economic development Plan [[Link](#) - REDWatch]2016
 - The Alexandra Canal Floodplain Risk Management Plan, Risk; Management Study and Flood Study [[Link](#) - REDWatch] 2014
 - Interim Floodplain Management Policy [[Link](#) - REDWatch]2014
 - City Art - Public Art Strategy [[Link](#) - REDWatch]2011
 - Public Art Policy [[Link](#) - REDWatch]
 - Guidelines for Public Art in Private Developments [[Link](#) - REDWatch]
 - Guidelines for Acquisitions and Deaccessions [[Link](#) - REDWatch]
 - Sydney Lights Design Code [[Link](#) - REDWatch] 2014
 - Access Policy [[Link](#) - REDWatch] 2004
 - Landscape Code 2016
 - Volume 1: Single Dwellings [[Link](#) - REDWatch]
 - Volume 2: All developments except single dwellings [[Link](#) - REDWatch]
 - Greening Sydney Plan [[Link](#) - REDWatch]2012
 - Urban Forestry Strategy [[Link](#) - REDWatch] 2013
 - Tree Management Policy [[Link](#) - REDWatch]2013
 - Urban Ecology Strategic Action Plan [[Link](#) - REDWatch]
 - Street Tree Master Plan [[Link](#) - REDWatch] 2015
 - Competitive Design Policy [[Link](#) - REDWatch]
 - A City for All – Social Sustainability Policy [[Link](#) - REDWatch] 2016
 - Creative City: Cultural Policy and Action Plan [[Link](#) - REDWatch]2014
 - Legible Sydney Wayfinding Strategy [[Link](#) - REDWatch]2012
 - Legible Sydney Design Manual [[Link](#) - REDWatch]2013
 - Urban Ecology Strategic Action Plan [[Link](#) - REDWatch]2014
[Listed twice]
 - Decentralised Water Masterplan [[Link](#) - REDWatch]2012
 - Tourism Action Plan [[Link](#) - REDWatch] December 2013
 - Visitor Accommodation Action Plan [[Link](#) - REDWatch] June 2015.
- 1.6. Consideration of other relevant strategies, reports, policies and guides strategies, and reports including, but not limited to:
- Draft Climate Change Fund Strategic Plan and A Plan to Save NSW Energy and Money [[Link](#) - REDWatch]
 - NSW Government Visitor Economy Industry Action Plan [[Link](#) - REDWatch]
 - NSW Climate Change Policy Framework [[Link](#) - REDWatch]
 - Future Directions for Social Housing in NSW [[Link](#) - REDWatch] [in different places]
 - A Picture of Health: Sydney Local Health District Health Profile [[Link](#) - REDWatch] 2015
 - NSW Health's Health Impact Assessment: A Practical Guide [[Link](#) - REDWatch]
 - Building Better Health [[Link](#) - REDWatch](Guidelines)
 - A City for All: Towards a Socially Just and Resilient Sydney [[Link](#) - REDWatch]
[Same as A City for All: Social Sustainability Policy (above)]
 - Central to Eveleigh Urban Transformation Strategy [[Link](#) - REDWatch] November 2016

- Planning New Schools, School Safety and Urban Planning Advisory Guidelines 2014 [Not found, but referred to in several places in Google search - REDWatch]
 - NSW Heritage Manual [Now published as many PDF files. See: [Publications list](#), under NSW Heritage Manual - REDWatch.]
 - The Conservation Plan [\[Link - REDWatch\]](#) (J S Kerr 1996)
 - Charter for the Conservation of Places of Cultural Significance [\[Link - REDWatch\]](#) (the Burra Charter) International Council on Monuments and Sites
 - **Connected Corridors for Biodiversity: Guide to regulatory tools, financial incentives and other mechanisms for promoting biodiversity conservation on private property** [Southern Sydney Regional Organisation of Councils] [\[Link - REDWatch\]](#)
 - **Greater Sydney LLS – Biodiversity Corridor Mapping** [Interactive map] [\[Link - REDWatch\]](#)
 - **Urban Ecology Renewal Investigation Project Report – due for release early 2017** [See: Urban Ecology Renewal Investigation Project - What we heard: Documenting the stakeholder workshops [Link](#) Urban Ecology: Theory, Policy and Practice in New South Wales, Australia [Link](#) Urban Ecology Renewal Investigation project - Blueprint for Living Cities [Link](#) - REDWatch]
 - Guide to Traffic Generating Developments [\[Link - REDWatch\]](#) [NSW Transport]
 - Local Planning for Healthy Waterways Using NSW Water Quality Objectives [\[Link - REDWatch\]](#), Department of Environment and Conservation (June2006)
 - Managing Urban Stormwater: Harvesting and Reuse [\[Link - REDWatch\]](#) (Dec2006)
 - Water Sensitive Urban Design Guidelines [\[Link - REDWatch\]](#) (Landcom 2009)
 - Managing Urban Stormwater: Soils and Construction series [\[Link - REDWatch\]](#)
 - Waste Not Development Control Plan Guidelines [\[Link - REDWatch\]](#) (EPA2008)
 - Better Practice Guide for Waste Management in Multi-Unit Dwellings [\[Link - REDWatch\]](#) (NSW: Environment)
 - Better Practice for Public Place Recycling [\[Link - REDWatch\]](#) [NSW: Environment]
 - Better Practice Guidelines for Waste Management and Recycling in Commercial and Industrial Facilities [\[Link - REDWatch\]](#) (NSW: Environment)
- 1.7. Provide justification for the proposal in the context of the draft Central District Plan [\[Link - REDWatch\]](#), the Sydney Metro project **and the renewal of the Waterloo Estate.**
- 1.8. Outline how the proposal considers the interface with **existing and** future land uses in the surrounding area including, but not limited to, land at Cope Street, **Philip Street, McEvoy Street, Pitt Street Botany Road, Wellington Street, and Raglan Road** and the wider area.
- 1.9. Outline how the proposal will integrate with and reinforce the role of Central Sydney.**
- 1.9.1.10.** Outline the historical significance of the site and how the proposal intends to be sympathetic to the local heritage **assets within and adjacent to the Waterloo Estate and the conservation areas to the north, east and west.** **items, in particular, the Waterloo Congregational Church, views and context of the precinct.**

2. Urban Design

- 2.1. Prepare a detailed site and context analysis.
- 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.

