ENVIRONMENTAL IMPACT STATEMENT

New Sydney Fish Market at Blackwattle Bay

Main Works Development Application

PREPARED FOR
INFRASTRUCTURE NSW

NSW GOVERNMENT

BBC CONSULTING PLANNERS

ENVIRONMENTAL IMPACT STATEMENT

NEW SYDNEY FISH MARKET AT BLACKWATTLE BAY

STAGE 2 DEVELOPMENT APPLICATION MAIN WORKS

Prepared for

Infrastructure NSW

By
BBC Consulting Planners

October 2019

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Abbreviations

ACHMP	Aboriginal Cultural Heritage Management Plan
ACM	Asbestos containing materials
AEP	Annual Exceedance Probability
AHD	Australian Height Datum
ARI	Annual Recurrence Interval
AS	Australian Standard
Background noise level	The ambient sound-pressure noise level in the absence of the sound under investigation exceeded for 90% of the measurement period. Normally equated to the average minimum A-weighted sound pressure level.
BDAR	Biodiversity Development Assessment Report
CCTV	Closed circuit television
CEMP	Construction Environmental Management Plan.
CIV	Capital Investment Value
COPCs	Constituents of Potential Concern
Cumulative impacts	Impacts that, when considered together, have different and/or more substantial impacts than a single impact assessment considered alone.
DPIE	NSW Department of Planning, Industry and Environment
DPI	NSW Department of Primary Industries
Drainage	Natural or artificial means for the interception and removal of surface or subsurface water.
EEC	Endangered Ecological Community
EIS	Environmental Impact Statement
EP&A Act	NSW Environmental Planning and Assessment Act 1979
EP&A Regulation	Environmental Planning and Assessment Regulation 2000
EPA	NSW Environment Protection Authority
EPBC Act	Commonwealth Environment Protection and Biodiversity Conservation Act 1999
ESA	Environmental Site Assessment
ESCP	Erosion and Sediment Control Plan
ESD	Ecologically Sustainable Development
GA NSW	Government Architect NSW
GFA	Gross Floor Area (as defined in the Standard Instrument—Principal Local Environmental Plan)
ICNG	Interim Construction Noise Guideline (DECC 2009)
INSW	Infrastructure NSW
LALC	Local Aboriginal Land Council
LEPs	Local environmental plans
LGA	Local government area
LoS	Level of Service
NML	Noise management level
NSFM	New Sydney Fish Market
NSW	New South Wales
OEH	Office of Environment and Heritage NSW
PMF	Probable Maximum Flood
RAP	Remediation Action Plan
Responsible person	the applicant or proponent responsible for preparing this EIS
RL	Reduced Level
RMS	NSW Roads and Maritime Services
SEARs	Secretary's Environmental Assessment Requirements

SEPP	State Environmental Planning Policy. A state level environmental planning instrument
SSD	State Significant Development
TfNSW	Transport for NSW
WSUD	Water Sensitive Urban Design

NOTE: UrbanGrowth NSW Development Corporation (UrbanGrowth) was abolished on 1 July 2019 with all functions transferred to Infrastructure NSW (INSW). Any reference to UrbanGrowth throughout the report is interchangeable with Infrastructure NSW.

STATEMENT OF VALIDITY

Name:	Dan Brindle
Qualifications:	BEcon; DipAgEcon; MSc (Urban and Regional Planning); MPIA
Address:	Level 2 55 Mountain Street, Broadway NSW 2007

I declare that I have prepared the contents of this EIS and to best of my knowledge:

- it has been prepared in accordance with Schedule 2 of Environmental Planning and Assessment Regulation 2000;
- it contains all available information that is relevant to the environmental assessment of the development to which this EIS relates; and
- the information contained in this report is neither false nor misleading.

Dan Brindle
Director
BBC Consulting Planners

4 October 2019

I. COMPLIANCE WITH SECRETARY'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS

BBC Consulting Planners, on behalf of UrbanGrowth NSW Development Corporation (now Infrastructure NSW) made a request for Secretary's Environmental Assessment Requirements (SEARs) on 23 November 2017, pursuant to Clause 3, Schedule 2 of the Environmental Planning and Assessment Regulation 2000 (EP&A Regulation). The request was made for works proposed under this development application.

SEARs for the EIS were issued by the Department of Planning, Industry and Environment (the Department) on 22 December 2017.

The SEARs are set out below in **Table 1** and addressed in various sections of the EIS and the accompanying appendices. A complete copy of the SEARs is included in full at **Appendix 1**.

Table 1: Secretary's Environmental Assessment Requirements

Requirement	Where Addressed
General requirements	
The Environmental Impact Statement (EIS) must address the Environmental Planning and Assessment Act 1979 and meet the minimum form and content requirements in clauses 6 and 7 of Schedule 2 of the Environmental Planning and Assessment Regulation 2000.	Statement of Validity
Notwithstanding the key issues specified below, the EIS must include an environmental risk assessment to identify the potential environmental impacts associated with the development.	
Where relevant, the assessment of the key issues as listed below, and any other significant issues identified in the risk assessment, must include: • adequate baseline data • justification of impacts • consideration of potential cumulative impacts due to other development in the vicinity • measures to avoid, minimise and if necessary, offset the predicted impacts, including detailed contingency plans for managing any significant risks to the environment.	This EIS and its appendices.
The EIS must also be accompanied by a report from a qualified quantity surveyor providing: • a detailed calculation of the capital investment value (CIV) of the development (as defined in clause 3 of the Environmental Planning and assessment Regulation 2000), including details of all assumptions and components from which the CIV calculation is derived • an estimate of the jobs that will be created by the development during construction and operation • verification that the CIV was accurate on the date that it was prepared.	A report from a qualified quantity surveyor accompanies the EIS and the development application.

Requirement	Where Addressed
Key Issues	

1. 1. Environmental Planning Instruments (EPIs), policies and guidelines
• The relevant statutory provisions contained within the applicable EPIs and Development Control Plans including:
  ○ State Environmental Planning Policy (State & Regional Development) 2011
  ○ State Environmental Planning Policy (State Significant Precincts) 2005
  ○ State Environmental Planning Policy No. 26 – City West
  ○ State Environmental Planning Policy (Infrastructure) 2007
  ○ State Environmental Planning Policy No. 55 – Remediation of Land (SEPP 55)
  ○ Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005
  ○ Draft State Environmental Planning Policy – Environment
  ○ Draft State Environmental Planning Policy - Infrastructure
  ○ Sydney Local Environmental Plan 2012
  ○ Sydney Harbour Foreshores and Waterways Area DCP 2005
• The relevant provisions, goals and objectives in the following:
  ○ NSW State Priorities
  ○ NSW Planning Guidelines for Walking and Cycling
  ○ Better Placed – An integrated design policy for the built environment of New South Wales
  ○ A Plan for Growing Sydney
  ○ Towards our Greater Sydney 2056
  ○ Draft Eastern City District Plan
  ○ Sustainable Sydney 2030
  ○ Draft Future Transport Strategy 2056 and support plans
  ○ Sydney City Centre Access Strategy
  ○ NSW Freight and Ports Plan 2013
  ○ Sydney's Light Rail Future
  ○ Sydney's Ferry Future
  ○ The Bays Precinct Sydney: Transformation Plan
  ○ NSW Aquifer Interference Policy.
	Section 5

2. Strategic context and concept development application • Consider the proposal in the context of the work being undertaken for the Bays Market District (BMD) nominated as a State Significant Precinct, having regard to relevant State Significant Precinct Study Requirements for the BMD. • Consider the proposal in the context of the proposed changes to the State Environmental Planning Policy (State & Regional Development) 2011, State Environmental Planning Policy No.26 – City West and Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005 and Draft State Environmental Planning Policy – Environment. • Demonstrate how the proposal is consistent with the Concept development application (SSD 8924), including any relevant Statement of Commitments.	Section 2.7 Sections 1.4 and 5 Sections 1.4, 3 and 4

Requirement	Where Addressed
3. Design excellence • Demonstrate how the proposal achieves design excellence in accordance with the Design Excellence Strategy prepared in consultation with the NSW Government Architect and the City of Sydney.	Section 6.1, Appendix 2 and Appendix 2 in the A3 Volume
4. Built form and urban design • Provide a detailed design analysis of the proposed development with reference to the building form, height, setbacks, bulk and scale in the context of the immediate locality, the wider area, and the desired future character, including development options for the remainder of the BMD. • Demonstrate how the proposal will achieve an optimal design and amenity outcome with specific consideration of the site's character, layout, setbacks, amenity, views and vistas, open spaces and public domain, connectivity and street activation. • Outline potential design considerations aimed at mitigating any impacts identified. • Provide a detailed description of all proposed land uses, including gross floor area calculations.	Sections 3 and 6.2 and Appendix 2 in the A3 Volume

5. Scenic quality and visual impacts
• Provide a detailed Visual Impact Assessment in accordance with the Plans & Documents section. The Visual Impact Assessment must also identify the following:
  ○ important sight lines and visual connectivity to and through the site
  ○ visual changes and view impacts of the proposal to/from key vantage points including, but not limited to, Wentworth Park, Anzac Bridge, Bank Street, Blackwattle Bay Park and various locations along the existing and future Sydney Harbour foreshore.
	Section 6.3 and Appendix 7 in the A3 Volume

6. Public domain and public access • Provide detail on the interface between the proposed development and the public domain, street activation, harbour foreshore and other surrounding development. • Identify the proposed public domain including key vehicular, bicycle and pedestrian access points and links to other public domain spaces, including Wentworth Park, Sydney CBD, and the existing and future harbour foreshore. • An analysis of physical connections between the northern part of Wentworth Park and the Fish Markets should be provided. This should include identifying 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. • An analysis of the physical connections between existing light rail stations, bus stops and the Fish Markets should be provided, including any works required outside the Fish Markets site boundary. • Provide detail on any of the public domain elements and associated works that will be Council owned or managed in the future. • Provide detail on specific design features (where applicable):	Section 3.8, Appendix 2 in the A3 Volume,

Requirement	Where Addressed
○ footpaths and pavements, roads and/or rights of carriageways ○ outdoor seating ○ materials and finishes ○ public art ○ furniture and fixtures ○ street lighting, pedestrian lighting and feature lighting ○ edges, screens, balustrading and fences ○ walls, embankments and mounds ○ steps, ramps, vehicle crossings, decks and pathways ○ civil and stormwater infrastructure ○ tree planting ○ mass planting beds, planter boxes and individual plantings ○ bicycle parking and end-of-trip facilities ○ wayfinding signage.	
7. Amenity • Provide a solar access analysis and shadow diagrams outlining impacts on adjoining developments and spaces (including Wentworth Park). • Identify and assess potential overshadowing, privacy and view impacts. • Demonstrate how sunlight access is maximised to the new 30 m foreshore promenade in front of the Fish Markets. • Provide a wind impact report that addresses the following; ○ demonstrate existing wind characteristics of the precinct ○ advice 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 outdoor public space areas ○ advise on placement, orientation, shape and external design of the building and relevant wind mitigation devices ○ identify areas surrounding the development that will be wind affected because of the development.	Appendix 2 in the A3 Volume Section 6.4 Section 6.4 and Appendix 25
8. Transport, traffic, parking and access • Provide detailed plans, including civil engineering plans, of the proposed road network. • Prepare a Travel Plan, including intended actions, monitoring, review and implementation, as well as responsibilities for implementation and detailing all modes of transport available to visitors and employees of the site. <u>Operation</u> • Have regard to and demonstrate consistency with the Concept development application (SSD 8924) Transport, Traffic and Accessibility Impact Assessment. <u>Construction</u> ○ details of construction vehicle routes, truck numbers, peak hour and daily movements, hours of operation, site compound locations, access arrangements and traffic control measures during construction ○ an assessment of construction impacts on road safety at key intersections and locations for potential pedestrian,	Appendix 10 and Appendix 3 in the A3 Volume Section 3.7 and Appendix 11 Section 6.5 Sections 2.4, 3.7 and 6.5 and Appendix 11.

