NSW GOVERNMENT

Blackwattle Bay

State Significant Precinct Study

JUNE 2021

Revised 14 July 2021

BLACKWATTLE BAY

STATE SIGNIFICANT PRECINCT STUDY

Revised 14 July 2021: Incorrect ***Figure 34: 3D Model of proposed massing*** on page 86 replaced with correct image.

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ABBREVIATIONS

1% AEP	Statistical flood event occurring once every 100 years
ACHAR	Aboriginal Cultural Heritage Assessment Report
ADG	Apartment Design Guide
ARH SEPP	*State Environmental Planning Policy (Affordable Rental Housing)*
BAM	Biodiversity Assessment Method
BASIX	Building Sustainability Index
BDAR	Biodiversity Development Assessment Report
BTR	Build to rent
CAQMP	Construction Air Quality Management Plan
Codes SEPP	*State Environmental Planning Policy (Exempt and Complying Codes) 2008*
CoS	City of Sydney Council
CPTED	Crime Prevention Through Environmental Design
DCP	Development Control Plan
DPIE	NSW Department of Planning, Industry and Environment
EMP	Environmental Management Plan
EP&A Act	*Environmental Planning and Assessment Act 1979*
ESA	Environmental Site Assessment
ESD	ecologically sustainable development
FSR	floor space ratio
GANSW	Government Architect NSW
GFA	gross floor area
GSC	Greater Sydney Commission
Harbour SREP	*Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005*
HHRA	Human Health Risk Assessment
HIA	Health Impact Assessment
INSW	Infrastructure NSW
ISEPP	*State Environmental Planning Policy (Infrastructure) 2007*
LEP	Local Environmental Plan
m	metres
the Minister	Minister for Planning and Public Spaces
PLO	Private Landowner
PMF	probable maximum flood
PPPS	Pyrmont Peninsula Place Strategy
PWG	Blackwattle Bay Project Working Group
SDCP 2012	Sydney Development Control Plan 2012
SEPP	State Environmental Planning Policy
SEPP 65	*State Environmental Planning Policy No 65 – Design Quality of Residential Apartment Development*
SIC	Special Infrastructure Contributions
SLEP 2012	Sydney Local Environmental Plan 2012
sqm	square metres

SRD SEPP	*State Environmental Planning Policy (State and Regional Development) 2011*
SREP 26	*Sydney Regional Environmental Plan No 26 – City West*
SSA	Social Sustainability Assessment
SSDA	State Significant Development Application
SSP	State Significant Precinct
SSP SEPP	*State Environmental Planning Policy (State Significant Precincts) 2005*
SWC	Sydney Water Corporation
SWRCP	Site Wide Remedial Concept Plan
TfNSW	Transport for NSW
TMAP	Transport Management and Accessibility Plan
TPZ	Tree Protection Zone
VIA	Visual Impact Assessment
WSUD	water sensitive urban design

EXECUTIVE SUMMARY

The Blackwattle Bay Significant Precinct Study

Blackwattle Bay is being investigated for its urban renewal potential. Blackwattle Bay presents a rare opportunity for new housing, employment and harbourfront community spaces located less than 1km from the western edge of the Sydney CBD. Spanning approximately 10.4 hectares, the site is one of the largest opportunity precincts in the Eastern Harbour City. Together with the new world-class Sydney Fish Market, this new mixed-use precinct will complement the established and evolving commercial, residential and entertainment industries that define Pyrmont.

In 2016 the then Minister for Planning declared the urban renewal of The Bays Precinct a matter of state planning significance and determined that The Bays Precinct should be considered a potential State Significant Precinct (SSP). The Minister also identified Blackwattle Bay (then referred to as Bays Market District) as one of two investigation areas for rezoning within The Bays Precinct, the other being White Bay which is now part of a broader area referred to as Bays West.

Study requirements for the Blackwattle Bay SSP study were issued by the Department of Planning and Environment in collaboration with the City of Sydney in April 2017. Infrastructure NSW (INSW, and the former UrbanGrowth NSW) has since spent several years undertaking extensive investigation and stakeholder and community consultation in support of the SSP Study and the new Sydney Fish Market.

This study has been prepared by INSW to address the SSP study requirements and to support and facilitate the future rezoning of the Blackwattle Bay SSP.

The Blackwattle Bay Study Area includes land on the western edge of the Pyrmont Peninsula and the water of Blackwattle Bay. It adjoins the foreshores of Glebe to the west and Pyrmont Bridge Road and Wentworth Park to the south. It forms part of the City of Sydney (CoS) local government area (LGA) and is approximately 1.2km west of Sydney CBD.

New Sydney Fish Market

A critical part of Blackwattle Bay's revitalisation and vision has been the NSW Government's decision to relocate the Sydney Fish Market from its existing location on Bank Street to the head of Blackwattle Bay. The new Sydney Fish Market will be the key catalyst for regeneration at Blackwattle Bay. Development of the new Sydney Fish Market is the first step in revitalising Blackwattle Bay as it unlocks the remaining land for urban renewal and allowing the completion of the missing link of the waterfront promenade running from Woolloomooloo to Rozelle.

A Concept/Stage 1 State Significant Development Application (SSDA) and Stage 2 SSDA for the new Sydney Fish Market were approved in June 2020. The new Sydney Fish Market was designed in parallel with baseline studies for Blackwattle Bay prepared as part of the SSP Study to ensure that key aspects of the project were consistent with the vision and principles for Blackwattle Bay.

Figure ES1: Blackwattle Bay study area
Source: FJMT

Strategic context and justification

Traditionally an area for industrial uses and the current home of the Sydney Fish Market, Blackwattle Bay has the potential to be both an international tourist destination and a much-loved community asset. However, it is currently rundown and in urgent need of renewal. The opportunity now exists to create a world-class, harbourside precinct anchored by a new purpose-built authentic fish market.

The relocation of the current Sydney Fish Market to its new site will enable:

- the foreshore to be returned to the public, completing the missing link to the harbourside promenade
- the existing fish market site and land between the Anzac Bridge approaches and harbour to be renewed for a mix of parks and open spaces, community facilities as well as employment, residential, tourist and retail uses

- the provision of improved pedestrian and cyclist connections, including to the proposed new metro station at Pyrmont.

Blackwattle Bay supports multiple key government policies and strategies by delivering:

- Economic development through urban renewal outcomes that attract investment
- Job creation through the provision of land for new offices, shops and residences, as well as supporting the NSW fishing industry in regional coastal areas
- Liveable cities through a place-based approach to urban renewal, using and optimising government-owned land to provide homes near jobs and amenities and deliver economic outcomes
- A world-class destination, that will increase visitor length of stay and expenditure in NSW.

The Eastern City District Plan (the District Plan) sets out the planning priorities and actions for growth and development within the Eastern City District over the next 20 years. The District Plan highlights the importance of the Bays Precinct as an innovation hub and its strategic importance within the Harbour CBD. It also identifies it as an important area for new housing and notes the potential for the Bays Precinct to become a low emissions and high environmental efficiency precinct due to the significant urban renewal that will occur.

Blackwattle Bay is also consistent with the Pyrmont Peninsula Place Strategy (PPPS) which was released in late 2020 by the NSW Government and which provides a 20-year vision for the future of the peninsula, adopting a place-based approach to its planning and development. The PPPS sets out a set of directions, planning responses, infrastructure and governance opportunities to guide investment in Pyrmont. It identifies seven sub-precincts that, based on their character, are more suitable for growth and change. Blackwattle Bay is nominated as one of the sub-precincts. The successful renewal of Blackwattle Bay is seen as critical to achieving the potential of Pyrmont. The PPPS recognises it as the area of "greatest potential for change across the Peninsula" which is able to deliver a large amount of the growth forecast and will become "a new urban quarter and a place of metropolitan significance". It also outlines Blackwattle Bay's ability to a range of deliver public benefits that can contribute to the peninsula over and above that required to support new growth.

Guiding principles

In September 2017, the NSW Government invited community members to engage in the visioning for a future Blackwattle Bay and to contribute to the writing of a set of Design Principles to guide the preparation of the Precinct Plan. The initial 13 Design Principles were expanded to 16 through subsequent consultation with First Nations communities, the Community Reference Group and private land owners.

Principle 1: Improve access to Blackwattle Bay, the foreshore and water activities for all users.

Principle 2: Minimise additional shadowing to Wentworth Park and Glebe Foreshore (in mid-winter) and create new places with comfortable conditions for people to enjoy.

Principle 3: Pursue leading edge sustainability outcomes including climate change resilience, improved water quality and restoration of natural ecosystems.

Principle 4: Prioritise movement by walking, cycling and public transport.

Principle 5: Balance diverse traffic movement and parking needs for all users.

Principle 6: Link the Blackwattle Bay precinct to the City, Glebe Island and White Bay and other surrounding communities and attractors.

Principle 7: Mandate Design Excellence in the public and private domain.

Principle 8: Integrate housing, employment and mixed uses to create a vibrant, walkable, mixed use precinct on the city's edge.

Principle 9: Maintain and enhance water uses and activities.

Principle 10: Allow for co-existence and evolution of land uses over time.

Principle 11: A place for everyone that is inviting, unique in character, socially inclusive and affordable.

Principle 12: Expand the range of recreational, community and cultural facilities.

Principle 13: Plan for the future community's education, health, social and cultural needs.

Principle 14: Deliver development that is economically, socially, culturally and environmentally viable.

Principle 15: Embed and interpret the morphology, heritage and culture of the site to create an authentic and site responsive place.

Principle 16: Foster social and cultural understanding and respect to heal and grow relationships.

Precinct Plan

A comprehensive urban design vision and strategy has been developed to guide the future development of the Blackwattle Bay Precinct. The vision and strategy are described in the Urban Design Statement prepared by FJMT (refer **Attachment 3**). The Urban Design Statement includes the Blackwattle Bay Precinct Plan. Key characteristics of the Precinct Plan include:

- New homes, jobs and services close to the CBD with the potential to accommodate:
  - approximately 5,600 jobs
  - approximately 1,550 dwellings
- A continuous waterfront promenade – the missing link in an otherwise 15km foreshore walk from Woolloomooloo to Rozelle
- New active transport connections to bring the neighbourhood closer to the harbour through new and improved pedestrian and cycling links
- Improved public transport options and minimised vehicle usage strategies including:
  - Minimising car parking spaces with limited on-street parking
  - Potential ferry wharf
  - Opportunity for buses to service through site link
  - Connections to the existing light rail
  - Access to the future Sydney Metro West Station in Pyrmont
- New parks and green space with 30,000 sqm of new open space
- New Sydney Fish Market at the heart of Blackwattle Bay.

The Precinct Plan for Blackwattle Bay is shown in **Figure 27:** Precinct Plan**ES2** and included at **Attachment 1**.

The public domain network of open spaces, streets and lanes is central to the plan and defines building envelopes and many of the urban design principles are formulated around aspirations for the public domain. The public domain network integrates streets and lanes with the open space and parks of the Precinct Plan.

The Precinct Plan includes significant areas of open space along the foreshore. A total of three hectares of new parks and plazas is proposed, equating to approximately 30% of the site area. The open space network has been designed to encourage public and community uses, including recreation activities, events and outdoor dining.

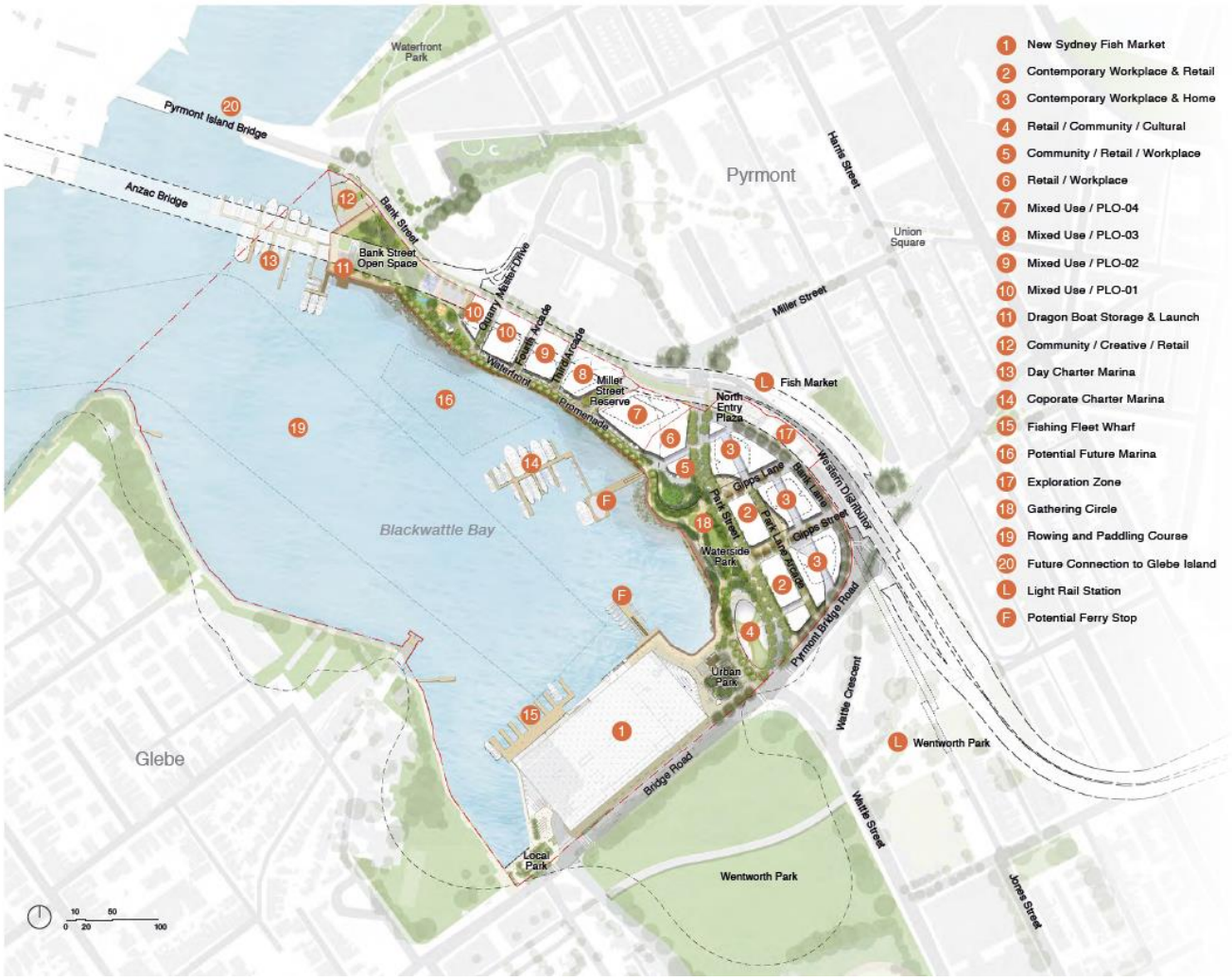


Figure ES2: Precinct Plan
Source: FJMT

The renewal of Blackwattle Bay prioritises the pedestrian and cyclist networks by providing shared ways, shared paths and dedicated cycleways, and limiting vehicle movements within the precinct. A well-designed fine grain network comprising streets, laneways and arcades, will enhance the accessibility of the waterfront and permeability of the precinct. The alignment and extension of Miller Street, Gipps Street, Wattle Street and Quarry Master Drive connect the precinct to the broader surroundings. Improved connections to the light rail stations and potential linkages to the future ferry stop and Metro station are integrated in the new local street system. The continuous waterfront promenade will connect the Glebe foreshore with the Pyrmont Peninsula completing the foreshore walkway linking Glebe and Woolloomooloo for pedestrians and cyclists.

The proposed built form and building typology responds to the findings of the context analysis as described in FJMT's Urban Design Study. The building envelopes are defined by maximum building heights and setbacks. Critical to the overall design process has been maintaining solar access to existing and proposed open space and ensuring a sensitive design response to the Anzac Bridge pylons and adjacent development in Pyrmont.

Block controls have been prepared for development lots. The block controls are included in a new draft Design Code for Blackwattle Bay (refer **Attachment 14**). The block controls specify maximum heights, podium heights, setbacks and gross floor area (GFA) for each development lot.

The Precinct Plan provides for a diverse range of land uses in line with the PPPS. The proposed land use mix is balanced between non-residential and residential uses across the study area. A minimum of 138,000 sqm employment floorspace (inclusive of the new Sydney Fish Market) is proposed. Employment uses in Blackwattle Bay are intended to help realise the Innovation Corridor as described in the Eastern City District Plan, meet growth demand for jobs, and support the expansion of knowledge-based industries around the Central Business District.

Proposed planning framework

A new planning framework is needed to guide the renewal of the Blackwattle Bay precinct, having regard to the site's harbourside context, environmental and heritage values, and physical constraints. The main elements of the proposed new framework comprise:

- An amendment to Sydney Local Environmental Plan 2012 (SLEP 2012) – This will include new zoning and development standards, including updated mapping, for land within the Blackwattle Bay Precinct.
- A Blackwattle Bay Design Code – This will include detailed controls to inform future development of the precinct. The draft Design Code has been prepared in a form that will allow for future integration with Sydney Development Control Plan 2012 (SDCP 2012).

A number of amendments to other planning instruments are required to facilitate the renewal of Blackwattle Bay. The Explanation of Intended Effect, which provides a detailed explanation of the proposed statutory planning framework is at **Attachment 10**. The draft Design Code is at **Attachment 14**.

The proposed planning framework proposes that development lots will be zoned to B4 Mixed Use while open space areas will be zoned RE1 Public Recreation. The new Sydney Fish Market will be zoned SP1 Special Activities, reflecting its unique role and function. It is also proposed to amend SLEP 2012 by:

- Introducing new site specific provisions including:
  - maximum gross floor area (GFA) controls
  - maximum height controls
  - minimum non-residential development (including office, retail, community and cultural uses) required for certain sites
  - a requirement for a contribution to affordable housing, equivalent to 5 percent of the total residential GFA being developed or provided as a monetary contribution
  - applying a sustainable development clause
  - reference to a Design Code to inform future development of the precinct. The Design Code will set out the design excellence process for the precinct
- Extending the area designated as *foreshore area* to protect these areas from incompatible development
- Requiring the Planning Secretary's approval of any proposed approach to the delivery of infrastructure before development can proceed.

A number of other planning instruments need to be amended to facilitate the Blackwattle Bay rezoning as follows:

- *State Environmental Planning Policy (Infrastructure) 2007* (ISEPP)
  - Nominating Blackwattle Bay as a Public Authority Precinct so that certain public works in the public domain can be undertaken as exempt development
- *State Environmental Planning Policy (Exempt and Complying Codes) 2008* (Codes SEPP)

    - Including Blackwattle Bay as a ‘major event site’ to facilitate the holding of events in the public domain
- *State Environmental Planning Policy (State Significant Precincts) 2005* (SSP SEPP)
    - Removing the Minister as consent authority for development carried out on certain land in Blackwattle Bay with a capital investment value (CIV) of not more than $10 million
    - Deleting the requirement that development with a CIV of not more than $10m carried out by a public authority on certain land in Blackwattle Bay is ‘development without consent’
- *State Environmental Planning Policy (State and Regional Development) 2011* (SRD SEPP)
    - Retaining the designation of development in Blackwattle Bay with a CIV over $10 million as State Significant Development and adjusting the State Significant Development Sties Map – Bays Precinct to reflect the boundary of the new Sydney Fish Market site.
- *Sydney Regional Environmental Plan No 26 – City West* (SREP 26)
    - Repealing the application of SREP 26 to the Blackwattle Bay Precinct
- *Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005* (Harbour SREP)
    - Removing the requirement to prepare a master plan for Blackwattle Bay as part of the City Foreshores Area
    - Amending the SREP Zoning Map by removing that part of the new Sydney Fish Market site that is currently zoned W1 Maritime Waters and that is proposed to be incorporated into the Sydney LEP and zoned SP1 Special Activities (Sydney Fish Market).

Any future development on the site will need to consider and meet the site-specific design requirements / design guidelines set out in the draft Design Code. The draft Design Code outlines requirements for the following matters:

- Land use, built form and design excellence
- Amenity
- Public domain and open space
- Movement network
- Environmental management and sustainability
- Heritage.

Infrastructure contributions and delivery

Development of Blackwattle Bay will deliver more homes and jobs and will increase the resident, worker and visitor population. Renewal of Blackwattle Bay will result in increased resident and worker populations and create demand for more infrastructure, including parks and recreation facilities, transport, community facilities and stormwater management works. The Precinct Plan proposes the delivery of key community and transport infrastructure as follows:

- Bank Street Open Space and adjacent community uses including dragon boat amenities
- Waterfront Promenade
- Waterside Park
- Urban Park
- Potential ferry wharf
- Intersection upgrades
- Separated cycle lanes
- Seawalls.

New infrastructure is expected to be provided through a combination of delivery of some facilities and infrastructure on site as well as monetary contributions towards State and local infrastructure in the vicinity of Blackwattle Bay.

The PPPS anticipates that an Infrastructure Delivery Plan will be refined in the near future that investigates the infrastructure costs, staging, sequencing, delivery partners and mechanisms. This will be prepared in collaboration with the CoS, Transport for NSW (TfNSW) and other infrastructure agencies. The outcome of this work may result in the development of a Special Infrastructure Contribution (SIC) or alternate funding and delivery arrangement to ensure delivery of the infrastructure.

A clause is proposed to be inserted in SLEP 2012 to ensure that developers make satisfactory arrangements to contribute to the provision of State public infrastructure prior to development occurring. It is anticipated that such a contribution, unless otherwise provided for via a SIC, would be negotiated via a Planning Agreement.

With respect to contributions for local infrastructure, the *City of Sydney Development Contributions Plan 2015* applies to Blackwattle Bay. Development contribution rates under that plan would apply to the site noting that updates are being prepared to align with the PPPS. Identification of additional infrastructure requirements would be the responsibility of the CoS. An update of the contribution plan to include demand generated by the Study Area would need to consider the provision of on-site infrastructure as proposed however 'works in kind' agreements would be subject to approval by the CoS.

With respect to the provision of affordable housing, the CoS has an inclusionary zoning in place for Ultimo Pyrmont via the SLEP 2012 which enables contributions as follows:

- 0.8 per cent of the total floor area of the development that is intended to be used for residential purposes; and
- 1.1 per cent of the total floor area that is not intended to be used for residential purposes.

A new provision is proposed in Sydney LEP that would enable the consent authority to impose a condition on residential development at Blackwattle Bay requiring a contribution towards the provision of affordable housing. The contribution would be equivalent to 5 percent of the total floor area of the development that is intended to be used for residential purposes for the purpose of affordable housing. The contribution would be made by way of a dedication of affordable dwellings within the precinct and/or paid as a monetary contribution. The appropriate monetary contribution rate that should apply in Blackwattle Bay is yet to be determined but will need to be balanced with the overall contribution being made towards the provision of public amenities and services that will be delivered as part of the development.

Addressing key issues

The Blackwattle Bay SSP Study Requirements address a wide range of issues under 28 categories ranging from:

- Strategic planning context and justification
- Urban design and public domain
- Land use and planning controls
- Transport, utilities, local regional and state infrastructure
- Housing
- Climate change mitigation and adaptation
- Indigenous and non-Indigenous cultural significance and history
- Biodiversity, urban forest and ecology
- Sustainability

- Environmental impacts water cycle management, air quality, noise and pollution, wind and contamination
- Demographics and community characteristics
- Economic development, retail , services, and consideration of feasibility and economic benefits
- Consultation with the community, government and non-government stakeholders.

These issues have been addressed through a range of technical studies, the urban design process and the SSP Study. Outcomes from the technical assessments and urban design studies have informed the proposed SEPP amendment, draft Design Code, and infrastructure funding and delivery strategy.

A. INTRODUCTION

Blackwattle Bay is being investigated for its urban renewal potential. Situated within the wider Bays Nominated State Significant Precinct, this area offers a key tourist attraction, the Sydney Fish Market (SFM), and an area of publicly and privately-owned lands with direct water frontage to Sydney Harbour, connections to major transport routes and proximity to the Sydney CBD.

In 2016 the then Minister for Planning declared the urban renewal of The Bays Precinct a matter of state planning significance and determined that The Bays Precinct should be considered a potential State Significant Precinct (SSP). The Minister also identified Blackwattle Bay (then referred to as Bays Market District) as one of two investigation areas for rezoning within The Bays Precinct, the other being White Bay which is now part of a broader area referred to as Bays West.

Study requirements for the Blackwattle Bay SSP study were issued by the Department of Planning and Environment in collaboration with the CoS in April 2017. Infrastructure NSW (INSW, and the former UrbanGrowth NSW) has since spent several years undertaking extensive investigation and stakeholder and community consultation in support of the SSP Study and the new Sydney Fish Market.

Blackwattle Bay is one of eight destinations identified for renewal in the 2015 *Bays Precinct Transformation Plan* and is the first of these to move toward the Precinct Proposal phase under the State Significant Precinct process.

Blackwattle Bay offers an extraordinary opportunity to reconnect the harbour, its surrounding neighbourhoods and the city; to showcase Sydney's living culture and stories of Country; to build an inclusive and iconic waterfront destination that celebrates innovation, diversity and community.

The NSW Government is revitalising Blackwattle Bay to deliver an authentic, vibrant and sustainable place connected to Sydney's iconic harbour. The proposal for a new Sydney Fish Market at the head of Blackwattle Bay unlocks an incredible opportunity to return inaccessible parts of our harbour back to the community and provide new homes, jobs, services and green space within walking distance of the CBD.

This study has been prepared by INSW to support and facilitate the future rezoning of the Blackwattle Bay SSP. It outlines the renewal proposal and addresses the Blackwattle Bay SSP Study Requirements (the study requirements). It outlines the strategic justification and planning pathway to rezone the SSP. It provides a review of the proposed rezoning against the relevant strategic plans and planning policies that apply to the site, in addition to carrying out an assessment of the environmental, social and economic benefits and impacts of the proposal.

Figure 1: Blackwattle Bay study area
Source: FJMT

The study has been structured to clearly address the study requirements. It is presented in seven main parts:

- **Part A: Introduction** – provides an overview of the SSP study process and previous planning investigations undertaken for Blackwattle Bay
- **Part B: The Precinct** – provides an outline of Blackwattle Bay, including site conditions, precinct context and existing planning framework
- **Part C: Strategic context and justification** – provides the strategic justification for renewal of Blackwattle Bay
- **Part D: Governance and community engagement** – details the community engagement strategy for the precinct, consultation to date with agencies and governance arrangements for the study
- **Part E: Vision and principles** – outlines the vision and urban design principles that shape the proposal for Blackwattle Bay
- **Part F: The proposal** - describes and explains the Blackwattle Bay Proposal (the rezoning proposal), including a vision and objectives, an indicative concept proposal, thematic strategies and a planning and implementation framework
- **Part G: Study requirements** – provides a detailed assessment of how the rezoning proposal addresses the study requirements

A1. State significant precincts

SSPs are areas that the Minister for Planning and Public Spaces (the Minister) has determined to be matters of state or regional planning significance. State or regional planning significance relates to social, economic or environmental characteristics that enable a precinct to play a particularly important role in achieving government policy objectives.

SSPs are declared and planned in accordance with *State Environmental Planning Policy (State Significant Precincts) 2005* (the SSP SEPP). The SSP process applies to a limited number of special precincts where the Government has an on-going role.

To support the SSP SEPP, the DPIE has published the “State Significant Precincts Guideline 2016” which sets out the process for the rezoning of SSPs. The guideline requires detailed investigations and preparation of a proposed planning framework. Potential SSPs are assessed against the following criteria to determine their state or regional planning significance:

- be a large area of land within a single ownership or control, typically government owned
- be of state or regional importance in achieving government policy objectives, particularly those relating to increasing delivery of housing and jobs
- be of state or regional importance for environmental or natural resource conservation
- be of state or regional importance for heritage or historical significance.

Following consideration of these criteria, the Minister determined that Blackwattle Bay (formerly known as Bays Market District) is of State planning significance and should be investigated for rezoning through the SSP process.

A2. The revitalisation of Blackwattle Bay

A2.1 Background

Urban renewal within the Bays Precinct has been envisioned for over 30 years. Since 1990, strategies, masterplans and development applications have been prepared and approved but none have come to fruition for a variety of reasons. With renewed determination, the conversation around the renewal of Blackwattle Bay and the broader Bays Precinct began again at the 2014 Bays Precinct Sydney International Summit and 2015 Call for Great Ideas. More than 1,200 people attended the International Summit and a report on its outcomes, *Transforming City Living: The Bays Precinct Discussion Paper*, received more than 4,000 comments and submissions. The Call for Great Ideas captured innovative thinking from local and global communities and industry on how The Bays Precinct's future should unfold.

In 2015 the NSW Government recognised The Bays Precinct as one of the highest potential urban transformation sites in Australia with the release of the *The Bays Precinct Sydney Transformation Plan*. It set out plans for Blackwattle Bay (then known as Bays Market District), to:

- rejuvenate the Sydney Fish Market into a world-class facility
- allow the Bays Waterfront Promenade to seamlessly connect with a bustling and thriving place that brings residents and visitors back to the water
- provide compatible housing suitable to living on the edge of the CBD
- improve access and public transport.

Calling on active and engaged local residents and businesses to assist with guiding the implementation of the Transformation Plan, The Bays Precinct Reference Group was established in 2015 and comprises 41 member organisations representing industry, community and peak bodies. Meeting several times a year since 2015 to discuss studies, planning and other key issues, the Reference Group has played a vital role shaping the future of the Bays Precinct and Blackwattle Bay.

Following the declaration of The Bays Precinct as an SSP in 2016, consultation was undertaken with the community and stakeholders during July-August 2017 on the vision, values, principles and objectives for Blackwattle Bay as part of the first phase of master planning. This work, along with initial technical investigations, was further refined to develop three precinct plan scenarios which were used to facilitate a conversation about the potential future urban renewal of Blackwattle Bay with the community in mid-2020. The scenarios explored different possibilities for land use, urban structure, open space, materiality and built form. The community provided detailed and valuable feedback on this work that has been reflected in the development of the Precinct Plan for Blackwattle Bay considered in this study. The Blackwattle Bay Precinct Plan is included at **Attachment 1**.

A2.2 The study in context

The Blackwattle Bay SSP study is being progressed within the context of other major urban renewal initiatives occurring west of Sydney's CBD. These initiatives are discussed below.

Figure 2: Surrounding context
Source: FJMT

New Sydney Fish Market

A critical part of Blackwattle Bay's revitalisation and vision has been the NSW Government's decision to relocate the Sydney Fish Market from its existing location on Bank Street to the head of Blackwattle Bay. Development of the new Sydney Fish Market is the first step in revitalising Blackwattle Bay as it unlocks the remaining land for urban renewal and allowing the completion of the missing link of the foreshore promenade running from Woolloomooloo to Rozelle.

A Concept/Stage 1 State Significant Development Application (SSDA) and Stage 2 SSDA for the new Sydney Fish Market were approved in June 2020. The new Sydney Fish Market was designed in parallel with baseline studies for Blackwattle Bay prepared as part of the SSP Study to ensure that key aspects of the project were consistent with the vision and principles for Blackwattle Bay.

Bays West

Bays West adjoins Blackwattle Bay to the west and north-west. It comprises the areas of Rozelle Bay, White Bay and Glebe Island, including the Rozelle Rail Yards and White Bay Power Station.

Currently the area is a working harbour primarily used for industrial and maritime purposes. The area has significant heritage value with landmarks including the Glebe Island Bridge, White Bay Power Station and Anzac Bridge. Future Government aspirations for Bays West will promote opportunities for innovation, business, dwellings and tourism, unlocking the areas economic potential.

The next stage of planning for Bays West is currently being led by the Department of Planning, Industry and Environment (DPIE) in collaboration with the Inner West Council.

The draft Bays West Place Strategy was publicly exhibited from 22 March to 29 March 2021. The draft Place Strategy builds upon previous urban renewal work in the wider Bays Precinct and creates a long-term vision for Bays West to be delivered over time. The place strategy and supporting documents will guide the renewal of Bays West and inform future master planning and rezoning.

At the time of writing, feedback and submissions to the exhibition were under consideration by the DPIE.

Pyrmont Peninsula

A Place Strategy has been adopted for the Pyrmont Peninsula which sets out a 20-year vision and planning framework to guide Pyrmont Peninsula's transformation to 2041.The Pyrmont Peninsula Place Strategy (PPPS) outlines a roadmap to transform Pyrmont Peninsula, providing opportunities for people to connect around the harbour, providing jobs in technology, entertainment and creative industries and protecting the heritage that makes Pyrmont a treasured destination for residents, workers and visitors alike.

The Place Strategy identifies seven sub-precincts across the Peninsula based on existing (as well as potential) uses and character. The seven sub-precincts are:

- Blackwattle Bay
- Pyrmont village
- Pirrama
- Darling Island
- Tumbalong Park
- Wentworth Park
- Ultimo

Significant growth opportunity is identified for the Ultimo, Blackwattle Bay, Tumbalong Park and Darling Island sub-precincts subject to further studies, master plans and planning processes.

For most of the Peninsula, sub-precinct master plans will be prepared to support the Place Strategy and once finalised, will inform updates to planning controls in the Sydney Local Environmental Plan 2012. The Blackwattle Bay Study Area has been identified as a "Key Site" in the PPPS. The PPPS notes that this site is progressing through an equivalent "Key Sites master planning" process and therefore a sub-precinct master plan is not required. The SSP Study and Precinct Plan will need to demonstrate consistency with the Place Strategy.

Further discussion on the alignment of the proposal with the Pyrmont Peninsula Place Strategy is provided in Part B5.3.

Innovation Corridor

Blackwattle Bay is positioned along the arc of the Innovation Corridor described in the Eastern City District Plan by the Greater Sydney Commission. The Innovation Corridor extends south from The Bays Precinct through Pyrmont, Ultimo, University of Sydney to Royal Prince Alfred Hospital and swings around through North Eveleigh, Australian Technology Park to Central Station and parts of Surry Hills (refer to **Figure 3**). The Innovation Corridor contains knowledge intensive, creative and start-up industries along with health, education and research services that support the global competitiveness of the Harbour CBD. The urban regeneration of Blackwattle Bay is seen as integral to strengthening the Innovation Corridor, not only by providing new flexible office space and housing,

but also by offering opportunities to deliver cultural infrastructure, enhanced amenity and open space, as well as improved public transport, walking and cycling connections.

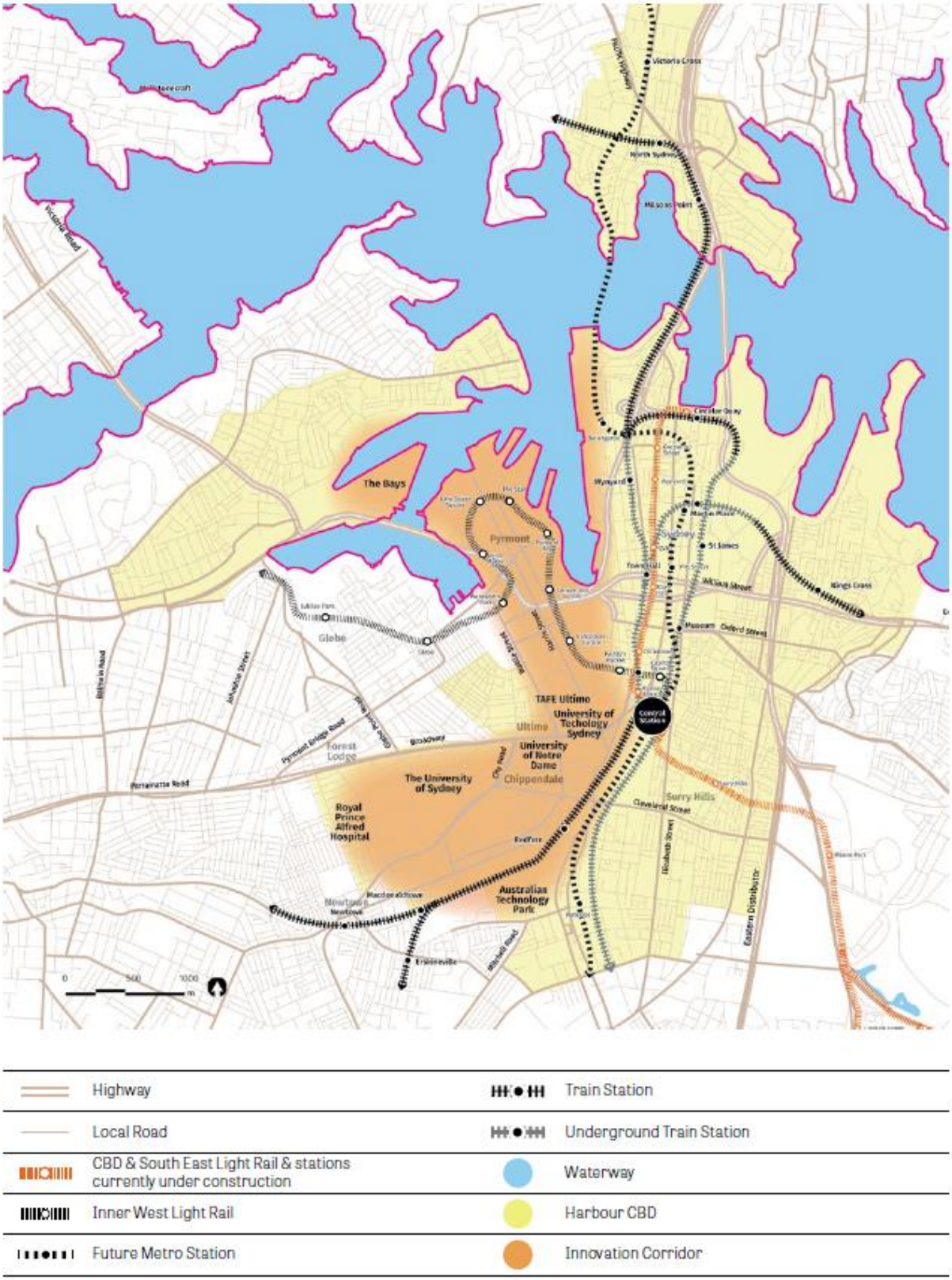


Figure 3: Harbour CBD
Source: Eastern City District Plan

Pyrmont Metro Station

Sydney Metro is Australia's biggest public transport project, revolutionising the way Sydney travels. Metro services started in May 2019 on the Metro North West Line between Rouse Hill and Chatswood and are being extended into the city and beyond to Bankstown by 2024.

Sydney Metro West was announced in November 2016. This new underground railway will connect Greater Parramatta and the Sydney central business district (CBD). The locations of seven proposed metro stations have been confirmed at Westmead, Parramatta, Sydney Olympic Park, North Strathfield, Burwood North, Five Dock and Bays West. A metro station at Bays West will deliver rail to the area for the first time, providing critical connections to the Sydney CBD and the western suburbs. The Bays Station will act as a catalyst for renewal of the area.

As part of Sydney Metro West, the NSW Government announced in December 2020 that it is building a new Metro station at Pyrmont. The new metro station will be a key driver for increased commercial floor space in the peninsula, supporting new jobs in creative, media and technology sectors and reinforcing the Innovation Corridor. Blackwattle Bay is adjacent the Pyrmont Metro investigation area with potential direct connections to the transport node delivering visitors to the new Sydney Fish Market, and workers to new employment space in the area.

Pyrmont Station will be located between Pyrmont Bridge Road and Union Street, greatly enhancing plans to revitalise this western gateway to the Sydney CBD. Station entrances are proposed to be located on Pyrmont Bridge Road and Union Street.

WestConnex

WestConnex is Australia's largest road infrastructure project. When complete in 2023, WestConnex will provide motorists with a continuous, 33km traffic-light free motorway network, with connections for future projects linking the north shore and northern beaches, Sydney Airport and the southern suburbs.

WestConnex is being delivered in four major stages, two of which deliver direct road infrastructure to The Bays. The M4-M5 Link Tunnels, opening in 2023, will be 7.5km tunnels linking the new M4 at Haberfield with the M8 at St Peters, with connections to the Anzac and Iron Cove bridges via the Rozelle Interchange. The Rozelle Interchange, also opening in 2023, will connects the M4-M5 Link to the Anzac and Iron Cove bridges, and the future Western Harbour Tunnel and Beaches Link. The Rozelle Interchange is being built almost entirely underground, freeing up space for a new 10ha regional park.

A2.3 Project outcomes and objectives

Blackwattle Bay presents a rare urban renewal opportunity for new housing, employment and harbourfront community spaces located less than 1km from the western edge of the Sydney CBD. Spanning approximately 10.4 hectares, the site is one of the largest opportunity precincts in the Eastern Harbour City. Together with the new world-class Sydney Fish Market, this new mixed-use precinct will complement the established and evolving commercial, residential and entertainment industries that define Pyrmont.

The Blackwattle Bay Precinct Plan, included at **Attachment 1** and discussed in Part F, sets out how the NSW Government is planning for the renewal of Blackwattle Bay as an authentic, vibrant and sustainable place connected to Sydney's iconic harbour.

The current planning framework applying to Blackwattle Bay is complex, with controls contained within several different planning instruments. This is inconsistent with planning best practice and will not facilitate the realisation of the vision for a renewed Blackwattle Bay.

The Blackwattle Bay SSP Study outcomes will establish a new planning framework to guide the future land uses, design and development of buildings and public domain in the Precinct. The new planning framework will include statutory controls under the Sydney Local Environmental Plan 2012 (SLEP 2012), a draft Design Code and infrastructure funding and delivery mechanisms. The planning framework is intended as a tool to achieve design excellence and a built form that is appropriate within the context of the broader vision for the Pyrmont Peninsula, as outlined in the PPPS.

To help guide the project the following nine objectives have been developed having regard to consultation undertaken with the community and stakeholders since 2014:

- **Objective 1:** Deliver a new retail and wholesale fish market at the head of Blackwattle Bay that is one of global Sydney's key tourist attractions
- **Objective 2:** Deliver a continuous foreshore promenade connecting Glebe foreshore to Pyrmont, which is activated, connected and resilient
- **Objective 3:** Design and deliver a high-quality public domain that links Blackwattle Bay to the foreshore and Wentworth Park and integrates with the wider public domain
- **Objective 4:** Provide a diverse range of land and water-based uses that are complementary to the new fish market and drive Blackwattle Bay's contribution to the Innovation Corridor and global Sydney
- **Objective 5:** Improve transport access to the surrounding area and ensure diverse customer needs are effectively managed
- **Objective 6:** Deliver housing affordability and diversity consistent with government policy – Towards our Greater Sydney 2056 and the Eastern City District Plan
- **Objective 7:** Implement sustainable initiatives that add to the resilience and liveability of the area including measured improvement of water quality in Blackwattle Bay
- **Objective 8:** Provide social infrastructure including recreation and open space to support the overall population needs
- **Objective 9:** Optimise financial and economic benefits to NSW.

A2.4 Project governance

The renewal of Blackwattle Bay involves a whole of Government approach, with INSW working collaboratively with DPIE, the CoS, Transport for NSW (TfNSW), Government Architect NSW (GANSW), Sydney Metro and other relevant agencies to build upon existing strategic planning and community consultation processes.

Infrastructure NSW

INSW was established in July 2011 to assist the NSW Government in identifying and prioritising the delivery of critical public infrastructure and nominated priority infrastructure projects, including Blackwattle Bay. INSW (previously UrbanGrowth NSW) has overall responsibility for delivery of the Blackwattle Bay SSP Study.

Project Working Group

A Project Working Group (PWG) was established for the project in 2016. The attendees and roles of the PWG are:

- DPIE - strategic planning and assessment tasks, including preparation of final recommendations and reports
- CoS - urban design, strategic planning and assessment tasks
- TfNSW – traffic and transport related items
- GANSW – public domain, built form, design excellence considerations
- INSW- project proponent.

The PWG has met generally on a fortnightly basis for the duration of the project at the CoS office. It has collaborated on key stages of the project, including:

- State Significant Precinct study requirements
- State Significant Precinct study
- adequacy assessments
- proposed planning controls.

The PWG will continue to play a role following submission of the SSP Study, including:

- stakeholder engagement and exhibition
- review of submissions and further study requirements
- Response to Submissions report
- review of proposed planning amendments.

Project Review Panel

The Project Review Panel, coordinated by DPIE, comprises senior executives of DPIE, CoS, TfNSW and the GANSW. It was established to review the project at strategic milestones, and to confirm that the project was ready to progress through the review points including:

- Study requirements
- Vision and Principles
- Precinct Options
- Preferred Option
- Pre Exhibition
- Post exhibition (including further studies or investigations)
- Response to Submissions.

A3. Blackwattle Bay SSP study requirements

The (then) Department of Planning and Environment issued study requirements in April 2017. A copy of the study requirements is provided at **Attachment 2.**

The study requirements are critical to the SSP process and outcomes, defining the scope of technical assessments and urban design as well as providing guidance on the form and content of proposed planning instruments and supporting design guidelines. The state and regional significance of the precinct will be evaluated by the DPIE based on this information and in turn will inform the decision by the Minister to formally designate the Blackwattle Bay SSP study area as a SSP.

Purpose of the study

The study requirements identify the following purpose of the SSP Study for Blackwattle Bay:

Investigate preparation of a new planning framework for the renewal of the [Blackwattle Bay] *to provide a new world-class food market, connected to the harbour and centred around a rejuvenated Sydney Fish Market. The framework will also provide for new public open space including a foreshore promenade, community facilities, and other compatible uses.*

Study key principles

The study requirements identify a series of key principles that need to be addressed to the extent that they relate to the rezoning:

- Ensure **Blackwattle Bay acts as a catalyst** for the implementation of the overall Bays Precinct transformation.
- Draw on the natural attraction of people to **the water** to create **a district focussed on tourism and recreation**, with compatible uses where appropriate.
- Provide improved passive and active **recreational opportunities** for visitors, workers and residents through provision of a **foreshore promenade** and associated **public domain** setback.
- Maximise public access with legible and **direct pedestrian connections** to Blackwattle Bay and Wentworth Park from the surroundings.
- Ensure an appropriate **mix of uses** is provided, including community facilities and services.
- Where business uses are proposed, consider an appropriate **range of business types** to link with the existing digital economy hub in Ultimo and Pyrmont, and connect to the proposed innovation district at the former White Bay Power Station.
- If residential development is proposed, ensure **a range of housing choices**, including Affordable Housing, is provided and the health and amenity of residents is protected.
- Within Blackwattle Bay, **balance the needs of private commercial marine operations** with the need to provide **public access** for recreational uses.
- Integrate the proposal with the Bays Precinct-wide mass **proposed transport investments**, including mass transit, a Glebe Island Bridge upgrade, and **road network improvements** such as on Bridge Road.
- Introduce **water quality initiatives** into the Bays Waterways.
- Ensure a **governance model** based on whole-of-government, state and local, collaboration that fearlessly pursues **public benefit**, is adopted.

Scope of the study

The study requirements require that the following issues 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 local, state and regional infrastructure and service delivery.
4. Implications of any proposed land uses on existing and future infrastructure in the Bays Precinct.
5. Means by which developer contributions should be secured for the site.
6. The extent and outcomes of engagement with the local community, landowners, other local stakeholders and Government agencies.

7 Local and regional economic, social, health and environmental impacts of the proposed development.
8 Recommended land uses and development controls for the site, and the extent to which development potential has been distributed fairly and impartially between government and privately owned land, subject to individual site constraints.
9 Effective linkages between the Bays Market District, its surrounds and the entire Bays Precinct.
10 Staging strategy for the Bays Market District in the context of the entire Bays Precinct and other projects planned in the area.

Key study requirements

The key requirements are detailed matters that the study must address. They are thematically structured under the following headings:

1 Vision, Strategic Context and Justification
2 Urban Design
3 Public Domain: Public Open Space and Streets
4 Land Use and Planning Controls
5 Traffic and transport
6 Housing and affordable housing
7 Biodiversity
8 State and regional infrastructure
9 Local infrastructure and contributions
10 Utilities
11 Heritage
12 Aboriginal cultural heritage
13 Arts and culture
14 Urban and marine ecology
15 Urban forest
16 Ecologically sustainable development
17 Climate change adaptation
18 Feasibility and economic benefits
19 Economic Development, Local Retail and Services
20 Geotechnical and contamination
21 Water, Riparian Land, Flooding and Stormwater
22 Noise and pollution
23 Wind
24 Aeronautical
25 Social sustainability assessment
26 Population demographics
27 Health impact assessment
28 Consultation.

B. THE PRECINCT

B1. Location

The Blackwattle Bay Study Area includes land on the western edge of the Pyrmont Peninsula and the water of Blackwattle Bay. It adjoins the foreshores of Glebe to the west and Pyrmont Bridge Road and Wentworth Park to the south. It forms part of the CoS local government area (LGA) and is approximately 1.2km west of Sydney CBD.

Blackwattle Bay's land area wraps around the southern and eastern edges of Blackwattle Bay and is bounded by Bridge Road to the south, Bank Street to the east and the waters of Blackwattle Bay from Glebe Island Bridge to Blackwattle Bay Park.

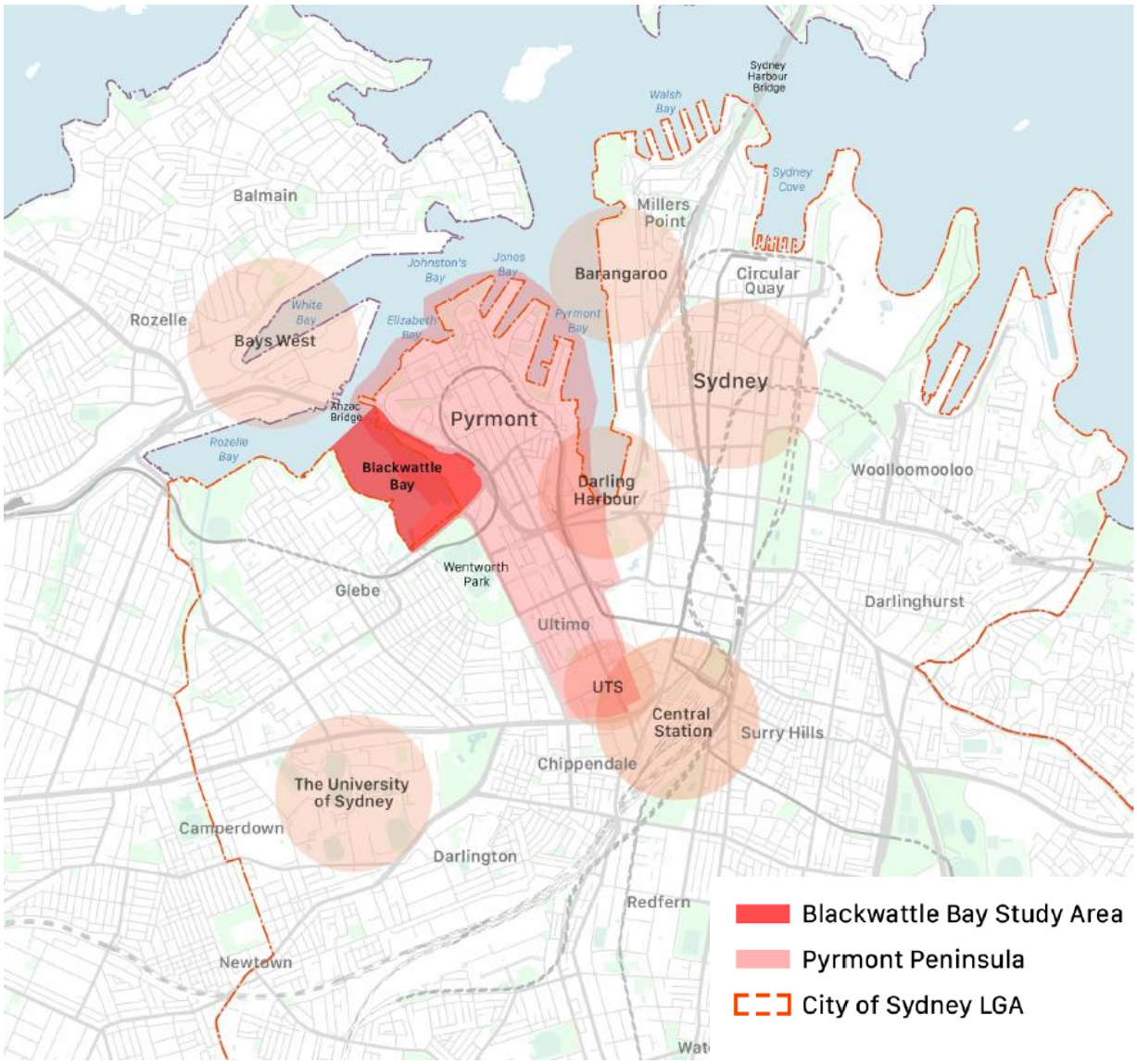


Figure 4: Regional context
Source: FJMT

B2. Land parcels and layout

The site comprises a number of individual properties along Bridge Road and Bank Street, in addition to the water of Blackwattle Bay. Most of the land is in government ownership with three privately held properties located on the eastern side of the bay, as shown in **Figure 5**.

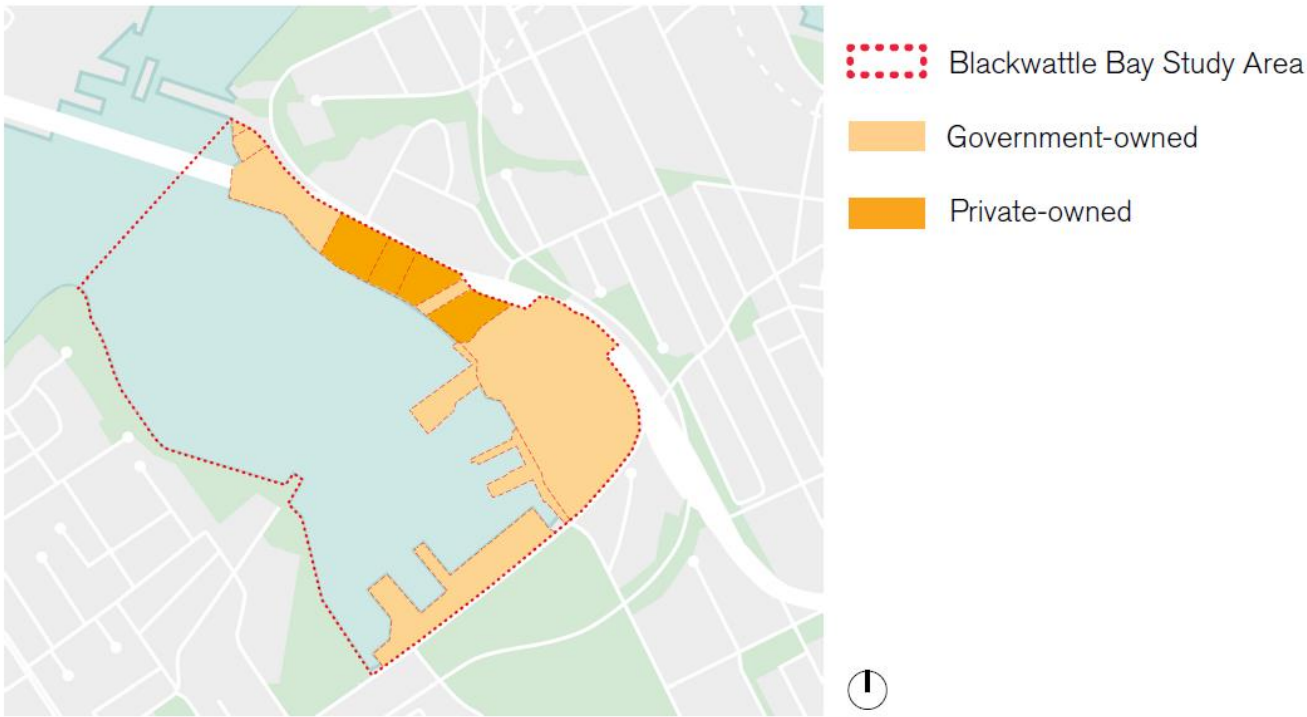


Figure 5: Land ownership
Source: FJMT

The Blackwattle Bay Study Area comprises the following properties:

Table 1 Blackwattle Bay properties

Street address	Cadastral details
1A Bank St	Lot 1 DP 85206 Lot 1 DP 188671
1-3 Bank St	Lots 1-2 DP 1089643 Lot 1 DP 439245
5 Bank St	Lot 20 DP 803159
7 Bank St	Lot 19 DP 803159
9 Bank St	Lot 21 DP 803159
11 Bank St	Lot 22 DP 803159
17-19 Bank St	Lots 5-6 DP 803160
21-29 Bank St	Lots 7-11 DP 803160 Lot 1 DP 442260
21A Bank St	Lot 1 DP 435429
31-35 Bank St	Lots 20-22 DP 811844
37-39 Bank St	Lots 24-25 DP 815847
1B Bank St	Lot 2 DP 1064339
41-45 Bank St	Lot 100 DP 836204
Bank St (Existing Sydney Fish Market)	Lot 2 DP 827434 Lot 1 DP 836351

	Lot 1 DP 734622 Lot 1 DP 74155 Lots 1-2 DP 125720
Bank St (Sydney Fish Market car park)	Lots 15-17 DP 1027254
Bank St (Sydney Fish Market wharves)	Lot 1 DP 835794
1C Bridge Road, Glebe	Lot 3 DP 1064339
1D Bridge Road, Glebe	Lot 4 DP 1064339
1-1A Bridge Road, Glebe	Lot 5 DP 1064339
154 Bank St Pyrmont	Lot 17 1027254
Blackwattle Bay	Lot 107 DP1076596

The extent of land area and water area with Blackwattle Bay will change with the construction of the new Sydney Fish Market. Previously, the total land area was 8.4 hectares and water area was 23 hectares. However, part of the new Sydney Fish Market is being developed below the mean high water mark, increasing the overall land area of the study area to 10.4 hectares and reducing the water area to 21 hectares.

B3. Site description and land uses

B3.1 Overview

Blackwattle Bay comprises land on the southern and eastern sides of Blackwattle Bay. It includes:

- land surrounding the southern pylon of the Anzac Bridge
- the existing Sydney Fish Market
- the site of the new Sydney Fish Market at the head of Blackwattle Bay
- Hymix concrete batching plant
- the Blackwattle Bay Marina
- various industrial and commercial buildings
- a TfNSW (formerly Roads and Maritime Services) compound
- the Blackwattle Bay Dragon Boat Club which includes a plastic mesh boat ramp.

The site extends north of the south-east abutment of the Anzac bridge towards Glebe Island Bridge. Along the eastern foreshore, between Anzac Bridge and Glebe Island Bridge are several one and two level disused and dilapidated brick buildings and a sandstone block seawall about 1.0m to 1.5m in height.

A seawall typically between 1.0m and 2.0m in height runs along the eastern shoreline and comprises sections of both sandstone and concrete blocks. There is sandstone boulder/rubble scour protection along much of its length together with various wharf structures along the foreshore.

At the southern end of the study area is the site of the new Sydney Fish Market. It previously comprised a concrete batching plant, various wharves and jetty used for waterfront industry purposes and part of the existing Sydney Fish Market wharf and outdoor dining area. All existing buildings, structures, wharves and jetties are being demolished.

Blackwattle Bay itself has a long history as a working harbour with multiple jetties and slipways offering loading and unloading in a protected, calm water bay. Today the jetties are primarily used for commercial charter vessels, recreational boating and Sydney Fish Market fleets. As Sydney transitions from a working harbour to recreational uses Blackwattle Bay is an important berthing location for commercial vessels.

Existing Sydney Fish Market

View east towards existing Sydney Fish Market

1-3 Bank Street

Looking south across the Western Distributor towards existing Sydney Fish Market

Looking south-east towards Anzac Bridge Pylon

B3.2 New Sydney Fish Market

The new Sydney Fish Market will be located along the southern edge of the Blackwattle Bay study area, on Bridge Road. It will be positioned predominately over the water at the head of Blackwattle Bay, taking advantage of the northern aspect and views of the bay and Anzac Bridge. It will expand and improve the functions of the existing fish market and will include a variety of fishmongers, restaurants, cafes, bars and specialty food retailers.

New Sydney Fish Market Design
Source: New Sydney Fish Market Concept Development Application

Visitors will be able to experience the inner workings of the fish market with views to the auction floor, as well as to the working wharves and boating facilities. The approved design includes improved access to the foreshore and approximately 12,700 sqm of public domain, consisting of a public promenade along the foreshore, a public plaza (to the eastern and western end of the building) and a public promenade along Bridge Road. A recreational wharf with capacity to accommodate a future ferry stop is also proposed.

Construction of the purpose-built facility is expected to be completed by 2024.

The location of the existing and proposed Sydney Fish Market site within the Blackwattle Bay study area is shown in **Figure 6**.

Figure 6: Blackwattle Bay Precinct showing location of new Sydney Fish Market
Source: FJMT

B3.3 Existing Sydney Fish Market

The existing Sydney Fish Market is located on Blackwattle Bay at the intersection of Pyrmont Bridge Road and the western distributor. It was formed in 1994 in response to the NSW Government privatisation of the marketing of seafood. It has developed into a popular tourist location with some three million visitors annually, 55-60% of which are from metropolitan Sydney, 22% are domestic visitors and 20% are tourists from overseas.

The existing fish market extends over approximately 18,000sqm of gross floor area which includes approximately 10,600sqm of ground floor retail and auction floor area. The existing Sydney Fish Markets complex includes the main market building, at grade car park, exterior public seating area, annex buildings surrounding the car park to the east and north and several small wharf structures extending into Blackwattle Bay. The main building is a multi-storey commercial structure comprising commercial, retail and wholesale tenancies, public seating areas and sales stall areas.

The car parking area accommodates approximately 417 cars. Additional vehicle parking, largely for operational market vehicles is located beyond the eastern extent of the fish market building. Several disused underground fuel storage tanks (USTs) are situated within the car park portion of the site.

An external paved promenade and outdoor public seating area extend to the west of the main building to the water's edge. It is understood that part of these facilities is suspended above a constructed seawall, which forms the western property boundary.

Access to the complex is via a partially raised concrete paved access road at the northern most property extent that extends from Banks St at the north-east of the property, along the northern property boundary before entering the carpark area in the north-west.

There is no significant vegetation within the site, however several large fig trees are located to the east of the property extent within the Banks St road reserve, adjoining the property boundary.

B3.4 Privately owned lands

There are three private landowners within the Blackwattle Bay site:

- 1B, 37-39 and 41-45 Bank Street - Hymix (Hanson) which currently operates a concrete batching plant in Blackwattle Bay. It owns two parcels of land either side of a TfNSW (formerly Roads and Maritime Services) owned reserve extending from Miller Street to the foreshore. There is currently a land swap arrangement in place for Hymix to operate over this reserve. Hymix does not use its water frontage as part of its operations. All logistics are via trucks entering/exiting from Bank Street
- 31-35 Bank St - EJC Pyrmont
- 21-29 Bank St - Australian Fishing Industries.

The Hymix site is located to the north of the existing fish markets, fronting Bank Street to the east. This facility includes an office/amenities building in the south-west, bulk material storage silos and associated loading infrastructure in the west, with the balance comprising paved vehicle movement/parking areas. Mature trees are located in the southern and central portions of this property. There is an above ground storage tank adjacent to the Bank Street boundary.

31-35 Bank Street is used for warehousing and commercial purposes. It comprises a large single and two storey warehouse structure occupying most of the property. The property appears to have been levelled via filling of the westerly portion, resulting in a sea wall at the west property extent. The rear portion of the building overlays basement level parking.

21-29 Bank Street comprises a commercial premises including a two-storey building occupied by a seafood distribution business. The building occupies the southern portion of the property, with an open vehicle parking area to the north A loading dock and hardstand parking areas front Bank Street.

Land ownership is shown in **Figure 5**.

B3.5 Existing maritime uses

The waterways of Rozelle and Blackwattle Bays are currently used for a variety of purposes, as set out below:

- Recreational power boats serviced by berthing and boat storage facilities within Blackwattle Bay including:
  - Blackwattle Bay Marine Operatives

    - Sydney Fish Market (northern mooring jetty)
- Public wharves available for temporary mooring of a range of visiting motorised recreational vessels:
    - Blackwattle Bay Public Pontoon at the headland adjacent to Bellevue House
    - Glebe Rowing Club pontoon in Blackwattle – low freeboard pontoon designed primarily for rowing boat access
    - Sydney Fish Market Public Pontoon in Blackwattle Bay provides a drop off/pick up facility for visitors to the Fish Market
- Marina berths within Blackwattle Bay are provided for charter boat operators including:
    - Blackwattle Bay Marina
    - Existing fish market – the end berths of the northern mooring jetty are used by Manly Fast Ferries and Fusion Cruises
    - Blackwattle Bay Marine Operatives
- Fishing trawlers access Blackwattle Bay to berth at the existing Sydney Fish Market facilities, which include:
    - dedicated fishing trawler berths at the inner berths of the northern timber mooring jetty
    - main concrete jetty with hardstand area is used for unloading, reprovisioning, refuelling and maintenance of fishing vessels
- Rowing/paddling is a popular activity in the Study Area with boat houses for rowing clubs occupying waterfront land within Blackwattle Bay and using the waterway on a regular basis for training purposes. Existing facilities providing waterway access for rowers include:
    - beach launching area within Bicentennial Park (Rozelle Bay)
    - Glebe Rowing Club (GRC) boathouse and pontoon (Blackwattle Bay)
    - Sydney University Boat Club (SUBC) boathouse and pontoon (Blackwattle Bay)
    - Dragon Boat ramp at Bank Street, Pyrmont (Blackwattle Bay)
    - foreshore access steps adjacent to Sydney Secondary College (Blackwattle Bay Campus) to the west of the site.
- Dragon Boats NSW Inc. occupy waterfront land used for dragon boat storage and have a dedicated ramp launching facility (including lighting) at Bank Street, Pyrmont. Fifteen dragon boating clubs use the Pyrmont facility on a regular basis for training.
- Rozelle Bay and Blackwattle Bay are highly regarded waterway areas for calm water kayaking. A dedicated kayak launching area is provided at Bicentennial Park on the southern foreshore of Rozelle Bay.
- Two sets of water access steps are provided as part of the Glebe Foreshore Walk along the western shoreline of Blackwattle Bay. These steps provide water access from the elevated promenade level and could be used for launching of passive craft.

Further detail on maritime uses is provided in the Blackwattle Bay Navigation Study at **Attachment 4.2**.

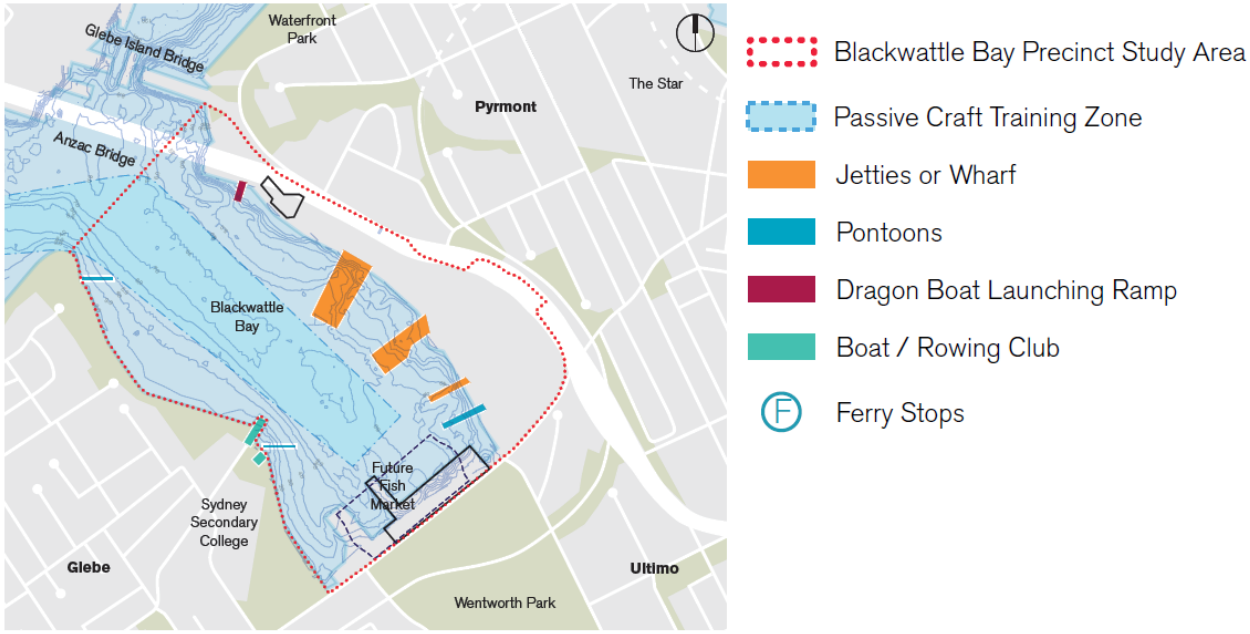


Figure 7: Maritime uses
Source: FJMT

B3.6 Other uses

The north-eastern corner of the study area comprises government owned land at 1-3 and 5-11 Bank Street.

5-11 Bank Street includes an area of open space which is used by Dragon Boats NSW to store and launch their craft. A new temporary marina and public space have been built on the site by the NSW Government, including a section of public access and boardwalk.

1-3 Bank Street is a separate land parcel located between the Bank Street open space, the bay and the Glebe Island Bridge abutment. The site is owned by the NSW Government and comprises three brick buildings with a covered jetty and courtyard. The buildings are currently vacant. Several large trees and understorey vegetation are situated in the south-west property corner adjacent to the water's edge, in addition to an area of overgrown vegetation situated beyond the property boundary to the north between the property boundary and the Glebe Island Bridge approach.

B4. Precinct context

SR2.1 Prepare a detailed site and context analysis

The Urban Design Statement Vol 2 (FJMT, 2021 – **Attachment 3**) includes a detailed site and context analysis.

B4.1 Terrain and water depth

The pre-European landscape of the western and northern eastern edges of the investigation area would have comprised a series of low ridge lines with relatively open sandstone valleys draining into the upper reaches of Sydney Harbour (Port Jackson). The landscape of the south and south-eastern

side of the investigation area, bordering Blackwattle Bay, was an estuarine marshland known as Blackwattle Cove or Blackwattle Swamp fed by Blackwattle Creek which flowed from the north.

Blackwattle Bay and its surrounds have been subject to large scale alteration including land reclamation to form bays and wharves. In effect the southwest and southeast shorelines of Blackwattle Bay are wholly artificial landforms for up to several hundred metres inland. Shallow zones within the bay limit draft of vessels.

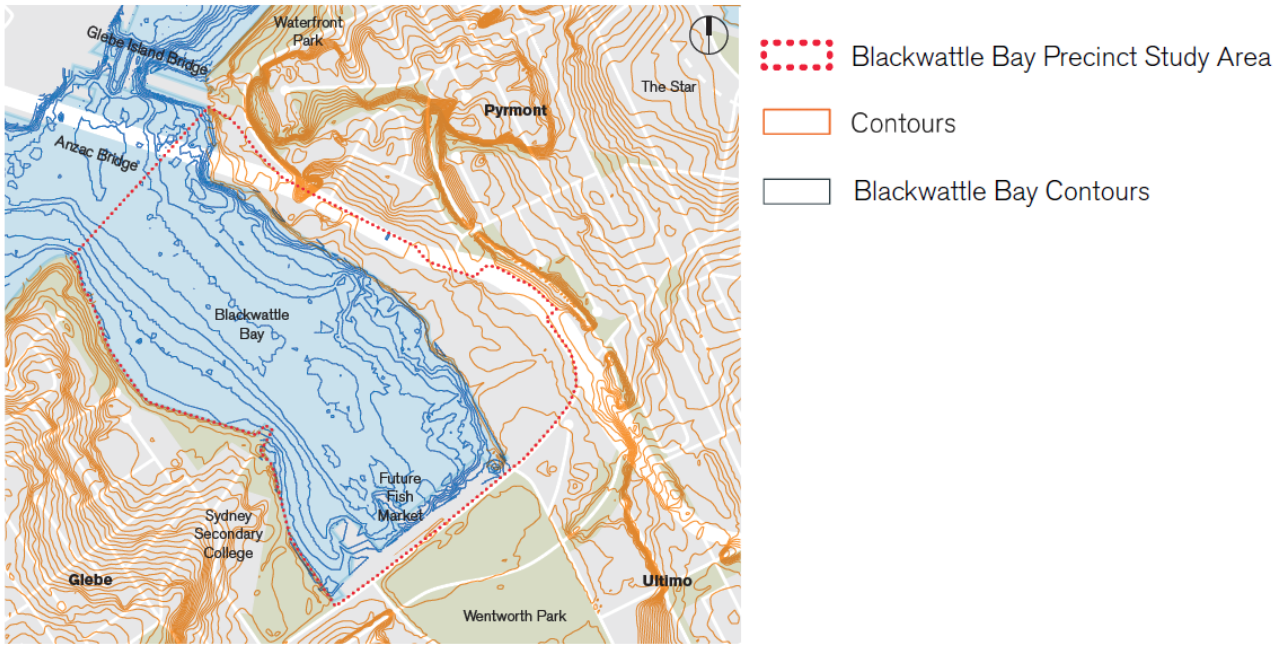


Figure 8: Terrain and water depth
Source: FJMT

B4.2 Drainage

The Blackwattle Bay catchment covers an area of approximately 315 hectares with some 50 hectares of land draining directly into Blackwattle Bay and the remaining portion draining to Sydney Water's major trunk drainage system used to route flows from the upper regions of the catchment. The trunk drainage system is linked to Council's feeder drainage system consisting of covered channels, in-ground pipes, culverts and kerb inlet pits.

Several locations within the catchment are flood liable. This flood liability mainly relates to the nature of the topography within the study area as well as the capacity of service provided by drainage assets. The topography of the catchment is steep in the upper areas, steep and undulating in the middle sections, and then flat particularly in the lower regions close to Blackwattle Bay.

Urbanisation throughout the catchment occurred prior to the installation of road drainage systems in the 1900s and many buildings have been constructed on overland flow paths or in unrelieved sags. Due to these drainage restrictions, topographic depressions can cause localised flooding as excess flows have no opportunity to escape via overland flow paths[1].