- 2.3.2.2. Prepare comprehensive opportunities and constraints mapping overlays.
- 2.4.2.3. Prepare a set of urban design principles that underpin the proposed development.
- 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.
- 2.6.2.4. Prepare a precinct plan that integrates: the: public domain plan, precinct wide community facilities plan, indicative subdivision plan, infrastructure plan, staging plan and building types and massing for the site. and demonstrate how this fits within the overall State Significant Precinct and surrounding context.
- 2.7.2.5. Provide a view and visual assessment, with particular focus on significant views view lines to, from and within the site Waterloo Congregational Church building. 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.
- 2.8.2.6. 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 [Link - REDWatch] for apartments residential development and the Sydney Development Control Plan [Link - REDWatch]2012 for open space and residential buildings not subject to the Apartment Design Guide.
- 2.9.2.7. Provide an analysis of proposed distribution of gross floor area, development yields, building types typologies, building envelopes and heights.
- 2.10.2.8. Provide sufficient detail of the building types, including precedents, to demonstrate future compliance with amenity standards including the Apartment Design Guide [Link - REDWatch] and to support any calculations that convert building envelopes to gross floor area and development yields.
- 2.11.2.9. Demonstrate how the urban design principles have informed the allocation and location of proposed land uses.
- 2.12. Integrate the public domain plan identifying proposed public park, square and streets and pedestrian/cycle paths.
- 2.13.2.10. 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.
- 2.14. Prepare an indicative subdivision plan that promotes future variety and distributes the social, affordable and private housing.
- 2.15.2.11. 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. that integrates the delivery of the public domain with the progress of proposed public and private development lots.
- 2.16. Outline how the staging of the redevelopment of the Waterloo Estate will be integrated with the staging of the Waterloo Metro Quarter.
- 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.
- 2.12. Demonstrate how the station entries, services and other requirements are fully integrated with on the site.
- 2.13. Demonstrate how the metro connects to the major active transport corridors (the City's Liveable Green Network [Link - REDWatch]). Indicate how provision for interchange with bus stops, provision of bicycle parking, kerbside areas for 'kiss and ride' and taxis are located and provide

customer comfort and a good customer experience including consideration of pedestrian desire lines, weather/wind protection and activation of building facades within interchange areas and along key pedestrian and bicycle routes. This requirement is also reflected in section 5.3.

3. Public Domain: Public Open Space and Streets

- 3.1. Consult closely with and obtain endorsement, for the extent that it relates to the approval of the planning framework, the City of Sydney for all aspects of the Public Domain as the ultimate owner and manager of the Public Domain.
- 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 [[Link](#) - REDWatch].
- 3.2. Provide a public domain plan identifying any changes to the surrounding streets and any areas of public open space. Reference should be made to the Central to Eveleigh and Waterloo Land Use and Infrastructure Strategy (LUIIS) [Not found see: [Urban transformation strategy](#) - REDWatch], when available and The Green Grid – Creating Sydney's Open Space Network [[Link](#) - REDWatch].
- 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.
- 3.3. Provide a detailed study of the Botany Road interface that addresses the existing poor amenity of this frontage. Consider the broader urban design context and transport function of the Botany Road corridor and identify opportunities to improve amenity through enabling landscaping and other improvements to this frontage.
- 3.4. Provide an open space plan for the precinct, locating precinct park(s) derived from site analysis, benchmarking assessment and urban design principles. Demonstrate how accessibility to the new park(s) is maximised by surrounding street interfaces, and location in relation to slope; and how the flexibility and extent of use is maximised by locating away from busy roads, noise and pollution, how size is suitable for the number and types of users, and location in relation to existing parks optimises use for the surrounding community.
- 3.5. 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.
- 3.6. Provide a layout plan of the public streets, lanes and walkways, identifying street hierarchy, typologies, movement patterns for all modes of travel, connectivity to existing context and the development lots. Provide detailed sections and plans for typical conditions in each type of street, demonstrating innovative and best practice design for high density, highly connected, and active transport priority environments.
- 3.7.3.4. Identify key intersections where there are **expected to be** 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.
- 3.8.3.5. Provide a **section and** general arrangement plan for streets locating proposed kerb alignments, including intersection arrangements and mid-block crossing arrangements, overlaid with existing and future ownership boundaries.
- 3.9. Provide a public domain plan incorporating the open space plan and street layout and demonstrate how it responds to the analysis and the urban design principles.
- 3.10.3.6. 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.
- 3.11.3.7. Provide a (Water Sensitive Urban Design [[Link](#) - REDWatch]) WSUD strategy that

integrates with the flood study, the public domain and private open spaces, show any measures on plans and detail street sections.

3.12.3.8. Provide an indicative material and furniture palette for the **park public realm** and the various street types.

3.13.3.9. 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.

4. Land Use and Planning Controls

4.1. Consider and coordinate the findings of other **parts of this study studies** to ensure vision and planning outcomes are achieved through the planning controls and future development.

4.2. Assess the consistency of the proposal against relevant state and local plans, strategies and policies.

4.3. Provide
a **draft planning framework for the precinct to include amendments to draft zoning and planning controls to amend State Environmental Planning Policy (SEPP) (State Significant Precincts) [Link - REDWatch] 2005 and a precinct- specific Development Control Plan.**

4.4 4.3 (continued)

The SEPP amendment is to include
including

zoning, maximum building height, **floor space ratio (FSR)**, heritage, lot size, active street frontage, design excellence provisions and any other provisions needed to achieve the intended planning outcomes.

Prepare controls for height and FSR and include residential and non-residential floor space mix requirements.

SEPP Planning controls are to be consistent with the Standard Instrument.

4.5 4.7 Prepare a draft DCP, in a form able to be integrated with the Sydney DCP [Link - REDWatch] 2012, including appropriate development controls to inform future development of the precinct including: public domain **and**, street hierarchy and typologies, connectivity, car parking, accessibility, building footprints, **detailed building heights** including street frontage and podium, setbacks, building typologies, private open space, **space for waste management**, sun access, **view corridors**, public art and heritage.

4.6 The combination of SEPP and DCP controls are to provide certainty that each stage and component of the project can achieve the required amenity standards and planning and development outcomes through the life of the project, while providing the flexibility needed to allow the project to respond to changing contexts over time.

4.7.4.4. Explain the proposed land uses and zoning approach and provide justification for the mix and location of proposed land uses.

4.8.4.5. Justify the proposed development standards (height, floor space, heritage and parking). Explain the methodology adopted to ensure planning outcomes, including appropriate transitions to adjoining areas, development that is sympathetic to heritage items, provision of infrastructure and amenity standards **including in** the Apartment Design Guide [Link - REDWatch], are achieved.

4.9.4.6. Develop a design excellence approach **which encourages that requires** a competitive design process and excellent design outcomes. The City of Sydney Design Excellence Strategy [Not found. See [Competitive design policy](#) - REDWatch] is encouraged.

5. Transport

5.1. Prepare a comprehensive transport impact assessment to understand the transport network context, service and network limitations, opportunities for improving customer experience and transport solutions that will accommodate planned growth through integrating land use and transport and better managing travel demand Hold a scoping meeting to agree upon an

acceptable methodology with Transport for NSW (TfNSW), Roads and Maritime Services (RMS) and the City of Sydney Council.