Requirement	Where Addressed
vehicle and bicycle conflicts ○ assessment of cumulative impacts associated with other construction activities in the area ○ temporary cycling and pedestrian access during construction ○ access arrangements for workers, emergency services and the provision for safe and efficient access for loading and deliveries, including the existing and proposed on-street parking ○ description of vehicle access routes used to access key freight locations/routes and the impact on nearby intersections, vehicle type and likely arrival and departure times ○ detailed plans of the proposed site construction layout, including access to and from the site from the road network, the internal road network, truck marshalling, turning path diagrams depicting vehicles entering, exiting and manoeuvring through the site, staging, driver facility areas and parking provision on-site. ○ preparation of a Construction Pedestrian Traffic Management Plan that includes an assessment of traffic and transport impacts during construction and how these impacts will be mitigated.	
9. Maritime navigation <u>Operation</u> • Have regard to and demonstrate consistency with the Concept development application (SSD 8924) Navigation Impact Assessment. <u>Construction</u> • Provide a Navigation Impact Assessment (NIA) to address the impacts of construction on the navigation of bulk carriers, cruise ships, ferries and commercial/recreational and other maritime vessels, including the implementation of mitigation measures. • The NIA is to also give consideration to the proposed developments at Glebe Island at berths 1 and 2 (SSD 8544 and SSD 6708) and cumulative impacts to all maritime users.	Sections 2.6 and 6.6 and Appendix 9 Sections 2.6 and 6.6 and Appendix 9
10. Biodiversity • Provide a detailed description of any works and materials to be used that will impact aquatic ecology including any dredging, piling, seawall treatments, height of the facility above the substrate and in relation to the Mean High Water Mark, type of decking material to be used and whether any reclamation is associated with the proposal. • Provide a Marine Ecology Report to identify and determine the ecological of the impacts to aquatic ecology, including from shading, vessel use during construction and operation, pile installation, hydrodynamic changes to water circulation and sediment movement, reduced water quality and dredging. • Outline the mitigation measures to avoid, reduce, mitigate and offset these impacts, and provide recommendations to increase the aquatic biodiversity value of the urban waterway. • Provide a Biodiversity Development Assessment Report (BDAR)	Section 6.7 and Appendix 8 Section 6.7 and Appendix 7

Requirement	Where Addressed
prepared in accordance with the Biodiversity Assessment Method to assess the impacts of the proposed development on biodiversity. • Include consideration of the relevant policies and guidelines, including the Policy and Guidelines for Fish Habitat Conservation and Management (2013), DPI Fisheries Threatened Species Assessment Guidelines, NSW Biodiversity Offsets Policy for Major Projects – Aquatic Biodiversity Factsheet, Environmentally Friendly Seawalls (2009) and About Fish Friendly Marine Infrastructure.	
11. Heritage and archaeology • Have regard to and demonstrate consistency with the Concept development application (SSD 8924) Heritage Impact Statement, Archaeological Assessment, Maritime Archaeological Assessment and Aboriginal Cultural Heritage Values Assessment. • If required for the detailed design, a historical archaeological assessment should be prepared by a suitably qualified historical archaeologist in accordance with the Heritage Division, Office of Environment and Heritage Guidelines 'Archaeological Assessments' 1996 and 'Assessing Significance for Historical Archaeological Sites and 'Relics' 2009. This assessment should identify what relics, if any, are likely to be present, assess their significance and consider the impacts from the proposal on this potential resource. Where harm is likely to occur, it is recommended that the significance of the relics be considered in determining an appropriate mitigation strategy. In the event that harm cannot be avoided in whole or part, an appropriate Research Design and Excavation Methodology should also be prepared to guide any proposed excavations. • If required for the detailed design, a detailed maritime archaeological assessment should be undertaken by a suitably qualified and experienced maritime archaeologist. This assessment should identify the archaeological potential and significance of maritime heritage sites including shipwrecks, maritime infrastructure, archaeological items and/or relics (both above and below water) that may be impacted by the proposal. The assessment should also include procedures and management strategies for the unexpected discovery of heritage items and/or relics. Underwater surveys may also need to be undertaken and may require remote sensing and/or diver based investigations. • If required for the detailed design, identify and describe the Aboriginal cultural heritage values that exist across the whole area that will be affected by the development. 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) and consultation with OEH regional officers. • 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 EIS. • Assess and document the impacts on Aboriginal cultural heritage	Section 6.8 and Appendix 23 Section 6.8 and Appendix 23 Section 6.8 and Appendix 24 Section 6.8 and Appendix 22 Section 6.8 and Appendix 22

Requirement	Where Addressed
values and demonstrate attempts to avoid impact upon cultural heritage values and identify any conservation outcomes. Where impacts are unavoidable, outline the proposed measures to mitigate impacts. Any objects recorded as part of the assessment must be documented and notified to OEH.	Section 6.8 and Appendix 22
12. Flooding • Have regard to and demonstrate consistency with the Concept development application (SSD 8924) flood assessment. • Include consideration of The City of Sydney Interim Floodplain Management Policy and The City of Sydney Blackwattle Bay Flood Study and Floodplain Risk Management Study.	Section 6.9 and Appendix 12 Section 6.9 and Appendix 12

13. Water quality, soils and contamination
• The EIS must describe the background conditions for any water resource likely to be affected by the development (construction and operation), including:
  ○ existing surface and groundwater
  ○ hydrology, including volume, frequency and quality of discharges at proposed intake discharge locations
  ○ water quality objectives (as endorsed by the NSW Government), including groundwater as appropriate that represent the community's uses and values for the receiving waters
  ○ indicators and trigger values/criteria for the environmental values identified above in accordance with the ANZECC (2000) Guidelines for Fresh and Marine Quality and/or local objectives, criteria or targets endorsed by the NSW Government.
• The EIS must assess the impacts of the development (construction and operation) on water quality, including:
  ○ the nature and degree of impact on receiving waters for both surface and groundwater, demonstrating how the development protects the Water Quality Objectives where they are currently being achieved, and contributes towards achievement of the Water Quality Objectives over time where they are currently not being achieved. This should include an assessment of the mitigating effects of proposed stormwater and wastewater management during and after demolition and early works
  ○ identification of proposed monitoring of quality
• The EIS must assess the impacts of the development (construction and operation) on hydrology, including:
  ○ water balance, including quantity, quality and source
  ○ effects to marine waters
  ○ effects to water-dependent fauna and flora
  ○ impacts to natural processes and functions
  ○ mitigating effects of proposed stormwater and wastewater management during and after the works on hydrological attributes such as volumes, flow rates, management
	Section 2.4, 6.10, 6.11 6.12, 6.15 and Appendices 3, 4, 5, 12
	
	Section 2.4, 6.10, 6.11 6.12, 6.15 and Appendices 3, 4, 5, 12, 13
	
	Section 2.4, 6.10, 6.11 6.12, 6.15 and Appendices 3, 4, 5, 12

Requirement	Where Addressed
methods and re-use options ○ identification of proposed monitoring of hydrological attributes. • Provide a Stormwater Management Plan outlining the measures for the proposal, particularly WSUD options and including measures for ongoing maintenance including associated funding approaches for ongoing management. • Develop an Integrated Water Cycle Management Strategy that considers water, wastewater and stormwater. The Strategy must consider water sensitive urban design and water conservation measures, including water efficiency and reuse, following appropriate best practice and guidelines and prioritise meeting non-potable water demands with recycled water or harvested stormwater. • • Map the following water and soil features: ○ acid sulfate soils (Class 1, 2, 3 or 4 on the Acid Sulfate Soil Planning Map) ○ rivers, streams, wetlands, estuaries (as described in Appendix 2 of the Framework for Biodiversity Assessment - NSW Biodiversity Offsets Policy for Major Projects, OEH 2014) ○ groundwater ○ groundwater dependent ecosystems ○ proposed intake and discharge locations. • Undertake an assessment of contamination of shore-side areas of the site and marine sediments. • Demonstrate compliance with the requirements of State Environmental Planning Policy 55 – Remediation of Land.	Section 6.11 6.12, 6.15 and Appendices 3, 4, 5, 12 Section 6.10 and Appendices 3, 4 and 5 Section 6.10 and Appendices 3, 4 and 5
14. Noise and vibration • Provide a noise and vibration assessment in accordance with the relevant EPA guidelines that addresses the following: ○ the impact of noise and vibration associated with construction and operation ○ the cumulative noise and vibration impacts from concurrent surrounding activities during construction and operation ○ the cumulative noise and vibration impacts from activities associated with the Stage 1 demolition and early works (SSD 8924) ○ impacts of operational noise on noise sensitive receivers such as surrounding residences, the Sydney Secondary College Blackwattle Bay Campus (particularly during exam times) and nearby public reserves, including public address systems, waste collection services, dock-side operations and reversing/movement alarms on vehicles ○ mitigation measures to minimise potential noise and vibration impacts during construction and operation, including recommended standard construction hours and intra-day respite periods for highly intrusive noise generating work ○ the proposed noise monitoring procedures.	Section 6.13 and Appendix 19
15. Air quality and odour	

Requirement	Where Addressed
• Provide an air quality impact assessment to address the impacts of construction and operation on air quality in accordance with the relevant Environment Protection Authority guidelines. • Identify the key air emission generating sources and activities from the proposed construction and operation. • Identify measures to minimise and mitigate potential air quality and odour impacts on surrounding development.	Section 6.14 and Appendix 18
16. Sediment, erosion and dust controls • Provide details on sediment and erosion control and dust control measures on site during construction. • Provide details on the measures and procedures to minimise and manage the generation and off-site transmission of sediment, dust and particles. • Provide details of the proposed piling and how this will be constructed within the seabed and relevant environmental controls.	Sections 4, 6.10, 6.11, 6.14 6.15 and 6.17 and Appendices 6, 12 and 13
17. Waste • Provide an assessment of the waste impacts and their management during construction and operation. • Provide a management plan for the identification, handling, transport and disposal of any acid sulfate soils containing waste that may be encountered during demolition, site preparation and construction. • Include measures to ensure effective operational waste management, for example adequate space within the development for waste infrastructure and collection. • Identify solutions to deal with specific waste streams (food waste and polystyrene packaging) in manner that maximises diversion from landfill, including investigation of closed loop polystyrene.	Sections 3.13, 6.10 and Appendices 13 and 15
18. Utilities and infrastructure • Provide detail about proposed upgrades to utilities and infrastructure. • Integrate utilities planning with the outcomes of the Integrated Water Cycle Management Study and the ESD study. • Prepare a utility and infrastructure servicing report outlining the development yield and staging which should include a high level assessment of the capacity of Sydney Water's network to service the development. • Provide servicing options considered for the development, including wastewater and stormwater recycling for non-potable use, 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. • Prepare a staging plan for all civil infrastructure works.	Section 3.12, 6.16 and Appendix 14
19. Construction impacts • Provide a Construction Environmental Management Plan that includes the following: ○ community consultation, notification and complaints handling	Section 4, 6.13, 6.14and Appendices 4, 5, 6, 12, 13, 15, 18, 19, 20, 23