[1] *Blackwattle Bay Catchment Flood Study*, WMA Water, September 2015

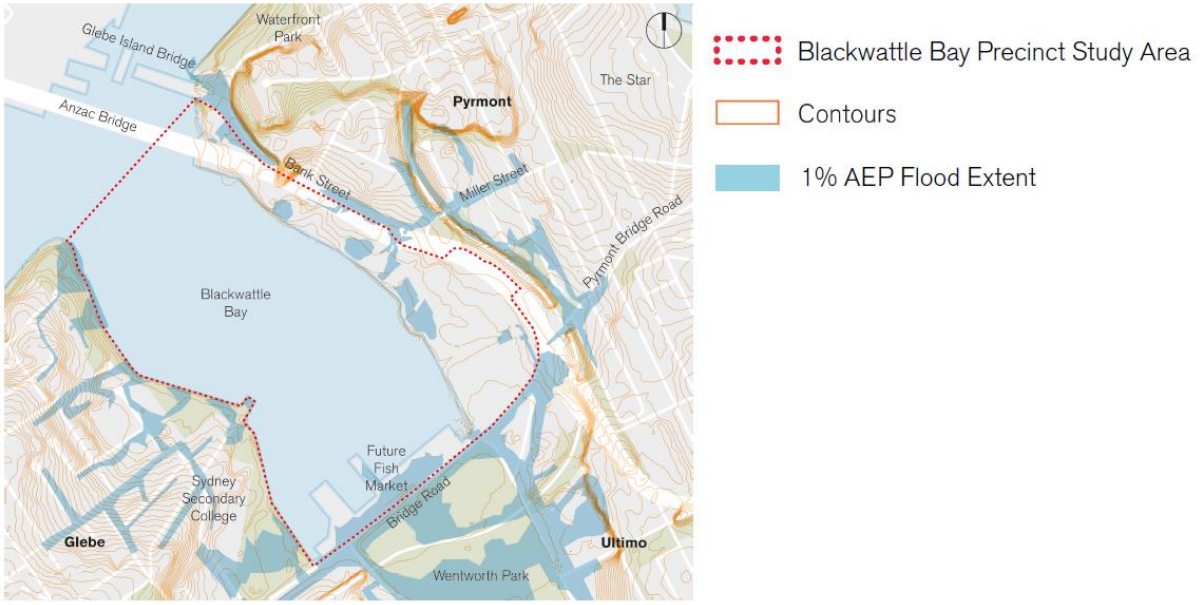


Figure 9: Existing flood
Source: FJMT

B4.3 Geomorphology

The underlying geology of the study area consists of Hawkesbury Sandstone, with ridges capped by Ashfield Shale of the Wianamatta group. The Wianamatta Shales cover a large section of the inner western and southern suburbs of Sydney. Local erosion patterns have created an irregular series of small coves and rocky points. Within and around the study area, steep angular faults in the sandstone have produced a system of flat ridge tops, steep slopes incised by streams, and a shoreline comprising rocky cliffs, small sandy beaches and marshes. This has resulted in a shoreline in Port Jackson generally, which is characterised by low rocky cliffs, small sandy beaches, and estuarine marshland where tidal waters were met by creeks.

The pre-European landscape of the western and northern eastern edges of the study area would have comprised a series of low ridge lines with relatively open sandstone valleys draining into the upper reaches of Sydney Harbour (Port Jackson). The landscape of the south and south-eastern side of the study area, bordering Blackwattle Bay, was an estuarine marshland known as Blackwattle Cove or Blackwattle Swamp fed by Blackwattle Creek which flowed from the north.

Much of the original shoreline surrounding White Bay, Rozelle Bay and Blackwattle Bay has been infilled as part of numerous phases of land reclamation. Most of this land reclamation occurred prior to the 1930s.

B4.4 Vegetation and marine ecology

There is very little vegetation and no significant green space within the Blackwattle Bay precinct. Very little vegetation remains within the Study Area other than significant figs at Pyrmont Bridge Road / Bank Street and trees outside of the Study Area at the approach to Glebe Island Bridge. The area to the north end of Bank Street, zoned RE1 Public Recreation, contains little vegetation other than at the boundaries of the private landowner's site.

The aquatic habitat in the study area is minimal. It has been modified by vertical seawalls, wharf structures, pontoons, piles and disturbance by regular boat traffic.

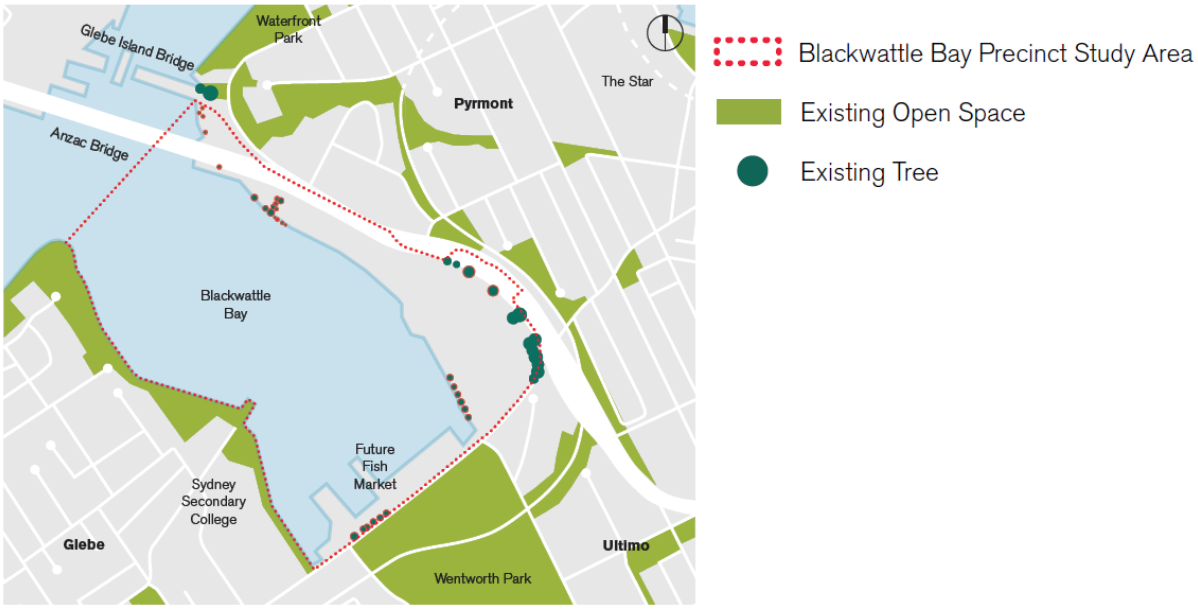


Figure 10: Existing vegetation and open space
Source: FJMT

B4.5 Urban character and landscape

The locality's physical geography of sandstone ridges defining Blackwattle Bay creates an 'amphitheatre' experience for the head of the bay with built form on the ridges forming the skyline.

There is a strong distinction in built form character on the northern and southern sides of the Bay. To the north the high rise commercial and residential buildings of Pyrmont, Ultimo and the City form the backdrop to the Bay, while the lower rise buildings and finer grain streets of Glebe create a less defined and more gradually revealed skyline to the south where street trees on the ridges are often as dominant as built form.

There are few extensive areas of vegetation outside of the foreshore parks, however small groups or lines of large mature native trees break down the dominant built form character of the landscape. Most notably, this includes the line of Fig trees along Bridge Road, the trees within Blackwattle Bay Park and smaller groups of trees such as in Bulwara Road which form a definition between dense built form.

The character of the waterway itself is open and mostly regular in form with only minor articulations in the foreshore edge. The large scale of waterway frequently forms the extensive foreground to the landscape experience. Recreational and commercial marine uses of the waterway frequently characterise the viewer and visitor experience.

B4.6 Transport

A Transport Management and Accessibility Plan prepared by AECOM is provided at **Attachment 4.1**.

Walking

Blackwattle Bay is located on several significant active transport corridors, directly connecting the site to major destinations within Sydney. These corridors include the following:

- Glebe to the Sydney CBD corridor via Bridge Road / Pyrmont Bridge Road / Pyrmont Bridge

- Blackwattle Bay to the Sydney CBD corridor via Miller Street / Union Street / Pyrmont Bridge
- Blackwattle Bay to Central Station corridor via Jones Street / Wattle Street / Broadway

Town Hall and Central stations are a 30-minute walk from Blackwattle Bay and Glebe, Wentworth Park and Fish Market light rail stations are within 200m of the Study Area.

The current road network provides walking opportunities for pedestrians in the area surrounding Blackwattle Bay. However, due to the largely industrial and port use history of the broader precinct, Blackwattle Bay currently features an incomplete waterfront promenade and few walking opportunities within and between the proposed destinations. Street furniture and utilities such as street lights and traffic signs also create pinch points for pedestrians on footpaths.

The gradients along some footpaths on routes towards public transport stops and major transport hubs (Town Hall and Central stations) are steep, creating accessibility issues. The lack of active frontage and wayfinding along key active transport routes also pose safety risks.

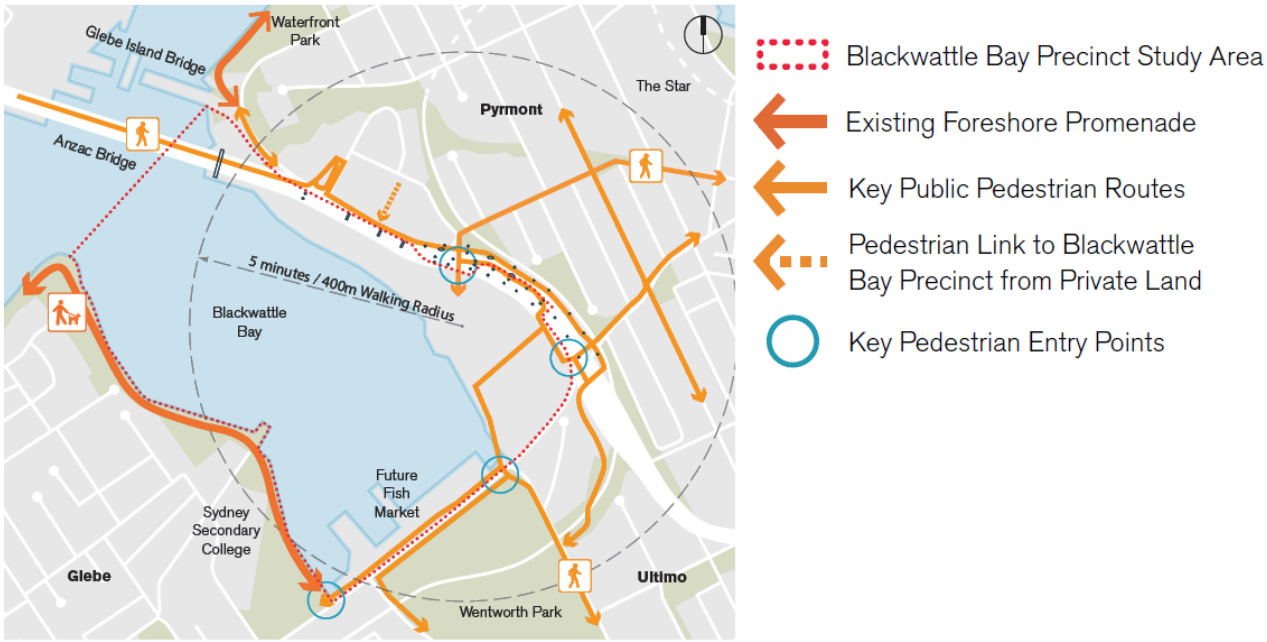


Figure 11: Existing pedestrian network
Source: FJMT

Cycling

Blackwattle Bay has good accessibility from existing regional and local cycleways. Miller Street, Union Street and Pyrmont Bridge form the existing east-west cycle link between Blackwattle Bay and behind Sydney Harbour Bridge.

From Blackwattle Bay, it takes 10 minutes to cycle to Central and Wynyard stations and 20 minutes to North Sydney.

Near Blackwattle Bay, the following cycling facilities are currently provided:

- Shared paths: Anzac Bridge, Victoria Road between Anzac Bridge and Birkenhead Point, along the foreshore of Rozelle Bay and Blackwattle Bay, Pyrmont Bay, Johnstons Bay and Jones Bay, The Crescent, through Jubilee Park, Bicentennial Park and Wentworth Park and along Darling Street and Union Street

- Road shoulder: Wentworth Park Road, Glebe Point Road, St Johns Road, Miller Street and Darling Drive
- Mixed traffic lanes: Ferry Road, Taylor Street, Glebe Street and Saunders Street.

In February 2015, TfNSW counted an average of about 1,750 cyclists using the Anzac Bridge cycleway on a typical weekday. It is the second highest use cycle connection in Sydney.

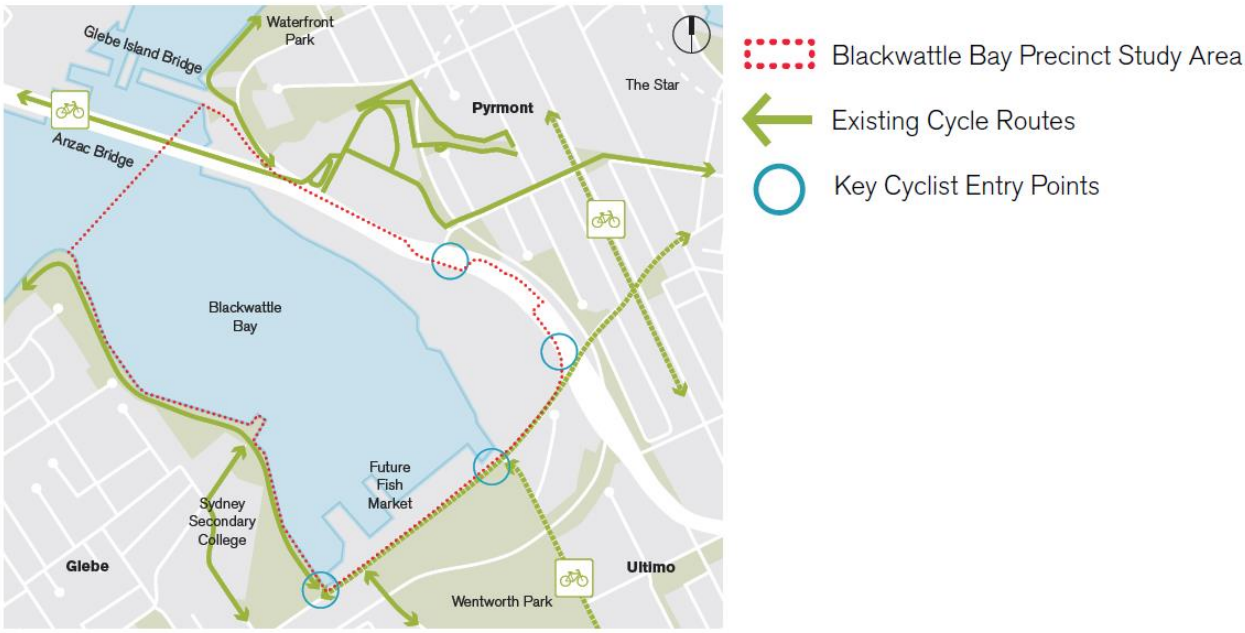


Figure 12: Existing cycle routes
Source: FJMT

Public transport

Heavy rail and metro

Blackwattle Bay is currently not served by the Sydney Trains network. The closest train stations to the site are Town Hall Station, located a 1.7 kilometre walk to the east, and Central Station, a 2.1 kilometre walk to the south-east of Blackwattle Bay.

Light rail

There are three light rail stops within a 200-metre walking distance to the Study Area:

1. Fish Market
2. Wentworth Park
3. Glebe.

The L1 Dulwich Hill Line links the Central Station and Dulwich Hill interchanges via Darling Harbour and Pyrmont. The L1 Dulwich Hill Line has an end-to-end journey time of approximately 36 minutes. Services broadly operate at eight-minute headways during peak periods, ten-minute headways during the interpeak period and 15-minute headways off peak during the evening or on weekends. Between Central Station and The Star, services operate 24 hours a day, seven days a week in both directions.

Bus

Five main bus routes currently service Blackwattle Bay:

- 370: Coogee to Leichhardt Marketplace.
- 389: Bondi Junction to Pyrmont

- 431: City Martin Place to Glebe Point
- 433: Central Pitt Street to Balmain Gladstone Park
- 501: Central Pitt Street to West

Key bus routes are shown in **Figure 13**. Details of frequency of services provided in the AECOM report (**Attachment 4.1**).

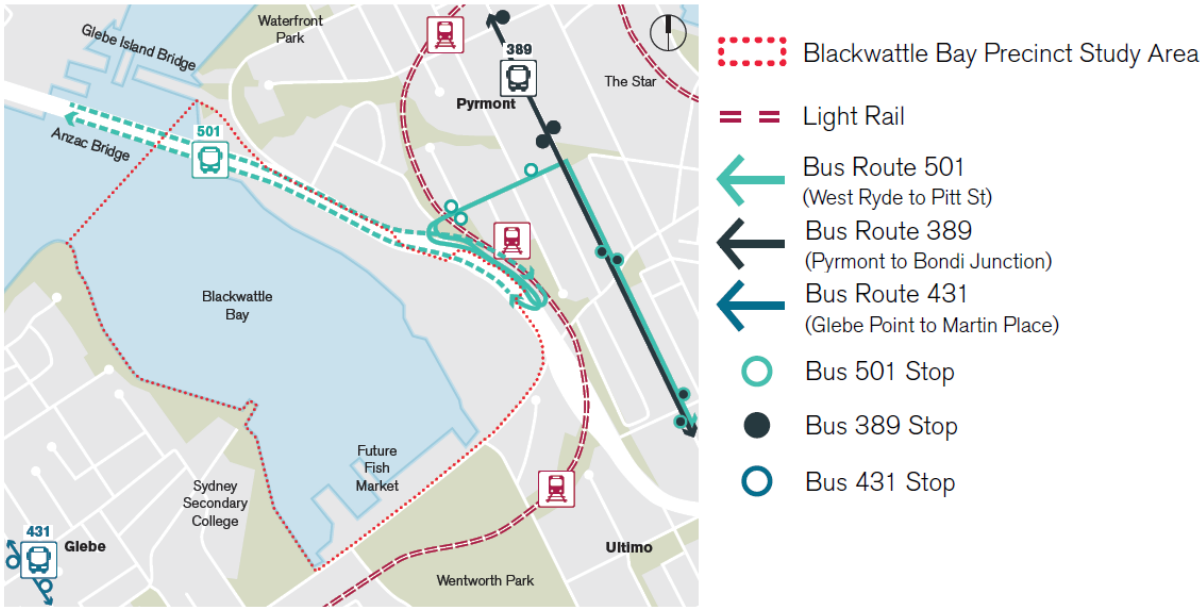


Figure 13: Light rail and bus services
Source: FJMT

Ferries

Blackwattle Bay is not served by public ferry services. An on-demand ferry service was launched in October 2019 by Transdev and ran between Barangaroo, Pirrama Park in Pyrmont, the current Sydney Fish Market and Blackwattle Bay in Glebe. The on-demand service is currently on hold and Transdev intends to restart it as soon as possible.

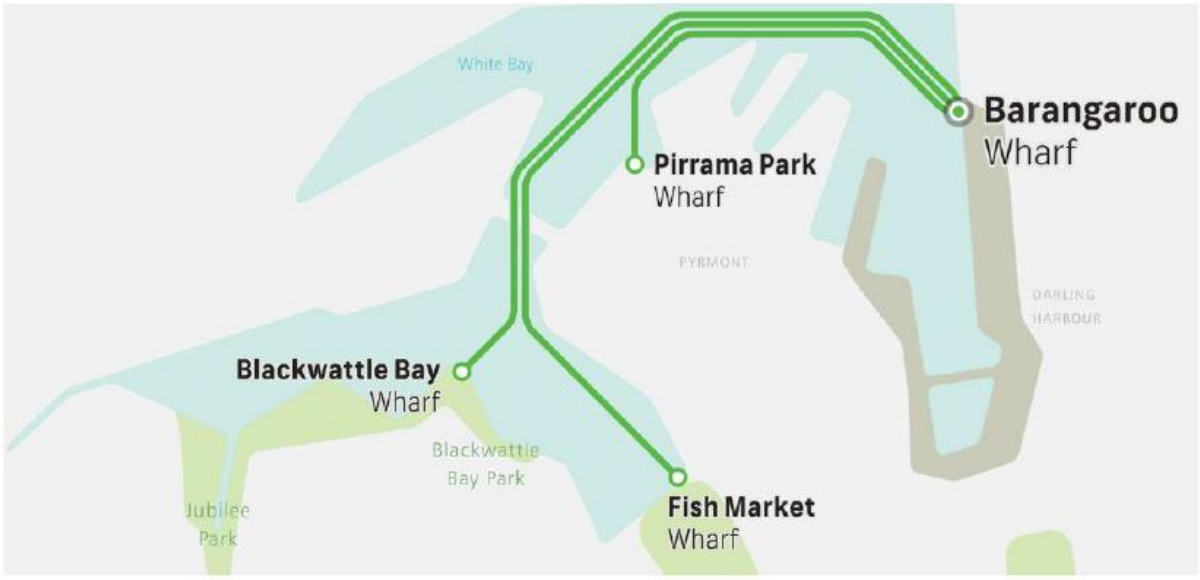


Figure 14: Transdev On-demand ferry route
Source: AECOM

Road network

Road access to/from Blackwattle Bay is supported by a hierarchy of roads as defined in Roads and Maritime's Schedule of Classified and Unclassified Roads:

- State Roads: Western Distributor, Harris Street, Bridge Road and Wattle Street
- Regional Roads: William Henry Street
- Local Roads that support the State and Regional Roads.

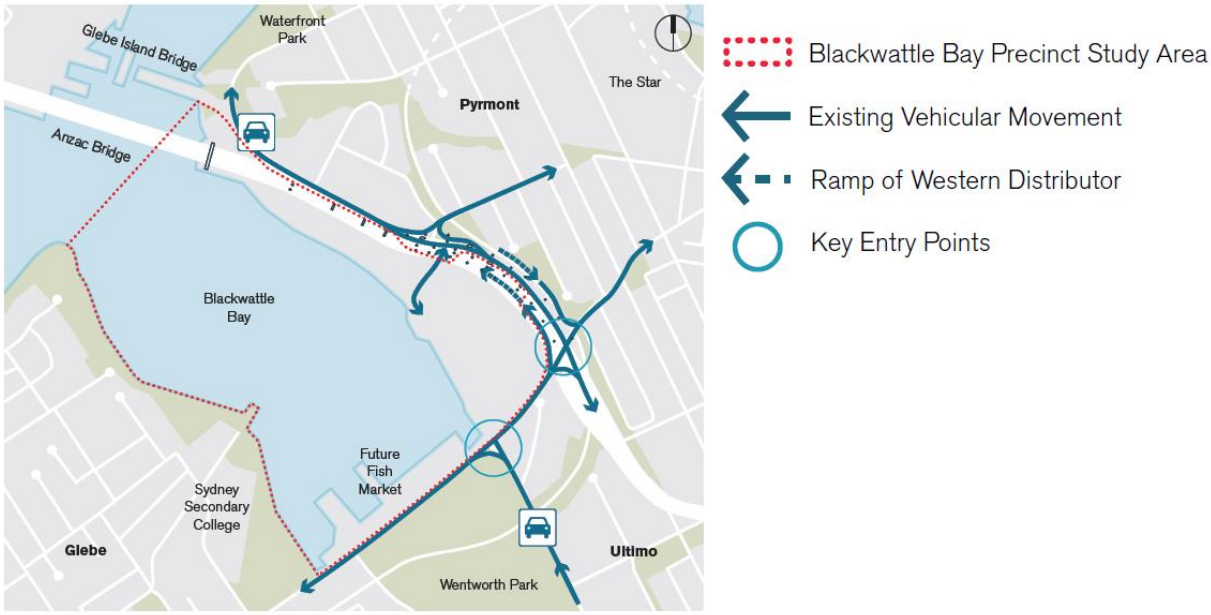


Figure 15: Existing vehicular movements
Source: FJMT

Parking

The existing Sydney Fish Market accommodates 417 formal parking bays including 4 accessible spaces and 26 loading/service vehicle spaces. The car park has a high turn-over rate, with up to 30% of visitors parking on site for less than 15 minutes and almost 75% staying for less than an hour. Parking demand exceeds available capacity by less than 4% between 12:00pm and 2:00pm on weekends, and approaches capacity on Fridays, particularly during the school term. Close to 300 parking spaces, or more than 60% of overall capacity, are occupied by 7:00am on the site on weekdays. This is likely attributed to staff parking and trade vehicles from buyers attending the auction.

The new Sydney Fish Market was approved with 417 basement parking spaces to service the facility.

B4.7 Heritage

As detailed in Part G11 of this study, there are no heritage items of local significance in the Blackwattle Bay Study Area listed under SLEP 2012, as shown in **Figure 16**.

Figure 16: SLEP 2012 Heritage Items

The warehouse at 1-3 Bank Street has been assessed as being of local heritage significance (refer discussion in Part G11) however it is not listed in any statutory instrument.

There are several heritage items in the surrounding area including the Wentworth Park viaduct, Glebe Island Bridge, Bellevue (house), and Lyndhurst (house).

Glebe Island Bridge is listed on the State Heritage Register. Anzac Bridge is listed as an item of State significance on the section 170 Heritage & Conservation Register of the TfNSW. It is considered a world standard bridge in scale, aesthetics and design features. Its pylons are dominant features in the landscape which are distinctive to Blackwattle Bay.

Two locations have been identified within the site as having potential for indigenous archaeology (PAD01 and PAD02). These are shown in **Figure 17**.

Figure 17: Existing heritage context and archaeological sites
Source: FJMT

B4.8 Population and demographics

A Population Demographics and Workforce Profile has been prepared by Profile.id (refer to **Attachment 5**). The key population characteristics of the existing communities around the Blackwattle Bay Study Area are discussed in Part G26.

B4.9 Economy

HillPDA has prepared an Economic Development, Local Retail and Services Study (refer to **Attachment 6**). The existing economic profile of the Blackwattle Bay Study Area as well as surrounding areas is discussed in Part G19.

B5. State and local planning strategies and policies

SR1.2: Outline the strategic planning context for the proposal including an assessment of relevant State planning documents.

SR1.4: Consideration of local planning and other relevant strategies and reports

SR1.5: Provide justification for the proposal in the context of The Greater Sydney Region Plan, the Eastern City Plan and Sustainable Sydney 2030 Community Strategic Plan 2014.

SR 4.3 Assess the consistency of the proposal against relevant State and local plans, strategies and policies.

The following is an outline of the key State planning policies that provide the strategic context for the proposal. An assessment of the proposal against the full list of State planning documents identified in the study requirements is provided at **Attachment 7**.

This section also considers relevant local strategic policies. Consideration of the proposal in relation to SLEP 2012, Sydney DCP 2012 and Sydney Development Contributions Plan 2015 is provided in Part B6. The assessment of the proposal against the full list of local planning documents listed in the study requirements is provided at **Attachment 8.**

B5.1 A Metropolis of Three Cities – The Greater Sydney Region Plan

In March 2018, the Greater Sydney Commission finalised the Greater Sydney Region Plan, which replaced A Plan for Growing Sydney (2014) as the NSW Government's Metropolitan plan for Sydney. The Plan is a strategy for managing growth and change. It guides integrated land use planning and infrastructure delivery to 2036, with longer term vision extending to 2056. The plan seeks to reposition Sydney as a Metropolis of three cities – the western parkland, central river and eastern harbour cities. Blackwattle Bay is located within the eastern harbour city.

The Greater Sydney Region Plan is structured around four key themes – infrastructure and collaboration, liveability, productivity and sustainability. These themes are supported by a set of directions and objectives. The GSC has established ten Directions to guide future planning policy and infrastructure decisions within Greater Sydney to 2056. The Directions are:

1 A city supported by infrastructure
2 A collaborative city
3 A city for people
4 Housing the city
5 A city of great places
6 A well-connected city
7 Jobs and skills for the city
8 A city in its landscape
9 An efficient city
10 A resilient city

The Greater Sydney Commission has identified that by 2036, the Eastern City District will need 157,500 new homes and the Harbour CBD and its fringe areas will need to provide up to 235,100 jobs. Blackwattle Bay provides a rare precinct-scale opportunity for new homes and employment, spanning a significant area of harbourfront land, less than 1km from the western edge of the Sydney CBD.

As the population of Sydney continues to grow, there will be need for more jobs and housing and improved infrastructure and services in inner city locations. Blackwattle Bay will not only provide new jobs and housing close to transport and services, but will also offer significant public benefits in terms of new and enhanced open spaces along the harbour foreshore and improved pedestrian/cycling connectivity. Exemplary urban design, increased urban tree canopy and sustainable energy and water management will create a green, resilient and efficient precinct in the future.

B5.2 Eastern City District Plan

SR4.5 Demonstrate how relevant Actions of the Greater Sydney Commission's Eastern City District Plan are met.

The Eastern City District Plan (the District Plan) sets out the planning priorities and actions for growth and development within the Eastern City District over the next 20 years. The District Plan fills the gap between the Greater Sydney Region Plan and local planning, giving effect to the Directions of the Greater Sydney Region Plan at a District scale.

Blackwattle Bay sits within the Harbour CBD of the Eastern City District. The District Plan notes:

> *The Eastern City District is vitally important to the success and prosperity of Greater Sydney, NSW and Australia. To remain globally competitive, we need the District to be a magnet for skilled people and innovative ideas from around the world. The District must be a powerhouse of creativity and innovation at all levels.*

The District Plan highlights the importance of the Bays Precinct as an innovation hub and its strategic importance within the Harbour CBD. It also identifies it as an important area for new housing and notes the potential for the Bays Precinct to become a low emissions and high environmental efficiency precinct due to the significant urban renewal that will occur.

Blackwattle Bay can make a significant contribution to employment and dwelling needs in the Eastern City and, like Central Park near UTS, can offer a new mixed use community that is enjoyed by local communities and visitors.

Tourism is identified as one segment that NSW should target as part of its whole-of-government agenda to create one million new jobs in NSW by 2036. There is a strategy to increase overnight visitor expenditure and to improve authentic visitor experiences for specific visitor groups. The Sydney Fish Market has been specifically identified as making a significant contribution to achieving these policy aims.

There are 22 Planning Priorities set out in the District Plan. An assessment of the Blackwattle Bay SSP proposal against the key relevant priorities is provided in **Table 2** and an assessment against relevant actions is provided in **Attachment 9**.

Table 2 Assessment against Eastern City Planning Priorities

RELEVANT ACTION	ASSESSMENT
Planning Priority E1. Planning for a city supported by infrastructure	Redevelopment of Blackwattle Bay will be supported by improved infrastructure, including new open space, streets and public domain, tree planting, community facilities and improved walking and pedestrian linkages.
Planning Priority E2. Working through collaboration	Planning for Blackwattle Bay is being carried out in close collaboration with the CoS, key NSW government agencies, stakeholders and the community.
Planning Priority E3. Providing services and social infrastructure to meet people's changing needs	An infrastructure delivery framework will be prepared to ensure that there is adequate social infrastructure to meet the needs of future residents and workers in Blackwattle Bay.
Planning Priority E4. Fostering healthy, creative, culturally rich and socially connected communities	The renewal will encourage healthy lifestyles by creating 30,000sqm – or approximately 30% of the precinct - of new green space, improving connections to the water and delivering better pedestrian and cycling access. An Arts and Cultural Strategy for Blackwattle Bay (**Attachment 30**) details a vision and strategies to foster a creative and culturally rich community.
Planning Priority E5. Providing housing supply, choice and affordability, with access to jobs, services and public transport	Renewal of Blackwattle Bay will increase housing supply, choice and affordability, provide services and employment floorspace on-site and improve access to jobs, services and public transport off-site.
Planning Priority E6. Creating and renewing great places and local centres, and respecting the District's heritage	The Blackwattle Bay Precinct Plan examines and interprets the natural systems, indigenous and non-indigenous heritage and industrial interventions of Blackwattle Bay. A local, layered understanding of the site has informed an authentic and respectful representation of the place and its cultural significance.
Planning Priority E7. Growing a stronger and more competitive Harbour CBD	The Blackwattle Bay renewal supports a stronger and more competitive Harbour CBD by delivering: • Economic development through urban renewal outcomes that attract investment • Job creation through the redevelopment of the Sydney Fish Market as well as provision of land for new offices, shops and residences • Liveable cities through a place-based approach to urban renewal, using and optimising government-owned land to provide homes near jobs and amenities and deliver economic outcomes • A world-class destination that will increase visitor length of stay and expenditure in NSW.
Planning Priority E8. Growing and investing in health and education precincts and the Innovation Corridor	The urban regeneration of Blackwattle Bay is integral to strengthening the Innovation Corridor, providing new office space and housing and offering opportunities to deliver cultural infrastructure, enhanced amenity, open space, as well as improved connectivity.
Planning Priority E10. Delivering integrated land use and transport planning and a 30-minute city	The redevelopment of Blackwattle Bay will provide employment floor space and housing choice in a highly accessible location. The new metro station at Pyrmont and significant improvements in walking and cycling linkages will contribute to the goal of achieving a 30 minute city and optimising infrastructure use. The rezoning will also provide for compact development and contribute to a low carbon future for Sydney.
Planning Priority E14. Protecting and improving the health and enjoyment of Sydney Harbour and the District's waterways	The improved health of Sydney Harbour will be achieved through careful water management of inflows to the bays with new urban forest canopy, wetlands and marine ecology supporting sea walls. The enjoyment of the

RELEVANT ACTION	ASSESSMENT
	harbour will be significantly enhanced through the provision of an expansive and high quality foreshore promenade which will connect Glebe with Pyrmont.
Planning Priority E16. Protecting and enhancing scenic and cultural landscapes	The Precinct Plan has been designed to protect the scenic and cultural landscape of Blackwattle Bay. It responds to the existing and original foreshore lines, street patterns, solar orientation and visual connections to form a specific design that integrates with the natural and urban tapestry of Pyrmont/Ultimo, Wentworth Park, the foreshore promenade and the new fish market facility.
Planning Priority E17. Increasing urban tree canopy cover and delivering Green Grid connections	A detailed Urban Forestry Strategy with recommendations has been developed as part of the SSP study requirements (refer **Attachment 31**). In line with the CoS Urban Forest Strategy 2013, the Precinct Plan targets canopy cover of 60% to streets, 30% to parks and 30% to private property.
Planning Priority E18. Delivering high quality open space	Blackwattle Bay Precinct Plan provides for 3 hectares of new green space, including the new Waterside Park, Miller Street open space and Bank Street open space. The continuous waterfront promenade will transform the community's access to and enjoyment of Blackwattle Bay, connecting the Bank Street open space through to the new Waterside Park and to the Sydney Fish Market and Glebe foreshore.
Planning Priority E19. Reducing carbon emissions and managing energy, water and waste efficiently	Blackwattle Bay will target net zero carbon emissions. An ESD Report has been prepared for the SSP Study (**Attachment 32**) which assesses ESD initiatives and opportunities to manage energy, water and waste in the precinct.
Planning Priority E20. Adapting to the impacts of urban and natural hazard s and climate change	A Climate Change Adaptation Report has been prepared for the SSP Study (**Attachment 33**) which local mitigations to future climate change risks including sea level rise, extreme heat and high rainfall events.

B5.3 Pyrmont Peninsula Place Strategy

The DPIE, on behalf of the NSW Government, has undertaken a strategic review of the Pyrmont Peninsula. The Pyrmont Peninsula Place Strategy (the PPPS) provides a 20-year vision for the future of the peninsula, adopting a place-based approach to its planning and development. The Place Strategy sets out a set of directions, planning responses, infrastructure and governance opportunities to guide investment in Pyrmont. It identifies seven sub-precincts that, based on their character, are more suitable for growth and change. Blackwattle Bay is nominated as one of the sub-precincts.

The successful renewal of Blackwattle Bay is critical to achieving the potential of Pyrmont. The PPPS recognises it as the area of "greatest potential for change across the Peninsula" which is able to deliver a large amount of the growth forecast and will become "a new urban quarter and a place of metropolitan significance". It also outlines Blackwattle Bay's ability to a range of deliver public benefits that can contribute to the peninsula over and above that required to support new growth.

The Place Strategy outlines 10 Directions to guide future growth and change in the Pyrmont Peninsula to 2041. The Blackwattle Bay SSP proposal is aligned with the 10 Directions, as shown in **Table 3**.

The Place Strategy also identifies five 'Big Moves' for Pyrmont:

- **Big Move 1** A world-class harbour foreshore walk
- **Big Move 2** A vibrant 24-hour cultural and entertainment destination
- **Big Move 3** Connect to Metro
- **Big Move 4** Low-carbon, high performance precinct
- **Big Move 5** More, better and activated public space.

Blackwattle Bay will play a key role in realising these five Big Moves. It will provide a continuous waterfront promenade which will transform the community's access to and enjoyment of the harbour in this location. With the new Sydney Fish Market at its heart, it will offer a vibrant cultural and entertainment destination, contributing to Sydney's safe night-time economy. The Blackwattle Bay Study area is adjacent the Pyrmont Metro investigation area with the ready opportunity to provide direct pedestrian and cycling connections between the areas. It is planned as a low-carbon, high performance precinct with precinct-wide approaches to energy and water management and the provision of extensive tree canopy. Finally, Blackwattle Bay will provide a ribbon of parks and open spaces with distinct characters linked by the waterfront promenade and street network, providing places for active and passive recreation, gatherings, performances, kid's play and relaxation and supporting an ecological renewal of the precinct.

Table 3: Assessment against 10 Directions

DIRECTION	ASSESSMENT
Direction 1: Jobs and industries of the future – Investment and innovation to boost jobs, creativity, tourism and night life.	Transformation of Blackwattle Bay will provide the kind of places, spaces and connections that support economic development and growth, encourage innovation and attract the jobs of the future. The Blackwattle Bay Precinct Plan provides for significant campus-style commercial floorspace arranged around a clearly structured public domain. Large office floorplates can be provided for flexible use. The new Sydney Fish Market will provide a catalyst, supporting tourism and the night economy.
Direction 2: Development that complements or enhances the area – New or upgraded buildings fit with Peninsula's evolving character	The Blackwattle Bay Precinct Plan outlines built form that is sensitive to the existing neighbourhood context whilst delivering an appropriate urban form in line with the anticipated future character. Street wall heights correspond to the existing street characters of Harris Street and Wattle Street and tower forms are positioned to deliver solar amenity for new and existing open spaces.
Direction 3: Centres for residents, workers and visitors – new, lively and attractive centres for everyone to enjoy.	Blackwattle Bay will deliver new public spaces and an activated and vibrant ground plane full of restaurants, cafés, cultural facilities and the services that support the precinct.
Direction 4: A unified planning framework – clearer rules delivering greater certainty and investment	The proposed planning framework detailed in the Explanation of Intended Effect at **Attachment 10** provides for new planning controls for Blackwattle Bay to be integrated into SLEP 2012 in line with the recommendations in the PPPS. This will ensure a clearer and certain planning regime to guide future development in the precinct.
Direction 5: A tapestry of greener public spaces and experiences – better spaces, streets and parks; a rich canopy of trees; and access to the foreshore.	The Blackwattle Bay Precinct Plan provides for better spaces by: • reconnecting Pyrmont Peninsula with the bay, extending the existing street pattern to the waterfront promenade and the sequence of waterside spaces. • providing intermediate pedestrian lanes and arcades to subdivide the block structure • providing for extensive tree canopy coverage to create a green, sustainable and resilient precinct in the future.
Direction 6: Creativity, culture and heritage – celebrating Pyrmont Peninsula's culture, heritage and connections to Country	The Blackwattle Bay Precinct Plan examines and interprets the natural systems, indigenous heritage and industrial interventions of Blackwattle Bay. Engagement with local First Nations communities has revealed opportunities for sharing traditional knowledge, uncovering song lines and creating a place for indigenous community access and involvement. A local, layered understanding of the site informs an authentic representation of the place and its cultural significance.
Direction 7: Making it easier to move around – safer, greener streets integrating with new public transport	The street and public domain network accommodates a hierarchy of movement from relaxed, recreational pedestrian and cycle movement along the waterfront promenade to commuter cyclists on the shared paths and service vehicles accessing building loading docks. A multi-modal public transport hub around the North Entry Plaza will allow exchange between light rail, ferry, bus and Sydney Metro services.
Direction 8: Building now for a sustainable future – an adaptive, sustainable and resilient built environment.	The Blackwattle Bay Precinct Plan has been designed to deliver an adaptive, sustainable and resilient built environment. The recommendations in the ESD Report (**Attachment 32**) and Climate Change Adaptation Report (**Attachment 33**) will guide future stages of the development.

Direction 9: Great homes that can suit the needs of more people – a diversity of housing types,	A diversity of housing types, including affordable housing, are catered for as set out in the Housing Affordability and Diversity Report (**Attachment 20**).
Direction 10: A collaborative voice – a cohesive, agreed approach to bring the best outcomes for Pyrmont Peninsula	INSW is committed to a collaborative approach in planning and developing Blackwattle Bay. Comprehensive stakeholder engagement has occurred throughout the duration of this project.

B5.4 Future Transport Strategy 2056

The NSW Government released the Future Transport Strategy 2056 concurrent with the release of the Greater Sydney Region Plan and the District Plans. The Future Transport Strategy 2056 replaced the NSW Long Term Transport Masterplan (December 2012). The Future Transport Strategy sets six state-wide outcomes to guide investment, policy and reform and service provision until 2056, as shown in **Figure 18**.

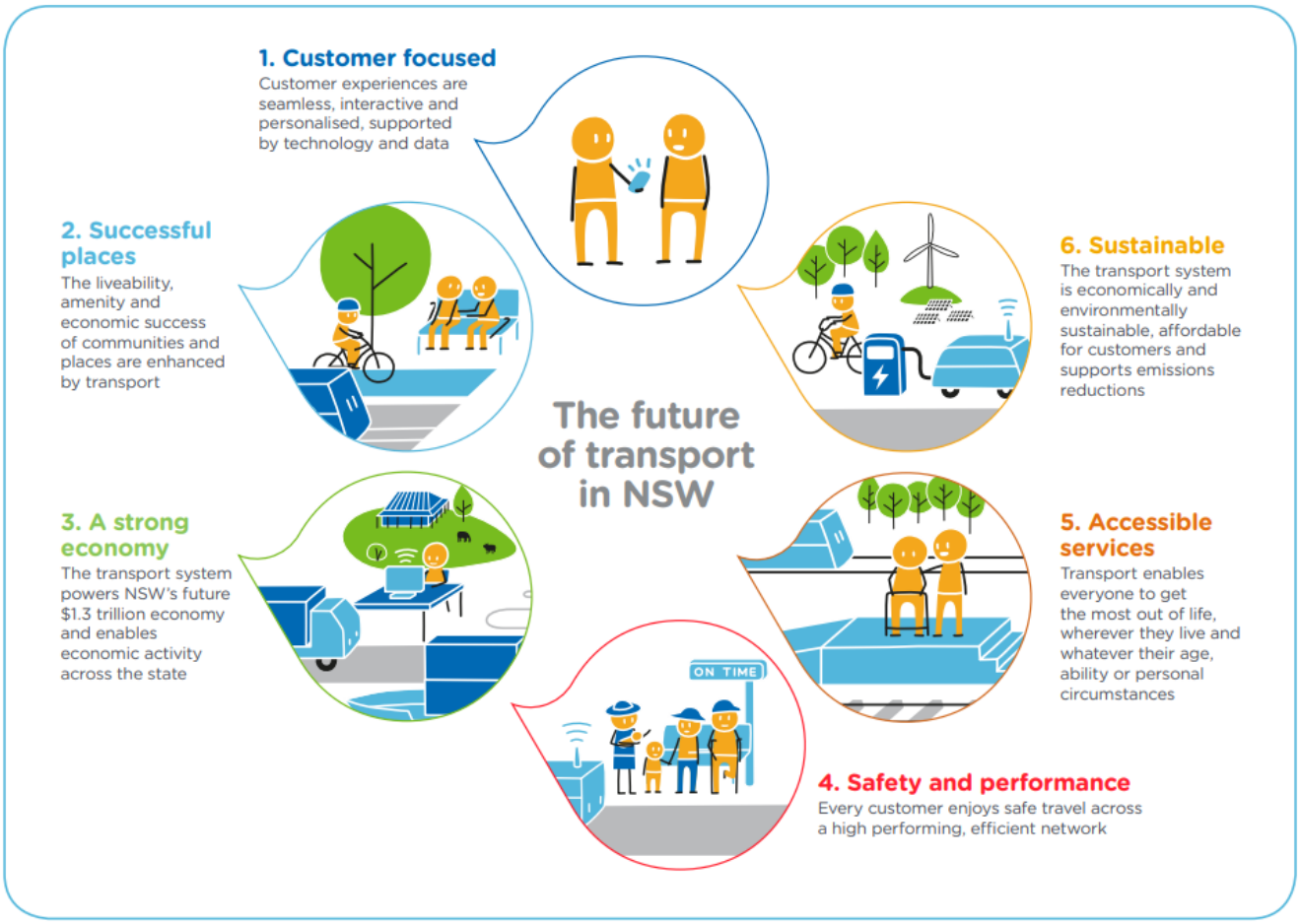


Figure 18: Future Transport's six state-wide outcomes
(Source: Future Transport Strategy 2056)

The Strategy also focuses on the role of transport in delivering movement and place outcomes that support the character of the places and communities for the future. The Movement and Place framework provides a tool to manage the road network in a way that supports safe, efficient and reliable journeys for people and freight while enhancing the liveability and amenity of places. The Movement and Place framework is discussed in detail in the Blackwattle Bay Transport Management and Accessibility Plan (**Attachment 4.1**).

Blackwattle Bay helps deliver on these outcomes by:

- prioritising active transport and public transport
- linking population and economic growth with the transport network
- ensuring the liveability, amenity and economic success of the future Blackwattle Bay to create a great place
- improving connectivity between Blackwattle Bay and public transport (including the proposed Pyrmont Metro station), pedestrian and cycling infrastructure

- prioritising walking as the dominant transport mode within the Blackwattle Bay precinct and reducing car usage.

B5.5 Better Placed

Better Placed was released in late 2017 and provides an overarching policy framework and focus for championing good design and great places. It establishes principles to support better design and create good places within NSW. The policy also advocates the support of design excellence of future development to create better quality places. This may utilise existing tools, such as design review panels, competitive design processes and guidelines and manuals to encourage support design excellence as part of future development proposals.

Blackwattle Bay is a significant opportunity for government, businesses and the community to implement Better Placed through the delivery of high quality places and to promote and achieve excellence in design. The Blackwattle Bay SSP Study has been a design-led process, and the proposed planning framework emphasises the importance of design quality for both buildings and the public domain.

The proposed planning framework includes design excellence provisions that will require a competitive design process and excellent design outcomes in accordance with Study Requirement 4.11. Any future development on the site will be required to exhibit design excellence by undergoing a competitive design process in accordance with either the CoS Competitive Design Policy or the relevant NSW Government Architect competitive design policy at the time of the competition.

B5.6 Greener Places

Greener Places and the *Draft Greener Places Design Guide* provide information on how to design, plan and implement green infrastructure in urban areas throughout NSW. It highlights the essential role of Green Infrastructure in the delivery of sustainable landscapes and communities. Greener Places proposes a design approach for urban environments. The policy cites four core principles in realising that objective:

- Integration: combine Green Infrastructure with urban development and grey infrastructure
- Connectivity: create an interconnected network of open space
- Multi-functionality: deliver multiple ecosystem services simultaneously
- Participation: involve stakeholders in development and implementation

The Blackwattle Bay Precinct Plan has been developed with regard to these four core principles, providing for a greener urban environment, greatly expanded tree canopy, a network of quality open spaces and multifunctional landscapes. Extensive community and stakeholder consultation has been undertaken in developing this approach.

B5.7 Sydney Green Grid

Government Architect NSW has identified a network of high-quality green spaces that connect town centres, public transport hubs, and major residential areas. Known as the Sydney Green Grid, it is an integral part of the Greater Sydney Region and District Plans and promotes a regional network of green spaces that provides a range of walking, cycling and publicly accessible spaces that connect the community to natural landscapes.

The Precinct Plan is aligned with the Sydney Green Grid. The proposed open spaces within the precinct have been designed to link into the existing open space network and the proposed foreshore

promenade will significantly enhance public foreshore access to the bay. In addition, the Precinct Plan seeks to deliver urban tree canopy cover of 60% to streets, 30% to parks and 30% to private property.

B5.8 Sustainable Sydney 2030

Sustainable Sydney 2030 is a long-term plan prepared by the CoS to achieve a green, global and connected city. The plan includes ten strategic directions intended to guide the future direction of Sydney:

1 A globally competitive and innovative city
2 A leading environmental performer
3 Integrated transport for a connected city
4 A city for walking and cycling
5 A lively and engaging city centre
6 Resilient and inclusive local communities
7 A cultural and creative city
8 Housing for a diverse population
9 Sustainable development, renewal and design
10 Implementation through effective governance and partnerships

The Blackwattle Bay SSP proposal aligns with the above strategic directions. It enhances Sydney's global position and attractiveness as a destination for people, business and investment by providing high-quality employment generating commercial floor space within the Innovation Corridor. It will also deliver leading edge sustainable outcomes including climate change resilience, improved water quality and restoration of natural ecosystems. Active transport (walking and cycling) and public transport networks are integral elements of the proposed urban structure with the street and public domain network accommodating a hierarchy of movement from recreational pedestrian and cycle movement along the waterfront promenade to commuter cyclists on the shared paths and service vehicles accessing building loading docks. A potential multi-modal public transport hub around the North Entry Plaza would allow exchange between light rail, ferry, bus and Sydney Metro services. It will provide housing for a diverse population integrated with the public domain to create a vibrant, walkable mixed use precinct. It will offer a range of recreational, community and cultural facilities to create a lively and engaging precinct. [add words on governance]

B5.9 City Plan 2036

City Plan 2036 is the draft Local Strategic Planning Statement (LSPS) for the CoS and links the state and local strategic plans with the planning controls to guide future development and the City's review of its Local Environmental Plan. It delivers on the 10 strategic directions of Sustainable Sydney 2030 and has been informed by the City's other social, environmental, economic and cultural plans and strategies.

The City Plan sets 13 priorities to achieve the City's Green, Global, Connected vision and guide future changes to the City's planning controls.

The City Plan notes that the NSW Government's development of Blackwattle Bay provides an opportunity to deliver a renewed hub for leading edge, innovative and creative workplaces within the Innovation Corridor. The City commits to collaborating with the NSW Government on State Significant Projects, including Blackwattle Bay, particularly to deliver places that attract knowledge-based industries and highly skilled workers and create flow-on benefits for the surrounding precincts. It notes that the review of planning controls in Pyrmont will focus on unlocking opportunities for economic development and jobs growth.

The City Plan provides strong support for a new metro station at Pyrmont, noting that this will improve connectivity between Blackwattle Bay and the Harbour City. It also highlights the important role that a rejuvenated Sydney Fish Market will play in supporting the visitor economy. The City Plan also strongly advocates for sustainability outcomes to be implemented in State Significant Precinct projects such as the Bays Precinct.

The City Plan supports the reintegration of NSW government renewal projects, including Blackwattle Bay, into the City's planning framework following their completion.

B6. Statutory planning

This section examines the statutory planning framework that applies to development in Blackwattle Bay.

B6.1 Zoning

Blackwattle Bay is zoned under the following planning instruments:

- *Sydney Local Environmental Plan 2012* (SLEP 2012)
- *Sydney Regional Environmental Plan No. 26 (City West)* (SREP 26)
- *Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005* (Harbour SREP)

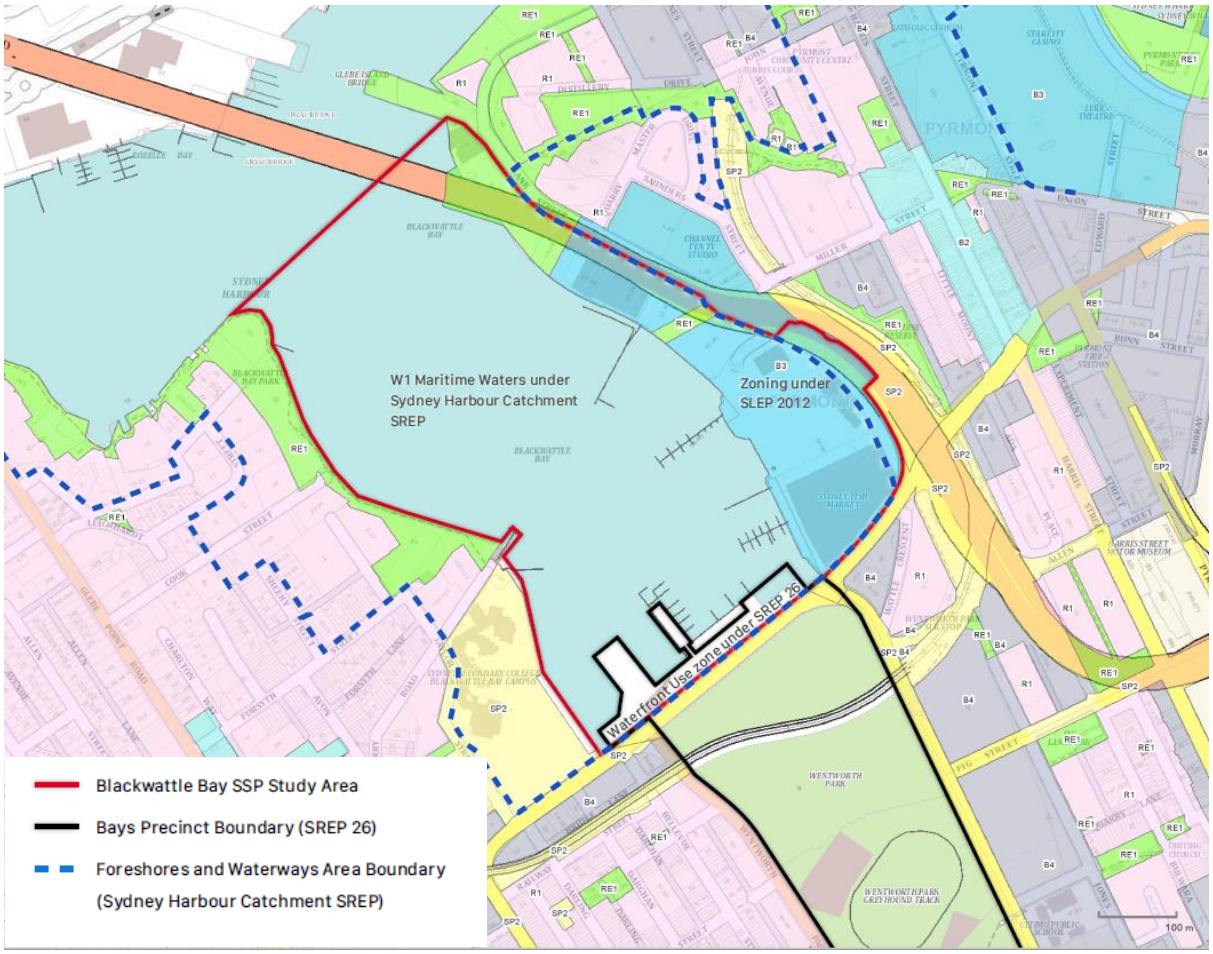


Figure 19: Blackwattle Bay zoning

SR1.3: Consider State Environmental Planning Policies (SEPPs) including, but not limited to:

- State Environmental Planning Policy (State Significant Precincts) 2005
- State Environmental Planning Policy (Urban Renewal) 2010
- SEPP 65 (State Environmental Planning Policy No 65 - Design Quality of Residential
- Apartment Development) 2015
- State Environmental Planning Policy (Affordable Rental Housing) 2009.
- State Environmental Planning Policy (Infrastructure) 2007
- Sydney Regional Environmental Plan No 26 – City West, and
- Sydney Regional Environmental Plan (Sydney Harbour Catchment 2005).

B6.2 State Environmental Planning Policy (State Significant Precincts) 2005

The SSP SEPP contains site specific planning controls and associated maps for SSP sites such as Sydney Olympic Park, Barangaroo and Sydney Opera House. The SSP SEPP also identifies certain circumstances where the Minister for Planning is consent authority for major development or where development consent is not required.

Under clause 4(2) of Schedule 6 of the SSP SEPP, the Minister is the consent authority for development with a capital investment value of not more than $10 million that is carried out by a person other than a public authority on land identified as Glebe Island, White Bay, Rozelle Bay and Blackwattle Bay on the Sydney Harbour Port and Related Employment Lands Map, as shown in **Figure 20**. This includes land at the southern end of Blackwattle Bay comprising part of the new Sydney Fish Market site. Further, clause 1(b) of Schedule 7 of the SSP SEPP stipulates that development carried out by a public authority with a CIV of not more than $10 million does not require development consent. It is proposed to remove these consent authority arrangements as they apply to Blackwattle Bay. The new planning controls will provide simpler and more transparent consent authority pathways for development in the precinct.

While the Blackwattle Bay SSP study area is a nominated SSP, it is not proposed that the SSP SEPP would contain the planning controls for the precinct. Rather, it is intended that the new planning controls would be contained in SLEP 2012.

Discussion on the proposed planning framework for Blackwattle Bay is provided in Part F3.

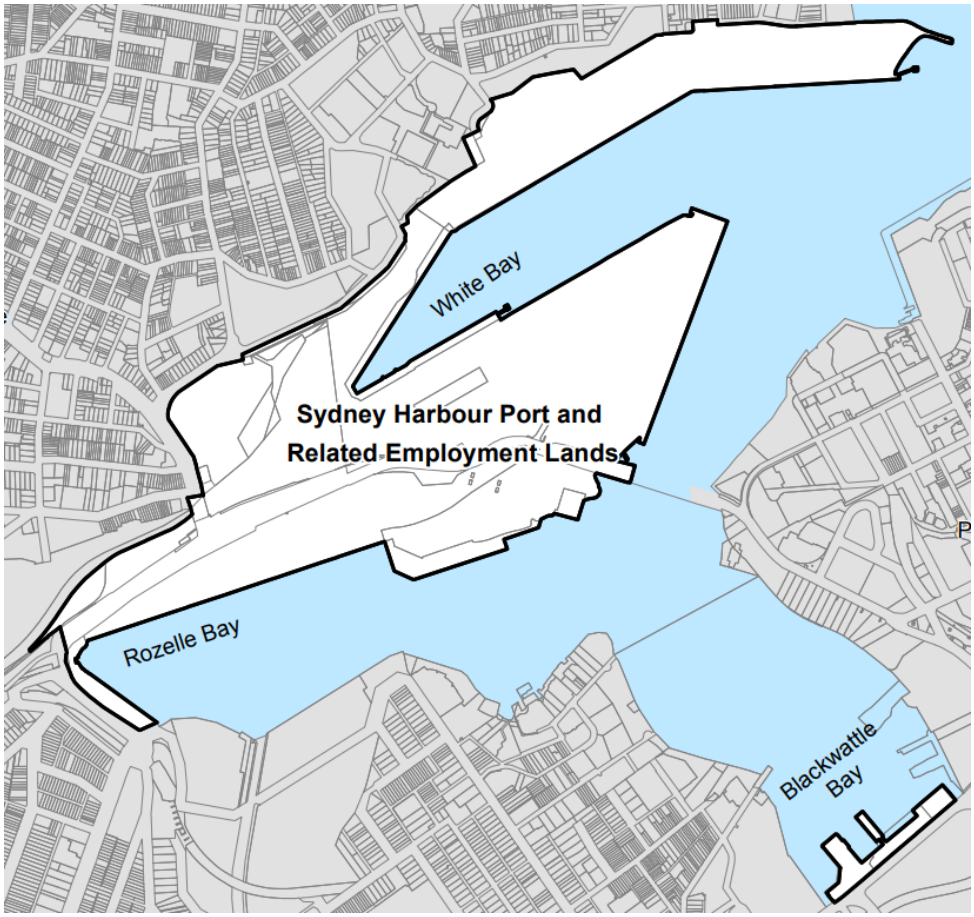


Figure 20: Sydney Harbour Port and Related Employment Lands Map under the SSP SEPP

B6.3 State Environmental Planning Policy (State and Regional Development) 2011

State Environmental Planning Policy (State and Regional Development) 2011 (SRD SEPP) identifies those types of development that due to their size, economic value or potential impacts are considered to be State significant development (SSD). It also identifies certain sites where development can also be SSD such as Sydney Olympic Park and Barangaroo.

Under Clause 2, Schedule 2 of the SRD SEPP, development that has a CIV of more than $10 million on land within the Bays Precinct Site is nominated as SSD. This includes all the land within the Blackwattle Bay study area, as shown in **Figure 21**. It is proposed that this provision will be retained and the Minister for Planning will therefore remain the consent authority for SSD in the precinct.

A minor map amendment is proposed to the SRD SEPP to reflect the extent of the new Sydney Fish Market site (refer Part F3 for further discussion).

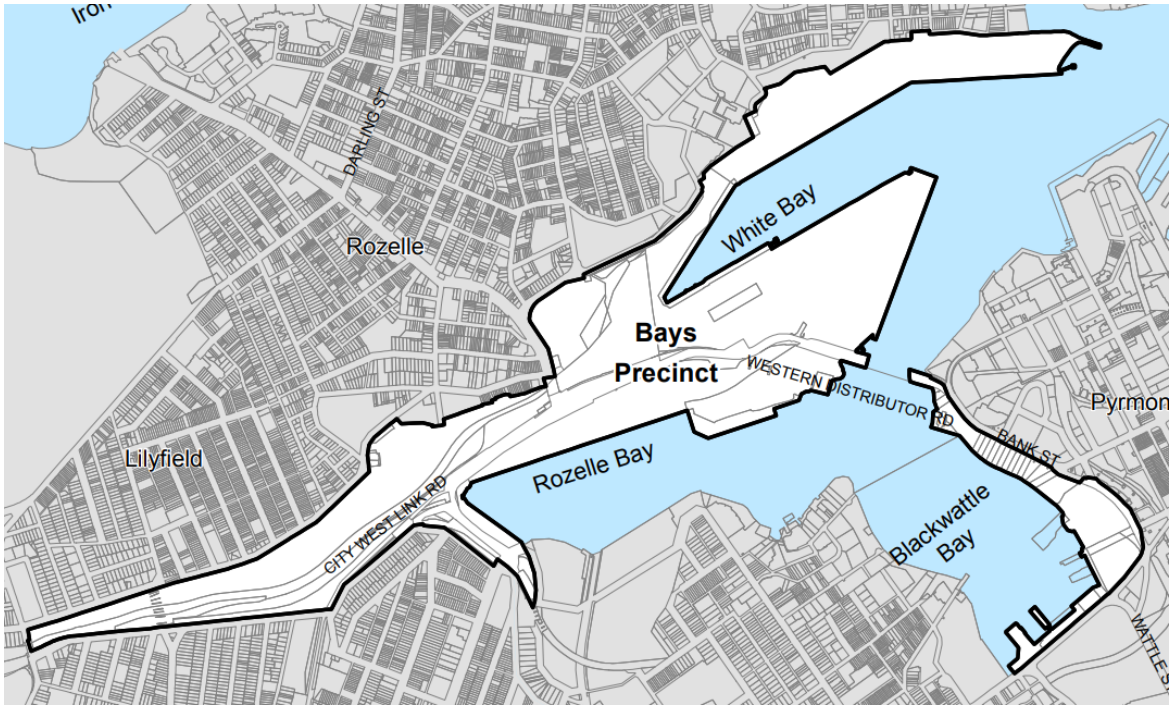


Figure 21: State Significant Development Sites Map for the Bays Precinct

B6.4 State Environmental Planning Policy No 65 – Design Quality of Residential Apartment Development

State Environmental Planning Policy No 65 – Design Quality of Residential Apartment Development (SEPP 65) aims to improve the design quality of residential apartments through nine design quality principles and the Apartment Design Guide (ADG). SEPP 65 applies to residential flat buildings (of three or more storeys).

An indicative scheme for Blackwattle Bay addresses the design quality principles of SEPP 65 and key elements of the ADG, to demonstrate that future development will be capable of compliance. The Blackwattle Bay Urban Design Study at **Attachment 3** provides a preliminary assessment against ADG requirements. The design quality of proposals during the development application stage will require further assessment against SEPP 65 and the ADG to ensure developments meet its objectives.

<u>Proposed Design and Place State Environmental Planning Policy</u>
The NSW Government is proposing to introduce a new Design and Place SEPP. The Design and Place SEPP will be a principle-based SEPP, integrating and aligning good design and place considerations into planning policy, and giving effect to a number of objects of the *Environmental Planning and Assessment Act 1979* including good design and amenity of the built environment, sustainable management of built and cultural heritage, and the proper construction and maintenance of buildings. It will also promote the NSW Premier's Priorities for a Better Environment (Greener Public Spaces and Greening our City).

The Design and Place SEPP will establish principles for the design and assessment of places in urban and regional NSW:

Figure 22: Proposed Design and Place SEPP principles

The Design and Place SEPP will also:

- establish matters for consideration and application requirements that collectively respond to each of the principles
- provide a single point of reference for design-related considerations and performance criteria in the planning system
- define scales of development – precincts and significant development, and all other development
- introduce a robust and consistent design process through requirements for design skills, design evaluation and review, and design excellence
- integrate a design-led, place-based approach, which includes embedding the draft Connecting with Country Framework
- be supported by existing, revised and new guidance, including a revised Apartment Design Guide (ADG), a new Urban Design Guide (UDG), and revisions to the Building Sustainability Index (BASIX)
- repeal and replace SEPP No 65 – Design Quality of Residential Apartment Development and SEPP (Building Sustainability Index: BASIX) 2004 (BASIX SEPP)
- consolidate design and place requirements in other SEPPs in the future.

The process involved in developing the Blackwattle Bay Precinct Plan is consistent with the proposed approach being put forward for the Design and Place SEPP. It has involved a design-led, place-based approach and one which has sought to ensure culturally inclusive and respectful engagement with Aboriginal people.

B6.5 State Environmental Planning Policy (Affordable Rental Housing) 2009

State Environmental Planning Policy (Affordable Rental Housing) (ARH SEPP) was introduced in 2009 to increase the supply and diversity of affordable rental and social housing throughout NSW. Under the SEPP affordable rental housing is defined as housing for very low, low and moderate income earning households as follows:

> *6(1) In this Policy, a household is taken to be a very low income household, low income household or moderate income household if the household:*
> *(a) has a gross income that is less than 120 per cent of the median household income for the time being for the Greater Sydney (Greater Capital City Statistical Area) (according to the Australian Bureau of Statistics) and pays no more than 30 per cent of that gross income in rent, or*
> *(b) is eligible to occupy rental accommodation under the National Rental Affordability Scheme and pays no more rent than that which would be charged if the household were to occupy rental accommodation under that scheme.*

(2) In this Policy, residential development is taken to be for the purposes of affordable housing if the development is on land owned by the Land and Housing Corporation.

This SEPP includes provisions designed to retain or offset the loss of low cost rental housing. It also seeks to promote diversification and increase the utilisation of the existing housing stock in addition to incentives to encourage the production of affordable rental housing for lower income groups.

The ARH SEPP would enable a floor space bonus to apply to the site for the delivery of affordable housing. The bonus is 0.5:1 or 20 per cent, whichever is greater on top of the existing maximum FSR allowed by the existing local planning controls.

The amount of bonus floor area that a housing provider may be granted is dependent on both the existing maximum FSR allowable on the land and the per centage of affordable housing that will be offered as part of the housing development. The minimum amount of affordable housing a provider must offer in order to be granted a bonus floor space is 20 per cent of the total gross floor area for residential flat buildings.

Proposed Housing SEPP

As part of its COVID-19 response, and broader moves to more build-to-rent housing, the NSW government proposed reforms to ensure that state planning provisions are fit for purpose to facilitate the construction of affordable and well-designed residential accommodation. The government is proposing a new State Environmental Planning Policy (Housing Diversity) that intends to consolidate state planning provisions for affordable, seniors and social housing into one plan. The DPIE has released an Explanation of Intended Effect (EIE) that highlights that the proposed changes will:

1. Amend some state-level planning provisions, particularly for boarding house and seniors housing development
2. Amend some state-level planning provisions to support social housing developments undertaken by the NSW Land and Housing Corporation (LAHC) on government-owned land; and
3. Consolidate three housing-related SEPPs:
    - State Environmental Planning Policy (Affordable Rental Housing) 2009
    - State Environmental Planning Policy (Housing for Seniors and People with a Disability) 2004
    - State Environmental Planning Policy No 70 – Affordable Housing (Revised Schemes) (section 3.3.2).

The SEPP will also make a number of changes to the existing provisions of the Affordable Rental Housing SEPP and the Seniors Housing SEPP, particularly around access and retention of existing affordable housing.

It is proposed that the new SEPP, when adopted, will provide new opportunities for institutional investment in residential development in NSW, creating jobs in planning, construction, and ongoing management.

The first set of changes to housing policies were made on 18 December 2020 to facilitate the delivery of social and affordable housing by the Land and Housing Corporation.

The Blackwattle Bay Precinct Plan is consistent with the intent of the ARH SEPP and the proposed new Housing SEPP by enabling an increased supply of housing, including affordable rental housing.

Build-to-rent Housing

On 12 February 2021, the ARH SEPP, the SRD SEPP, SEPP 65 and the *Environmental Planning and Assessment Regulation 2000* were amended, to introduce build-to-rent housing (BTR housing) into the NSW planning framework.

The BTR housing amendments:

- allow for development of BTR housing in any zone that residential flat buildings are permitted, as well as in the B3 Commercial Core, B4 Mixed Use, and B8 Metropolitan Centre zones
- introduce minimum car parking rates and apply councils' maximum car parking rates where relevant
- apply council height and FSR standards
- prevent residential subdivision for 15 years in all zones, except the B3 zone where the BTR housing cannot be subdivided into separate lots, in perpetuity
- encourage consent authorities to be flexible in applying the ADG to BTR housing, in particular with regard to the design criteria for private open space and balconies, storage and apartment mix
- introduce a State Significant Development (SSD) pathway for BTR housing developments that have a CIV of more than $100 million for the Greater Sydney Region (excluding the City of Sydney LGA) and more than $50 million for development on other land
- apply council LEP controls relating to minimum non-residential floor space requirements in business zones.

The BTR provisions will apply to Blackwattle Bay as relevant.

B6.6 State Environmental Planning Policy (Infrastructure) 2007

State Environmental Planning Policy (Infrastructure) 2007 (ISEPP) plays a key role in helping to deliver the NSW Government's infrastructure works. It assists the NSW Government, private infrastructure providers, local councils and the communities they support by simplifying the process for providing infrastructure like hospitals, roads, railways, emergency services, water supply and electricity delivery.

Many of the activities that will be required to be undertaken by public authorities to facilitate the redevelopment of Blackwattle Bay would be facilitated under the ISEPP. These activities include road infrastructure upgrades, new public wharves and boating facilities, waterway management and foreshore upgrade, and new utilities.

Part 3, Division 11, Clauses 58G-58H of the ISEPP enables public authorities to undertake certain works as exempt development within identified public authority precincts. These precincts are currently Barangaroo, Darling Harbour, Sydney Olympic Park and The Rocks. Activities that can be undertaken as exempt development comprise public works such as cycleways, recreation facilities, amenity facilities, landscaping and the like. Similar provisions apply to Council reserves under Part 3, Division 12 of the ISEPP.

Given that the public domain at Blackwattle Bay is not a Council reserve at this time, it is proposed that Clause 58G of the ISEPP be amended to include Blackwattle Bay as a public authority precinct. Further discussion on this proposal is provided in Part F3.

B6.7 Sydney Regional Environmental Plan No 26 – City West

Sydney Regional Environmental Plan No 26 – City West (SREP 26) is a 'deemed State Environmental Planning Policy'. It applies to land at the southern end of Blackwattle Bay, being part of the site of the new Sydney Fish Market comprising the existing wharves but excluding the waters of Blackwattle Bay, as shown in **Figure 19**.

The area within Blackwattle Bay to which SREP 26 applies is zoned 'Waterfront Use' and only uses that the consent authority considers are consistent with the Waterfront Use zone objectives may be carried out. The zone objectives are:

- to provide for development of water-based commercial and recreational activities, including facilities for the servicing, mooring, launching and storage of boats
- to allow a range of commercial maritime facilities (such as boating industry facilities, marinas, waterfront service operations, waterfront commercial and tourism facilities and uses associated with the servicing, temporary mooring, launching and storage of boats and uses ancillary to these), which will take advantage of the harbour location
- to provide public access within and across the zone and to facilitate the extension of the Ultimo-Pyrmont foreshore promenade from Blackwattle Bay to Rozelle Bay and link with public access networks surrounding the precinct
- to create, retain and enhance views and links between Wentworth Park and the foreshores of Blackwattle Bay.

Uses such as hotels, hotel apartments and tourist resort development are not permitted.

There are no development standards relating to maximum building height or FSR that apply to the site under SREP 26.

SREP 26 sets out planning principles of regional significance for City West Planning as well as planning principles for the Bays Precinct which must be taken into consideration when a consent authority is assessing a development. These relate to matters such as urban design, public domain, land use, movement and parking, environment and heritage.

SREP 26 requires the preparation of a Master Plan for the site at Blackwattle Bay which is to address the following matters (as relevant):

- phasing of development
- distribution of land uses and, in the Residential-Business Zone, proposals for satisfying the principles of mixed residential and business use and public recreation use
- pedestrian, cycle and road access and circulation networks
- parking provision
- subdivision pattern
- infrastructure provision
- building envelopes and built form controls
- heritage conservation, implementing the guidelines set out in any applicable conservation policy, and protection of archaeological relics
- decontamination of the site
- provision of public facilities
- provision of open space, its function and landscaping
- any other matters stipulated by the Director-General (now Secretary of the DPIE).

Section 4.23 of the *Environmental Planning and Assessment Act, 1979* (EP&A Act) provides that the obligation to prepare a master plan may be satisfied by the making and approval of a concept development application in respect of that land. This was the case with the concept approval for the new Sydney Fish Market.

SREP 26 includes a number of other provisions that are relevant to development on the Blackwattle Bay site and which were addressed in the concept SSDA for the new fish markets.

Under the new planning framework proposed for Blackwattle Bay, that part of the precinct that is currently under SREP 26 would instead be zoned under SLEP 2012 and SREP 26 would cease to apply.

B6.8 Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005

Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005 (Harbour SREP) is also a 'deemed State Environmental Planning Policy'. It covers all the waterways of the Harbour, the foreshores and entire catchment. It establishes a set of planning principles to be used by councils for the preparation of planning instruments. It also zones the waterways into nine different zones to suit the differing environmental characteristics and land uses of the harbour and its tributaries and provides the regulatory framework for development within waterways.

Under the Harbour SREP, Blackwattle Bay is zoned W1 Maritime Waters. The objectives of the W1 zone are:

- to give preference to and protect waters required for the effective and efficient movement of commercial shipping, public water transport and maritime industrial operations generally
- to allow development only where it is demonstrated that it is compatible with, and will not adversely affect the effective and efficient movement of, commercial shipping, public water transport and maritime industry operations
- to promote equitable use of the waterway, including use by passive recreation craft.

Uses that are permitted and prohibited in the W1 zone are shown in **Table 4**.

Table 4: Permitted and prohibited uses in the W1 zone

Permissible (with or without consent)	Prohibited
Aids to navigation, Aviation facilities, Boat launching ramps (Public), Boat lifts (other than boat lifts for storage of vessels above water), Boat repair facilities, Charter and tourism facilities, Commercial marinas, Commercial port facilities, Community facilities, Demolition (other than demolition of a heritage Item), Dredging, Flora and fauna enclosures, General restoration works, Maintenance dredging, Naval activities, Private landing steps, Public boardwalks, Public water recreational facilities, Public water transport facilities, Recreational or club facilities, Single mooring (other than associated with a commercial marina or a boating industry facility), Skids, Telecommunications facilities	Advertisements, Advertising structures, Boat lifts for the storage of vessels above water, Boat sheds (private), Houseboats, Intertidal dredging, Mooring pens, Private landing facilities, Private marinas, Reclamation works, Residential development, Slipways, Swimming enclosures (private), Swimming pools, Tourist facilities, Water-based restaurants and entertainment facilities, Waterfront access stairs

Part 2 of the Harbour SREP sets out planning principles that are to be considered and, where possible, achieved:

- in the preparation of environmental planning instruments and development control plans
- in the preparation of environmental studies and master plans.

SR4.4 Assess the consistency of the proposal against the principles of Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005.

An assessment of the Blackwattle Bay Precinct Plan against these principles is provided in **Table 5**.