5.2. The assessment should consider, but not be limited to:

- o a broad review of the existing and future land use and transport context within the study precinct, access and connectivity with assessment of the overall precinct and its relationship to the surrounding transport network and land uses
- o appraisal of current site travel mode share including walking, cycling, public transport and private vehicles, including shared vehicles
- o how the transport outcomes and the effect of the transport network will support the urban and place-making outcomes for the precinct
- o the needs of different customers within the precinct
- o access to key destinations and infrastructure in the local area, in particular, schools, community facilities and other local services
- o the safety of all road users, in particular, pedestrians and cyclists
- o performance of the existing and future cycling, public transport and road network surrounding the Waterloo Estate, and in addition map the agreed public transport initiatives linked to the development of the Waterloo Metro Quarter, the Central to Eveleigh Urban Transformation Strategy [[Link - REDWatch](#)] (noting that the study area must be agreed with TfNSW and RMS) and WestConnex and associated projects
- o existing trip generation by mode based on the current land use and transport context including walking, cycling, public transport, taxi, ride share (e.g. Uber) and private vehicles
- o review the trip generating potential for all modes and purposes (including education) associated with the proposal. Trip generation rates are to be prepared specifically for the precinct based on evidence-based review of standard rates, intended urban form and travel characteristics of the precinct and consultation with key stakeholders. Trip generation rates are to be agreed by Transport for NSW (TfNSW), Roads and Maritime Services and the City of Sydney
- o cumulative growth of surrounding area based on committed and planned developments such as Australian Technology Park and proposed infrastructure (such as WestConnex, and associated projects)
- o impact of additional travel demands (across all modes) on the transport network serving the site
- o benchmark the travel mode share and trip generation profile through undertaking trip generation surveys for all modes of a development site of similar scale and geographic context
- o provide an understanding of the travel behaviours and patterns (across all modes) of future residents, workers and visitors of the proposal through benchmarking, forecast modelling tools and other sources of evidence
- o develop a traffic model to determine the road network improvements required to support the proposal (scope, parameters and methodology to be agreed with Roads and Maritime Services and should be carried out in accordance with RMS Traffic Modelling Guidelines [[Link - REDWatch](#)] 2013) including street hierarchy and spatial provision for all modes of travel
- o consider the role of shared vehicles in managing travel demand and provide any recommendations for implementation of shared vehicle solutions
- o benchmark and provide recommendations for land use mix profile that will ensure customer outcomes are met and assist in management of travel demand and create a walkable neighbourhood
- o benchmark and provide recommendations on the provision of bicycle parking and end trip facilities (showers, lockers etc) to help promote alternative travel choices including walking, cycling and public transport

- o provide recommendations for car parking rates to reduce private vehicle travel demand and that help promote sustainable travel choices such as walking, cycling and public transport
 - o detail the, access and egress requirements in accordance with RMS and City of Sydney guidelines and relevant Australian Standards
 - o detail the transport infrastructure and servicing improvements, including identification of both the land (corridor preservation) and capital components to support the proposal including costings and funding responsibilities
 - o establish a flexible and resilient system of access corridors (that considers the City of Sydney's Liveable Green Network [[Link](#) - REDWatch]) within the precinct (streets, walkways, open spaces) to connect and serve the precinct and local area, including demonstrating how integrated solutions are achieved for connecting the metro station with the surrounding community
 - o prepare a staging plan that has trigger points for potential future development based on the delivery of transport infrastructure and service improvements
 - o prepare a Travel Plan detailing all modes of transport available to future residents, visitors and employees of the site and proposed mechanisms for maximising travel by walking, cycling and public transport, and
 - o prepare the required DCP provisions.
- 5.3. Review the Interchange Access Plan (IAP) for Waterloo station and demonstrate how integrated solutions are achieved for connecting the metro station with the surrounding communities and the planned major active transport corridors (the City's 'Liveable Green Network' [[Link](#) - REDWatch]). Indicate how provision for interchange with bus stops, provision of bicycle parking, kerbside areas for 'kiss and ride' and taxis are located and provide customer comfort and good customer experience outcomes. This requirement is also reflected in section 2.13.
- 5.4. Review the provision of public bicycle parking for use by future metro customers to allow for multi modal trips to deliver fully integrated world class facilities.
- 5.3.5.5. Provide an overview of potential impacts of construction traffic on potential future development. Identify a strategic construction approach, including identification of potential staging that broadly outlines the construction footprint and construction related traffic access.

6. Housing

- 6.1. Undertake a housing needs analysis for the precinct to identify the appropriate mix of dwelling types, tenures, sizes and price-points necessary to support a diverse, health and socially sustainable community. For the Waterloo Metro Quarter, the analysis should have regard to the intended provision of social and affordable housing, consider the needs of renters, investors and owner occupiers and the CommunitiesPlus process measures to ensure a diverse, inclusive, healthy, socially connected, liveable, energy efficient and sustainable community.
- 6.2. Demonstrate how the proposed planning controls will support the achievement of housing and tenure objectives.
- 6.3. Consider how social housing in the precinct is to be replaced and identify guiding principles and / or potential options for the appropriate distribution throughout the precinct to ensure positive social outcomes.
- 6.4.6.3. Identify and assess the range of mechanisms/models available to maximise affordable housing, noting the minimum target maximise the minimum affordable housing, target of 5% - 10% of new floorspace referenced in the draft Central District Plan [[Link](#) - REDWatch], or any greater target if NSW government policy changes.

7. State and Regional Infrastructure

- 7.1. Outline the impact of the proposal on State and regional infrastructure, including public transport, roads, schools, utilities, regional stormwater and drainage, human services and health facilities required to meet the characteristics and likely needs of the current population during the

development period, and future population, including the estimated costs (inclusive of land and capital) and timing of the works. Include reference to the findings of the Social Sustainability Assessment (see section 23 *Social Sustainability Assessment in the Waterloo Estate Study Requirements*).

- 7.2. Ensure on-going collaboration with State agencies to ensure their property requirements are considered and land can be zoned appropriately to accommodate future needs.
- 7.3. Outline the scope, mechanism and delivery responsibility for development for development contributions between the Applicant/s and infrastructure agencies, such as transport, education and health, for infrastructure that meets the needs of the future population having regard to the infrastructure schedule and the City of Sydney Council's existing contributions plans.