Requirement	Where Addressed
○ impacts of construction on adjoining development and proposed measures to mitigate construction impacts ○ noise and vibration impacts on and off site ○ air quality impacts on the neighbourhood ○ odour impacts ○ water quality management for the site ○ construction waste classification, transportation and management methods in accordance with DECCW's Know Your Responsibilities: Managing Waste from Construction Sites Guideline.	
20. Sea level rise • Provide an assessment of the risks associated with sea level rise on the development noting the NSW Government Climate Change Policy Framework and NSW Government's Draft Climate Change Fund Strategic Plan and A Plan to Save NSW Energy and Money.	Section 6.9, 6.17and Appendix 12
21. Building Code of Australia • Provide a BCA report, access report and fire safety assessment demonstrating compliance with the BCA.	Section 3.5.7 and Appendix 17A and 17B
22. Safety • Provide a Crime Prevention Through Environmental Design Report. • Provide details on the measures to ensure the safety of visitors and workers within the development and the surrounding public domain.	Section 6.19 and Appendix 26 Section 6.19 and Appendix 27
23. Ecologically Sustainable Development (ESD) • Provide detail of how best practice ESD principles (as defined in clause 7(4) of Schedule 2 of the Environmental Planning and Assessment Regulation 2000) will be incorporated in the design, construction and ongoing operation phases of the development. • Outline how ESD measures employed can connect to ESD measures in the remainder of the BMD.	Section 6.20 and Appendix 21
24. Developer contributions • Provide the scope of developer contributions proposed.	Section 6.18
25. Consultation • Undertake an appropriate level of consultation with Council and State Government agencies. • Provide details of the consultation activities undertaken.	Section 4
The Applicant must consult with the relevant local, State or Commonwealth Government authorities, service providers, community groups and affected landowners. In particular, consultation is required with the following agencies: • City of Sydney Council • NSW Government Architect's Office • NSW Roads and Maritime Services • Transport for NSW	Section 4

Requirement	Where Addressed
• NSW Office of Environment and Heritage • SW Department of Primary Industries, including Crown Lands and Water Division • Environment Protection Authority • Sydney Water • The Port Authority of NSW, including the Harbour Master • NSW Police • Infrastructure NSW • Destination NSW • Department of Education and Principals of Secondary College and Blackwattle Bay Campus • Local Aboriginal Land Council and stakeholders • Local Heritage Group/s, if relevant • Relevant commercial fishing groups • Relevant recreational groups including fishing, boating, rowing and dragon boating The EIS must describe the consultation process and the issues raised, and identify where the design of the development has been amended in response to these issues. Where amendments have not been made to address an issue, a short explanation should be provided.	
Plans and Documents	
The EIS must include all relevant plans, architectural drawings, diagrams and relevant documentation required under Schedule 1 of the *Environmental Planning and Assessment Regulation 2000*. These are to be provided as part of the EIS rather than as separate documents. In addition, the EIS must include the following:	A3 Volume of Drawings
1. **An existing site survey plan** drawn at an appropriate scale illustrating: • the location of the land, boundary measurements, area (sqm) and north point • the existing levels of the land in relation to buildings and roads • location and height of existing structures on the site • location and height of adjacent buildings • all levels to be to Australian Height Datum (AHD).	Appendix 6 of A3 Volume
2. **A locality/context plan** drawn at an appropriate scale indicating: • significant local features such as parks, community facilities and open space and heritage items • the location and uses of existing buildings, open space, wharves and employment areas • traffic and road patterns, pedestrian and cycle routes and public transport nodes.	Appendix 1 of A3 Volume
3. **Drawings at an appropriate scale** illustrating: • plans of the proposed building envelope (at a minimum scale of 1:200) • the height (AHD) of the proposed building envelope in relation to	Appendix 1 and 2 of A3 Volume

Requirement	Where Addressed
the land and any changes that will be made to the level of the land by excavation, reclamation or otherwise • the location and uses of existing buildings and structures within the site and surrounding area	
4. **Landscape plan** showing the landscape treatment of the development and public domain.	Appendix 1 and 2 of A3 Volume
5. **Shadow diagrams** showing: • overshadowing of the proposed development during the summer solstice (Dec 21), winter solstice (June 21) and the equinox (March 21 and September 21) at 9.00am, 12.00 noon, and 3.00pm • solar access to the site and any surrounding residential developments during the summer solstice (Dec 21), winter solstice (June 21) and the equinox (March 21 and September 21) at 9.00am, 12.00 noon, and 3.00pm.	Appendix 1 and 2 of A3 Volume
6. **Visual Impact Assessment** • The visual impact assessment, including focal lengths, must be done in accordance with Land and Environment Court principles and is to provide the following information: <u>Visual assessment methodology</u> • A flow-chart indicating how the analysis is to be undertaken, or a narrative description of the proposed sequence of activities. • An explanation and justification for the criteria for assessment relevant to the site, local context and proposed built form and public domain outcomes. Criteria must include reference to the planning framework. • A definition and explanation of the visual catchment should be defined (see below). • An assessment matrix including number of viewers, period of view, distance of view, location of viewer to determine potential visual impact - i.e. high, medium or low. <u>Visual catchment</u> • Potential visual catchments and view locations, including contours (areas from which the development is visible) are to be identified. • Categories of views (e.g. from public open space, from key streets, from main buildings and from key heritage items) are to be defined. • Photos are required for representative view categories, plotted on a map. <u>Visual material</u> • Reference to be made to site analysis. • Assessment must benchmark against the existing situation with the proposed plans. • Provide key plan indicating where viewpoints are located and narrative explaining why these have been selected. • The built form should be illustrated in the context of the visual catchment to enable assessment of the visual impact. • The location of cross-sections should be clearly shown on a key	Appendix 7 in the A3 Volume

Requirement	Where Addressed
plan and the choice of positions explained. The cross sections should be shown in the context of the visual catchment and drawn to realistic scales and shown in context. • Vertical exaggeration should provide an accurate rather than 'flattened' impression of buildings in the context of the visual catchment. • Photomontages to be provided for key viewpoints from all directions, and from several positions within the visual catchment. A key plan is to show the locations of these photomontages with supporting documentation to explaining the choice of these locations. Photomontages should be provided for close as well as distant views. A comparison of 'before' and 'proposed' is fundamental to a visual impact assessment, therefore the visual impact assessment (A3 in size) should be undertaken using human eye focal lengths (50mm at 35mm FX format and 46o angle of view) from long range, medium range and short range positions so that they can be assessed with respect to visibility, visual absorption capacity and visual impact rating.	

II. EXECUTIVE SUMMARY

Project Overview

The proposal is to build a new Sydney Fish Market with a contemporary urban design, provide unique experiences for visitors and world-class auction and wholesale facilities. The new facility will be set within an improved public domain including the creation of a waterfront promenade with improved access to Blackwattle Bay and linking to surrounding areas and to public transport.

The development will expand and improve the functions of the existing Sydney Fish Market in a new setting achieving design excellence, authentic experience, functional performance and environmental sustainability.

The new Sydney Fish Market will include wholesale facilities and auction rooms, offices and commercial space, culinary education, retail premises including food and beverage premises (potentially with liquor licenses), back-of-house facilities and car and delivery vehicle parking spaces and ancillary uses. The new facility is to include a new foreshore promenade and wharves. The new Sydney Fish Market will be purpose built and will be supported by a state of the art back-of-house plant and recycling/waste management facilities under one roof.

Site Details

The land to which the development application relates comprises Lots 3 - 5 in DP 1064339, part of Lot 107 in DP 1076596, part of Lot 1 in DP835794, part of Lot 3 in DP1018801 and Bridge Road and its intersections with Wattle Street and Wentworth Park Road. The development footprint is irregular in shape and has an area of approximately 38,450m^2 approximately 40% of which is on land and 60% over water.

Site Ownership

Roads and Maritime Services (RMS), Waterways Authority NSW, Minister for Education and Training. Bridge Road is a State classified road managed by RMS with the Council of the City of Sydney being the roads authority in whose ownership the public roads is vested.

Proposed Development

This SSD DA seeking approval for the construction and operation of a new Sydney Fish Market. Specifically this SSD DA seeks consent for:

1. construction of a new Sydney Fish Market building with a gross floor area of 26,751m^2 as indicated on the drawings contained in Appendix 1 of the A3 Volume);
2. waterfront structures such as wharves;
3. a new public domain including promenades, access to Blackwattle Bay and landscaping;
4. pedestrian, cycle and road access and circulation;
5. upgrade works to Bridge Road and its intersections with Wattle Street and Wentworth Park Road;
6. associated works such as provision of services, site level adjustments and stormwater management;
7. the subdivision of land to create a lot on which the new Sydney Fish Market would be located and a further subdivision of this lot

	to identify separate lots comprising the public domain and water, and various parts of the new Sydney Fish Market building and wharves to be leased in separable parts.
	This development application is consistent with the concept DA.
Responsible Person	Infrastructure NSW Level 12, MLC Centre, 19 Martin Place, Sydney NSW 2000
Employment	Construction: approximately 675 jobs Operation: approximately 725 jobs
Planning Process	State Significant Development. The development application is a Crown development application.
Environmental Impact Statement	This EIS accompanies a development application seeking approval for the new Sydney Fish Market. It describes the site and its context and provides details of the proposed development. The EIS carries out an environmental assessment of the development as required by the *Environmental Planning and Assessment Act 1979* including the Secretary's environmental assessment requirements. It has been prepared in accordance with, and meets the minimum requirements of, clauses 6 and 7 of Schedule 2 of the Environmental Planning and Assessment Regulation 2000 (the EP&A Regulation). The development demonstrates consistency with prevailing planning instruments at the State and local levels. An assessment of the impacts of the development indicates that:
Summary of Impacts:	**Built form and urban design** The development has been designed to achieve design excellence through the implementation of a design excellence strategy and consistency with the emerging development principles for the Bays Precinct and Blackwattle Bay District. The development principles have been informed by stakeholder and community consultation. The design has evolved from a detailed consideration of the site and its context, the operational requirements for the new Sydney Fish Market and the vision of the project architects. The building is sited to accommodate view corridors to the east and west, facilitates pedestrian circulation around and through the building and connects with the surrounding area, particularly Wentworth Park. It provides a generous setback to Bridge Road enhancing the quality of this space, complementing the park and respecting the dimensions of the park. The significant trees in the park have informed the height of the building which remains lower than existing structures on the site in the form of the existing concrete batching plant. The building that is highly articulated and permeable visually and physically enabling street activation and public accessibility. It has a gross floor area of 26,751m^2.