Table 5: Assessment against Harbour SREP Principles

Planning Principles	Assessment
(a) development is to protect and, where practicable, improve the hydrological, ecological and geomorphological processes on which the health of the catchment depends,	The proposal provides for the protection and improvement of hydrological, ecological and geomorphological practices. Careful water management of inflows to the bays with new urban forest canopy, wetlands and marine ecology supporting sea walls will contribute to improved water quality and marine life.
(b) the natural assets of the catchment are to be maintained and, where feasible, restored for their scenic and cultural values and their biodiversity and geodiversity,	As noted above, the biodiversity and geodiversity assets of the catchment will be enhanced through the introduction of new urban forest canopy, wetlands and marine ecology. Scenic and cultural values of the catchment will be protected with a ribbon of parks and open spaces which will line the harbour.
(c) decisions with respect to the development of land are to take account of the cumulative environmental impact of development within the catchment,	The Blackwattle Bay Precinct Plan has been developed through comprehensive stakeholder and community consultation, analysis of context and site conditions, explorations of options and testing and assessment of environmental impacts. This work has taken account of the cumulative environmental impact of development within the catchment.
(d) action is to be taken to achieve the targets set out in Water Quality and River Flow Interim Environmental Objectives: Guidelines for Water Management: Sydney Harbour and Parramatta River Catchment (published in October 1999 by the Environment Protection Authority), such action to be consistent with the guidelines set out in Australian Water Quality Guidelines for Fresh and Marine Waters (published in November 2000 by the Australian and New Zealand Environment and Conservation Council),	The proposed stormwater management strategy (refer discussion in Part G21), which adopts water sensitive urban design (WSUD) principles and meets CoS water quality targets, is expected to significantly improve stormwater quality from the precinct and contribute to an improvement in water quality in Blackwattle Bay. It is expected that the proposed strategy would contribute to achieving the Water Quality and River Flow Interim Environmental Objectives (EPA, 1999) within Blackwattle Bay and is consistent with Australian Water Quality Guidelines for Fresh and Marine Waters (ANZECC 2000).
(e) development in the Sydney Harbour Catchment is to protect the functioning of natural drainage systems on floodplains and comply with the guidelines set out in the document titled Floodplain Development Manual 2005 (published in April 2005 by the Department),	A detailed flooding assessment has been undertaken (refer **Attachment 12**). It complies with the guidelines set out in the Floodplain Development Manual. Only minor changes in the flood behaviour within and surrounding the Study Area are anticipated which can be readily resolved in the detailed design stage.
(f) development that is visible from the waterways or foreshores is to maintain, protect and enhance the unique visual qualities of Sydney Harbour,	The existing site is characterised by concrete batching infrastructure, light industrial and commercial buildings and on-grade parking. There is limited public access to the foreshore which is generally of poor quality with minimal public domain

Planning Principles	Assessment
	amenity. The Precinct Plan will provide for a high quality, attractive foreshore promenade as well as landscaped public open space what will enhance the unique qualities of the bay.
(g) the number of publicly accessible vantage points for viewing Sydney Harbour should be increased,	Opportunities for viewing Sydney Harbour will be significantly increased with the introduction of the foreshore promenade and parks around the edge of the bay.
(h) development is to improve the water quality of urban run-off, reduce the quantity and frequency of urban run-off, prevent the risk of increased flooding and conserve water,	The proposal will deliver improved water quality run-off and provide for appropriate measures to manage stormwater flows.
(i) action is to be taken to achieve the objectives and targets set out in the Sydney Harbour Catchment Blueprint, as published in February 2003 by the then Department of Land and Water Conservation,	See above.
(j) development is to protect and, if practicable, rehabilitate watercourses, wetlands, riparian corridors, remnant native vegetation and ecological connectivity within the catchment,	There are no existing riparian corridors, wetlands or native vegetation within the precinct. It is intended to increase. Initiatives to improve ecological conditions include new urban forest canopy, wetlands and marine ecology supporting sea walls.
(k) development is to protect and, if practicable, rehabilitate land from current and future urban salinity processes, and prevent or restore land degradation and reduced water quality resulting from urban salinity,	This area of Sydney is not presented in published salinity risk maps. Management of any urban salinity in the Study Area can be appropriately addressed at DA stage if necessary.
(l) development is to avoid or minimise disturbance of acid sulfate soils in accordance with the Acid Sulfate Soil Manual, as published in 1988 by the Acid Sulfate Soils Management Advisory Committee	Based on previous site investigation activities completed in various portions of the site, potential acid sulfate soil (ASS) conditions have been identified in natural alluvial/marine soil underlying fill material and in adjoining bay sediments within Blackwattle Bay. Where natural alluvial/marine soil/sediments are identified or fill materials have alluvial/marine characteristics appropriate measures to manage the acid generation risks will be required to be documented as an ASS management plan (ASSMP) prior to any works that may result in disturbance (and so oxidation) of these materials.

The Harbour SREP includes a range of matters for consideration by consent authorities assessing development within the Foreshores and Waterways Area of the Plan. These are aimed at ensuring better and consistent development decisions and include such issues as ecological and scenic quality, built form and design, maintenance of views, public access and recreation and working harbour uses. The Harbour SREP includes provisions relating to heritage conservation and wetlands protection and provides planning controls for strategic foreshore sites.

Clause 41 of the Harbour SREP requires the preparation of master plans for strategic foreshore sites, which includes the eastern side of Blackwattle Bay. A draft master plan is to address the following:

- design principles drawn from an analysis of the site and its context
- phasing of development
- distribution of land uses including foreshore public access and open space
- pedestrian, cycle and motor vehicle access and circulation networks
- parking provision
- infrastructure provision

- building envelopes and built form controls
- heritage conservation (including the protection of archaeological relics and places, sites and objects of Aboriginal heritage significance), implementing the guidelines set out in any applicable conservation policy or conservation management plan
- remediation of the site
- provision of public facilities
- provision of open space, its function and landscaping
- the impact on any adjoining land that is reserved under the National Parks and Wildlife Act 1974
- protection and enhancement of the natural assets of the site and adjoining land
- protection and enhancement of the waterway (including water quality) and any aquatic vegetation on or adjoining the site (such as seagrass, saltmarsh, mangroves and algal communities).

Under clause 41(2) of the Harbour SREP, the Minister may waive the requirement to prepare a master plan:

> *(a) if satisfied that preparation of a master plan is unnecessary because of—*
> *(i) the nature of the proposed development, or*
> *(ii) the fact that the proposed development will affect only a small proportion of the site, or*
> *(iii) the adequacy of other planning controls applying to the proposed development, or*
> *(b) for such other reason as the Minister considers sufficient,*
>
> *so long as the Minister is satisfied that the proposed development will not compromise the application of the planning principles set out in clauses 13, 14 and 15.*

Given that extensive scope of the Blackwattle Bay SSP Study and Precinct Plan it is considered that the preparation of a master plan in this instance is not warranted and should be waived.

The Harbour SREP includes provisions to protect identified heritage items as well as potential places of Aboriginal and non-Aboriginal significance. These provisions must be taken into account when assessment development under Part 4 or Part 5 of the EP&A Act. The Glebe Island Bridge and abutments are nominated as a heritage item under the policy. A detailed assessment of Aboriginal and non-Aboriginal heritage has been undertaken for the SSP study and is discussed in Parts G11 and G12.

There is a need to amend the Harbour SREP zoning map to reflect the proposed zoning of the new Sydney Fish Market under SLEP 2012.

SR1.4: Consideration of local planning and other relevant strategies and reports

B6.9 Sydney Local Environmental Plan 2012

The SLEP 2012 is the principal local environmental plan, establishing permissibility and development parameters for most of the CoS LGA, including the eastern side of Blackwattle Bay. It includes key development standards, such as building height and floor space ratios.

That part of Blackwattle Bay that falls within SLEP 2012 is zoned B3 Commercial Core, RE1 Public Recreation and SP2 Special Uses, as shown in **Figure 23**.

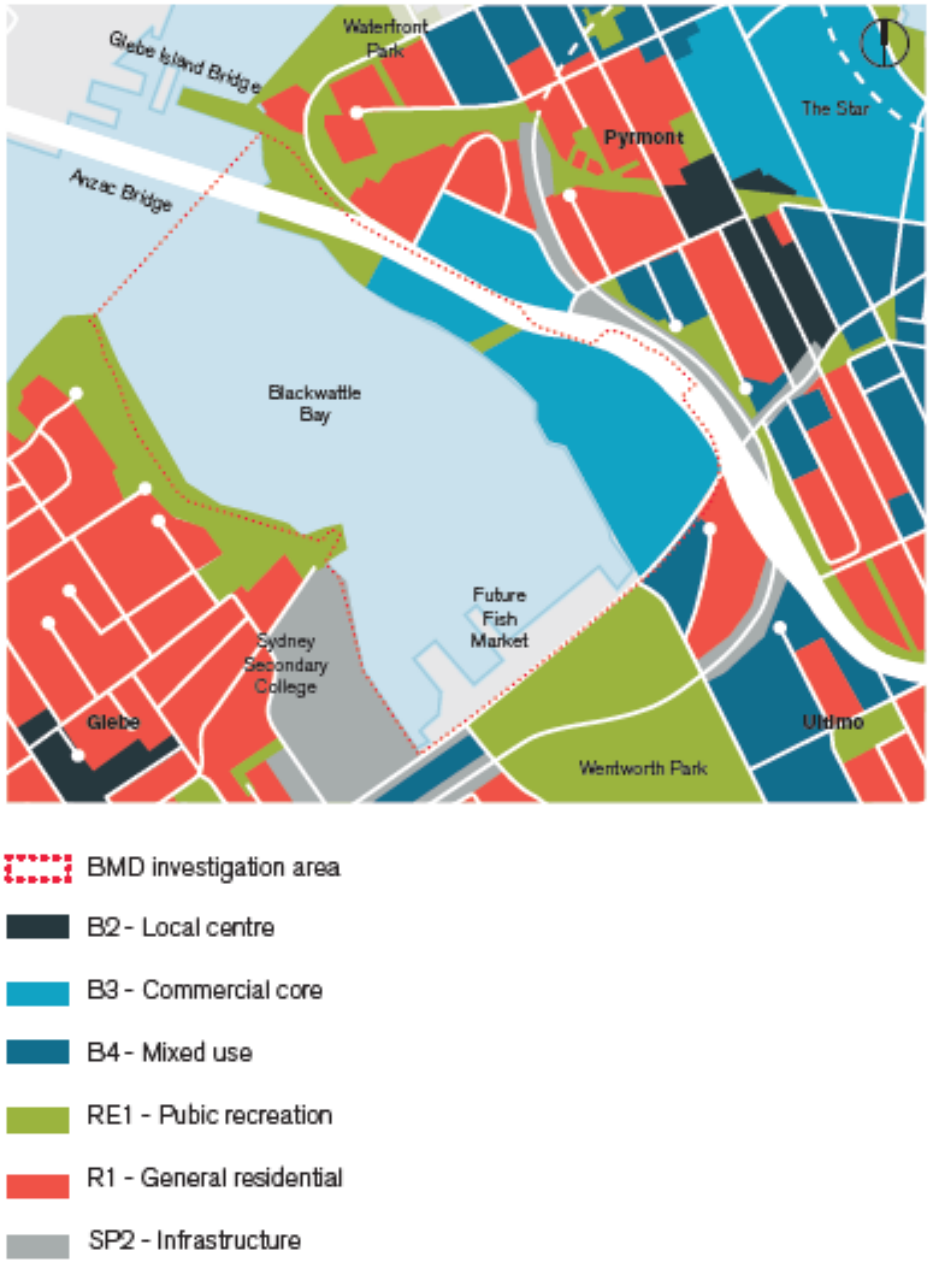


Figure 23: Existing zoning under SLEP 2012

The maximum building heights applying to the site under SLEP 2012 range from 15m to 33m, as shown in **Figure 24**.

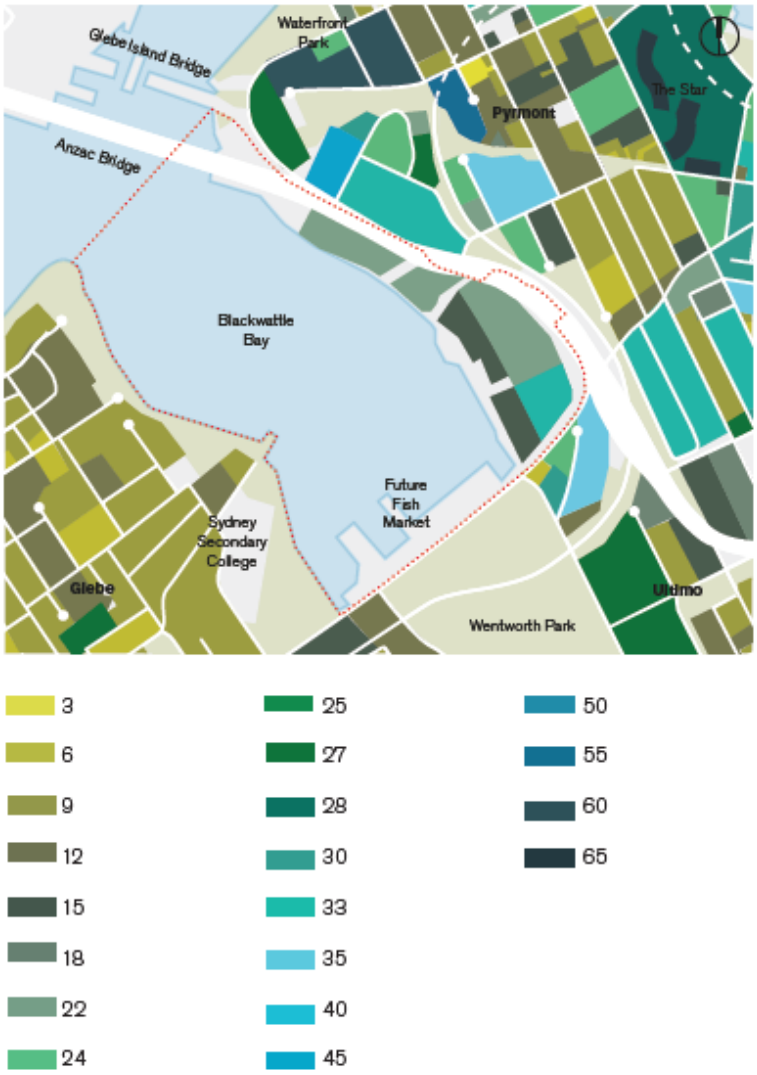


Figure 24: Maximum building heights under SLEP 2012.

For land within the Study Area covered by SLEP 2012, there is a maximum 2.5:1 floorspace ratio, as shown in **Figure 25**.

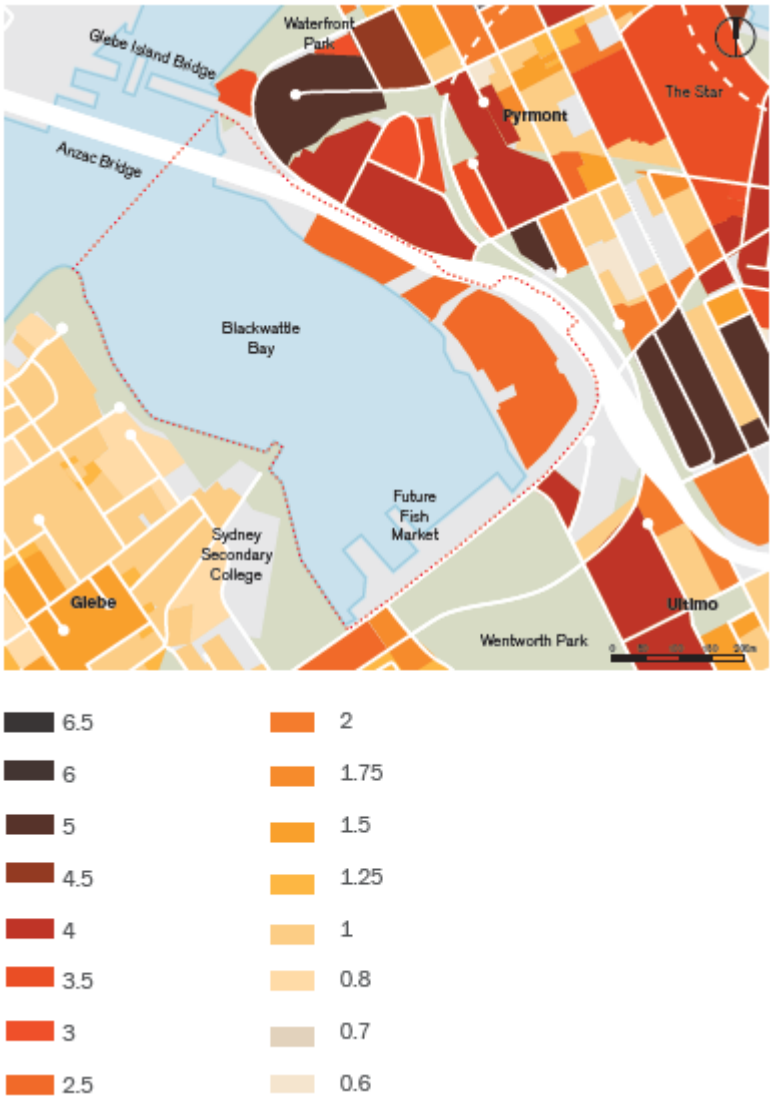


Figure 25: Maximum FSR under SLEP 2012

Other key provisions of SLEP 2012 that currently apply to the Blackwattle Bay include:

- **Acid sulfate soils:** Classes 1 and 2
- **Foreshore development:** To ensure that public access along the foreshore is protected and enhanced and any structures within the foreshore area do not have adverse impacts on environment, visual amenity, heritage or public access.
- **Car parking:** Maximum car parking rates specified for different development types
- **Affordable housing levy:** Applicable in Ultimo-Pyrmont equivalent to 0.8% of total floor area of development to be used for residential purposes and 1.1% of the total floor area for non-residential purposes.

The proposed planning controls for Blackwattle Bay would predominantly be contained in SLEP 2012, as detailed in the Explanation of Intended Effect at **Attachment 10**.

B6.10 Sydney Development Control Plan 2012

Sydney Development Control Plan 2012 (DCP 2012) sets the development and built form parameters for the CoS LGA. It applies to the eastern side of Blackwattle Bay but not the site of the new Sydney Fish Market.

DCP 2012 includes key development standards, such as, public domain improvements, street wall heights and active frontages. The aims of DCP 2012 are to:

- encourage development to respond to its context and is compatible with the existing built environment and public domain
- recognise and reinforce the distinctive characteristics of the CoS's neighbourhoods and centres
- build upon the detailed objectives and controls under SLEP 2012
- protect and enhance the public domain
- achieve the objectives of the City's Sustainable Sydney 2030 Strategy
- encourage design that maintains and enhances the character and heritage significance of heritage items and heritage conservation areas
- encourage ecologically sustainable development and reduce the impacts of development on the environment.

Relevant DCP 2012 provisions include:

- Public domain elements and defining the public domain
  - Active frontages
  - Public open space
  - Pedestrian and bike network
  - Building street frontage height
  - Awnings and colonnades
  - Wind
  - Reflectivity
  - Lighting
- Design excellence and competitive design process
- Urban ecology
- Ecologically sustainable development
- Water and flood management
- Transport and parking

A draft Design Code has been prepared for the precinct (refer discussion in Part F4).

B6.11 Development Contributions Plan 2015

Blackwattle Bay is included in the West Precinct of CoS Development Contributions Plan 2015 (Contributions Plan 2015). Contributions Plan 2015 projects substantial additional growth in the CoS over the anticipated life of the contributions plan from 2016 to 2030. While the bulk of the new resident and worker population and required new local infrastructure are anticipated to be in the South Precinct, the West Precinct is expected to experience the second highest population and worker growth. However, the Contributions Plan does not account for any population growth as a result of future redevelopment in the Bays Precinct, including Blackwattle Bay.

Contributions Plan 2015 provides an assessment of additional local infrastructure that is anticipated to be required to meet the needs of projected resident and worker population growth. The redevelopment of Blackwattle Bay is not specifically contemplated by the plan.

The types of infrastructure to be funded through contributions are categorised as:

- Open space
- Community facilities
- Traffic and transport
- Stormwater.

The only projects in the vicinity of Blackwattle Bay to be funded by contributions under the plan are the embellishment of Bank Street foreshore, already zoned for open space and included in the Bank Street Masterplan (2006), and upgrade works in Wentworth Park.

B6.12 Consent authority

Consent authority arrangements in Blackwattle Bay are complex given the number of planning instruments that apply to the precinct. A summary of consent arrangements that apply is provided in **Table 6**. The Blackwattle Bay SSP Study provides an opportunity to clarify and rationalise the planning approval pathways that apply in the Precinct (refer discussion in Part F3.4).

Table 6: Consent authority arrangements in Blackwattle Bay

Planning Instrument	Criteria	Development type	Consent authority
SRD SEPP	Development with CIV over $10 million within the Bays Precinct	Part 4 - State significant development	▪ Minister or DPIE (by delegation) for applications made by or on behalf of a public authority ▪ Independent Planning Commission where: - there have been 25 or more objections to the application - the local council has objected - there has been a reportable political donation in connection with the application, or to a previous related application.
SSP SEPP	Development with CIV not more than $10 million carried out by a person other than a public authority. Only applies to land at southern end of Blackwattle Bay	Part 4	Minister (or delegate)
SSP SEPP	Development with CIV not more than $10 million carried out by a public authority. Only applies to land at southern end of Blackwattle Bay	Part 5	N/A
SLEP 2012	Development with CIV not more than $10 million on land within eastern side of Blackwattle Bay (outside of area identified on Sydney Harbour Port and Related Employment Lands Map under SSP SEPP)	Part 4	CoS
Harbour SREP	Water-based development Land/water interface development	Part 4 Part 4	The Minister administering the Ports and Maritime Administration Act 1995. CoS

C. STRATEGIC CONTEXT AND JUSTIFICATION

C1. The case for change

Traditionally an area for industrial uses and the current home of the Sydney Fish Market, Blackwattle Bay has the potential to be both an international tourist destination and a much-loved community asset. However, it is currently rundown and in urgent need of renewal. The opportunity now exists to create a world-class, harbourside precinct anchored by a new purpose-built authentic fish market.

The existing Sydney Fish Market is a popular destination for both locals and visitors, despite the detractions of noise, smell and ageing buildings. Even with its inadequate and ageing facilities, poor amenity and connectivity to Sydney Harbour, the Sydney Fish Market makes a significant economic contribution to the State:

- It presently has over three million visitors per year, with visitation projected to double in the next 10 years
- It currently draws more tourists than Bondi Beach, the Great Barrier Reef and the entire state of Western Australia
- 50 per cent of Chinese tourists to Sydney visit the Sydney Fish Market
- It supports fishing and aquaculture operators in 300 communities across Australia.

However, the Sydney Fish Market was not purpose built, is not fit for purpose and is struggling to meet the demands placed on it as it continues to draw increasingly more visitors.

There are other major constraints at Blackwattle Bay that also need to be addressed:

- Access to the fish market and to the surrounding land is poor. The intersection of Bridge Road and Bank Street is congested, public transport access ways are unclear, and walking and cycling paths are cut off by buildings and infrastructure
- The harbour-front public pathway from Rozelle to Woolloomooloo is interrupted by leased public land and private land around the edge of Blackwattle Bay. This forces pedestrians and cyclists onto the road to bypass the area instead of being able to enjoy the harbour foreshore
- Poor access to Blackwattle Bay has meant that it has been functionally separated from adjoining neighbourhoods and has missed out on much of the renewal and regeneration that has been experienced in Pyrmont, Ultimo and Glebe. These existing constraints provide significant opportunities for improvement
- Bank Street land zoned Public Recreation is fenced off from the public and used for recreational boating, but lacks the amenity required to encourage greater community use
- The Western Distributor passes behind the current Sydney Fish Market, cutting former access roads and paths from Pyrmont to the water. Remnants of these connections are seen in Gipps Street and Miller Street, but today the streets end in pylons or buildings.

The land surrounding Blackwattle Bay is largely owned by the NSW government except for three private landholdings. The government's strategic landholdings together with the redevelopment of the Sydney Fish Market are key to the area's renewal and reintegration with the rest of Sydney.

The relocation of the current Sydney Fish Market to its new site will enable:

- the foreshore to be returned to the public, completing the missing link to the harbourside promenade

- the existing fish market site and land between the Anzac Bridge approaches and harbour to be renewed for a mix of parks and open spaces, community facilities as well as employment, residential, tourist and retail uses
- the provision of improved pedestrian and cyclist connections, including to the new metro station at Pyrmont.

Unlocking Blackwattle Bay will deliver better pedestrian and cycling connections, new jobs, new housing, new street links and new public open space. The renewal of Blackwattle Bay will also be able to take advantage of the new Sydney metro station at Pyrmont which will bring greater connectivity, an expanded labour pool and the impetus for strong activity.

C2. Alignment to government policy

Part B5 of this study provides a detailed analysis of the rezoning proposal's alignment to key government policies.

Blackwattle Bay supports multiple key government policies and strategies by delivering:

- Economic development through urban renewal outcomes that attract investment
- Job creation through the provision of land for new offices, shops and residences, as well as supporting the NSW fishing industry in regional coastal areas
- Liveable cities through a place-based approach to urban renewal, using and optimising government-owned land to provide homes near jobs and amenities and deliver economic outcomes
- A world-class destination, that will increase visitor length of stay and expenditure in NSW.

C3. Culture and liveability

Cultural infrastructure generates public value, social and economic benefits, and contributes to Sydney's status as a distinctive global city.

The strategic location of Blackwattle Bay Precinct taps into Sydney's broader iconic art, culture and tourism corridor, linking key visited landmarks in the CBD with cultural institutions across Pyrmont, Bays West, Sydney Olympic Park and Parramatta, including:

- **Sydney CBD:** Sydney Harbour, Opera House, Sydney Harbour Bridge, QVB, The Rocks, Darling Harbour (east) etc
- **Pyrmont:** Sydney Fish Markets, The Star, the Australian National Maritime Museum and International Convention Centre
- **Bays West:** Potential for a rejuvenated White Bay Power Station and other vibrant cultural attractions
- **Sydney Olympic Park:** Entertainment, events, sporting and leisure precinct with ANZ Stadium, Qudos Bank Area, Sydney showground and various sporting centres
- **Parramatta:** The new Parramatta Powerhouse MAAS museum, planned to be the largest in NSW.

The foreshore promenade from Woolloomooloo to Rozelle already connects numerous cultural facilities and destinations, from the Botanical Gardens and the Sydney Opera House through Circular Quay and the Museum of Contemporary Art around to the Harbour Bridge, Walsh Bay theatre district and Darling Harbour. These destinations are enhanced throughout the year with events and celebrations such as VIVID, New Year's Eve and Australia Day.

The new promenade through Blackwattle Bay bookended with the new Sydney Fish Market will open up a host of new cultural opportunities. This includes extending existing events programming such as VIVID and creating new events including events around maritime traditions such as the Blessing of the Fleet.

The renewal of Blackwattle Bay will create opportunities to provide new public areas and open spaces, sports and community facilities which will also contribute to the liveability of the precinct.

C4. Economic benefits

The proposed rezoning of Blackwattle Bay will deliver significant economic benefits. It will create 17,000 construction jobs (direct and indirect) and 5,500 ongoing jobs, deliver approximately 1,550 dwellings and provide for an extensive network of open space and other infrastructure improvements.

HillPDA has prepared an *Economic Development, Local Retail and Services Study* (**Attachment 6**) which details the economic benefits of the proposal.

Total construction cost is expected to be around $1.7 billion. Approximately 4,245 job years will be generated directly in construction on site. Due to multiplier impacts more than 17,000 job years would be generated in the national economy. Further, renewal in accordance with the Precinct Plan would provide 6,000 jobs on site, which is more than a 13 fold increase on the base case (do nothing option). Total remuneration of workers on site would be $454m per annum and the value of gross output would be $1.8 billion.

Renewal as envisaged by the precinct plan would provide more housing for almost 3,000 residents. These residents would spend around $52m a year on retail goods and services, of which a major proportion would be directed to businesses in the Ultimo Pyrmont and Glebe area. Workers on site will generate a further $21m in expenditure within the immediate area of which a high proportion will be in food services.

Tourists staying overnight within the precinct (assuming 140 hotel rooms and serviced apartments) would generate $10m in expenditure each year, of which around 37% would be in retail and food services and, of which, a large proportion would be captured by local businesses.

Gross value added (contribution to the local economy or gross regional product) would be $761m per annum (in 2020 dollars). This is 24 times higher than the base case.

The Precinct Plan will help deliver infrastructure identified for the SSP as well as for the wider Pyrmont area. Infrastructure works in the precinct include the waterfront promenade and urban parks that will provide significant social benefit to residents, workers and visitors to the precinct and the surrounding urban area. The precinct plan will result in an uplift in land value by more than $600m, which well above the estimated cost of $121m for infrastructure and public domain areas in the precinct. The precinct plan is essential to fund the public benefits, which in turn improves the quality of life for the residents, workers and visitors in the precinct.

C5. Reconnecting Blackwattle Bay to its surrounds

SR1.6 Outline how the proposal considers the interface with current and known/planned land uses in the surrounding area including, but not limited to, Bays Waterfront Promenade, Wentworth Park, Glebe foreshore walk, Glebe Island Bridge, Sydney Secondary College, Blackwattle Bay Campus, the working port and other maritime uses in the wider area, as well as reinforcing the role of Central Sydney.

The proposed urban structure set out in the Blackwattle Bay Precinct Plan seeks to reconnect Blackwattle Bay to its surrounds. By extending key streets to the bay and intersecting with the tracing of the original foreshore line, the Pyrmont Peninsula is reconnected to the bay. The streets lead to the continuous waterfront promenade and a sequence of waterside public spaces.

Gipps Street and Miller Street are extended into the site area of the existing Sydney Fish Market and lead to the new Waterside Park and Miller Street open space respectively.

The Precinct Plan relates street wall heights to the existing street characters of Harris Street and Wattle Street and positions tower forms to deliver solar amenity for new and existing open spaces.

The urban structure of Precinct Plan establishes connections and vistas from beyond the site to the water, the new Sydney Fish Market and to Wentworth Park. A north-south vista from the Bank Street / Miller Street intersection across the Waterside Park to the new Fish Market is a key orientation initiative in the Precinct Plan.

Active transport (walking and cycling) and public transport networks are integral in the urban structure of the Precinct Plan. A separated cycle path extends from Bridge Road around to Miller Street and Bank Street providing a safe cycle link to the existing cycle network.

Renewal at Blackwattle Bay will enhance the access to the foreshore through the provision of the foreshore promenade and will provide for expanded community use of the bay. The importance presence of commercial marinas will be maintained, in new configurations, respecting the rowing course and creating safe harbours for paddlers and rowers to enter the bay.

C6. Place making

The Blackwattle Bay Precinct Plan aligns with principles of ‘place-based’ planning, as set out in both the Greater Sydney Region Plan and the Eastern City District Plan. Place-based planning enables the development of a shared vision and a spatial framework for a place which provides the basis for its future development. Through place-based planning, it is possible to create a well-designed built environment with a fine grain urban form and to facilitate the delivery of infrastructure and opportunity. The proposed rezoning will enable the delivery of significant precinct-wide benefits that are the culmination of place-based planning for the site.

The Blackwattle Bay Precinct Plan delivers on the Eastern City District Planning Priority E4 fostering healthy, creative, culturally rich and socially connected communities by providing quality urban spaces, activating public spaces, providing high public amenity, and respecting heritage. The proposal also aligns with Planning Priority E6, helping to renew Blackwattle Bay and creating a great new place for people to enjoy and experience.

The Place character and identity of Blackwattle Bay is drawn from its topography, the pre-colonial history, from local industries and employment, and from the cultures of the people of Pyrmont and Glebe. Blackwattle Bay is, and always has been, an essential part of the working harbour in Sydney. From a fishing place of First peoples, through timber merchantry to fish markets, wholesalers, commercial berths and concrete batching, the bay has provided for the local and regional communities. A local, layered understanding of the site has informed an authentic representation of the place and its cultural significance.

The place-based approach to planning for Blackwattle Bay has involved collaboration with a broad range of stakeholders. In particular, INSW is committed to ensuring the story of systematic and

sustainable land management, occupation and cultural heritage of Aboriginal people informs placemaking and planning across the Blackwattle Bay area. There is a strong commitment to ensuring culturally inclusive and respectful engagement with Aboriginal people and ensuring that the outcomes for the Blackwattle Bay Precinct will speak to the multiplicity of stories of the area including that of Indigenous Australians through engaging, innovative and exceptional cultural, social and physical infrastructure. Blackwattle Bay contains physical evidence of Aboriginal occupation in the form of rock engravings and middens and INSW is committed to working with others to ensure their protection and preservation for future generations.

Sixteen (16) Design Principles have been developed to guide the renewal of the precinct drawn from an extensive process of community and stakeholder consultation.

The heritage significance of Blackwattle Bay has also been integral in adopting a place-based approach to planning for Blackwattle Bay.

D. COMMUNITY ENGAGEMENT AND GOVERNANCE

D1. Consultation overview

SR28.1. Undertake an appropriate and justified level of consultation with Council, other relevant State and Federal government agencies, private landowners including those within the study boundary, non-government service providers and community stakeholders during the preparation of the study. Include the Department of Education and Principals of Sydney Secondary College and Blackwattle Bay Campus.

A significant level of consultation has been undertaken with the CoS, relevant State and Federal government agencies, private landowners including those within the Precinct, non-government service providers and community stakeholders. Consultation has also included numerous meetings with NSW Department of Education - School Infrastructure and the Principals of Sydney Secondary College and Blackwattle Bay Campus. Consultation has occurred over a long period, commencing prior to the issuing of the Study Requirements in early 2017 and ongoing since that time. The consultation has informed the preparation of this SSP Study.

SR28.2. Align consultation with International Association for Public Participation (IAP2) core values and demonstrate integration of the guiding principles of community engagement including:

- Integrity – clear scope and purpose
- Inclusiveness - inclusive and accessible for all those affected
- Open discussion - designed to facilitate genuine dialogue and discussion with the community
- Opportunity to influence - Provides the opportunity for the community to influence outcomes.

The goal of the engagement program was to present the opportunities and constraints of the Study Area including specific design response elements to the community and key stakeholders to ascertain preferences and priorities. These were used to guide and inform the development of the Blackwattle Bay Precinct Plan and SSP Study. From the outset, the goal was to inform, consult and adhere to the guiding principles of community engagement as laid out by the International Association for Public Participation. INSW did this by:

- Communicating clearly the scope of the consultation being undertaken and the purpose for which feedback was being collected
- Providing multiple channels through which interested people could provide feedback and express their opinions
- Providing forums through which key stakeholders could engage in a genuine dialogue to discuss and to provide feedback to the INSW project team
- Shaping and evolving the plans based on the feedback and opinions expressed.

SR28.3. Outline a consultation strategy that addresses key aspects of the proposal including spatial arrangement of development, staging, open space, amenity, transport, community facilities, infrastructure and community resilience to manage change.

The NSW Government has been consulting with the community about plans for the Bays Precinct, including Blackwattle Bay, since 2014. The community is very active and passionate about the future of the area and eager to see and participate in its progress.

Utilising a best practice approach, INSW held multiple, targeted rounds of engagement with the community and key stakeholders to get their feedback on potential outcomes and considerations for the precinct planning of the Blackwattle Bay Study Area. During each of these rounds of engagement, feedback was sought and provided on key aspects of the proposal including spatial arrangement of development, staging, open space, amenity, transport, community facilities, and infrastructure. Parallel processes, like the PPPS, provided further, indirect opportunities for input.

Outlined below is the three-phased strategy for engaging and consulting with the community and key stakeholders. Each phase has informed the evolution and development of the final draft precinct master plan and SSP Study. The fourth phase is the statutory process led by DPIE.

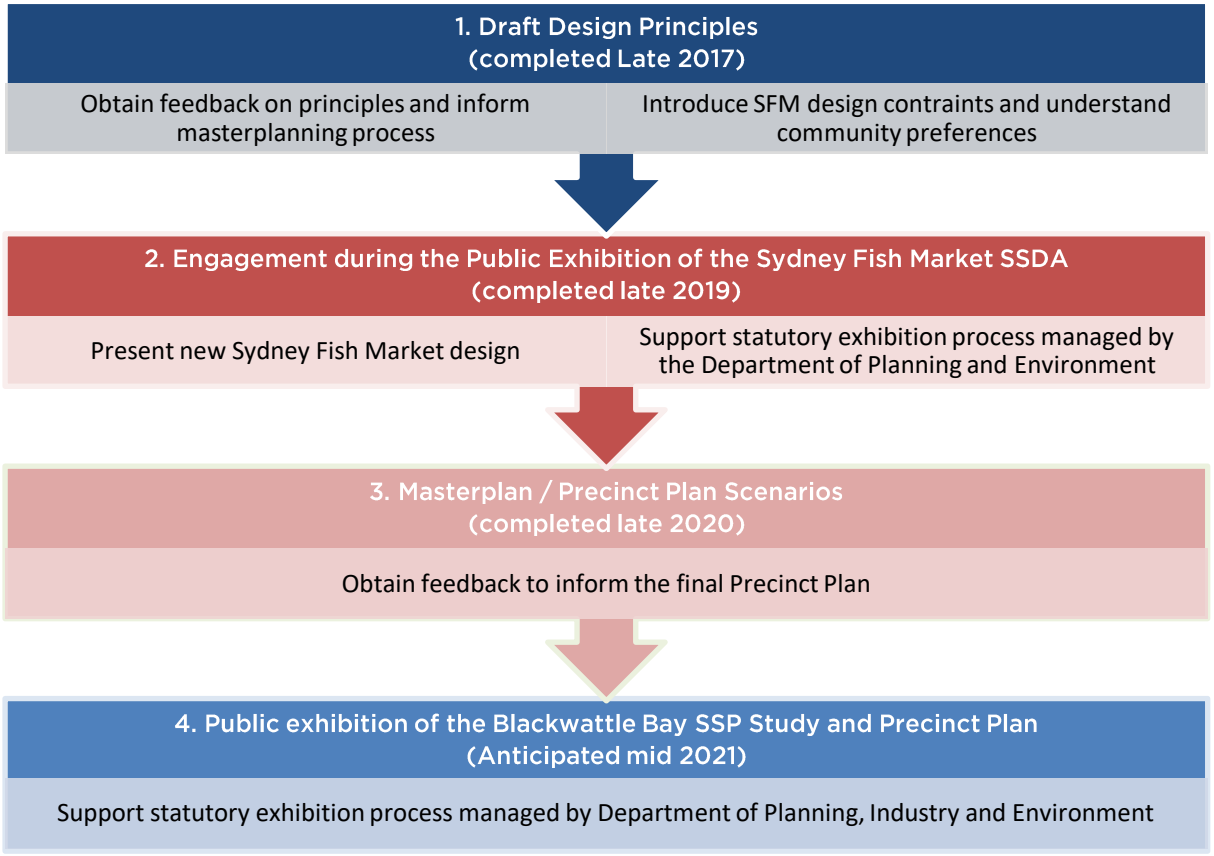


Figure 26: Engagement process

SR28.4. Demonstrate that the consultation program has built confidence in the process by considering the context including: the role and relationship of the proponent to the existing and surrounding community; the history of development proposals in the area; the history of previous consultation including the Community and Business Reference Groups, open days, summits and surveys; the history of Aboriginal and Torres Strait Islander Communities in the area and the community's perception of its capacity to influence decisions.

A proactive and community-centred approach to engagement about future uses and planning for the Blackwattle Bay precinct and The Bays Precinct has been ongoing since late 2014. Key engagement activities are outlined below.

1 **November 2014** - The Bays Precinct International Summit was held to bring international and domestic experts together with community representatives to generate the 20 high-level

Principles to underpin the approach to land and waterway governance and development in The Bays. Refer:

- https://thebayssydney.nsw.gov.au/assets/Document-Library/Reports-and-Plans-2014-/2014-International-Summit-Statement-of-Principles.pdf

2 **April 2015** - The Bays Precinct Discovery Day was held to unlock the gates surrounding The Bays and open up the Precinct to tens of thousands of Sydneysiders. This allowed them to explore usually inaccessible areas, ensuring their feedback on the transformation program was informed by an understanding of The Bays Precinct as it is today.

3 **May 2015** - The Bays Precinct Sydneysiders Summit and Leadership Forums were convened, attended by more than 1,200 people, kicking off detailed consultation with industry, communities, universities and schools on how The Bays should be transformed.

4 **May to July 2015** - Transforming City Living: The Bay Precinct Discussion Paper and Plan - "Transforming City Living: The Bays Precinct Discussion Paper" (a collation of outcomes from the International Summit) was exhibited to present the NSW Government's initial ideas and ambitions for The Bays. It received more than 4,000 comments and submissions.
Refer

- https://thebayssydney.nsw.gov.au/assets/Document-Library/Reports-and-Plans-2014-/2015-Transforming-City-Living-Discussion-Paper.pdf
- https://thebayssydney.nsw.gov.au/assets/Discussion-Paper-Public-Feedback/Discussion-Paper-Consultation-2015.pdf

5 **May to July 2015** - A 'Call for Great Ideas' process was run in parallel to the exhibition of the Discussion Paper to generate concepts for land, water, infrastructure and activation in The Bays Precinct. The Great Ideas were reviewed by panels of experts and community leaders, and the best Ideas were selected to shape future masterplanning for The Bays. Refer:

- https://thebayssydney.nsw.gov.au/assets/Document-Library/Reports-and-Plans-2014-/2015-The-Call-For-Great-Ideas-Compendium.pdf

6 **October 2015** - The program of consultation resulted in the publication of The Transformation Plan: The Bays Precinct, Sydney. The Transformation Plan was launched by the NSW Premier and Minister for Planning. It drew on all aspects of UrbanGrowth NSW's consultation program, and integrated international best practice; emerging trends for 21st Century global cities; and advice from key stakeholders on critical considerations. The Transformation Plan is the NSW Government's 20 to 30 - year blueprint for the renewal of The Bays. Refer:

- https://thebayssydney.nsw.gov.au/assets/Document-Library/Reports-and-Plans-2014-/2015-Informing-The-Bays-Precinct-Transformation-Plan.pdf
- https://thebayssydney.nsw.gov.au/assets/Document-Library/Reports-and-Plans-2014-/2015-Transformation-Plan.pdf

7 **December 2015 to 2020** - The Bays Precinct Reference Group launched. It comprised 41 member organisations representing industry, community and peak bodies with interests in the area. The Reference Group meets several times a year with the project team to discuss studies, planning and other key issues.

8 **2015 – 2017** - Schools and university engagement - In addition to the engagement outlined above and in order to engage poential future residents, workers and visitors, Urban Growth Development Corporation (UGDC) ran an extensive schools and university engagement program that included student site tours, presentations to school groups and the development of online school curriculum resources. Refer:

- https://thebayssydney.nsw.gov.au/learning/university-hub/
- https://thebayssydney.nsw.gov.au/learning/school-hub/

9 **2016 – 2018** - Open houses - As part of a broad engagement program, UGDC ran quarterly open houses that included market stalls, information sessions and sponsorship of community events such as the Balmain Fun Run.

10 **August 2017** - Public consultation commenced on the principles to guide the precinct planning of Blackwattle Bay. The process was designed to provide members of the community and other

stakeholders with information on the masterplanning process for Blackwattle Bay (formerly the Bays Market District) and obtain their feedback on the Draft Masterplan Principles for the precinct. It also sought to increase community and stakeholder understanding of the site constraints that will influence design of the new Sydney Fish Market and to obtain feedback on priorities for the fish market design. Engagement activities included two public workshops, an online survey and submissions process, Community Reference Group and Business Reference Group meetings and a government agency briefing. The outcomes of this engagement is captured in the Masterplanning the Bays Market District: Draft Masterplan Principles Consultation Report 2017 (Elton Consulting). Refer:

- https://thebayssydney.nsw.gov.au/assets/publications/Final-Report-The-Bays-Market-District-masterplan-principles-251017.pdf

11 **October/November 2019** - Four public information drop-in sessions were held on the design and SSDA for the new Sydney Fish Market. Two sessions were held at St Barnabas Anglican Church on Broadway, one session was held at Broadway Shopping Centre and one session was held at the Balmain Fun Run. While feedback about the wider Precinct was not the subjct of the consultation, all relevant feedback received has been identified and included in this process.

12 **May/June 2020** - Consultation for shaping the Blackwattle Bay Precinct Plan commenced with three scenarios illustrating potential future urban renewal based on different elements. The elements within each of the scenarios illustrated different land use mixes, open space arrangements and waterfront promenade designs, and street and building layouts. While each scenario has a set of common features, they also explored unique elements. Feedback was provided through a number of different forums which included; online webinar sessions and an online survey. In addition, a wider survey was undertaken to explore the views of Greater Sydney. A number written submissions were also received via the Blackwattle Bay email address. This feedback has collated, assessed and helped shape the final Precinct Plan. The outcomes of this engagement are captured in the Revitalising Blackwattle Bay Community and Stakeholder Engagement: Outcomes Report 2020 (**Attachment 11**).

D2. Other consultation activities

City of Sydney Council Presentations

The INSW project team has presented to the Lord Mayor and councillors as follows:

- 15 November 2017 – introduction and delivery strategy for Blackwattle Bay
- 26 November 2018 – New Sydney Fish Market design
- 4 November 2019 – Blackwattle Bay master plan framework
- 4 May 2020 – Revitalisating Blackwattle Bay consultation brochure

Blackwattle Bay College

Since November 2017, the project team has met at least once a year with the principal of the Sydney Secondary College Blackwattle Bay Campus. The meetings have covered a range of topics, primarily the master planning progress of Blackwattle Bay and the design of the new Sydney Fish Market. Key concerns raised by the school have included construction noise from the redevelopment during the HSC exam periods and people on school grounds during school hours.

School Infrastructure NSW

The project team has met with School Infrastructure NSW (SINSW) on several occasions regarding the master planning progress of Blackwattle Bay and the potential future population that could occur as a result of the precinct renewal. SINSW has indicated future development of Blackwattle Bay (formerly the Bays Market District) will not generate the need for an additional education facility.

Community reference group: Ongoing engagement since its establishment in 2016

The Bays Precinct Reference Group (the 'Reference Group') was established in December 2015 to create an ongoing forum for communication and information sharing between the then UGDC and its stakeholders.

The purpose of the Reference Group was to be a forum to share information and provide feedback on The Bays Precinct Urban Transformation Program. It was acknowledged that this would not be the only forum where information sharing and feedback would occur, however, it would provide an important vehicle through which information could be shared, regular updates provided and issues discussed.

In October 2015, an Expression of Interest (EOI) for membership of the Reference Group was released. The EOI announced that a total of 30 places would be available for representatives of associations, groups and commercial organisations to participate.

Following the EOI process, a total of 41 members were accepted into the Reference Group in exceedance of the original intention for 30 members. Members represented a diverse range of community and business organisations as shown in **Table 7**.

Table 7: Initial membership of Community Reference Group

10,000 Friends of Greater Sydney	White Bay Stratas Committee
A.P.I.A. Leichhardt Tigers Football Club	Australian Institute of Landscape Architects
Action for Public Transport (NSW) Inc.	Boat Owners Association
AFL NSW/ACT	Boating Industry Association
Annandale Precinct Committee	Cement, Concrete & Aggregates Australia
Balmain District Football Club	Commercial Vessel Association
Balmain Precinct Committee & White Bay/ Rozelle Precinct Committee	Committee for Sydney
Balmain Tigers Australian Football Club	Consult Australia
Bays area Community Coalition (BaCC)	NSW Chapter - Australian Institute of Architects
Bike Leichhardt	NSW Federation of Housing Associations Inc.
Blackwattle Cove Coalition	Planning Institute of Australia
C3 Rozelle Campus	Property Council of Australia
Canterbury District Soccer Football Association	Southern Sydney Regional Organisation of Councils

Coalition of Glebe Groups	Sydney Alliance
Council of Ultimo/Pyrmont Associations (CUPA)	Sydney Business Chamber
DragonBoats NSW	Sydney Harbour Maritime Forum
EcoTransit Sydney	Tourism Accommodation Australia
Glebe Point Residents Group	Tourism and Transport Forum
Inner West Youth Alliance	Pyrmont History Group
Pyrmont Action Inc	The Glebe Society
Pyrmont Community Group	

The Reference Group met periodically between December 2015 and November 2020. However, after the second meeting, the Reference Group decided to separate into two groups, the business and community groups. Following this decision, two meetings were held and although on the same topic, they were presented in a different manner to cater to the respective groups.

SR28.5. Hold at least 2 (two) workshops, to be professionally facilitated, which involve private landowners, DPE and CoS with the intent of understanding private landowner aspirations and how they will be considered as part of the proposal. The number and timing of workshops is to be agreed with DPE and CoS to allow workshop outcomes to inform the vision and options for the project.

Private landowners (PLOs) in the Blackwattle Bay Precinct have been consulted over the duration of the project. This consultation has addressed a range of issues including traffic and access, renewal aspirations and master planning. As required by the Study Requirements, the first two meetings with the PLOs were professionally facilitated. For the subsequent meetings the PLOs requested to be consulted individually.

Private landowner workshop findings.

- **Celestino** – Keen to redevelop their site as soon as possible. Their redevelopment proposition is very well aligned with the PPPS and the Eastern City District Plan's innovation corridor; Celestino would like to utilise their Blackwattle Bay site as a satellite site to their Western Sydney Science Park project given the site's proximity to universities, TAFEs, and the CBD. Their building could provide a mix of different incubator office uses as well as a mix of different residential uses. Overall, they generally support the proposed planning controls for their site, however, would like to further investigate the opportunity for additional height and gross floor area, which they believe would better allow them to achieve their vision for the site.

- **Poulos Bros** – Potentially a mid-term redevelopment prospect. As wholesale tenant within the Sydney Fish Market, their site offers them a strategic location to service the needs of their customers. Redevelopment timing of their Bank St site will need to align with their business plans as well as cover the costs associated with relocating operations to a location that will likely be further away. Overall, Poulos Bros are generally supportive of the proposed planning controls for their site, however, they would like additional height and gross floor area, which they believe is necessary to offset the anticipated costs of relocating their business operations.

- **Hymix** – Likely a long-term redevelopment prospect. Hymix has stated that the Pyrmont concrete batching plant is a critical part of the concrete supply network, as it supplies approximately 35% of concrete requirements within the CoS. Given the lack of similarly located suitable sites, they do not ever envisage the site's closure or relocation. Therefore, Hymix believes that the concrete batching plant can be transformed into an urban integrated facility that can coexist with the other land uses at Blackwattle Bay. Hanson's position in relation to the Hymix Pyrmont concrete batching plant site has always been clear: The proposed redevelopment outcomes for the site must enable the continuation of concrete batching activities. The proposed redevelopment should provide the economic incentive for Hymix to invest in the development of an urban integrated facility that can operate 24/7 and coexist with new surrounding land uses including public waterfront access, housing, and commercial uses.

Table 8 provides further detail on the meetings held and the topics covered.

Table 8: Schedule of meetings with PLOs

Meeting No.	Date	Private landowner (PLOs)	Overview of meeting
Workshop 1	27/07/2017	Hymix (Hanson), Celestino, Poulos Brothers	Facilitated by Deborah Cameron, Project Director, KJA Presentation delivered by UrbanGrowth NSW included project introduction and draft masterplanning principles. Separate presentation by PLOs of renewal aspirations.
Workshop 2	04/09/2017	Hymix (Hanson), Celestino, Poulos Brothers	Facilitated by Ian Colley, Director, Make Stuff Happen Presentation delivered by UrbanGrowth NSW included the following: • Overview of consultation that was undertaken • Review of the draft principles and the feedback received from the community • How feedback from the landowners has been incorporated into the revised principles • • Presentation on the revised principles and the key changes that have been made as a result of feedback received from the feedback and stakeholders
Meeting 1	18/08/2017	Celestino	Feedback on masterplanning principles
Meeting 2	18/08/2017	Poulos Brothers	Feedback on masterplanning principles
Meeting 3	22/09/2017	Poulos Brothers	UGNSW presents masterplanning progress update for the Bays Market District. Poulos presents preliminary concept for their site – mixed-use building with two residential towers.
Meeting 4	26/09/2017	Celestino	UGNSW presents masterplanning progress update for the Bays Market District. Celestino present preliminary concept for their site – vertically mixed-use building with potential incubator office space that could be associated with the Sydney Science Park in Western Sydney.
Meeting 5	03/10/2017	Hymix (Hanson)	Hymix presents preliminary concept for their site – integrated batching plant in the basement and podium of a predominately residential building
Meeting 6	12/12/2017	Hymix (Hanson)	UGNSW presents masterplanning progress update for the Bays Market District. Hymix presents a further developed concept for their site
Meeting 7	12/12/2017	Poulos Brothers	UGNSW presents masterplanning progress update for the Bays Market District and Poulos's concept for their site
Meeting 8	12/12/2017	Celestino	UGNSW presents masterplanning progress update for the Bays Market District. Celestino present concept for their site

Meeting No.	Date	Private landowner (PLOs)	Overview of meeting
Meeting 9	16/01/2018	Hymix (Hanson)	Hymix presents updated concept for their site – integrated batching plant in basement of a predominately residential building
Meeting 10	14/02/2018	Poulos Brothers	UGNSW presents masterplan framework for the Bays Market District and UGNSW's concept for the Poulos Bros' site
Meeting 11	19/02/2018	Hymix (Hanson)	UGNSW presents masterplan framework for the Bays Market District and UGNSW's concept for the Hymix's site
Meeting 12	20/02/2018	Celestino	UGNSW presents masterplan framework for the Bays Market District and UGNSW's concept for the Celestino's site
Meeting 13	19/06/2018	Hymix (Hanson)	Hymix presents further updated concept for their site – integrated batching plant in basement of a predominately residential building
Meeting 14	10/10/2018	Hymix (Hanson), Celestino, Poulos Brothers	PLOs represented by Tim Williams, Arup Discussed the logic for proposed built form outcomes on the PLOs sites; greater than 22 storeys overshadows key public domain and primary open space, no precedence in Sydney Harbour context of heights immediately adjacent to the harbour's edge that are greater than 14 storeys, Anzac Bridge is heritage listed and the Pylon should remain as a dominant feature in the landscape.
Meeting 15	28/05/2020	Celestino	INSW presented scenarios within Precinct Planning Brochure.
Meeting 16	28/05/2020	Hymix (Hanson)	INSW presented scenarios within Precinct Planning Brochure.
Meeting 17	31/08/2020	Celestino	INSW presented: • A summary of the engagement feedback • A summary of the previous meetings with Celestino • A review of the submission made by Celestino regarding the Engagement Brochure • A summary of the PPPS as it pertains to the Blackwattle Bay SSP area
Meeting 18	03/09/2020	Poulos Brothers	INSW presented: • A summary of the engagement feedback • The draft final precinct plan for Blackwattle Bay • A summary of the previous meetings with Poulos Bros • A review of the submission made by Poulos Bros regarding the Engagement Brochure • A summary of the Pyrmont Peninsula Place Strategy as it pertains to the Blackwattle Bay SSP area
Meeting 19	04/09/2020	Hymix (Hanson)	INSW presented: • A summary of the engagement feedback • The draft final precinct plan for Blackwattle Bay • A summary of the previous meetings with Hymix • A review of the submission made by Hymix regarding the integrated batching plant • A summary of the PPPS as it pertains to the Blackwattle Bay SSP area

SR28.6. Measure and evaluate the adequacy and effectiveness of the consultation against the following:

- Appropriateness – Was the engagement appropriate for the communities affected and how well did stakeholders accept the process,
- Reach – Were the people reached sufficiently representative of those affected by the decision,
- Outcomes – Were the intended outcomes of the engagement process achieved.

As detailed above, the consultation process for the Blackwattle Bay SSP study has been extensive and has sought to engage stakeholders through a range of forums and other mediums, including public and targeted workshops, one-on-one meetings, community reference group meetings and public exhibitions. Consultation has been undertaken with the communities surrounding Blackwattle Bay, with interest groups, with key government agencies, with First Nations representatives, with non-government organisations, with the CoS, with PLOs and with peak industry bodies. The outcomes of this work have informed the technical analyses and have been integral to the development of the Precinct Plan.

SR28.7. 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 of the workshops have been considered as part of the proposal and how the proposal results in a fair and impartial distribution of development potential between Government-owned and privately owned land having regard to site opportunities and constraints.

The Precinct Plan for Blackwattle Bay has been guided and informed by the design principles developed with the community and key stakeholders in late 2017 and by the feedback provided by the community and key stakeholders on the three urban renewal scenarios released in mid-2020.The scenarios sought feedback across a wide range of topics including access to the foreshore, public open space, indigenous and industrial heritage, transport, social infrastructure, economics and built form.

While community feedback covered a broad spectrum of considerations, they primarily focused on five key areas: height and density, traffic and transport, open space and waterfront promenade, working and recreational harbour, and community, culture and social infrastructure. The key considerations with the design team's responses are discussed below.

1 **Height and Density** with specific reference to neighbourhood character and surrounding context and the potential impacts to amenity and the quality of the public realm.

- **Neighbourhood character & context**

  The design team notes the evolving character of the Pyrmont neighbourhood as outlined in the PPPS, however, key characteristics and context has informed the final precinct plan. These include utilising lower built form elements such as lower podiums and lower tower heights immediately adjacent to the water's edge and utilising lower overall building heights closer to the state-listed heritage Anzac Bridge. Conversely, building heights increase further away from the water's edge and Anzac Bridge. Other character and context considerations include materials like timber, sandstone and brick, have been present at different times across Pyrmont's history. Refer to section 2.10 in the Urban Design Statement Volume II report (**Attachment 3**).

- **Impacts to public realm quality**
  Overshadowing, wind, noise, air quality, views have been assessed to ensure a wide variety of high-quality public realm experiences. Refer to section 2.8 / 2.9 / 2.16 in the Urban Design Statement Volume II report.

- **Supporting traffic & transport**
  Improved active transport connections, reconfigured pedestrian-prioritised intersections, and new public infrastructure support the redevelopment. Refer to section 3.5 / 3.7 / 3.8 / 3.9 in the Urban Design Statement Volume II report.

2 Traffic and Transport

- **Impact to local roads and parking**
  Improved active and public transport that provides a number of different travel options, reduces the reliance on private vehicles and limits the impacts to the local roadway network and demand for basement car parking. Refer to Transport Management and Accessibility Plan (TMAP - **Attachment 4.1**).

- **Improve mobility & active transport**
  New dedicated cycle paths, wide pedestrian footpaths, visitor intuitive wayfinding. Refer to section 3.3 / 3.4 / 3.5 / 3.6 / 3.7 / 3.8 in the Urban Design Statement Volume II report.

- **Accessibility to public transport, legibility of transport locations & peninsula wayfinding**
  Collaborating and coordinating with local council and state agencies including TfNSW and GANSW (Movement and Place). Refer to section 3.5 in the Urban Design Statement Volume II report.

3 Open Space & Promenade

- **Providing contiguous open space**
  Three hectares of new waterfront open space linked together through the waterfront promenade, continuous 15km walk from Rozelle to Woolloomooloo. Refer to section 2.5 / 2.7 / 3.3 / 3.6 / 3.10 in the Urban Design Statement Volume II report.

- **Quality and programming**
  Variety of sizes and locations to provide for a high number of passive and active programmatic opportunities. Refer to section 2.5 / 2.7 / 3.2 / 3.6 / 3.10 in the Urban Design Statement Volume II report.

- **Width & public accessibility of waterfront promenade**
  Minimum 10m wide waterfront promenade that is publicly accessible to all. Refer to section 3.3 / 3.6 / 3.10 in the Urban Design Statement Volume II report.

4 Harbour

- **Balancing working and recreation activities**
  Logical and considered approach to appropriately locating different types of maritime infrastructure within the bay, minimising conflict between working and recreational vessels.

- **Improving water quality and environment Improvement to current situation**
  Refer Water Quality, Flooding and Stormwater Study at **Attachment 12**.

5 Community, Culture & Social Infrastructure

- **Provisioning for affordable & social housing**

Alignment with state and local programs.

- **Ensuring adequate supporting infrastructure including education and health**
  Refer discussion in Parts G8 and G9.

- **First Nations culture**
  Connecting with Country framework for Tjerruing Blackwattle Bay.

The community preference was weighted toward Scenario 2 (Balanced) and Scenario 3 (Jobs) with strong overall support for the idea of creating a mixed-use precinct at Blackwattle Bay. Stakeholder submissions were received from the three PLOs, the CoS, Australian Institute of Architects, University of Sydney and Goodman. Key feedback items included:

- Protecting public interest and delivering public benefit
- Clear and flexible block structure integrated with Pyrmont
- Alignment with the PPPS
- Diverse and flexible workspace arrangements to grow jobs in strategically important knowledge-based industries
- Solar performance of open spaces, promenade and Glebe Foreshore
- Preference for Scenario 3 mixed mode street layout
- Integration with Camperdown-Ultimo Collaboration Area

SR 28.8. 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.

Refer to above and attached engagement outcomes reports prepared by Elton Consulting:

- Masterplanning the Bays Market District: Draft Masterplan Principles Consultation Report 2017 (**Attachment 13**)
- Revitalising Blackwattle Bay - Community and Stakeholder Engagement: Outcomes Report 2020 (**Attachment 11**)

E. VISION AND PRINCIPLES

E1. Vision for Blackwattle Bay SSP

SR1.1. Outline the vision for the proposal.

Blackwattle Bay offers an extraordinary opportunity to reconnect the harbour, its surrounding neighbourhoods and the city; to showcase Sydney's living culture and stories of Country; to build an inclusive and iconic waterfront destination that celebrates innovation, diversity and community.

Blackwattle Bay is an extension of the evolving urban structure and character of Pyrmont to the waters of the bay. Delivering the missing link in the waterfront promenade from Woolloomooloo to Rozelle Bay, it also brings significant new public open space, and creates a mixed use quarter as a complement to the new Fish Market.

A detailed Vision is described in the Urban Design Statement (Vol 1) (refer **Attachment 3**).

E2. Guiding principles

SR2.5. Prepare a set of urban design principles that underpin the proposed development.

In September 2017, the NSW Government invited community members to engage in the visioning for a future Blackwattle Bay and to contribute to the writing of a set of Design Principles to guide the preparation of the Precinct Plan. The thirteen Design Principles were expanded to sixteen through subsequent consultation with First Nations communities, the Community Reference Group and private land owners.

Principle 1: Improve access to Blackwattle Bay, the foreshore and water activities for all users.

Principle 2: Minimise additional shadowing to Wentworth Park and Glebe Foreshore (in mid-winter) and create new places with comfortable conditions for people to enjoy.

Principle 3: Pursue leading edge sustainability outcomes including climate change resilience, improved water quality and restoration of natural ecosystems.

Principle 4: Prioritise movement by walking, cycling and public transport.

Principle 5: Balance diverse traffic movement and parking needs for all users.

Principle 6: Link the Blackwattle Bay precinct to the City, Glebe Island and White Bay and other surrounding communities and attractors.

Principle 7: Mandate Design Excellence in the public and private domain.

Principle 8: Integrate housing, employment and mixed uses to create a vibrant, walkable, mixed use precinct on the city's edge.

Principle 9: Maintain and enhance water uses and activities.

Principle 10: Allow for co-existence and evolution of land uses over time.

Principle 11: A place for everyone that is inviting, unique in character, socially inclusive and affordable.

Principle 12: Expand the range of recreational, community and cultural facilities.

Principle 13: Plan for the future community's education, health, social and cultural needs.

Principle 14: Deliver development that is economically, socially, culturally and environmentally viable.

Principle 15: Embed and interpret the morphology, heritage and culture of the site to create an authentic and site responsive place.

Principle 16: Foster social and cultural understanding and respect to heal and grow relationships

F. THE PROPOSAL

This part of the SSP Study report sets out the proposal for Blackwattle Bay. The proposal comprises:

- The Precinct Plan (SR: 2.7) which shows an indicative concept proposal for the development of Blackwattle Bay, including new buildings, the public domain including the foreshore promenade and parks, the new Sydney Fish Market, water-based infrastructure and integration with the surrounding locality
- The proposed planning framework, including new statutory planning controls (SR: 4.9), and a draft Design Code (SR: 4.12).

F1. Blackwattle Bay Precinct Plan

SR2.7 Prepare a precinct plan that integrates: the public domain plan, infrastructure plan, community facilities plan, buildings types and massing for the site. Demonstrate how this fits within the overall Bays Precinct State Significant Precinct and surrounding context.

F1.1 Overview

FJMT has prepared an Urban Design Statement which establishes the Precinct Plan for Blackwattle Bay (refer to **Attachment 3**). The statement provides a comprehensive urban design vision and strategy to guide the future development of the Blackwattle Bay Precinct. The Urban Design Statement has been shaped by the broader vision, objectives and principles for The Bays Precinct SSP Study Area (Blackwattle Bay and Bays West) as expressed in The Bays Precinct Transformation Plan as well as the PPPS. In turn, the Precinct Plan for Blackwattle Bay has informed the proposed planning framework, which is the key outcome of the SSP Study.

Key characteristics of the Precinct Plan include:

- New homes, jobs and services close to the CBD with the potential to accommodate:
  - approximately 5,600 jobs
  - approximately 1,550 dwellings
- A continuous waterfront promenade – the missing link in an otherwise 15km foreshore walk from Woolloomooloo to Rozelle
- New active transport connections to bring the neighbourhood closer to the harbour through new and improved pedestrian and cycling links
- Improved public transport options and minimised vehicle usage strategies including:
  - Minimising car parking spaces with limited on-street parking
  - Potential ferry wharf
  - Opportunity for buses to service through site link
  - Connections to the existing light rail
  - Access to the future Sydney Metro West Station in Pyrmont
- New parks and green space with 30,000sqm of new open space
- New Sydney Fish Market at the heart of Blackwattle Bay.

The Precinct Plan for Blackwattle Bay is shown in **Figure 27:** Precinct Plan.

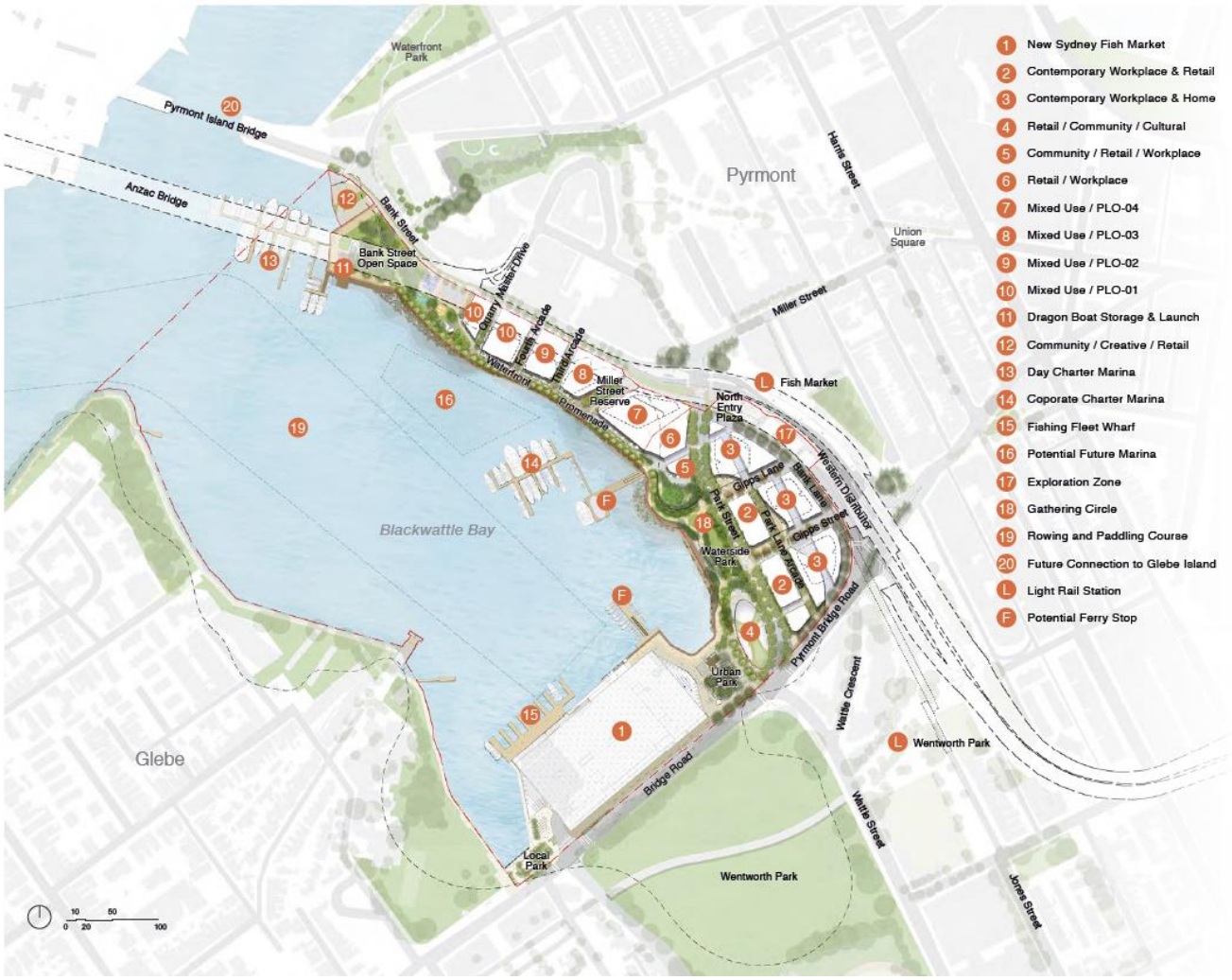


Figure 27: Precinct Plan
Source: FJMT

More specifically, the Precinct Plan makes provision for:

- Nine new buildings with a total gross floor area (GFA) of approximately 234,000 sqm comprising:
  - 48% for employment and non-residential uses (approximately 111,000 sqm)
  - 52% for residential uses (approximately 123,000 sqm)
- Four parks – Bank Street open space, Miller Street Reserve, Waterside Park and Urban Park
- 1 x multipurpose court, active play, fitness and skate area
- Creative arts and amenities in 1-3 Bank Street
- Waterfront promenade of variable width. The minimum width of 10 metres applies to only 17% of the promenade length. The promenade expands into open spaces that can provide a range of recreational, community facilities and social infrastructure.
- Area 2 (refer **Figure 28**):
  - 5 x 4 storey podium blocks
  - 4 x towers (14-20 storeys above 4 storey podium)
  - 7m wide colonnade along promenade
  - 3 Arcade links to Bank Street
  - Non residential uses below 9th storey
- Area 3 (refer **Figure 28**):

- 5 x 8 storey street wall buildings
- 3 x towers (21-34 storeys above 8 storey street wall)
- 2 x 4 storey buildings to north and south of Waterside Park (Buildings 01 and 07)
- Non residential uses below 9th storey in Area 3 (except Building 02)
- Park Street, Gipps Street, Gipps Lane and Banks Lane

- Non-residential uses to active frontages on Ground Level
- Community and Cultural facilities in Buildings 01 and 07
- Local services
- Separated cycleway linking Bridge Road to Miller Street

The Blackwattle Bay Precinct is divided into five areas, defined by both existing and likely future character. These areas are shown in **Figure 28**.

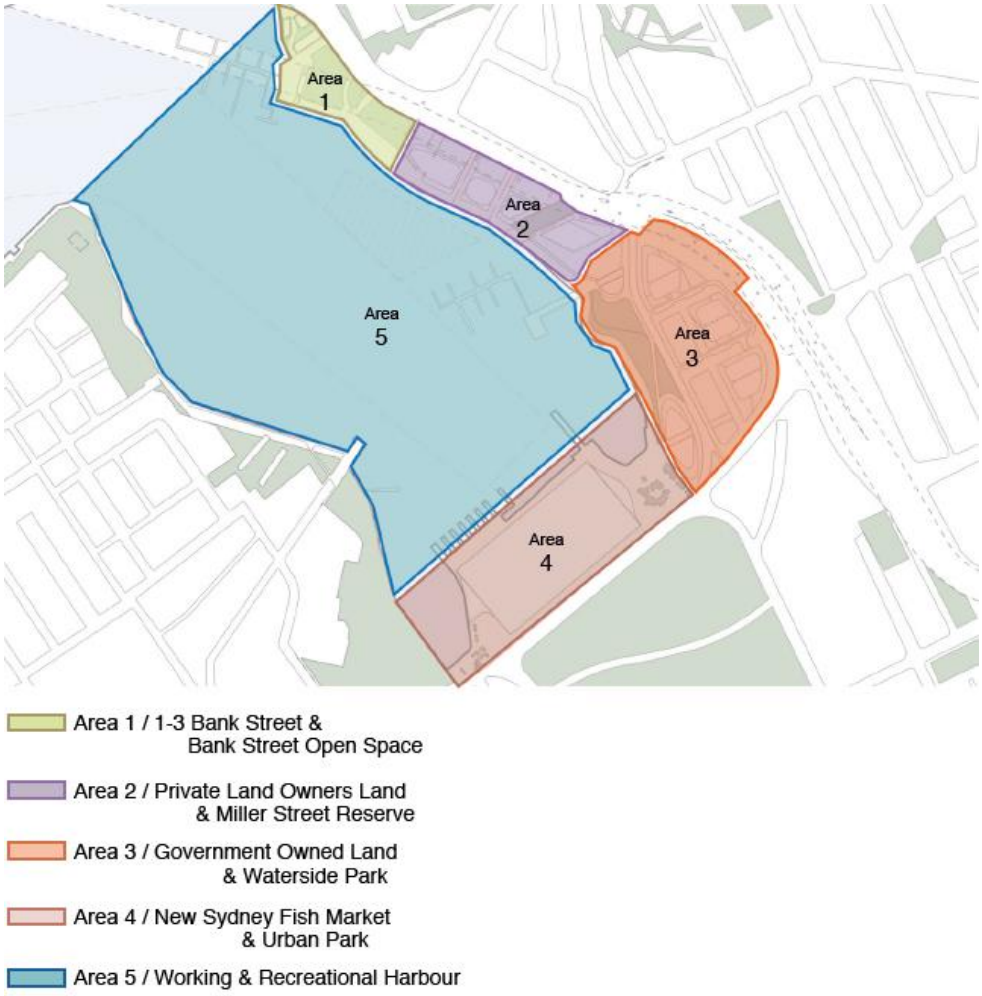


Figure 28: Precinct Plan character areas
Source: FJMT

F1.2 Public domain

The public domain network of open spaces, streets and lanes is central to the plan and defines building envelopes. A public domain plan is included in the Precinct Plan and shown in **Figure 29**. It integrates streets and lanes network with the open space and parks of the Precinct Plan. It responds to the site analysis and context, and the possibilities associated with future renewal. Many of the urban design principles are formulated around aspirations for the public domain.

Figure 29: Public domain plan
Source: FJMT

An open space plan is also included in the Precinct Plan and reproduced in **Figure 30**. The key elements of the open space plan are:

- Waterfront promenade - a continuous, accessible and open waterfront promenade for a range of uses will connect Glebe to Pyrmont and extend to Woolloomooloo Bay.
- Open spaces - A ribbon of parks and open spaces with distinct characters is linked by the waterfront promenade and street network, providing places for active and passive recreation, gatherings, performances, kid's play and relaxation and supporting an ecological renewal of the precinct.

A total of three hectares of new parks and plazas is proposed, equating to approximately 30% of the site area. The open space network has been designed to encourage public and community uses, including recreation activities, events and outdoor dining.

A detailed description of the public domain and open spaces is provided in the Urban Design Statement Vol II (**Attachment 3**) and further discussion on the public domain is provided in Part G3.