8. Local Infrastructure and Contributions

- 8.1. Outline the future community profile in age groups and time series format of the proposal (see section 22).
- 8.2. Analyse the existing and currently planned local infrastructure within the catchment of the Precinct.
- 8.3. Ensure that the redevelopment specifically includes social infrastructure and service development appropriate to the needs and requirements of the community. This includes for example primary health care, retail, community health and wellbeing services, and community support facilities.
- 8.4. 8.3 The provision of open space and recreation facilities is to be consistent with City of Sydney Open Space, Sports and Recreational Needs Study [[Link](#) - REDWatch] 2016. Consult closely with the City of Sydney.
- 8.5 8.4 Provision of community facilities is to consider:
 - o Supply - including the quantity and quality within the geographic catchment.
 - o Demand - needs of the forecast population within the catchment.
 - o Community and stakeholder views - feedback from consultation, and.
 - o Feasibility and opportunity: - including operational and costs, renewal, co-location and site constraints.
- 8.6.8.5. Consult closely with City of Sydney Council to understand existing opportunities to integrate local infrastructure needs for the Precinct with the existing and planned infrastructure network.
- 8.7.8.6. Consider the most efficient provision and operation of facilities throughout the local area, including ongoing operational implications.
- 8.8.8.7. Identify the local infrastructure needed to meet the needs of the future community, including recreation, open space (active and passive), community facilities, libraries, health facilities, primary health care services, childcare, local pedestrian, cycling and transport facilities, and local drainage.
- 8.9.8.8. Assess and provide recommendations for additional community infrastructure required to meet the needs of a mixed tenure renewal area based on the findings of the Social Sustainability Assessment (see section 23) for the Waterloo Estate.
- 8.10.8.9. Prepare an infrastructure schedule for local infrastructure including the funding arrangements, potential land reservations, floor space provision, estimated costs, timing, and delivery responsibilities relevant to staging of the development. The schedule is to differentiate any works that are needed to manage the impacts of the development.
- 8.11.8.10. Outline the proposed ongoing responsibilities and maintenance of any proposed open space/connections, drainage reserves and community facilities.
- 8.12.8.11. Consult with the City of Sydney to achieve agreement on the provision and responsibilities for local infrastructure and outline details of any agreements with the City of Sydney Council for public use of community facilities.

8.13.8.12. Outline the scope and mechanism for development contributions to fund the infrastructure identified in the schedule having regard to existing contributions plans, including the City of Sydney Development Contributions Plan [\[Link - REDWatch\]](#) 2015.

9. Utilities

- 9.1. Provide a utilities and infrastructure servicing report identifying:
 - o existing capacity, proposed on-site generation / water recycling and required capacity and augmentations needed for the proposal
 - o sustainability and climate change adaptation measures (including Water Sensitive Urban Design [\[Link - REDWatch\]](#) (WSUD), and
 - o measures to manage increasing heat and changing rainfall patterns) and staging.
- 9.2. The water utilities component must be prepared by a suitably qualified hydraulic consultant. The power utility requirements must be prepared by a suitably qualified (ASP) consultant.
- 9.3. Prepare a utilities and infrastructure servicing report that outlines the development yield, peak demand and generation forecasts, staging information and includes a high-level assessment of the capacity of:
 - o the Ausgrid electrical network requirements to service the development (including on-site generation and storage) and outline the likely impacts on the broader Ausgrid electrical network. This will include direct engagement with Ausgrid on the high-level impacts to ensure early understanding of energy requirements, planned on-site generation, energy storage and visibility of any network augmentation requirements including facility site requirements, easement requirements and asset relocations
 - o a study of forecast transport peak energy demand requirements including the proposed Waterloo metro station and potential use of electric vehicles, and
 - o **the capacity of** Sydney Water's network to service the development and the proposed servicing options considered for the development. Outline any integrated water cycle management and / or sustainability initiatives proposed for the development, including any proposed alternative water supply, proposed end uses of drinking and non-drinking water and proposed water conservation measures.
- 9.4. The utilities and infrastructure servicing report should also identify the location of Ausgrid, Sydney Water and other services or assets in the precinct and provide proposals to mitigate the asset risks related to the development of the site.
- 9.5. Integrate outcomes of the ESD Study to ensure optimisation of sustainable infrastructure opportunities.
- 9.6. Ensure compliance with current utility design standards which require all new power, communication and other utilities within new development areas to be underground.

10. Climate Change Mitigation and Adaptation

- 10.1. Undertake a sustainability assessment of the proposal, reflecting the directions outlined in the NSW Climate Change Policy Framework [\[Link - REDWatch\]](#) October 2016 and Draft Central District Plan [\[Link - REDWatch\]](#) - Creating an efficient Central District to achieve net-zero carbon emissions by 2050. Investigate options for achieving both net zero buildings and a net zero precinct.
- 10.2. Provide a Climate Change Adaptation Report which details how the proposal will address social, environmental and economic effects of climate change on future communities (see NSW and ACT Regional Climate Modelling: NARCLIM [\[Link - REDWatch\]](#)), including **the integration of vegetation (future and existing)** designing to manage changing temperatures and rainfall patterns through the integration of vegetation (existing and future), permeable and reflective surfaces, and Water Sensitive Urban Design [\[Link - REDWatch\]](#).
- 10.3. Assess the potential impacts of climate change on vulnerable groups, including older people, and mechanisms for implementing mitigation strategies.
- 10.4. Undertake a sensitivity analysis to address the impact of climate change due to increased

temperatures, extreme heat events and changing rainfall patterns integrated with the Water Quality, Flooding and Stormwater Study.

10.5. Demonstrate consideration of the Urban Green Cover in NSW Technical Guidelines [[Link](#) - REDWatch] (OEH, 2015).

10.6. Demonstrate compliance with BASIX and investigate opportunities to deliver beyond-compliance BASIX scores.

11. Heritage

11.1. Prepare a heritage assessment that investigates the history, physical evidence and significance of the features within the study area, based on a site inspection and documentary research, to identify and conserve features of local or greater heritage significance.

11.2. The heritage assessment is to be undertaken in accordance with guidelines set out in the NSW Heritage Manual [Now published as many PDF files, which are listed under "NSW Heritage Manual" in the [Publications list](#) - REDWatch.], the methodology described in 'The Conservation Plan' [[Link](#) - REDWatch] (J S Kerr 1996) and in the Australia ICOMOS Charter for the Conservation of Places of Cultural Significance [[Link](#) - REDWatch] (the Burra Charter).

11.3. This assessment is to review, but is not limited to, features of potential heritage significance within the area for replanning including:

- o buildings - all existing
- o landscaping elements - built and planted
- o monuments or public art installations
- o infrastructure - street patterns and stormwater
- o potential archaeological relics, and
- o places of social significance.

11.4. Provide recommendations for the management of heritage significance – to guide future development or planning to retain the assessed significance of features, including features to retain and re-use, treatment of specific spaces and fabric of significance, view corridors, setbacks and heights for new development in the vicinity, photographic archival recording or oral histories.

11.5. Provide a Statement of Heritage Impact in accordance with the Statement of Heritage Impact guide which:

- o identifies and assesses any direct and/or indirect impacts (including cumulative impacts) to the heritage significance of the Waterloo Congregational Church and other heritage items and conservation areas in the vicinity of the site, and
- o addresses the height, density, bulk and scale, and setbacks of the proposal in relation to the locality and the surrounding development, topography and streetscape, having particular regard to its relationship with Waterloo Congregational Church.