The development integrates into the surrounding urban and landscape context allowing for a building of modern architectural expression in an innovative and high quality public domain focussed on the waterfront and connections to Wentworth Park and adjoining sites including future connections through the existing Sydney Fish Market site. It heralds a rejuvenation of the area, replacing old and disused structures alienating the waterfront and no longer required for their present and previous purpose. The development respects the character of the surrounding area with connections to surrounding public domain and generous separation of built form whilst creating a bold and iconic building.

The design facilitates the continuation of the renewal process along the foreshore of Blackwattle Bay connecting with a future waterfront promenade along the eastern side of the bay to connect with the existing promenade around Pyrmont thus contributing to the completion of an extensive waterfront promenade program.

The proposed building connects the built form and communities of Glebe and Pyrmont enhancing the existing role played by Wentworth Park.

Scenic quality and visual impacts

While recognising the significant level of change to the scene generated by the proposed building, the process pursued to achieve design excellence in architecture and landscape design has produced a design outcome that is in many respects as much contributory to the visual scene as it is impacting.

The landscape character of Blackwattle Bay and its foreshore varies greatly in nature offering a spectrum of landscape experiences from open water views with a city backdrop to more intimate enclosed parkland and street spaces on the foreshore.
In assessing the visual impact of the proposal, the following conclusions are made:

- the visual catchment of the proposal is large as a result of its position on Blackwattle Bay. This location allows for views of the proposal from the surrounding foreshore of Blackwattle Bay, Bridge Road, Anzac Bridge and Wentworth Park;
- the proposal allows for greater views of Blackwattle Bay from within it as well as from the proposed public domain areas surrounding it. Currently these areas are not accessible as a result of the concrete batching plant and the former Jones Coal Loader. These elements currently exclude or highly filter views of the bay from Bridge Road and Wentworth Park;
- the proposal will largely obstruct views of some of the fig trees on the northern side of Wentworth Park from Blackwattle Bay apart from filtered views through the eastern and western public domain areas, however these public domain areas will provide greater visual access to Wentworth Park than is currently available;
- the proposal will enhance views from the bay to the extent that the existing poorly maintained assembly of buildings will be replaced with a development of design excellence;
- the amount of built form along Bridge Road will be increased by the proposal, however this will be mitigated through the inclusion of street planting along the northern edge of Bridge Road, raising the level of

vegetation from the limited amount that currently exists along Bridge Road.

Public domain and public access

The design accommodates circulation paths around and through the new building including a substantial promenade connection along Bridge Road and the establishment of a public pedestrian promenade along the foreshore of Blackwattle Bay providing 24 hour continuous waterfront access.

The landscape works include a landscaped ecological zone in the eastern inlet, and connecting a central boulevard and harbour promenade of the development. Extensive public domain is provided around and either side of the building capable of accommodating a range of activities and experiences.

Environmental Amenity

Acoustic impacts during construction

Where possible, the construction works would be undertaken in accordance with the Interim Construction Noise Guidelines during the standard daytime working hours of:

- 7.00 am to 6.00 pm Monday to Friday
- 8.00 am to 1.00 pm on Saturdays.

On this basis, the potential noise impacts during construction have been predicted during the daytime period only.

Construction has the potential to exceed noise management levels (NML) at nearby to the south and west of the site. Thus feasible and reasonable work practices are to be investigated to minimise noise emissions. This includes consideration of alternative piling methods.

Criteria may be exceeded during demolition and construction which requires careful management through the preparation of a noise and vibration management plan. Consideration has been given to alternative methods of piling that can be employed to minimise construction noise given the proximity to sensitive residential and educational receptors.

Acoustic impacts during operation

Noise during operation was found to be within acceptable limits at nearby receptors except for the loading dock operation. With the inclusion of the loading dock mitigation measures recommended in the noise impact assessment, there will be 4 dBA residual exceedance of the night-time Project Noise Trigger Levels at the residential receiver at 84 Wentworth Park Road. The new Sydney Fish Market project team will engage with the representatives of the residential apartments at 84 Wentworth Park Road and discuss the impacts of residual exceedances and potential preferred additional mitigation measures (where possible).

Visual Privacy

Generous setbacks from surrounding development minimise potential for loss of visual privacy to adjoining developments.

View sharing

Views into and across the development from adjoining properties and roads would be affected by the development. View across the site would change as a result of the new building with the older industrial buildings replaced by the new building. Setbacks from the western and eastern edges of the development footprint would enhance view corridors down Wattle Street and Wentworth Park Road.

Having assessed the impacts of the development on the landscape and visual qualities of the site and on views, Clouston Associates conclude that the scale and character of the proposal in combination with the anticipated visual impacts offset against the quality of architectural, landscape and urban design are such that the impacts would not constitute reasons to hinder planning approval on visual impact grounds.

Lighting impacts

Lighting will be provided in accordance with Australian Standards to provide a safe environment for pedestrians and visitors. Lighting levels are expected to increase but remain compatible with the character of the surrounding area and would be softened by perimeter landscaping along Bridge Road. Lighting will be designed to restrict obtrusiveness and glare.

Overshadowing

Overshadowing impacts of the development to adjoining private properties are minimal. There will be additional overshadowing of Wentworth Park in the afternoons in mid-winter, however these shadows generally coincide with those cast by the existing fig trees.

Transport, traffic parking and access

Extensive surveys of traffic and parking conditions at the existing Sydney Fish Market forms the basis for the assessment of impacts of the proposed development.

Traffic modelling was undertaken to determine the impacts on the road network and any associated improvements required to support the proposal. The analysis indicates that key intersections in the vicinity of the new Sydney Fish Market site will operate at the same level of service compared to existing conditions.

Parking is provided on site to meet expected need and access has been provided for service vehicles and buses. No additional parking is provided above levels at the existing SFM which requires changes to staff parking arrangements and the implementation of a travel plan to encourage alternative forms of transport including light rail.

Maritime navigation

The extent of the construction work area is not expected to significantly impact on boating access to existing wharf structures as the Glebe Rowing Club pontoon, Sydney University Boat Club pontoon, existing Sydney Fish Market northern mooring jetty and Blackwattle Bay Marine Operatives marina are at a sufficient distance away from the site. The required work area around the perimeter of the construction zone would need to be clearly delineated.

The proposed wharf structures encroach over the existing alignment of the rowing route in Blackwattle Bay which will need to be modified to accommodate the development and its construction at the head of the Bay. This would require shortening of the route so that it does not extend as far into Blackwattle Bay. It is not considered that this would have any significant adverse impact on the safety of non-powered craft as the available waterway width across Blackwattle Bay would generally be maintained and only the length of the Blackwattle Bay leg of the rowing route would be reduced. These changes have been informed through consultation with the local rowing and dragon boating clubs.

Water depths and wave conditions are appropriate for the expected use of the development and allow for vessel manoeuvring and interaction. The proposed wharf structures encroach over the existing alignment of the rowing route in Blackwattle Bay.

Biodiversity

Marine ecology

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. Direct and indirect impact through piling and shading would occur on unvegetated substrate (minimally sensitive key fish habitat). New hard surfaces from piles, pontoons and vertical walls may supplement habitat loss due to the new structure, but there would still be an overall net loss of key fish habitat. The use of habitat enhancing features such as bioshelters (living seawalls) fixed to the new structure would also increase and improve habitat and help offset any loss of habitat. Three small mangrove seedlings would be harmed equating to the loss of less than 1 m^2 of type 2 key fish habitat.

Biodiversity Development Assessment

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.

Heritage and archaeology

Marine Archaeology

There is a potential for archaeological deposits to be present within the development area consisting of individual items that have fallen from the jetties or from vessels using those facilities. This requires management during construction.

Aboriginal cultural impacts

The location of the proposed new Fish Sydney Market at Pyrmont is of nil to low Aboriginal archaeological potential, and no further archaeological assessment is required. The assessment report finds:

- no further Aboriginal archaeological assessment of the study area is required
- existing recommendations included in the ACHAR for management and risk minimisation are appropriate;
- registered Aboriginal Parties consulted during the ACHAR preparation process have been updated on the proposed development.

Heritage

City Plan Heritage find that the development will have a number of positive and negative impacts. While the proposed works will result in the demolition of the former coal loader and the office/ weighbridge building this has been considered acceptable. It will enable the development of the new Sydney Fish Market precinct in line with the overall vision for the Bays Precinct.

The details to avoid any physical impact of the proposed works on the heritage listed stormwater channel are yet to be finalised through consultation with Sydney Water. Notwithstanding, as the heritage item is currently obscured from view from within the public domain, further obstruction through the proposed new Sydney Fish Market is considered an acceptable impact, due to the other heritage benefits afforded by the proposed works. Any required mitigation measures recommended by Sydney Water would be implemented at the detailed design stage.

Flooding

The results showed that the proposed development has no adverse impact on flooding on adjacent properties and roads.

Water quality

During construction, measures are required to be implemented to control erosion and sedimentation and turbidity of waters of the bay to manage water quality impacts associated with construction activities including the removal of piles and wharves and construction. Water quality monitoring is to be undertaken at all discharge locations into the Bay.

Water Sensitive Urban Design (WSUD) strategies for the development have been modelled and will meet relevant targets for water quality.

Soils and contamination

Acid Sulfate Soils

The site is located within an area of 'high probability' of acid sulfate soil within bottom sediments. In such areas, there is the potential for environmental risk if bottom sediments are disturbed by activities such as dredging, piling and pile removal. Consequently an ASSMP has been prepared on the basis that all ground disturbance activities will require consideration of ASS management requirements. The ASSMP will be implemented during all stages of construction.

Contamination

A remediation action plan (RAP) has been prepared which presents a summary of known and suspected site conditions, a conceptual site model (CSM) of contamination conditions and identification of existing data gaps. It also evaluates potential remedial strategies, identifies preferred strategies and details site management and associated validation requirements to be implemented during the proposed works.

Subject to the successful implementation of the measures described in the RAP and with consideration to the limitations presented in the RAP, it is considered that the site can be made suitable for the intended uses 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.

Noise and vibration

See above discussion on environmental amenity.

Air quality and odour

Construction

The main potential sources of air emissions are dust impacts during construction. This requires management during the construction process.

Operation

The main potential sources of air emissions from the new Sydney Fish Market are identified as odour, volatile organic compounds (VOC), products of combustion and particulates. The potential for off-site air quality impacts due to operation phase activities was assessed using a qualitative risk-based approach. Given the nature and scale of the operations proposed, SLR consider that, provided appropriate mitigation measures are implemented as part of the detailed design stage, the relevant air quality criteria will not be exceeded as a result of the construction and operation of the development.

Sediment erosion and dust controls

The site has potential for sedimentation and increased turbidity of the bay during construction. Sedimentation and erosion control measures will be provided in accordance with the recommendations in the EIS.

Waste

A waste management strategy has been prepared to be implemented during demolition, construction and operation. The strategy seeks to divert 90% of construction waste away from landfill. During operations mechanisms are proposed to divert at least 80% of total operational waste and recycling from landfill.

Utilities and infrastructure

All utility services are available or can be reasonably extended to meet the needs of the development.

Sea level rise

Climate change scenarios incorporating a 0.4m and a 0.9m 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).