Figure 30: Proposed open spaces
Source: FJMT

F1.3 Movement network

Active transport

The renewal of Blackwattle Bay prioritises the pedestrian and cyclist networks by providing shared ways, shared paths and dedicated cycleways, and limiting vehicle movements within the precinct. A well-designed fine grain network comprising streets, laneways and arcades, will enhance the accessibility of the waterfront and permeability of the precinct. The alignment and extension of Miller Street, Gipps Street, Wattle Street and Quarry Master Drive connect the precinct to the broader surroundings. Improved connections to the light rail stations and potential linkages to the future ferry stop and Metro station are integrated in the new local street system. The continuous foreshore promenade will connect the Glebe foreshore with the Pyrmont Peninsula completing the foreshore walkway linking Glebe and Woolloomooloo for pedestrians and cyclists.

The proposed pedestrian network is shown in **Figure 31** and cyclist network in **Figure 32**.

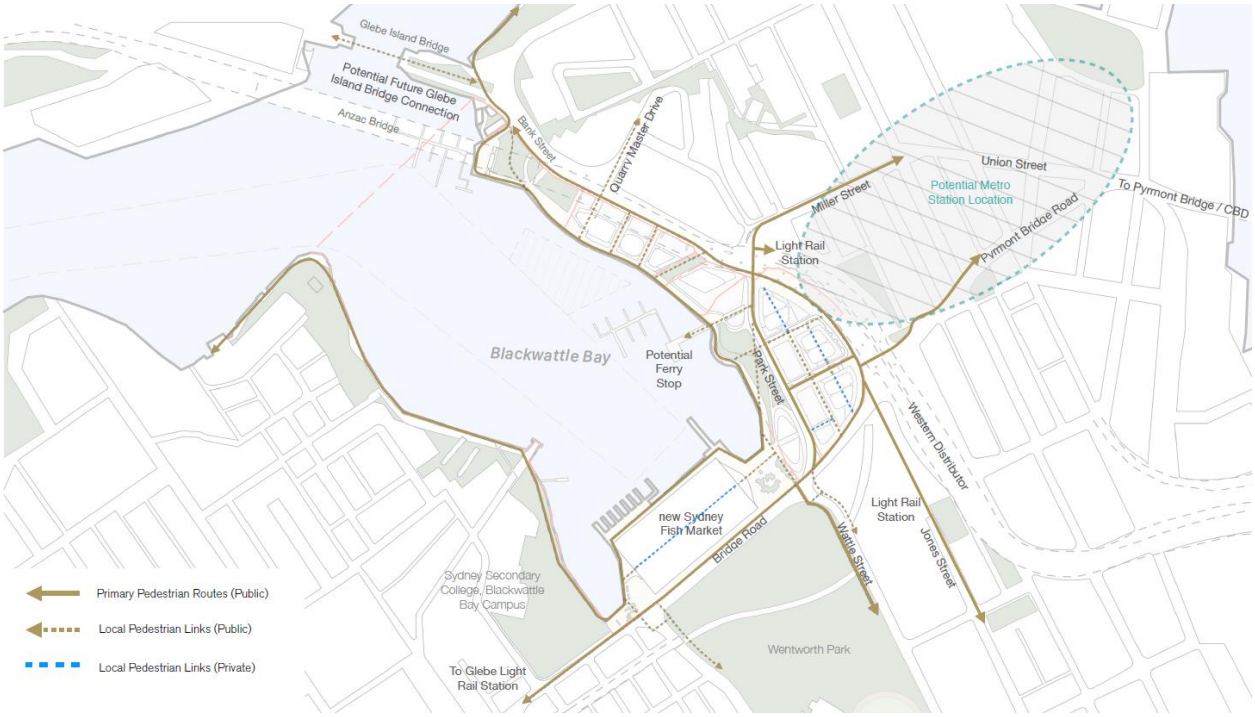


Figure 31: Proposed pedestrian network
Source: FJMT

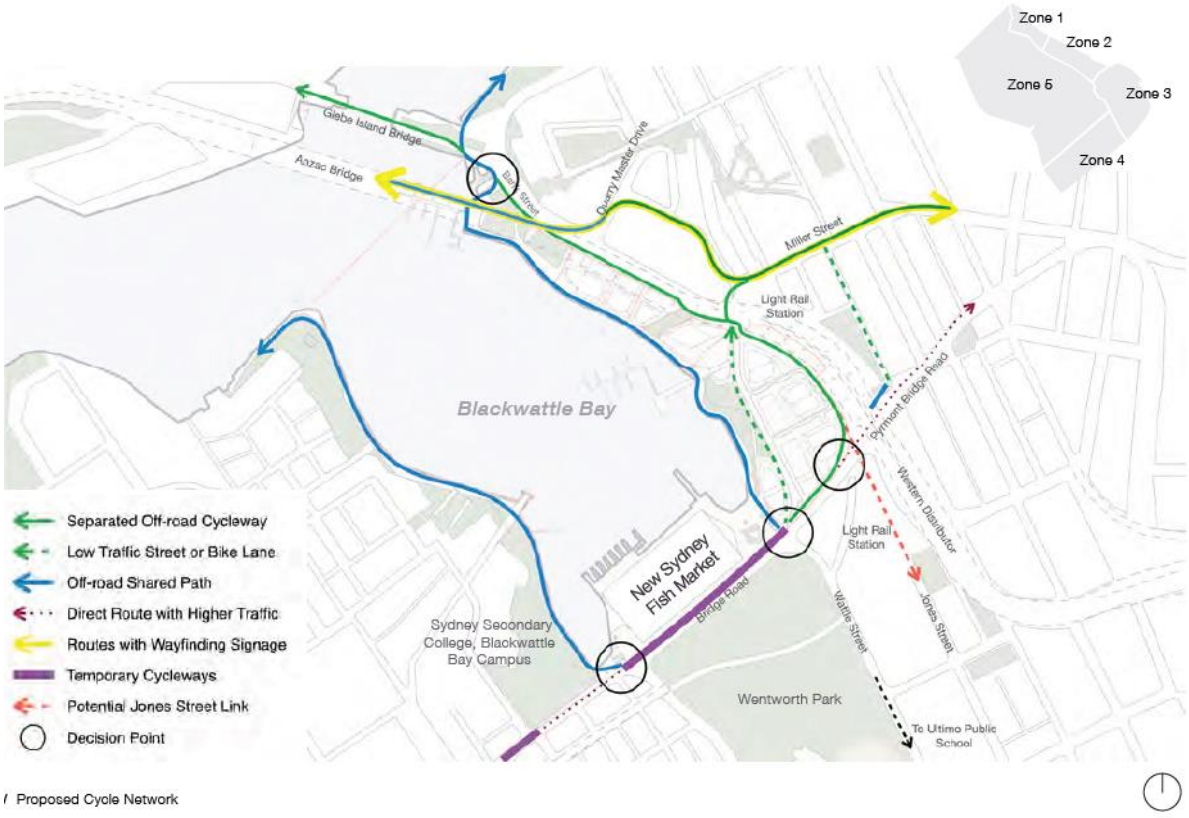


Figure 32: Proposed cycle network
Source: FJMT

Adequate provision for bicycle parking and end-of-trip facilities will ensure more commuters, families and residents from a wider catchment use active transport modes for travel. Bike storage and end of trip facilities will be incorporated within each development parcel in accordance with the required ratio of floor area and occupancy, as set out in the Design Code.

The proposed Pyrmont Metro station will influence future pedestrian desire lines and pedestrian numbers. The Precinct Plan anticipates a likely increase in pedestrian movement along Pyrmont Bridge Road offering the broad Gipps Street alignment and 10m setback from Pyrmont Bridge Road along the south-eastern site boundary. The Metro will be a driver for change towards a more pedestrian focused environment around the study area and will likely influence the future of the pedestrian challenged Bank St / Pyrmont Bridge Road intersection.

Street network

The proposed vehicular streets and lanes in the Precinct Plan are contained within the Area 3 site boundary and directly interface with existing road reserves without crossing other site boundaries. Vehicular access to Area 2 properties is direct from Bank Street.

The street arrangement adheres to the design principles aimed at:

- Improving access to the foreshore
- Providing better active transport links
- Connecting to public transport
- Creating safe and amenable public domain spaces.

The Precinct Plan provides for significant improvements to the intersections at Bank Street / Miller Street and also Bridge Road / Wattle Street (refer Study Requirement 3.8) to improve safe and comfortable pedestrian crossing conditions and to incorporate a separated cycleway parallel to Bridge Road and Bank Street.

A one-way vehicular loop through Gipps Lane, Bank Lane and Gipps Street provides vehicular address to individual building lots, caters for emergency vehicle access, and allows carpark and loading access to basement facilities. Kerbside parking is incorporated in between street trees and furniture.

The streets are proposed to allow low vehicle speeds only with a shared street approach in the central area of Area 3 transitioning to a traditional kerbed street arrangement adjacent the signalised intersections to the surrounding network.

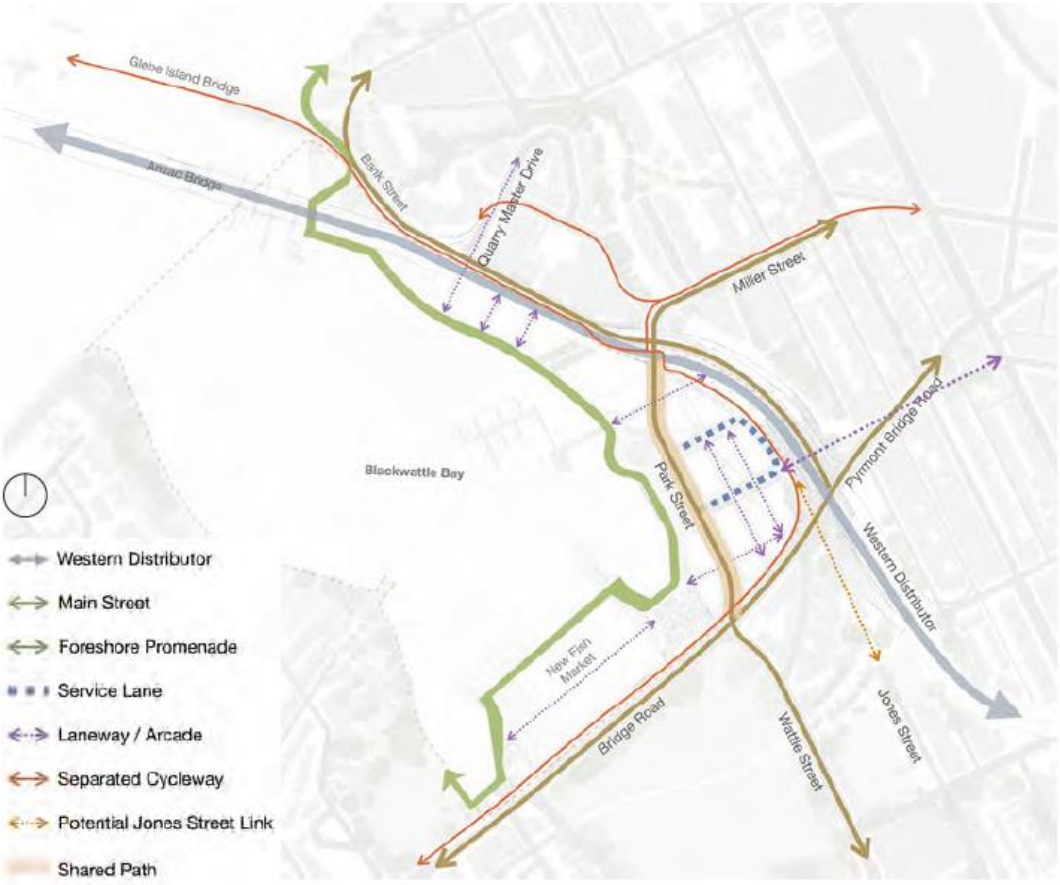


Figure 33: Proposed street hierarchy

F1.4 Built form

The proposed built form and building typology responds to the findings of the context analysis as described within FJMT's Urban Design Study (refer to **Attachment 3**).

Pyrmont Peninsula is positioned between the high density setting of the Central Business District, with tower clusters in the City extending to almost 300m high, and the low scale neighbourhood of Glebe. Blackwattle Bay will contribute to the evolving form of Pyrmont as a transition between these neighbouring precincts. The PPPS proposes a number of taller building clusters for Pyrmont including areas of Blackwattle Bay.

The Precinct Plan draws street wall heights from existing morphology and sets back to taller building forms arranged with careful consideration to the amenity of existing and proposed open space and public domain areas.

Existing landmarks are acknowledged, particularly the striking pylons of the Anzac Bridge, and the new Sydney Fish Market landmark is given space and related building scale at the interface.

Figure 34: 3D Model of proposed massing
Source: FJMT

The building envelopes are defined by maximum building heights and setbacks. Critical to the overall design process has been maintaining solar access to existing and proposed open space and ensuring a sensitive design response to the Anzac Bridge pylons and adjacent development in Pyrmont.

Building heights and setbacks have been determined based on the following key steps:

1. A solar envelope has been developed for Blackwattle Bay by projecting sun planes at the relevant times on June 21st to protect the Glebe Foreshore, Sydney Secondary College and Wentworth Park from overshadowing from the new built form.
2. The open space and public domain network has been deducted from the solar envelope. No built form is proposed to these areas which equate to 50% of the total site area.
3. The scale of potential built form around the primary new open space (Waterside Park) is reduced and related to existing warehouse buildings along Wattle Street.
4. Building envelopes book-ending Waterside Park are further reduced to a maximum 4 storey height to reference the height of the new Sydney Fish Market and existing buildings along Miller Street and Bridge Road. These building envelopes are positioned and scaled to accommodate community and cultural facilities along with commercial space focused on delivering local services.
5. The maximum height of buildings in Area 2 is limited to 90m to align with existing towers in Distillery Hill, maintain the prominence of the Anzac Bridge Pylons and minimise overshadowing of the Glebe Foreshore before 9am on June 21st.
6. Profiling of the Area 2 envelope steps the built form down to the Bank Street open space and to Waterside Park. The latter adjustment is critical to the mid-winter solar performance of Waterside Park as per the analysis in the response to Study Requirement 2.9 Sun Access.

The maximum building heights are also constrained to the Obstacle Limitation Survey at 156 AHD, approximately half the height of the tallest buildings in the CBD.

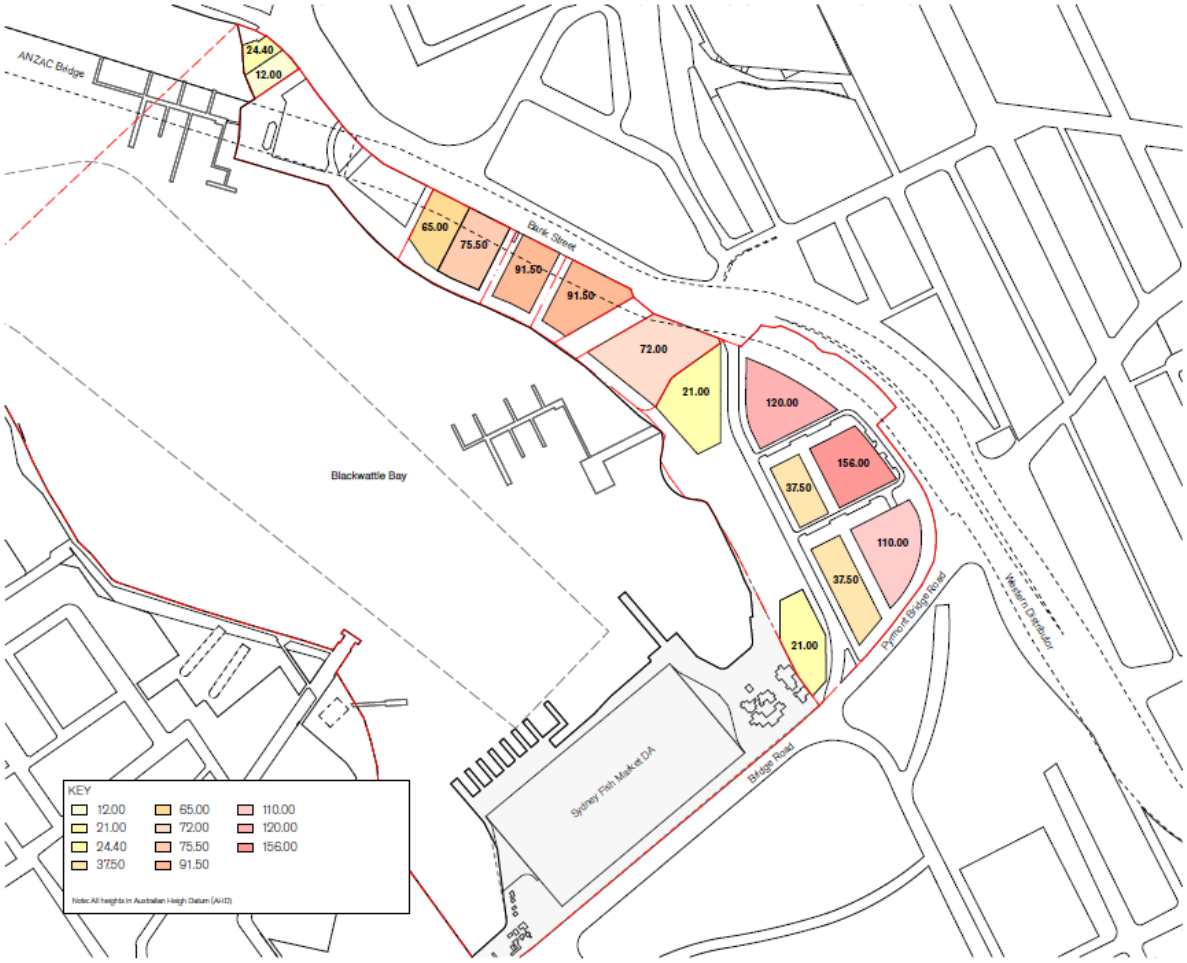


Figure 35: Proposed maximum building height (AHD)
Source: FJMT

A series of setbacks are proposed at ground and above street wall, as shown in **Figure 36**. The setbacks have been determined to:

- define the streets and lanes
- provide articulation of tower forms
- increase building separations
- create slender tower forms
- mitigate down draft wind effects.

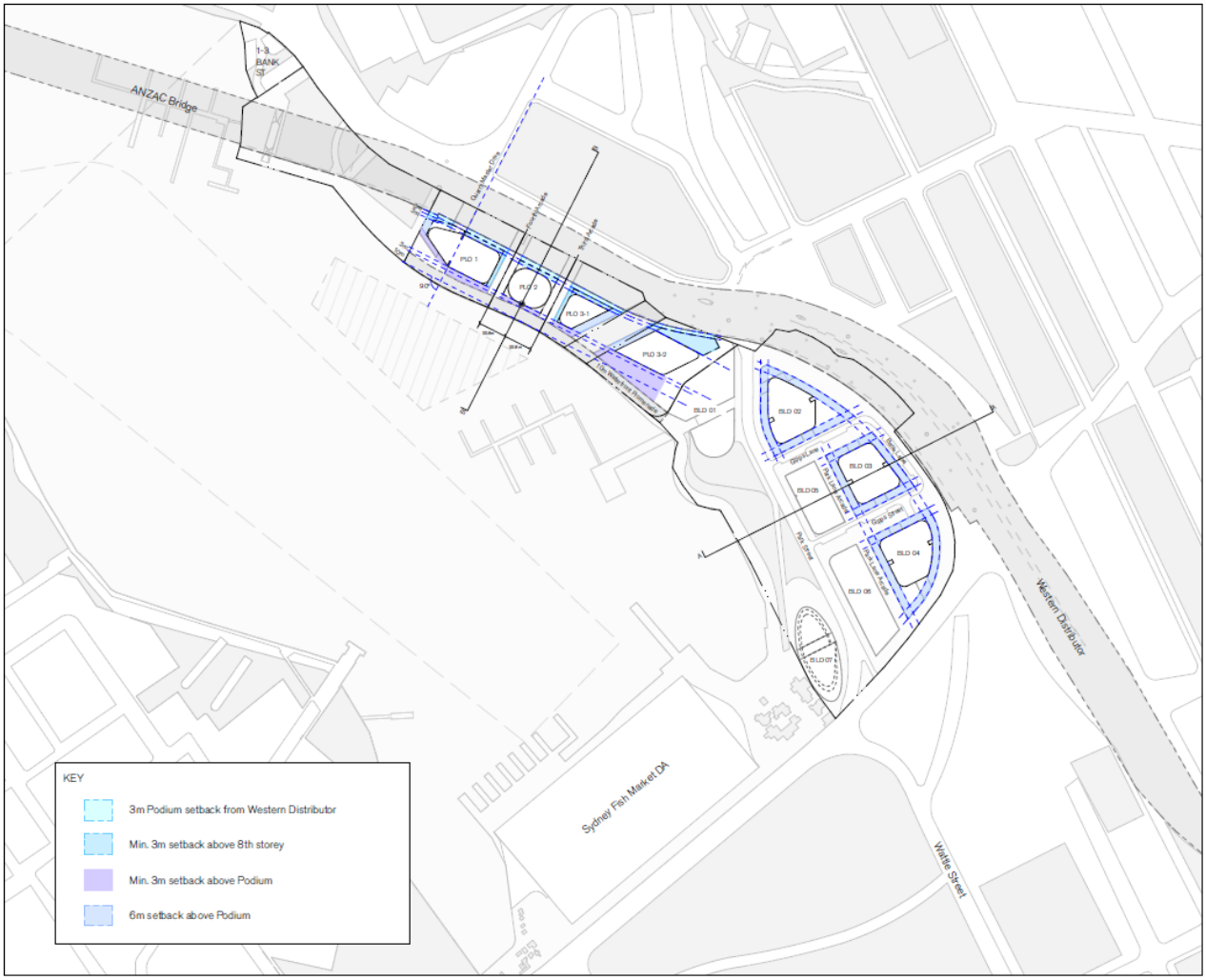


Figure 36: Minimum building setbacks
Source: FJMT

Block controls have been prepared for development lots. The block controls are included in the Design Code and specify maximum heights, podium heights, setbacks and GFA for each development lot.

F2. Land use

The Precinct Plan provides for a diverse range of land uses in line with the Pyrmont Peninsula Place Strategy which describes the future Blackwattle Bay as "… a place attracting businesses and employees, visitors and tourists along the connected waterfront linking the new Sydney Fish Market east to the Western Harbour, Walsh Bay and beyond".

The proposed land use mix is balanced between non-residential and residential uses across the study area. A minimum of 138,000 sqm employment floorspace is proposed (inclusive of the new Sydney Fish Market). Employment uses in Blackwattle Bay are intended to help realise the Innovation Corridor and meet growth demand for jobs around the Central Business District. The proposed inclusion of residential floorspace will create a 24-hour community in Blackwattle Bay, providing for surveillance and activation of the precinct, and helping to meet projected housing demand in the Eastern City.

The proposed block structure retains flexibility for increased commercial use should the introduction of the Sydney Metro to Pyrmont and market forces support higher levels of workplace accommodation. Tower forms tested for residential could be delivered as commercial use or other uses such as hotel, serviced apartments or student housing.

Along with the new Sydney Fish Market, the Precinct Plan proposes complementary facilities ranging from cultural activities with national reach through to sports and recreation functions serving the local community. Proposed community and social infrastructure are shown in **Figure 37**.

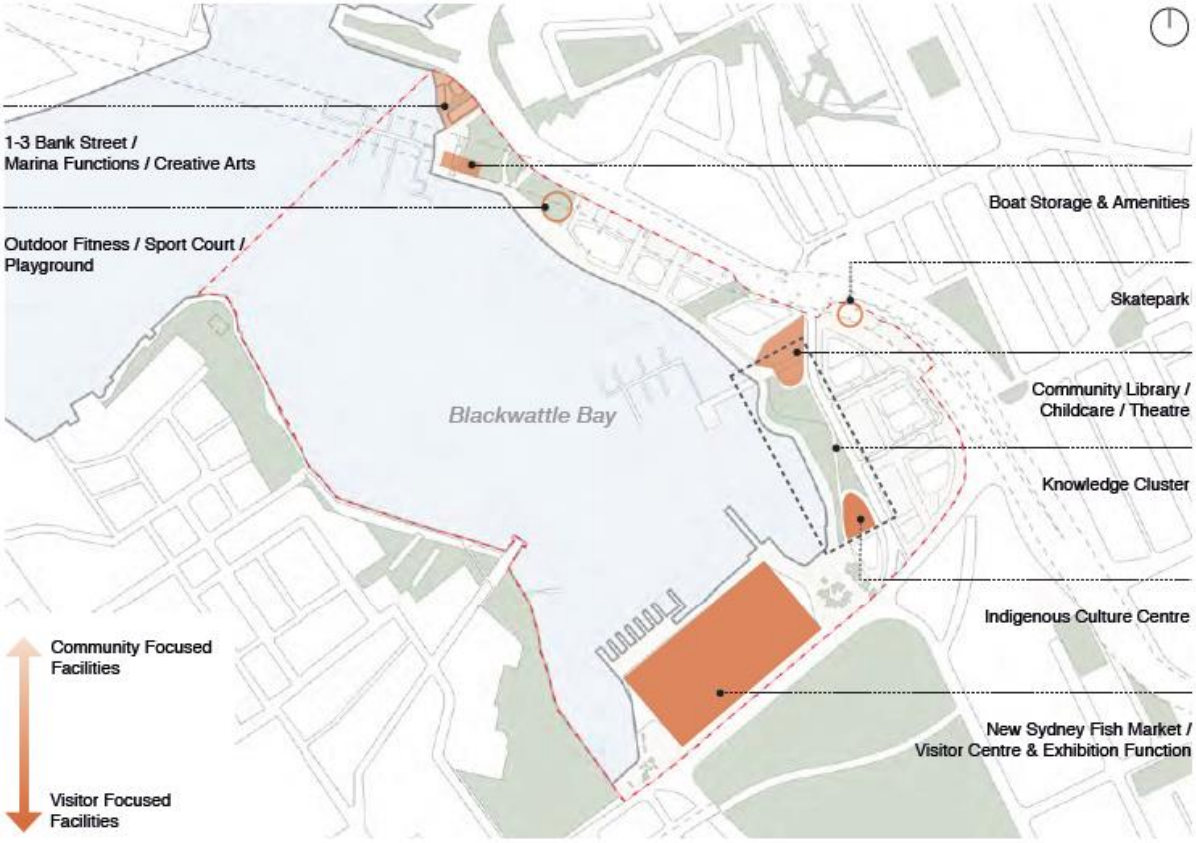


Figure 37: Proposed community and social infrastructure
Source: FJMT

The use distribution principle of the Precinct Plan is to integrate a range of uses vertically, positioning the uses most appropriately in relation to access, noise, air quality, wind and solar amenity. The floorplate size is optimised per use, varying from large campus commercial floorplates to slender residential towers.

The Precinct Plan is able to deliver a range of workplace accommodation building types including large floor plate, low rise campus commercial, mid-size street wall commercial blocks and smaller scale buildings for boutique organisations and startups.

As well as accommodating employment floorspace, building podiums will accommodate a diversity of activities to address the differing needs of the local community as well as visitors, providing for a vibrant day and night economy, integrating with and activating the public domain. Proposed land uses of the podiums include:

- Commercial offices
- Community services

- Social services
- Cultural and recreational facilities
- Food and beverage
- Retail
- Residential
- Entertainment.

The distribution of workplace types is responsive to the constraints and opportunities of Blackwattle Bay. The block structure allows the large campus floor plates to be configured to frame the public domain whilst mitigating the negative impacts of the Western Distributor. On the private landowner sites, commercial levels slide in under the Western Distributor providing address to Bank Street and allowing residential uses to be accommodated clear of the elevated road structure.

F3. Proposed planning framework

SR4.8: Explain the proposed land use and zoning approach and provide justification for the mix and location of proposed land uses. Where zones which permit residential uses are proposed, provide a thorough analysis of the suitability of the site for those uses taking into consideration the findings of all other relevant parts of this study.

SR4.9. Provide draft zoning and planning controls to amend *State Environmental Planning Policy (State Significant Precincts) 2005* including zoning, maximum building height, FSR heritage, lot size, maximum parking rates, active frontages, design excellence provisions and any other provisions needed to achieve the intended planning outcomes. Prepare for each individual block controls with graduated height and future lot FSR and include residential and non-residential floor space mix requirements. SEPP controls are to be consistent, where possible, with the CoS's planning controls.

SR4.14. Provide draft zoning and planning controls to amend State Environmental Planning Policy (State Significant Precincts) 2005 including maximum building height, FSR, heritage maps and noise compatibility requirements to ensure that noise related land use conflicts are identified, and where necessary addressed at the design and construction stage of development.

The Blackwattle Bay SSP planning process adopts a place-based approach to urban renewal, using and optimising government-owned land to deliver economic outcomes and provide employment floorspace and housing close to transport and amenities. The proposed rezoning will also enable the delivery of significant precinct-wide benefits including a new foreshore promenade, quality urban and open spaces, high public amenity and the celebration of Aboriginal and European heritage.

A new planning framework is needed to guide the renewal of the Blackwattle Bay precinct, having regard to the site's harbourside context, environmental and heritage values, and physical constraints.

The main elements of the proposed framework comprise:

- An amendment to SLEP 2012 – This will include new zoning and development standards, including updated mapping, for land within the Blackwattle Bay Precinct.
- A Blackwattle Bay Design Code – This will include detailed controls to inform future development of the precinct. The draft Design Code has been prepared in a form that will allow for future integration with Sydney DCP 2012, notably as a 'Specific Area' under Section 5 of Sydney DCP 2012.

A number of changes to other planning instruments are required to facilitate the renewal of Blackwattle Bay. The Explanation of Intended Effect, which provides a detailed explanation of the proposed statutory planning framework is at **Attachment 10**. The draft Design Code is at **Attachment 14**.

A draft SEPP is proposed to be prepared to amend SLEP 2012 as well as the Harbour SREP, SREP 26, the SRD SEPP, the SSP SEPP, the ISEPP and the Codes SEPP. The proposed SEPP amendment will apply to the Blackwattle Bay Precinct as mapped in **Figure 1**.

Most of the controls for Blackwattle Bay will be incorporated into SLEP 2012 rather than the SSP SEPP as proposed by the study requirements. The intention to integrate planning controls for Blackwattle Bay into SLEP 2012 reflects the recommendations of the PPPS and will ensure a clearer and certain planning regime to guide future development in the precinct.

A summary of the land use zones and development controls to be introduced into SLEP 2012 are described below.

F3.1 Land use zoning

The proposed planning framework proposes the following land use zones:

- **Area 1:** 1-3 Bank Street & Bank Street Open Space – no change to existing RE1 zoning
- **Area 2:** Private landowners' land – rezone land from B3 Commercial Core to B4 Mixed Use and retain existing RE1 zoning
- **Area 3:** Government owned land and Waterside Park – rezone land from B3 Commercial Core to B4 Mixed Use and RE1 Public Recreation
- **Area 4:** New Sydney Fish Market –rezone from Waterfront Use to SP1 Special Activities (Sydney Fish Market)
- **Area 5:** Water –adjust W1 zone to reflect boundary of new Sydney Fish Market which will be zoned under Sydney LEP as SP1 Special Activities (Sydney Fish Market).

The B4 Mixed Use zone is proposed for development sites within the precinct. This zone will permit a broad mix of land uses consistent with the vision for Blackwattle Bay, including commercial, retail, residential, community, recreation and entertainment uses. The B4 zoning is also consistent with the surrounding zoning of mixed use precincts in Pyrmont and Ultimo.

The new Sydney Fish Market, which is currently zoned Waterfront Use under SREP 26 and W1 Maritime Waters under the Harbour SREP, will be rezoned SP1 Special Activities to reflect its unique role and function. It will be zoned under SLEP 2012. SREP 26 will no longer apply to the site and the Harbour SREP will be amended to remove the Sydney Fish Market from the SREP zoning plan.

The new Waterside Park and Urban Park are proposed to be zoned RE1 Public Recreation to reflect their primary open space function. The existing RE1 zoning applying to Bank Street Park and Miller Street Reserve will remain unchanged.

Similarly, the zoning of road reservations within the site which are currently zoned SP2 Infrastructure will remain unchanged.

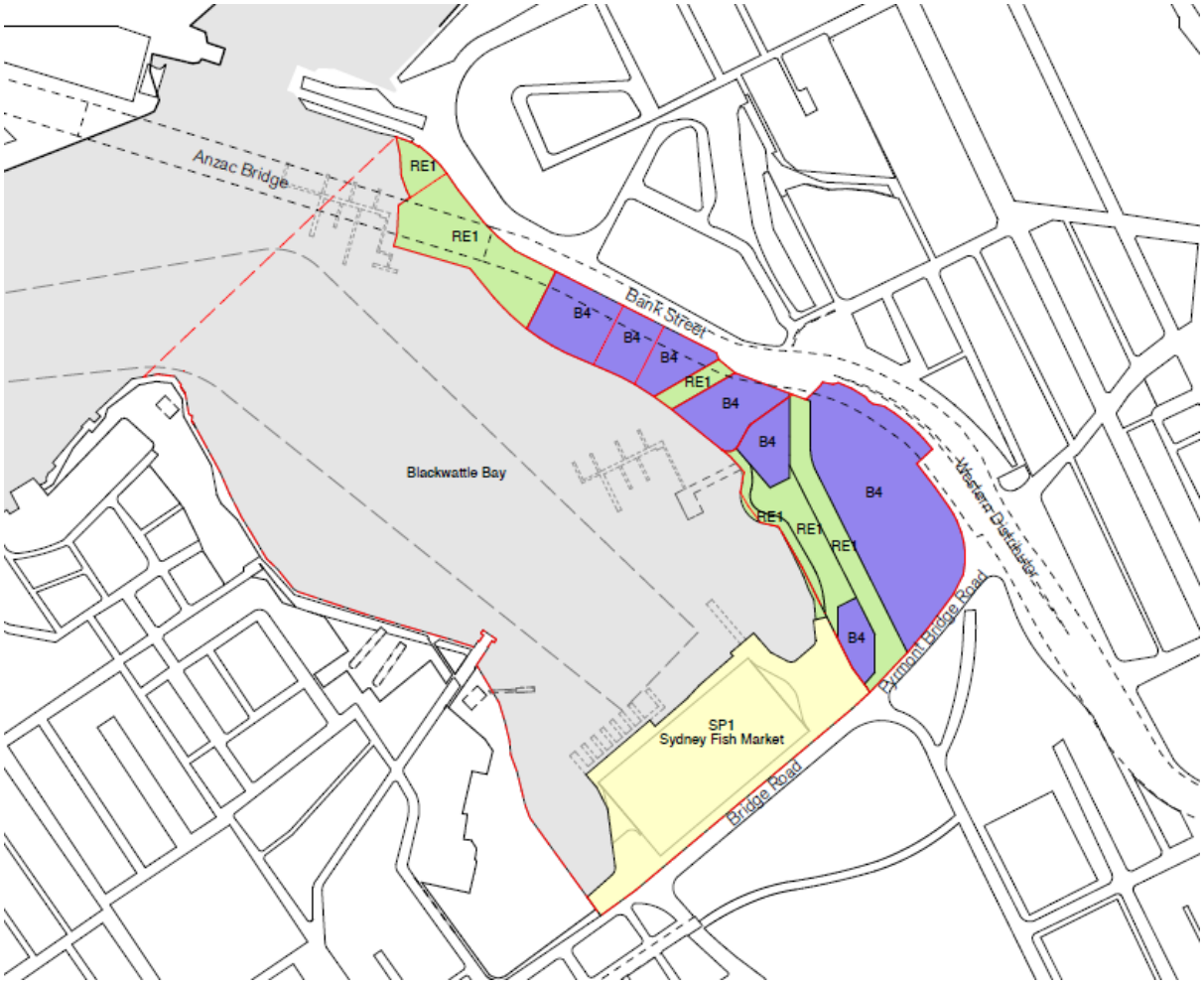


Figure 38: Proposed zoning

F3.2 Site specific provisions

A new site-specific provision for the Blackwattle Bay Precinct is proposed to be inserted into SLEP 2012 to set out controls that apply only to this precinct. It is proposed to include the following in the site-specific provisions:

- Amending the maximum height and floor space controls
- A provision specifying the minimum non-residential component for particular sites within the precinct. This provision is designed to ensure commercial floor space is prioritised, in line with the recommendations of the PPPS
- Reference to the Design Code to inform future development of the precinct
- A provision removing the application of clauses 6.21(5)-(7) (relating to the design excellence process) to new development. Instead, the design excellence process will be set out in the Design Code which will be referenced in the LEP. The Design Code will inform future development and will include a provision requiring development for new major buildings to demonstrate Design Excellence (no design excellence bonuses will apply). Design excellence provisions will apply across the precinct. This may include (but is not limited to) parks, open spaces and buildings. Future development to which design excellence applies will need to:
  - undertake a competitive design process in accordance with the CoS's Competitive Design Policy; or
  - undertake a design excellence process that has been agreed with the NSW Government Architect.

- A provision removing the requirement for a Development Control Plan, as set out in clause 7.20 in SLEP 2012. This requirement is instead satisfied through the preparation of the Design Code
- Extending the area designated as *foreshore area* to protect these areas from incompatible development
- Requiring the approval of the Planning Secretary before development can proceed to ensure satisfactory arrangements are in place for the adequate provision of State infrastructure.
- Applying a sustainable development clause.

Maximum building height and GFA

Building heights have been determined based on an extensive analysis of the following:

- solar access requirements to existing and future open space
- land morphology
- height of surrounding buildings (foreground and background) and building typologies
- height of the Anzac Bridge pylons
- Obstacle Limitation Survey (OLS) height for aircraft movement (noting the PPPS also identifies Blackwattle Bay as a taller building zone with potential building heights up to the OLS).

The proposed maximum heights will ensure that appropriate solar access protection is afforded to existing and new open spaces (refer discussion in Part G2).

The maximum GFA for each block within the Blackwattle Bay Precinct has been informed by detailed urban design and site-specific testing of building mass and floor space capacity for each site. The detailed testing and ultimate GFA calculation have taken into account numerous key factors including site context, massing, building separation and setbacks, overshadowing, wind and impacts on the public domain.

Table 9: Proposed maximum building heights and GFA

Block	Maximum Height	Maximum GFA (sqm)
Block	**Maximum building height (m)**	**Maximum gross floor area (sqm)**
PLO 1-1	65	
PLO 1-2	75.5	23,250 (PLO 1-1 + PLO 1-2)
PLO 2	91.5	16,250
PLO 3-1	91.5	13,300
PLO 3-2	72	19,150
BLD 01	21	7,200
BLD 02	120	38,200
BLD 03	156	51,400
BLD 04	110	39,100
BLD 05	37.5	12,950
BLD 06	37.5	8,600
BLD 07	21	4,675

Key material documenting the analysis of building height and floorspace is included in the Urban Design Statement at **Attachment 3**.

Non residential floor space

Minimum non-residential floor space requirements are proposed for each block, as shown in Table 10. This approach will ensure alignment with the PPPS, which states that Blackwattle Bay should be redeveloped as *a new urban quarter focused on knowledge-based jobs and supplemented with cultural and entertainment, visitor and tourism, retail and residential uses.*

Table 10: Proposed minimum non-residential GFA.

Block	Minimum non-residential gross floor area (square metres)
PLO 1-1	
PLO 1-2	13,000 (PLO 1-1 + PLO 1-2)
PLO 2	7,000
PLO 3-1	6,750
PLO 3-2	10,600
BLD 01	7,200
BLD 02	7,250
BLD 03	15,500
BLD 04	17,700
BLD 05	12,950
BLD 06	8,600
BLD 07	4,675

Design excellence

Mandating design excellence in both the public and private domain is one of the urban design principles underpinning development at Blackwattle Bay. New works including (but not limited to) buildings, parks and open space on the site will be required to exhibit design excellence by undergoing a competitive design process in accordance with either the CoS Competitive Design Policy, without the application of Design Excellence bonuses, or the relevant NSW Government Architect competitive design policy at the time of the competition. This will be stipulated in the Design Code which in turn will be referenced in the site specific clause in Sydney LEP, obligating developers to commit to a design excellence process.

The design excellence strategy will inform preparation of the Public Domain Plan which will guide development of the open spaces in Blackwattle Bay.

Foreshore area

Part of the foreshore along the eastern side of Blackwattle Bay is shown as 'Foreshore Area' on the *Locality and Site Identification Map Foreshore Building Line Map*. Clause 7.10 of SLEP 2012 relates to foreshore areas and includes provisions aimed at protecting these areas from incompatible development. It is proposed to extend the area designated as Foreshore Area on the map to correspond to the proposed foreshore promenade as shown on the Precinct Plan so that this area is protected for its intended purpose as a major public access and recreation corridor.

Affordable housing

At present, the CoS has an inclusionary zoning in place for Ultimo Pyrmont via the SLEP 2012 which enables an affordable housing contribution as follows:

- 0.8 per cent of the total floor area of the development that is intended to be used for residential purposes; and
- 1.1 per cent of the total floor area that is not intended to be used for residential purposes.

A new provision is proposed in SLEP 2012 that would enable the consent authority to impose a condition on residential development at Blackwattle Bay requiring a contribution towards the provision of affordable housing. The contribution would be equivalent to 5 percent of the total floor area of the development that is intended to be used for residential purposes for the purpose of affordable housing. The contribution would be made by way of a dedication of affordable dwellings within the precinct and/or paid as a monetary contribution. Further discussion on affordable housing is provided in Part G6.

Infrastructure funding and delivery

An infrastructure delivery strategy for Blackwattle Bay is currently being investigated in collaboration with the CoS, TfNSW and other infrastructure agencies (refer discussion in Part G8). While the infrastructure delivery strategy is being finalised, it is critical that development does not proceed without ensuring that a mechanism is in place to provide for contributions towards public infrastructure. To ensure that arrangements to contribute to infrastructure are in place prior to development, it is proposed that a new clause be inserted into SLEP 2012 requiring the Planning Secretary's approval of any proposed approach to delivery of infrastructure prior to approval of significant development.

Car parking

Blackwattle Bay is targeting a mode share of 80% sustainable transport and 20% vehicles with a more ambitious stretch target of 85 % sustainable transport and 15% vehicles. Key strategies to help achieve these targets include improving cycle and pedestrian connections and providing for new and improved public transport in and around the Blackwattle Bay precinct. A further critical factor which influences travel behaviour is the availability, or lack thereof, of car parking. Reducing the amount of car parking that is available will help to achieve the sustainable transport objectives for the precinct. Therefore it is proposed to restrict the number of car park spaces in the precinct by changing the category classifications that currently apply to the precinct, as shown on the Land Use and Transport Integration Maps (Sheets LUT_007 and LUT_008) and the Public Transport Accessibility Level Maps (Sheets TAL_007 and TAL_008) under SLEP 2012. The following changes are proposed:

- Land Use and Transport Integration (residential parking)
  - Reclassify from Category B to Category A
  - Moving from Category B to Category A reduces maximum number of residential parking spaces permitted by approximately 15%

- Public Transport Accessibility (non-residential parking)
  - Reclassify from Category F to Category D
  - Resulting in an approximately 40% reduction in retail car parking
  - Resulting in an approximately 57% reduction in parking for office premises and business premises
  - No parking impact to essential services like centre-based childcare facilities, information and education facilities, and health consulting rooms and medical centres.

Sustainable development

The introduction of sustainable utilities infrastructure is supported at Blackwattle Bay to ensure sustainable development and improve water and energy efficiency in the precinct. This is also consistent with the PPPS which seeks to achieve an adaptive, sustainable and resilient built environment across the broader Pyrmont precinct.

A new 'Sustainable Development' local provision is proposed requiring the consent authority to have regard to the principles of sustainable development as they relate to development based on a 'whole of building' approach by considering the following:

- conserving energy and reducing carbon dioxide emissions
- embodied energy in materials and building processes
- building design and orientation
- passive solar design and day lighting
- natural ventilation
- energy efficiency and conservation
- water conservation and water reuse
- waste minimisation and recycling
- reduction of vehicle dependence
- potential for adaptive reuse.

The proposed Sustainable Development clause would be accompanied by sustainability provisions in the Design Code to provide further guidance for implementation.

F3.3 Other planning changes

A number of other planning instruments need to be amended to facilitate the Blackwattle Bay rezoning as follows:

- *State Environmental Planning Policy (Infrastructure) 2007* (ISEPP)
  - Nominating Blackwattle Bay as a Public Authority Precinct so that certain public works in the public domain can be undertaken as exempt development
- *State Environmental Planning Policy (Exempt and Complying Codes) 2008* (Codes SEPP)
  - Including Blackwattle Bay as a 'major event site' to facilitate the holding of events in the public domain
- *State Environmental Planning Policy (State and Regional Development) 2011* (SRD SEPP)
  - Retaining the designation of development in Blackwattle Bay with a CIV over $10 million as State Significant Development and adjusting the State Significant Development Sties Map – Bays Precinct to reflect the boundary of the new Sydney Fish Market site.
- *State Environmental Planning Policy (State Significant Precincts) 2005* (SSP SEPP)
  - Removing the Minister as consent authority for development carried out on certain land in Blackwattle Bay with a capital investment value (CIV) of not more than $10 million
  - Deleting the requirement that development with a CIV of not more than $10m carried out by a public authority on certain land in Blackwattle Bay is 'development without consent'
- *Sydney Regional Environmental Plan No 26 – City West* (SREP 26)
  - Repealing the application of SREP 26 to the Blackwattle Bay Precinct
- *Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005* (Harbour SREP)
  - Removing the requirement to prepare a master plan for Blackwattle Bay as part of the City Foreshores Area

- Amending the SREP Zoning Map by removing that part of the new Sydney Fish Market site that is currently zoned W1 Maritime Waters and that is proposed to be incorporated into the Sydney LEP and zoned SP1 Special Activities (Sydney Fish Market).

The rationale for the amendments is provided in the Explanation of Intended Effect (refer **Attachment 10**).

F3.4 Consent authority arrangements

The proposed planning framework for Blackwattle Bay will simplify consent authority pathways for development in the precinct as follows:

- **State significant development** - The Minister for Planning will remain the consent authority for development with a CIV over $10 million (State Significant Development), as provided for under the SRD SEPP.
- **Development under Part 4** - the CoS will be the consent authority for all other development requiring consent under Part 4 of the EP&A Act
- **Exempt development** - To facilitate activation and enhancement of the public domain, development such as landscaping, pedestrian pathways, public art and the like, as well as activities such as community events and markets, are proposed to be nominated as 'exempt development'. This means that these activities may be undertaken without the need for development consent or assessment subject to meeting appropriate amenity and other criteria. Similar provisions apply to Barangaroo, Darling Harbour, The Rocks and Sydney Olympic Park. The introduction of the exempt development pathway for these activities will require amendments to the ISEPP and Codes SEPP. Further discussion is provided in the Explanation of Intended Effect (**Attachment 10**).

F4. Draft Design Code

Any future development on the site will need to consider and meet the site-specific design requirements / design guidelines set out in the draft Design Code (refer **Attachment 14**). The draft Design Code outlines requirements for the following matters:

- Land use, built form and design excellence
- Amenity
- Public domain and open space
- Movement network
- Environmental management and sustainability
- Heritage.

The draft Design Code serves a similar function and purpose as a site specific DCP. In this regard, the draft Design Code seeks to satisfy clause 7.20 of the SLEP 2012.

G. STUDY REQUIREMENTS

G1. Vision, strategic context and justification

The vision, strategic context and justification for the SSP study are addressed elsewhere in this report as follows:

- Vision – Part E
- Strategic context – Part B5
- Justification – Part C.

G2. Urban design

SR2.1: Prepare a detailed site and context analysis. SR2.4. Prepare comprehensive opportunities and constraints mapping overlays.

FJMT has prepared an Urban Design Statement (refer Volumes I and II at **Attachment 3**).

Extensive analysis across more than 30 specialist consultant disciplines has been undertaken to investigate the site conditions and understand the opportunities and constraints for Blackwattle Bay. Iterative analysis has been undertaken in areas including wind, tree canopy, noise and air quality to test the potential massing of the Precinct Plan and to refine the proposed public domain, built form and land use distribution.

A detailed site and context analysis is included in the FJMT Urban Design Statement Volume. Issues covered include:

- Surrounding urban character and building heights
- Solar requirements of existing and future open spaces
- Wind conditions
- Terrain and flooding
- Traffic access and volumes
- Public transport and pedestrian/cycle networks
- History and archaeology.

Discussion on the site and its context is also provided in Section B4 of this study.

The key site constraints and opportunities are summarised in **Table 11**.

Table 11: Key site constraints and opportunities

	Constraints	Opportunities
Heritage	• Need to better represent and engage knowledge and values of First Nations people • Two locations have been identified as offering potential for indigenous archaeology (PAD01 and PAD02). • There are no listed heritage items (local or State) within the Blackwattle Bay Study Area although there are some items with potential heritage significance. • Glebe Island Bridge is listed on the State Heritage Register. • Anzac Bridge is listed as an item of State significance on the TfNSW Section 170 Heritage & Conservation Register • The northern extent of Blackwattle Bay Stormwater Channel No 17 is listed on Sydney Water Corporation Section 170 Heritage & Conservation Register	• Celebrate the cultural importance of Blackwattle Bay to the Wangal and Gadigal people. • Reinterpret historical character of Blackwattle Bay and Blackwattle Creek. • Interpret the historical eastern shoreline of Blackwattle Bay. • Interpret historic quarry, coal loading and timber industry through materiality interface with the bay. • Interpret boat building and fishing fleet history within the bay including slipways.

Character	• The impact of the Western Distributor
	  ○ as a physical barrier
	  ○ in terms of overshadowing
	  ○ adverse noise and air quality impacts
	• Disconnection of Pyrmont from the waters of Blackwattle Bay.
	• Limited public access to the foreshore.
	• Lack of diversity of existing uses.
		• Integration with existing Pyrmont urban structure and historical reference to original street alignments.
		• Significant renewal opportunities to create a mixed use precinct housing a variety of uses for future employment growth and residents.
		• Link to the existing promenade along the Glebe foreshore to the Pyrmont waterfront completing a continuous waterfront walk from Rozelle Bay to Woolloomooloo.
		• Public access to highly valued harbour shoreline.
		• Reconnection of street network bifurcated by Western Distributor.
		• Healing of the bay through re-establishment of land and marine ecologies.

Public transport and movement	• The waterfront promenade is interrupted between Glebe foreshore and Pyrmont north. • Access to public transport is impacted by busy roads, narrow paths and poor pedestrian crossing arrangements. • Public transport is limited to light rail and bus services. • Traffic volumes on Pyrmont Bridge Road and parts of Bank Street in addition to the Western Distributor structure and ramps are barriers to access to the site.	• Foreshore promenade providing uninterrupted link between Glebe foreshore and Pyrmont north. • Promote walking and cycling through the site and around the study area. • Alternative public transport including new Metro, potential bus and ferry route and stops. • Create greater movement permeability through the site with a fine grain local street network and additional entries into the site. • Improve links to the existing light rail stations.

	Constraints	Opportunities
	• Cycle networks from the inner west to the city are discontinuous forcing riders onto the road network. • North/south pedestrian movement from UTS and Central Park toward the Glebe Island Bridge is not well supported. • Glebe Island Bridge is currently not operational or available as a pedestrian/cycle/transport link to Bays West.	• Reactivation of the Glebe Island Bridge for new active transport connection.

Social and community facilities	• The existing land uses and ownerships
	• The staging of future development of the Blackwattle Bay precinct
	• Regional, national and international appeal of the Sydney Fish Market
	• Facilities to benefit existing communities
	• Health benefits of open space and access to the foreshore
	• Need to better represent and engage first nations knowledge and values
	• Need for social diversity
		• Potential for
		  ○ a new cultural and community centre integrated with the new open space.
		  ○ new cultural and community facilities at 1-3 Bank Street.
		  ○ other social and community facilities such as childcare and health clinic within the podium of the mixed use development.
		• Provision of the affordable housing
		• Provide additional recreation facilities including improved boat storage and amenities, multipurpose court, play and fitness

Urban morphology	• Varied building heights and characters across the peninsula • Low scale built form in Glebe • Innovation Corridor and accommodation for the future workplace including knowledge industries • Westerly expansion of the Central Business District • Future renewal of Bays West • Protection of solar access to existing open spaces including Glebe foreshore and Wentworth Park	• Future Pyrmont Metro station and service • Tech and Innovation industries • Tall building clusters defined in the Pyrmont Peninsula Place Strategy • Large scale urban renewal • Foreshore link • Increase in residential provision • 24hr precinct
Views	• A lack of visual legibility adds to the feeling of disconnection to the site and within the site. • On the approach from Sydney City, views to the Sydney Fish Markets and the Bay are restricted by the Western Distributor and associated on/off ramps and by fences and shipping containers at the eastern fringe the Fish Markets site.	• Urban structure retains views to the water from Bank St, Miller St, the Sydney Fish Markets light rail station, Pyrmont Bridge Rd and from Wentworth Park.
Open space	• The area of Blackwattle Bay is either reclaimed land or has been stripped of existing vegetation • There is limited open space within the Study Area although Wentworth Park provides a significant public recreation resource.	• Increased public access to water • Opportunity for the seawall to increase marine habitat and have natural filtration impacts on the Bay.

	Constraints	Opportunities
		• Increase tree canopy to improve visual quality of public domain and help mitigate urban heat island effects • Opportunity for bespoke connections to the water from the promenade responding to the heights of promenade from water line. • Opportunity for promenade edge to have water sensitive urban design (WSUD) that acts as filtration to stormwater runoff from paved areas. • Opportunity to create areas of open space sheltered by landform.
Water uses	• Demands on use of bay by commercial and recreational vessels create potential conflicts • Shallow zones limit draft of vessels	• Passive water craft activities of the Bay are supported and coordinated with commercial, fishing and transport vessels. • Programming of Bank Street Open Space allows for formalised boating and recreational facilities. • Further use from kayaks and canoes can follow as the boat launch area is established as a recreational water zone with direct access to the designated rowing and paddling course.

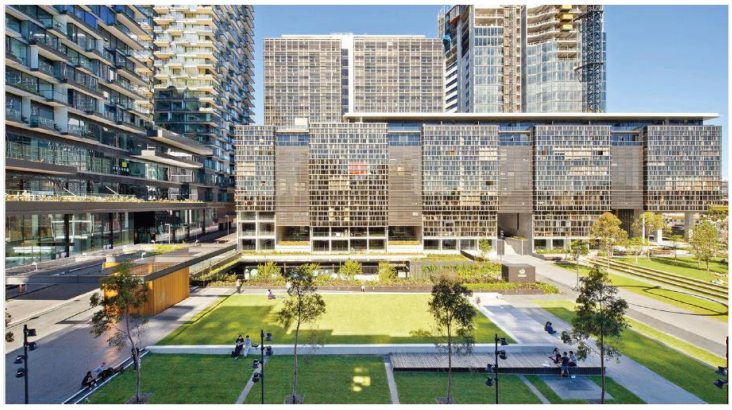
SR2.2: Prepare a review of relevant best practice case studies of areas of similar size, land use and approximate dwelling density to the proposal, outlining transferable principles.

FJMT undertook a review of four Australian case studies and three international case studies relevant to the renewal of Blackwattle Bay. Three case studies are located in Sydney - one at the harbour's edge (Barangaroo South) and two adjacent existing communities (Central Park and Green Square Town Centre). Each has involved the renewal of former light or heavy industrial land. The fourth Australian case study, Elizabeth Quay in Perth, occupies land previously designated open space and seeks to connect the city centre to the river foreshore.

The three international case studies are located in the United States, United Kingdom and Germany.

A summary of the review of case studies is provided in **Table 12**.

Table 12: Summary of case studies review

Transferable Principles	Discussion
Central Park, Chippendale	
• *Density done well* • *Quality public domain and open space* • *Successful mix of uses* • *Vertical landscape and sustainability* 	Central Park delivers a significant quantum of mixed use floor space in buildings up to 30 storeys high. The use mix achieves a highly successful integration with the UTS campus and serves the needs of residents, students and visitors. Public domain and open space are central to the renewal philosophy. Central Park visibly extends the green character of its public spaces vertically and has a strong sustainability agenda focused around local power generation and water reuse.
Green Square Town Centre, Zetland	
• *Early delivery of public domain and community facilities* • *Quality public domain* • *Shared vehicle / pedestrian way integrated with public space* • *Solar access to public space* 	The CoS is responsible for delivering streets and primary public spaces. The City opened the new Green Square plaza and library ahead of the majority of development ensuring that new residents arrive to public amenity and infrastructure. Green Square is an exemplar of quality public domain and landscape design. It employs quality materials, and carefully selected street furniture and fittings with pedestrian access given primacy. The Green Square Town Centre DCP defines maximum shadow extents over the plaza, constraining development, particularly to the north, but allowing for innovation in built form.

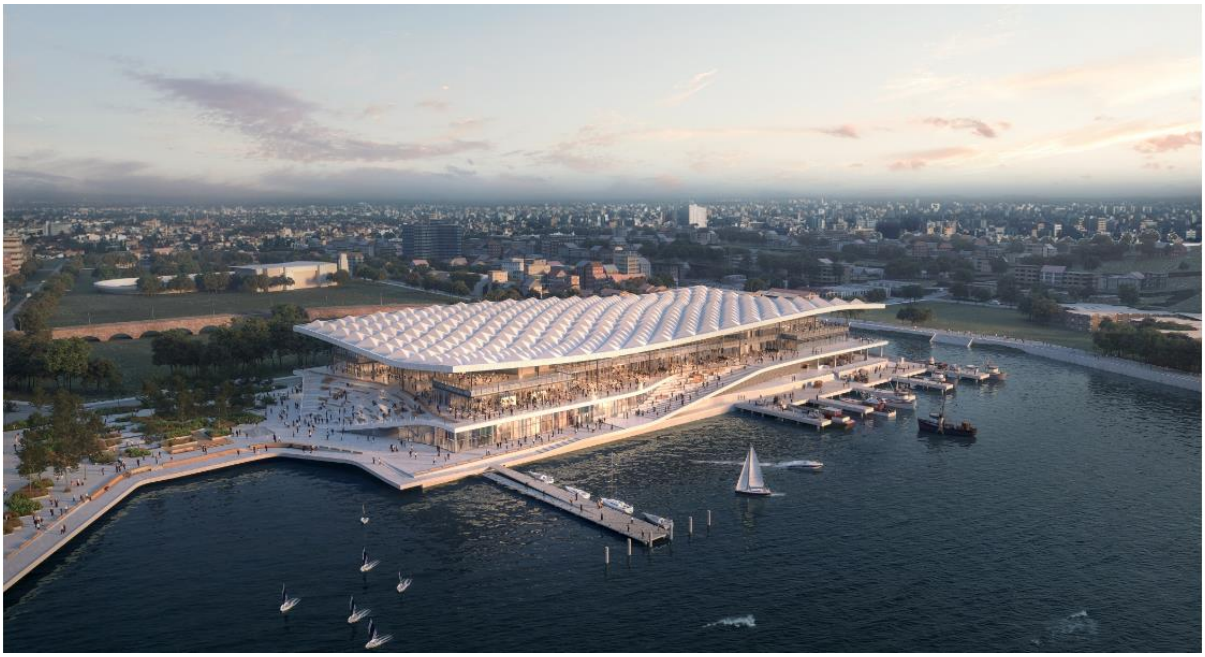
Transferable Principles	Discussion
Barangaroo South, Sydney	
• *Waterfront Promenade* • *Network of Streets and Lanes* • *Podium and Tower* • *Inclusion of Small Buildings* • *Public Transport - Ferry Terminal* 	The waterfront promenade is connector and public space in one with a clear and robust landscape strategy. Pedestrian movements are prioritised with people streets and lanes connecting from Wynyard Walk through to the waterfront promenade. Unlike Central Park, the tower forms of Barangaroo Central are generally held above the ground plane with podium forms and street wall buildings framing the public domain and presenting a lower scale at the street level interface. Smaller buildings create scale counterpoints to the large commercial towers. A new Ferry Terminal provides workers, residents and visitors an alternative public transport means to access the precinct.
Elizabeth Quay, Perth	
• *Extension of the city grid* • *Early delivery of public domain* • *Linear Water Side Public Space* • *Built Form Innovation through Competitive Processes* 	This project involves the integration of city grid, public space and foreshore promenade to ensure a legible urban structure. Similar to Green Square, the Metropolitan Delivery Authority has delivered the new streets, public domain and foreshore promenade ahead of the individual development lots. A waterside plaza forms the central public space, stepping down to the water's edge and providing a closer relationship to the inlet of the Swan River. The individual development lots of Elizabeth Quay have been subject to competitive processes.
Domino Sugar Factory Redevelopment, Brooklyn	
• *Community park* • *Campus office* • *Waterfront access* • *Street grid*	The masterplan placed great emphasis on public use and community amenities with locals playing a strong role. Over 50% of the site area is comprised of public space. The public park was the first stage of the redevelopment to be delivered. Whilst there is an emphasis on the tower forms delivering a wide mix of residential typologies, the lower scale commercial building housed within the restored refinery is geared towards campus style office use along with ground floor retail. This provides a diversity of use. The existing urban street network of Williamsburg has been continued down to the new public

Transferable Principles	Discussion
	open space creating an immediate connection with the surrounding area through both visual links and accessibility.
Battersea Power Station, London	
• *Solar driven form* • *Phased development* • *Pedestrian site links and promenade* • *Informed history* 	Building massing has been derived from solar studies and supports passive cooling and user controllable environments. The planned phasing of development has played an important role in ensuring high quality design as well as the layout and form of public spaces and waterfront promenade. There is emphasis on the heritage structure as the anchor point for the a sense of place. Pedestrian activation is prioritised by promoting a diverse public transport network that feeds into the city and its local context. The industrial past is celebrated through the promotion of cultural venues and artefacts and the provision of highly flexible programmable spaces.
HafenCity, Hamburg	
• *Incremental delivery* • *Open space network* • *Scale* • *Diverse architectural realisation of urban concept* • *Living / working / art and culture / entertainment and tourism* 	HafenCity provides a fine grain resolution to a large renewal area. The block structure allows for a permeable ground plane and a diverse street wall. Development lots are of moderate size with a relatively consistent street wall height of 6-8 storeys punctuated by taller building elements. The renewal is controlled by HafenCity Hamburg, the state authority established to manage the delivery of the project. Individual development lots are required to undertake a competitive design process prior to finalisation of the land transaction. The approach to release and development of the lots has created an architectural diversity within a strong urban form, with consistent material references to the existing brick port buildings. HafenCity is overtly mixed use with residential and workplace uses interspersed through the block structure

Further detail on the case studies is provided in the FJMT Urban Design Statement Vol II.

SR2.3: Prepare a review of relevant best practice case studies of food and/or fish markets, outlining transferable principles including logistics and operations, transport and access, and any other strategic aspects.

As the new Sydney Fish Market has been designed and approved and is now under construction, a review of best practice case studies of fish markets is no longer warranted. The new Sydney Fish Market is inspired and informed by some of the most iconic markets around the world such as the Public Market in Seattle USA, the Tsukiji Fish Market in Tokyo Japan, and the Borough Market in London UK. Transferable principles and strategies have been identified and applied in the new market design with local considerations.



SR2.5: Prepare a set of urban design principles that underpin the proposed development.

The urban design principles for the Blackwattle Bay Precinct are set out in Section E2 and discussed in detail in the FJMT Urban Design Statement Vol II (refer **Attachment 3**). They are also included in the draft Design Code (**Attachment 14**).

SR2.6: 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 state planning policies (e.g. SEPP 65 and the ADG) and have been used to inform the final proposal.

Three scenarios, aligned with the Design Principles, were developed in early 2020 for review with the community. Three different conceptual approaches were taken, emphasising different aspects of the site history, topography and morphology and creating alternative public domain networks and built form arrangements.

The scenarios explored ways in which Blackwattle Bay might be revitalised, with different land use mixes, open space arrangements, waterfront promenade designs, and street and building layouts. The scenarios also highlighted different First Nations perspectives which could be included in the future detailed planning of public spaces and buildings. These detailed elements represent important connections to country and contribute to a strong sense of place and identity.

A Metro station for Pyrmont was not confirmed at the time the scenarios were tested but was assumed to be a real possibility.

A summary of the three scenarios is provided in **Table 13**.

Table 13: Summary of three scenarios

Scenario	Key features	3D Model
Scenario 1: Homes	4,000 jobs 1,700 homes 30,000 sqm open space	
Scenario 2: Balanced	5,000 jobs 1,160 homes 30,000 sqm open space	
Scenario 3: Jobs	7,000 jobs 1,045 homes 30,000 sqm open space	

599 submissions were received in response to the exhibition of the three scenarios. The feedback favoured a balance of uses. Submissions highlighted the importance of providing active transport opportunities, connecting to public transport and integrating with existing movement networks. Submissions also emphasised the need for quality green and public spaces.

The urban design and public domain strengths of the three scenarios have been distilled into the Precinct Plan that balances residential and commercial uses, integrates with the grid structure of Pyrmont, reflects the organic geometries of the original foreshore line and sandstone cuttings, and creates a unique sequence of open spaces connected by the waterfront promenade.

Further discussion on the outcome of the consultation as well as analysis of the options is provided in the FJMT Urban Design Statement Vol II.

SR2.7: Prepare a precinct plan that integrates: the public domain plan, infrastructure plan, community facilities plan, buildings types and massing for the site. Demonstrate how this fits within the overall Bays Precinct State Significant Precinct and surrounding context.

A Precinct Plan has been prepared for Blackwattle Bay (**Attachment 1**) and is discussed in detail in Section F1 of this study and in the Urban Design Statement (**Attachment 3**).

SR2.8: Provide a view corridor 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. Include views from public places in Pyrmont and Wentworth Park, and to and from the harbour, that bisect the precinct. 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 and harbour. Include analysis of any visual impacts on the surrounding areas, and mitigation measures. The number and angle of significant views are to be agreed with the City of Sydney and Department of Planning.

A Visual Impact Study (VIA) has been prepared by Clouston (refer **Attachment 15**).

A hierarchy of views was established in the design phase of the Precinct Plan that informed the way in which view corridors and precinct views were structured. This took into account a contextual analysis of the existing site and the importance of specific vistas.

The scale of the view was broken down into Local Landmark Views, Framed Vistas, Upper Level Glimpses and Broad Views to the Bay. These views do not take into account views out from proposed structures but rather the effect the proposed massing will have on the views from the Precinct and its surrounds.

The VIA identified and evaluated the existing visual environment (while acknowledging that the current visual scenes may change in the future) and key views before progressing to an assessment of quantitative and qualitative criteria using best practice methodology.

The selection of views for detailed evaluation in this assessment has been derived from a number of sources including:

- Visual assessment policy guidance in particular the NSW Land and Environment Court Planning Principles
- Background documents
- Desktop mapping
- In field evaluation.

For the assessment criteria, 20 views were selected to cover a wide range of visual instances across Blackwattle Bay and the surrounding foreshores and suburbs. When selecting the viewpoints, the existing urban and landscape character was taken into account as well as the future Sydney Fish Market.

The VIA concluded that:

- the majority of the visual impacts fall within the negligible to moderate scale (eleven viewpoints), with nine viewpoints registering a moderate/high to high rating
- the most significant public spaces that will be affected by the rezoning proposal are those that are in close proximity with largely unobstructed views such as the foreshore walk of Blackwattle Bay Park
- given the height and mass of elements within the precinct, it is visible from a range of varied locations, however its visual impact ratings begin to decrease relatively quickly over a small distance as a result of existing elements within the landscape obstructing or filtering views
- where long distance views of the Study Area are possible, it generally forms a component of a wider urban skyline comprised of varying architectural styles and scales, and does not appear at odds with the wider skyline which helps to mitigate the scale of the precinct
- views of the Anzac Bridge are left largely unobstructed, with the exception of the view looking north from Wentworth Park (viewpoint 13) where landscaping is proposed. The visual impact is likely to result in a filtering or obstruction of the view however this could arguably be said to be adding a contributory greening element to a highly busy urban road and increasing user amenity.

The VIA notes that alleviation of visual impacts could be achieved by built-form articulation and materials selection during detailed design. This would contribute towards the proposal integrating as sympathetically as possible with the surrounding landscape, and potentially contribute to the surrounding built environment in a positive manner through well considered design.

Building reflectivity and specialist lighting should be further considered during detailed design to ensure that these elements are minimised as much as possible for surrounding sensitive receptors.

Importantly, the VIA notes that the assessment has been undertaken against the maximum building envelopes and that ongoing design refinement has the potential to reduce the viewpoint ratings outlined in the report.

Further, development of the public realm during the detailed design phase has the potential to have a contributory effect on the precinct through the creation of world-class public space which matches its location as one of Sydney's premier central Bays. Articulation of the public realm design during the detailed design phase would ensure that landscape elements (such as trees) would not obstruct valued sight lines (such as water views). This could be particularly beneficial for any viewpoints in close proximity that may be impacted by vegetation (such as from within Wentworth Park).

SR2.9: Provide a comprehensive sun access analysis for the site and its surroundings at the Winter Solstice between 9am and 3pm, demonstrating the ability of the proposal to comply with standards as follows:

- For new and existing apartments and private open spaces subject to the Apartment Design Guide, against the standards in that guide
- For all other new and existing dwellings, and private and public open spaces, against the standards in Sydney DCP 2012
- For the new 30 metre foreshore promenade (refer to section 3), against standards in Sydney DCP 2012 for public open spaces. Recognising that compliance with this standard may be difficult due to the orientation of this area, particularly in the morning, a sun access plane which maximises sunlight access to the promenade may be proposed
- For the new area of foreshore promenade in front of the new fish market (refer to section 3), an appropriate standard should be proposed, recognising that solar access to the area is limited, particularly in the morning, and

- For the existing public open space, Sydney Secondary College, Blackwattle Bay Campus and walkways along the Glebe Foreshore and Wentworth Park, no additional overshadowing at the Winter Solstice 9am to 3pm must be demonstrated.

A comprehensive sun access analysis is provided in the Urban Design Statement.

Solar access to existing apartments

Three developments situated on the corner of Wattle Street and Bridge Road and along Wattle Crescent are within the shadow path of the Blackwattle Bay massing and have been assessed. The sites are identified in **Figure 39** and **Figure 40**.

Figure 39: Existing neighbouring residential apartments
Source: FJMT

Figure 40: Aerial Map of the Neighbouring Residential (existing) (Source: FJMT)

Sites 1 and 2 are able to maintain a minimum two hours of solar access on 21 June between 9am and 3pm to facades currently receiving solar. Analysis of Site 3 on Wattle Crescent indicates that there is a greater impact of the potential Blackwattle Bay massing on this site. There are a number of factors to consider including:

- The development pre-dates the introduction of SEPP 65 and the Apartment Design Guide (and Residential Flat Design Code that went before it)
- The site geometry means that facades are currently only achieving close to the minimum two hour solar access, without the proposed renewal of Blackwattle Bay
- The existing buildings feature extensive balconies which in turn overshadow living spaces
- It is likely that living spaces currently receive less than 2 hours minimum solar on 21 June between the nominated hours.
- More than 80% of the north-west facades receive 2 hours of solar between 10am and 4pm.
- The analysis also shows that solar access to the south-east facades is unaffected by the potential renewal massing.

Proposed residential apartments

The development sites of the Blackwattle Bay Study Area have a south-west orientation to the bay and the waterfront promenade and the Western Distributor borders the site to the north-east. Alignment with the solar guidelines of the ADG requires careful orientation of apartments so that solar access can be achieved sun over the Western Distributor whilst recognising the amenity of outlook over Blackwattle Bay.

In the upper portions of the built form, solar access to apartments is able to be paired with views over the Pyrmont Peninsula toward the city and harbour.

Indicative apartment floor plates have been developed and tested for the residential building components in Area 2 and Area 3. Setbacks, building separation, orientation and floor plate layouts across both sites ensure that 70 % or more of the apartments in each residential tower will achieve a minimum of 2hrs of sunlight on the 21st of June (winter solstice) in line with the ADG. Further detail to demonstrate compliance is provided in the Urban Design Statement (**Attachment 3**).

Existing open space

Sydney DCP 2012 requires that:

- Overshadowing effects of new buildings on publicly accessible open space are minimised between the hours of 9am to 3pm on 21 June
- Shadow diagrams are provided that indicate the existing condition and proposed shadows at 9am, 12 noon and 2pm on 14 April and 21 June. If required, the consent authority may request additional detail to assess the overshadowing impacts.

A key principle for the renewal of Blackwattle Bay is minimising any overshadowing of the existing public domain and open space between the hours of 9am - 3pm on the 21st of June. This includes the Glebe Foreshore and walkway, Sydney Secondary College Blackwattle Bay Campus and Wentworth Park.

The shadow analysis undertaken by FJMT indicates that there will be no additional overshadowing of Wentworth Park, Glebe Foreshore or the Sydney Secondary College between 9am to 3pm on 21 June, as shown in **Figure 41**.

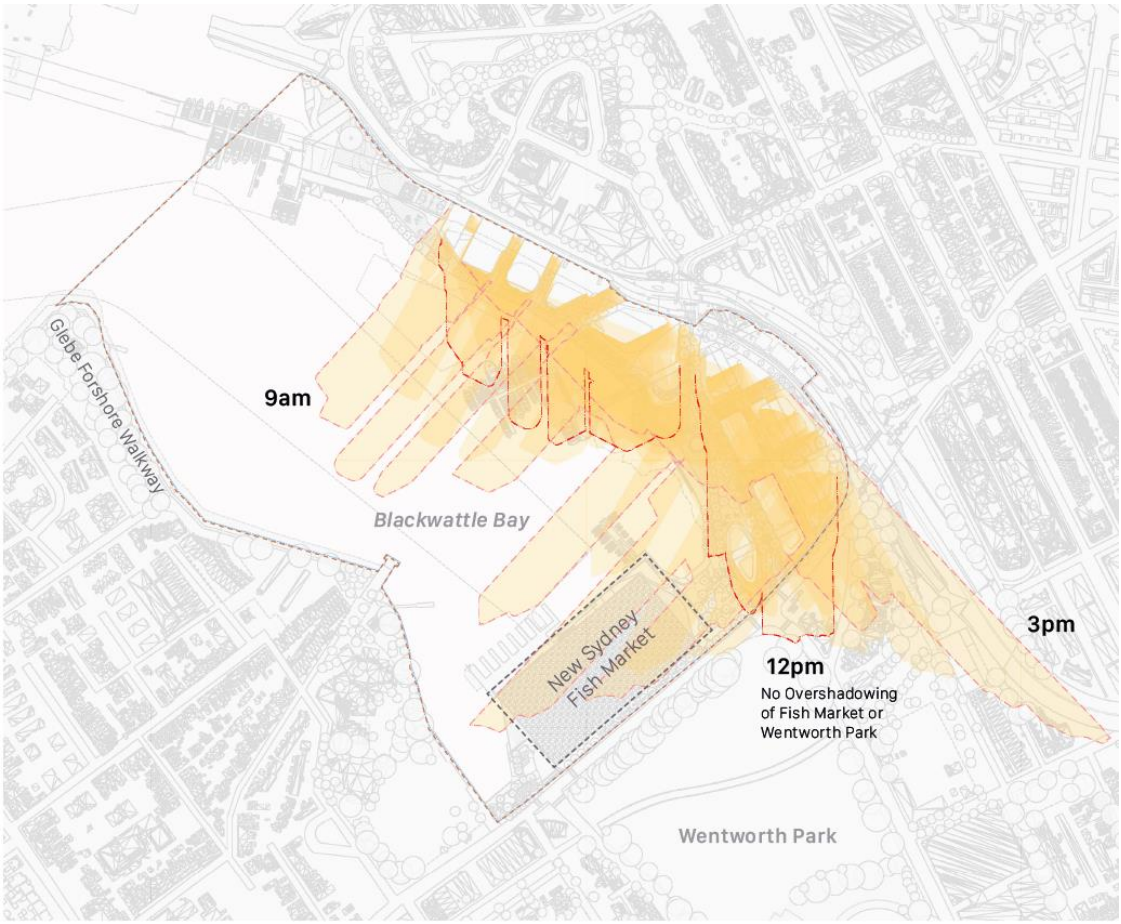


Figure 41: Shadow overlay – 9am/12pm/3pm on 21 June
Source: FJMT

Solar Access to Waterfront Promenade & Proposed Open Space

There are four new open space areas proposed:

- Waterfront Promenade
- Bank Street open space
- Miller Street Reserve
- Waterside Park/Urban Park

Given the orientation challenges of the precinct, some individual zones perform very well, easily achieving 50% solar access for a period of four or more hours on 21 June, whereas some zones are more solar constrained as is the case with the Miller Street Reserve. More emphasis has been given to the importance of individual places achieving the minimum solar access, most notably Waterside Park/Urban Park. Given the orientation of the site, this principal open space has been prioritised in the Precinct Plan to achieve a level of solar performance to offset the constraints of built form and promenade access around the Miller Street Reserve.