11.5.11.6. Provide the required DCP provisions.

11.6.11.7. Provide an interpretation plan having particular regard to the precinct's relationship with nearby heritage items in accordance with Interpreting Heritage Places and Items Guidelines.

12. Aboriginal Cultural Heritage

12.1. Prepare an Aboriginal cultural heritage study to identify and describe the Aboriginal cultural heritage values that exist across the whole area that will be affected by the development and document these in the study. This may include the need for surface survey and test excavation. The identification of cultural heritage values should be guided by the Guide to investigating, assessing and reporting on Aboriginal Cultural Heritage in NSW [[Link](#) - REDWatch] (DECCW, 2011).

12.2. Where Aboriginal cultural heritage values are identified, consultation with Aboriginal people must be undertaken and documented in accordance with the Aboriginal cultural heritage consultation

requirements for proponents [[Link](#) - REDWatch] 2010 (DECCW). The significance of cultural heritage values for Aboriginal people who have a cultural association with the land must be documented in the study.

12.3. Impacts on Aboriginal cultural heritage values are to be assessed and documented in the study. The study must demonstrate attempts to avoid impact upon cultural heritage values and identify any conservation outcomes. Where impacts are unavoidable, the study must outline measures proposed to mitigate impacts. Any objects recorded as part of the assessment must be documented and notified to OEH.

12.4. Prepare the required DCP provisions.

13. Biodiversity

13.1. Assess and document biodiversity impacts in accordance with the Framework for Biodiversity Assessment, [[Link](#) - REDWatch] unless otherwise agreed by OEH, by a person accredited in accordance with s142B(1)(c) of the Threatened Species Conservation Act 1995 [[Link](#) - To be replaced by the [Biodiversity Conservation Act](#) - REDWatch].

14. Urban Forest

14.1. This study requires a Project Arborist qualified in arboriculture to Australian Qualifications Framework (AQF) level 5 or above and have at least 5 years demonstrated experience in managing trees within complex development sites.

14.2. Provide a preliminary arboricultural report that identifies tree location, condition, quality, life expectancy and indicative Tree Protection Zones to enable the urban design to minimise impacts to trees.

14.3. Undertake an arboricultural impact assessment for the proposal outlining trees to be removed or retained and the possible impacts on the trees to be retained including allowing for future construction methodology.

14.4. The plan for the retention of existing and provision of new trees is to consider:

- o The capacity of the public domain and urban design approach to protect existing trees and allow for the growth of new trees
- o Species selection that maximises solar access during winter
- o The provision of sufficient soil volumes and quality (including within the private domain) provide for long term tree health
- o Canopy design concepts that consider expanded verges and central verges (through setbacks, reduced carriageway or widened reservation) to increase planting, incorporation of landmark large scale trees in key locations and street gardens and low plantings to improve streetscape amenity, and
- o Coordinate outcomes of the Public Domain Design, Urban Design, Utilities (ensure overground utilities are undergrounded), Wind (ensuring that trees are not expected to be the wind mitigation device) and transport parts of this study.

14.5. Demonstrate how the project addresses the City of Sydney Urban Forest Strategy [[Link](#) - REDWatch];, in particular, the following site specific targets:

- o minimum canopy cover of 50% to streets, 25% to parks and 25% to private property
- o minimum species diversity targets of 40% family, 30% genus, and 10% species
- o minimum distribution of tree heights of 10% small trees (3-5m), 45% medium trees (5-10m), 35% large trees (10-20m) and 10% extra-large trees (20m+), and
- o consult closely with City of Sydney.

14.6. Provide an indicative tree and **landscape** planting strategy across the site, accounting for biodiversity and habitat considerations that includes:

- o a tree sensitive public domain and that protects existing trees, and allows for the growth of new trees

- o species selection that maximises solar access during winter, and
- o sufficient soil volumes and quality are provided for long term tree health.
- o Demonstrate that Council policies, strategies, master plans are complied with, including, Tree Management Controls:
 - SLEP[[Link](#) - REDWatch];
 - SDCP [[Link](#) - REDWatch];
 - Urban Forest Strategy [[Link](#) - REDWatch];
 - Tree Management Policy [[Link](#) - REDWatch];
 - Street Tree Master Plan [[Link](#) - REDWatch];
 - Urban Ecology Strategic Action Plan [[Link](#) - REDWatch]and
 - Landscape Code 2016 [[1: Single Dwellings](#), [2: Other developments](#) - REDWatch]

15. Urban Ecology

- 15.1. Prepare an ecological assessment by a suitably qualified ecologist following the guidelines in SSROC Connected Corridors for Biodiversity: Guide. Include species and communities of local conservation significance, as identified in the City's Urban Ecology Strategic Action Plan [[Link](#) - REDWatch] (UESAP), as well as, listed threatened species and ecological communities. Include in the assessment:
- o identify any species that are of particular conservation significance (including threatened species and locally-significant species identified in the City's UESAP).
 - o determine the nature and extent of impacts to the urban vegetation and fauna, particularly those of conservation significance (if present), that are likely to result from each stage of the development.
 - o outline the mitigation measures that will be employed to avoid or minimise such impacts, including:
 - clearing and relocating of any onsite indigenous flora and fauna prior to works commencing
 - protecting of any significant habitat features, and
 - restoration/creation of compensatory habitat for any important habitat features removed/disturbed as a result of the development., and
 - o provide recommendations and identify opportunities to create habitat features that will benefit urban biodiversity. This report should identify, but not be limited to, what habitat features are to be retained, species to be planted, and other habitat features are to be created.
- 15.2. To achieve the City's UESAP overall objectives, for this site it is considered appropriate that mid and understorey plantings using locally native indigenous plants comprise of a minimum:
- o 60% within the public domain; 70 species, and
 - o 40% within private property; 15 species.
- 15.3. Integrate the findings of other urban biodiversity/ecology parts of this study and demonstrate how these have shaped the plan for the site and how they contribute to meeting the City's Urban Ecology requirements and targets.

16. Ecologically Sustainable Development (ESD)

- 16.1. Provide an Ecologically Sustainable Development Report which details how ESD principles (as defined in clause 7(4) of Schedule 2 of the Environmental Planning and Assessment Regulation [[Link](#) - REDWatch] 2000) will be incorporated, specifically:
- o identify performance benchmarks to allow sustainability to be considered in site planning, building design and in the construction and operational phases of the development to achieve best practice sustainability outcomes, and
 - o commitment to compliance with a nationally recognised rating system (e.g. Green Star – Communities).