With 0.4 m sea level rise, flood level increases of less than 0.05m and less than 0.02m are observed at the western plaza and eastern plaza respectively. Outside the study area along Wattle Street, Wentworth Park Road, Bridge Road and in Wentworth Park, flood level increases are generally less than 0.050 m.

With 0.9 m sea level rise, there are increases in flood levels of greater than 0.50 m in the western plaza. In the eastern plaza, flood level increases are less than 0.30 m. Outside the study area, along Wattle

Street, Wentworth Park Road and in Wentworth Park, flood level increases are generally between 0.02m to 0.2m.

Ecologically sustainable development

The project will implement a number of sustainable design principles and includes initiatives designed to mitigate the environmental impact of the following:

- Energy – including reduction in energy associated to demolition, construction and operation, across the building and its associated sources (30% reduction target in Greenhouse Gas Emissions from operations);
- Water Efficiency – including reduced potable water demand and improved stormwater quality (45% reduction target in potable water consumption);
- Passive Design Principles – reducing the development's overall requirement for building services;
- Ecology - Maintaining ecology through landscaping where practical;
- Materiality – Considering the whole of life impact of materials in demolition, construction and operation stages, and considering their selection to minimise harm to the environment;
- Waste – implementation of best practice management techniques to reduce waste going to landfill (landfill diversion rate is targeted at 90% for construction and demolition waste, and 80% for operational waste);
- Transport – encouraging alternate low carbon means of transportation to and from the New Sydney Fish Market.

The above are assessed using a holistic built environment sustainability rating tool - Green Star Tool Design & As Built v1.2 - to demonstrate equivalence with industry best practice. The project is committed to achieving a formal Green Star Rated outcome (5 Star target) under Design & As Built – v1.2.

Conclusion

The potential environmental impacts, both direct and cumulative, have been identified and assessed as part of this EIS. The assessment finds that the development will provide the potential for a new Sydney Fish Market of international standing acting as a catalyst for the rejuvenation of the eastern foreshore of Blackwattle Bay.

The assessment concludes that no significant environmental impacts have been identified as a result of the development. Any potential impacts can be satisfactorily mitigated through a range of measures that have been identifies within the EIS.

In addition, the development is consistent with relevant Government policies and strategies.

It is considered that the development is in the public interest and warrants approval with conditions.

1. INTRODUCTION

1.1 General

The proposal is to build a new Sydney Fish Market with a contemporary design, providing unique experiences for visitors and world-class auction and wholesale facilities. The new building will be set within an improved public domain including the creation of a waterfront promenade with improved access to Blackwattle Bay and linking to surrounding areas and public transport. The development will expand and improve the functions of the existing Sydney Fish Market in a new setting to achieve design excellence, functional performance and environmental sustainability.

The new Sydney Fish Market will serve many purposes – a working fish market, an amenity for the city, a cultural and tourist destination and urban connector and an inspiring icon along the Sydney Waterfront. It will act as a catalyst for the rejuvenation of Blackwattle Bay, which is underutilised and largely inaccessible to the public. It will include wholesale facilities and auction rooms, offices and commercial space, culinary education (the Sydney Seafood School), retail premises including food and beverage premises (potentially with liquor licences), back-of-house facilities and car and delivery vehicle parking spaces. The new facility is to include a new foreshore promenade and wharves. The new fish market will be purpose built and will be supported by a state of the art back-of-house plant and recycling/waste management facilities.

A concept development application seeking approval for concept proposals and details of the first stage of the development being the demolition of buildings and structures on the site has been lodged concurrently with this development application. The concept DA also seeks to secure approval for the use of the site for the purposes of a fish market within a defined site area and building envelope.

This subsequent development application for the construction of the new Sydney Fish Market and associated works is consistent with the concept DA.

1.2 Background

The existing Sydney Fish Market is the largest market of its kind in the Southern Hemisphere and the third largest seafood market in terms of variety in the world. A working fish market, the existing fish market sources product both nationally and internationally and trades approximately 14,500 tonnes of seafood annually with up to one hundred sustainable seafood species traded every day and approximately 500 species traded annually.

The existing Sydney Fish Market is a popular destination for both locals and visitors and attracts over 3 million visits each year. Despite its detractions of noise, smell and aging buildings, many people visit to buy seafood. Sydneysiders have a strong relationship with the sea and seafood, and the fish market supports that connectedness with the water, beach, bays and natural environment.

Even with its inadequate and aging facilities, poor amenity and connectivity to Sydney Harbour, the existing Sydney Fish Market is a major tourism attraction with around three million visits a year. Adapted from a former print storage factory, the facility was not purpose-built, is not fit-

for-purpose and is struggling to meet the demands placed on it as it continues to draw more and more visitors. Despite this, the fish market's authenticity is a major attractor cherished by locals and visitors alike and has underpinned its operations for over 50 years.

Although the existing Sydney Fish Market provides an authentic destination, 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 enjoying continuous access to Sydney Harbour. These existing constraints provide significant opportunities for improvement.

In November 2016, the NSW Premier announced a new fish market at the head of Blackwattle Bay, adjacent to the existing fish market. In June 2017 the Premier of NSW announced the appointment of Danish architects 3XN to lead the design team that includes Sydney firms BVN and Aspect Studios. They have been working with key stakeholders, including Infrastructure NSW and Sydney Fish Market Pty Ltd (SFM), to develop the design for the new fish market.

1.3 Approval process

Pursuant to the provisions of the *Environmental Planning and Assessment Act 1979* and *State Environmental Planning Policy (State and Regional Development) 2011* ("SEPP SRD") the new Sydney Fish Market development is State Significant Development and the Minister for Planning is the consent authority.

To deliver the new Sydney Fish Market, the following applications are lodged:

- A concept development application seeking approval for concept proposals for the new fish market. This is to meet the requirements for a master plan contained in clause 40 of SREP26. The concept development application also sets out details of the first stage of the development being the demolition of land and water-based structures on the site including removal of marine piles and any resulting repairs to the existing sea wall;
- A development application for the construction of the new Sydney Fish Market (this application).

These are progressing concurrently.

1.4 Analysis of feasible alternatives

In May 2015 UrbanGrowth (as it then was) released a Discussion Paper on the Bays Precinct as well as launching a Call for Great Ideas. Through this broad community consultation, a number of themes were made clear and translated into objectives for each destination documented within *The Bays Precinct Transformation Plan*[1]. The community feedback reiterated the importance for the Sydney Fish Market to be rejuvenated, creating a world class marketplace to remain in Blackwattle Bay.

The Call for Great Ideas submissions included suggestions to:

- Relocate all or part of the fish market to the head of Blackwattle Bay;

[1] *The Bays Precinct Transformation Plan* prepared by UrbanGrowth NSW, October 2015

- Relocate Bridge Road (to the South) to create the new SFM site;
- Diversify produce, dining offerings, operation hours and expand the destination to enhance the experience for locals and tourists;
- Integrate the waterfront promenade with the new market using floating walkways and pontoons and activate with temporary and permanent uses allowing continuous public access to the water.

A number of strategic design options have been considered:

Description	Findings
Permanent relocation of wholesale operations to Western Sydney close to major transport corridors	➢ Unacceptable to SFM due to impacts on their business and brand ➢ Costly due to the acquisition of suitable land, and likely business interruption ➢ Expected negative impacts on tourism to NSW ➢ Lack of provision of an authentic fish market as a key attractor for the area
Relocation to the head of Blackwattle Bay in a new stand-alone building with greater footprint than existing wharfs	➢ One move approach minimises impacts on business operations for SFM ➢ Potential to create public access to waterfront that is currently inaccessible
Staged Construction. New fish market building constructed on the existing carpark. Temporary parking on B1-B3 wharfs. Wharfs ultimately redeveloped.	➢ Increased delivery timeframe and cost due to staging ➢ Unacceptable to SFM due to impacts on their business operations ➢ Sub-optimal urban design outcome
Temporary Relocation SFM relocated to a temporary facility on vacant government land while new facility is built on current site. With wharfs also developed for mixed use	➢ High cost of temporary facility ➢ Unacceptable to SFM due to impacts on their business operations ➢ Likely financial impact due to business interruption ➢ Sub-optimal urban design outcome with mixed use development

1.5 Justification for the proposed building location

Visitors to the existing Sydney Fish Market regularly cite its authenticity as one of the key ingredients that separate it from other retail food venues in Australia and overseas, and the reason people want to visit and experience fresh Australian seafood. There are several features creating this feeling of authenticity however the waterfront location, with wharfs where the local fishing fleet unload their catch and mend their nets is paramount in creating this environment. Also key is the proximity to significant resident and worker communities in Glebe, Ultimo, and Pyrmont and within walking distance to the Sydney CBD. A significant number of visitors to the existing Sydney Fish Market are from interstate or abroad and therefore the proximity of the existing Sydney Fish Market to other Sydney tourist landmarks is important.

Newgate Research conducted an online survey of 1,027 residents of Greater Sydney in April 2018, which explored current opinions of the existing Sydney Fish Market and attitudes towards the proposed redevelopment. The research found that 85 per cent considered that it is important for Sydney to have an 'authentic fish market on the harbour'. When the facility was compared against 10 other venues including the Pitt Street retail district, Darling Harbour, the

Rocks, Paddy's Markets and others, 78 per cent considered that the Sydney Fish Market is an 'important part of Sydney's economy'.

The establishment of a new fish market at the site has been anticipated since 2016, when the then NSW Premier Mike Baird announced the preferred location at the head of Blackwattle Bay.

This commitment was reinforced on 25 June 2017 when the Premier announced the appointment of the lead designer for the project. The development is a key element in the revitalisation of the Bays Market District.

Government Architect NSW (GA NSW) and Infrastructure NSW have overseen the testing of various design led scenarios that support the proposal's head of the Bay location. This process involved establishing and testing differing detailed architectural schemes at a number of locations in Blackwattle Bay and across the Bays Precinct. The schemes and their supporting studies enabled an understanding of the fish market's future requirements and tested these requirements against the contextual constraints and opportunities of the various locations.

The process focused the collaboration between Infrastructure NSW and SFM, enabling evaluation of the scenarios across criteria of: staging, economics, connectivity, spatial requirements, continuity of commercial and cultural identity, and opportunities for complementary uses on adjacent sites. The process was supported by design advice from GA NSW, learnings from the *Sydney Harbour Foreshore Authority Masterplan* (2005) and Infrastructure NSW's comprehensive understanding of development opportunities across the Bays Precinct.

The public 'Call for Great Ideas' that was undertaken in 2015 saw 213 submissions across the Bays Precinct considered by an Independent Assessment Panel. A number of these including submissions from architects, urban designers and the City of Sydney suggested constructing a new fish market facility at the head of Blackwattle Bay.

Based on the findings of the Call for Great Ideas and above strategic design options, the site at the head of Blackwattle Bay was confirmed as the preferred option for the site of the new Sydney Fish Market.

A reference scheme was developed by AJC testing the constraints and impacts of the site location at the head of Blackwattle Bay and identified the following opportunities and constraints:

- Significance of the avenue of Moreton Bay figs along the northern edge of Wentworth Park and the need to minimise any impact on the existing green space and ecological habitat;
- Significant road network and engineering constraints in closing or relocating Bridge Road;
- Requirement to minimise impacts on the heritage drains within Wentworth Park and other local heritage items;
- Opportunity to create better visual and physical connections between Wentworth Park and the water of Blackwattle Bay;
- The need to minimise the building footprint over the water and ensure sufficient separation of buildings to the east and west of the new facility to provide visual connection to the water;

- Opportunity to improve east west connectivity and create a new publicly accessible space linking the communities of Glebe and Pyrmont/Ultimo;
- Opportunity to design a building which maximises north facing public dining spaces.