Figure 42 and **Figure 43** show that most of the area of Waterside Park/Urban Park receives at least 3 hours and up to 6 hours of sunlight between 9am to 3pm on 21 June. Similarly, much of the foreshore promenade to the north of the new Sydney Fish Market receives 6 hours of sunlight during the stipulated period. The proposed Bank Street open space is overshadowed by the Western Distributor but nonetheless still receives almost 50% solar access in accordance with Sydney DCP 2012 requirements.

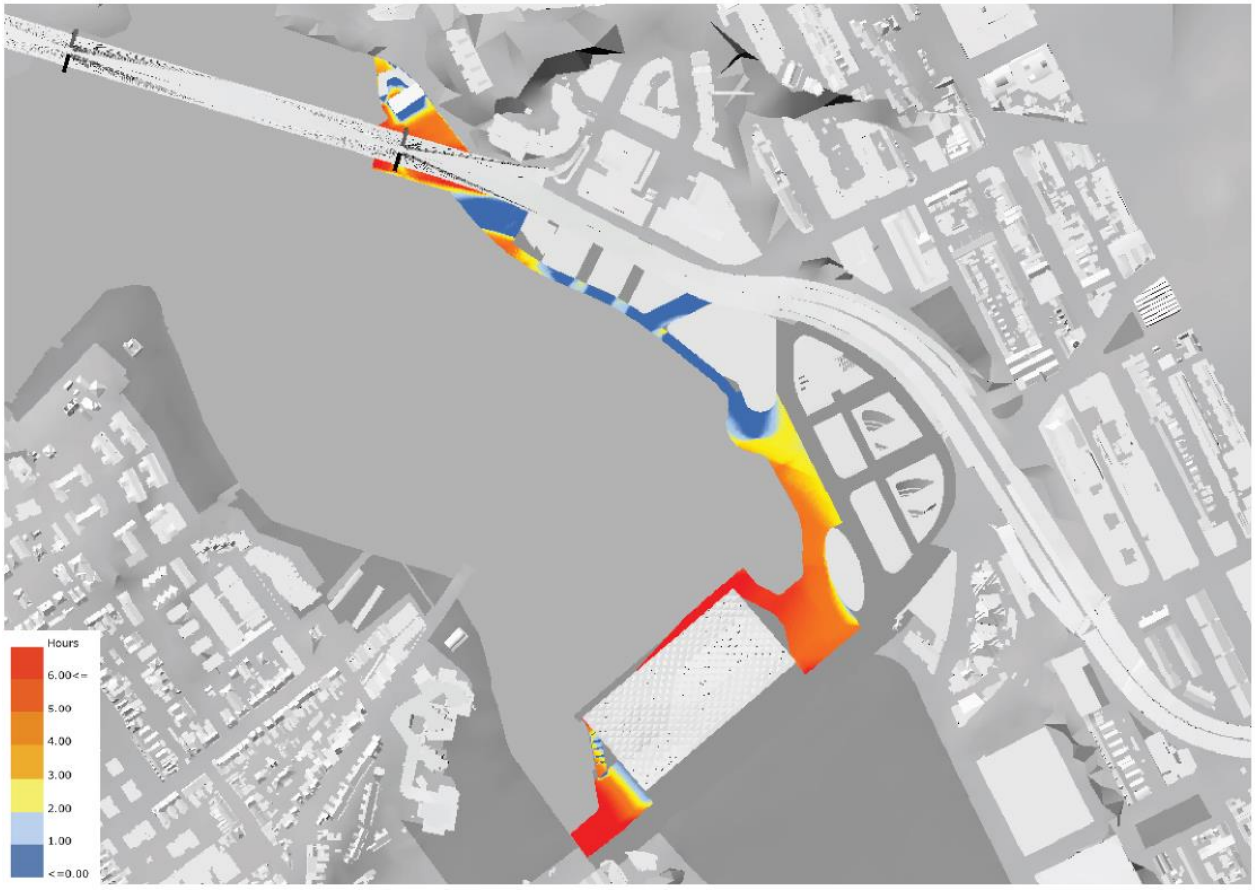


Figure 42: Heat map of proposed open space as 9am-3pm 21 June
Source: FJMT

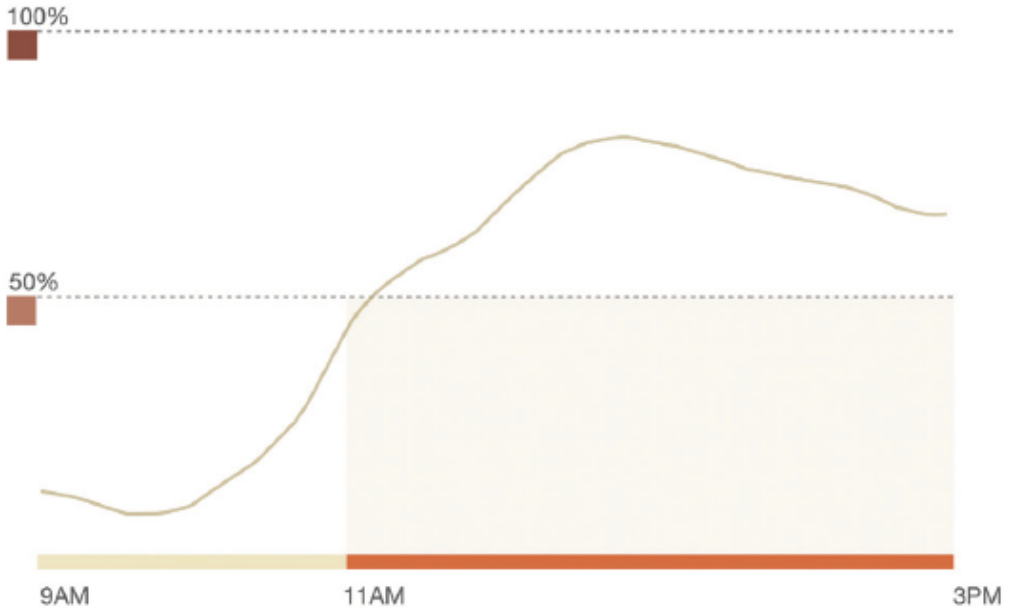


Figure 43: Heat graph of proposed Waterside Park/Urban Park and associated promenade on 21 June
Source: FJMT

Further sun access analysis is provided in the Urban Design Statement Vol II (**Attachment 3**).

SR2.10: Provide an analysis and justification of proposed distribution of gross floor area, development yields, building typologies, building envelopes and heights. Demonstrate a fair and impartial distribution of development potential between land in government and private ownership, subject to individual site constraints.

The proposed distribution of GFA, development yields, building typologies, building envelopes and heights has been derived through a deductive process starting with the protection of existing key open spaces from overshadowing and then removing building envelope from open spaces, the waterfront promenade and new streets. Building envelopes have been further defined having regard to the existing and evolving morphology of the context. Local solar access and scale relationships were then applied to create the controls of final urban form.

Land ownership was not a consideration in determining the appropriate development potential. Rather, it was the existing site conditions, broader strategic objectives, urban design principles and environmental ambitions that guided the development of building envelopes. The Precinct Plan represents an appropriate and impartial distribution of development potential across the Precinct.

Further discussion on the built form is provided in Part F1.4 of this study as well as the Urban Design Statement.

SR2.11: Provide sufficient detail of the building types to demonstrate future compliance with amenity standards can be achieved including the Apartment Design Guide; including careful siting and layout of buildings to minimise the impacts of noise and provide natural ventilation through open windows and to support any calculations that convert building envelopes to gross floor area and development yields.

FJMT has prepared an indicative scheme to demonstrate how future development of the site can meet required amenity standards. Key aspects of the indicative scheme's compliance with the ADG are outlined below, with further detail provided at **Attachment 3**.

Solar access

Indicative apartment floor plates have been developed and tested for the residential building components in Area 2 and Area 3. Setbacks, building separation, orientation and floor plate layouts across both sites ensure that 70% or more of the apartments in each residential tower are able to achieve a minimum of two hours of sunlight on the 21st of June (winter solstice), in line with the ADG.

Figure 44: Indicative solar access to apartments
Source: FJMT

Building separation

Building separations between residential towers in the indicative scheme exceed the ADG in most instances including all tower separations in Area 3. In Area 2, the site dimensions of the Private Landowner sites are limited and tower footprints are constrained by the Western Distributor. Minimum building separations for a residential tower are applied with 18m between a habitable room and a non habitable room from the residential levels of the tower in accordance with the ADG.

Figure 45: Indicative building separations
Source: FJMT

Natural ventilation

The ADG recommends cross ventilation be achieved to 60% of apartments in the first nine storeys of a residential or mixed use building. From the 10th storey and above apartments are considered to be cross ventilated if balconies are not fully enclosed.

All floors above nine storeys can achieve ADG compliance for natural ventilation. In addition, BLD 02 in Area 3 has been tested for residential use below nine storeys due to its favourable solar orientation and increased separation from the Western Distributor relative to other blocks. The indicative floor plate arrangement for BLD 02 demonstrates that the ADG cross ventilation target of 60% is achievable.

Noise

The ADG anticipates noise constrained sites near major roads, rail lines and beneath flight paths in Section 4J Noise and Pollution. Objective 4J-1 of the ADG provides design guidance in relation to noise impacts and notes that achieving the ADG design criteria may not be possible in some situations due to noise (and pollution). Notwithstanding this acknowledgement, the residential

components of the Precinct Plan are expected to achieve high levels of amenity with application of effective strategies in detailed design. Detailed design opportunities include:

- limiting the number and size of openings facing noise sources
- providing seals to prevent noise transfer through gaps
- using double or acoustic glazing, acoustic louvres or enclosed balconies (winter gardens)
- using materials with mass and/or sound insulation or absorption properties eg. Solid balcony balustrades, external screens and soffits.

Noise impacts and mitigation are discussed in Part G22.

Air quality

The principles developed to mitigate the impacts of noise on sensitive uses also assist in relation to the zone of poor air quality around the Western Distributor during periods of heavy traffic flow. While natural ventilation to apartments can be provided, the lowest residential floors will require specific solutions to provide alternative fresh air paths. This includes possible mechanical assistance to ensure that residents have the option to open windows and doors for natural ventilation or close windows and doors but maintain access to fresh air.

Air quality impacts and mitigation are discussed in Part G22.

Commercial uses

Commercial uses including contemporary workplace accommodation can be positioned in more challenged environments including adjacent and under the Western Distributor. Sealed facade systems that facilitate efficient and comfortable internal conditions can be used to mitigate exposure to noise and poor air quality sources.

SR2.12. Demonstrate how the urban design principles established in 2.5 have informed the allocation and location of proposed land uses.

The urban design principles have informed the allocation and location of proposed land uses as follows (where relevant):

Principle 1: *Improve access to Blackwattle Bay, the foreshore and water activities for all users.*

- The Plan provides the missing link in the waterfront promenade and opens up to 50% of the Study Area to public access.
- Other key open space areas have been situated adjacent to the waterfront promenade to maximimse public access.
- The new Sydney Fish Market provides world class market facility at the head of the bay.
- Access to the Bay is improved by extending existing street alignments, improving intersections and supporting new direct connection to public transport.
- Boating amenities and access will be enhanced.

Principle 2: *Minimise additional shadowing to Wentworth Park and Glebe Foreshore (in mid-winter) and create new places with comfortable conditions for people to enjoy.*

- Building envelopes have been configured and located to minimise overshadowing and create comfortable conditions.

Principle 3: *Pursue leading edge sustainability outcomes including climate change resilience, improved water quality and restoration of natural ecosystems*

- The public domain, landscape and built form has been designed to facilitate climate change resilience, improve water quality and restore natural ecosystems.

Principle 4: *Prioritise movement by walking, cycling and public transport*
Principle 6: *Link the Blackwattle Bay precinct to the City, Glebe Island and White Bay and other surrounding communities and attractors.*

- The urban structure of the Plan prioritises walking and cycling by creating pedestrian focused spaces, introducing new separated cycleways and ensuring that internal streets can support new bus routes.
- The urban structure has been designed to provide ready connection to the Pyrmont Metro, Sydney CBD, Glebe Island, and White Bay Power Station and other surrounding destinations.

Principle 5: *Balance diverse traffic movement and parking needs for all users.*

- Integrated with the pedestrian, cycle and public transport infrastructure, general transport is supported through a new main street, linking Wattle and Miller Streets. Parking and loading are accommodated under buildings with access from lanes and from Bank Street.

Principle 8: *Integrate housing, employment and mixed uses to create a vibrant, walkable, mixed use precinct on the city's edge.*

- The Plan incorporates a wide range of potential workplace typologies including large campus style floor plates and opportunities for smaller collaborative workspaces. The Plan can accommodate a range of housing typologies in the use mix. The primary uses are complemented by community facilities, retail and local services framed around the public domain to create a vibrant and walkable mixed use precinct.

Principle 9: *Maintain and enhance water uses and activities*

- The Bank Street open space can incorporate a new boat storage facility
- Commercial marina zones are located between the shallow tidal water zone along the shore line and the rowing course in the middle of the bay
- Safe harbour zones are available for rowers and paddlers
- A public pier at the north end of the Waterside Park can provide access to a future ferry service.

Principle 10: *Allow for co-existence and evolution of land uses over time.*

- The Plan allows for the staging of the renewal and accommodates the possibility that some Private Landowners will wish to delay renewal of their sites to suit their business operations
- The on-land and on-water elements are arranged such that a temporary floating or fixed boardwalk can be constructed past sites yet to be renewed to ensure that the continuous waterfront promenade is delivered
- The proposed separated cycleway along Bank Street can be delivered in the street corridor with the CoS.

Principle 11: *A place for everyone that is inviting, unique in character, socially inclusive and affordable.*
Principle 12: *Expand the range of recreational, community and cultural facilities.*

Principle 13: *Plan for the future community's education, health, social and cultural needs.*

- Creating Blackwattle Bay as a daily place of work, recreation, living and social interaction will ensure that it is an integral part of the Pyrmont Peninsula. The provision of community facilities and local services will help to deliver a more socially inclusive precinct.
- The Plan significantly expands the range of recreational, community and cultural facilities for Blackwattle Bay and the Pyrmont Peninsula, including boating facilities, community space, library and cultural space as well as active sporting facilities such as skate park and courts.

Principle 14: *Deliver development that is economically, socially, culturally and environmentally viable.*

- The proposed allocation and location of land uses seek to deliver development outcomes that balance economic, social, cultural and environmental values and viability.

Principle 15: *Embed and interpret the morphology, heritage and culture of the site to create an authentic and site responsive place.*

- The Precinct Plan synthesises the morphological, heritage and cultural influences of the site as well as feedback from community participants and stakeholders to form an urban structure and public domain network that is connected to the history and place of Pyrmont.

Principle 16: *Foster social and cultural understanding and respect to heal and grow relationships.*

- The waterfront promenade of Blackwattle Bay will allow for the future extension of the Eora Harbour Walk and potentially culminate in an indigenous cultural centre or cultural knowledge library at Blackwattle Bay
- The Plan outlines a public domain rich in cultural meaning, revealing songlines through the landscape.

SR2.13. Provide physical and 3D CAD models to fit the City of Sydney's respective models. 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.

Refer Urban Design Vol II at **Attachment 3**.

SR2.14. Prepare a subdivision plan that reflects the precinct plan identified in 2.7 and integrates the proposed staging plan.

SR2.15. Outline the proposed staging, including showing how the progressive delivery of the public domain (park and streets) is integrated with the progressive release of development lots and how the proposed staging will be integrated with the staging of the wider Bays Precinct. Within the staging plan, maximise opportunities for temporary activation and providing public access.

As this is a large site comprising both private and government land, an indicative subdivision plan has been prepared which indicates land to be released as single lots for development while keeping a continuous open space and public domain at the forefront of the development. The proposed subdivision generally comprises the new Sydney Fish Market, open space, Government sites, Private Landowner sites and additional public domain.

The indicative subdivision plan is shown in **Figure 46**.

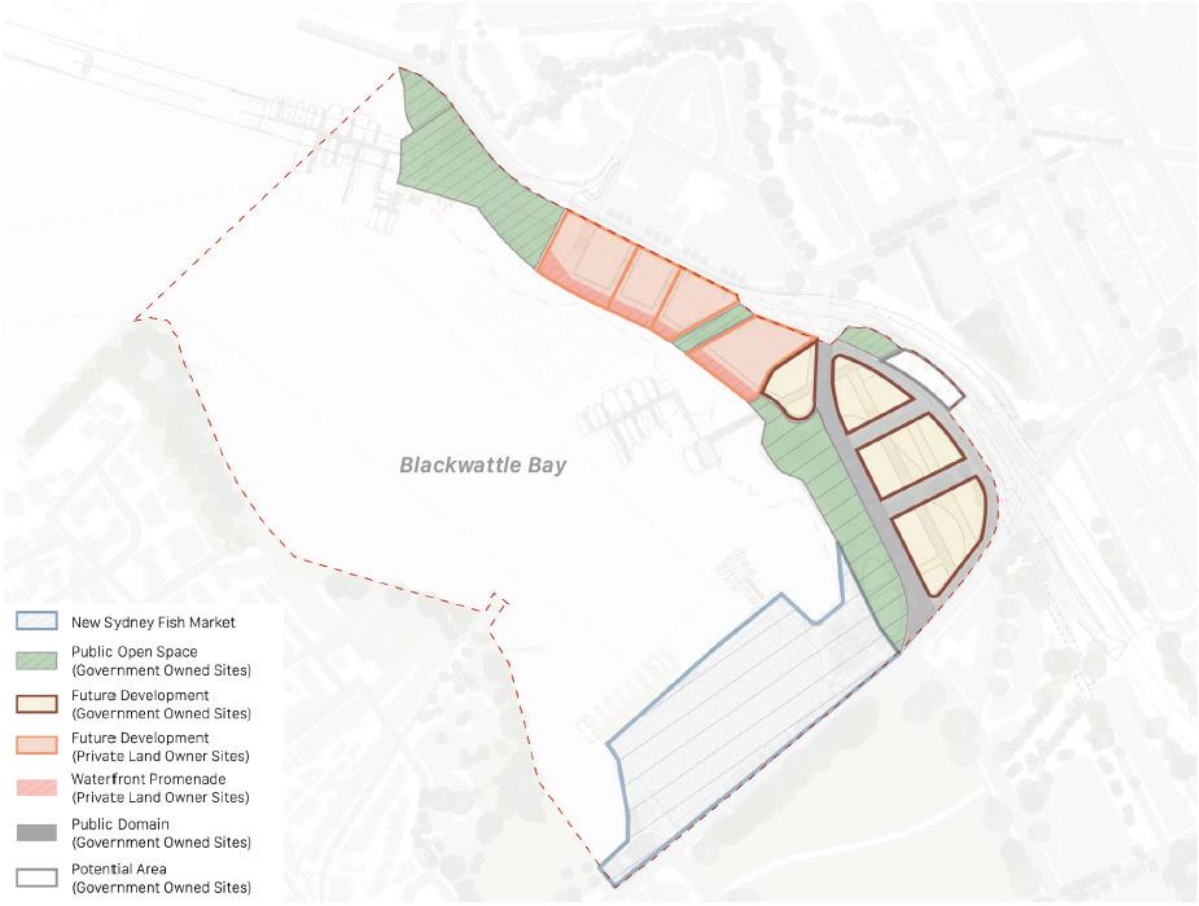


Figure 46: Indicative subdivision plan
Source: FJMT

The indicative staging of the proposal is shown in **Figure 47**. Stage 1 comprises the new Sydney Fish Market which is currently under construction and will be the key catalyst for regeneration at Blackwattle Bay. Bank Street open space and the buildings at 1 - 3 Bank Street are seen as the most logical next stage of the project, followed by development of the foreshore/public domain in the vicinity of the site of the existing fish market (Stage 3 on the plan). The successful delivery of this is essential in reconnecting Blackwattle Bay with its surrounding community and future visitors to the fish market.

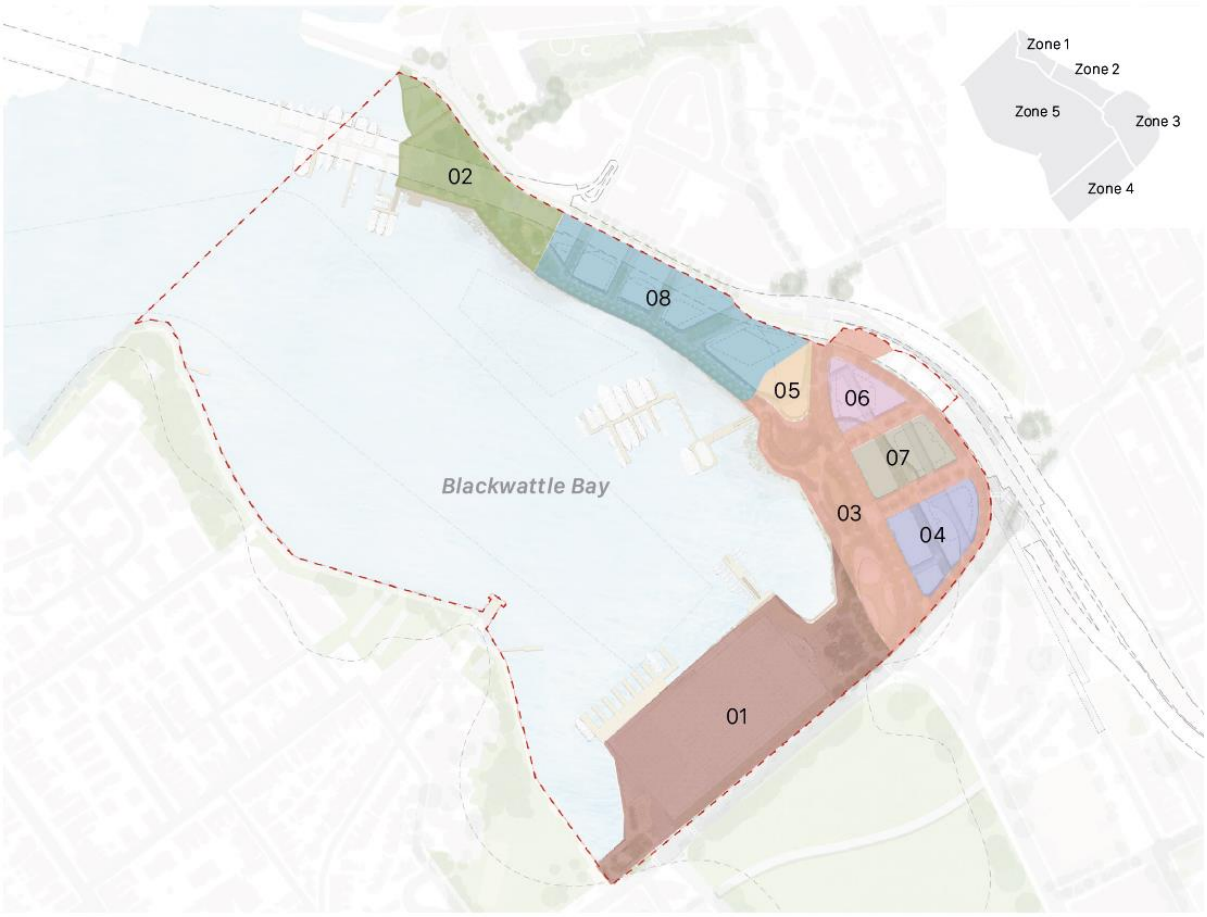


Figure 47: Indicative staging plan
Source: FJMT

SR2.16 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.

A comprehensive team of specialist consultants has contributed to the analysis of the existing site conditions and context, needs, risks and opportunities. Recommendations have been put forward by each of the specialist consultants and considered, evaluated and, as appropriate, integrated into the urban design and public domain structure of the Precinct Plan. Refer also to the following specific discussion:

- ESD – Part G16
- Wind – Part G23
- Flooding – Part G21
- Noise and pollution – Part G22

G3. Public domain: public open space and streets

SR3.1 Consult closely with and obtain appropriate endorsement, to the extent that it relates to the approval of the planning framework, for all aspects of the Public Domain from the ultimate owner and manager. RMS will act as the owner and manager of the public domain on water and the City of Sydney will act as the owner and manager of the public domain on land unless and until alternative ultimate owners and managers are agreed by DPE and CoS.

Contextually, Blackwattle Bay is part of an important collection of strategic Sydney Harbour lands that include some of Australia's most world-recognised, iconic structures and destinations. Therefore, NSW Government is currently evaluating the most appropriate long-term ownership and management structure for the government-owned lands at Blackwattle Bay.

SR3.2 Provide a site analysis of existing physical features and conditions influencing the location and design of a continuous public domain setback from the foreshore on all sites on Bank Street. As envisaged in Volume 2 of the City's Open Space and Recreational Needs Study, this should take the form of a 30 metre public domain setback from the foreshore to the building alignment allowing at least 10 metres width of paths for pedestrians and cyclists; recreational open space; outdoor dining; community facilities, emergency access and the like. The analysis should include but not be limited to sea level rise, tides, flooding, noise and pollution, canopy and trees, heritage, character, function and use. Provide and compare options for its design. Any proposed departure from the dimensions specified above must be fully explained and justified.

A separate landscape site analysis is included in the Urban Design Statement. This analysis complements the urban design site analysis and detailed investigations by special consultants into areas including climate change resilience, flooding, tree canopy coverage, noise and air quality. The landscape site analysis provides an understanding of the particular landform and vegetation characteristics of the site and its context.

The proposed public domain setback along the foreshore is discussed under SR3.3 below.

SR3.3 Provide and compare options for the design of a continuous, unimpeded, publicly accessible, promenade and provision for cyclists located between the new fish market buildings and the head of Blackwattle Bay. Provide analysis of the future conditions and requirements of the fish market and how these will influence and interact with the promenade.

Options for the promenade have been tested and reviewed with key stakeholders. The options include a continuous 30m wide waterfront promenade as suggested by the Study Requirements, a 20m waterfront promenade and a variable width promenade with a minimum width of 10m. A description and analysis of the options is provided in **Table 14**.

Table 14: Analysis of foreshore promenade options

Option	Analysis
Option 1 30m width	• Provides a consistent linear movement and recreation space • Reduces the developable depth of Private Landowner sites to as little as 14m given the easements around the Western Distributor • A wide land dedication and minimal available building footprint renders renewal of the sites unfeasible • Apportions more of the open space allocation of the Precinct Plan to the more solar constrained section of the site reducing amenity and public benefit.
Option 2 20m width	• Increases the minimum width of the Area 2 sites to 24m.

	• Effective floor plates could only be achieved on Area 2 sites with zero lot or minimal side setbacks, effectively creating a wall of built form with little opportunity for sun access through to the public domain. • The limited dimension between the vertical easement to the Western Distributor and a 20m wide waterfront promenade would be a significant constraint and disincentive to site renewal. The developable portion of the shallowest sites, above the height of the Western Distributor, would be less than 30% of the total site depth.
Option 3 variable 10m width	• A responsive and optimised approach that reflects site constraints and maximises the public benefit and opportunity for renewal • A minimum 10m wide promenade is defined in Area 2 with laneway connections through to Bank Street providing potential for pocket plazas. • The minimum width promenade is zoned for slow and medium pace movement including recreational cycling. • The promenade expands in width and integrates with open space at Bank Street open space, Miller Street reserve, Waterside Park and the Urban Park.

Option 3 is the preferred option. The variable width approach to the promenade places open space and public domain where they can provide greatest public benefit. The minimum promenade width of 10 metres applies to only 17% of the promenade length and in these locations is complemented by a 7 metre colonnade and Pedestrian Lanes. The promenade expands into open spaces that can provide a range of recreational, community facilities and social infrastructure. As shown in **Figure 48**, more than 60% of the foreshore promenade is greater than 30 metres wide, when combined with the adjacent open space.

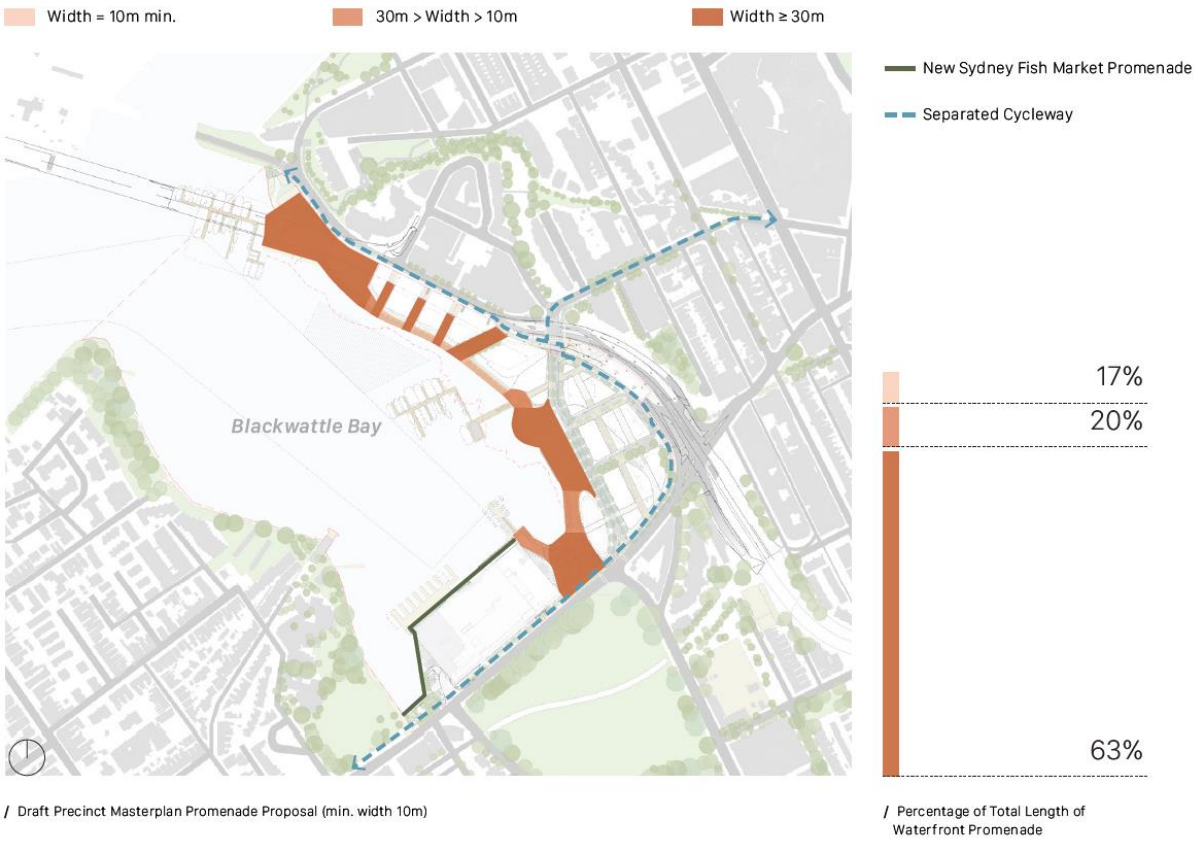


Figure 48: Proposed promenade variable widths
Source: FJMT

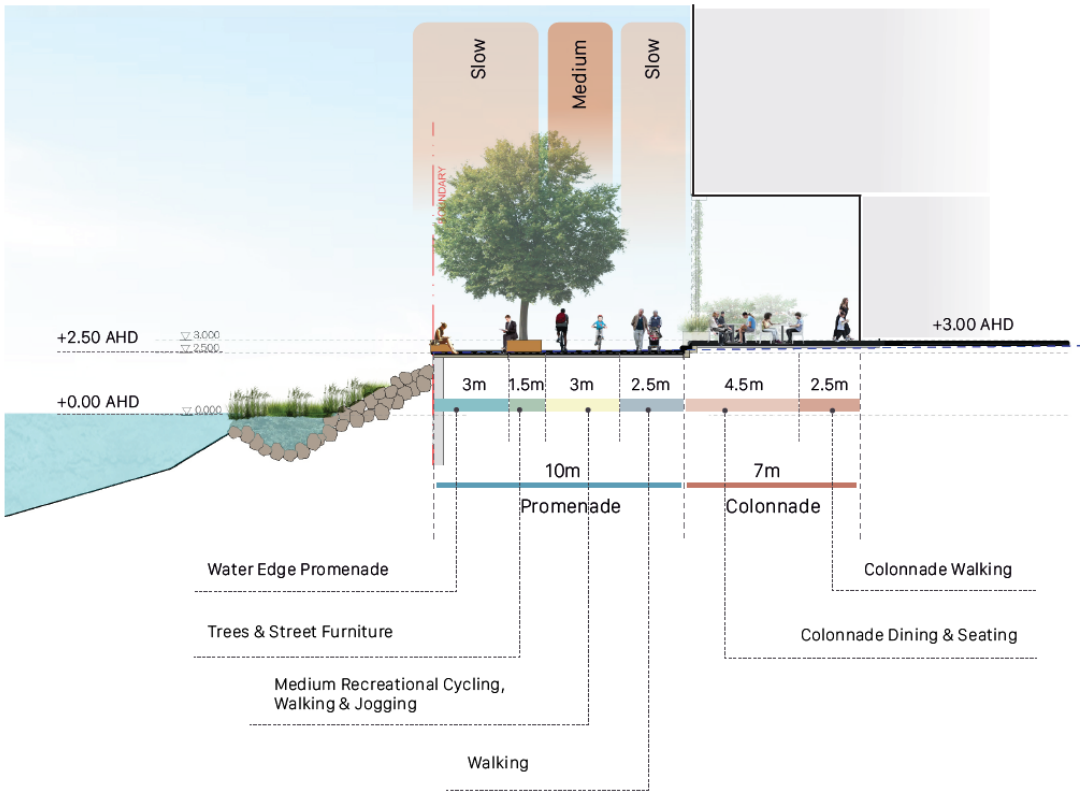


Figure 49: Typical Area 2 promenade section
Source: FJMT

The timing of sequence of renewal of sites in Area 2 will depend on the individual interest of private landowners. Delivery of the continuous waterfront promenade may require an interim solution to allow connection to be established between the Bank Street open space and Waterside Park. A floating promenade could be established past one or all of the Area 2 sites.

SR3.4 Provide an analysis of the physical connections between the northern part of Wentworth Park and the Bays Market District. Identify opportunities and options for improving connectivity for pedestrians and cyclists between the two across Bridge Road while ensuring the primary function of Wentworth Park for active recreation is not reduced and, where possible, enhanced.

Under the Precinct Plan, improved connectivity for pedestrians and cyclists is achieved by:

- the proposed removal of the left turn slip lane from Wattle Street to Bridge Road which will simplify pedestrian and cyclist access to Blackwattle by creating a singular road crossing
- providing a distinguishable point of access via the proposed community building (BLD.07) that evolves as an extension of the green space ground plane, while also delineating an immediate separation between cars and the movement of pedestrian and cyclist through the precinct
- providing the principal open space (Waterside Park) along the southern water's edge of Area 3 which will act not only as a continuation of the green space of Wentworth Park but as a visual connection between Wentworth Park and Blackwattle Bay
- improved public domain along Bridge Road as a result of the new Sydney Fish Market which involves raising Bridge Road to the same height as Wentworth Park and providing a signalised intersection with Wentworth Park Road.

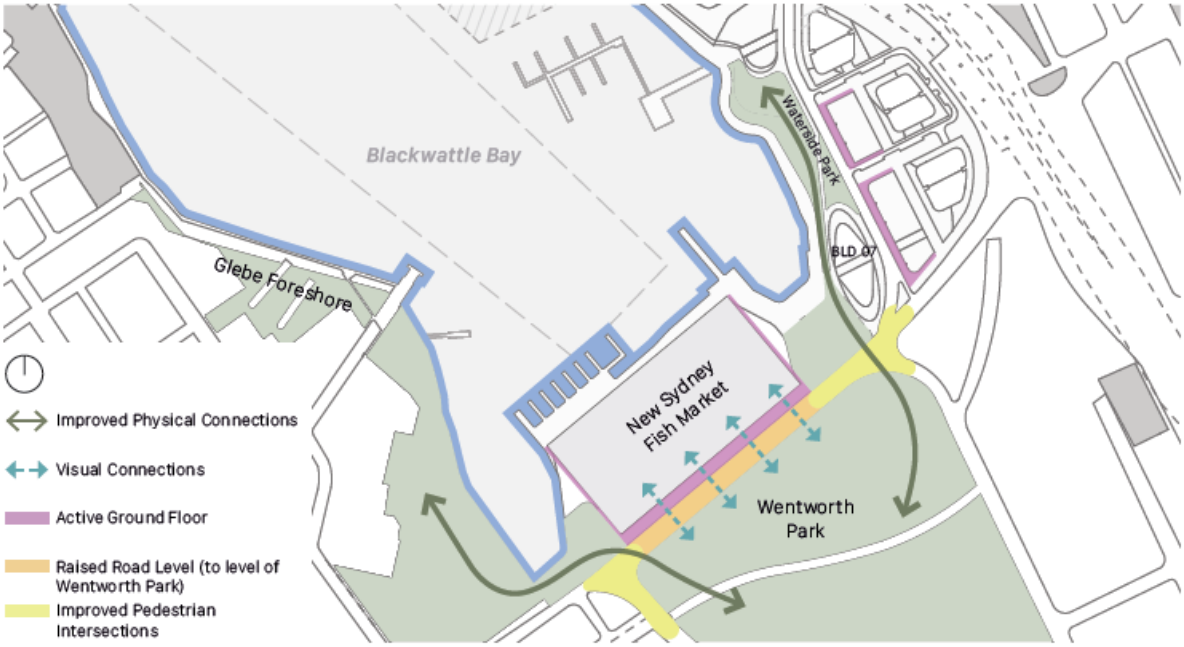


Figure 50: Improved connectivity between Wentworth Park and Blackwattle Bay (Source: FJMT)

SR3.5 Provide an analysis of the physical connections between Central Sydney, existing light rail stations and bus stops, and the precinct. Identify opportunities and options for improving pedestrian connectivity between them. Include any works required outside the precinct boundary.

Future developments within the city and the proposed Precinct Plan will ultimately change and reconfigure access and pedestrian movement across the precinct. These include upgrades to Darling Harbour, the new Pyrmont Metro station and Tech Central at Central Station. There is the potential for a north / south pedestrian link via UTS and Jones Street to Blackwattle Bay, including a proposed pedestrian and cycle link extension to Jones Street, which will offer a safer arrival point and integration into Blackwattle Bay, the new Sydney Fish Market and further transit connections.

Existing site conditions present a series of barriers between Blackwattle Bay and the Light Rail Network. A number of improvements to pedestrian connectivity and legibility are proposed between the light rail stations and Blackwattle Bay as shown in **Figure 51**.

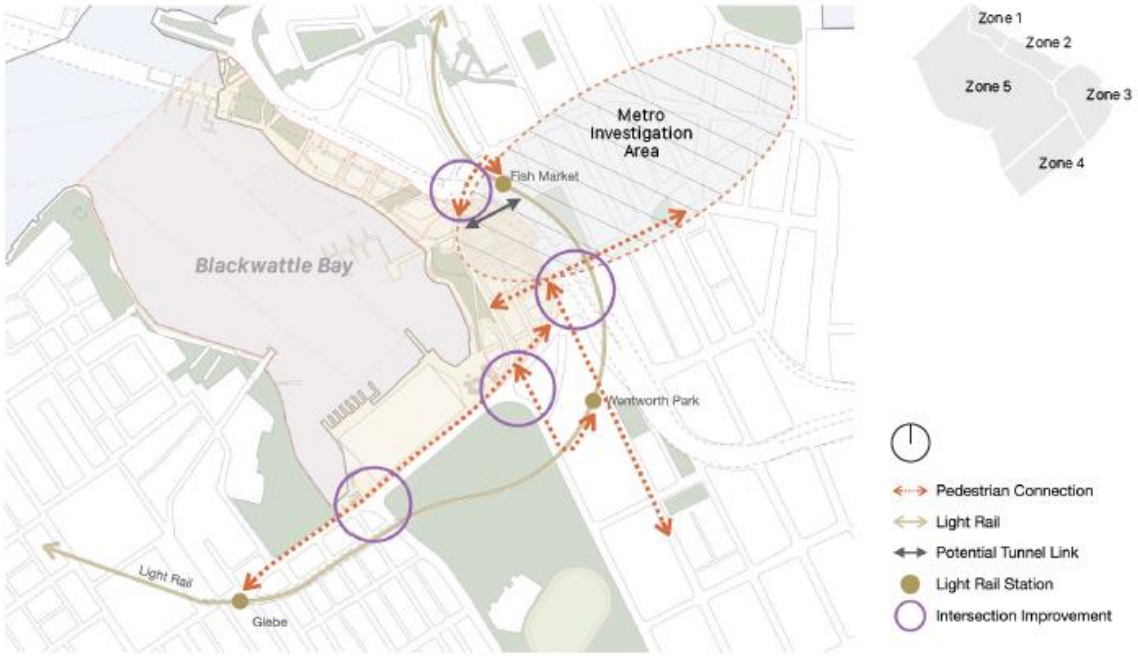


Figure 51: Proposed pedestrian connections to light rail stations
Source: FJMT

SR3.6. Provide an open space plan for the Precinct, based on providing a 30 metre wide public domain promenade. Demonstrate:

- how accessibility to the promenade is maximised by its surrounding street interfaces
- how the flexibility and adaptability of use is maximised
- how it is protected from noise and pollution
- how it connects to the former Glebe Island Bridge as a possible future active transport connection to the other precincts within the Bays
- how it connects to the existing foreshore walks in Glebe and Pyrmont
- and how connections to it optimise its use for the surrounding community.

Explore opportunities to locate within it suitable public and community uses which may include built structures and unenclosed areas for outdoor dining.

The open space plan should also integrate outcomes of the Bays Precinct Social Infrastructure Assessment previously undertaken by the proponent to inform programming, type and size of sub-spaces to be provided within the precinct.

Any proposed departure from the dimensions specified above must be fully explained and justified including how the requirements of 3.2 and 3.6 are appropriately met within the proposed dimensions.

An open space plan has been prepared for the proposal as described in Part F1.2 and shown in **Figure 30**.

Accessibility to the promenade from surrounding streets

Accessibility to the promenade from surrounding streets is maximised by extending the alignment of existing streets. This not only provides visual connection to the bay but also supports pedestrian legibility and accessibility. The key street alignments are Wattle Street, Gipps Street, Miller Street and

Quarry Master Drive. The existing street alignments are complemented by new through site links from Bank Street to the waterfront promenade.

Flexibility and adaptability

Flexibility and adaptability are maximised through the proportions, geometry and positions of the individual spaces in the network. The configuration of the open spaces and relationship to built form also buffer the public gathering and recreation areas from local noise and pollution sources, particularly the Western Distributor and Pyrmont Bridge Road.

Noise and pollution

Protection from noise and pollution, particularly from the Western Distributor and Pyrmont Bridge Road, is achieved through the configuration of the open spaces and built form which provides a buffer to public gathering and recreation areas,

Potential link with Glebe Island Bridge

Pedestrian and recreational cycle movement along the waterfront promenade intersects with the proposed separated cycle path along Bank Street near 1-3 Bank Street, providing the opportunity to link with Glebe Island Bridge should it become an active transport link.

Connection to existing foreshore open space

A key objective of the open space plan is the connection to the existing foreshore walks and open spaces. The Precinct Plan provides a continuous waterfront pathway from the north of the Pyrmont peninsula through to Urban Park with pedestrian and cycle connections from Urban Park to the new Sydney Fish Market reflecting the DA approved configuration.

Access to open space from surrounding community

Direct access to the open space from the surrounding community is provided by:

- Direct frontage to Bank Street for the Bank Street open space and Miller Street reserve
- Clear vistas and linkages to Waterside Park from Miller Street via Park Street, Gipps Street and Pyrmont Bridge Road
- Improved connections to the precinct from Wentworth Park (as discussed under SR3.4)
- Improved connections from Glebe via the Sydney Fish Market promenades.

Public and community uses

The open space plan presents opportunities for a range of landscape characters and for different public and community uses that could be accommodated in the individual open space areas. The characters and potential uses of the various open spaces within the Study Area are explored in the Urban Design Statement.

Social infrastructure

The proposed open space complies with the local open space opportunities and benchmarks identified in the Blackwattle Bay Social Sustainability Assessment by Elton Consulting (**Attachment 16**). Along with providing passive and active open space in excess of that required for the future population on the site, the combined space can also support activities such as open air markets, performances and practice of First Nations culture.

SR3.7: Provide a layout plan of the public streets, lanes and walkways, identifying street hierarchy, typologies, movement patterns for all modes of travel, connectivity to the surrounding area and the development lots. Consider reopening former streets, reconnecting existing streets and street widening where beneficial. Provide and compare options for the street layout. 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.

The Precinct Plan creates a clear and permeable urban structure that prioritises connectivity and access to the foreshore consistent with the Urban Design Principles. The proposed street hierarchy is shown in **Figure 33**.

Three options were considered for the street layout:

- Scenario 1 - Traditional street and lane model with separate pedestrian zones
- Scenario 2 - Pedestrian focus with limited vehicular movement within study area
- Scenario 3 - Shared street environment with low vehicle speeds, paved streets and pedestrian priority.

Public comment on the three options was sought in March 2020. The preferred option is most closely aligned to Scenario 3 overlaid with the original foreshore line and organic influences of Scenario 2.

Detailed sections and plans for typical conditions in each type of street are provided in the Urban Design Statement.

SR3.8: Using data from the Traffic and Transport study, 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.

Four intersections have been identified as key points for interaction between pedestrians, cyclists and vehicles:

- Miller Street/Bank Street
- Pyrmont Bridge Road/Bank Street
- Wattle Street/Bridge Road
- Bridge Road/Wentworth Park Road.

The location of the intersections is shown in **Figure 52**. The proposed improvements will ensure that all four sides of each intersection will be safe for crossing.

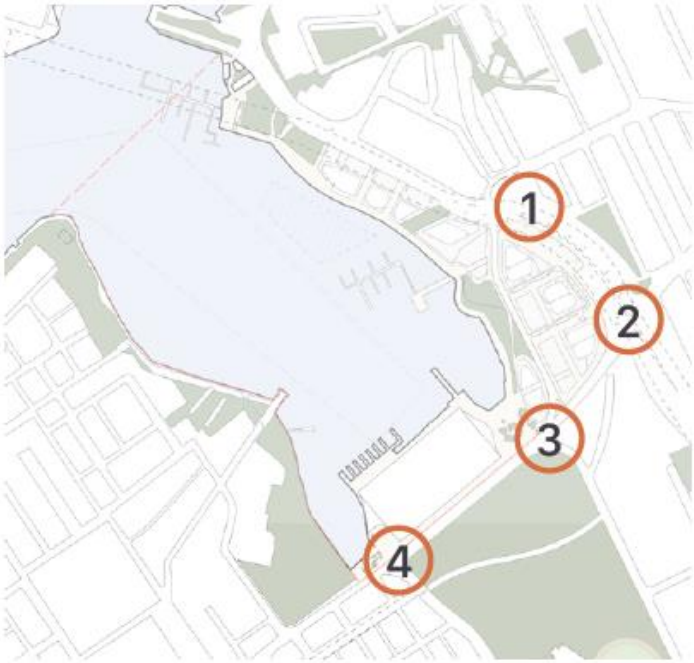


Figure 52: Intersection upgrade locations
Source: FJMT

Proposed upgrades to the four intersections are shown in **Figure 53**.

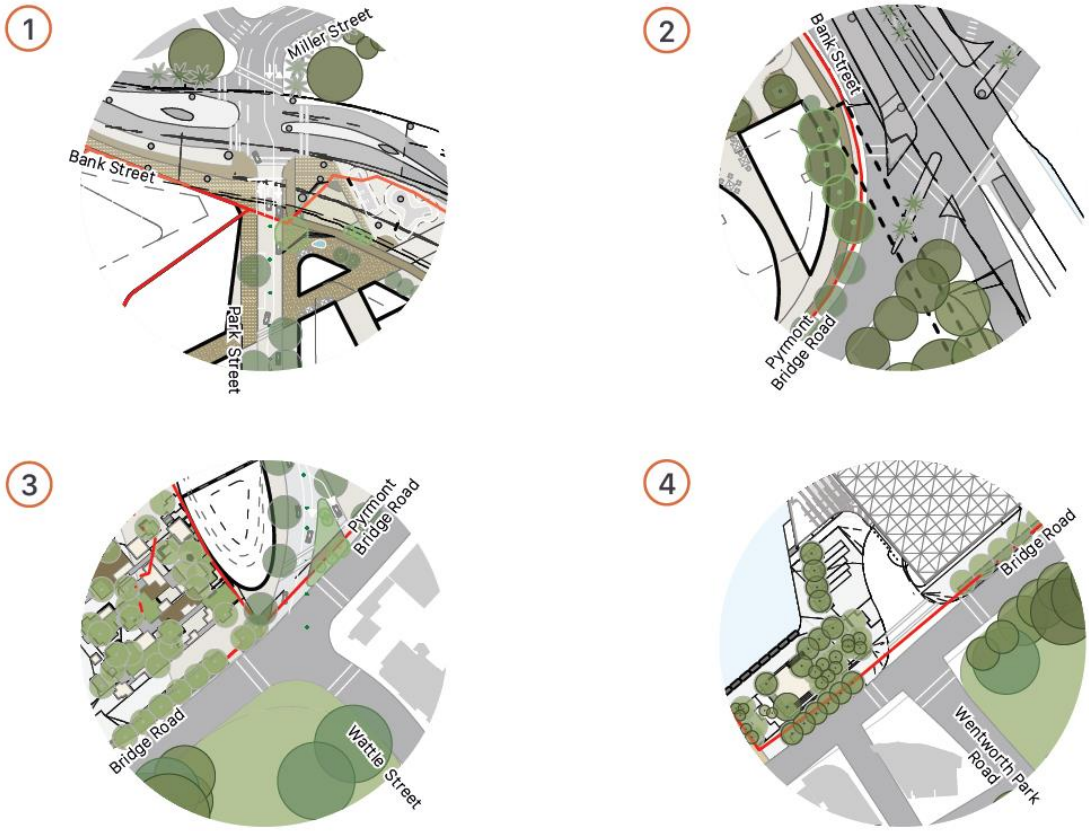


Figure 53: Proposed intersection upgrades
Source: FJMT

SR3.9: 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.

A general arrangement plan is provided in the Urban Design Statement. The proposed vehicular streets and lanes are contained within the Area 3 boundary and directly interface with existing road reserves without crossing other site boundaries. Vehicular access to private landowner properties is direct from Bank Street.

SR3.10: 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.

Refer discussion in Part F1.2.

SR3.11: 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.

The Precinct Plan is structured to promote legibility in the public domain, provide connected and safe spaces and clearly define public and private interfaces. Pedestrian and cyclist movement paths are designed to be open and visible, supporting passive surveillance. The mix of uses proposed in the Precinct Plan ensures that there is a level of background activity day and night that assists the sense of comfort and security of users and minimises opportunity and attractiveness for potential inappropriate behaviour or activities.

A CPTED assessment is included in the Urban Design Statement and clearly demonstrates that the CPTED principles can be achieved.

SR3.12: 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.

The WSUD Strategy for Blackwattle Bay has been prepared with reference to the 'Water, Riparian, Flooding and Stormwater Study' prepared by Cardno (**Attachment 12**). The indicative WSUD Strategy is shown in **Figure 54**. The public domain and private open space landscape character has been developed to deliver the water quality / quantity targets as set out in the Cardno report.

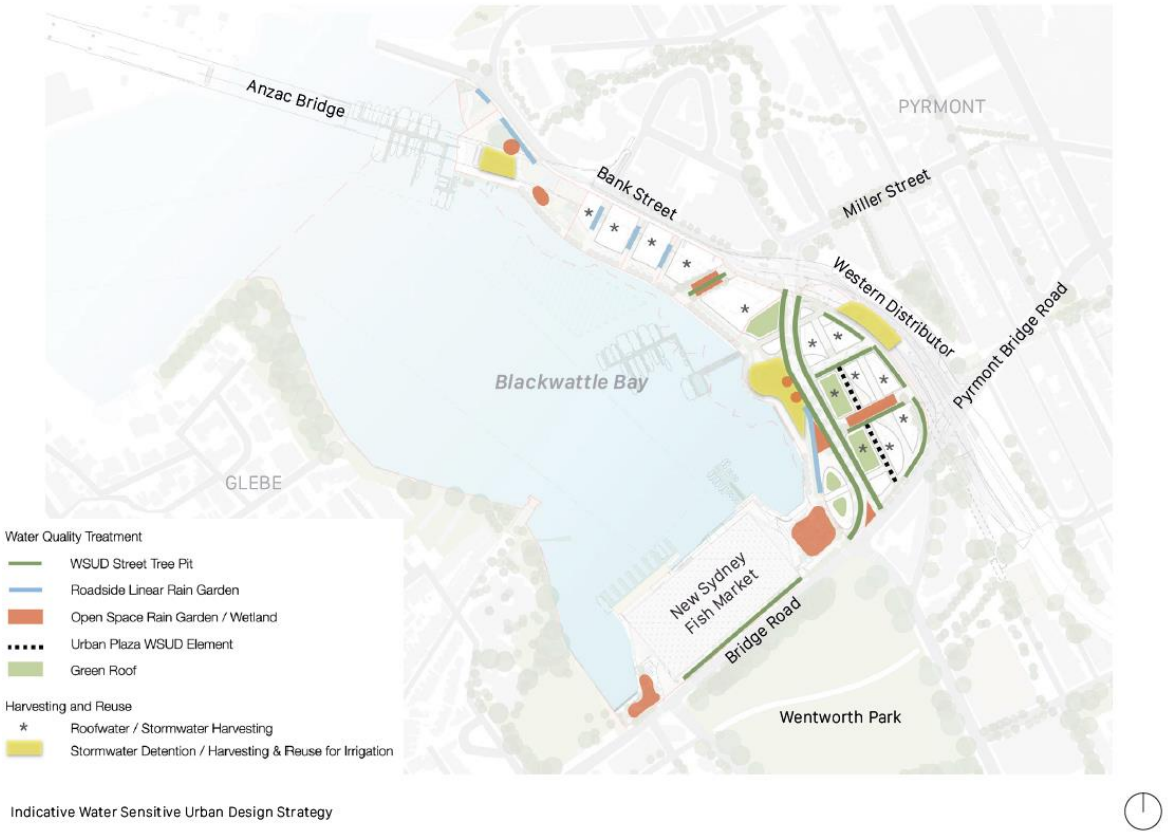


Figure 54: Indicative WSUD Strategy
Source: FJMT

SR3.13: Provide an indicative material and furniture palette for all areas of public open space and the various street types.

An indicative material and furniture palette is outlined in the Urban Design Statement. Future material selection will consider the CoS Street Codes Part C Character Areas and Palettes.

SR3.14: 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.

The proposed street network in the Precinct Plan has been developed with input from the CoS and in line with the Streets Code 2013. The street widths incorporate pedestrian and public domain furniture zones appropriate to the hierarchy in the network.

G4. Land use and planning controls

A draft SEPP is proposed to amend SLEP 2012, the Harbour SREP, SREP 26, ISEPP, SRD SEPP, SSP SEPP and Codes SEPP as part of the Explanation of Intended Effect (**Attachment 10**). A draft Design Code has also been prepared (**Attachment 14**).

SR4.1: Consider and coordinate the findings of other parts of this study to ensure the vision and planning outcomes are achieved through the planning controls and future development.

Development of the proposal has involved an extensive and iterative process whereby design has been informed and tested by the findings of technical specialist investigations as well as feedback from public and stakeholder consultation.

SR4.2: Demonstrate a fair and impartial distribution of development potential between government and privately owned sites, subject to individual site constraints.

As noted in Part G2, land ownership was not a consideration in determining the appropriate development potential. Rather, it was the existing site conditions, broader strategic objectives, urban design principles and environmental ambitions that guided the development of building envelopes.

SR4.3: Assess the consistency of the proposal against relevant State and local plans, strategies and policies.

Part B of this study assesses the consistency of the proposal against relevant state and local plans, strategies and policies. This assessment has determined that the proposed rezoning is generally consistent with the key directions of these documents, in particular by providing new jobs and housing close to transport and services, and by offering significant public benefits in terms of new and enhanced open spaces along the harbour foreshore and improved pedestrian/cycling connectivity.

SR4.4: Assess the consistency of the proposal against the principles of Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005.

An assessment of the proposal against the principles of the Harbour SREP is provided in Part B6.9.

SR4.5: Demonstrate how relevant Actions of the Greater Sydney Commission's draft Central District Plan are met.

Refer to **Attachment 9**.

SR4.6: Demonstrate how any relevant existing development consents have been considered.

Relevant existing development consents include:

- New Sydney Fish Market Concept and Stage 1 SSDA (SSD-8924)
- New Sydney Fish Market Stage 2 SSDA (SSD-8925)
- Sydney Heritage Fleet Maritime Facility Part 3A Project Approval (MP11_0001)
- Maritime Facility (former Sydney Heritage Fleet) Part 3A Modification Approval (MP11_0001 Mod 3).

The new Sydney Fish Market is an integral element of the Precinct Plan and has informed all relevant aspects of the design and evaluation process.

The approval for the Maritime Facility (MP11_0001 Mod 3) limits its operation to five years. Options for its future operation landside are currently being investigated. Any decision regarding its future operations will ensure that the recreation function and proposed activities for the Bank Street open space area are not impacted.

SR4.7. Identify management approaches (including complementary land use approaches such as buffers) to address any potential risks associated with land use conflict in relation to key employment and urban service lands. This should also include the identification and mapping of buffers around the operation of potentially hazardous activities and industries (including Port

Related Infrastructure) that have been granted environment protection licences. Buffers will vary based upon the level of risk of impacts on the surrounding community.

Management approaches to addressing potential risks associated with surrounding land uses have been considered in the Air Quality Assessment Report (**Attachment 17**), the Noise and Vibration Assessment (**Attachment 18**) and the Human Health Risk Assessment (**Attachment 19**). A discussion on the risks and recommended management approaches is provided in Part G22.

SR4.8: Explain the proposed land use and zoning approach and provide justification for the mix and location of proposed land uses. Where zones which permit residential uses are proposed, provide a thorough analysis of the suitability of the site for those uses taking into consideration the findings of all other relevant parts of this study.

Refer discussion in Part F2.

SR4.9: Provide draft zoning and planning controls to amend *State Environmental Planning Policy (State Significant Precincts) 2005* including zoning, maximum building height, FSR heritage, lot size, maximum parking rates, active frontages, design excellence provisions and any other provisions needed to achieve the intended planning outcomes. Prepare for each individual block controls with graduated height and future lot FSR and include residential and non-residential floor space mix requirements. SEPP controls are to be consistent, where possible, with the City of Sydney's planning controls.

Refer discussion in Part F3.

SR4.10: Justify the proposed development standards identified in 4.9. 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 compliance with amenity standards including the Apartment Design Guide, are achieved.

Refer discussion in Part F3.

SR4.11: Develop a design excellence approach which encourages a competitive design process and excellent design outcomes. The City of Sydney's Design Excellence policy framework is the appropriate model.

To ensure the achievement of design excellence it is proposed that a new site-specific clause for the precinct includes provisions that stipulate that proposals for new major buildings are required to demonstrate and achieve design excellence through one of the following means:

- undertaking and completing a competitive design process in accordance with the CoS's Competitive Design Policy, or
- undertaking and completing a design excellence process that has been agreed with the NSW Government Architect.

As discussed in Part B6.4, the new Design and Place SEPP proposes to introduce a robust and consistent design excellence process. As the new SEPP is likely to have been introduced by the time development occurs in Blackwattle Bay, it is considered appropriate that the option for undertaking a design excellence process agreed with the NSW Government Architect should be made available.

SR4.12: Prepare a draft DCP, design code or the like, compliance with which is referenced in the proposed SEPP controls and is in a form able to be integrated with the Sydney DCP 2012. It should include appropriate development controls to inform future development of the precinct including: public domain, street hierarchy and typologies, connectivity, car parking, car share parking, bike parking, access and circulation, building footprints, heights including street frontage and podium, setbacks, building typologies, private open space, space for waste management, sun access, public art and heritage.

A draft Design Code has been prepared in accordance with this requirement (**Attachment 14**).

SR4.13. Detail and provide justification for the mix and location of proposed and existing land uses having specific regard to acoustic compatibility between noise generating and noise sensitive land uses.

The block layout of the Precinct Plan has been carefully arranged to support a mix of uses and minimise exposure of sensitive uses to negative environmental impacts such as noise and poor air quality. Commercial uses are located in the more challenged environments while more sensitive uses including residential, community facilities and childcare are able to be vertically and horizontally distanced from environmental constraints.

A consistently applied principle in the Precinct Plan is the vertical separation between the residential uses in Areas 2 and 3 and the noise source of the Western Distributor. Residential zones are introduced on the 9th storey across the site mitigating the impact of the Western Distributor primarily through distance. BLD 02 is an exception as its location is more horizontally separated from the main traffic lanes than other buildings.

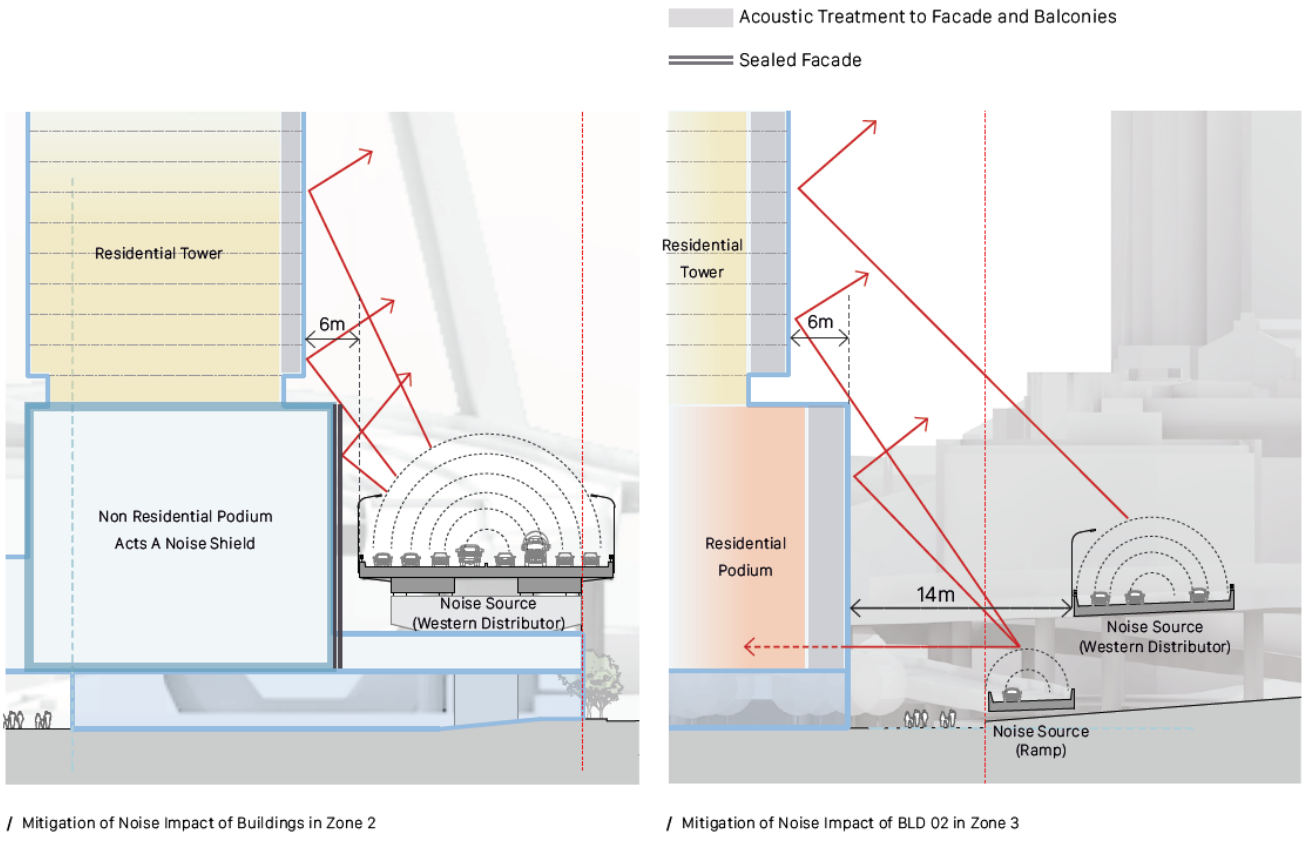


Figure 55: Mitigation of noise impacts from Western Distributor
Source: FJMT

Further discussion on noise impacts and recommended mitigation measures is provided in Part G22.

SR4.14. Provide draft zoning and planning controls to amend State Environmental Planning Policy (State Significant Precincts) 2005 including maximum building height, FSR, heritage maps and noise compatibility requirements to ensure that potential noise related land use conflicts are identified, and where necessary addressed at the design and construction stage of development.

Draft zoning and planning controls have been prepared (refer Explanation of Intended Effect - **Attachment 10**).

G5. Traffic and transport

SR5.1: Prepare a comprehensive transport impact assessment, including maritime users: understand the transport network context, service and network limitations; identify transport solutions that will accommodate planned growth through integrating land use and transport and better managing travel demand and; identify opportunities for improving customer experience.

SR5.3 (In summary) the assessment should consider, but not be limited to:

- Definition of a study area to be agreed by TfNSW, RMS, CoS and DPE
- A broad review of the existing and future land use and transport context
- Appraisal of current travel mode share
- Assessment of travel needs, behaviours and patterns of a broad range of future customers
- The transport outcomes and the effect of the transport network on the urban and placemaking outcomes for the precinct
- Access and connections to key destinations and infrastructure in the local area
- Road safety
- Location of existing and future wharves, maritime safety for vessels accessing any wharves / berths
- Access and egress and services arrangements for the new fish market
- Performance of the existing and future pedestrian, cycling, public transport and road network
- Future needs of all water users
- Consult with RMS if a ferry service is proposed
- Undertake an assessment of trip generation rates of Sydney Fish Market
- Cumulative growth of the surrounding area
- Establish a flexible and resilient system of access corridors (that considers the City of
- Sydney's Liveable Green Network). Outline how this system of access corridors will drive visitation to the new Sydney Fish Market and strengthen Sydney's visitor and tourist economy
- Develop a traffic model to determine improvements to the movement network required to support the proposal,
- Detail the transport infrastructure and servicing improvements including identification of both the land (corridor preservation) and capital components to support the proposal
- Consider the role of shared vehicles and automated vehicles in managing travel demand
- Provide recommendations for land mix use designed to manage travel demand and create a walkable neighbourhoods
- Assess impact of the proposal on the surrounding suburbs of Glebe, Ultimo and Pyrmont as well as Sydney Secondary College, Blackwattle Bay Campus
- Provide recommendations for car, car share and bicycles parking rates
- Provide recommendations on the extent of end of trip facilities required
- Provide a strategic level assessment that demonstrates that on-site parking, servicing,
- access and egress requirements can be designed in accordance with RMS and CoS
- guidelines and relevant Australian Standards.

- Prepare a staging plan that has trigger points for potential future development based on
- the delivery of transport infrastructure and service improvements
- Prepare a draft Travel Plan

AECOM has prepared a Transport Management and Accessibility Plan (TMAP - refer **Attachment 4.1**). The TMAP has also been informed by the Blackwattle Bay Navigation Study prepared by Royal HaskoningDHV (**Attachment 4.2**).

The TMAP comprises the following:

- An outline of the strategic context having regard to NSW Government and CoS transport and land use initiatives
- A review of the existing transport and land use context
- Consideration of the future transport and land use context, identifying planned transport infrastructure projects around Blackwattle Bay as well as future transport technology and traffic impacts
- An understanding of the Blackwattle Bay Precinct Plan vision and objectives along with a range of complementary transport enablers, indicators and targets
- A validation of the vision, covering the transport assessment and a summary of traffic impacts
- A package of actions for workers based in Blackwattle Bay designed to minimise car use and maximise the number of people walking, cycling and catching public transport
- Identification of transport and traffic strategies that respond to the Blackwattle Bay Precinct Plan with a range of walking, cycling, public transport and traffic interventions
- An assessment of construction traffic impacts
- A summary of the proposed delivery, staging and implementation of transport infrastructure, services, policies and strategies.

It should be noted that a number of the Study Requirements detailed above, for example, estimating the traffic impact of the Sydney Fish Market, have been addressed and satisfied as part of the Concept and Stage 2 SSDAs for the new Sydney Fish Market.

The TMAP identifies a number of transport challenges for Blackwattle Bay, including:

- The road network surrounding the Study Area is congested and highly constrained
- Current travel behaviour suggests that the road network would need to accommodate a third of future trips generated by Blackwattle Bay in peak periods
- The existing Western Distributor ramps will continue to attract through-traffic to Blackwattle Bay
- Walking and cycling routes between Blackwattle Bay and public transport stops and major transports hubs are steep in gradient and lack activated frontages
- Wayfinding to key attractions and services in the area is poor
- Pedestrian crossing facilities do not cater for existing demand
- New site traffic access movements will increase right-turn vehicle movements at key intersections, potentially increasing delays and queuing if not managed
- Existing public ferry fleet operated by Harbour City Ferries is unable to access Blackwattle Bay due to low-wash area at Blackwattle Bay.

The TMAP also identifies a number of opportunities:

- New foreshore connection between Waterfront Park in Pyrmont and the Glebe Foreshore to create a continuous waterfront walking and cycling link between Glebe and Woolloomooloo
- The construction of a new crossing between Glebe Island and Pyrmont could support new walking, cycling and public transport links

- Ability to leverage Blackwattle Bay's proximity to the Goods Line to provide improved connections to Central Station
- New Sydney Metro West stations will increase public transport capacity in Blackwattle Bay
- New Sydney Metro West services may cause mode shift for east-west movements and reduce through-traffic in Blackwattle Bay
- Spare capacity on existing bus routes provides opportunity to reconfigure the bus network to better service Blackwattle Bay
- Private ferry operators with fleets that operate in low-wash areas, like Blackwattle Bay
- New development could provide end-of-trip facilities for cyclists
- New development could provide opportunities to employ travel demand measures such as car share and parking management
- Innovative transport solutions such as electric vehicles, autonomous vehicles and on-demand services could be trialled in Blackwattle Bay.

The TMAP sets an ambitious mode share target for Blackwattle Bay which seeks to prioritise walking, cycling and public transport use and reduce reliance on private vehicles. The mode share target for walking and cycling is set at 27%, public transport at 53% and private vehicle at 20%. While this target is ambitious, it is considered feasible subject to implementation of the strategies detailed in the TMAP.

Five goals were identified for the future transport network surrounding the Blackwattle Bay SSP Study Area:

- **Goal 1** - Reduce the need for vehicle infrastructure and encourage residents, employees and visitors to travel to and within the site by walking, cycling, or public transport rather than driving
- **Goal 2** - Create a network that accommodates all modes of transportation and prioritises active (walking and bicycling) and public transport first and private vehicles second
- **Goal 3** - Prioritise pedestrians and wheelchair accessibility by creating streets that are safe, comfortable, attractive, and appealing for walking
- **Goal 4** - Provide clear, safe and connected bicycle network via high-quality, on-street and off-street facilities including bicycle parking and storage throughout the Blackwattle Bay precinct
- **Goal 5** - Leverage existing and planned public transport infrastructure, including the new Pyrmont Station on Sydney Metro West Line, the three light rail stations on the L1 Dulwich Hill Line and local bus routes to recognise Blackwattle Bay as a multimodal precinct

To achieve these goals, modal strategies and actions were developed for:

- Walking and cycling
- Public transport
- Site access and parking
- Future transport

Walking

The walking strategy identifies actions to provide improved active transport facilities along surrounding key transport routes. Actions include:

- Providing new waterfront promenade along Blackwattle Bay
- Providing improved walking facilities between precinct and surrounding streets as well as key destinations such as Central Station and Sydney CBD, including:
  - Widening and enhancing the Bridge Road footpath adjacent to the new Sydney Fish Market
  - Providing a new signalised pedestrian crossing at Wentworth Park Road / Bridge Road

- Modifying the Wattle Street and Bridge Road intersection to remove the existing slip lane on the south-west approach of the intersection to improve pedestrian safety

- Investigating underground connection to new Pyrmont Metro Station and Fish Market Light Rail.

Potential walking initiatives are shown in **Figure 56**.

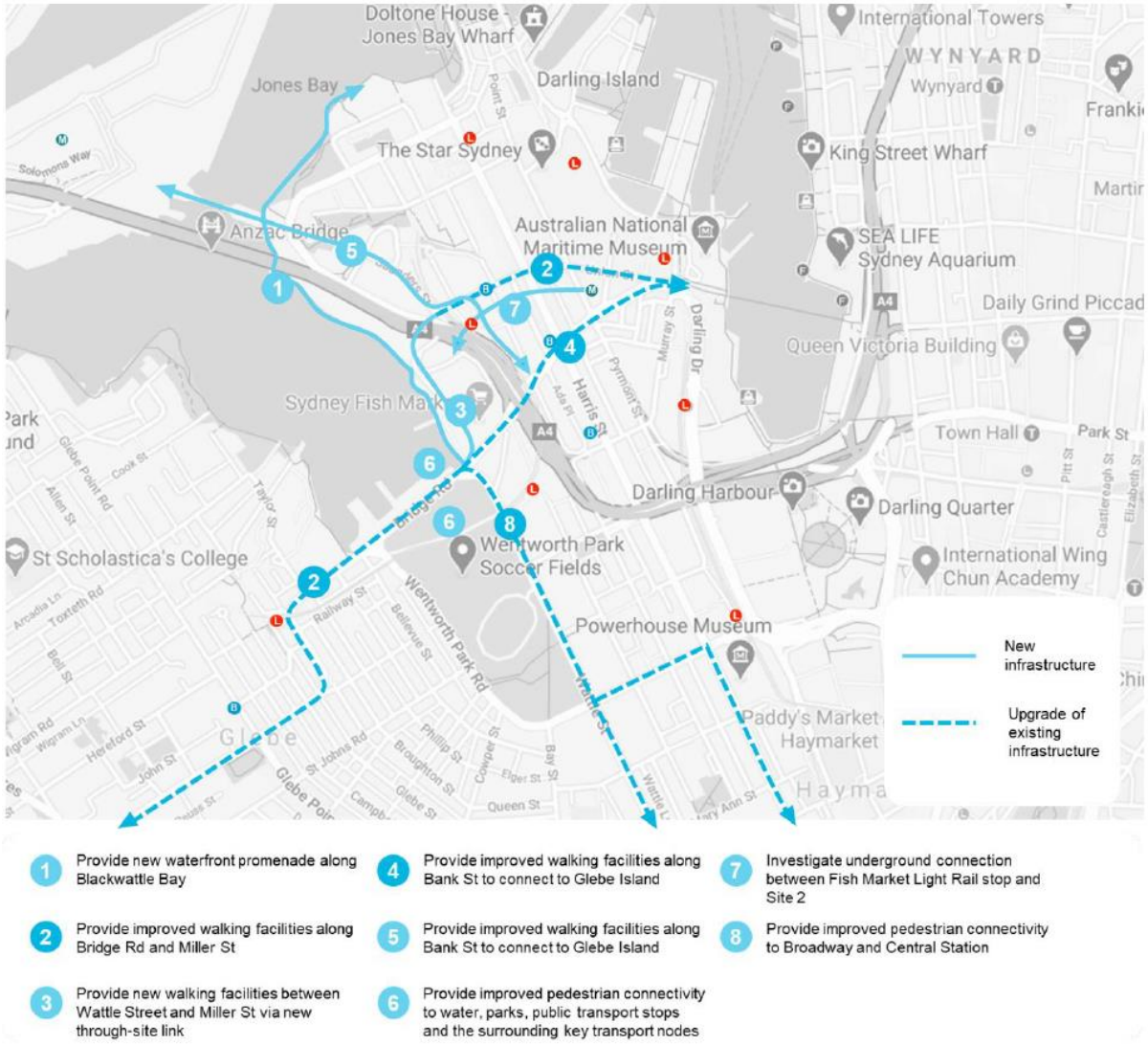


Figure 56: Potential walking initiatives
Source: AECOM

Cycling

The cycling strategy aims to encourage the use of cycling, increase local permeability and provide improved first and last mile connections between Blackwattle Bay and key transport facilities. Actions include:

- Providing new waterfront promenade along Blackwattle Bay for recreational cycling
- Providing improved cycling facilities between the precinct and surrounding streets and destinations, including shared path along Bridge Road and bi-directional cycle lanes on the Bank Street from Miller Street to Glebe Island Bridge
- Providing cycle parking and end of trip facilities around Blackwattle Bay.