- 16.2. Provide an Integrated Waste Water Management Strategy that considers water, waste water and stormwater plus potential alternative water supply, demonstration of water sensitive urban design and any future water conservation measures, including reuse, following appropriate best practice and guidelines. Investigate any opportunities for and include an assessment of the feasibility of a precinct-scale recycled water scheme that includes nearby sites with the **willingness and capacity** to participate.
- 16.3. Identify options to achieve a minimum of 50% renewable energy for the precinct, by maximising on-site generation and renewable energy generated off-site.
- 16.4. Identify and implement waste management strategies to achieve the NSW Government's Waste Avoidance and Resource Recovery Strategy [[Link - REDWatch](#)]; 2007 (WARR) and compliments the NSW Government's Waste Less, Recycle More initiatives and EPA waste and recycling programs. Include measures to ensure effective operational waste management, for example, adequate space within buildings for waste infrastructure, accessibility for waste collection vehicles. Identify building and precinct-scale solutions.
- 16.5. Prepare the required DCP provisions.

17. Water Quality, Flooding and Stormwater

- 17.1. Provide an assessment of any potential impacts of the proposal on the hydrology and hydrogeology of the urban renewal precinct and adjoining areas, with particular focus on water quality, and **reference** to water quality targets in the City of Sydney DCP [[Link - REDWatch](#)]2012:
 - o reduce the baseline and annual pollutant load for litter and vegetation larger than 5mm by 90%
 - o reduce the baseline annual pollutant load for total suspended solids by 85%
 - o reduce the baseline annual pollutant load for total phosphorous by 65%, and
 - o reduce the baseline annual pollutant load for total nitrogen by 45%.
- 17.2. Provide a concept Stormwater Management Plan outlining the general stormwater management measures for the proposal, with particular emphasis on possible WSUD options.
- 17.3. Consider the effect of climate change and changing rainfall patterns and undertake a sensitivity analysis to address the risks and impacts.
- 17.4. Provide a flood risk assessment developed in consultation with City of Sydney Council identifying flooding behaviours for existing and developed scenarios in order to outline the suitability of the land for proposed uses. Identify flooding characteristics (i.e. flow, levels, extent, velocity, rate of rise, hydraulic and hazard categories) for the full range of flooding up to the probable maximum flood (PMF), for both mainstream and overland flow path.
- 17.5. Consider the future cumulative flood risk impact across the entire **nominated Waterloo** Precinct and adjoining land areas.
- 17.6. Address the impact of flooding on future proposed development including flood risk to people and properties for key flood events including the 1% AEP and the probable maximum flood (PMF) event. The assessment is to address relevant provisions of the NSW Floodplain Development Manual [[Link - REDWatch](#)]; (2005).
- 17.7. Provide an assessment of possible impacts of the proposal on the flood behaviour (i.e. flow levels, extent, velocities and duration of flooding) and any impact of the proposal on adjacent, downstream and upstream areas.
- 17.8. Provide concept level information on the impacts of future earthworks and filling of land within the proposal. This assessment is to be based on an understanding of staging and cumulative flood impacts.
- 17.9. Provide preliminary assessment on recommended flood management measures including mitigation works and development controls.
- 17.10. Provide recommendations regarding the most appropriate emergency response strategy to manage risk to life.

- 17.11. Provide concept level details of the drainage associated with the proposal, including stormwater drainage infrastructure and address the impact of stormwater flows on the site from other catchments.
- 17.12. In addition to securing an acceptable level of personal and property safety from flooding, the proposal is to ensure that measures to address **of** flooding can achieve high quality urban design outcomes, including ground floor public – private domain engagement i.e. how ground floor retail can be entered at ground at footpath level, and promote water quality outcomes through measures such as water sensitive urban design (in the public and private domains).
- 17.13. Prepare an implementation plan for the concept Stormwater Management Plan and Flood Risk Assessment.
- 17.14. Demonstrate, through assessment against established criteria, how the proposed flooding and stormwater strategy achieves acceptable water quantity and quality outcomes, and in particular, promotes water sensitive urban design.

18. Noise, Vibration and Pollution

- 18.1. Provide a noise and vibration impact assessment for the proposal. The assessment will address the relevant policies and guidelines in relation to noise including State Environmental Planning Policy (Infrastructure) [\[Link - REDWatch\]](#); 2007 and the Development Near Rail Corridors and Busy Roads [\[Link - REDWatch\]](#) – Interim Guideline.
- 18.2. Consider and assess potential pollution impacts from the proposed rezoning including, but not limited to, water, air, noise and light pollution.
- 18.3. Provide an air quality assessment for the proposal. The assessment will address the relevant policies and guidelines in relation to air quality including State Environmental Planning Policy (Infrastructure) [\[Link - REDWatch\]](#) 2007 and the Development Near Rail Corridors and Busy Roads [\[Link - REDWatch\]](#) – Interim Guideline.
- 18.4. These assessments should also consider other current local air and noise issues in the Waterloo area, including potential cumulative impacts from the Waterloo Estate.
- 18.5. Identify and map current and proposed future sensitive receptors (eg residential uses, schools, child care centres).
- 18.6. Identify current and likely future noise, vibration and pollution affecting the precinct, including sources and nature and impact. Site monitoring will be required to determine current road noise levels on **McEvoy Street Botany Road**. 3D mapping to clearly communicate these impacts, including demonstrating for example how noise reduces with distance from source, is desirable.
- 18.7. Model the likely future noise, vibration and pollution scenario based on 3D block envelope diagrams prepared by the urban designer. This is to include road and rail noise.
- 18.8. Recommend appropriate noise and vibration mitigation measures. The consultant is expected to work with the urban designer, and suggested measures are provided for the protection of future residents of buildings through the careful siting and layout of buildings maintaining natural ventilation through open windows.
- 18.9. Outline the recommended measures relating to noise, vibration and pollution to minimise the nuisance and harm to people or property within the precinct.

19. Wind

- 19.1. Provide a complete understanding of the existing wind characteristics of the precinct. Consider the wind climate of Sydney, local characteristics such as topography that modify this wind climate for the precinct and the impact of existing buildings, in particular, the tower and slab blocks, on wind conditions.
- 19.2. Identify significant locations for wind sensitivity within the public domain, including **metro station entry**, bus stops, public plazas and other public domain areas for the purpose of modelling wind impacts of the proposed development.
- 19.3. Ensure early consideration of potential wind impacts and amelioration approaches through the

layout and arrangement of the public domain and the built form.

- 19.4. Advise on measures to ensure the suitability of areas for their intended use with regard to the impact of wind on comfort and safety. In particular, this is to focus on the public space areas intended to be used for seating (ie the park, outdoor dining areas on footpaths and public plazas) and standing (ie building entries); and, also for outdoor private recreation areas to be suitable for sitting (eg balconies, decks and outdoor communal private open space). Advise on the placement, orientation, shape and external design of buildings, and relevant wind mitigation devices.
- 19.5. Any advice on landscaping of public space must accord with the City of Sydney's Public Design Manual [See [Public domain design codes](#) - REDWatch] and the Public Domain design. In general landscaping can only be used for wind mitigation if it is already in place.
- 19.6. Include areas surrounding the precinct that may be wind affected as a result of the proposal.
- 19.7. Undertake an assessment to demonstrate that subject to any recommended measures, wind will not have an unacceptable impact on the proposal, and the proposal will not generate unacceptable wind impacts.
- 19.8. Wind tunnel testing is required.