A Design Excellence Strategy was established for the project, in consultation with GA NSW (**Appendix 2**). The proposed development has been designed in accordance with the strategy, which included appointing 3XN as project architects through a competitive tender. Short listed designers responded to a design brief with a number of options testing the constraints of the site.

The existing Sydney Fish Market has a historic connection to the Blackwattle Bay foreshore and has provided Blackwattle Bay with a destination status. This location is accessible to public and commercial users by land and sea. It is also important to the functioning of the new Sydney Fish Market that it has a central and maritime location because of its need to accommodate and service the Sydney fishing fleet. The proposed location has a long history of association with traditional waterfront industries.

The proposed location at the head of Blackwattle Bay allows for the current fish market use to generally retain its existing operations until the new facility is completed and provides for continuity of the use.

The new building is designed such that it generally corresponds with the extent of current wharf structures at B1, B2 and B3. It is only the new wharves that will extend further into the bay. This provides sufficient space to accommodate fish market functions, provide separation between public and private domain with continued public access to the waterfront and a significant building setback from Bridge Road. There is minimal and acceptable impact on the use of the bay.

Locational advantages of the proposed site include:

- the waterfront location enables authenticity for fish market operations and its associated waterside dock operations for a fishing fleet connected to the waterfront promenade;
- good access to public transport such as rail, light rail and bus access direct to site considering current and expected visitor numbers demands;
- good vehicular access to the arterial road network providing access for trucks and delivery vehicles and parking;
- connectivity to the pedestrian and cycle network facilitates bicycle access and parking and pedestrian access;
- proximity to the existing Sydney Fish Market retaining a connection with Blackwattle Bay and the surrounding area and assisting in wayfinding;
- the opportunity for moorings for ferries, cruise operators, water taxis and temporary moorings for private vessels as well as for commercial berths;
- waterfront public open space, public boardwalk and related facilities complements the fish market's key role in tourism and support growing visitor numbers; and
- suitability for 24/7 operation.

2. SITE AND CONTEXT

2.1 Location

The site is located at the head of Blackwattle Bay between Pyrmont Peninsula and Glebe Peninsula. It is situated less than 2km west of Sydney's CBD (**Figure 1**), and is partially within the City of Sydney Local Government Area. Blackwattle Bay is one of a number of bays on Sydney Harbour formed by active streets (Harris Street and Glebe Point Road) built on ridges protruding into the harbour.

The site has a frontage to Bridge Road to the south and Blackwattle Bay to the north. Pyrmont Bridge Road is an arterial road that links to the Anzac Bridge to the north west of the site. Sydney Secondary College Blackwattle Bay Campus is immediately west of the site and the existing Sydney Fish Market immediately east. Located directly opposite the site to the south is Wentworth Park, separated by Bridge Road.

Located between 250m and 400m walking distance from the site are the Fish Market, Wentworth Park and Glebe light rail stops which is serviced by the Dulwich Hill Line - a 23 stop, 12.8-kilometre route running from Dulwich Hill to Central station via Pyrmont.

The adjoining area varies in built form and land use. To the east and north east is Pyrmont with a variety of uses on the hillside leading from Harris Street. Residential uses predominate interspersed with pockets of compatible commercial, retail and entertainment uses. The Western Distributor and approaches to the Anzac Bridge are elevated above this area.

To the west is Sydney Secondary College on the western foreshore of the bay beyond which is the fine grain small scale terrace and free standing dwellings with some old and new units on the Glebe Point eastern hill side. East west streets connect Glebe Point Road with the water.

To the south west is further smaller scale residential housing with a mix of public and private housing and some new mixed use apartment buildings such as the building at the corner of Wentworth Park Road and Bridge Road.

To the south is the impressive and large Wentworth Park, punctuated by the railway viaduct at this northern end and containing the greyhound racing track and associated stadium buildings. As with the site, Wentworth Park was once an estuarine waterway reclaimed and developed to address the urbanisation of the locality and its ongoing transformation.

Figure 1 Site Context

2.2 Site details

The land to which the development application relates comprises:

Lots	Description
Lots 3 - 5 in DP 1064339	Land containing the existing wharves at the head of Blackwattle Bay
Part of Lot 107 in DP 1076596	Comprising the waters of Blackwattle Bay
Part of Lot 1 in DP835794	Land containing an existing SFM wharf, a former wharf (since demolished) and foreshore seating forming part of the existing SFM
Part of Lot 3 in DP1018801	Land to the west of the site being land adjacent to the existing waterfront promenade along the edge of the school site.
Part of Bridge Road	Works are also proposed to Bridge Road where it adjoins Lots 3 - 5 in DP 1064339 and at its intersections with Wattle Street and Wentworth Park Road.

The development footprint (**Figure 2**) is irregular in shape and has an area of approximately 40,160m^2. The site is partly on land above mean high water mark and partly on water below mean high water mark.

The development footprint has a frontage to Bridge Road of approximately 353 metres extending from Sydney Secondary College Blackwattle Bay campus to the existing Sydney Fish Market and a depth of approximately 120 metres (excluding new wharves).

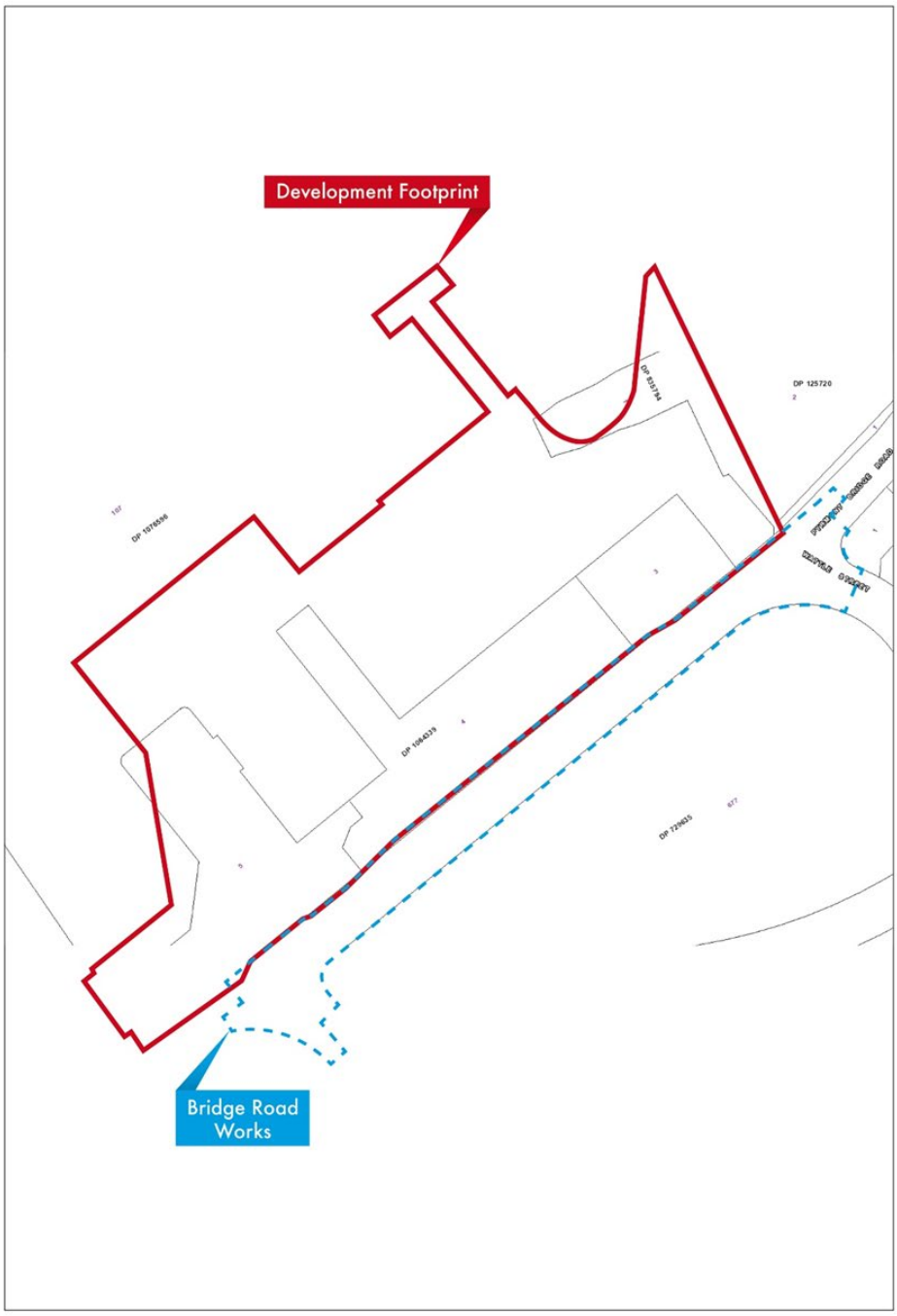


Figure 2 Site Details

2.3 Ownership

The existing wharves and the water of Blackwattle Bay are owned by Roads and Maritime Services NSW (RMS). Bridge Road and its intersections with Wattle Street and Wentworth Park Road are public roads with ownership vested in the Council of the City of Sydney. Works to connect to the existing waterfront promenade to the west of the site located on Lot 3 in DP1018801 is on land owned by the Minister for Education and Training. It is understood that

the Council of the City of Sydney is the roads authority for Bridge Road, Wattle Street and Wentworth Park Road.

2.4 Site conditions

2.4.1 Existing buildings and improvements

The site comprises the following elements:

- A land based component being land retained by a sea wall located approximately 18 metres from, and running parallel to, Bridge Road;
- A series of wharf structures;
- A series of buildings erected on land and on the wharf structures.

The site is currently occupied by the following buildings and improvements:

- Hanson Cement (1A Bridge Street Glebe) - The western portion of the site is used as a concrete batching plant operated by Hanson Cement with facilities constructed in approximately 1981.
- Central portion of the site (1B Bridge Street Glebe) - The central portion of the site comprises wharves and a jetty and various structures previously used for waterfront industry purposes.
- The Jones Brothers Coal Loader (1C Bridge Road) - The eastern portion of the site comprises the former Jones Brothers Coal loader and bins and weighbridge building.
- Existing Sydney Fish Market Seating Area - The site includes part of the existing SFM wharf and outdoor dining area which is located along the foreshore on the western side of the main fish market building.

All buildings, structures, wharves and jetties are to be demolished pursuant to the concept DA.

Below are a series of pictures of the site and its surrounds (see **Pictures 1 – 6**).

Picture 1: Site from existing fish market looking south

Picture 2: Site looking south west

Picture 3: Bridge Road looking west

Picture 4: Wentworth park looking south from Bridge Road

Picture 5: Hanson Cement batching plant

Picture 6: Site looking south east

2.4.2 Topography and drainage

The existing wharf structures have a height of RL2.0 to 2.4m similar to the levels of Bridge Road adjoining the site.