Potential cycling initiatives are shown in **Figure 57**.

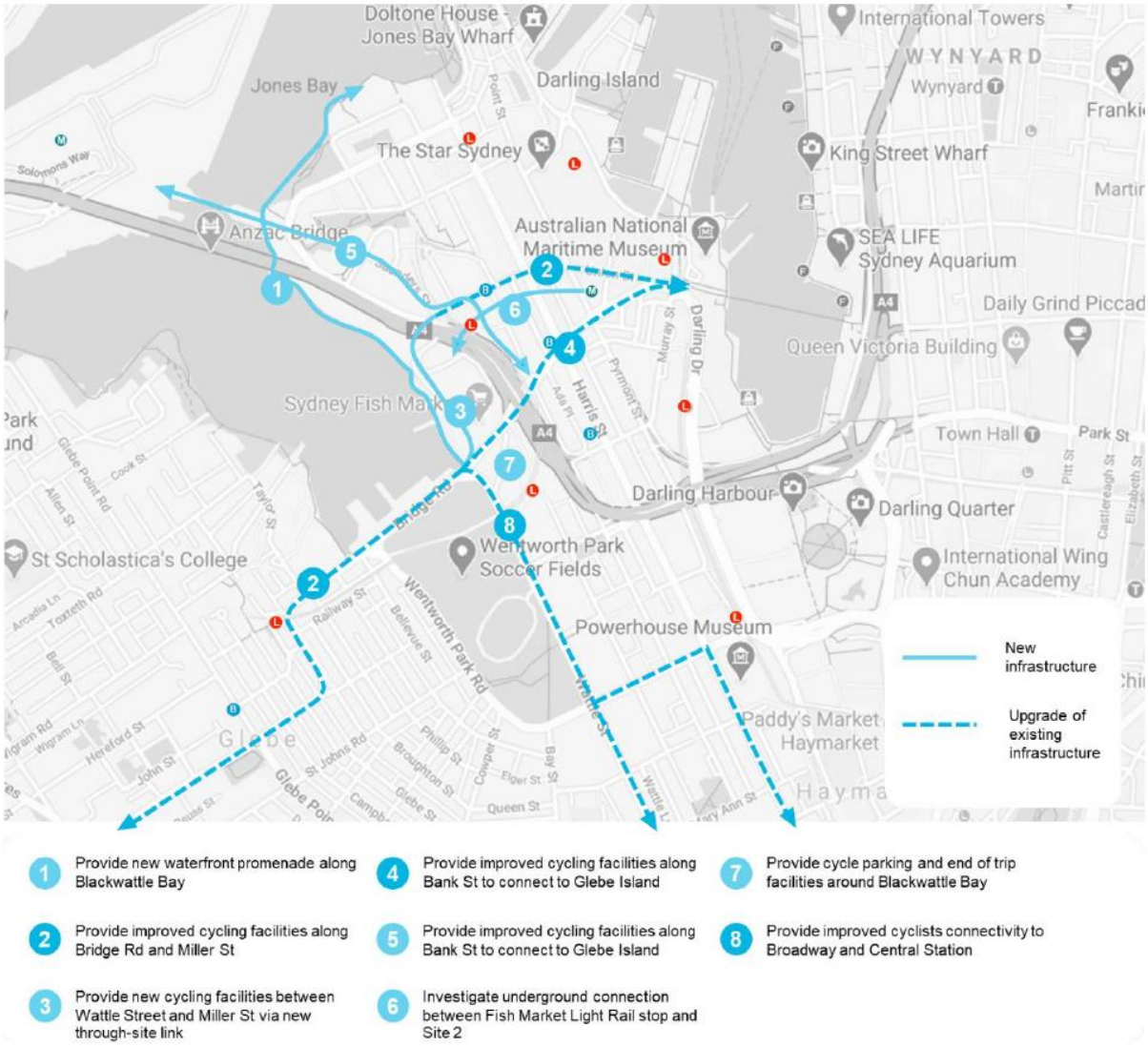


Figure 57: Potential cycling initiatives
Source: AECOM

Public transport

The public transport strategy aims to improve access to public transport around Blackwattle Bay. It includes actions to investigate increasing light rail service frequencies, reconfigure local bus routes, utilise water access and leverage off new Sydney Metro stations.

Potential public transport initiatives are shown in **Figure 58**.

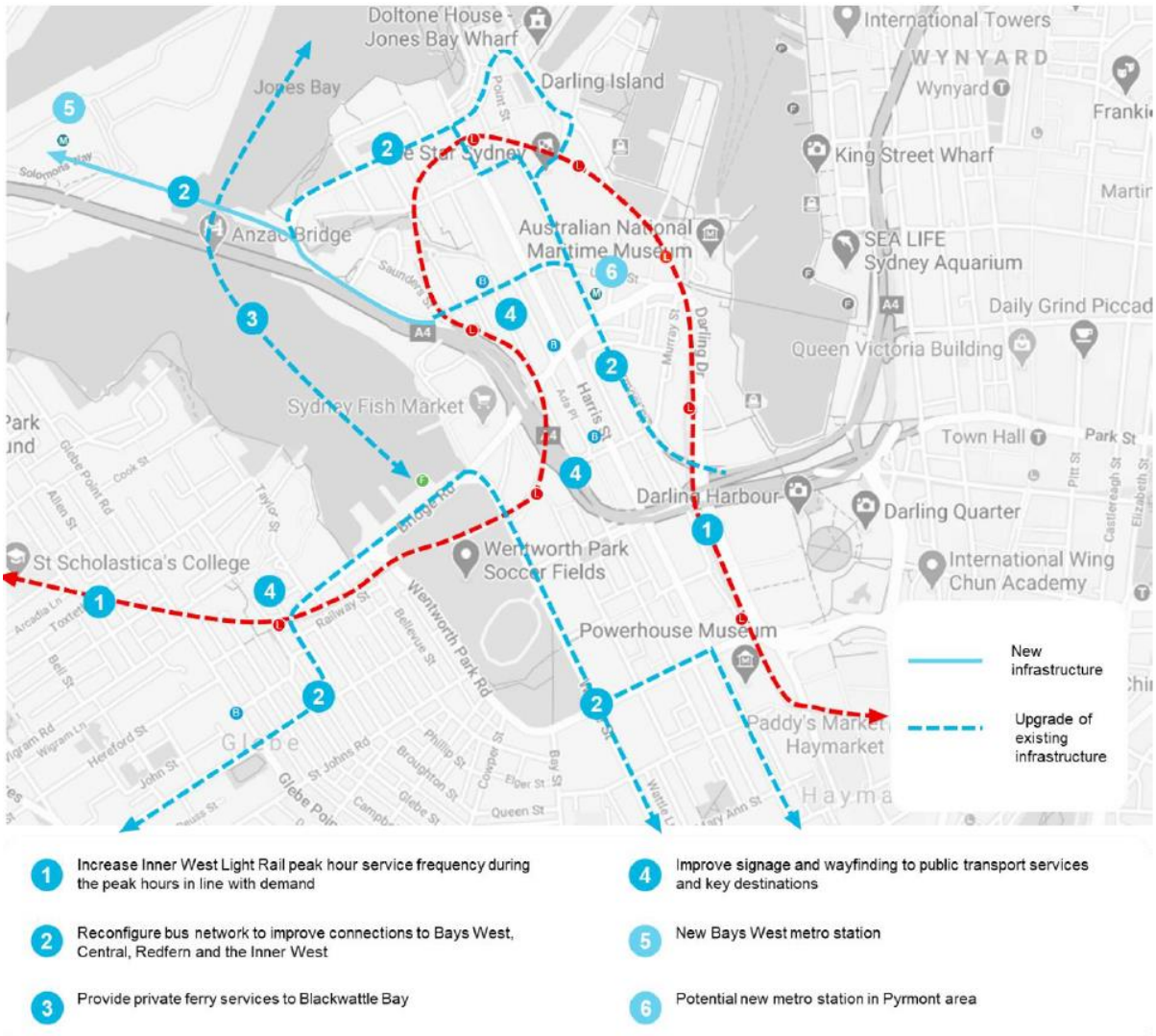


Figure 58: Potential public transport initiatives
Source: AECOM

Site access and parking

The site access and parking strategy aims to develop an effective and efficient vehicle and parking response and manage traffic demand to better utilise the existing road network. The target outcome is to reduce the reliance on private-car travel and thus minimise the impact of travel demand generated by Blackwattle Bay on the surrounding road network. Actions include:

- No increase in parking for new Sydney Fish Markets
- Stipulating maximum car parking rates for development
- Supporting use of car share programs
- Providing access to new Sydney Fish Market car park and loading area via new signalised intersection at Wentworth Park Rd/Bridge Rd
- Providing new local street network within Blackwattle Bay to facilitate local traffic movements within Pyrmont
- Managing on-street parking through appropriate street design and road space allocation.

Future transport

Part of the vision for Blackwattle Bay is that it will be a place of transport innovation. The future transport strategy for Blackwattle Bay therefore sets actions to investigate opportunities to provide

innovative transport technology and services such as on-demand transport, autonomous vehicles and electric vehicle infrastructure.

SR5.2. 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 (CoS).

The study area, scope and methodology were endorsed at project commencement at the end of 2017 and early 2018. The stakeholders included INSW (then UrbanGrowth NSW), the CoS and TfNSW (then Roads and Maritime Services). The framework was finalised in May 2018. Various other meetings were held with agency stakeholders over the course of preparing the TMAP. Stakeholder consultation is discussed in Part D.

SR5.4. Prepare required DCP / design provisions in collaboration with CoS and DPE.

Transport and parking provisions are included in Section 6 of the draft Design Code which reflect the overall approach to transport demand management. This approach has been developed in collaboration with CoS and DPIE.

SR5.5. Provide an overview of potential impacts of construction traffic on existing and potential future development. Identify a strategic construction approach, including identification of potential staging that broadly outlines the construction area and construction related traffic access.

While there is no formal construction program for the renewal of Blackwattle Bay, the potential construction activities and key stages, impacts and mitigation measures are considered in the TMAP.

The potential impacts from construction of the new Sydney Fish Market to traffic, transport and access were assessed as part of the Stage 2 SSDA (SD-8925). Condition B78 of the development consent required the preparation of a Construction Pedestrian and Traffic Management Plan prior to the commencement of works.

As part of the Blackwattle Bay SSP renewal, the current Sydney Fish Market will be demolished to make way for the proposed public open space and public domain as well as future building sites. Demolition work will occur once the Sydney Fish Market relocates to the new location at the head of Blackwattle Bay.

During the demolition of the current Sydney Fish Market, it is anticipated that the construction traffic routes would travel to and from the precinct via the State road network and main roads including the Western Distributor, Victoria Road and the City West Link, and enter the site through the Bridge Rd/Wattle St intersection. Anticipated construction traffic routes are shown in **Figure 59**.

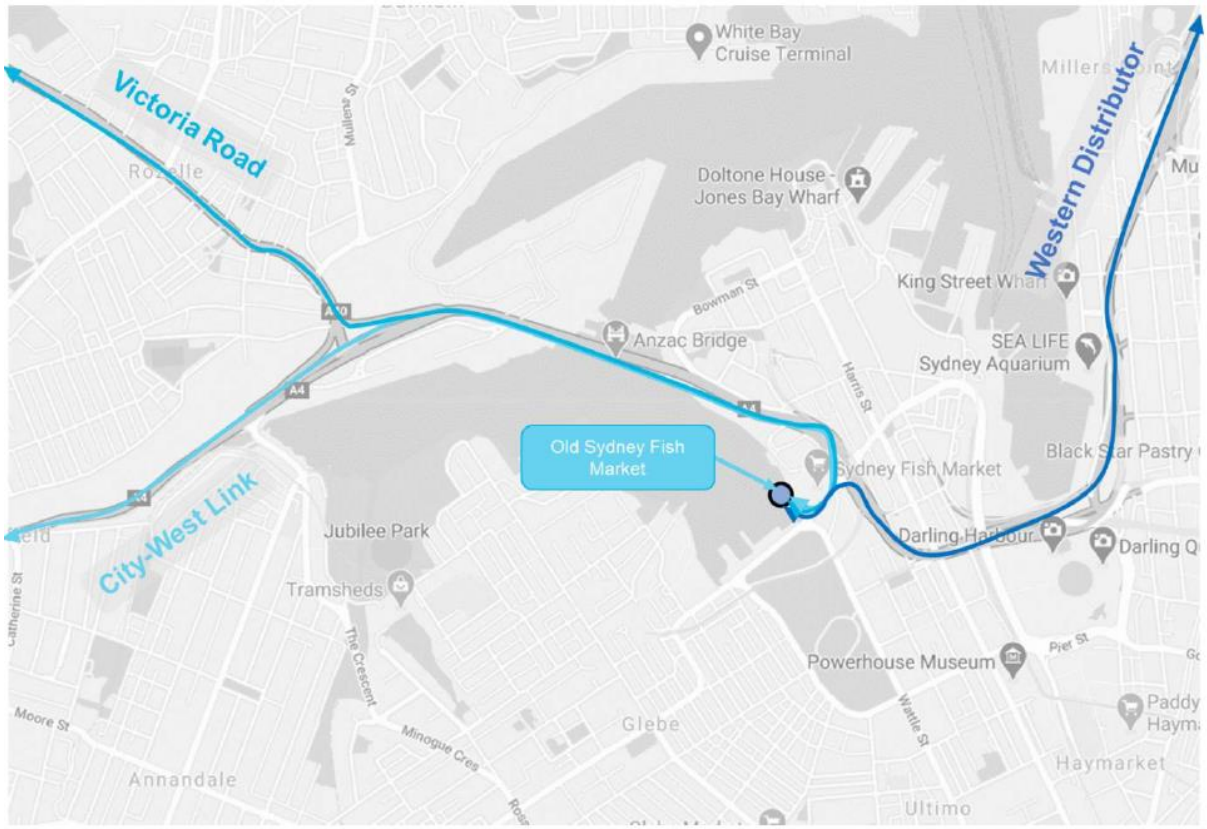


Figure 59: Potential construction routes to Blackwattle Bay
Source: AECOM

In accordance with usual practice, it is expected that Construction Traffic Management Plans would be required prior to demolition or construction occurring.

Further detail on construction traffic impacts is provided in the TMAP (**Attachment 4.1**).

SR5.6. Any proposed physical, access, maintenance, operational, urban design and heritage (if applicable) impacts on Roads and Maritime Services assets that form part of the proposal must involve consultation with and must be approved by Roads and Maritime Services.

Consultation has been undertaken with TfNSW (formerly Roads and Maritime Services) and is ongoing. TfNSW approval will be sought for any proposed works that may impact on TfNSW assets.

G6. Housing and affordable housing

SR6.1: 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, healthy and socially sustainable community. The analysis should have regard to the intended provision of affordable housing, consider the needs of renters, investors and owner occupiers and measures to ensure a diverse, inclusive, healthy, socially connected, liveable and sustainable community.

A Housing Diversity and Affordability Report has been prepared by HillPDA (refer **Attachment 20**). A housing needs analysis is included in the HillPDA report. Key findings of the analysis include:

- The population profile for Blackwattle Bay catchment is reflective of the CoS population profile (ABS 2016)

- Retaining and/or improving housing choice within the study area and CoS is a real and growing challenge for lower income earners
- Whilst historically a range of factors have enabled a diversity of dwelling and household types to be located within the CoS, its growing attraction as a place to live is increasing property prices which in turn is increasing barriers to affordability and therefore diversity
- People on very low or low incomes cannot afford to rent a 1 or 2 bedroom apartment in the CoS. People on a moderate income could afford a 1 bedroom but not a 2 bedroom apartment
- New residents who are able to live in larger dwellings are more likely to be middle aged and higher income earning residents at the expense of a younger population
- The lack of affordable rental housing has a knock-on effect of reducing a socially diverse and healthy community and access to key workers. In addition, this may result in the following costs to business and the wider community:
    - Local industry will face additional costs with consequent impacts on competitiveness (e.g. job retention, recruitments costs etc.)
    - Workers face additional costs in the form of transport or housing, resulting in a fall of disposable income
    - There is a significant net migration out of the area of younger people. This age cohort is tending to leave family, friends and community networks to move to areas with lower priced housing and better access to jobs, education and entertainment
    - Workers may change their place of work to be closer to home, further reducing the labour force pool available to support the local economy and community
- An approach to delivering affordable housing that enables an appearance of equity in housing across tenures can help remove the stigma associated with affordable housing
- A building by building approach which clusters affordable housing within a single building but achieves a mix of tenure across the Study Area is the most acceptable on-site option. It offers fewer risks and can deliver better housing outcomes to affordable housing tenants and community housing providers because:
    - The approach has been accepted by developers, most recently at Ivanhoe Estate, and presents fewer risks in terms of potential for social housing to detract from market housing
    - The approach enables lower maintenance and management costs compared to the unit by unit approach
    - It avoids the complications of strata dwellings such as the need for affordable housing providers to participate in body corporate arrangements and to pay regular fees to the body corporate which are likely to be high given the waterfront location of the development
- Cash contributions to community housing providers has the potential to result in more, and more sustainable, affordable housing than the dedication of dwellings in the Study Area.

SR6.2: Demonstrate how the proposed planning controls will support the achievement of housing and tenure objectives.

SR6.3: Identify the range of mechanisms/models to provide affordable housing (including affordable rental housing for very low, low and moderate income households) and assess their feasibility. Maximise provision of affordable housing noting the target of 5%-10% of new floor space referenced in the draft Central District Plan or any greater target if NSW Government policy changes

City of Sydney affordable housing provisions in SLEP 2012

The CoS has an inclusionary zoning in place for Ultimo Pyrmont via the SLEP 2012 which enables an affordable housing contribution as follows:

- 0.8 per cent of the total floor area of the development that is intended to be used for residential purposes; and
- 1.1 per cent of the total floor area that is not intended to be used for residential purposes.

Under the current *Revised City West Affordable Housing Program*, an alternative monetary contribution is permitted. As of February 2020, the rates are $31.90/sqm of total residential area and $45.84/sqm of total non-residential floor area. These rates apply to the development as a whole, not the 0.8 and 1.1 contribution rates identified above.

Using the SLEP 2012 and Revised City West Affordable Housing Program, the contributions that could potentially be generated under the Precinct Plan would be:

- 2,175 sqm of affordable housing; or
- Approximately $8.9m in monetary contributions towards affordable housing.

The affordable housing contribution represents approximately 1.7 per cent of the total residential floorspace under the Precinct Plan.

The CoS prepared a City of Sydney Affordable Housing Review (Affordable Housing Planning Proposal), a planning proposal that proposes a number of changes to the affordable housing provisions in the LEP. The planning proposal has recently been finalised, with the main outcome being an extension of affordable housing contribution provisions across the Sydney LGA. The amendments confirm that the relevant affordable housing program in the Ultimo-Pyrmont area is the Revised City West Affordable Housing Program.

Proposed affordable housing contribution

The Greater Sydney Region Plan includes Affordable Rental Housing Targets for very low to low-income households in Greater Sydney generally in the range of 5-10 per cent of new residential floor space subject to viability. The Plan also identifies the need for further work by the Greater Sydney Commission to support the implementation of the Affordable Rental Housing Targets including consideration of allocation, ownership, management and delivery models.

In line with the intent expressed in the Greater Sydney Region Plan, a new provision is proposed in Sydney LEP that would enable the consent authority to impose a condition on residential development at Blackwattle Bay requiring a contribution towards the provision of affordable housing. The contribution would be equivalent to 5 percent of the total floor area of the development[2] that is intended to be used for residential purposes[3] for the purpose of affordable housing. The contribution would be made by way of a dedication of affordable dwellings within the precinct and/or paid as a monetary contribution. The appropriate monetary contribution rate that should apply in Blackwattle Bay is yet to be determined but will need to be balanced with the overall contribution being made towards the provision of public amenities and services that will be delivered as part of the development.

Other planning provisions to support housing and tenure objectives

The Precinct Plan will result in a mix of dwelling sizes that directly addresses the need for smaller, more affordable, dwellings in the Sydney LGA. This is anticipated to attract a mix of owner occupiers and investors catering to renters. Both these segments are under-represented, with the increase in housing supply anticipated to place a downward pressure on ownership and rental prices.

[2] As defined in clause 7.13(6) of Sydney LEP
[3] Apart from 'excluded development' as defined in clause 7.13(6) of Sydney LEP

Other options for delivering lower cost private dwellings would be developed during the detail design phase including:

- A requirement for a minimum of 20 per cent of the total apartments to incorporate the *Liveable Housing Guideline's* silver level universal design features.
- Environmental and energy efficient building design
- Alternative car parking options to reduce housing costs such as:
  - Reduction of residential car parking including, particularly for studio and 1 bedroom apartments
  - Shared residents/public car parks which allow residents to access the public car parking stations after hours with a security pass
  - Car sharing spaces which allow people to hire cars within close proximity to their residence
  - Bike sharing stations located in the public realm.

Proposed State Environmental Planning Policy Housing Diversity (Explanation of Intended Effect)

As discussed in Part B6.5, the NSW government is proposing a new State Environmental Planning Policy (Housing Diversity). It is proposed that the new SEPP, when adopted, will provide new opportunities for institutional investment in residential development in NSW to support housing diversity and affordability. It is envisaged that the new SEPP will apply to development at Blackwattle Bay.

G7. Biodiversity

SR7.1: Assess and document biodiversity impacts in accordance with the Framework for Biodiversity Assessment, unless otherwise agreed by OEH, by a person accredited in accordance with s142B(1)(c) of the *Threatened Species Conservation Act 1995*.

The Framework for Biodiversity Assessment no longer exists and has been replaced by the Biodiversity Assessment Method (BAM). The BAM requires the preparation of a Biodiversity Development Assessment Report (BDAR) to measure loss and calculate biodiversity offsets (if any). To run the BAM calculator and complete a BDAR, a Development Application is required.

A comprehensive urban and marine ecology has been prepared by Eco Logical Australia (refer **Attachment 21** and discussed in G14 below). Detail impact assessment (likely a BDAR) will be required to support future development applications.

G8. State and regional infrastructure
G9. Local infrastructure and contributions

SR8.1. Outline the impact of the proposal on State and regional infrastructure, including public transport, roads, stormwater and drainage, human services, education and health facilities required to meet the characteristics and likely needs of the current population during the development period and the likely future population, including the estimated costs (inclusive of land and capital) and timing of the works.

SR8.2. Outline the scope, mechanism/s and delivery responsibility for development contributions between the Proponent 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 and possible State Infrastructure Contributions plans.

SR8.3. Identify land to be reserved for future provision of state infrastructure including but not limited to public transport, health services, schools and emergency services and identify the appropriate zoning to accommodate their future needs.

SR8.4. Ensure that school provision is determined with reference to the demographic information established by the Population Demographic study at section 26 and outline any consultation with the Department of Education, including reference to their policies and procedures.

SR9.1 Outline the future community profile, in age groups and time series format, of the proposal (as established by the Population Demographics Study) see section 26.

SR9.2. Analyse the existing and currently planned local infrastructure within the catchment of the Precinct.

SR9.3. The provision of open space and recreation facilities is to be consistent with the City of Sydney Open Space, Sports and Recreational Needs Study 2016. Close consultation with the City of Sydney is required, along with detailed justification for any variation.

SR9.4. Identify the local infrastructure needed to meet the needs of the future community including recreation, open space (active and passive), community facilities, education facilities, health facilities, primary care facilities, libraries, childcare, local pedestrian, cycling and transport facilities, local drainage, seawalls, water sensitive urban design, jetties and other foreshore infrastructure. Develop a cost plan of all infrastructure required to support the proposal.

SR9.5. 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.

SR9.6. Outline the proposed ongoing responsibilities and maintenance of any proposed open space/connections, drainage reserves, community facilities and foreshore infrastructure identified in 9.4.

SR9.7. Consult with the City of Sydney Council to achieve agreement on the provision and responsibilities for local infrastructure and outline details of any agreements with the City of Sydney for public use of community facilities.

9.8. Outline the scope and mechanism/s 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 2015. Identify any gaps in local infrastructure funding and potential funding sources.

HillPDA has prepared an Infrastructure and Contributions Review (**Attachment 22**) which considers both State and local infrastructure. The HillPDA report examines the following:

- Existing framework for delivering infrastructure in the Blackwattle Bay area
- Potential demand associated with the Precinct Plan
- Infrastructure required to meet that demand
- Potential authorities responsible for delivering and/or operating the infrastructure
- Most suitable mechanisms for funding the infrastructure.

In preparing the report, HillPDA undertook preliminary consultation with the following state and local government organisations:

- Infrastructure NSW and larger project assessment team
- DPIE
- Department of Education
- TfNSW
- NSW Health
- CoS.

Existing infrastructure

Existing and planned infrastructure within the catchment of the Precinct has been considered in detail in the following documents:

- Blackwater Bay Social Sustainability Assessment (Elton Consulting, **Attachment 16**)
- Blackwater Bay Precinct Plan: Transport Management and Accessibility Plan (AECOM, **Attachment 4.1**)
- Utilities and Infrastructure Servicing Report: Blackwattle Bay State Significant Precinct (AECOM, **Attachment 23**)
- Water, Riparian Land, Flooding and Stormwater Study: Blackwattle Bay State Significant Precinct (Cardno, **Attachment 12**).

The PPPS also provides an assessment of existing infrastructure which indicates that existing social and transport infrastructure in the area is strained.

Pyrmont-wide infrastructure strategy

The PPPS identifies the need for a Pyrmont-wide strategy which will identify both State and local infrastructure to meet future demand. Together with the proposed Pyrmont Metro Station, other PPPS identified State infrastructure may include:

- Improved active and public transport connections
- Transport interchanges
- Investigation of repurposing Glebe Island Bridge to link Pyrmont Peninsula with Bays West
- Investigation of delivery of additional public open space, including Wentworth Park.

Delivery of these items would likely be in partnership with local government and private stakeholders. Finalisation of the planned State infrastructure would be undertaken through the PPPS implementation process.

Demand for infrastructure arising from the rezoning proposal

The following is a summary of the infrastructure demands arising from the rezoning proposal.

- <u>Open space, recreation, community and social facilities</u>
  The Precinct Plan includes a mix of residential and commercial uses that would generate demand for social infrastructure, such as community facilities and public open space. Benchmarks and numerical triggers for social infrastructure provision, as a result of the Precinct Plan's development, are discussed in the Blackwater Bay Social Sustainability Assessment (**Attachment 16**). An extract of infrastructure provision benchmarks and how they apply to the Study Area is provided in **Table 15**.

Table 15: Summary of local social infrastructure demand

Type	Sub-type	Standard	Source	Demand	Typical supplier
Open space and recreation	Open space	15% of site area for government urban renewal projects	City of Sydney, Local Strategic Planning Statement and Open Space and Recreation Strategy	15% of site area equates to 1.26 hectares	Council/ State
	Sportsfield	One sportsfield for every 5,600 residents; One field for every 120,000 workers	City of Sydney, Baseline Infrastructure Study Also used in Pyrmont Peninsula Place Strategy Social Infrastructure Assessment (2020)	0.5 sportsfields	Council
	Outdoor sports courts	One outdoor sports court for every 2,179 people plus 10% for workers	City of Sydney, Open Space and Recreation Strategy	1.5 outdoor sports courts	Council
	Play space	One play space for every 2,000 people	Parks and Leisure Australia (2012). Also used in Pyrmont Peninsula Place Strategy Social Infrastructure Assessment (2020)	1 play space	Council
	Outdoor fitness	One outdoor fitness station for every 15,000 people	Parks and Leisure Australia (2012). Also used in Pyrmont Peninsula Place Strategy Social Infrastructure Assessment (2020)	Insufficient local demand in Blackwattle Bay	Council
Community and social facilities	Community centre	80 sqm/ 1,000 people plus 10% for worker use	Recognised standard in social infrastructure planning. Also used in Pyrmont Peninsula Place Strategy Social Infrastructure Assessment (2020)	251 sqm	Council
	Library	57.5 sqm/1000 people for populations less than 20,000	NSW State Library, People Places, Public Library Standards	197 sqm	Council
	Early education and care	One long day care place for every 48 residents outside the CBD Plus one place for every 75 workers	City of Sydney, Child Care Needs Study	138 long day care places	Council/ private
	Arts and creative spaces	One major performance space per 100-150,000 people. One Creative Arts Centre for every 20,000- 30,000 people	City of Sydney. Also used in Pyrmont Peninsula Place Strategy Social Infrastructure Assessment (2020)	Insufficient local demand in Blackwattle Bay	Council/ private
Health and education	Medical centre	One GP per 800 people	Existing provision based on Central Eastern Sydney Primary Health Networks	Approximately 3 GPs	State/ private

Source: Blackwater Bay Social Sustainability Assessment (Elton Consulting, 2021) and HillPDA

Consultation undertaken by INSW regarding the provision of state infrastructure indicates that:

- NSW Department of Education do not require space on site for a public school
- While NSW Health has indicated that the site would likely create demand for a medical centre, space on site for a State health facility is not required.

- Private, public and active transport

The Precinct Plan would result in residential, employment and visitor related traffic that would use internal circulation, including active, public and private transport infrastructure, as well as connections to the surrounding transport network.

The TMAP has identified opportunities for improvement in off-site active transport infrastructure, including walking and cycling infrastructure to reduce demand for private vehicles. Public transport initiatives are also identified, including the planned Pyrmont Sydney Metro Station. The TMAP does not identify these are required infrastructure to support the Precinct Plan but notes that they would improve transport outcomes.

Upgrades to existing intersections will be required to accommodate additional traffic associated with residents, workers and visitors.

In terms of State infrastructure:

- TfNSW's roads team has indicated that they do not require any lands within the Study Area for the purposes of road widening. However, they are investigating motorway optimisation through their Smart Motorways group. Improvements may result in minor modifications to interchange access and vehicle movements outside the Study Area
- TfNSW's Sydney Metro team has indicated that they do not require any lands within the Study Area for the purposes of Metro West or the associated Pyrmont station.

- Utilities
  New and upgraded utility infrastructure is required on and off-site to service the rezoning proposal, as discussed in Part G10.

- Stormwater
  As discussed in the Water Quality, Flooding and Stormwater Study (refer to **Attachment 12**), a stormwater management strategy has been prepared that would potentially include:

  - Relocating and upgrading stormwater trunks that service the surrounding area
  - New pits and pipes to support new development and open space
  - Filtration, gross pollutant trap and harvesting systems to manage stormwater.

  Ultimately, the final infrastructure provision would be a product of detailed design and would meet the relevant standards at that time. A portion of stormwater infrastructure would also service community facilities and the public domain.

- Seawall
  The existing seawall requires upgrading, primarily to support the proposed foreshore promenade. The seawall is in poor condition in many areas and also needs to be raised to manage the impacts of climate change (sea level rise). The seawall would also support elements of the Waterfront Promenade and is integral to the provision of open space and pedestrian access, as envisioned by the PPPS.

Proposed on-site infrastructure

The Precinct Plan proposes the delivery of key community and transport infrastructure as follows:

- Bank Street Open Space and adjacent community uses including dragon boat amenities
- Waterfront Promenade
- Waterside Park
- Urban Park

- Potential ferry wharf
- Intersection upgrades
- Dedicated cycle lanes
- Seawalls.

A summary of the types of infrastructure to be delivered, the relevant agencies, estimated costs and timing of delivery is provided in Table 17 of the HillPDA report.

An assessment of the Precinct Plan's delivery of infrastructure within the Study Area against the demand for infrastructure is provided in **Table 16**. The assessment includes a consideration of the numerical requirements in the CoS's *Open Space, Sports and Recreation Needs Study*.

Table 16: Addressing infrastructure demand (Source: HillPDA)

Type	Sub-type	Demand	Response
Open space and recreation	Open space	15% of site area equates to 1.26 hectares	As detailed in the FJMT Urban Design report, the open spaces of the Precinct Plan equate to approximately 30 per cent of the Study Area, including a range of parks plazas. The demand for open space is exceeded.
	Sportsfield	0.5 sports fields	A sports field is not proposed in the Study Area, and as detailed in the Elton Social Sustainability Assessment, would be impractical and not in alignment with community preferences. Further such a sport field is not identified in the City of Sydney's *Open Space, Sport and Recreation Needs Study*. Instead, the PPPS recommends enhancement of the existing Wentworth Park site. As such, demand would be met by form development contributions associated with future development (e.g. Development contributions or Planning agreement)
	Outdoor sports courts	1.5 outdoor sports courts	A multi-use court is planned in the Bank Street Open Space area. A skate park and dragon boat amenities are also planned in the Study Area. Considering the range of active recreation uses on the site, this would result in a relative exceedance of demand.
	Play space	1 play space	A playground is planned for the Bank Street Open Space area
	Outdoor fitness	Insufficient local demand	An outdoor fitness area is planned for the Bank Street Open Space area
Community and social facilities	Community centre	251 sqm	Over 5,500 sqm of mixed community space is proposed across the Study Area. This may be used for a community centre, library, long day care, arts and creative spaces or other community facilities. Likewise, long day care may be provided privately as part of the commercial uses provided in the Study Area.
	Library	197 sqm	
	Early education and care	138 long day care places	
	Arts and creative spaces	Insufficient local demand	
Health and education	Medical centre	Approximately 3 GPs	Demand for GPs would likely be met through a medical centre provided in the commercial portions of future development, should the market support the use. Alternatively, a portion of the mixed community space could potentially be allocated to a service provider.
	Primary school	n/a	A primary school is not proposed within the Study Area. Schools Infrastructure have advised that there is no requirement for a public school to service future development. The local primary school appears to have capacity for enrolments resulting from renewal in accordance with the Precinct Plan. However, it may not be within a walking catchment for the entire Study Area.
	Secondary school	n/a	A secondary school is not proposed in the Study Area. NSW Department of Education has indicated that there is not a requirement for a new high school, however the local school has indicated that there is no capacity for out of area enrolments, suggesting that capacity is an issue. This should be considered further as part of the PPPS implementation.
Private, public and active transport	All	n/a	The Precinct Plan incorporates plans for • Internal roads • Active transport infrastructure • Upgrades to intersections

Type	Sub-type	Demand	Response
			• Bus shelter(s) and signage • A potential ferry wharf As discussed in the AECOM TMAP, on-site infrastructure and coordination with surrounding infrastructure would reduce demand of private vehicle transport.
Emergency services	All	Demand not identified by relevant agencies.	Emergency services are not planned for in the Study Area.
Utilities, stormwater and other supporting infrastructure	All	As required	Stormwater and utilities access has been incorporated into overall infrastructure delivery. Non-infrastructure development (e.g. recreation and commercial development) would be required to provide their own connections. It is noted that seawall construction is integral to the delivery of the waterfront promenade envisioned by the PPPS, and as such, is planned for delivery as part of the Precinct Plan

Mechanisms for delivery

Mechanisms for delivery are identified as follows:

- Special Infrastructure Contribution
  The PPPS indicates that a Special Infrastructure Contributions (SIC) scheme may be required to deliver the State infrastructure to support future residents, workers and visitors to the Pyrmont area.

  The PPPS anticipates that an Infrastructure Delivery Plan will be refined in the near future that investigates the infrastructure costs, staging, sequencing, delivery partners and mechanisms. This will be prepared in collaboration with CoS, TfNSW and other infrastructure agencies. The outcome of this work may result in the development of a SIC that captures funding for State infrastructure.

  However, the *Review of Infrastructure Contributions in New South Wales* (NSW Productivity Commission, 2020) discourages the use of new SICs and recommends region-based infrastructure levies instead. A SIC may therefore not eventuate for the Pyrmont Peninsula. Should a SIC not be applied to the Pyrmont area (including the Study Area), an alternate funding and delivery arrangement will be required to ensure delivery of the infrastructure. This would be via a Satisfactory Arrangements clause, as described below.

- Local infrastructure contributions
  The *City of Sydney Development Contribution Plan 2015* applies to development within the Study Area. Development contribution rates under that plan would apply to the site, providing for infrastructure across the West Precinct noting that updates are being prepared to align with the PPPS. The Contributions Plan allows for alternatives to monetary contributions via dedication of land, provide works in kind or another material public benefit, when the council agrees to an offer. Such an alternative for a portion of monetary contributions may be sought for works in kind.

  An alternative contribution would potentially be justified by meeting the unmet demand for community infrastructure generated by the surrounding communities, as detailed in *Blackwattle Bay Social Sustainability Assessment* (Elton Consulting, **Attachment 16**). As noted in the plan, the council may choose to accept such an offer, but is not obliged to do so. As advised by the plan, consultation with the council will be ongoing to discuss the structure of an alternative contribution.

The *City of Sydney Development Contribution Plan 2015* does not anticipate the development of the PPPS (including the Study Area) as proposed. An update of the contribution plan to include demand generated by the Study Area should consider the on-site infrastructure proposed, which typically exceeds the benchmarks shown in **Table 15**. Identification of additional infrastructure requirements would be the responsibility of the CoS. Works in kind agreements would also be subject to approval by the CoS.

- Satisfactory arrangements clause and planning agreements

  To ensure that arrangements to contribute to infrastructure are in place prior to development, it is proposed that a new clause be inserted into SLEP 2012 requiring the Planning Secretary's approval of any proposed approach to delivery of infrastructure prior to approval of significant development. The purpose of the clause is to ensure that developers make satisfactory arrangements to contribute to the provision of State public infrastructure prior to development occurring. It is anticipated that such a contribution, unless otherwise provided for via a SIC, would be negotiated via a Planning Agreement. The Planning Agreement would be negotiated between the developer and a planning authority, with the potential for the authority delivering the infrastructure also being a party. Planning Agreements would dictate if infrastructure was delivered as an in-kind (e.g. developer delivered) or cash contribution (e.g. agency delivered).

  As INSW would likely lead the development of significant on-site infrastructure such as public open space, prior to private development, it would be likely that INSW would be party to such a Planning Agreement to allow for recoupment of expended funds.

- Post-development maintenance

  Local infrastructure typically owned and operated by local government, namely local road reserves and stormwater assets, would be the responsibility of CoS to maintain in accordance with existing policy, if ownership were to be accepted. Similarly, land and built form assets may be owned by a State agency, with management delegated to CoS under Crown Land Manager arrangements under the *Crown Land Management Act 2016* (CLM). Such an arrangement would allow for Council to maintain and program land uses through existing processes but would need to be negotiated with Council.

  Ownership of other infrastructure would be confirmed via the detail design process, with potential ownership including TfNSW, Port Authority, DPIE, relevant utility companies and local body corporates. It is anticipated that the following infrastructure categories would remain in State ownership:

  - Buildings
  - Storage facilities
  - Seawalls
  - Wharves
  - Jetties

  As noted in Part G3, the NSW Government is currently evaluating the most appropriate ownership and management structure for the government-owned lands at Blackwattle Bay.

  Ownership would be finalised through the development application process.

Future consultation

Consultation is anticipated to be ongoing with key agency stakeholders as details of the PPPS and associated infrastructure commitments and contribution options are further developed. In particular, engagement with the CoS regarding the funding, delivery and dedication of infrastructure will continue through the detail design and assessment process.

G10. Utilities

SR10.1: Provide a utilities and infrastructure servicing report identifying existing capacity, required capacity and augmentation needed for the proposal, sustainability and climate change adaptation measures (including Water Sensitive Urban Design (WSUD), and measures to manage increasing heat and changing rainfall patterns) and staging.

SR10.2 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.

SR10.3. The utilities and infrastructure servicing report should outline the development yield and staging and should include a high-level assessment of the capacity of:

- Ausgrid electrical network to service the development 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 and visibility of any network augmentation required, and
- Sydney Water's network to service the development and the proposed servicing options considered for the development including wastewater and stormwater recycling for nonpotable use. It should propose sustainability initiatives for the development, including any proposed alternative water supply, proposed end uses of drinking and non-drinking water and proposed water conservation measures. It should also confirm whether there is adequate capacity in the existing sewerage system to cater for additional loads and the systems environmental performance will not be compromised.

AECOM has prepared a Utilities and Infrastructure Servicing report (refer to **Attachment 23**). The purpose of the report is to identify existing utility infrastructure and consider any upgrades or new utility infrastructure that may be required. AECOM is a suitably qualified consultant for the purposes of SR10.2.

A separate Ecologically Sustainable Development (ESD) report has been prepared by AECOM (refer **Attachment 32**) which explores WSUD and other measures to respond to climate change. ESD is discussed in Part G16.

The AECOM report estimates indicative building service loads as follows:

- Demand calculations provide the following estimates based on development yields: Potable water between 1,010 – 1,370 kL/day
- Sewer loading between 4.8 – 6.2 L/s
- Electrical load between 11.6 – 15.6 MVA
- Gas demand between 1,260 – 1,710 m^3/day

However, it should be noted that these estimates are provided to inform lead-in infrastructure requirements only and are subject to change as part of design development.

Existing utility services in and around Blackwattle Bay are:

- Potable Water: Drinking water is provided by Sydney Water Corporation (SWC) from the Prospect and/or Kurnell Systems via the Potts Hill Trunk Delivery System incorporating the Potts Hill Reservoirs and Crown Street Reservoir
- Wastewater: Wastewater facilities servicing is provided by SWC with sewer mains running through the entirety of the site
- Electrical: Electricity is provided by Ausgrid via cables from four main substations: Darling Harbour, Blackwattle Bay, Camperdown and Leichardt Zone Substations
- Gas: Jemena currently supplies gas to the area through existing gas mains
- Data and Telecommunications: Various telecommunications providers have assets in the vicinity of the site including Telstra and NBN Co.

There are several constraints impacting on utilities in Blackwattle Bay:

- A concentration of potable water, wastewater, communications, Telstra and Ausgrid utilities infrastructure running adjacent to the Study Area which may require decommissioning prior to development
- An Ausgrid 33kV transmission line along the southern boundary of the site near Wattle Crescent and Jones Street
- Overhead powerlines around the site boundary which potentially need to be undergrounded.

Nonetheless, the Study Area is currently well serviced by utility infrastructure, as shown in **Table 17**.

Table 17: Summary of existing utility services infrastructure and required upgrades (Source: AECOM)

Utility Service	Potable water	Wastewater	Electrical	Gas	Data and Telecommunications
Utility Authority Asset	SWC	SWC	Ausgrid	Jemena	NBN Co and Telstra
Adequate capacity for proposed development?	Yes*	Yes*	No*	Yes*	Yes*
Proposed works	Local network amplifications	Local network amplifications	Potential upgrade of standby feeder networks	No upgrades required	No upgrades required
Funding	TBC**	TBC**	Ausgrid	TBC**	TBC**
Estimated cost of developer funded works	TBC**	TBC**	N/A	TBC**	TBC**

*Current capacity and servicing requirements to be confirmed with relevant utility authority during the detailed design stage of the development
**To be confirmed at development consent stage

The opportunities to support Blackwattle Bay include:

- Minimal utility infrastructure running through the precinct, which provides an opportunity to plan the services in line with the urban design intent and sustainability outcomes
- Existing trunk services may have excess capacity to service the initial phases of any new development, however local amplifications are likely and new electrical feeder cables will likely be required

- There may be an opportunity to re-use any redundant electrical utility routes for new infrastructure.

The Utilities and Infrastructure Servicing report identifies a number of potential ESD initiatives for utilities as follows:

- Onsite renewable energy
- Irrigation of public open space with recycled water
- Diverting operational waste from landfill
- Increased tree canopy cover
- Onsite stormwater retention
- Provision of bicycle parking and dedicated car share spaces
- Electric vehicle charging stations.

These initiatives are explored in more detail in the ESD report at **Attachment 32**.

G11. Heritage

SR1.7: Outline the historical significance of the site and how the proposal intends to be sympathetic to any State and / or local heritage assets within and adjacent to the Bays Market District and the Conservation Areas located to the north east and south west.

SR11.1. 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.

SR11.2. The heritage assessment is to be undertaken in accordance with guidelines set out in the NSW Heritage Manual, the methodology described in "The Conservation Plan' (J S Kerr 1996) and in the Australia ICOMOS Charter for the Conservation of Places of Cultural Significance (the Burra Charter).

City Plan has prepared a European Heritage Assessment and Impact Statement for Blackwattle Bay (refer **Attachment 24**). The report incorporates a Thematic History, an analysis of Built Heritage and Archaeological and a Cultural Landscapes Study.

The philosophy and process adopted during the work towards this report is guided by the *Australia ICOMOS Charter for the Conservation of Places of Cultural Significance* (the Burra Charter). The assessments of heritage significance have been prepared in accordance with the NSW Heritage Manual 'Assessing Heritage Significance' guidelines. The Thematic History was guided by the thematic framework developed by the NSW Heritage Council for use in heritage assessment and management. The Cultural Landscapes Study was conducted according to guidelines presented within the Department of the Environment, Climate Change and Water (DECCW)'s 2010 publication, *Cultural Landscapes: A Practical Guide for Park Management*.

SR11.3. This assessment is to review, but is not limited to, features of potential heritage significance within the precinct including:

- Buildings: all existing
- Landscaping elements: built and planted
- Waterways
- Monuments or public art installations
- Infrastructure: street patterns and stormwater
- Potential archaeological relics, and

- Places of social significance

Heritage items

Heritage items located in the vicinity of the Study Area include those listed in **Table 18**. It should be noted that there are no listed items within the Study Area itself, apart from the northern extent of the Blackwattle Bay Stormwater Channel No 17 which is listed on the Sydney Water Section 170 Register.

Three items of State significance are located in the vicinity of the precinct. The Glebe Island Bridge and Bellevue cottage at Glebe Point are listed on the State Heritage Register while the Anzac Bridge is listed as an item of State significance on TfNSW's Section 170 Heritage and Conservation Register.

Several heritage items are listed in SREP 26, including Wentworth Park, Wentworth Park rail viaduct and the White Bay Power Station complex.

In addition, there are two heritage conservation areas nearby - Glebe Point Heritage Conservation Area (C28) to the south-west and Pyrmont Heritage Conservation Area (C52) to the east.

Table 18: Heritage items in the vicinity of Blackwattle Bay

Heritage listing	Heritage item or conservation area	Within precinct
State Heritage Register	Glebe Island Bridge, Bank Street, Victoria Road Pyrmont, Item No 01914	No
	Bellevue, 55-57 Leichhardt Street, Glebe Point, Item No 00470	No
Transport for NSW Heritage Register	Anzac Bridge	No
Sydney Water Heritage Register	Blackwattle Bay Stormwater Channel No 17	Northern extent
SREP 26	Wentworth Park rail viaduct	No
	White Bay Power Station complex	No
	Wentworth Park	no
SLEP 2012	Kauri Foreshore Hotel including interior, 2 Bridge Road, (Item no. I657)	No
	Street trees, Wentworth Park Road, (Item No I816)	No
	Former MWS & DB Sewage Pumping Station No.2 including interior, 103 Pyrmont Bridge Road, (Item no. I1257)	No
	Railway Viaduct, Railway Street, (Item no. I800)	No
	House "Bellevue" including interior, 55 Leichhardt Street, (Item no. I792)	No
	House group comprising: • House "Florence Villa" including interior (49 Leichhardt Street, Glebe) (Item No I789) • House "Drayton Lodge" including interior and front fence (51–51B Leichhardt Street) Item No I790) • House "The Retreat" including interior (53 Leichhardt Street) (Item No I791) • House including interior and front fencing (14 Oxley Street) (Item No I797) • House "Eurimbla House" including interior (16 Oxley Street) (Item No I798)	No
	Railway cutting (Item No I1203)	No
	Former MWS&DB Sewage Pumping Station No 2 including interior (Item No I1257)	No

	Blackwattle Bay Park including landscaping, 242 St Johns Road, (Item no. I649)	No
	Glebe Point Heritage Conservation Area C28	No
	Pyrmont Heritage Conservation Area C52	No

Archaeological heritage

Research indicates that there is potential for archaeological resources to be found across the Blackwattle Bay Precinct. **Table 19** indicates the specific locations and nature of potential archaeological deposits throughout the study area, and their locations are also shown on **Figure 60**.

Table 19: Areas of archaeological potential (Source: City Plan)

Map reference	Location	Nature of deposit
1	Blackwattle Bay foreshore (Pyrmont Bridge Road)	Potential for extant: Causeway Sea walls and pilings Coal depot Timber wharves
2	Blackwattle Bay waters	Potential for extant: Sea walls Pilings for wharves
3	Fish market site and Bank Street	Potential for archaeology related to early industrial activities

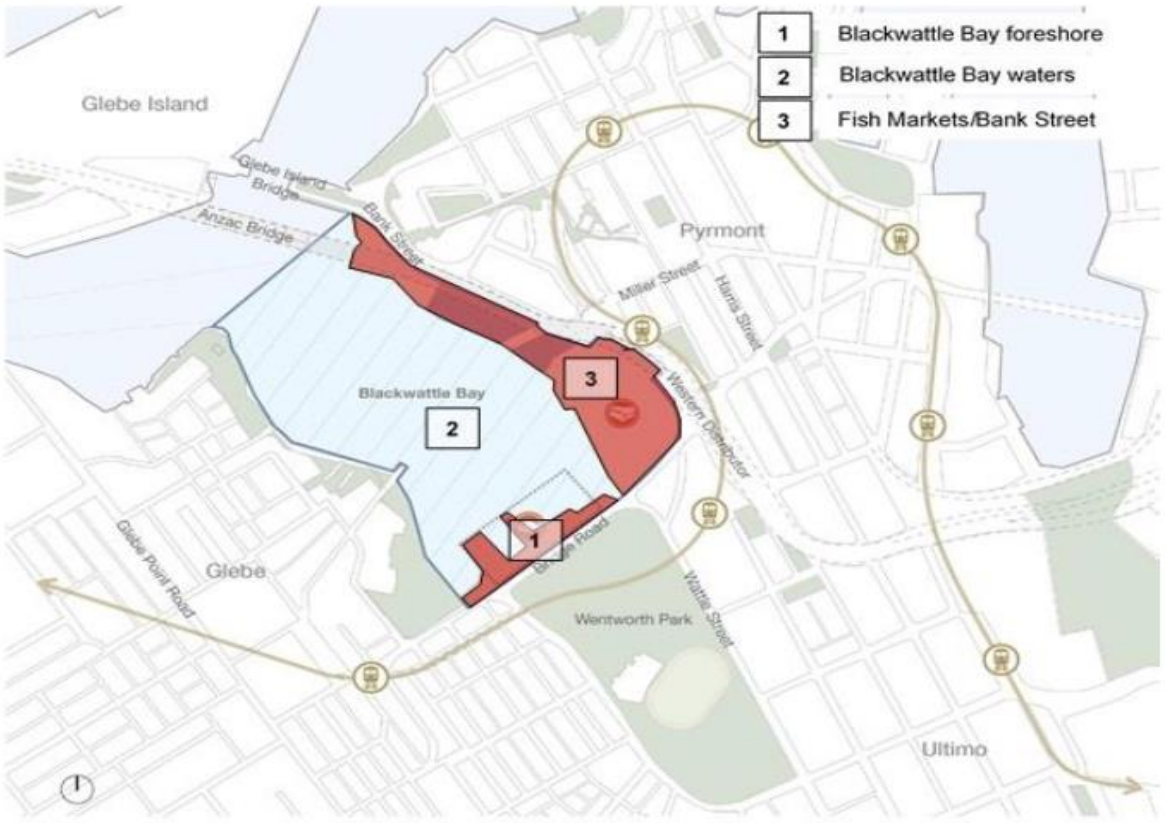


Figure 60: Areas of archaeological potential in Blackwattle Bay
Source: City Plan

Potential archaeology in the vicinity of the new Sydney Fish Market has been subject to assessment as part of the Concept and Stage 2 SSDAs (SSD 8924 and SSD 8925). In its assessment report the DPIE indicated that it did not consider that any archaeological site or potential archaeological site would be adversely affected by the proposal subject to recommended conditions which are being implemented during the demolition and construction phases of the project.

With respect to the existing fish market site, City Plan assessed that it is of local heritage significance as the primary market dedicated to fish and seafood in Sydney since the 1960s and historically it has been the site of a wide range of industrial activities, traces of which may remain in the archaeological record. While the site has high potential for redevelopment and renewal, archaeological resources relating to earlier industrial activity on the site may be present beneath the ground surface.

Cultural landscape

The cultural landscape elements of the Study Area have been assessed against the Heritage Council criteria, as shown in **Table 20**. The assessment notes that there are no identified landscape elements of significance within the study area. However, the panoramic views north across Blackwattle Bay to the Anzac Bridge from the northern side of Pyrmont Bridge Road and various points in the Fish Market site are assessed as being of aesthetically exceptional significance. These views are currently somewhat limited. The new Sydney Fish Market has been designed to allow for greater views of Blackwattle Bay towards the Anzac Bridge from within it as well as from the proposed public domain areas surrounding it.

Table 20: Assessment of Landscape Significance

Landscape element	Significance criteria satisfied	Level of significance
Ornamental plantings along boundary between Bank Street and Sydney Fish market	Local amenity values	Little
First Sydney Corporation sewer	Historical, technical, rarity	High
Sydney Fish Market	Possible social significance	Many of the structures are intrusive or of no heritage significance. Social values have not been assessed by

Potential heritage items

City Plan has identified the Wharf-Front Warehouse at 1-3 Bank Street as potentially significant. This item, which is located within the Study Area, has had a long association with the Blackwattle Bay timber industry and later as the base of the Cam and Sons fishing trawler fleet, where it continuously operated for over thirty years. Besides the recent removal of the finger wharf, the site is largely intact from its 1932 construction. It is a rare, extant example of the early-twentieth century maritime industry within Blackwattle Bay.

SR11.6. 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.

In general, the Precinct Plan considers the heritage values of the existing and potential historic interest sites and allows for the interpretation of the streets and original foreshore line through establishment of Quarry Master Drive, extensions of Miller, Gipps and Wattle Streets along the eastern parts of the precinct. The assessment recommends that rezoning with changes in height and FSR should consider impacts on existing heritage items within the vicinity of the Blackwattle Bay SSP, such as overshadowing, removal of view corridors, and alteration of historical subdivision patterns

and characters. These matters have been considered in detail in the development of the Precinct Plan.

There will be no impact on the identified heritage values of the Heritage Conservation Areas (HCA) located to the south west and north east of the Study Area. These are Glebe Point HCA (C28) and Pyrmont HCA (C52) respectively.

While there are no listed heritage items within the precinct, listed heritage items in the vicinity of the Study Area and archaeological sites ordinarily have statutory protection under the NSW *Heritage Act 1977* and the EP&A Act. Therefore, finalised proposals should be assessed for their potential impact on heritage significance in a Heritage Impact Statement at the development application stage.

There is potential for adaptive re-use of existing buildings and sites along the same principles as their historic uses. This is particularly relevant to the buildings at 1-3 Bank Street which are assessed as being of local heritage significance as a largely intact remnant of the early twentieth century Blackwattle Bay maritime industry. The site has high potential for adaptive reuse, incorporating new structures into the existing Inter-War building.

As rezoning will not impact upon archaeological resources, there will be no associated physical works. There is no requirement to undertake detailed archaeological assessments prior to rezoning however future applications may require preparation of a detailed archaeological assessment if any development involves disturbance of the ground surface within the areas of archaeological potential. Where known or potential archaeological resources are determined to be of high significance, archaeological excavation will be required prior to any development works, subject to the approval of a section 140 permit application which would be accompanied by the detailed archaeological assessment and a research design.

The Heritage Interpretation Strategy/Plan (**Attachment 25)** discussed below under SR11.8 should be used as a basis for any future site-specific interpretation within the precinct and implemented as part of the future development proposals.

Measures have been included in the draft Design Code (**Attachment 14**) to reflect the recommendations in the City Plan report.

SR11.4. A detailed Maritime Archaeological and Heritage Assessment (desktop and possible underwater survey) is to be undertaken that assesses the significance of buried or submerged maritime heritage sites (e.g. shipwrecks both archaeologically located and known from historical records, anchors or other historic maritime infrastructure sites including piers, seawalls and other maritime industry components, and associated relics), which may exist underwater, under the seabed or under areas of reclaimed land (especially at the fish markets site and behind the Blackwattle Bay Coal Loader site, and Rozelle Bay Parkland).

SR11.5 The Maritime Archaeological and heritage assessment should be undertaken by a suitably qualified and experienced specialist maritime archaeologist who has an understanding of the effects of dredging and reclamation process on former submerged maritime infrastructure sites and other submerged maritime heritage sites.

Comber has prepared a Maritime Archaeological Assessment (refer **Attachment 26**). The report was prepared by a specialist maritime archaeologist with extensive experience in the processes of dredging and reclamation.

The study reviewed existing literature and undertook original research to identify the evolution of the bay and the likely location and survival of archaeological evidence. The recommendations in the

report were developed to be consistent with the requirements of the Heritage Act. They are also consistent with the rules contained in the Annex to the 2001 UNESCO Convention on the protection of the underwater cultural heritage which has been adopted by the New South Wales Heritage Council for the management of underwater cultural heritage in this State.

The maritime archaeological assessment found that the survival of archaeological evidence in large sections of the bay has been compromised by the history of dredging. However, archaeologically significant submerged deposits are likely to be present at the southern end of the bay. In addition, significant maritime infrastructure sites are likely to be present under land fill along the eastern shore.

The Maritime Archaeological Assessment makes a number of recommendations regarding future stages of the Blackwattle Bay precinct redevelopment, including:

- the remains of the sandstone seawall on the eastern foreshore are likely to be associated with the nineteenth century dock and should undergo conservation works and included in heritage interpretation
- any proposed impacts on the existing sandstone seawalls or the stone foundations of the small wharf off the end of Cook Street should be subject to archaeological assessment in view of any specific proposed works in this area
- archaeological investigations should precede any construction or other ground disturbance works in the vicinity of:
  - the former dock at the end of Gipps Street
  - the early wharf at the end of Miller Street
- view corridors and setbacks should be retained to assist in interpretation of the location of items above
- an unexpected finds procedure should be adopted for the maritime archaeology of Blackwattle Bay.

The Maritime Archaeological Assessment notes that Blackwattle Bay's maritime history of evolution has considerable potential as an interpretation and educational resource. The report includes guidance on the interpretation of the maritime heritage of Blackwattle Bay.

The Maritime Archaeological Assessment also concludes that:

- due to the history of dredging within Blackwattle Bay and in the absence of any indication of shipwrecks being included within landfill at Blackwattle Bay, no additional historical research, remote sensing surveys or dive surveys are required to identify shipwrecks in the Study Area prior to rezoning and any development approval
- no further investigation is required of jetties that extended into Blackwattle Bay subsequent to the phases of land fill
- no further investigation is required of deposits of non-structural cultural material within the Study Area prior to rezoning.

Measures have been included in the draft Design Code (**Attachment 14**) to reflect the recommendations in the City Plan report.

SR11.6. 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.

SR11.7. Prepare the required design provisions, in collaboration with CoS and DPE, which are able to be integrated into Sydney DCP 2012 if required.

The recommendations of both the European Heritage Assessment and Impact Statement and the Maritime Archaeological Assessment have been incorporated into the Design Code as appropriate. The Design Code has been in consultation with the CoS and DPIE. The Design Code is able to be integrated into Sydney DCP 2012.

SR11.8. 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*.

A Heritage Interpretation Strategy/Plan has been prepared by City Plan (refer **Attachment 25**). The document has been prepared in accordance with *Interpreting Heritage Places and Items Guidelines* as well as other relevant guidelines and policies.

G12. Aboriginal cultural heritage

SR12.1: 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 (DECCW, 2011).

Artefact Heritage has prepared an Aboriginal Cultural Heritage Assessment Report (ACHAR) for Blackwattle Bay (refer to **Attachment 27**). The objectives of the ACHAR are:

- Assess the Aboriginal cultural heritage values of the Study Area, including archaeological and community cultural values, and the significance of identified values
- Identify Aboriginal cultural heritage values that may be impacted by the proposed works, including consideration of cumulative impacts, and measures to avoid significant impacts
- Ensure appropriate Aboriginal community consultation in the assessment process
- Identify any recommended further investigations, mitigation and management measures required
- Make recommendations for management of Aboriginal cultural and archaeological potential in the Study Area based on consultation with Registered Aboriginal Parties.

The Pyrmont area, known as Pirrama to its first inhabitants, was a location of rich resources. It was adjacent to the swamp and wetlands of Blackwattle Swamp, the marine resources of Blackwattle Bay, and contained rocky shores covered in outcrops which included rock shelters. The eastern shore of Blackwattle Bay also contained freshwater springs and wells, including the named Tinkers Well that remained until destroyed through quarrying. The location maintained a distinct Aboriginal presence up to1836 with visits by Aboriginal people up to the 1870's.

With the establishment of European settlement at Sydney Cove, Aboriginal people rapidly became alienated from their land and resources. Killings of Aboriginal people, both endorsed by the government and extra-judicial, took their toll along with a major epidemic of an introduced disease which broke out in 1789, probably smallpox. This had a devastating effect on the Aboriginal population.

The Study Area has been subject to significant levels of disturbance. This has included the formation of much of the rea through land reclamation, considerable alterations to the natural coastline, and the ongoing development of the Study Area as a combined industrial, transport, commercial and high-density residential area. Such locations are of nil to low Aboriginal archaeological potential however they maintain Aboriginal cultural value as part of a wider cultural landscape.

A survey of previous Aboriginal archaeological reporting related to the Study Area found that few studies had been undertaken in the locality and that no archaeological excavations had been carried out in the surrounding areas. This was primarily due to the significantly disturbed nature of the locality and the limited number of modern development activities that would have triggered archaeological investigation.

No registered Aboriginal objects have been identified within the investigation area. However, a search of the Aboriginal Heritage Information Management System (AHIMS) found that there are two registered Aboriginal sites within the Study Area. These are The Bays Precinct PAD01 45-6-3338 and The Bays Precinct PAD02 45-6-3339. One additional site is located approximately 30 metres east of the Study Area. This is Jacksons Landing Shelter PAD 45-6-2960, a partially preserved rock shelter with views over Blackwattle Bay.

Figure 61: Potential Aboriginal Deposits in the Study Area
Source: Artefact

SR12.2: 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 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.

Consultation with Aboriginal stakeholders has been conducted in accordance with the OEH Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (Consultation Requirements). A total of 17 Aboriginal stakeholders registered as persons or organisations that may hold cultural knowledge relevant to determining the Aboriginal cultural values of the Study Area. The ACHAR incorporates feedback by Registered Aboriginal Stakeholders who were provided with a draft copy for comment.

SR12.3: 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.

Considerations of Country and understanding impacts on Aboriginal cultural heritage values have been integral to the evolution of planning for Blackwattle Bay and development of the Precinct Plan. This is documented in the following two reports:

- *Connecting with Country Framework for Tjerruing Blackwattle Bay* prepared by Bangawarra (**Attachment 28**)
- *Aboriginal Cultural Advice and Community Engagement Findings Report* prepared by Murawin Consulting (**Attachment 29**)

The 2020 Government Architect NSW Draft Connecting with Country Framework articulates the need for designers to make connections with local Aboriginal peoples, giving priority to partnerships with people holding Ancestral connections to the Country that is slated for development. Country-centred design embraces the complex, interdependent character of Country, and the knowledge embedded within it/her. At Blackwattle Bay, as on any part of Country, there are multi-layered and interconnected stories that provide a rich design context, and the opportunity to draw on numerous aspects of site history and knowledge into a range of spatial outcomes that celebrate deep history, story, ethnobotanical and cultural knowledges, animals or local climatic expertise.

Blackwattle Bay is a highly modified site given the successive colonial interventions that have occurred, but the spirit of Country has endured and stories and themes are identified in the Connecting with Country Framework as a starting point for designing with Country.

In terms of Aboriginal archaeology, the ACHAR has identified that the majority of the Study Area is of nil to low Aboriginal archaeological potential due to historical processes of land reclamation and disturbance. However, Registered Aboriginal Parties provided comment that despite historical soil disturbances, the entirety of the Study Area is in a foreshore location once highly utilised by local Aboriginal people and that its associated cultural values are therefore high and are not limited to archaeological potential.

Prior to construction and once the scale of potential impact to soils in The Bays Precinct PAD01 45-6-3339 and The Bays Precinct PAD02 45-6-3338 is identified, the ACHAR recommends that further study of these areas should be carried out to better assess their archaeological potential and the risks of impacts resulting from development.

For areas outside The Bays Precinct PAD01 45-6-3339 and The Bays Precinct PAD02 45-6-3338 no further archaeological testing or archaeological assessment is required. If the boundary for proposed works changes to include the location of AHIMS ID 45-6-3339 and AHIMS ID 45-6-3338, further archaeological investigation and consultation with Registered Aboriginal Parties would be necessary.

SR12.4: Prepare the required design provisions, in collaboration with CoS and DPE, which are able to be integrated into Sydney DCP 2012 if required.

The ACHAR includes a series of recommendations to guide the future management of Aboriginal cultural heritage in Blackwattle Bay. These recommendations have been included in the Design Code (refer **Attachment 14**).

G13. Arts and culture

SR13.1: In consultation with CoS (including the City's Public Art Advisory Panel), Create NSW, the community and other cultural stakeholders, prepare an overarching strategy for how arts and cultural infrastructure will be considered at the early planning stages and incorporate into and around the precinct. This should include, but not be limited to, consideration of Aboriginal art, public art, art practitioner spaces, multi-use cultural venues and event spaces as well as festivals, performance, events and programming.

City People has prepared an Arts and Cultural Strategy for Blackwattle Bay (refer to **Attachment 30**). The Arts and Cultural Strategy is guided by three main objectives:

1 Arts and culture in Blackwattle Bay reflect its histories, landscape and communities
2 Blackwattle Bay is recognised as a creative making place for its residents, workers and visitors
3 Arts and cultural experiences activate the precinct, day and night.

The strategy covers not only 'typical' arts and cultural forms and infrastructure (e.g., museums, galleries, performance venues), but considers the broader creative industries and allied sectors that are present in the area such as information and communications technology (ICT), tourism and education.

Stakeholder engagement

The preparation of the strategy involved extensive stakeholder consultation. Interviewees were unanimous in their support for arts and culture as a key driver in the precinct. Aboriginal arts and culture were overwhelmingly cited as a key development opportunity for the precinct.

The Strategy

The Arts and Cultural Strategy sets out strategies, recommendations and considerations to guide the implementation of the objectives in the subsequent planning by Infrastructure NSW or by private developers. These are summarised in **Table 21**.

Table 21: Summary of strategies, recommendations and considerations

STRATEGY	RECOMMENDATION	CONSIDERATION
OBJECTIVE 1: ARTS AND CULTURE IN BLACKWATTLE BAY REFLECT ITS HISTORIES, LANDSCAPE AND COMMUNITIES		
1A. Celebrate the maritime histories and character of Blackwattle Bay with a dedicated focus on Aboriginal cultural practices.	▪ Facilitate co-ordination between the CoS's Eora Journey Harbour Walk and major public art commissions in the precinct (e.g., Sydney Fish Market).	▪ Develop public program content in partnership with current local maritime culture-based organisations (e.g., Tribal Warrior, Sydney Heritage Fleet, Sydney Fish Market).
1B. Establish curatorial principles to align all arts and cultural programs with the precinct's arts and cultural vision.	▪ Develop an arts advisory panel that can assist in the development, implementation and direction of curatorial direction for the precinct. ▪ Continue to engage closely with Sydney Fish Market arts and cultural planners to ensure good fit with Blackwattle Arts and Culture Strategy.	▪ Appoint panel representatives from other key city arts and cultural advisory groups. ▪ Include Aboriginal arts and culture representative on arts advisory panel.
1C. Ensure all public art, events, way finding, performance, installations, retail strategy and place brand are	▪ Develop a combined interpretation plan that draws upon and influences heritage, retail,	

STRATEGY	RECOMMENDATION	CONSIDERATION
vehicles for arts-led place interpretation.	activation and marketing strategies for Blackwattle Bay.	
1D. Link interpretation of the Bay's stories with the wider Sydney Harbour narratives such as Eora Journey and Sydney Harbour Walk.	▪ Play an active role in the Sydney Harbour Collaboration Group to ensure place story co-ordination across other inner-city harbour locations.	▪ Identify best practice processes for generating interpretation project ideas that are specific to Blackwattle Bay (e.g., place-based arts laboratories).
OBJECTIVE 2: BLACKWATTLE BAY IS RECOGNISED AS A CREATIVE MAKING PLACE FOR ITS RESIDENTS, WORKERS AND VISITORS		
2A. Build affordable making spaces for creative industries and local communities.	▪ Provide a multi-purpose 'making space' as part of the community facility provision for Blackwattle Bay. ▪ Partner with other making space and arts-culture residency organisations to deliver best-practice operation models.	▪ Encourage developers to make tenancy provisions for creative partners. ▪ Investigate relocation of Aboriginal making organisation such as Boomalli Artists Co-operative. ▪ Investigate the provision of live-work spaces and develop international partnerships with other organisations to capitalise on exchange and profile building opportunities.
2B. Engage artists in the design and development of public domain lighting, street furniture and wayfinding for the precinct.	▪ Support the intent of prominent precinct stakeholders who embrace the precinct's arts and cultural direction (e.g., Sydney Fish Market).	▪ Include weighted-score incentives for consortia that include artist collaborations as part of their bids for tenders.
2C. Foster synergies and collaboration between the area's knowledge-based industries and its arts and cultural programs.	▪ Provide flexible event space as part of any community centre facilities and promote subsidised rates for the use of this space to the startup community. ▪ Include free wi-fi and power access across the public domain to encourage collaboration in the precinct. ▪ Implement innovative content (e.g., hacker, DIY and maker programs) within any public community programs and facilities.	▪ Provide rental incentives for the inclusion of start-up digital creative industries within the precinct's commercial / retail leasing strategies.
2D. Dedicate space to Aboriginal artists and arts and cultural programs and include a focus on contemporary and innovative practice.	▪ Approach digital Aboriginal arts and cultural organisations to see if they can have a permanent presence within the precinct (e.g., Balarinji, Indigital, Virtual Songlines, Indigi Lab).	▪ Partner with the Indigenous Digital Excellence (IDX) program at the National Centre for Indigenous Excellence to foster collaboration between emerging Aboriginal designers and the local Blackwattle Bay creative digital sector.
OBJECTIVE 3: ARTS AND CULTURAL EXPERIENCES ACTIVATE THE PRECINCT, DAY AND NIGHT		
3A. Ensure development provisions enable the precinct to host arts and cultural activation.	▪ Require prospective developers to provide an arts and cultural plan in response to the Blackwattle Bay Arts and Cultural Strategy as a part of the Expressions of Interest criteria. ▪ Re-examine arts and cultural objectives when entering into any subsequent Voluntary Planning Agreements to ensure that they are still current and valid. ▪ Implement permanent event infrastructure and permanent event DA provisions across potential	▪ Lead the adoption of standardised event and activation processes (e.g., licencing, venue hire, temporary infrastructure, etc) across all place management agreements within the precinct.

STRATEGY	RECOMMENDATION	CONSIDERATION
	activation areas of the public domain. ▪ Adopt a busking policy in line with CoS guidelines.	
3B. Build productive arts and cultural partnerships with key western harbour organisations.	▪ Liaise with Western Harbour Alliance and CoS to ensure that the Harbour Walk is extended all the way to Blackwattle Bay. ▪ Partner with MAAS (Ultimo and / or Parramatta) on creative industry exchange programs for maker-spaces.	▪ Partner with ANMM and Sydney Fish Market / Sydney Heritage Fleet on public programs (e.g., walks, sustainable ocean programs etc).
3C. Develop arts and cultural partnerships with local Aboriginal communities and organisations.	▪ Work with Aboriginal arts and cultural consultants to initiate discussion with Sydney-based organisations (e.g., Tribal Warrior, First Hand Solutions (Blak Arts Market), Boomalli), with a view to developing long-term and mutually-supportive relations.	▪ Collaborate with CoS Aboriginal liaison team to find ways to encourage meaningful engagement with local communities. ▪ Support collaboration between local Aboriginal enterprises Tribal Warrior and Tranby.
3D. Design and implement activation zones across the precinct so that the place has a diversity of arts and cultural offerings at different times.	▪ An activation strategy for the precinct should accompany the master-planning process so that there is sufficient thinking around the potential arts and cultural offer for the precinct. ▪ Planning approvals for Blackwattle Bay should be as flexible as possible to facilitate this broad spectrum of activation, both day and night.	
3E. Use arts and cultural programs to promote the place vision for Blackwattle Bay before, during and after the precinct's construction.	▪ Give the Arts Advisory group (Objective 1C) a mandate to develop "meanwhile use" options as part of its remit.	

SR13.2: The strategy should propose a sound methodology for the selection, commissioning and delivery of arts and cultural infrastructure as part of future development applications including proposed ownership and maintenance arrangements for major public art.

The strategy makes a number of recommendations to ensure that the recommendations in the Arts and Cultural Strategy are delivered. They include:

- Embedding arts and culture provision in the bid/tender documents' criteria
- Liaising with developers regarding their intentions for delivering on the arts and cultural strategy throughout their development proposal processes (including any voluntary planning agreements).
- Establishing arts and cultural leadership in the precinct as early as possible and developing a governance model to advise on the direction of the arts and culture strategy.
- Begin 'meanwhile' arts and cultural programming in the public domain to foreshadow the arts and cultural vision for the precinct before, during and after its development.

Because development in the precinct will be staggered over an extended period, Infrastructure NSW will need to adopt a staged approach to the implementation of arts and culture in Blackwattle Bay. An indicative program model for timing of these recommendations is shown in **Figure 62**.