20. Aeronautical

- 20.1. Review relevant background information, including the 'Sydney Airport Master Plan [\[Link - REDWatch\]](#) 2033' to understand the current and proposed future operations of Sydney Airport, as relevant to the precinct.
- 20.2. Identify and clearly map the OLS, PANS OPS and any other relevant Sydney Airport height limitation layers, including consideration of Navigation Aid Surfaces.
- 20.3. Translate these layers into a maximum height for permanent (e.g. buildings) and temporary (e.g. cranes) structures include a building methodology specialist to translate this information into maximum building envelope height planes.
- 20.4. Advise on other measures, if necessary, to ensure the precinct does not have an adverse impact on the operations of Sydney airport, e.g. lighting, reflective surfaces etc).
- 20.5. Advise on the pathway required to secure approval from relevant bodies, e.g. Air Services Australia, as part of subsequent development application processes, including for temporary structures such as cranes.
- 20.6. Certify that subject to any recommended measures, the precinct proposal will not have an adverse impact on the operations of Sydney Airport.

21. Geotechnical and Contamination

- 21.1. Provide an assessment of the local soil, outlining its suitability for the proposed uses with respect to erosion, salinity and acid sulphate soils.
- 21.2. Provide an assessment of the proposed land uses in accordance with State Environmental Planning Policy No 55 – Remediation of Land [\[Link - REDWatch\]](#) (SEPP55).

NOTE: In cases where land is potentially contaminated, the investigation and any remediation and validation work is to be carried out in accordance with guidelines made or approved by the EPA under Section 105 of the Contaminated Land Management Act 1997 and be in accordance with the requirements and procedures in the Contaminated Land Management Act 1997, Contaminated Land Management Regulation 2013 and SEPP 55 – Remediation of Land [\[Link - REDWatch\]](#).

22. Population Demographics

- 22.1. Determine the most suitable data set, model (or combination of models) and assumptions to be used to inform forecasts of future population and employment. Assumptions to be agreed include average size of dwellings, average dwelling occupancy, average floorspace per worker and others where relevant. Data for employment is to be consistent with the City of Sydney's 2012 floor space and employment survey (FES) [See [FES download page](#) - REDWatch] updated when available. Consult with NSW Department of Planning and Environment, and City of Sydney on methodology.

- 22.2. Identify and clearly communicate (including through the use of maps, tables and charts as appropriate) key population and employment drivers and trends impacting the precinct and surrounding communities.
- 22.3. Identify the key population and employment attributes of comparable higher density inner city Sydney communities. Potential areas to be reviewed include Kings Cross / Potts Point and Pyrmont. Identify the key population and employment attributes of comparable higher density social housing communities. Potential areas to be reviewed include Waterloo Estate, Redfern Estate and Northcote and surroundings.
- 22.4. Prepare a population and employment profile of the future community including dwelling types, age profile, ethnicity, education, employment, income, household types, housing tenure, car ownership, trip to work mode and other information required by the various parts of this study.
- 22.5. Compare precinct data with the remainder of the City of Sydney LGA and Greater Sydney Metropolitan Region for the purposes of benchmarking.
- 22.6. Prepare time series (5 year increments) population and employment profiles of the precinct and surrounding community (including dwelling and job yields) based on existing development capacity, without the Planning Proposal.
- 22.7. Prepare time series (5 year increments) population and employment forecasts of the precinct and surrounding community (including dwelling and job yields) based on strategic modelling, with the Planning Proposal. Reference dwelling yields for the precinct will be provided for the precinct.
- 22.8. Update data as the 2016 census results become available.

23. Social Sustainability Assessment

- 23.1. The purpose of the Social Sustainability Assessment is to guide the implementation and scope of the project to promote positive social outcomes through design and management recommendations and strategies.
- 23.2. The Social Sustainability Assessment (SSA) should address:
 - a) existing social characteristics, issues and trends for the Estate and adjoining neighbourhoods
 - b) capacity for community participation in the planning process
 - c) the contribution of the project to improved social sustainability
 - d) the Waterloo Precinct Plan, including the social aspects of project staging and delivery, urban design, provision of open space and community facilities, state social infrastructure and services, the availability of local social and community services, and other key issues, and
 - e) consider the proposed project within the local area and its broader context especially in respect of densities and community connectedness.
- 23.3. Demonstrate how the vision and relevant principles in the City's social sustainability policy - A City for All: Towards a Socially Just and Resilient Sydney [[Link - REDWatch](#)], and the objectives of the NSW Government's Future Directions for Social Housing in NSW [[Link - REDWatch](#)] [will be realised.
- 23.4. Prepare a comprehensive profile of the existing community, neighbouring communities, and the likely future community.
- 23.5 Prepare an in-depth social needs analysis for the existing, neighbouring and future communities, including the use of primary research, with at least the following groups:
 - o Key population groups including (but not limited to);
 - (i) Aboriginal and Torres Strait Islander People (with separate groups of women, men, young people and older people)
 - (ii) older people
 - (iii) young people
 - (iv) children and families

- (v) key groups of CALD residents (with separate groups for the main language groups)
- (vi) primary school children.

- o Separate groups with users and providers of: i) community services, e.g. home care, community transport, ii) key medical and mental health services, iii) key legal services, iv) tenant representative groups and other local service providers and government agencies such as Education and Justice.

23.6 Prepare a Social Sustainability Report that:

- o is undertaken by a competent and suitably qualified social science professional who uses rigorous social planning methodologies
- o includes effective, timely and transparent public involvement, including the input of different social groups
- o fully assesses the social aspects of the project process and staging, as well as the proposed final project outcomes
- o fully describes the needs of the existing, neighbouring and likely future communities, and how those needs will be addressed through the project to promote positive social outcomes
- o fully describes the changes anticipated as a result of the project
- o identifies, where possible, examples of similar scenarios and social sustainability measures for comparison, paying particular attention to vulnerable and key population groups including minority groups, and different age, income and cultural groups
- o identifies direct and indirect, long term and short term social sustainability measures to promote positive social outcomes as a consequence of the project, addressing people's way of life, social connections, safety, access to health and welfare services, access to employment and education opportunities, health and culture including measures to provide for the needs of minority groups, different age, income and cultural groups and future generations
- o identifies the relative equity of the project and associated social sustainability measures, including how the opportunities will be accessible to different sections of the community
- o considers social sustainability overtime
- o includes qualitative and quantitative needs analysis
- o includes a mechanism for the future review of community needs, and
- o makes clear recommendations for opportunities to maximise positive social outcomes for existing, neighbouring and likely future communities through the project. Recommendations should refer to how the project will address the needs of existing, neighbouring, and likely future communities and include measures that are tangible, timely and effective, and within the ability of the Applicant/s (alone or in partnership) to deliver.