Water depths within Blackwattle Bay are deepest in the middle of the bay, where depths of up to 7m are found. Water depths adjacent to existing wharf, marina and jetty structures are generally between 2m to 6m (refer to Navigation Impact Assessment in **Appendix 9**).

There are five existing stormwater culverts and drains that run under Wentworth Park, discharging into Blackwattle Bay through the site (see Structural Civil and Maritime Design Report in **Appendix 10**). The new facility will be placed around these outlets with the design allowing continued operation of these drains including during construction.

2.4.3 Subsurface conditions and groundwater

A summary of site geotechnical and hydrogeological conditions is presented in the Environmental Site Assessment prepared by JBS&G (**Appendix 4**) with further details in the

Revised Geotechnical Report prepared by JK Geotechnics (**Appendix 3**). The site is underlain by Hawkesbury Sandstone of the Wianamatta Group comprising medium to coarse grained quartz sandstone with minor shale and laminate lenses.

The site was previously part of Blackwattle Bay Cove or Blackwattle Swamp Cove reclaimed between 1835 and 1891. The land area of the site is underlain by a significant depth of fill material consistent with historical reclamation. The fill is reported to comprise a clayey sand and silty clay with trace amounts of fine to medium grained sand and coal and plastic fragments. Boreholes in the adjoining Wentworth Park identified fill comprising silty sand or sandy clay containing varying amounts of inclusions such as sandstone and igneous gravel, also timber, tile, ceramic, glass, shell, concrete and brick fragments, slag and ash.

Boreholes in Blackwattle Bay disclosed a subsurface profile generally comprising natural clay and sandy clay soils of medium to high plasticity and clayey sand soil overlying sandstone bedrock. In the bay, the boreholes typically encountered no fill from the seabed level, except the boreholes close to the existing shoreline where fill extending up to 4.7m depth was encountered. There generally appeared to be a fill layer close to the southern shoreline.

Natural soils were encountered either from seabed level or about 0.5m depth in the Bay comprised interbedded layers of silty clay, sandy clay and clayey sand soils.

Groundwater has been encountered on the site within the fill materials. The closest wells (approximately 250 m south-west of site) were constructed for monitoring purposes and were reported to contain a standing water level of approximately 0.6 m within shallow fill materials.

A summary of information on acid sulfate soil (ASS) and potential acid sulfate soil (PASS) is presented in the Acid Sulfate Soil Management Plan (ASSMP) (**Appendix 6**). The site is located within an area of 'high probability' of acid sulfate soil within bottom sediments. In such areas, there is the potential for environmental risk if bottom sediments are disturbed by activities such as dredging.

2.4.4 Vegetation and marine ecology

Terrestrial Vegetation

The site is largely devoid of vegetation due to past industrial uses and limited deep soil areas. All vegetation present within the site has been classified as 'Urban Exotic and Native Cover', consistent with the non-native vegetation and was considered to be in a low condition (Biodiversity Development Assessment Report in **Appendix 7**). The largest portion of contiguous vegetation are a lined of *Casuarina glauca* (Swamp Oak) located along the south-eastern boundary of the site.

Vegetation within the site includes native canopy species *Casuarina glauca, Ficus rubiginosa* (Port Jackson Fig) and *Ficus macrophylla* (Moreton Bay Fig), and exotic canopy species *Celtis sinensis* (Japanese Hackberry), and *Magnolia grandiflora* (Magnolia). Mid-storey and groundcover species include *Lantana camara* (Lantana), *Ehrharta erecta* (Veldtgrass), and *Cenchrus setaceus* (Fountain Grass).

Canary Island Palms are located along the eastern border of the site.

There are street trees along sections of the northern footpath of Bridge Road and a large stand of planted *F. macrophylla* (Moreton Bay Fig), and one *Ficus microcarpa var. hillii* (Hills Weeping Fig), occurs on the southern side of Bridge Road, within Wentworth Park.

Vegetation on the site and within the road reserve on the northern side of Bridge Road will be removed as part of concept DA.

Marine Ecology

The site has been modified by a vertical seawall, the existing wharf structure, piles and disturbance by regular boat traffic which has contributed to its relative lack of habitat biodiversity (Marine Ecology Assessment in **Appendix 8**). There are four distinct zones of marine ecology identified within the site:

- Structures: comprising the seawall which is home to marine/riparian vegetation, and piles which are covered in encrusting organisms such as turfing algae, bryozoans, barnacles, oysters and mussels.
- Subtidal Sands: characterised by coarse sediment, covered with a variety of shell fragments, woody debris, rubbish and scattered rocky rubble.
- Intertidal rock rubble: characterised by rock rubble extending to the seawall covered with sessile organisms including oysters, barnacles and algae.
- Macroalgae: the subtidal zone also included *Sargassum linearifolium* attached on rock rubble along the western shoreline. This macroalgae potentially provides a habitat for seahorses.

2.4.5 Access and movement

Vehicular, cycle and pedestrian access to the site is provided from Bridge Road, a classified State road. The site is surrounded by a number of State and local classified road which provide connectivity to the site and surrounding parts of Sydney Metropolitan area. The Western Distributor provides direct access to the site via Bridge Road which travels in a westerly direction to Sydney's Western suburbs via Victoria Road or the City-West Link Road.

The site is served by three light rail stations: Fish Market, Wentworth Park and Glebe which are between 250 and 400 metres from the site and which are serviced by the Dulwich Hill Line running between Dulwich Hill to Central station via Pyrmont.

Whilst there are no bus routes that provide direct access to the site, Bus routes 389 and 501 stop along Harris Street approximately 420m walking distance from the site. The closest heavy train station to the site is Town Hall which is located approximately 1.5km to the south east.

The site adjoins a waterfront promenade along the western foreshore of Blackwattle Bay with the proposed development having the potential to extend this eastwards and complete a missing link in the foreshore promenade network for pedestrians and cyclists. The site is in close proximity to the established cycleway network of inner Sydney. There is convenient pedestrian access from Pyrmont and Glebe and from nearby light rail stations.

2.5 Surrounding context

The site is generally surrounded by a mixture of residential, recreational, and commercial land uses. To the west and south of the site is the suburb of Glebe which is characterised by

predominately 19th century terrace style housing. Sydney Secondary College Blackwattle Bay Campus is immediately west of the site and the existing fish market immediately north east. Located directly opposite the site to the south is Wentworth Park, separated by Bridge Road. To the south of Wentworth Park is Broadway/Ultimo a mixed use commercial and residential area including a large shopping centre and further south Sydney University. To the east of the site is the suburb of Pyrmont which is mixed use area comprising both commercial and residential land uses. Darling Harbour is located to the south east and comprises a large recreational and pedestrian precinct situation on the western outskirts of Sydney's CBD subject to a number of recent renewal projects.

2.5.1 To the North

The northern boundary of the site adjoins Blackwattle Bay, and further north east of the site is Anzac Bridge and Glebe Island. North-west of the site is the Glebe Rowing Club boatshed.

2.5.2 To the East

To the east, the site adjoins the existing Sydney Fish Market comprising approximately 18,000 square metres of gross floor area which includes approximately 10,600 square metres of ground floor retail and auction floor area. It also includes an at grade car parking area for approximately 417 cars.

To the south east of the site, on the corner of Bridge Road and Wattle Street, area a number of residential flat buildings on Pyrmont Bridge Road, Wattle Street and Wattle Crescent.

2.5.3 To the South

To the south east, the site is bounded by Bridge Road which is adjoined by Wentworth Park. Bridge Road links to Wattle Street to the south east which runs in a southerly direction connecting to Broadway. Wentworth Park is a multi-purpose sporting facility that provides recreational spaces for various sports such as rugby union, cricket and soccer. Located within Wentworth Park is the greyhound racing track which has races on Fridays and Saturdays.

To the south west of the site, on the corner of Wentworth Park Road and Bridge Road is a residential flat building comprising six dwellings and a ground floor retail premises (No 84 Wentworth Park Road), the Kauri Foreshore Hotel and, to the south of the light rail line, the more established residential areas of Glebe.

2.5.4 To the West

Adjoining the west of the site is Sydney Secondary College – Blackwattle Campus which is a co-educational public school for students in years 11 and 12. In 2018 there were 718 students, 271 of which were female and 441 of which were males. Further to the west are residential areas on the hillslopes of Glebe.

Figure 3 Local Site Context

2.6 Existing maritime uses

The waterways of Rozelle and Blackwattle Bays are used for a variety of purposes as outlined in the Navigation Impact Assessment (**Appendix 9**). Users include:

- Recreational power boats are serviced by a number of berthing and boat storage facilities within Blackwattle Bay including:
    - Blackwattle Bay Marine Operatives; and,
    - 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; and,
    - Sydney Fish Market Public Pontoon in Blackwattle Bay provides a drop off/pick up facility for visitors to the Fish Market.
- A number of marina berths within Blackwattle Bay are provided for charter boat operators including:
    - Blackwattle Bay Marina;
    - Sydney Fish Market – the end berths of the northern mooring jetty are used by Manly Fast Ferries and Fusion Cruises; and
    - 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; and,
    - main concrete jetty with hardstand area is used for unloading, reprovisioning, refuelling and maintenance of fishing vessels.
- The south-western corner of Blackwattle Bay was previously occupied by Hanson Australia. Blackwattle Bay Marina previously occupied the site to the east of the former Hanson facility and provided 18 berths for cruises vessels and 12 other charter operators as did a small marina for mooring workboats and barges owned by HDSA Group who provided marine construction and commercial diving services.
- Rowing/paddling is a popular activity in the Bays Precinct with boat houses for rowing clubs occupying waterfront land within Blackwattle Bay and use 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); and,

- foreshore access steps adjacent to Sydney Secondary College (Blackwattle Bay Campus) to the west of the site.

A voluntary rowing guide has been developed by RMS in consultation with local rowing groups (including Dragon Boating Clubs) detailing a recommended rowing course throughout Rozelle and Blackwattle Bays. The course runs in an anti-clockwise direction around the perimeter of both Rozelle and Blackwattle Bay with row boats staying on the starboard side and keeping a distance off of 25m to 40m from berthing structures and moored vessels. The Glebe Rowing Club (GRC) website notes that training can comprise 2 to 5 laps of the course and the best water conditions for rowing are early morning or late afternoon. From review of information on the GRC and SUBC websites, rowing training occurs on most mornings during the week and over the weekend. Learn to row programs are also held by the clubs and are typically scheduled on Saturday or Sunday mornings at 9am-11am following early morning rowing training.

Sydney Secondary College (Blackwattle Bay Campus) is located on the western shoreline of Blackwattle Bay and offers rowing, kayaking and dragon boating as part of its school sports curriculum.

A J.B. Sharp Series rowing regatta was also held in 2016 with a racing course being set out within Rozelle Bay and Blackwattle Bay. This was attended by a number of Sydney rowing clubs and multiple rowing boat access points were utilised to launch boats onto the water for the event.