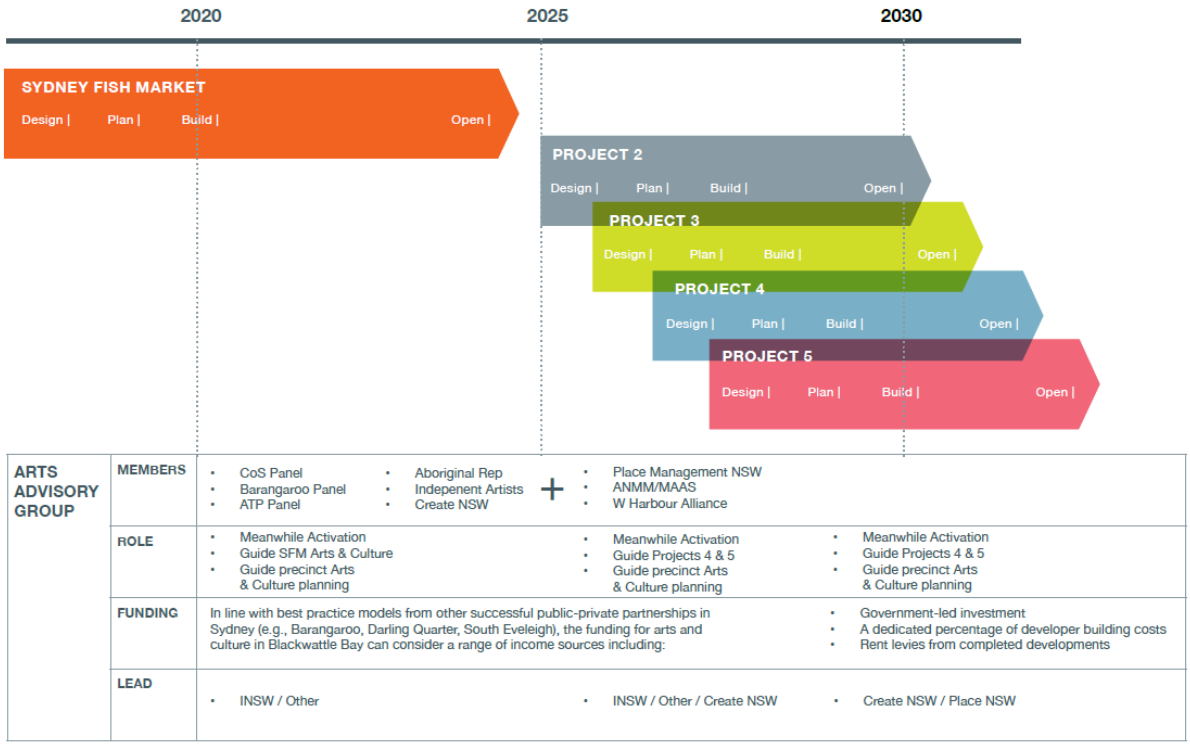


Figure 62: Blackwattle Bay Arts and Culture Implementation Model
Source: City People

SR13.3: Demonstrate how the strategy is consistent with the City of Sydney's Public Art Strategy, Public Art Policy, Guidelines for Public Art in Private Developments and Guidelines for Acquisitions and Deaccessions and Create in NSW's NSW Arts and Cultural Policy Framework.

A full analysis of relevant state and local government policy pertaining to arts and cultural opportunities in Blackwattle Bay is included at Appendix 1 of the Arts and Cultural Strategy. A summary of key elements of government alignment is also supplied within each strategy objective.

G14. Urban and marine ecology

SR14.1: Prepare an ecological assessment by a suitably qualified ecologist. Include species and communities of local conservation significance, as identified in the City's Urban Ecology Strategic Action Plan (UESAP), as well as, listed threatened species and ecological communities. Include in the assessment:

- identify any species that are of particular conservation significance (including threatened species and locally-significant species identified in the City's UESAP)
- determine the nature and extent of impacts to the urban vegetation and fauna and marine habitats, particularly those of conservation significance (if present), that are likely to result from each stage of the development
- 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
- restoration/creation of compensatory habitat for any important habitat features removed/disturbed as a result of the development

- provide recommendations and identify opportunities to create habitat features that will benefit urban terrestrial 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.

Eco Logical Australia has prepared an Urban and Marine Ecology Constraints and Opportunities report for Blackwattle Bay (refer to **Attachment 21**). It addresses both terrestrial and marine biodiversity.

Eco Logical Australia also prepared a Biodiversity Development Assessment Report (BDAR) for the proposed new Sydney Fish Market as part of the Concept/Stage 1 and Stage 2 SSDAs.

Aquatic and terrestrial constraints

The Eco Logical report found that aquatic habitat in the study area had been modified by vertical seawalls, wharf structures, pontoons, piles and disturbance by regular boat traffic. The dominant habitat was unvegetated subtidal sand. Macroalgae and intertidal rock rubble provided some variation in habitat around the shallow fringes of the bay. Due to historic land reclamation and seawalls, no large areas of saltmarsh or mangroves can establish. No seagrass occurred in the bay, possibly due to poor water clarity, salinity and/or disturbance from boats. No threatened species, populations or communities were observed in the Study Area, however, protected or proposed threatened seahorses could use the western shallows where macroalgae (seaweed) was more prominent.

In relation to terrestrial habitat, a high proportion of the study area has been mapped as supporting areas of a Biodiversity Corridor. Given the urban context and the type of habitat provided (mostly landscape plantings and street trees) the mapping is taken to refer primarily to highly mobile species such as birds and bats. The vegetation on site does not form a recognisable native vegetation community (or Plant Community Type) and therefore the mapping has categorised the vegetation by its canopy family and understorey.

Presence or likelihood of threatened and protected aquatic species and populations

Within the study area, the only habitat capable of supporting threatened species was the macroalgae growing predominately along the western seawall of the bay. Syngnathiformes (seahorses, seadragons, pipefish, pipehorses, ghostpipefish and seamoths) occur in the harbour and are known to use similar habitats. No seahorses or other Syngnathiformes were observed during field survey. They may occur in the macroalgae along the western shoreline but are unlikely near piles as there was very little macroalgae in these locations. No other threatened species, populations or communities were observed on site although it is possible that some species may pass through the area, given the connectivity to Sydney Harbour and coastal habitats. It is unlikely that they would rely on the site for habitat or survival.

In addition, the BDAR for the new Sydney Fish Market found there would be no direct or indirect impacts to threatened aquatic species, populations or ecological communities or their habitat as a result of the project. The development has been located in a way that substantially avoids and minimises impacts to biodiversity values due to its location within an area where there are limited biodiversity values.

Terrestrial habitats at Blackwattle Bay

No endangered or critically endangered ecological communities were found in the Blackwattle Bay study area. No hollow-bearing trees which may provide roosting/nesting habitat for threatened mammals (including microbats) and birds, were identified. However, there are several areas of high-medium potential microbat habitat located in built structures. These structures may support several species of threatened microbats, such as *Myotis macropus* (Southern Myotis) and *Miniopterus orianae oceanensis* (Large Bent-winged Bat). Several trees in or adjacent to the study area contain

potential foraging habitat for the threatened *Pteropus poliocephalus* (Grey-headed Flying Fox). No other threatened fauna are likely to depend on habitat within the study area. Canopy vegetation also provides potential habitat for small birds of local conservation significance. No threatened flora were identified.

Mitigation measures/recommendations

There are few major ecological constraints to the proposed rezoning and future development which should be addressed during ongoing design. However, there are several opportunities to enhance the terrestrial and marine ecology with reasonably simple considerations in design and habitat connectivity.

Aquatic habitat enhancement opportunities are summarised in **Table 22**.

Table 22: Aquatic habitat enhancement opportunities

Location/environment	Opportunity
Subtidal sand (>2 m depth)	▪ Install 'oyster reefs' to provide colonisation and refuge for marine fauna.
Subtidal sand (1-2 m depth)	▪ Subject to boat safety considerations, install scattered rubble to connect macroalgae habitat.
Macroalgae (dense *Sargassum linearifolium*)	▪ Plant/transplant native macroalgae and/or increase rocky rubble to improve continuity and width.
Intertidal rocky rubble seawalls	▪ Construct water retaining features and increase structural complexity of intertidal or subtidal zones of seawalls.
Vertical and sloped smooth seawalls	▪ Replace with gentle grade wall and/or retrofit with horizontal features like flowerpots, water retaining features and complex hard surfaces.
Vertical rough seawalls	▪ Retrofit with horizontal features like flowerpots.
Sloped stepped seawalls	▪ Increase macroalgae habitat at base through planting and/or additional rubble.
Future boardwalks, wharves and jetties	▪ Design to allow light penetration to water and suspend fish aggregation devices.
Future floating boardwalks (temporary)	▪ Add benthic habitat features to improve fish shelter and connectivity.
Piles	▪ Select products with rough surface and/or attach rough material for macroalgae attachment.

Provisions aimed at enhancing aquatic habitat are included in the Design Code.

In relation to terrestrial biodiversity, Eco Logical report notes that master planning and development design could include indigenous vegetation planting in landscaping works, creation of roof-top gardens, green walls, artificial wetlands and water-sensitive urban design. There is opportunity to connect fragmented habitat by strategic placement of habitat nodes or linear connections. Terrestrial vegetation also influences water quality that then affects marine ecology. Specific design considerations for the bay include:

- Give preference to planting locally native species
- Incorporate trees into the master plan with the aim to shade pavement. This will reduce warming of surface water before entering the harbour. Warm water can favour exotic marine species
- Incorporate trees, garden beds, microbat habitat boxes and ground complexity into the master plan to connect patches of vegetation. This will aid fauna passage, foraging and breeding opportunities, and dispersal and exchange of genetic material
- Use pervious surfaces for open-space areas to allow water to soak into the soil rather than flow off quickly to the harbour

- Select low-spill lighting near habitat vegetation to reduce disturbance to nocturnal animals.

Appropriate controls have been included in the Design Code relating to tree planting, urban and terrestrial habitat enhancement, WSUD and lighting.

SR14.2: Demonstrate that the findings of 'Guiding Principles for Marine Foreshore Developments' developed by the Sydney Institute of Marine Science and the University of Sydney have been considered in the proposed planning controls.

To achieve greater abundance and diversity of marine biota, several techniques are available as described in Guiding Principles for Marine Foreshore Developments. Potential options suited to existing conditions in the Study Area have been summarised in **Table 22**.

Further detail is provided in Table 5 of the Eco Logical report at **Attachment 21**.

SR14.3: Ensure possibilities for the mitigation and restoration/creation of marine habitat are investigated.

Refer discussion above.

SR14.4: 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.

The Urban and Marine Ecology Constraints and Opportunities report reflects the findings of the Urban Forestry Strategy (**Attachment 31**) and the findings of the new Sydney Fish Market SSDAs. A future Aquatic Biota Management Plan will be prepared for the new Sydney Fish Market construction phase, which can be further developed to extend across the Blackwattle Bay Precinct at a later stage.

The City's Urban Ecology targets are addressed in Table 6 of the Eco Logical report (**Attachment 21**).

G15. Urban forest

SR15.1: This study requires a Project Arborist: qualified in arboriculture to Australian Qualifications Framework (AQF) Level 5 or above; and who has at least 5 years' demonstrated experience in managing trees within complex development sites.

SR15.2. 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.

An Urban Forestry Strategy has been prepared by qualified arboriculturalists, Tree IQ (refer **Attachment 31**). The strategy comprises the following:

- Preliminary Arboricultural Report
- Arboricultural Impact Assessment
- Tree Planting Masterplan.

A Visual Tree Assessment was undertaken on trees growing within the Study Area to determine their health and structural condition. A total of sixty (60) trees and groups of trees were assessed as shown in **Figure 63**. The trees include a mix of locally indigenous, Australian native and exotic species. None of the trees within the Study Area are listed in the CoS Register of Significant Trees.

As required by Clause 2.3.2 of *Australian Standard 4970 Protection of Trees on Development Sites (2009*), each of the trees assessed has been allocated a Retention Value. Retention Value categories are based on a combination of Landscape Significance and Useful Life Expectancy. The trees have been allocated one of the following Retention Values:

- Priority for Retention
- Consider for Retention
- Consider for Removal
- Priority for Removal.

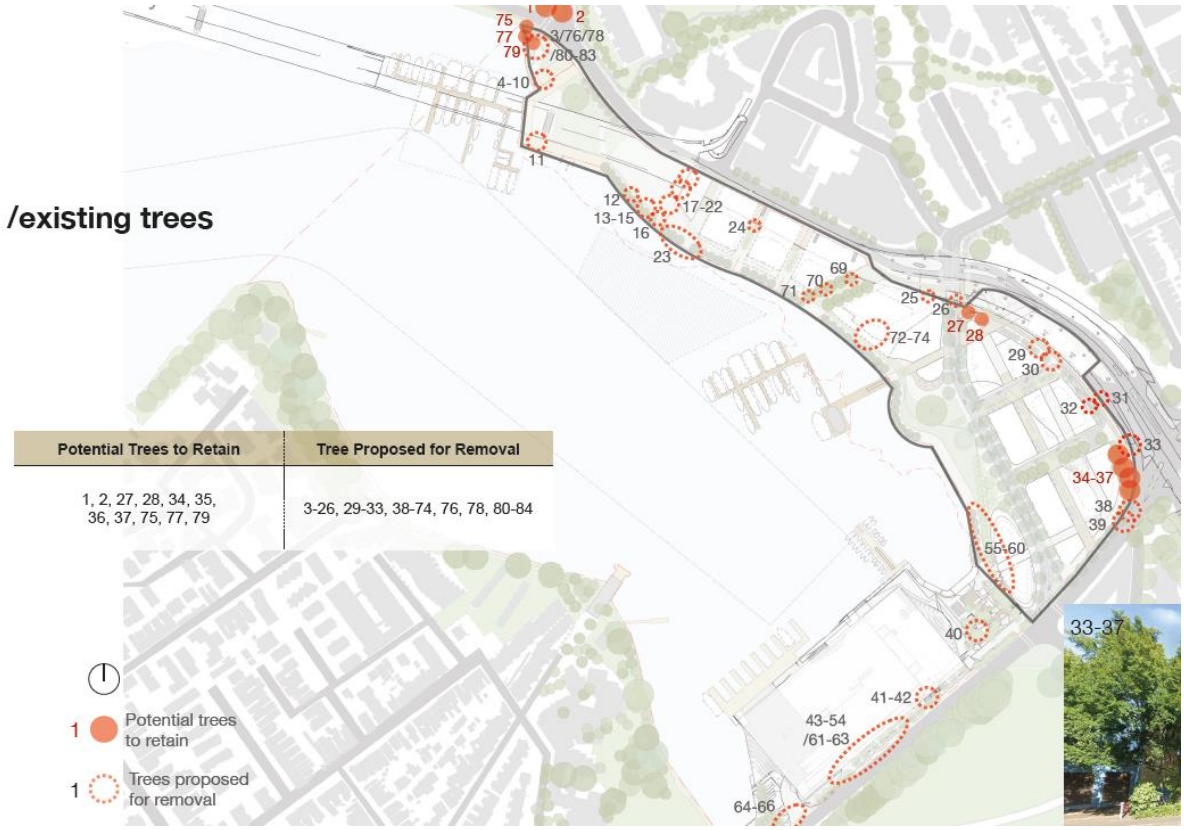


Figure 63: Tree Location Plan
Source: Tree IQ

In general, the trees within the Study Area are of low to moderate value with 54% of the population being allocated a Retention Value of Consider for Retention. 32% of trees have a Retention Value of Priority for Removal. These trees have a Useful Life Expectancy of less than 5 years and should be removed regardless of future development works. Trees with a Retention Value of Consider for Removal represent 10% of the population and are generally of low Landscape Significance with a short Useful Life Expectancy. The removal of these trees would provide space for the planting of better-quality specimens which should provide a positive contribution to the Study Area in the medium to long term. Trees with a Retention Value of Priority for Retention represent the lowest percentage of trees within the Study Area at 3%. Ideally, these trees should be accommodated within future development works.

SR15.3: 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.

Based on the indicative scheme, forty-eight (48) trees are likely to be impacted by future development undertaken in accordance with the Precinct Plan, as shown in **Table 23**. This includes twenty-three (23) trees with a Retention Value of Consider for Retention, six (6) trees with a Retention Value of Consider for Removal and nineteen (19) trees with a Retention Value of Priority for Removal. No trees with a Retention Value of Priority for Retention are identified as requiring removal.

It should be noted that the proposed tree removals are based on the current level of design at the master planning stage and will continue to be refined.

Table 23: Proposed tree removal

Priority for Retention	Consider for Retention	Consider for Removal	Priority for Removal
	5, 11, 12, 15, 16, 19, 20, 21, 22, 23, 26, 29, 31, 32, 33, 38, 39, 55, 56, 57, 58, 59 & 60	3, 7, 8, 9, 24 & 83	4, 6, 10, 13, 14, 17, 18, 25, 30, 70, 71, 72, 73, 74, 76, 78, 80, 81 & 82

Eleven (11) trees can be potentially retained. These are Trees 1, 2, 27, 28, 34-37, 75, 77 and 79.

A detailed Arboricultural Impact Assessment should be prepared for all subsequent Development Applications where works are proposed within the TPZ areas of trees to be retained. The Arboricultural Impact Assessment should examine the potential impact of any proposed works on the trees and recommend tree sensitive methods and tree protection measures as required.

SR15.4. The plan for the retention of existing and provision of new trees is to consider:

- The capacity of the public domain and urban design approach to protect existing trees and allow for the growth of new trees
- Species selection that maximises solar access during winter within new streets and private domain
- Species selection that complements existing park planting themes in Wentworth Park and Glebe foreshore parks
- The provision of sufficient soil volumes and quality (including within the private domain) provide for long term tree health
- 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
- 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.

SR15.5. Demonstrate how the project addresses the CoS Urban Forest Strategy, in particular the following site specific targets:

- minimum canopy cover of 60% to streets, 30% to parks and 30% to private property
- minimum species diversity targets of 40% family, 30% genius, and 10% species
- 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
- Note: Wentworth Park, as a well-established park, is not to be included within the canopy cover measurements or species diversity targets.

SR15.6. Provide an indicative tree and planting strategy across the site, accounting for biodiversity and habitat considerations that includes:

- a tree sensitive public domain and that protects existing trees, and allows for the growth of new trees
- species selection that maximises solar access during winter, within new streets and private domain
- Species selection that complements existing park planting themes in Wentworth Park and Glebe foreshore parks and is tolerant to the foreshore site conditions, and
- sufficient soil volumes and quality are provided for long term tree health.

SR15.7. Demonstrate that all relevant Council policies, strategies and master plans are considered including SLEP 2012, SDCP 2012, Urban Forest Strategy, Tree Management Policy, Street Tree Master Plan, Urban Ecology Strategic Action Plan and the Landscape Code.

The proposed Urban Forestry Strategy Plan is shown in **Figure 64**. The plan shows the suggested tree size and distribution as well as minimum tree canopy.

Tree canopy

Canopy cover is a measure of the physical coverage of the combined tree canopy over the land. It represents a way of expressing, as a percentage, how much of any given area is shaded by trees. The indicative canopy cover targets for the Study Area are shown in **Table 24** and shown on **Figure 64**. The targets are based on the CoS *Urban Forest Strategy* (2013) and as outlined within the Study Requirements.

Table 24: Indicative canopy cover

Location	Canopy Cover Targets
Indicative Street	60%
Indicative Laneway	60%
Indicative Laneway over Basement	60%
Indicative Promenade	45%
Indicative Bank Street Park	30%
Indicative Promenade and Open Space	30%
Miller Street Reserve	30%

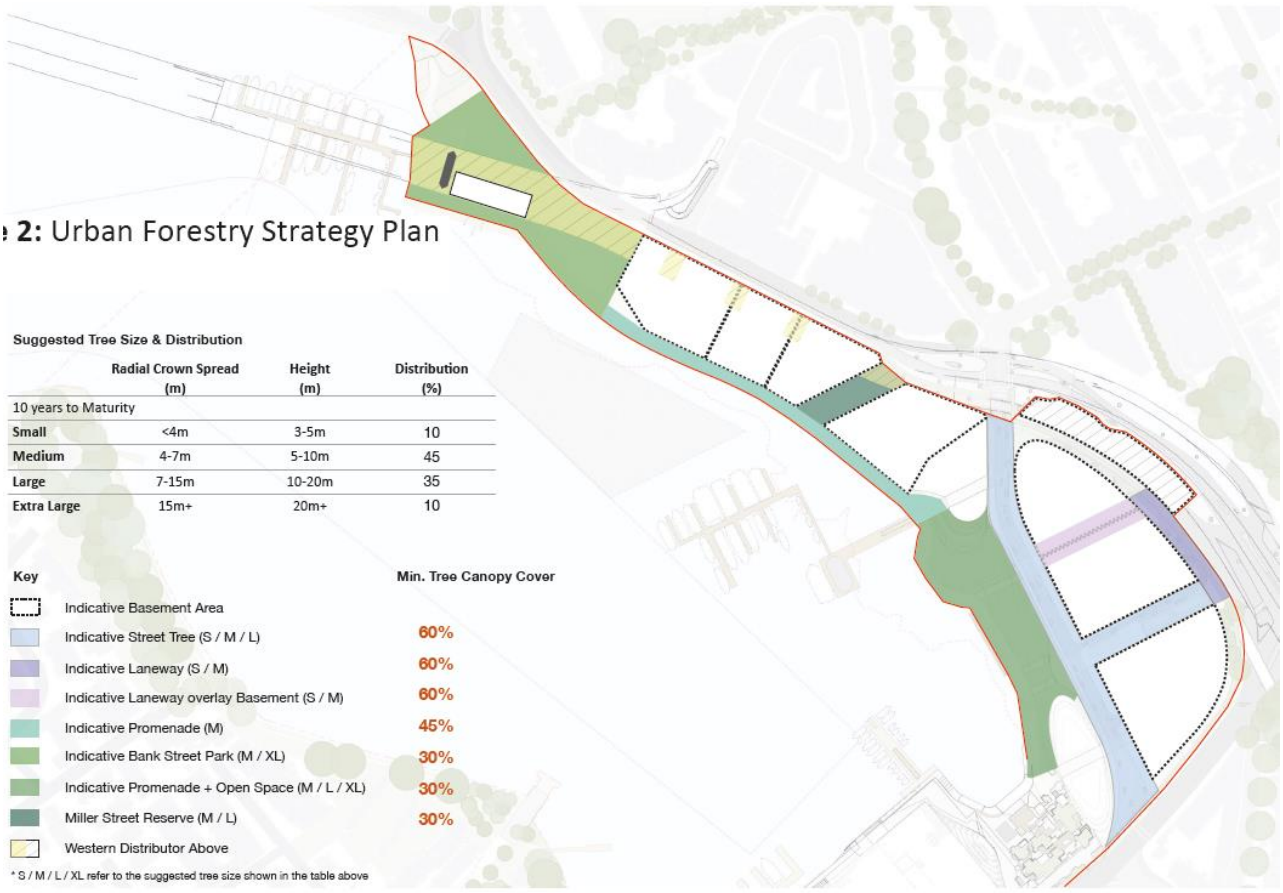


Figure 64: Urban Forestry Strategy Plan
Source: Tree IQ

Tree sizes

Within a tree population, a range of tree sizes and habits adds a level of structure and complexity which when used effectively can complement and enhance the surrounding built environment. The report recommends that only 10% of trees should be small trees, with the remaining trees either medium, large or extra large. The report notes that the cost benefit of large trees is proportionately much greater than that of small trees due to their ability to shade, screen, absorb greater volumes of carbon dioxide and pollutants, and help reduce the scale of large buildings.

Table 25 shows the proposed indicative tree sizes.

Table 25: Indicative tree sizes

Tree size	Percentage
Small	10%
Medium	45%
Large	35%
Extra large	10%

Street tree spacings

New street tree spacings within the Study Area are based on the CoS Street Tree Masterplan Part D (2015) as outlined below:

- Medium trees – 8.5m linear spacing and 7m setback from trees in adjacent row
- Large trees – 12.7m linear spacings and 9m setback from trees in adjacent row.

Soil volume and depths

Contamination testing has been carried out across the Study Area and the Site Audit Report recommends a regime for further analysis on a site-specific basis when redevelopment is contemplated. Nonetheless, it is expected that artificial soil profiles will need to be installed across the Study Area with the new trees being planted on-structure, below paving or in areas where the existing site soil is unsuitable for plant growth. Limited soil volumes, especially in paved areas and over structures, can be a major limitation to tree health and development.

Indicative soil volumes for the Study Area are based on the Apartment Design Guide (2015) of 35m^3 for medium trees and 80m^3 for large trees. Further investigations in relation to soil and engineering requirements for the tree planting pits (including location of underground services) would be undertaken as part of subsequent design development).

Urban forest capacity

The streets and foreshore promenade have been designed to meet the urban forestry targets for canopy cover, tree sizes and spacings, and soil volumes as outlined within the Study Requirements. This is shown in **Table 26** below and in the sections in Figure 4 of the Urban Forestry Strategy (**Attachment 31**).

The urban forest capacity will be subject to further refinement during design development.

Table 26: Urban forest capacity

Typology	Tree size	Nominal radial crown width	Spacings	Soil volume	Canopy cover
Promenade	Medium	4.5m	8.5m	35m^3	71%
Gipps Lane	Medium Large	4m 7m	8.5m	35m^3 80m^3	78%
Gipps Street	Large Medium	7m 4m	12.7m	80m^3 35m3	70%
Bank Lane	Medium	4m	8.5m	35m^3	62%
Park Street	Medium Large	4m 7m	8.5m 13.5m	35m^3 80m^3+	84%

Species selection and diversity

There are a number of site constraints which need to be considered when progressing the design and selecting the species selection for the new tree plantings, notably:

- **Wind** - The Study Area is subject to a range of wind effects which have the potential to impact the mechanical and biological processes of the new tree plantings. The selected tree species need to be tolerant of wind impacts, and particularly along the foreshore, new tree plantings need to include a variety of species with differing crown forms to help ameliorate wind conditions and provide protection for those species which are less wind tolerant.

- **Shade** - The Study Area has a south-westerly aspect. In addition, structures such as the Western Distributor Motorway/Anzac Bridge Viaduct and existing buildings outside of the Study Area to the north and east cast a degree of shade and new development will also create shade. Tree selection in areas subject to shading will need to focus on recognised shade-tolerant species, particularly littoral rainforest species which can tolerate the harbour foreshore location of the Study Area.
- **Salt spray** - The foreshore areas of the Study Area may be exposed to salt laden winds on occasion and salt-tolerant species need to be selected in these areas.

SR15.7. Demonstrate that all relevant Council policies, strategies and master plans are considered including SLEP 2012, SDCP 2012, Urban Forest Strategy, Tree Management Policy, Street Tree Master Plan, Urban Ecology Strategic Action Plan and the Landscape Code.

All relevant Council policies, strategies and master plans have been considered in the Urban Forestry Strategy.

G16. Ecologically sustainable development

SR16.1. 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 2000) will be incorporated, specifically:

- identify performance benchmarks to allow sustainability to be considered in site planning,
- building design and in the construction and operational phases of development to achieve
- best practice sustainability outcomes, and
- commitment to compliance with a nationally recognised rating system (e.g. Green Star – Communities).

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 NSW Government's Waste Avoidance and Resource Recovery Strategy 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, off-street storage for collection and accessibility for waste collection vehicles. Identify both building and precinct scale solutions.

SR17.6. Demonstrate that compliance with BASIX is achievable and investigate opportunities to deliver beyond-compliance BASIX scores: Energy 40 and Water 60 for residential buildings (6+ storeys).

AECOM has prepared an ESD report (refer **Attachment 32**).

The ESD report demonstrates how the planning and design process for the precinct has incorporated sustainability design initiatives and seeks to ensure appropriate recommendations are made for future initiatives. In addressing the SSP Study Requirements, the following approach was undertaken:

- Identify Existing Environment Context - establishing a base case for ESD in Blackwattle Bay, including the sustainability and regulatory context applicable to the site.
- Develop and Test Sustainability Targets and Initiatives - The context of the site informed the identification and development of sustainability targets and initiatives aimed at meeting the existing and future community and environmental needs.

- ESD Recommendations and Framework Assessment - The targets are used in conjunction with the established site context to provide ESD recommendations and identify initiatives for the Precinct Plan and recommendations for future design investigation. The proposed Precinct Plan has also been assessed through an ESD framework that demonstrates compliance with a nationally recognised rating system - the Green Star Communities National Framework.

There are numerous international, national, state and local policy and regulatory drivers from an ESD perspective, ranging from the Paris Agreement which sets out a global action plan to reduce global warming through Commonwealth and State initiatives to the CoS's Climate Change Adaptation Plan. A detailed analysis of the regulatory and policy context is found in Appendix A of the ESD report.

There are also several contextual, market and industry drivers that will influence the overall sustainability outcomes of the Blackwattle Bay precinct. These come from emerging market innovations, price trends, supply constraints, climate change or policy changes that present either potential opportunities or emerging risks. Examining these external forces early in the planning process helps to address risks and to capitalise on opportunities to implement the latest sustainability technologies and initiatives.

Table 27: Sustainability drivers and implications (Source: AECOM)

Driver	Summary of implications for planning and development
Climate change	• Increased tree canopy cover to reduce land surface temperatures • Green infrastructure such as green roofs, planting a variety of vegetation species to increase roughness of the urban landscape and low emissivity and high albedo (reflectivity) materials/coatings.
Decreasing electricity prices	• Decreasing electricity costs means provides opportunity to consider electrification of buildings.
Building electrification	• Electrification is necessary for achieving net zero buildings • Consider electrifying systems that provide hot water, heating, ventilation and air-conditioning (HVAC) and cooking
Renewable energy generation	• opportunity to incorporate rooftop solar into the design of the Precinct to help achieve the minimum 50 per cent renewable energy for the precinct
Grid decarbonisation	• the decarbonisation of the grid should be factored into demand and generation models for on-site renewable energy and other renewable energy arrangements.
Green infrastructure	• Green infrastructure can help thermal performance of buildings, reduce cooling loads and improve amenity of the precinct • Prioritise native, low water use vegetation to align to BASIX water targets.
Electric vehicle uptake	• EV charging infrastructure needs to be provided, having regard to the need to manage electricity demand throughout the day
Transport trends	• Flexibility should be incorporated to cater for future trends and technologies such as electric vehicles, the use of drones for parcel delivery and driverless vehicles • Focus should be on sustainable transport
Active transport	• Given precinct's proximity to CBD and linkages to regional and local pedestrian and cycle routes (constructed and planned), active transport should be integral to planning and development.
Water consumption	• As the population increases and rainfall becomes less predictable due to climate change, measures to decrease water consumption are crucial • Future development needs to incorporate water saving measures, such as rainwater tanks, native and/or low water use landscaping and high WELS rated appliances and water fixtures

Waste and recycling rates	• Well-designed waste separation at the Precinct will be critical to achieving the City of Sydney's targets. • Precinct represents an opportunity to compost food waste and use that fertiliser for landscaping or a communal vegetable garden.
Circular economy	• Designing the Precinct provides opportunity to consider its future disassembly to increase the circularity potential of the buildings from the start, as well as to use materials that are recycled rather than from virgin resources.

Sustainability targets

Several ESD targets have been developed to inform planning controls with the aim of achieving sustainable outcomes in Blackwattle Bay. These targets have been collaboratively developed in line with:

- Statutory requirements
- Local and state policy
- Land and Housing Corporation programs and policy
- Best-practice sustainability frameworks.

For each target a 'minimum goal' is nominated to outline minimum commitments for master planning and planning approvals. The ESD report recommends that the goals are used to guide tendering options for development and where the tenderers offer increased sustainability ambitions, there is an opportunity to provide a point of sustainability differentiation among developers/tenderers.

The targets are set out in **Table 28**.

Table 28: Sustainability targets for precinct

Target	Minimum goal	Target source*	Comment (where required)
Green Star Communities precinct rating	5 star		Version 1.1
Green Star Buildings	5 star	GSC	Version 1
BASIX energy targets		BASIX SEPP, SSP, CoS	BASIX targets are expressed as a percentage reduction over NSW benchmarks
High rise (6 storey units or higher)	25		
Mid rise (4-5 storeys)	35		
NABERS energy rating for office and retail buildings	6 star	CoS	
Net zero carbon precinct	100% by 2050		% reduction in carbon emissions (baseline to be determined)
Precinct powered by renewable energy	50%	SSP	% of total estimated demand provided by renewable energy from off-site and/or on-site sources
NABERS water rating for office and retail buildings	5 star		
BASIX water targets			
High rise and other residential buildings	40	BASIX SEPP, CoS	BASIX targets are expressed as a percentage reduction over NSW benchmarks
Public open space irrigation with recycled water	100%		
Operational waste diverted from landfill	70%	CoS, NSW WARR	

Target	Minimum goal	Target source*	Comment (where required)
Construction and demolition waste diverted from landfill	80%	GSC, CoS, NSW WARR	Excludes waste that is not normally sent to landfill, e.g. hazardous waste, soil from excavation etc.
Climate change and resilience risks addressed through design	All high and extreme risks addressed	GSC	
Tree canopy cover	60% to streets 30% to parks 30% to private property	SSP, CoS	% of individual areas
Electric vehicle parking	10%		Measured as parking yield per parking lot as EV charge station 'turn key' ready at development completion

*Abbreviations:
BASIX SEPP – BASIX State Environmental Planning Policy
GSC – Green Star – Communities v1.1
SSP – State Significant Precinct Study Requirements
CoS – City of Sydney requirement and/or target
NSW WARR – NSW Waste and Resource Recovery Target

Sustainability initiatives

The ESD Report outlines key sustainability initiatives and design opportunities for investigation in Blackwattle Bay. They include:

- Energy and emissions initiatives
  - Passive design
  - Energy efficiency measures
  - Building electrification
  - On-site renewable energy – solar photovoltaics
  - Microgrids
  - Power purchase agreements
  - Green infrastructure
  - Cool materials
  - EV charging infrastructure
  - Active transport
- Water initiatives
  - Water efficiency measures and fixtures
  - Water sensitive urban design
  - Rainwater harvesting
  - Onsite water recycling systems
- Waste initiatives
  - Construction and demolition waste reduction
  - Operational waste minimisation and improved recycling

Many of these initiatives can assist in meeting and exceeding the targets set for the precinct, including Green Star Buildings, BASIX Energy, BASIX Water, NABERS Energy, Net-Zero Carbon Precinct and the 50% renewable energy target for the precinct.

SR16.2. Provide an Integrated Water Cycle Management Strategy that considers water, waste water and stormwater. The Strategy must consider water sensitive urban design and any future water conservation measures, including water efficiency and reuse, following appropriate best

practice and guidelines and priorities meeting non-potable water demands with recycled water or harvested stormwater.

Refer discussion in Part G21.

SR16.5. Prepare the required design provisions, in collaboration with CoS and DPE, which are able to be integrated into Sydney DCP 2012 if required.

ESD design provisions have been included in the Design Code at **Attachment 14**.

G17. Climate change adaptation

SR17.1. Undertake a sustainability assessment of the proposal, reflecting the directions outlined in the 'NSW Climate Change Policy Framework', October 2016, and the draft Central District Plan "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.

This study requirement is addressed in the Ecologically Sustainable Development Report (refer **Attachment 32**) and discussed in G16 above.

SR17.2. 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), including 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 features.

SR17.3. Assess the potential impacts of climate change on vulnerable groups, including older people, and mechanisms for implementing mitigation strategies.

SR17.4. Undertake sensitivity analysis to address the impact of climate change due to increased temperatures, extreme heat events and changing rainfall patterns as informed by the Water Quality, Flooding and Stormwater Study.

SR17.5. Demonstrate consideration of the *Urban Green Cover in NSW Technical Guidelines* (OEH, 2015).

AECOM has prepared a Climate Change Adaptation Report (refer **Attachment 33**).

The report methodology involved:

- Reviewing the exposure of the site to climate change related hazards (such as extreme temperatures, heavy rainfall events, extreme storms, sea level rise, and bushfires)
- Identifying preliminary risks which were workshopped and validated through a series of stakeholder exercises and community engagement activities
- Identifying priority risks and developing adaptation actions to be integrated into design documentation.

The key climate impacts identified through the risk assessment workshop process are outlined in **Table 29**.

Table 29: Climate hazards and risks (Source: AECOM)

CLIMATE HAZARD	RISK
Changes to mean temperature and the number/severity of hot days	• More frequent and more intense instances of extreme heat can cause heat stress and exacerbate any pre-existing health conditions for residents and visitors to the Precinct. In particular, community members such as the elderly, children, and those with pre-existing medical conditions are likely to be more vulnerable to periods of extreme heat. • Extreme heat both increases demand on the energy network because air conditioning units work harder to maintain temperature, and reduces energy network capacity, which can cause brownouts and blackouts when the power grid is at or beyond capacity.
Changes to storm conditions (i.e. extreme wind and east coast low storms)	• Greater intensity of rainfall and runoff has the potential to overwhelm drainage capacity and cause flooding and inundation of roof, ground, and subterranean systems. • Greater intensity of rainfall and runoff has the potential to cause inundation and malfunction of underground utilities such as electricity distribution, fibre cables, pumping stations, other network infrastructure. • East Coast Low storms (ECLs) generate extreme rainfall, wind, and storm surges which can lead to infrastructure and building damage, and pose health and safety risks for residents, workers, and visitors. • Safety concerns for community members with reduced mobility (e.g. in the event of evacuation) such as the elderly, children, those with pre-existing medical conditions, and those of culturally and linguistically diverse (CALD) communities who may be more vulnerable in terms of health, safety, and communication during these events. • Implications for emergency management planning to consider the increase in the frequency and intensity of these extreme events
Changes to mean rainfall and drought conditions	• Drought risk affecting water storage systems on site and increasing dependency on mains water supply for non-potable water use
Bushfire	• Increased bushfire frequency and intensity impacting air quality leading to health and safety risks for residents, workers, and visitors. • More frequent and more intense instances of bushfires and associated poor air quality can cause heat stress and exacerbate any pre-existing health conditions for residents and visitors to the Precinct. In particular, community members such as the elderly, children, and those with pre-existing medical conditions are likely to be more vulnerable to these events. Careful consideration should be made when outlining requirements for air quality monitoring, air filtration and sealing of buildings
Sea level rise and coastal flooding	• Sea level rise can exacerbate storm surges which lead to overtopping and inundation of public space and buildings. • Storm surges and coastal inundation have the potential to damage and cause malfunction of underground utilities such as electricity distribution, fibre cables, pumping stations, other network infrastructure. • Implications for emergency management planning to consider the increase in the frequency and intensity of these extreme events. • Safety concerns for community members with reduced mobility (e.g. in the event of evacuation) such as the elderly, children, and those with pre-existing medical conditions. Similarly, emergency management planning should ensure communication materials and notices consider CALD community engagement.
Increasing rainfall intensity and flooding	• Greater intensity of rainfall and runoff has the potential to overwhelm drainage capacity and cause flooding and inundation of roof, ground, and subterranean systems. • Greater intensity of rainfall and runoff has the potential to cause inundation and malfunction of underground utilities such as electricity distribution, fibre cables, pumping stations, other network infrastructure.

	• Implications for emergency management planning to consider the increase in the frequency and intensity of these extreme events. • Safety concerns for community members with reduced mobility (e.g. in the event of evacuation) such as the elderly, children, and those with pre-existing medical conditions. Similarly, emergency management planning should ensure communication materials and notices consider CALD community engagement.

In total, 45 risks were identified for the Precinct. Of these, in 2030 17 were rated 'low', 24 rated 'medium' and 4 rated 'high'. In 2090, 5 were rated 'low', 24 rated 'medium' and 16 rated 'high'. It is worth noting that no extreme risks were identified for either time period.

Adaptation actions and responses have been identified and integrated into the Precinct Plan to address these climate impacts, as shown in **Table 30**.

Table 30: Precinct Plan responses to key climate impacts

CLIMATE HAZARD	ADAPTATION MEASURES
Changes to mean temperature and the number/severity of hot days	Canopy coverage Canopy coverage over paved surfaces serves as a cost-effective means of mitigating urban heat island effects and additional projected increases in mean temperature and extreme heat events. The Urban Forest Strategy Plan indicates that streets and promenades will have a minimum tree canopy cover of 60%, with a mix of small/medium/large trees (up to 20m high). The open space areas (Bank St Park and Promenade Open Space) will have a minimum tree canopy cover of 30% and will be a mix of tree sizes including those over 20m in height. This will be facilitated by maximising the retention of deep soil areas. These targets represent an increase in the existing canopy coverage on the site. The tree retention and replacement targets will help to reduce the urban heat for pedestrians and residents (including those most vulnerable; elderly, youth, disabled). An increase in vegetation surrounding the site will also help to improve air quality which benefits those with respiratory issues. Water sensitive urban design (WSUD) The Precinct Plan features several water sensitive urban design (WSUD) measures which provide a means for cooling the microclimate and reducing urban heat island effects. For example, the integration of water into landscapes assists in cooling urban areas via evaporation, provides activities for children, and provides amenity for the community. If designed appropriately, there are also significant co-benefits for flood mitigation. Building design Facades are planned to have depth and incorporate shading capacity, particularly for ground floor premises. Natural (passive) ventilation is a key principle of the design of buildings in addition to maximising the orientation of the building to help reduce heat gain and the burden of the HVAC systems.
Changes to storm conditions (i.e. extreme wind and east coast low storms)	Building design and orientation Building placement will be optimised to the best extent possible (taking into account design constraints such as the Western Distributor, foreshore depth and solar amenity), to consider wind mitigation and reduce the impact of high winds resulting from extreme storms. Wind impact and mitigation measures are explored further in the SLR wind study.
Changes to mean rainfall and drought conditions	WSUD Inclusion of water sensitive urban design features help minimise water use for irrigation.
Sea level rise and coastal flooding	Specification for minimum site levels

CLIMATE HAZARD	ADAPTATION MEASURES
	Specification of podiums / site levels at 3.0m AHD elevation, with non-critical areas (e.g. Promenade) designed at 2.5m AHD accounts for future sea level rise. Foreshore access Precinct Plan identifies a stepped embankment between promenade and water level to ensure access to water is maintained regardless of sea level.

Sensitivity to climate change assessments were undertaken in two ways. Firstly, the Water, Riparian Land, Flooding and Stormwater Study (Cardno, **Attachment 12**) ran a sensitivity test of the stormwater infrastructure to climate change by undertaking model runs that consider an increase in rainfall intensity during extreme rainfall events. It was found that the drainage infrastructure has capacity to account for this increase, and as a result there is no significant increase to flood hazards resulting from climate change. Secondly, climate change projections were reviewed across two greenhouse gas emission scenarios (representing medium-low and high rates of emissions towards the end of the century). Both risks and adaptation actions were found to be relevant for the site under all scenarios and were adopted.

The AECOM report considers the *Urban Green Cover in NSW Technical Guidelines* in detail. It recommends that specific tree species selection should be determined during detailed design having regard to the Technical Guidelines as well as the Government Architect's Greener Places Strategy. It notes that opportunities to connect vegetation and planting at the Precinct to the Sydney Green Grid should be explored for improved habitat connectivity, enhanced biodiversity and ecological resilience. Specific measures have been included in the Design Code aimed at enhancing urban tree canopy and increasing habitat consistent with the Urban Green Cover guidelines.

SR17.6. Demonstrate that compliance with BASIX is achievable and investigate opportunities to deliver beyond-compliance BASIX scores: Energy 40 and Water 60 for residential buildings (6+ storeys).

This study requirement is addressed under Part G16.

G18. Feasibility and economic benefits

HillPDA has prepared an Economic Development, Local Retail and Services study (refer **Attachment 6**).

SR18.1. Provide an analysis of the market demand for the proposal.

SR18.2. Demonstrate that the development can be delivered in the context of prevailing market demand and supply trends, achievable uptake rates relating to development staging and product mix.

To determine the market demand for the proposal, HillPDA undertook the following tasks:

- an analysis of the strengths, weaknesses, opportunities and challenges (SWOC) analysis focussing on locational considerations and site attributes to understand the economic opportunities and challenges with delivering the objectives sought for the Blackwattle Bay Study Area (i.e. the base case). References to broader economic trends were also used to further inform the economic opportunities and challenges facing Blackwattle Bay
- a robust evidence-based assessment of the quantum of retail and commercial floorspace, by type, that Blackwattle Bay could support, taking into account infrastructure capacity constraints,

the impact on surrounding centres – including future destinations within the broader Bays Precinct, and a requirement for a visually appealing, highly walkable destination which complements neighbouring centres.

- consultation with industry experts to better understand the current and future demand for commercial uses in the Blackwattle Bay locality
- a high-level assessment of the site's suitability for retail, commercial and residential uses across key locational factors/ attribute.

Key findings from the retail and commercial demand analysis indicate that there is demand for up to 10,000 sqm of leasable retail floorspace net of the new Sydney Fish Market by 2036 and up to 85,000 sqm of intensive and office based commercial uses which would meet market needs to 2041-46. There are also opportunities to retain some of the working harbour uses that occur in Blackwattle Bay including charter vessels, marina and retail uses to support the commercial charter vessels and integrate these uses with the office based commercial space.

It is envisioned the proposed retail floorspace will primarily be a local resident and worker population serving centre (ie local centre) which will complement the Sydney Fish Market and not directly compete with the higher order surrounding retail centres.

With respect to commercial floorspace, the HillPDA study found that there is a high representation of intensified and office based floorspace in the local area, with strong prevalence of small offices, particularly in creative digital, design, media and cultural industry in Pyrmont. As such, there are opportunities to further grow some of these industries which is consistent with current employment trends.

In addition, based on the growing presence of serviced apartments and growing traveller market and the location of the site (ie its proximity to key destinations, major employment hubs, Sydney's CBD and harbour front amenity) there is an opportunity to consider hotel/serviced apartment uses in the locality with ancillary conference facilities and exhibition spaces.

SR18.3. Provide an economic assessment of the proposal, including the likely wider economic benefits.

SR18.4. Provide an assessment of the likely economic impacts of the rezoning of industrial and maritime related land.

SR18.5. Undertake an economic analysis testing feasibility of future development to contribute towards local, State and regional infrastructure.

SR18.6. Investigate the potential for visitor accommodation within the precinct and consider an appropriate target, taking into account access and connectivity to existing and planned nearby visitor accommodation including in the wider Bays Precinct..

As noted in Part C4 of this study, there are significant economic benefits arising from the proposed rezoning.

Jobs

HillPDA has estimated that the renewal as envisaged by the Precinct Plan would deliver the following jobs:

- Construction
  Every one million dollars of construction work undertaken generates 2.5 job years directly in construction. Based on the estimated construction cost, the proposal would directly generate 4,245 job years directly in construction. Including the multiplier impacts, construction would generate a total of more than 17,000 job years directly and indirectly.

- Ongoing jobs
  By applying job density ratios to the proposed land uses within the precinct HillPDA estimate that the precinct when fully developed under the Precinct Plan will provide 5,907 jobs within the precinct and a further 114 residents are expected to work within the precinct from home. This is more than 5,500 additional jobs – representing a thirteen (13) fold increase from the base case.

Gross Value Added

As shown **Table 31**, Gross Value Added (the contribution to gross regional product) is expected to be $761m every year. This is 24 times higher than the base case.

Table 31: Economic output ($m per annum in 2020 dollars) (Source: HillPDA)

Land use	Jobs	Gross Output	Gross Value Added	Workers Remuneration
Hotel and serviced apartments	63	7.0	3.5	2.8
Retail	575	118.9	28.6	19.7
Office	5,269	1,686	720.2	424.1
Work at home	114	11.1	8.9	7.1
Total	**6,021**	**1,822.9**	**761.2**	**453.7**
Increase on base case	5,571	1,642.7	729.5	431.9

Tourism benefits

Based on the growing presence of serviced apartments, the growing traveller market and the location of the site there is a clear opportunity to include hotel/serviced apartment uses in the locality. Based on industry knowledge and a review of existing and pipeline developments which include serviced apartment some 100-180 rooms would be an appropriate number of hotel rooms/ serviced apartments in this location whilst allowing some benefits from economies of scale. The proposed zoning would provide flexibility for an operator to propose serviced apartment/hotel use within Blackwattle Bay if the market fundamentals support this.

The Precinct Plan enables the provision of hotel rooms and serviced apartments as well as conference facilities thereby increasing the capacity of the local area in providing short-term accommodation and having flow-on economic benefits such as increased employment and tourism expenditure.

Assuming 140 hotel rooms and serviced apartments with an occupancy rate of 78% the total number of visitor nights per annum is expected to be around 68,000 with total expenditure generated by tourists on site expected to be almost $12.6 million per annum. Around $4.7 million (37%) of this expenditure would be on retail goods, food and drink services and the like, which will benefit existing businesses in the immediate locality.

Economic impacts from construction

HillPDA estimates that with an estimated construction cost of $1.7 billion, development would generate a further $2.18 billion of activity in production induced effects and $1.54 billion in consumption induced effects. The total economic activity generated by construction would be around $5.4 billion.

Provision of infrastructure

Infrastructure identified for the SSP as well as for the wider Pyrmont area includes:

- Bank Street Open Space and adjacent community uses including dragon boat amenities
- Waterfront promenade
- Waterside Park
- Urban Park
- Ferry Wharf
- Intersection upgrades
- Separated cycle lanes
- Seawalls.

Total cost of these works is estimated at $121 million.

Direct infrastructure works in the SSP will provide significant social benefits – particularly in terms of environmental improvements and use benefit (users enjoying leisure time in the public domain areas). These social benefits have not been quantified. However, land value uplift from the Precinct Plan has been quantified and weighed against the cost of infrastructure in the SSP. This is summarised in **Table 32**.

Table 32: Benefit Cost of the Precinct Plan ($m) (Source: HillPDA)

	$m
Development rights of the residential floor space	615
Development rights of the employment floor space	236
Less opportunity cost of the land ('as is' value)	-240
Less infrastructure costs of the SSP	-121
Net benefit	490
Benefit Cost Ratio	2.36

Table 32 shows the significant uplift in residual land value from the proposed development rights. The uplift of $611m well exceeds the infrastructure costs of $121m. The benefit cost ratio would be further improved by the inclusion of social benefits. Importantly the uplift in land value is imperative to assist in the funding of the infrastructure works. The synergy is that redevelopment helps pay for the infrastructure and brings more residents, workers and visitors to the area and the infrastructure, entertainment and public domain areas improves the quality of life for those residents, workers and visitors to the precinct.

G19. Economic development, local retail and services

SR19.1. Prepare and analyse the local economic and employment profile for the precinct and local area.

As noted in Part G18, Hill PDA has prepared an Economic Development, Local Retail and Services Study (refer to **Attachment 6**).

Blackwattle Bay is located near NSW's largest employment hub – the Sydney CBD. The CoS, which includes the vast majority of Blackwattle Bay, had a total internal commercial floor space of 37.9 million sqm in 2017, an increase of 2.68 million sqm from 2012. The city accommodated 501,786 workers, an increase of 66,017 (15.1% increase) since 2012.

There is a strong presence of creative digital, design, media and cultural enterprises through the Ultimo, Glebe and Pyrmont and Redfern-Eveleigh-Darlington areas, with Pyrmont/Ultimo accommodating a number of major media technology hubs. However since 2007 there has been a net loss in space occupied by the arts and entertainment industry due to contraction, relocation and sub-letting as a result of these user groups not being able to pay the rents associated with city fringe space. Pyrmont is a well established office market, characterised by small office tenancies. Shared office space is also well represented in Pyrmont with WeWork, Wotso, Fishburner all based in the locality.

Harris Street village (some 500m north of Blackwattle Bay) continued to experience strong growth with the business floor area increasing by 9.0% from 2012 to 1,341,669sqm 2017, reflecting the demand and desirability of commercial uses in the Pyrmont locality.

Discussions with industry experts in 2018-19 (pre-COVID-19) indicate vacancy rates across all office grades for Pyrmont and Ultimo are lower than the CBD at 3.4% and 3.7%, respectively, indicative of a strong commercial market. The low vacancy rates were largely the result of a loyal tenant mix of IT, advertising and media companies.

A significant amount of floor space was added to the supply of employment floor space in Pyrmont – Ultimo in 2019-20 – some 45,000sqm. 19,245sqm of that space was office space and 23,466 was education space. There is only one major development expected for completion by 2024 – namely a mixed-use development at 14-26 Wattle St, Pyrmont which was lodged for D.A. in 2018/19. The development proposes to include 16,701sqm of office floor area and 3,589sqm of community floor area.

SR19.2. 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.

SR19.3 Identify the quantum of floor space required to support economic development, local retail and service provision.

Refer discussion in G18.

Based on the findings of the retail demand assessment and key objectives of the Blackwattle Bay development (ensuring a highly walkable precinct with a high degree of containment) HillPDA recommends a convenience-based retail offering of up to 10,500sqm gross leasable area (GLA) which will largely serve residents and workers within an 800m walkable catchment.

It is envisioned the centre's role will primarily be a local resident and worker population serving centre (ie local centre) which will complement the new Sydney Fish Market and not directly compete with the higher order surrounding retail centres.

In terms of optimal retail mix HillPDA recommends:

- a main anchor (i.e. new format supermarket/ grocer/fresh foods operator(s) of up to 3,500sqm)

- a small to mid-size liquor store and complementary food and non-food specialities totalling 2,000-2,500sqm (i.e. pharmacy, newsagent, variety store, etc;
- around 1,500sqm of food services
- up to 1,000sqm of personal services (hairdresser, drycleaner, etc)
- 1,000 to 1,500sqm of supporting non-retail shopfront floorspace (medical, real estate, financial, etc).

There is also opportunity for pop-up retail and incubator space (up to 1,000sqm). Retail of this nature will serve a much wider catchment – with an infrequent shopper profile –probably piggybacking from visitors of the fish markets.

In light of the broad/localised trends potential commercial uses for Blackwattle Bay include:

- Small boutique office tenancies (tenants such as architects and other professional services, media, tech and start-up companies)
- Medical centre and/or related services for the local resident and worker population
- Live/work spaces
- Other lower employment generating commercial services on site which could include:
  - Working harbour uses that could be integrated with the office based commercial space
  - Hotel and serviced apartments with 100 to 180 rooms

These land uses align with the Pyrmont Peninsula Place Strategy and the supporting Economic Development Strategy.

SR19.4. Develop a strategy to deliver strategically important uses, through market delivery combined with targeted interventions where market delivery will not satisfy identified needs.

The HillPDA study provides an assessment of the risks associated with market delivery of the precinct plan and the potential intervention measures to ensure delivery of important components. In summary, the assessment finds as follows:

- **Residential** - The risk of residential not being delivered by the market is perceived to be very low. The probability of this scenario is low because the residential market over the past 25 years has outperformed the commercial office market. Continued immigration and population growth and strong market conditions is expected to continue notwithstanding occasional adverse short-term conditions or impacts from a variety of factors (such as COVID 19 and the temporary closure on immigration).

- **Retail** - Retail has a very important role in ground floor activation. The strategic visions of the precinct plan, the PPPS and other planning instruments and policies would be undermined without ground floor retail. Notwithstanding, the risk of the spaces not being delivered or not being occupied is considered low. Given the size of the local market, the proximity / adjacency to the SFM and the waterfront location these spaces would be attractive – particularly for waterfront themed retail and food services. For whatever reason if the delivery of retail space was to fail then intervention measures could be put in place. The main measure is to incorporate it in the planning instrument mandating that the ground floor area is used for active commercial purposes.

- **Commercial** - Office and other commercial spaces are considered to be the most at-risk component which has largely been impacted by COVID-19 and associated restrictions. The long term demand for office space could contract as workers spend a higher proportion of their working hours working from home and CBD office space is potentially rationalised. However, a scenario of no commercial space on site would result in the lost opportunity of 4,800 jobs and

result in the precinct becoming almost entirely residential. Measures that could be used to encourage commercial development include:

- Precommitment - getting a pre-commitment from a head tenant which in turn attracts other potential occupiers.
- Business clustering / agglomeration - In a similar manner, undertaking strong marketing and fostering of private industries early in the precinct's development to capture key tenants and encouraging other firms to follow.
- Theming - developing a particular theme such as media, innovation precinct, science/research, education, health/bio-medical, etc while ensuring that Blackwattle Bay does not replicate the other important precincts
- Government occupier – the NSW Government could give the area a significant level of support by pre-committing one of its own departments, agency or government trading enterprise.
- The Metro Station - The importance of the Metro Station cannot be overstated. Without it the market risk to the delivery of the commercial space is much higher.
- Public Domain - the provision of public domain and other infrastructure significantly enhances the amenity of the locality and thereby attracts businesses as well as improving residential amenity.
- Financial incentives such as tax exemptions, subsidies and grants to encourage business activity within the.

SR19.5. Consider the role of the precinct in terms of employment, retail, local services and other economic generating land uses within the local and regional context including nearby local centres such as Ultimo, Pyrmont, Glebe and Broadway.

SR19.6. 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.

Refer discussion above and in Part G18.

SR19.7. 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.

The quantum and allocation of commercial floor space (including retail and service uses) discussed in Part F3.2 has been determined having regard to the findings of the HillPDA report but also taking into account broader strategic objectives for the precinct. In considering the appropriate land use mix and quantum of residential and non-residential floor space for the Study Area, the over-arching vision and objectives required for successful project implementation have been carefully considered. These include:

- provisioning for a vibrant mixed use place
- allowing for clustering of uses that foster innovation ecosystems
- improving mobility through numerous active and public transport modes
- delivering high quality public domain including increased accessibility to and around the foreshore
- ensuring office and retail space is flexible and adaptable in its configuration so it can respond to changing economic forces within a highly competitive market
- leveraging high-value land uses to catalyse renewal which bring to fruition key public benefits and infrastructure.

Blackwattle Bay's city fringe location, coupled with the strong presence of media and technology businesses within Pyrmont and Ultimo creates an environment conducive to innovation. However, there is significant competition for innovation, start-ups and media-tech leaders within the area. There are also a number of macro-economic factors which will influence demand for employment floor space in the immediate and midterm timeframe. These include the impact on Covid-19 on long-term workplace occupancy and the growing prevalence of a hub and spoke business model which has led to a de-centralisation toward the west. Whilst the Economic Development Local Retail and Services Study provides an estimate of future demand, based on an extrapolated view of historic demand, future economic trends tend to be greater with significant government investment in infrastructure (new Sydney Fish Market, Metro West) and city shaping policies (GSC, DPIE, CoS). Therefore, the recommended 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 is slightly greater than that outlined in the Economic Development Local Retail and Services Study.

G20. Geotechnical and contamination

SR20.1. Provide an assessment of the local soil and seabed, outlining its suitability for the proposed uses with respect to erosion, salinity, acid sulphate soils and other relevant considerations.

An Environmental Site Assessment (ESA - refer **Attachment 34**) and a Site Wide Remedial Concept Plan (SWRCP - refer **Attachment 35**) have been prepared by JBS&G.

The ESA indicates that the site is generally underlain by three geological types:

- Man-made fill typically comprising dredged estuarine sand and mud, demolition rubble, industrial and household waste
- Quaternary aged silty to peaty quartz sand, silt and clay deposits with ferruginous and humic cementation in places and with common shell layers
- Hawkesbury Sandstone typically characterised as medium to coarse-grained quartz sandstone with very minor shale and laminate lenses.

The upper reaches at the east of the site are typically underlain by Sandstone bedrock as evidenced in areas of historical quarrying and cut along Banks St. Closer to the water's edge. It is expected that the Sandstone bedrock is overlain by quaternary aged deposits and in some instances man-made fill material where reclamation has historically occurred to generate current site levels.

The site primarily lies within a disturbed landscape. Disturbed landscapes may include quarries, tips, land reclamation and large cut and fill features. Original vegetation may be cleared and weeds may be abundant. Within these profiles, the ground generally includes soil, rock, building and waste materials. Limitations of disturbed landscapes includes soils with high variability that may include engineering hazard, unconsolidated low bearing strength materials, low permeability, poor drainage, very low soil fertility, toxic materials and wind erosion hazard. Disturbed landscapes may be sources of sediment and groundwater contamination.

None of the abovementioned landscapes are associated with saline soil conditions and as such this area of Sydney is not presented in published salinity risk maps.

Previous site investigation activities within the Study Area have identified the presence of limited fill material close to the shoreline to depths of up to approximately 0.5 m below the sea bed. Otherwise, within the bay the natural sediment/soils comprised interbedded layers of silty clay, sandy clay and clayey sand soils with varying amounts of fine to coarse grained gravel, shell fragments and other organic materials.

The area of the site covered in surface waters is located within an area of 'high probability' of acid sulfate soils (ASS) within bottom sediments. In such areas, there is the potential for severe environmental risk if bottom sediments are disturbed by activities such as dredging. Potential ASS conditions have been identified in natural alluvial/marine soil underlying fill material and in adjoining bay sediments within Blackwattle Bay. Appropriate measures to manage the acid generation risks will be required to be documented as an ASS management plan (ASSMP) prior to any works that may result in disturbance (and so oxidation) of these materials.

SR20.2. Provide an assessment of the proposed land uses in accordance with State Environmental Planning Policy No 55 – Remediation of Land (SEPP 55). The assessment should also consider the foreshore area to inform any remediation management approaches and its management. In particular, if lands are being proposed for recreational use the assessment should document management approaches to ensure the lands are fit for their intended use.

SR20.3. Due to the land's current and past industrial use, an EPA-accredited Site Auditor should be involved within the contamination management process. This also includes the provision of a Site Audit Statement certifying that the land is suitable for the proposed use(s).

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.

The ESA provides a broad-scale assessment of contamination within the Blackwattle Bay Study Area, where individual lots will be subject to future redevelopment and as required, identifies requirements for additional detailed contamination assessments and/or remediation.

The scope of work undertaken for the ESA involved:

- a desktop review of site contamination and geotechnical investigation reports as available
- a review of historical site use information and regional environmental information to identify areas of potential environmental concern and associated contaminants of potential concern
- development and documentation of a contamination conceptual site model based on the available information with consideration to the future redevelopment scenarios
- preparation of this assessment report presenting the outcomes of the assessment.

Given the proximity of the Study Area to the Sydney CBD and the initial location of the Sydney colony, portions of the Study Area have a long and often varied history of uses that may contribute to current site contamination characteristics. Based upon information presented in previous site investigations, previous site use of the Study Area is summarised in **Table 33**.

Table 33: Summary of site history

1880s - 1891	▪ Land reclamation works completed resulting in the formation of Wentworth Park and an embankment associated with the current northern extent of Bridge Rd.
1860s	▪ First bridge constructed immediately to the north of the study area, joining Pyrmont to Glebe Island
1890s - 1920s	▪ Reclamation works completed along the eastern portion of study area creating a number of small industrial land parcels ▪ Some of these properties were already being used as timber storage yards and other small industrial activities.

1900s	▪ British Imperial Oil Company Ltd and Shell Company of Australia Pty Ltd leased current day Fish Market car park portion of site for use as an oil distribution and storage facility and constructed various stores buildings and above ground product storage tanks. ▪ Site portion to north of Bridge Road used for various commercial purposes including timber merchants, abattoirs and a garbage collector's yard.
1930s	▪ East side of Blackwattle Bay occupied by small industrial lots, many with small wharves extending into bay and wharfage consistent with coal loader at south extent of study area.
1950s	▪ Shell Co of Australia Ltd site facilities were documented as including stores for various types of petroleum oils and lubricants ▪ Drums filled on site in shed and kerosene and turpentine also stored in above ground tanks ▪ Timber yards were located to north and south of Shell site with AGL property located further to north within study area ▪ Mix of small industrial and vacant lots in remaining area of eastern foreshore to Glebe Island Bridge ▪ Southern portion of study area comprised facilities associated with several coal depots and ship painter's workshop
1960s	▪ Former timber yard and Shell site replaced by leases to NSW Fish Authority with operations commencing in July 1966 ▪ Former small industrial buildings at north extent of study area appeared to have been redeveloped as storage yards for materials ▪ Concrete batching plant developed in proximity to former AGL site at central east of study area
1980s	▪ Second concrete batching plant at south west extent of study area commissioned ▪ Fish market was extended encompassing land parcel south of former Gipps St to form its current day footprint ▪ Construction of new market and shops building for fish market and conversion of northern section to carparking facilities
1990s	▪ Former coal wharves decommissioned and site was then used for commercial boat hire operations ▪ Five former underground storage tanks on this part of study area understood to have been decommissioned and asbestos materials also understood to have been removed ▪ Tanks understood to have formerly contained gasoline, distillate, racing fuel, mineral spirit and mineral oil ▪ ANZAC Bridge supports constructed in early to mid-90s with areas around supports used as work sites/construction compounds ▪ Following completion of bridge, several areas were converted for use as dragon boat club facilities ▪ Several large warehouse/stores type buildings were constructed between these parcels as well as concrete batching plant site at east of study area
2020	▪ Former concrete batching plant at head of Blackwattle Bay decommissioned ▪ All associated infrastructure in the process of being demolished in preparation of new Sydney Fish Market development

Assessment of site conditions as based on historical investigations completed across the site has allowed for the broad characterisation of potential site contamination conditions associated with historical activities within the Study Area.

A conceptual site model was also prepared which identified several areas of potential concern associated with historically placed fill and reclaimed land, the former coal wharf, current and former concrete batch plants, current and former industrial areas, marine areas, known/suspected current and former petroleum-based storage and dispensing facilities as well as impacted sediments.

The areas of potential concern may have caused impacts to site soils, sediments, groundwater, surface water and soil vapour conditions that will require further assessment and if considered necessary based on detailed land use proposals.

Notwithstanding, the range of potential constituents and media affected are common and typically encountered on brownfield redevelopment sites in the Sydney basin. The potential contamination is unlikely to be of such a scale or occurrence that common and readily available remediation and/or management techniques could not render the site, or portions thereof, suitable for the proposed uses. As such, the potential for contamination to occur at the site is considered not to preclude planning of the future development of the site.

The ESA recommended that a SWRCP be prepared for the Study Area to establish a suitable framework for management of potentially contaminated media in order to facilitate staged redevelopment. This is discussed below.

The ESA also recommends that upon the development of specific development plans for individual site areas, the existing available data set for the relevant areas should be reviewed in conjunction with the overall site remedial strategy, such that a specific assessment of site contamination issues may be completed and remedial actions and/or management plans be developed to demonstrate the respective site portion is, or can be made, suitable for the proposed use.

Site Wide Remedial Concept Plan

In response to the recommendation in the ESA, JBS&G has prepared a SWRCP (refer **Attachment 35**). The SWRCP identifies strategies and remedial/management options to address identified and suspected environmental (site contamination) impacts present at the site such that all areas of the site may be considered suitable for the proposed permissible land use(s) prior to future uses.

Overall, JBS&G considers that the proposed actions outlined in the SWRCP conform to the requirements of the *Contaminated Sites Guidelines for the NSW Site Auditor Scheme* (3rd Edition) (EPA 2017) because they are technically feasible; environmentally justifiable; and consistent with relevant laws policies and guidelines endorsed by NSW EPA.

JBS&G concludes that the Study Area can be made suitable for the range of intended uses as proposed and that the risks posed by contamination can be managed in such a way as to be adequately protective of human health and the environment subject to:

- the implementation of the processes outlined in SWRCP
- the following being developed and implemented in addition to the area specific Remedial Action Plans (RAPs) to ensure the risks and impacts during remediation works are controlled in an appropriate manner:
  - A Remediation Environmental Management Plan, to document the monitoring and management measures required to control the environmental impacts of the works and ensure the validation protocols are being addressed
  - A Work Health and Safety Management Plan to document the procedures to be followed to manage the risks posed to the health of the remediation workforce.

Upon completion of the works within sites located in the Study Area, validation reports and on-going environmental management plans (EMPs) for residual impacted materials as may be retained beneath the specific area footprints will be required to be submitted to the consent authority documenting that the applicable footprint is considered suitable for the proposed use(s), subject (where applicable) to implementation of the relevant ongoing EMP.

Site Audit Report

Ramboll Australia has prepared a Site Audit Report (refer **Attachment 36**). The Audit was conducted to provide an independent review by an EPA Accredited Auditor of the suitability and appropriateness of a remediation action plan (the SWRCP), i.e. a "Site Audit" as defined in Section 4 (1) (b) (v) of the NSW *Contaminated Land Management Act 1997* (the CLM Act).

Based on information presented in the reports reviewed and following the decision-making process for assessing urban redevelopment sites in NSW EPA (2017) *Guidelines for the NSW Site Auditor Scheme (3rd Edition)*, the Auditor concluded that the Blackwattle Bay Precinct can be made suitable for mixed uses if the site is managed in accordance with the SWRCP and subject to the following conditions:

- Identifying and closing out data gaps
- Preparation and implementation of an area specific RAP where necessary
- Successful validation and preparation of a validation report
- Preparation of a Section A Site Audit Statement and Site Audit Report certifying the suitability of each development area for its proposed use at an appropriate time in the development process
- Preparation and implementation of long-term environmental management plans where necessary.

G21. Water, riparian land, flooding and stormwater

SR21.1 Provide an assessment of any potential impacts of the proposal on the hydrology and hydrogeology of the precinct and adjoining areas. Include particular focus on water quality, the extent to which development protects, maintains or restores water health and the community's environmental values and use of waterways for Sydney Harbour (also known as the NSW WQO). Consider these water quality targets in Sydney DCP 2012:

- Reduce the baseline annual pollutant load for litter and vegetation larger than 5mm by 90%
- Reduce the baseline annual pollutant load for total suspended solids by 85%
- Reduce the baseline annual pollutant load for total phosphorus by 65%
- Reduce the baseline annual pollutant load for total nitrogen by 45%.

SR21.2: Provide a concept Stormwater Management Plan outlining the general stormwater management measures for the proposal, with particular emphasis on possible WSUD options. This should also include measures for ongoing maintenance including any associated funding approaches for ongoing management.

SR21.16 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.

Cardno has prepared a Water Quality, Flooding and Stormwater Study (refer to **Attachment 12**).

SDCP 2012 sets stormwater quality targets for urban developments. All developments greater than 1,000sqm are required to achieve the following reductions in post-development baseline (ie. proposed development without any water quality treatment) annual pollutant loads:

- Gross Pollutants (GP) (litter and vegetation >5 mm) 90%
- Total Suspended Solids (TSS) 85%
- Total Phosphorus (TP) 65%
- Total Nitrogen (TN) 45%

These targets have been adopted for the purpose of the assessment.

There are a large range of options available to achieve stormwater management targets. Considerations in developing a strategy for the Study Area have included:

- Performance of specific measures to achieve objectives
- Ownership (measures on private vs public land)
- Maintenance requirements
- Staging of development.

The industry standard Model for Urban Stormwater Improvement Conceptualisation (MUSIC) was used to assess the performance of the proposed stormwater management strategy. The CoS WSUD Technical Guidelines (Alluvium, 2014) were used as a basis to set-up a MUSIC model for the proposed development.

The water quality modelling results for the key pollutants are summarised in **Table 34** and this demonstrates that the water quality targets can be met.

Table 34: Results of water quality modelling (Source: Cardno)

Pollutant	Load Generated (kg/year)	Residual Load after Treatment (kg/year)	% Reduction Achieved	% Reduction Target
Gross Pollutants (GP)	1,100	3.6	99%	90%
Total Suspended Solids (TSS)	3,640	468	87%	85%
Total Phosphorus (TP)	10.6	3.8	65%	65
Total Nitrogen (TN)	113	39	66%	45%

To achieve the targets, a total bioretention filter area of 3,100sqm was found to be required. This represents approximately 0.5% of the total Study Area and is typical of the area required to achieve targets for similar developments.

The results of the MUSIC modelling indicate that there is a WSUD solution capable of achieving the water quality targets.

The general strategy that has been adopted is:

- Filtration devices (either bioretention/raingardens or cartridge systems) have been applied to all areas. These could ultimately be applied in various forms to suit the development (eg; cartridge systems within building footprints, tree pits within road reserves, small raingardens in road reserves or open spaces, larger bioretention basins in open spaces)
- Potential to provide gross pollutant traps (GPTs) as end of pipe system
- Potential to harvest rainwater from roofs for potable or non-potable purposes within buildings
- Potential to harvest stormwater to reuse for irrigation or other non-potable purposes.

Trunk drainage infrastructure (pits and pipes) will be required to be constructed to suit the proposed Precinct Plan layout.

A preliminary layout has been provided as part of the concept Stormwater Management Plan included in Appendix C to the Water Quality, Flooding and Stormwater Study.

On-site detention (OSD) is not proposed as part of the strategy. This is due to:

- The Study Area is largely impervious under existing conditions and therefore no measurable increase in peak flows is anticipated once development occurs
- The Study Area discharges directly to Blackwattle Bay where any potential increase in peak flows would have no measurable effect.

It is expected that the strategy will evolve as the Precinct Plan is progressed and further design detail established.

SR21.3 Consider the effect of climate change and changing rainfall patterns on stormwater and floodplain management and undertake a sensitivity analysis to address the risks and impacts including sea level rise.

Climate change is expected to cause increased rainfall intensities and sea level rise. The impacts of increased rainfall intensity on flood levels within the study site and surrounds in the 0.5% AEP are not significant. While the impacts in the 0.2% AEP event are more significant, overland flows are still expected to be contained within road reserves / open spaces and flood risk able to be appropriately managed.

Climate change scenarios incorporating a 0.4 m and a 0.9 m rise in sea levels were modelled for the 1% AEP event, representing 2050 and 2100 climatic conditions in accordance with the NSW Sea Level Rise Policy Statement (NSW Government, 2009). Impacts of sea level rise on flood levels within the Study Area are generally limited due to the proposed terrain levels being higher than both the 0.4m and 0.9m sea level rise levels (1.78 m AHD and 2.28 m AHD respectively). The western corner of the site is an exception with proposed terrain levels lower than the raised sea level. However, this will be addressed in design and with appropriate uses (eg; open space / boating related uses / launch area).

SR21.4 Provide details, and an assessment, of impacts of the proposal on watercourses, wetlands and riparian land on and adjoining the urban renewal precinct, including proposed rehabilitation, management and maintenance, zoning and proposed future ownership of riparian land.

The conditions within the Study Area are characterised by highly modified hydrological systems. Drainage systems, which drain the Study Area and also upstream areas, are all piped. The Study Area itself is also dominated by impervious surfaces, such as carparks and roofs. The Study Area does not include any mapped watercourses or wetlands. It follows that it also does not include any riparian land.

SR21.5 Provide a hydrogeological assessment, including details on groundwater quality, quantity, levels and flow, groundwater dependent ecosystems, water licensing requirements, proposed monitoring, and consideration of the NSW Aquifer Interference Policy.

The study area is underlain by the Hawkesbury Sandstone of the Wianamatta Group, consisting of medium to coarse grained quartz sandstone with very minor shale and laminate lenses. At least two dolerite dykes are believed to extend through the site in a rough north-west alignment.

Groundwater is expected to be present within the Hawkesbury Sandstone at the site and will be a consideration for any future basement excavation, however no significant impacts are expected and no groundwater dependent ecosystems have been noted within the study area.

SR21.6 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. The flood assessment should 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.

SR21.7. Consider the future cumulative flood risk impact across the entire Bays Market District and adjoining land areas.

SR21.8. 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 should address relevant provisions of the NSW Floodplain Development Manual (2005) and the City's Interim Floodplain Management Policy.

SR21.9. Provide an assessment of possible impacts of the proposal on the flood behaviour (i.e. flow levels, extent, velocities and duration of flooding) and the impact of the proposal on adjacent, downstream and upstream areas.

SR21.10. Provide concept level information on the impacts of future earthworks and filling of land within the proposal. This assessment should be based on an understanding of staging and cumulative flood impacts.

SR21.11. Provide preliminary assessment on recommended flood management measures including mitigation works and development controls in accordance with the City's Interim Floodplain Management Policy.