23.7 Measures require effective and costed implementation mechanisms and responsibilities which are agreed with key partners and documented in a site-specific Social Sustainability Plan to guide future stages of the project.

23.8 The City of Sydney, Department of Education and Department of Family and Community Services should be closely consulted in preparation of the Social Sustainability Report.

23.9. Ensure that the historical connections and importance of the Waterloo area to our First Nations people and means to support them and reflect them in the design of the project, the services and employment opportunities provided and that Waterloo continues to be a welcoming and culturally inclusive place.

24. **23. Economic Development, Local Retail and Services**

2423.1. Prepare and analyse the local economic and employment profile for the precinct and local area.

2423.2. Analyse the economic development, local employment and local retail and services needs to support the development and economic sustainability of the precinct, ensuring a highly

walkable precinct with a high degree of containment, its future community and relevant local and regional centres.

- 2423.3. Identify the quantum of floorspace required to support economic development, local retail and service provision.
- 2423.4. Develop a strategy to deliver strategically important uses, through market delivery combined with targeted interventions where market delivery will not satisfy identified needs.
- 2423.5. Identify appropriate locations for active retail frontages to provide community services to facilitate current and future needs.
- 2423.6. Consider the role of the precinct in terms of employment, retail, local service and other economic generating land uses within the local and regional context including nearby local centres, Green Square Town Centre, Central Sydney and Australian Technology Park.
- 2423.7. Consider local employment and business needs and opportunities to support the existing and future community, including a specific focus on Aboriginal and Torres Strait Islander communities.
- 2423.8. Identify measures to ensure the development of the precinct meets the economic development, local employment and local retail and service needs of the community and supports the economic development of neighbouring centres. This is to consider the different service, business and employment needs of groups within the community.
- 2423.9. Provide recommendations to inform planning controls on the quantum of retail, service and employment floor space needed to meet the needs of the vision and objectives of the project.
- 23.10. Demonstrate an integration of local retail and services across the entire Waterloo Precinct noting that the Waterloo Metro Quarter and its surrounds may present the best location for larger retail concentration.

25. 24. Feasibility and Economic Benefits

- 2524.1. Provide an analysis of the market demand for the proposal.
- 2524.2. Provide an assessment of the development feasibility of the proposal.
- 2524.3. Provide an economic assessment of the proposal, including the likely wider economic benefits.
- 2524.4. Undertake an economic analysis testing feasibility of future development to contribute towards local, State and regional infrastructure.
- 2524.5. Investigate the potential for visitor accommodation within the nominated precinct and consider an appropriate target.

26. 25. Public Art

- 2625.1 Prepare a public art plan that:
 - is authored by a professional curator with experience and knowledge of the area
 - is developed in consultation with the City of Sydney, the City's Public Art Advisory Panel, key cultural stakeholders and the community
 - allows for individual, meaningful and iterative one on one consultation with the above groups
 - identifies opportunities and an overarching conceptual approach/curatorial rationale for the precinct
 - proposes a sound methodology for the selection, commissioning and delivery of public art as part of future development applications in a way that ensures the strategic intent, vision, artistic integrity and quality of all public artworks is maintained throughout this process
 - ensures that adequate checks and balances are in place to achieve best practice outcomes,
 - outlines a budget for public art that allows for best practice outcomes that will contribute to

the future public life in Waterloo, and

- clarifies the lifespan of the artwork and process for decommissioning as well as ownership, funding and responsibility for ongoing maintenance of all artworks.

2625.2 Demonstrate how it is consistent with:

- an overall curatorial strategy and urban design strategy for the area covered by the Central to Eveleigh Urban Transformation Strategy [[Link](#) - REDWatch], and
- the City of Sydney's Public Art Strategy [[Link](#) - REDWatch], Public Art Policy [[Link](#) - REDWatch], Guidelines for Public Art in Private Developments [[Link](#) - REDWatch] and Guidelines for Acquisitions and Deaccessions. [[Link](#) - REDWatch]

27. 26. Consultation

- 2726.1. During the preparation of the study undertake an appropriate and justified level of consultation with Council, other relevant State and Federal government agencies, non-government service providers and community stakeholders.
- 2726.2. Align consultation with IAP2 core values and demonstrate guiding principles of community engagement including integrity, clarity, scope and purpose, inclusiveness, accessibility to all those affected, genuine dialogue and open discussion and opportunity for influence.
- 2726.3. Consultation is to be evaluated against its appropriateness, reach and achievement of intended consultation outcomes.
- 2726.4. Consultation is to address key aspects of the proposal including spatial arrangement of development, staging, open space, amenity, transport, community facilities and community resilience to manage change.
- 2726.5. Include a capacity building and education process to prepare communities and community groups to participate in the planning process.
- 2726.6. Engage with relevant target groups including housing tenants, tenants with complex needs, Aboriginal and Torres Strait Islander community, linguistically and culturally diverse communities, neighbouring residents, landowners, workers and students, local businesses, local community organisations and local service providers through appropriate, independent, safe and culturally respectful channels.
- 27.7. Host at least 2 (two) workshops, to be professionally facilitated, which involve private landowners, the Department and Council with the intent of understanding private landowner aspirations and how they will be considered as part of the proposal. The timing of workshops is to be agreed at the earliest opportunity with the Department and Council in order to allow workshop outcomes to inform the Vision and Options for the project.
- 27.8. 26.7. Adequate and ongoing consultation with the local Aboriginal and Torres Strait Islander community is recommended, particularly for heritage assessments and Social Sustainability Assessment and Economic Development, Local Retail and Services Study (see section 2423).
- 27.9. 26.8. Provide a summary report of the general outcomes of early consultation and how the outcomes have been incorporated into the proposal (or justification where outcomes have not been incorporated into the proposal). The report should contain a specific section summarising the outcomes of private landowner workshops demonstrating how the findings from these workshops have been considered as part of the proposal, and how the proposal results in a fair and impartial distribution of development potential between private and government-owned land.
- 27.10. 26.9. Provide evidence of consultation (including letters, minutes of meetings, charrette/drop in event summaries and formal advice) with Council, government agencies and adjoining land owners.

REDWatch Note:

This document has been prepared by REDWatch to enable community members to access a

information of the combined study requirements for the Waterloo Estate and for the Waterloo Quarter. While we have taken care in combining the two sets of requirements we can not guarantee that all differences have been identified by the software used or manual adjustments needed for readability. Readers should rely on their own comparisons. If you identify any errors please email details to mail@redwatch.org.au. The original document on which this combination has been based can be downloaded from www.planning.nsw.gov.au/Plans-for-your-area/State-significant-precincts/Waterloo.

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