Flood studies undertaken for the CoS in 2015 as part of the NSW State Government floodplain planning process and a Flooding and Water Quality Assessment undertaken by Cardno for the new Sydney Fish Market in 2019 were used as a basis to model flood behaviour within the Study Area.

The Existing Conditions flood model was revised to represent the proposed Blackwattle Bay SSP precinct through inclusion of the proposed grading (refer proposed grading plan in Appendix E of Cardno Water Quality, Flooding and Stormwater Study).

The hydraulic model was run for the 1% Annual Exceedance Probability (AEP) and PMF events. Under the Existing Conditions in the 1% AEP and PMF events the study area is mostly flood free with the exception of the overland flow coming from Miller Street and discharging into the bay and also localised water ponding at the existing carpark and adjacent to the bay.

The Proposed Conditions model was run for the 1% AEP and PMF flood events. Under Proposed Conditions only minor changes in the flood behaviour within and surrounding the Study Area are anticipated.

The flood assessment shows that most road reserves within the precinct are expected to convey minimal overland flow. Therefore, in most cases flooding will not be a constraint to achieving high quality urban design outcomes or complying with Council requirements as detailed in their Interim Floodplain Management Policy.

The key exception is the road reserve which is an extension of Miller Street and includes an overland flowpath which conveys flows from the upstream catchment to the north of the western distributor. However, it is expected that trunk drainage system upgrades at this location, which are not currently incorporated into the flood modelling, and further design of the road itself, would reduce overland flow at this location. Ultimately, given flooding at this location is relatively minor to start with, it is expected that following further design development, flooding will not form a significant constraint to achieving high quality urban design outcomes at this location. It also follows that it is expected that Council's requirements, as detailed in their Interim Floodplain Management Policy, will be able to be met.

There is no existing flood hazard across the majority of the site due to being outside the flood extent in all events up to PMF. Flood hazard is observed along the overland flow coming from Miller Street and localised water ponding at the existing carpark and adjacent to the bay. Modelling shows that there is minimal difference in hazard between the Existing and Proposed Conditions within and outside the Study Area.

SR21.12 Provide recommendations regarding the most appropriate emergency response strategy to manage risk to life and property.

Considering the short duration of flooding for the study site and limited ability to provide safe evacuation offsite, a shelter-in-place approach is recommended for the Blackwattle Bay SSP. The advantage of shelter-in-place is that people do not require as long to respond for this type of emergency response to be appropriate. As opposed to evacuation, where people are likely to have to travel a significant distance to reach flood free land, for shelter-in-place people are likely only going to need to access a mezzanine level or first floor within the same building. Therefore, this type of response is far more appropriate for flash flooding environments, in particular where the duration of flooding is expected to be relatively short and high hazard conditions are expected in surrounding access routes.

SR21.13 Provide concept level details of the drainage associated with the proposal, in accordance with the City's Stormwater Drainage Design Code including stormwater drainage infrastructure and address the impact of stormwater flows on the site from other catchments.

A Stormwater Concept Plan has been prepared for the Blackwattle Bay Precinct Proposal, consistent with the City's Stormwater Drainage Design Code. The Stormwater Concept Plan is provided at Appendix C to the Cardno Water Quality, Flooding and Stormwater Study.

SR21.14 In addition to securing an acceptable level of personal and property safety from flooding, the proposal is to ensure that measures to address 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).

New levels proposed in the Precinct Plan will respond to flood levels and sea level rise. The WSUD Strategy proposes a suite of treatment opportunities to promote water quality outcomes (refer discussion in Part G3 SR3.12).

SR21.15 Prepare an implementation plan for the concept Stormwater Management Plan and Flood Risk Assessment.

The implementation of stormwater measures will depend on the delivery strategy that is ultimately adopted for the broader precinct. Most stormwater assets are expected to be installed in combination with other assets (eg; any WSUD and stormwater pits/pipes in road reserves would be installed during road construction). However, depending on the ultimate staging of the development, there may be a requirement to install some stormwater pipes through to their outfall location to Blackwattle Bay, even when construction of roads or open spaces has not yet occurred. Further assessment would be undertaken during subsequent design phases to ensure construction of all stormwater assets was appropriately staged. Flooding also needs to be considered as part of this delivery strategy, to ensure that overland flows are appropriately managed at all times.

G22. Noise and pollution

SLR has prepared:

- an Air Quality Assessment (refer to **Attachment 17**)
- a Noise and Vibration Assessment (refer to **Attachment 18**)
- a Lighting Strategy (refer to **Attachment 37**).

SR22.1: Provide a noise impact assessment for the proposal. The assessment will address the relevant policies and guidelines in relation to noise including *State Environmental Planning Policy (Infrastructure) 2007* and the *Development Near Rail Corridors and Busy Roads – Interim Guideline.*

The Noise and Vibration Assessment addresses relevant policies and guidelines, including *State Environmental Planning Policy (Infrastructure) 2007* and the *Development Near Rail Corridors and Busy Roads – Interim Guideline.*

SR22.2. Consider and assess potential pollution impacts from the proposed rezoning including, but not limited to, water, air, noise and light pollution.

Noise

Existing noise sources that have the potential to impact the Study Area include:

- Road traffic noise, particularly from Western Distributor and Pyrmont Bridge Road
- Rail noise from the Light Rail Line L1 which runs along a viaduct through Wentworth Park to the South
- Industrial noise associated with Hymix concrete batching plant located within the site
- Noise from maritime uses, such as boating and unloading activity associated with the fish markets.

Future noise sources that have the potential to impact the precinct include:

- Commercial noise associated with the new Sydney Fish Market
- Noise from new non-residential areas within the Precinct, such as commercial tenancies, public recreation areas, community facilities, etc, affecting future receivers within the Precinct.

Road traffic noise was found to have the greatest impact across the proposed residential areas of the site. The worst-case noise levels impacting the eastern facades in the precinct are predicted to be in the region of 70 to 78 dBA during the daytime period, with night-time levels typically being around 3 dB lower. Noise levels are broadly consistent across the same elevations of all buildings of the Study Area with the highest impacts seen at Building PLO 01 Poulos, which is closest to the Western Distributor at the northern end of the site.

An industrial noise assessment of the existing Hymix facility and new Sydney Fish Market has been conducted. The assessment confirmed that for most residential areas of the Precinct, road traffic noise impacts would be greater than industrial noise. Should Hymix continue to operate, significant noise impacts to Buildings BLD 02 and PLO 02 are anticipated, particularly to the facades overlooking Hymix. Noise levels from the new Sydney Fish Market are not anticipated to result in any exceedances of the Project Noise Trigger Levels.

An indicative patron noise assessment has been conducted, considering the new Sydney Fish Market and proposed outdoor areas near Buildings BLD 03, 04, 05 and 06. The assessment indicated the worst-case patron noise levels impacting the precinct are predicted to be in the region of 60 to 63 dBA

during the night-time period for Buildings BLD 02, BLD 03 and BLD 04 which overlook the outdoor patron areas.

There are currently no major vibration sources located in or near to the project area. Road traffic typically generates relatively low levels of vibration which are generally well below the applicable criteria. The future vibration environment is not anticipated to significantly change from that of the existing situation.

Air pollution

The primary sources of air emissions in the area immediately surrounding the Study Area are expected to be vehicles travelling along the Western Distributer and Bridge Road. Engine exhaust emissions will also be generated by marine traffic within Blackwattle Bay and the wider Sydney Harbour, including ferries and water taxis, fishing trawlers, cruise ships and recreational boating.

In terms of industrial emissions, the Hymix concrete batching facility is also a source of potential air pollutant emissions.

A search of the EPA public register and NPI database within a 3 km radius of the Study Area identified several industries which could potentially impact local air quality. These are shown in **Figure 65**.

The White Bay Cruise Terminal is located approximately 900 m north-northeast of the Study Area (directly west of White Bay 6 Pty Ltd). Ships entering, leaving and berthed at this terminal will emit combustion products that have potential to impact on local air quality.

Additional industrial and commercial activities, including the new Sydney Fish Market, were assessed but considered not to generate significant air quality impacts.

Figure 65: Industrial sources
(Source: SLR)

Lighting pollution

Potential lighting impacts are summarised in **Table 35**.

Table 35: Potential light spill

Location	Light spill assessment
Area around 1-3 & 5 Bank Street	There will be additional light around new buildings. Open spaces are likely to have lighting for safety, security and general activities. SLR is of the opinion that there is low risk for light spill onto the surrounding buildings in the area. The most noticeable lights which could be seen from surrounding buildings are likely to be those from Anzac Bridge.
Bank Street buildings	Lighting along Bank Street is likely to be similar to current levels. There will be additional lighting around entrances to new buildings and stairways. There will be significant lighting on the water facing side for outdoor eating and lighting of foreshore walk. Lighting in spaces between buildings may be visible from residential buildings along Miller Street but distance and screening means any adverse light spill is unlikely.
Sydney Fish Market site (existing)	There will be new lighting around buildings as well as in the public domain. The nearest residential properties to this area are terrace houses along Bulwara Road. Any adverse light spill will be mitigated by significant vegetation. There is risk of light spill on facades of residential buildings at 99-103 Pyrmont Bridge Road and some on Wattle Street. Proposed tree planting could prevent light spill to this area and should be further examined during detailed design.
Urban Park (between existing and new Sydney Fish Market)	Temporary lighting for events in this location could generate light spill for residential properties to the south and rooms at Kauri Foreshore Hotel. Vegetation in the area and along Pyrmont Bridge Road may provide some screening however further analysis is required during detailed design to quantify light spill and ensure appropriate mitigation.
New Sydney Fish Market	The new Sydney Fish Market proposal includes external lighting on all sides. Adverse light spill impacts to nearby residential properties are not anticipated. Condition B59 of the Stage 2 SSDA approval requires that all new outdoor lighting comply with AS 1158.3.1-2005 *Pedestrian Area (Category P) Lighting* and AS 4282: *1997 Control of the Obtrusive Effects of Outdoor Lighting.*

Water pollution

Part G21 addresses water pollution impacts.

SR22.3: 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) 2007 and the Development Near Rail Corridors and Busy Roads – Interim Guideline. These assessments should also consider other current and future local air and noise

issues in the Bays area, including potential cumulative impacts from the current Sydney Fish Market and from maritime uses in the Bay.

The Air Quality Assessment (refer **Attachment 17**) addresses all relevant policies and guidelines, including *State Environmental Planning Policy (Infrastructure) 2007* and the *Development Near Rail Corridors and Busy Roads – Interim Guideline.*

The Air Quality Assessment considers current and future local air issues and includes an assessment of cumulative impacts.

To gain a better understanding of the potential worst case air pollutant concentrations within the Study Area, detailed meteorological and air quality dispersion modelling of emissions from the identified sources of emissions was performed. The modelling was performed for two scenarios, namely:

- Scenario 1 – Redevelopment of the entire Study Area
- Scenario 2 – Partial redevelopment of the Study Area with the Hymix concrete batching facility remaining in place.

The results of the cumulative impact assessment undertaken to assess the potential worst case air pollutant concentrations within the Study Area due to emissions from local traffic and activities at Hymix indicate that emissions from these sources have the potential to result in exceedances of the ambient air quality criteria for PM_{10}, $PM_{2.5}$ and NO_2 within the Study Area, particularly on lower floors of buildings at locations closest to the Western Distributor and Hymix. Generally, these exceedances are managed by locating non-residential uses at the lower levels and utilising sealed facades as discussed below.

Table 36 summarises the extent of exceedances of the relevant air quality criteria at residential receptor locations for the two scenarios modelled (as the percentage of residential receptors modelled predicted to experience exceedances of the relevant criteria).

Table 36: Summary of Exceedances at Residential Receptor Locations (Source: SLR)

Modelled scenario	PM_{10}		$PM_{2.5}$		NO_2	
	24-hour	Annual	24-hour	Annual	1-hour	Annual
Scenario 1	5%	0%	1%	2%	4%	0%
Scenario 2	11%	2%	3%	7%	4%	0.5%

Overall, there are a higher number of residential receptors predicted to be impacted by concentrations above guideline levels for Scenario 2, in which Hymix is assumed to continue to operate as currently permitted. To quantify the potential risk to human health as a result of the predicted exceedances, a human health risk impact study has been completed for the proposed Precinct Plan. This is discussed below.

The Precinct Plan incorporates a number of measures to avoid adverse air quality impacts, in line with recommendations in the SLR report. These include:

- Minimising the formation of urban canyons by having buildings of different heights interspersed
- No sensitive receptors (residential units) are proposed within a 20 m radius of the major roads
- For all proposed buildings (with the exception of BLD 02) the lower eight floors are proposed to be used for commercial/retail purposes. For BLD 02, the ground floor is proposed to be used for retail purposes.

The SLR report recommends that for future development, particularly development fronting the Western Distributor, detailed assessments on final building configurations be undertaken to ensure

that as well as compliance with the relevant air quality impact assessment criteria, ventilation needs can be met.

Once details surrounding the proposed construction methodology and equipment are known, a construction air quality impact assessment and Construction Air Quality Management Plan (CAQMP) should be undertaken as part of the approval process. The CAQMP should incorporate mitigation and management strategies developed through consultation with the surrounding community and the relevant regulatory authority.

Should Hymix continue to operate as currently permitted, lower floors of buildings located closest to the Hymix facility should be commercial/retail use and residential receivers should be located on higher floors.

SR22.4: Consider the approaches conceptually being applied in the Parramatta Road Corridor Urban Transformation Strategy (noting the difference in noise levels on a vertical plane).

Noise mitigation approaches detailed in the Parramatta Road Corridor Urban Transformation Strategy have informed the Noise and Vibration Assessment (refer **Attachment 18**).

SR22.5: Identify and map current and proposed future sensitive receptors (eg residential uses, schools, child care centres and public open spaces).

Sensitive receivers are shown in **Figure 66**.

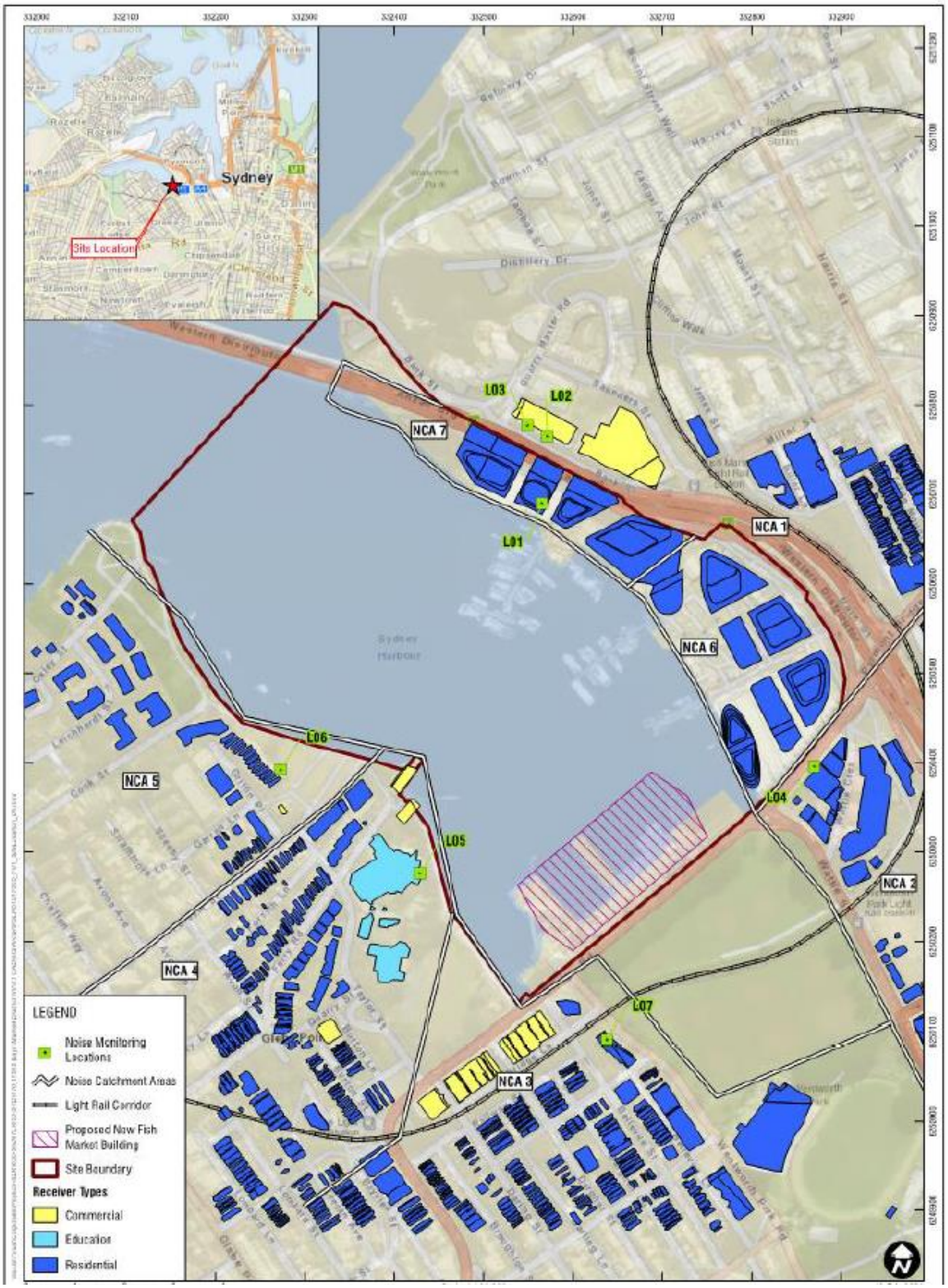


Figure 66: Noise sensitive receivers (residential shown dark blue and education shown light blue)
Source: SLR

SR22.6: 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 for the Anzac Bridge approach, Western Distributor, Bank Street and Bridge Road at a minimum. Monitoring will also be required to determine current noise levels from the Sydney Fish Market (particularly from service vehicles) and maritime uses in the bay. 3D mapping to clearly communicate these impacts, including demonstrating for example how noise reduces with distance from the source, or with the use of barriers, is desirable.

SR22.8. Model the likely future noise, vibration and pollution scenario based on 3D block envelope diagrams prepared by the consultant appointed urban designer. This is to include noise generated by road rail and maritime uses and noise from the Sydney Fish Market, particularly from service vehicles.

SR22.2 identifies current and likely future noise, vibration and pollution affecting the precinct.

Comprehensive baseline noise monitoring at the site and surrounds was undertaken in February 2018 for the Blackwattle Bay Stage 1 Noise and Vibration Study, included at Appendix D to the SLR Noise and Vibration Assessment. Noise monitoring equipment was deployed with consideration of other noise sources that may influence the measurements, accessibility and security. The noise monitoring locations are shown in **Figure 66**. The measured noise levels have been used to establish existing ambient noise levels throughout the project area and to develop a detailed understanding of the existing noise environment.

A noise model of the study area was used to predict the potential impacts to the surrounding receivers. Local terrain, receiver buildings and structures were digitised in the noise model to develop a three-dimensional representation of the Study Area and surrounding areas.

SR22.7: Assess the impact of potential noise generated from the relocated fish market on Sydney Secondary College and Blackwattle Bay Campus (particularly during exam times).

The noise impact of the new Sydney Fish Market was assessed for the Concept/Stage 1 and Stage 2 SSDAs.

SR22.9: Recommend appropriate noise and vibration mitigation measures. The consultant is expected to work with the consultant appointed urban designer, and suggested measures are to cover new buildings (ie careful siting and layout of buildings maintaining natural ventilation through open windows as required by the Apartment Design Guide).

Sensitive receivers in the precinct which have line of sight to major roads will likely be affected by noise impacts and noise mitigation measures would need to be incorporated into the design of future development. The preferred mitigation strategy would be determined at a later stage in the project and would likely use a combination of the measures discussed below.

The Western Distributor, Pyrmont Bridge Road and Bridge Road are the most significant sources of noise, with these roads carrying a significant amount of traffic each day. The removal of buildings currently located on the boundary of these roads and the existing Fish Market would result in an increase in noise levels to internal parts of the site.

As far as practicable, the built environment should be designed to ensure that line-of-sight is eliminated from Pyrmont Bridge Road and Bridge Road to the residential elements of the Blackwattle Bay. There are however limitations to the amount of noise attenuation that this approach can provide, given the elevated nature of the Western Distributor to the immediate north of the site, which is also a significant contributor to noise levels across the precinct.

The Precinct Plan has been informed by the findings of the Noise and Vibration Assessment. It seeks to orient buildings and allocate land uses so that residential development is vertically distanced from the Western Distributor and non-residential uses are located in closest proximity to the noise source where possible. Further discussion on measures in the Precinct Plan to mitigate noise is provided in Part G4 (SR4.13).

During the detailed design phase, residential buildings adjacent to the Western Distributor will require careful consideration with regard to internal layout and configuration to ensure that the noise requirements of SDCP 2012 and the Apartment Design Guide can be achieved.

Key mitigation measures identified in the Noise and Vibration Assessment include:

- Increased façade specifications - Many facades are likely to require increased glazing specifications to mitigate high external noise levels and to provide a suitable internal noise environment. Required façade attenuation would be greatest for bedrooms located on the eastern façade overlooking the Western Distributor. To maximise the potential for natural ventilation, it would be recommended to locate other habitable spaces (such as living rooms) with attenuated or enclosed balconies on this façade.

  For locations exposed to high traffic or industrial noise levels requiring more than 15 dB attenuation, façade mitigation measures include:

  - enclosed balconies with attenuated ventilation openings
  - closed windows and mechanical ventilation.

- Internal building layout – Where residential buildings are located close to sources of road noise, the layout of the buildings can be optimised to minimise road traffic noise intrusion into sensitive areas. Buildings can be constructed so that noise insensitive areas such as kitchens, storage areas and laundries are located closer to the noise source, with habitable spaces being positioned away from the most noise affected facades. Noise levels in habitable spaces protected by less noise sensitive uses would be expected to comply with the appropriate internal noise criteria in most cases.

- Use of intervening structures – Non-residential structures can be used to shield residential development as well as passive open space from adverse noise impacts. The built environment should be designed with consideration of providing quiet areas shielded from road traffic noise.

- Noise impacts from commercial activities within the precinct – Future entertainment or food and beverage/licensed premises need to be adequately controlled. Recommended measures to mitigate this noise include:
  - Locating high noise generating uses (such as licensed premises) together and away from areas of residential receptors
  - Using non-residential zones as buffers to shield residential areas
  - Developing precinct plans which appropriately limit operational hours of noisy developments, as well as management plans for reducing noise impacts, as far as practical. Such plans may include the need to close windows / doors of high noise-generating venues at certain times, as well as requiring venues to be designed and constructed to control noise egress should predicted internal noise levels within venues exceed a certain limit (to be defined by the design of the building)
  - Using appropriate mitigation measures within the design of future residential developments, which may include appropriately upgraded facades and ventilation systems in proximity to high noise generating uses.

- Industrial noise - Noise emissions from mechanical plant at future non-residential uses in the precinct would be required to be assessed against specified noise goals in the Noise and Vibration Assessment. SLR recommends that a detailed acoustic assessment of the potential industrial noise impacts is completed once the various non-residential tenant types are finalised. The following strategies are recommended where exceedances are predicted:
  - Spatial separation between noisy activities and noise sensitive areas through locating less noise sensitive uses in high noise areas.
  - Taking advantage of any site features that can be used to screen noise impacts when planning land use in an area.
  - Using intervening structures such as less noise sensitive multi-storey buildings to act as barriers. Buildings used as barriers should incorporate noise mitigation principles into their building design to ensure appropriate internal noise conditions.
  - Locating mechanical plant inside plant rooms or in enclosures with appropriate acoustic treatment.

  The most exposed facades which face Hymix are predicted to be subject to relatively high night-time industrial noise levels and mitigation strategies have been recommended, including upgrading facade elements and designing building layouts to place less noise sensitive usages near to source of industrial noise.

  Noise impacts from new industrial/commercial noise sources within the precinct would be assessed individually at the DA stage of the project.

The SLR study has shown that from an acoustic perspective, the site is suitable for the intended uses subject to the future design development on final proposals of high-level mitigation measures summarised within this study. It should be noted that there are numerous examples of residential developments being located in close proximity to major arterial roads, including the Harbour Mill adjacent to the Western Distributor, where appropriate noise mitigating measures have been successfully incorporated into the design.

SR22.10: Outline the recommended measures relating to noise, vibration and pollution to minimise the nuisance and harm to people or property within / adjoining the precinct.

The recommended measures to minimise nuisance and harm arising from noise and pollution to within and adjoining the precinct have been discussed above.

SLR has prepared a Human Health Risk Assessment (HHRA - refer **Attachment 19**). The HHRA provides a comprehensive investigation of risk to human health from potential exposure to particulate matter (as $PM_{2.5}$ and PM_{10}) and nitrogen dioxide (NO_2). It has identified that any future development at Blackwattle Bay is likely to have an average net health benefit.

The HHRA has utilised the results of air dispersion modelling undertaken as part of the SLR air quality assessment. The assumptions used as inputs into the modelling err on the side of safety (i.e. they are conservative). The HHRA has been undertaken for the two scenarios considered for the air quality assessment, that is, redevelopment of the entire Study Area and partial redevelopment with the Hymix concrete batching facility continuing operation.

The population health endpoint assessment undertaken in the HHRA has shown that for both long-term and short-term exposure, the altered exposure circumstances of potential future development are predicted to provide an average net health benefit. This means that on average lower population exposures to $PM_{2.5}$, PM_{10}, and NO_2 are anticipated to occur within the the Study Area relative to other residences and commercial properties south, southeast, and north of the Study Area.

When comparing Scenario 1 (without Hymix) and Scenario 2 (with Hymix), the estimated change in population health outcomes from long-term and short-term exposures to $PM_{2.5}$ within the Study Area are slightly better (i.e. provide higher benefit) for Scenario 1 than Scenario 2, noting that the proposed redevelopment in both Scenarios provides a net overall benefit relative to baseline conditions. The difference in population health outcomes for PM_{10} and NO_2 long-term exposures between Scenarios 1 and 2 are negligible.

The analysis of short-term exposure health outcomes revealed that there may be exceedances of exposure to NO_2 for different buildings depending on the scenario evaluated. Exposure to NO_2 at certain levels can increase the incidence of asthma in some individuals. The likelihood of sensitive asthmatics being present at these building locations at the exact time that adverse concentrations of NO_2 may be found is considered low (especially given that the modelling is conservative). However, the possibility cannot be excluded and the HHRA therefore recommends that management measures be considered to reduce potential NO_2 exposures at these building locations. The HHRA indicates that adverse effects resulting from exposure to NO_2 would not be experienced by people using the proposed new public open spaces within the Study Area.

The recommended management measures are those described above in relation to the air quality assessment.

G23. Wind

SR23.1: 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 on wind conditions.

Windtech has prepared a Pedestrian Wind Environment Study (refer Stage 1 and Stage 2 reports at **Attachments 38** and **39**). The Stage 1 study provides a detailed investigation into the existing wind environment conditions for the proposed Bays Market District Investigation Area and the Stage 2 study investigates the wind environment impact of the Precinct Plan. The Study includes wind tunnel testing.

The Windtech analysis indicates that the southerly winds are by far the most frequent winds for the Sydney region, and are also the strongest. The westerly winds occur most frequently during the winter season for the Sydney region, and although they are typically not as strong as the southerly winds, they are usually a cold wind and hence can be a cause for discomfort for outdoor areas. North-easterly winds occur most frequently during the warmer months of the year for the Sydney region, and hence are usually welcomed within outdoor areas since they are typically not as strong as the southerly or westerly winds.

The directional wind speeds are summarised in **Table 37** and the directional wind speeds and corresponding directional frequencies of occurrence are presented in **Figure 67**.

Table 37: Directional Wind Speeds (m/s) (hourly means, referenced to 10m above ground in standard open terrain) (Source: Windtech)

Wind direction	5% Exceedance	Annual Maximum
N	5.9	9.9
NNE	9.9	12.9
NE	9.7	12.3
ENE	7.5	10.0
E	6.3	9.3
ESE	6.2	9.1

Wind direction	5% Exceedance	Annual Maximum
SE	7.0	10.1
SSE	8.5	12.2
S	10.3	13.9
SSW	10.0	14.1
SW	6.9	11.9
WSW	9.3	13.6
W	9.8	14.4
WNW	8.8	14.3
NW	6.7	12.6
NNW	5.5	10.7

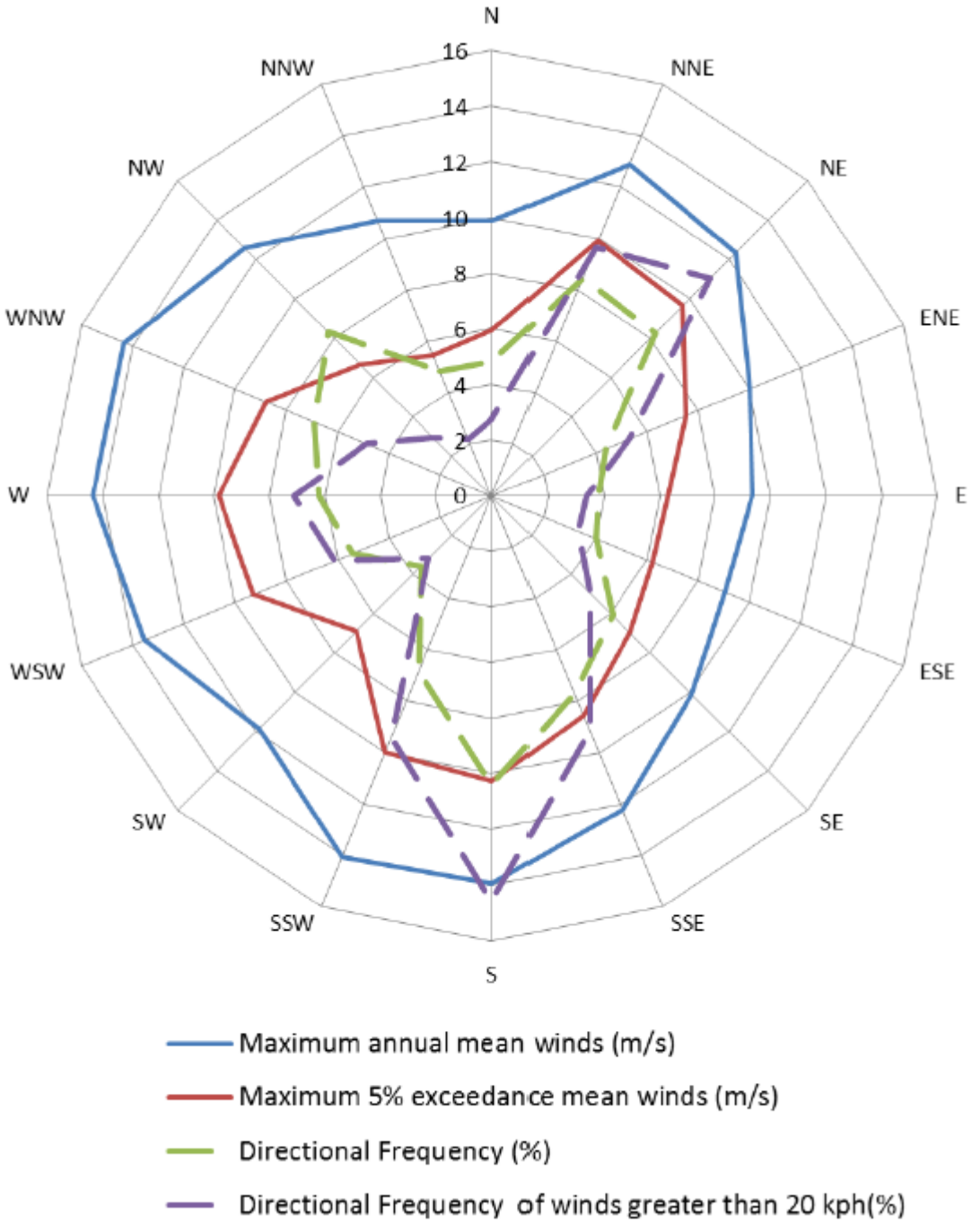


Figure 67: Annual and 5% Exceedance Hourly Mean Wind Speeds, and Frequencies of Occurrence, for the Sydney Region (referenced to 10m above ground in standard open terrain) (Source: Windtech)

SR23.6. 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.

SR23.5. Include areas surrounding the precinct that may be wind affected as a result of the proposal.

SR23.7. Wind tunnel testing is required.

Windtech undertook wind tunnel testing. Testing was carried out using a 1:400 detailed scale model of the development. The effects of nearby buildings and land topography have been accounted for.

The model was initially tested in the wind tunnel without the effect of any forms of wind ameliorating devices such as screens, balustrades and the like. The effect of vegetation was also excluded from the testing. Initial testing demonstrated that in the absence of design changes or mitigation measures, several areas within and around the Study Area exceeded the relevant safety criteria. This is shown in **Figure 68**. With the inclusion of architectural building form changes and architectural elements/ features, all ground floor areas within and around the proposed masterplan achieved the safety criteria or were equivalent or better than the existing site wind conditions. This is shown in **Figure 69**.

Multiple iterations of the masterplan massing design with the inclusion of architectural treatments were tested in the wind tunnel to arrive at the Precinct Plan. These alterations and treatments included:

- building form changes to the tower(s)/podium(s) as well as awnings to reduce the impacts of downwash
- vertical screening and podium cut-outs to reduce the impacts of localised winds side streaming
- chamfered corners to reduce the wind accelerating locally around building corners.

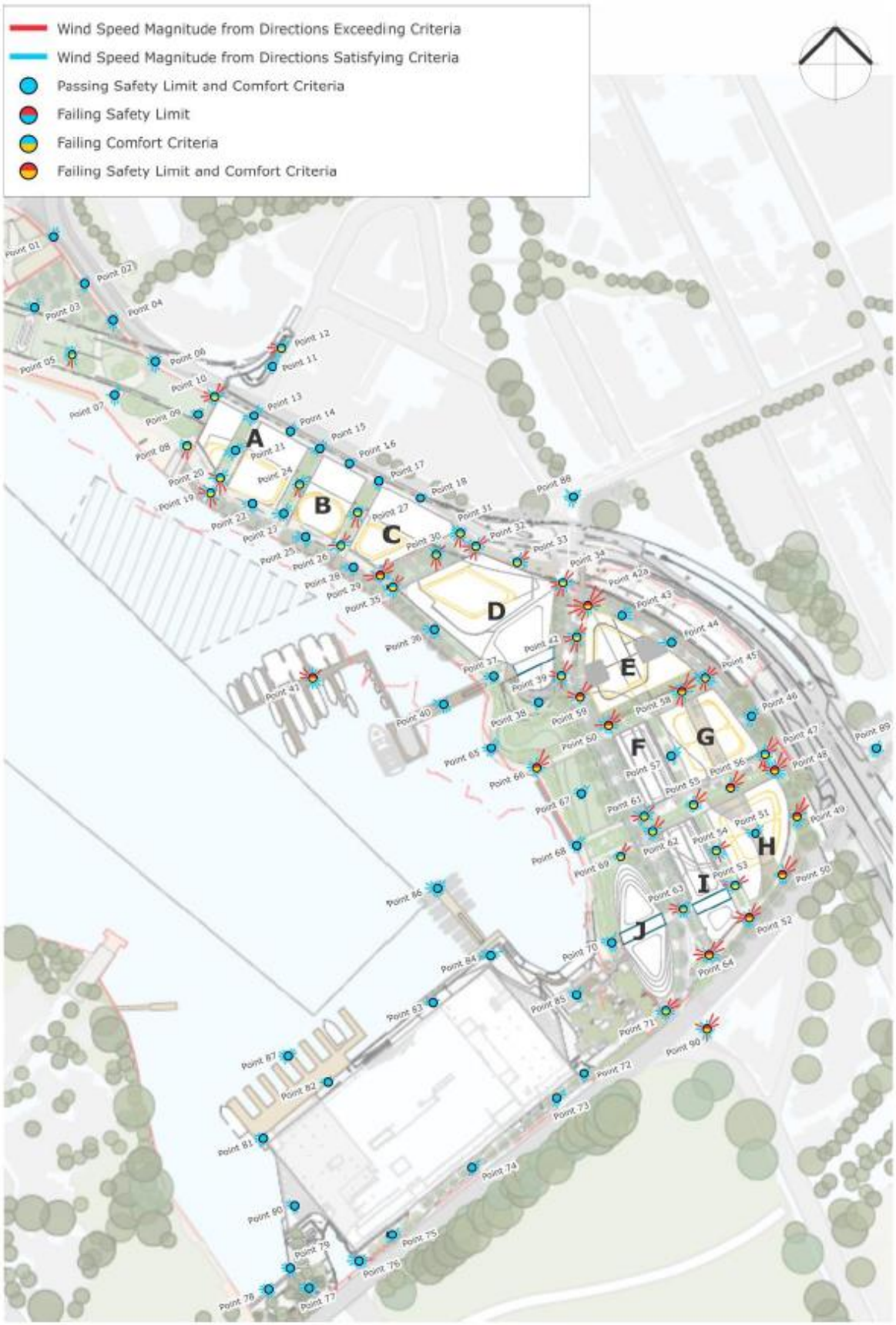


Figure 68: Initial wind tunnel results
(Source: Windtech)

Figure 69: Wind tunnel results with treatments added
(Source: Windtech)

SR23.2: Ensure early consideration of potential wind impacts and amelioration approaches through the layout and arrangement of the public domain and the built form.

SR23.3: 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 foreshore reserve, 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 including screens and awnings.

SR23.4. Any advice on landscaping of public space must accord with the City of Sydney's Public Design Manual and the Public Domain design. In general, landscaping can only be used for wind mitigation if it is already in place.

Together with other matters, consideration of wind impacts has shaped the layout and design of public domain and built form for the quarter. Key moves to address wind include:

- Taller building forms are setback above podium or 'street wall' buildings to ensure that down-draughts are dissipated at the podium level and wind speeds in the public domain at street level are mitigated
- The built form massing across the masterplan area is stepped to avoid a steep transition from low building scales to taller buildings
- Tower building forms are limited in their footprint size to allow wind movement around and between buildings
- Awnings help reduce wind speeds in dining areas of the public domain
- Extensive landscape will be employed to reduced wind speeds at the pedestrian level.

The intended use of the spaces can be determined at a more detailed design stage and at an individual building level. The comfort conditions can be improved at that stage through the use of landscaping, adjustments to the building form, or other localised mitigation measures. The effect of staging should also be considered to ensure that wind conditions are suitable throughout the construction of each development. Where areas are affected by the prevailing westerly winds the vegetation/tree planting should be of an evergreen variety to ensure that they are effective all year round.

G24. Aeronautical

Strategic Airspace has prepared an Aeronautical Impact Assessment (refer to **Attachment 40**). It examines the current regulated airspace height limits constraints overhead the Study Area that are related to aviation airspace protection requirements and which would:

- Trigger the requirement to apply for an airspace height approval
- Constrain the maximum permissible building envelope heights
- Constrain the maximum permissible heights for cranes that would be required to enable construction of the proposed development.

SR24.1: Review relevant background information, including the Sydney Airport Master Plan 2033 to understand the current and proposed future operations of Sydney Airport, as relevant to the precinct.

Strategic Airspace has provided a review of relevant background information to understand the existing and proposed future operations of Sydney Airport. This has included a review of the Sydney Airport Master Plan (the most recent is the 2039 Master Plan).

From an aeronautical impact point of view, Blackwattle Bay is located approximately 8.4km (4.5 nautical miles) from the airport, midway between the straight-in flight paths to the closest runways. The proximity of Blackwattle Bay to Sydney Airport is shown in **Figure 70**.

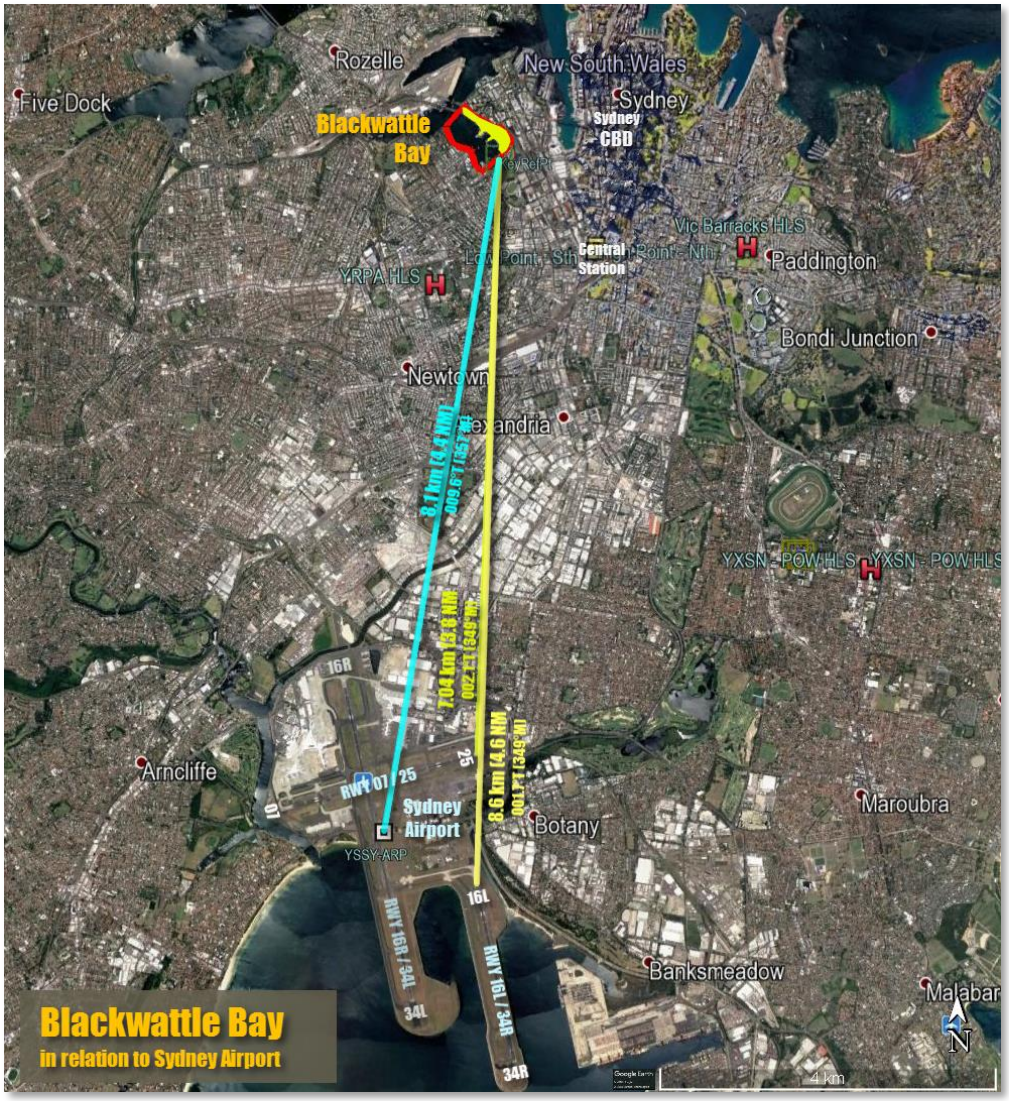


Figure 70: Blackwattle Bay in relation to Sydney Airport
Source: Strategic Airspace

SR24.2: Identify and clearly map the OLS, PANS OPS and any other relevant Sydney Airport height limitation layers, including consideration of Navigation Aid Surfaces.

Based on the Aeronautical Impact Assessment, Blackwattle Bay is:

- subject to Obstacle Limitation Surface (OLS) height limits which over the site is a horizontal limit of 156m Australian Height Datum (AHD) (refer **Figure 71**)
- constrained by Procedures for Air Navigation Services – Aircraft Operations (PANS-OPS) procedures, which impose various sloping surfaces across the Study Area
- constrained by a Radar Terrain Clearance Chart (RTCC) surface, a horizontal surface constraint which is higher than the applicable PANS-OPS height limits
- unaffected by height constraints related to the approach, missed approach and departure procedures to and from Sydney airport runways.

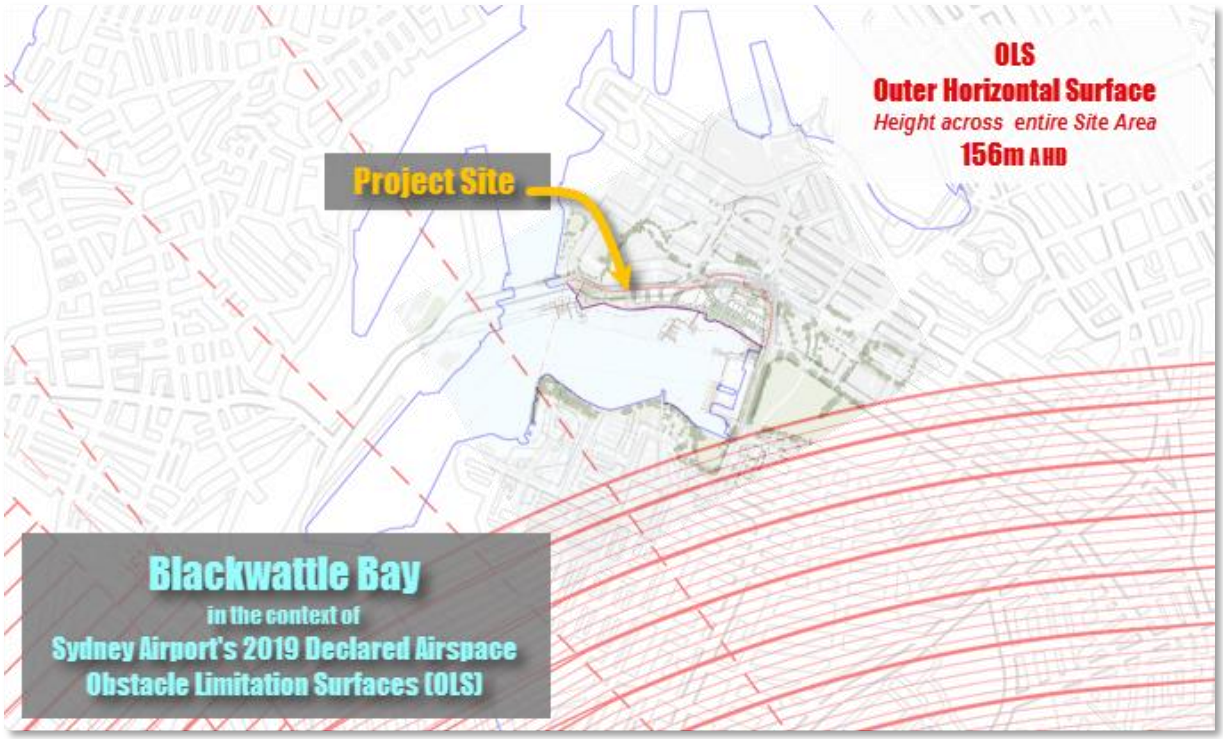


Figure 71: Blackwattle Bay in relation to Sydney Airport's OLS
Source: Strategic Airspace

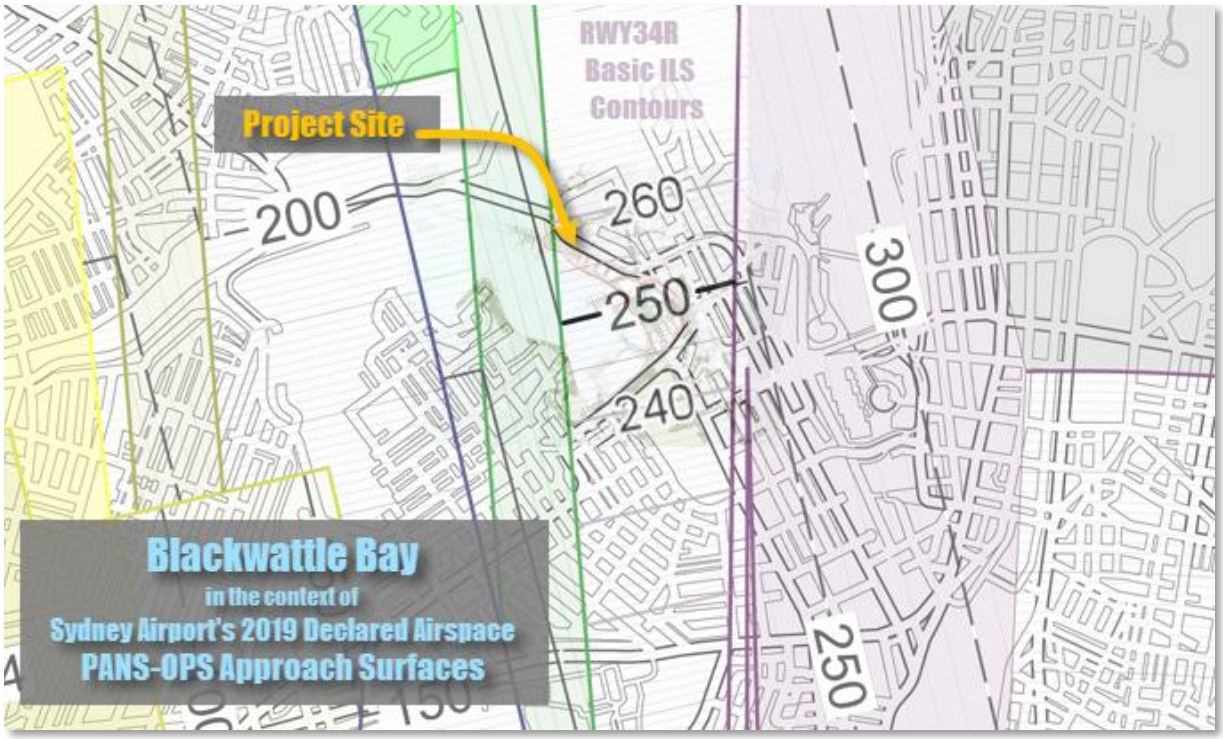


Figure 72: PANS-OPS Approach Procedures Height Constraints across Blackwattle Bay
Source: Strategic Airspace

S24.3. Translate these layers into a maximum height for permanent structures (e.g. buildings) and temporary structures (e.g. cranes). Engage a building methodology specialist to translate this information into maximum building envelope height planes.

The PANS-OPS surface defines the maximum permissible building height that would be approved by the aviation authorities in the relevant areas. The PANS-OPS height limit (AHD) varies across the site from 245m-265m. The Precinct Plan proposes a maximum height limit of 156m AHD within the study area which allows a margin of 89m to accommodate all cranes required for construction. As a consequence, the maximum height for permanent (eg buildings) and temporary (eg cranes) structures is well within the PANS-OPS surface.

S24.4. Advise on other measures, if necessary, to ensure the precinct does not have an adverse impact on the operations of Sydney airport, eg lighting, reflective surfaces etc.

The Study Area is too far from the airport, and also effectively shielded by buildings between it and the airport, to have any negative impact on lighting and reflectivity.

No other measures are identified in the Aeronautical Impact Assessment as necessary to ensure the precinct does not have an adverse impact on the operations of Sydney airport.

S24.5. 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.

Any development or construction activity or structure (eg, crane) that would exceed the relevant Outer Horizontal Surface (OLS) height across the Study Area would require a prior 'airspace height' approval from the Department of Infrastructure, Transport, Regional Development and Communications under the Airports (Protection of Airspace) Regulations (or APAR). As shown in **Figure 71**, the OLS for the study area is 156m.

The planned building envelopes will not exceed this height and will therefore not require prior airspace approval.

Cranes which would exceed the OLS height would require prior approval under the *Airports (Protection of Airspace) Regulations 1996* (APAR). However, this does not preclude approval of the rezoning proposal.

After construction, any building which exceeds 110m above ground must be reported as a Tall Obstacle to Airservices.

S24.6. Certify that subject to any recommended measures, the precinct proposal will not have an adverse impact on the operations of Sydney Airport.

Subject to compliance with the maximum height of 156m, Strategic Airspace advises that the proposal will not have an adverse impact on the existing or proposed future operations of Sydney airport.

G25. Social sustainability

SR25.1. Prepare a comprehensive Social Sustainability Assessment (SSA) of the proposal. The SSA should be prepared in accordance with the Planning Institute of Australia's policy position on SSAs. It should provide recommendations to ensure that the proposal can achieve UrbanGrowth's sustainability goal of creating the world's most liveable urban communities. Specifically, it should:

- demonstrate how the proposal aligns with relevant principles in the City of Sydney's Social Sustainability Policy and Discussion Paper "A City for All: Towards a Socially Just and Resilient Sydney"
- demonstrate how the proposal aligns with the vision and goals of, and contributes towards the targets in, UrbanGrowth's draft Sustainability Strategy. Specifically, the study should:
  - Identify specific initiatives to foster the integration of existing community networks in the Pyrmont and Glebe communities into the proposal
  - Recommend how existing and future community facilities may be integrated in the proposal to ensure equitable access to a broad range of minority groups and different age, income and cultural groups and to achieve UrbanGrowth's objectives of healthy and inclusive places,
  - Identify how the development, given its proximity to the water, may foster the relationship between water, landscape and urban living in order to enhance social well being, and
  - Identify specific initiatives design strategies and management approaches to embed arts and culture into the existing character, local heritage and sense of place as understood by the existing adjacent communities.
- Cross reference other relevant parts of the broader State Significant Precinct Study, assessing how their recommendations may contribute to the social sustainability of the proposal. These include: Local Infrastructure and Contributions Plan; social infrastructure component of the State and Regional Infrastructure study; Consultation; Public Domain; Affordable Housing; Population Demographics and Health Impact.
- Outline opportunities to promote positive social outcomes to meet the needs of the future community and existing adjoining communities including Glebe and Pyrmont and document the measures in a site-specific Social Sustainability Plan. Measures should be tangible, timely and effective within the ability of the proponent to deliver and/or agreed with key partners. Measures require effective and costed implementation mechanisms and responsibilities which are agreed with key partners (where necessary).

Elton Consulting has prepared a Social Sustainability Assessment (SSA - **Attachment 16**). The purpose of the SSA is to present an integrated range of social sustainability initiatives that respond to the identified challenges, opportunities and key issues associated with the development of the Blackwattle Bay Precinct. The assessment is both informed by and informs the developing Precinct Plan for Blackwattle Bay.

The SSA responds to the projections for residents, visitors and workers within the precinct and also identifies the types of social infrastructure and the range of social sustainability initiatives that can be introduced to support the area's vision to become a world class liveable urban community. The SSA responds to leading practice thinking for both social infrastructure and social sustainability. It adopts the CoS's definition of social sustainability and addresses the four key themes within the CoS's Social Sustainability Policy & Action Plan 2018-2028[4]:

- An inclusive city: social justice and opportunity, with residents sharing the same opportunities and benefits
- A connected city: diverse, cohesive communities that are socially connected and have a sense of belonging
- A liveable city: quality places and spaces, that are designed for people of all ages and abilities and connected to the natural environment.
- An engaged city: good governance and active participation, with opportunities to get involved.

The development of the SSA has involved:

- review of the CoS's Social Sustainability Policy and Discussion Paper A City for All: Towards a Socially Just and Resilient Sydney and other relevant NSW Government policies and strategies
- review and analysis of the PPPS
- development of a community profile for existing communities within the Study Area based on analysis of Australian Bureau of Statistics (ABS) Census data for 2016
- review of outcomes of community and stakeholder consultation
- consideration of other leading practice urban renewal projects nationally and internationally
- development of an indicative future profile for the Precinct
- community infrastructure assessment to understand the capacity of existing facilities to meet the additional demand generated by new residents, workers and visitors, and gaps in provision
- assessment of social sustainability challenges and opportunities that may result from the redevelopment
- consultation with community and leading thinkers on social sustainability
- identification of social sustainability initiatives and the development of recommendations and an implementation plan.

Given the diversity between existing communities of Pyrmont, Glebe and Ultimo and the future Blackwattle Bay Precinct, community and social infrastructure will need to accommodate a wide variety of needs, including those of families, children and young people, young working adults, retirees and older people.

The Study Area's future population will be distinguished from that of surrounding suburbs in its age and household profile. This points to the importance of providing infrastructure and attractors that can help to bridge the gap and enhance social cohesion. Social infrastructure and community development initiatives can play an important role in encouraging links and connections between new and existing communities reducing the risk of polarisation and fragmentation.

[4] This replaces the Social Sustainability Policy and Discussion Paper "A City for All: Towards a Socially Just and Resilient Sydney" mentioned in the Study Requirements)

Given the forecast demographics, a key challenge for the Study Area will be achieving a socially diverse and sustainable community, in terms of a balance of age, household type and income. The extent to which a reasonably diverse population may be achieved will depend largely upon housing diversity and affordability.

The separately prepared Housing Diversity and Affordability Study (**Attachment 20**) discusses the importance of delivering housing diversity and affordability in the Study Area (refer discussion in Part G6).

Based on a combination of the consultation undertaken for this project and an analysis of the Social Infrastructure Assessment prepared as part of the PPPS, the key existing gaps in provision of social infrastructure in the established communities surrounding the study area include:

- increased community meeting and activity space including an increased demand for space for community programs
- space for creative arts including studio space with an emphasis on affordable arts and creative spaces
- locally accessible green space that respond to needs of residents, visitors and workers
- increased play opportunities
- recreational walking linkages
- multipurpose courts
- outdoor gyms
- space for young people including for basketball and skating
- public boating facilities and associated storage.

The Blackwattle Bay Precinct Plan presents a number of key opportunities to address the requirements for social infrastructure as well as many of the aspirations of the surrounding, existing community. The key elements include:

- the foreshore promenade which will provide a critical missing piece in the regional pedestrian and cycling network
- Bank Street open space which will be focussed on meeting local and community needs
- the opportunity to provide a boat house/club house facility with boat storage within the Bank Street Open Space
- the opportunity to adaptively re-use the existing buildings at 1-3 Bank Street for a combination of both community and cultural uses. The Precinct Plan envisages a range of arts and creative uses to be accommodated in this space including studios, maker space, gallery and exhibition space and performance and event space.

The SSA makes a number of recommendations grouped into stages related to the planning and delivery process. These stages are:

- rezoning (the current stage)
- detailed design and development application
- project delivery and operations.

The SSA places emphasis on those proposed actions and initiatives that need to be addressed at the rezoning stage of the planning process. These are summarised in **Table 38** and essentially comprise the social infrastructure components of social sustainability including the land and space required for various forms of community facilities, cultural space and public open space.

Table 38: Proposed social infrastructure (Source: Elton Consulting)

SSA NO	RECOMMENDATIONS	PRIMARY RESPONSIBILITY
PROPOSED SOCIAL INFRASTRUCTURE		
R1	**Community centre** - Provide for a community centre space of a minimum of 400 sqm (GFA) in a location that enables its use as a boat house/club house. The facility should accommodate existing dragon boat, kayak and canoe paddlers as well as be available for use as general multipurpose community meeting and activity space to members of the Blackwattle Bay and surrounding communities.	NSW Government in collaboration with CoS
R2	**Boat storage** - For boat storage to be made available as part of, or immediately adjacent to, the proposed community centre (boat house/club house) facility.	NSW Government in collaboration with CoS
R3	**Child care** - Ensure the rezoning enables the provision of child care both work based and general community with space required for approximately 138 long day care places.	NSW Government in collaboration with CoS
R4	**Local medical services** - Ensure the rezoning accommodates sufficient office space to enable the provision of GP and other medical services.	NSW Government in collaboration with CoS
R5	**Community health outreach** - Consider the incorporation of outreach space for community health services to be included in the proposed community centre (R1).	NSW Government in collaboration with CoS
R6	**Arts and creative space** - Allow for the inclusion of approximately 1,200 sqm (GFA) of space for arts and creative uses at 1-3 Bank Street.	NSW Government in collaboration with CoS
R7	**Public open space** - Ensure that the rezoning includes 3 hectares of public open space (approximately 35% of the study area) in accordance with the public domain and landscape plans prepared by FJMT. Key elements of the public open space should include: • The foreshore promenade • Bank Street Open Space • Miller Street Reserve • Entry Plaza • Waterside Park.	NSW Government in collaboration with CoS
R8	**Multi-purpose courts** - Provide for outdoor multipurpose court in the Bank Street Open Space area	NSW Government in collaboration with CoS
R9	**Play space** - Provide for a high quality play space in the Bank Street Open Space area.	NSW Government in collaboration with CoS
R10	**Outdoor fitness** - Provide for a high quality outdoor fitness area in the Bank Street Open Space area.	NSW Government in collaboration with CoS
R11	**District/regional community facility** - Continue to investigate opportunities for a district or regional level community or cultural use in either the Elliptical Building or other appropriate area of the precinct.	NSW Government and range of potential partners including Create NSW

The SSA also identifies actions linked to the broader understanding of social sustainability outlined in the CoS Social Sustainability Policy. These are summarised in **Table 39**.

Table 39: Additional social sustainability actions (Source: Elton Consulting)

SSA NO	RECOMMENDATIONS	PRIMARY RESPONSIBILITY
INCLUSIVE CITY		
R12	Implement key affordability and diversity recommendations from the Housing Diversity and Affordability Study (**Attachment 20**)	NSW Government in collaboration with CoS
R13	Consider the findings from the community engagement process and the Aboriginal Cultural Advice Report (Murawin, 2020), in relation to affordable and/or social housing.	NSW Government

SSA NO	RECOMMENDATIONS	PRIMARY RESPONSIBILITY
R14	Explore opportunities to include affordable employment floorspace to support a range of industries including creative, entertainment and research sectors, as well as emerging small businesses and start-ups.	NSW Government in collaboration with CoS
R15	Enable the provision of spaces and places that attract knowledge-based industries and highly skilled workers	NSW Government in collaboration with CoS
R16	Create an environment that supports mixed uses, day and night, to create a vibrant environment that contributes to the economy, which requires physical and technological connectivity, and the provision of safe, legible and welcoming public space.	NSW Government in collaboration with CoS
CONNECTED CITY		
R17	Create a low speed and safe environment to encourage walking and cycling.	NSW Government in collaboration with CoS
R18	Ensure that principles and recommendations of the Landscape Character and Visual Impact Assessment (**Attachment 15**) are considered in the rezoning in relation to the location of buildings and open spaces	NSW Government
LIVEABLE CITY		
R19	Consider the findings of the Aboriginal Cultural Advice Report (**Attachment 29**) to allow for the provision of spaces for 'Aboriginal people for cultural purposes'.	NSW Government and indigenous stakeholders
R20	Ensure that future public spaces address the principles of the NSW Public Spaces Charter and the NSW Great Public Spaces Toolkit (DPIE, 2020).	NSW Government
R21	Consider opportunities to provide spaces to learn about Aboriginal culture, such as a cultural centre, museum or gallery	NSW Government
R22	Consider the findings of the Health Impact Assessment.	NSW Government
R23	Continue to use the Healthy Urban Development Checklist (NSW Health) in future planning and development stages.	NSW Government
ENGAGED COMMUNITY		
R24	Continue to engage with all relevant groups and stakeholders through the rezoning and all future planning and development stages	NSW Government

The later stages of recommended actions focus on more detailed design elements that can be addressed through the detailed design and development approvals processes as well as non-physical elements of social sustainability that require an array of community engagement, community and cultural development and place activation and management mechanisms to take effect. It is envisaged that Infrastructure NSW will continue to work on these recommendations post-rezoning and will provide more detail on how they will be addressed and actioned.

Further discussion on the infrastructure demands of the proposal and delivery mechanisms is provided in Parts G8 and G9.

G26. Population demographics

SR26.1. 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 floor space per worker and others where relevant. Data for employment is to be consistent with the City of Study Requirements for Bays Market District | Nominated State Significant Precinct – The Bays - April 2017 30 Sydney's 2012 floor space and employment survey (FES) updated when available. Consult with NSW Department of Planning and Environment, and City of Sydney on methodology.

SR26.8. Update data as the 2016 census results become available.

Profile.id has prepared a Population Demographics and Workforce Profile (refer **Attachment 5**).

The Profile.id methodology and assumptions for the analysis involved:

- utilising small area ABS census data to build a resident and worker profile of the existing Blackwattle Bay area and wider Precinct
- utilising ABS Census data, CoS Floor Space Survey data, City of Melbourne CLUE data to conduct benchmark analysis of other locations in Sydney and Australia that can inform profiling likely future outcomes at Blackwattle Bay
- utilising INSW inputs related to dwelling assumptions and Profile.id's detailed population forecast model which relies on location specific cohort component, household propensities and housing unit models to forecast future population and household types in Blackwattle Bay
- Utilising INSW inputs related to building assumptions and land use mix, benchmark analysis, CoS Floor Space Survey work space ratios, Pyrmont Peninsula Economic Development Strategy, NIEIR's small area economic impact model and TfNSW employment projections to forecast future job creation in Blackwattle Bay.

Workshops were held with the DPIE and CoS to agree on the methodology and assumptions.

SR26.2. 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.

Key drivers include:

- Greater Sydney and CoS have experienced substantial population growth over the last decade, exceeding rates experienced by the country as a whole
- Inner city locations are experiencing a resurgence as young workers and some downsizing retirees seek greater access to employment and essential services
- Population growth is driving large increases in property values. Both the median property price and median rent in CoS have more than doubled in the last ten years
- CoS is the largest employment agglomeration in NSW by far and its influence has increased over time. In 2011, it supported 15% of the employment, however in the last five years it generated 38% of the employment growth
- This jobs growth is increasing the divergence between where people work compared to where they live in Sydney. CoS has a substantial 'Jobs Surplus' –more jobs than employed residents
- Driving this growth is an increase in jobs requiring more cognitive and non-routine skills that often necessitate higher qualified employees. These jobs are often concentrated in CBDs and other major employment nodes
- Knowledge based industries generate a large amount of these jobs and gain productivity benefits from agglomeration and access to deep labour pools
- High density development around major transport nodes support access to labour for businesses, and jobs for residents. The proposed metro station in Pyrmont will be within walking distance of Blackwattle Bay
- Blackwattle Bay is planned to generate a substantial increase in residents in an area that has strong accessibility to education and employment opportunities, as well as being close to a major transport node
- The COVID-19 pandemic and policy responses enacted to contain its spread have had an enormous economic and social impact. Some considerations in the short and longer term include:
    - Substantial fall in local employment in inner Sydney in 2020 and continuing into 2021, impacting how office work is conducted and placing limitations on the hospitality sector

- Fall in population growth across the Sydney due to reduced international migration. Lower fertility rates are also expected in the short to medium term due to socio-economic uncertainty
- Businesses have improved their policies to support and encourage flexible working arrangements to allow more people to work from home during the pandemic. This transition is expected to slowly continue even post-pandemic influencing the need for more liveable mixed use environments which allow people to live in work in smaller contained communities.

SR26.3. Identify the key population and employment attributes of comparable higher density inner city Sydney communities such as Pyrmont, Kings Cross/Potts Point.

SR26.5. Compare precinct data with the remainder of the City of Sydney LGA and Greater Sydney Metropolitan Region for the purposes of benchmarking.

For profiling purposes a larger catchment area has been utilised in the Profile.id report due to the non-existent resident base at Blackwattle Bay. The catchment area includes sections of the neighbouring suburbs of Pyrmont, Ultimo-Haymarket and Glebe.

- Pyrmont is home to a higher share of young affluent working professionals and managers who come from a mixture of countries. There is a larger share of couple households who rent or are working to pay off their mortgage. The dwelling stock is almost entirely high density (3 storeys+).
- Ultimo-Haymarket is dominated by an international student population, largely from Asia, who live in group households. The leads to lower income levels, lower workforce participation and high study rates. The dwelling stock is almost entirely high density.
- Glebe is made up of older and generally Australian born residents. It is a mixture of highly advantaged and highly disadvantaged households with both high rates of social housing, but also high rates of outright home ownership. The dwelling stock is more likely to be medium density.

Key population and employment attributes of this larger catchment include the following:

- The resident population in the Blackwattle Bay Catchment has a similar age profile to the broader CoS with a high share of 20 to 39 year olds
- The area is very multicultural with a high population of Asian immigrants, especially Chinese, due to a large student population
- Education attainment is very high with the majority completing school and going on to attain degree qualifications
- The catchment has a mixture of highly advantaged and highly disadvantaged small areas
- The predominate dwelling stock is high density housing, largely occupied by lone person households and couples. Most households (50%) are rented privately
- Participation in the labour force was less than the CoS rate and the unemployment rate was above that in the CoS, but this was primarily due to the student population in Ultimo
- The main industries of employment for working residents in the Blackwattle Bay Catchment are Professional, Scientific and Technical Services, Accommodation and Food Services, and Financial and Insurance Services.
- In 2016, 1 in 3 residents worked in Sydney's CBD and another 14% in the catchment area which led to high rates of active commuting (35% walked or cycled to work)
- The largest employing industries in 2016 were Education and Training and Information Media and Telecommunications
- The main occupation was Professionals in Education, Business Services and Creative areas.

Further detail, including graphs and tables, on the population and employment characteristics of the representative catchment is provided in the Profile.id report (**Attachment 5**). The Profile.id report also includes comparison with the remainder of the CoS LGA and Greater Sydney Metropolitan Region for the purposes of benchmarking.

SR26.4. 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.

SR26.6 Prepare time series (5 year increments) population and employment profiles of the precinct and surrounding community (including dwelling and job yields) based on trend, without the SSP Study.

SR26.7. Prepare time series (5 year increments) population and employment profiles of the Precinct and surrounding community (including dwelling and job yields) based on trend, with the SSP Study. Reference dwelling yields for the precinct will be provided for the precinct.

Population and housing

Population and housing forecasts have been determined using Profile.id's forecasting model that incorporates a detailed understanding of the drivers of demographic change as well as specific input provided by project stakeholders. The analysis includes forecast population and employment profiles in 5-year increments with and without the SSP proposal.

Key findings include:

- The forecasts for the Blackwattle Bay Study Area see an increase in population from 0 in 2016 to 2,795 in 2036. This forecast is based on an increase of 1,546 dwellings in net terms between 2024 and 2032
- Average household size is expected to decrease from at 1.99 in 2026 to 1.90 in 2036 however dwelling occupancy is expected to be lower at 1.8 persons per dwelling. This takes into account an assumed vacancy rate commencing at 10% and decreasing to 5% in 2028 as new dwelling stock is added.
- The area is expected to attract a range of markets including both younger adult age groups driven by all the classic attributes of inner city areas: fast access to CBD jobs in finance, banking and professional services, as well as a range of entertainment and cultural options either on site or within a short walk
- There area is also expected to comprise a sizeable component of older working adults and retirees, attracted by waterfront property with close proximity to the new Sydney Fish Market as well as a range of transport options and waterfront trails
- The largest forecast increases by age are in the 25-39 age bracket by 2036. This is partly the result of people migrating to the district in those age groups, as well as the ageing of early movers to the site in their 20s. There are also significant increases in the 50 to 64 age group
- Without the planned SSP development, it is forecast that population and dwelling levels would remain zero within the Blackwattle Bay Study Area
- The forecasts for Blackwattle Bay Catchment see an increase in population from 33,623 in 2016 to 46,127 in 2036.

Table 40: Forecast population and household growth, Blackwattle Bay Study Area (Source: Profile.id)

	2016	2021	2026	2031	2036
Population	**0**	**0**	**825**	**2,502**	**2,795**
Change in pop. (5 years)			825	1,677	293
Average annual % change				24.8%	2.2%

Households	**0**	**0**	**414**	**1,290**	**1,468**
Change in households (5 years)			414	876	179
Average h/hold size			1.99	1.94	1.90

Employment forecasts

The employment forecasts are reliant on specific input provided by relevant stakeholders and also include assumptions about building construction rates and building/land use mix. Changes to these assumptions would result in different forecast results.

Key findings include:

- It is forecast that by 2036 there could be approximately 5,713 ongoing jobs in Blackwattle Bay
- Employment opportunities will be largely focused on business services, especially Professional, Scientific and Technical Services and Information Media and Telecommunications, due to the increase in commercial office space planned for the site
- The new Sydney Fish Market site will continue to support seafood related wholesale and retail as well as a likely uplift in hospitality based jobs
- Other opportunities could be in in health and well being or recreational services, community services, personal services, child care, and serviced apartments/short term accommodation
- Without the planned SSP development, it is forecast that job levels would remain relatively low within the existing SFM site and adjacent private lands. The new SFM would contain approx. 725 jobs
- The forecasts for Blackwattle Bay Catchment see an increase in jobs from 64,224 in 2016 to 81,788 in 2036. This projection is based on an addition of 5,153 in net terms between 2016 and 2036 as a result of the SSP development
- Without development, jobs in the catchment is forecast to only reach 76,634 in 2036.

Table 41: Forecast jobs growth, Blackwattle Bay Study Area (Source: Profile.id)

	2016	2021	2026	2031	2036
Ongoing jobs	**560**	**525**	**1,495**	**3,044**	**4,446**
Change in jobs (5 years)		-35	970	1,549	1,403
Average annual % change		-1.3%	23.3%	15.3%	7.9%
Ongoing plus construction	**560**	**525**	**2,720**	**3,941**	**4,446**
Change in jobs (5 years)		-35	2,195	1,221	506
Average annual % change		-1.3%	39.0%	7.7%	2.4%

G27. Health impact

SR27.1. Using the NSW Government's 'Health Impact Assessment: A Practical Guide' for guidance, prepare a Health Impact Statement for the proposal, including the following steps:

- Using the data from Population Demographics Study in section 24 prepare a community profile
- Based on the community profile identify and document potential health impacts resulting from the development
- Include information provided in Section 16. Noise and Pollution
- Assess the significance of impacts and prioritise, and
- Develop action-oriented recommendations to address the identified impacts

Elton Consulting has prepared a Health Impact Assessment (HIA - **Attachment 41**). The methodology for the HIA is informed by the following key references:

- NSW Health (2007), *Health Impact Assessment: A practical guide*, University of New South Wales, Centre for Health Equity Training, Research and Evaluation (this is a required resource identified by the Study Requirements)
- EnHealth (2017), *Health Impact Assessment Guidelines*, World Health Organisation Collaborating Centre for Environmental Health Impact Assessment and the School of Public Health, Curtin University

Key elements of the HIA include:

- A review of relevant health and the built environment literature focussing on recently published research on the health implications of public open space, physical activity, social infrastructure, air pollution, noise, land contamination and mental health
- Scoping which sets the parameters of the HIA
- Identification including data on the existing population and projected population forecasts
- Assessment which includes a base case comparison as well as looking at the consequence, likelihood and significance of key health impact issues
- Recommendations focusing on key health impact mitigation.

The HIA indicates that the urban renewal of Blackwattle Bay is likely to result in significant positive health impacts, particularly with key amenities like parks, pedestrian and cycling infrastructure, streetscape, community facilities, etc. being delivered.

As noted in Part G22, air quality is identified as a potential health impact for Blackwattle Bay. A precautionary approach is required given the potential significance of impacts and risk to human health. There are numerous examples throughout Sydney of residential apartment buildings being developed adjacent to busy roadways, including the Harbour Mill adjacent to the Western Distributor. With appropriate design, setbacks, and building orientation, impacts on air quality from adjacent roadways can be appropriately management. Blackwattle Bay provides an opportunity to demonstrate how residential development adjacent to major roadways can be achieved in a way that creates a quality design outcome to ensure the achievement of quality of life and health and wellbeing outcomes for future residents. Similarly, appropriate mitigation measures in the use, location and design of buildings will ensure noise health impacts are minimised.

The HIA also considers potential health effects arising from land contamination. Effective and comprehensive remediation will improve any existing health risk for contaminated land in the area. Redevelopment of contaminated land is usual practice in urban renewal projects. Best practice remediation practices will ensure positive health benefits from the Blackwattle Bay Precinct redevelopment.