- Dragon boating is another popular passive recreation activity enjoyed on the waterway. 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. The dragon boating clubs follow the same training route around Rozelle Bay and Blackwattle Bay as described above for rowing clubs. Dragon boat club training is generally held in the evenings during weekdays (most popular on Tuesday and Thursday evenings) and on Saturday and Sunday mornings.
- Rozelle Bay and Blackwattle Bay are highly regarded waterway areas for calm water kayaking and are listed as top destinations for kayaking within Sydney Harbour on websites of kayak tour operators, travel blogs and passive recreation groups. In addition to the sheltered waters, other attractions of the area for kayaking visitors include paddling beneath the iconic Glebe Island Bridge and Anzac Bridge, extensive foreshore park areas for picnicking, the Glebe Foreshore Walk including canoe storage racks, surrounding industrial and commercial activities, and dining options at the existing Sydney Fish Market and The Boathouse (Blackwattle Bay).

  A dedicated kayak launching area is also provided at Bicentennial Park on the southern foreshore of Rozelle Bay. This comprises steps leading down to a 20m wide shallow beach area that has been recessed into the shoreline. A low freeboard pontoon is also provided at the adjacent public wharf.
- Several sets of water access steps are provided as part of the Glebe Foreshore Walk along the western shoreline of Blackwattle Bay (two sets of steps). These steps provide water access from the elevated promenade level and could be used for launching of passive craft.

2.7 Bays Precinct

2.7.1 Introduction

The site is located within the Bays Precinct comprising 95 hectares of predominantly government owned land with 5.5 kilometres of harbour frontage to approximately 94 hectares of waterways in Sydney Harbour. The Minister for Planning has determined that the urban renewal of land within the Bays Precinct is a matter of State planning significance, and agreed to investigate the area as a potential State Significant Precinct ("SSP"). In October 2015 UrbanGrowth (as it then was) released the *Transformation Plan: The Bays Precinct, Sydney* which sets out a strategy for transformation of the Bays Precinct, including the new fish market. It identifies eight destinations within the Bays Precinct:

- White Bay Power Station;
- Blackwattle Bay (formerly Bays Market District);
- Bays Waterfront Promenade;
- Wentworth Park;
- Glebe Island;
- White Bay;
- Rozelle Rail Yards; and
- Rozelle Bay and Bays Waterways.

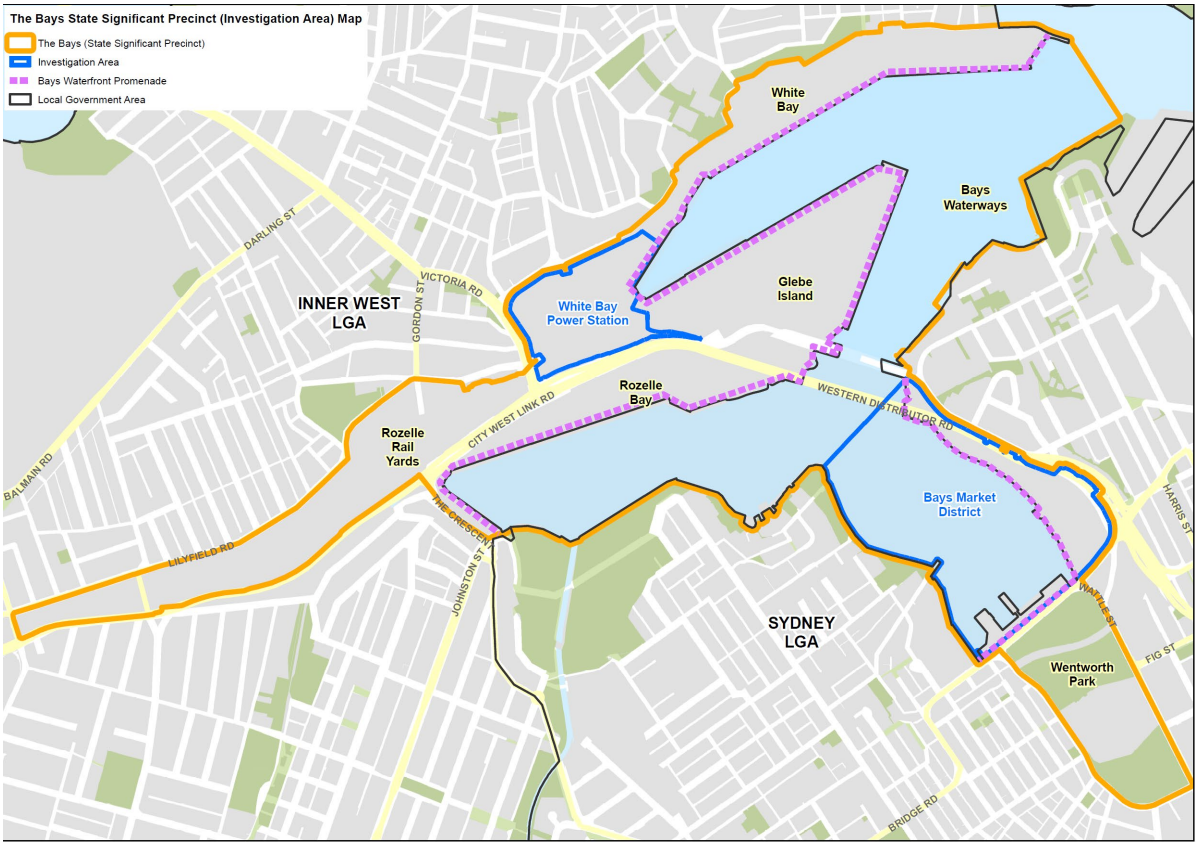


Figure 4 Bays Precinct

2.7.2 Blackwattle Bay (formerly Bays Market District)

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 and wharves at the head of Blackwattle Bay.

Blackwattle Bay has been identified by the NSW Government as an immediate planning priority. On April 28 2017 the NSW Department of Planning, Industry and Environment, in consultation with the City of Sydney, finalised the SSP Study Requirements for the Blackwattle Bay to facilitate the preparation of new planning controls.

Figure 5 Blackwattle Bay

2.7.3 Existing Sydney Fish Market

The existing Sydney Fish Market is located in Blackwattle Bay. Established in 1966, the existing fish market is located to the south east of Anzac Bridge at the intersection of Pyrmont Bridge Road and the western distributor with frontage to Blackwattle Bay. 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 3 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 18,000 square metres of gross floor area which includes approximately 10,600 square metres of ground floor retail and auction floor area. It also includes an at grade car parking area for approximately 417 cars.

2.7.4 Relationship of new Sydney Fish Market planning and approvals to Blackwattle Bay

As outlined above, Infrastructure NSW is undertaking a State Significant Precinct Planning Study for the Blackwattle Bay. In April 2016, the Minister for Planning declared that the Bays Precinct was a matter of State planning significance. The Department has prepared Study Requirements for the rezoning of the Bays Market District (now Blackwattle Bay) Investigation Area.

Infrastructure NSW has commenced early investigations and is in the process of preparing a master plan that will inform a State Significant Precinct Study and rezoning application to the Department. Infrastructure NSW anticipates that consultation on the master plan and proposed rezoning will occur in 2020 and lodgement in late 2020. Relocating the existing Sydney Fish Market to a new site at the head of Blackwattle Bay is the catalyst that will facilitate the rezoning and subsequent regeneration of Blackwattle Bay.

The foreshore promenade included in this application would continue along the foreshore of the mixed use precinct under investigation on the eastern foreshore of Blackwattle Bay.

The State Significant Precinct Study will propose a new planning framework for Blackwattle Bay. It will also consider the new Sydney Fish Market and identify the most appropriate planning instrument for the site. While the State Significant Precinct investigations are only in the preliminary stages, they have considered the new Sydney Fish Market in their baseline analyses. Likewise, the design of the new Sydney Fish Market has ensured that key aspects of the project are consistent with the vision for Blackwattle Bay. In particular, the public domain design ensures a seamless connection between the new Sydney Fish Market and the remainder of the Blackwattle Bay investigation area.

3. THE DEVELOPMENT

3.1 Development overview

Address:	1A, 1B & 1C Bridge Road, Glebe
Site:	Lot 3, 4, and 5 DP 1064339 Part of Lot 107 in DP 1076596 Part of Lot 1 in DP835794 Part of Lot 3 in DP 1018801 Part of Bridge Road
Area:	The new Sydney Fish Market would have a development footprint of approximately 40,160m^2.
Ownership:	Roads and Maritime Services (RMS) (Waterways Authority NSW); Minister for Education and Training; Bridge Road managed by RMS with City of Sydney Council being the roads authority in whose ownership the public roads is vested.
LGA:	The site is partly within the City of Sydney Council area and partly within Sydney Harbour adjoining the City of Sydney Council area.
Proposal	A new Sydney Fish Market set within an improved public domain including the creation of a waterfront promenade with improved access to Blackwattle Bay and linking to surrounding areas and to public transport. The new Sydney Fish Market will include wholesale facilities and auction rooms, offices and commercial space, Sydney Seafood School, retail premises including food and beverage premises (with the potential for liquor licenses), back-of-house facilities and car and delivery vehicle parking. The new facility is to include a new bayside promenade and wharves. The new fish market will be purpose built and will be supported by state of the art back-of-house plant and recycling/waste management facilities. Works are proposed to Bridge Road to provide improvements to its design and operation including improvements to the intersection of Bridge Road with Wattle Street and Wentworth Park Road. Subdivision is proposed to create an allotment containing the new Sydney Fish Market. A further subdivision of this lot will create s number of lots to enable the building to be on a separate lot to the public domain and water, and to allow the building and wharves to be leased in separable parts.
Zoning:	The land based portion of the site is zoned ('Waterfront Use') under Sydney Regional Environmental Plan No. 26 City West ("the SREP 26") – see **Figure 8**. That part within the existing Sydney Fish Market (lot 1 in DP 835794) is zoned B3 ('Commercial Core') under Sydney Local Environmental Plan 2012 ("the LEP"). Bridge Road is partly zoned B4 ('Mixed Use') and SP2 ('Classified Road'). The waterway is zoned W1 ('Maritime Waters') under Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005 ("the Harbour SREP").

Permissibility:	The new Sydney Fish Market is partly permissible with consent, partly permissible without consent and partly prohibited under the current planning controls. Section 4.38(3) of the EPA Act allows the Minister to approve a part prohibited SSD DA.
Capital Investment Value (CIV)	The CIV is well in excess of $10 million and consequently the development is State Significant development.

3.2 Summary of the development for which consent is sought

This SSD DA seeks approval for:

1. a new Sydney Fish Market building with a gross floor area of 26,751m2 as indicated on the drawings contained in Appendix 1 of the A3 Volume);
2. waterfront structures such as wharves;
3. a new public domain including promenades, access to Blackwattle Bay and landscaping;
4. pedestrian, cycle and road access and circulation;
5. upgrade works to Bridge Road and its intersections with Wattle Street and Wentworth Park Road;
6. associated works such as provision of services, site level adjustments and stormwater management;
7. the subdivision of land to create a lot on which the new Sydney Fish Market would be located and a further subdivision of this lot to identify separate lots comprising the public domain and water, and various parts of the new Sydney Fish Market building and wharves to be leased in separable parts.

3.3 Development objectives

The objectives of the development are to:

- Provide a distinctive architectural addition to the city's foreshore experiences for the general public;
- Expand and improve the functions of the existing Sydney Fish Market in a new setting designed to achieve design excellence, functional performance and environmental sustainability;
- Provide a safe and secure new Sydney Fish Market;
- Provide a fish market that is technologically advanced and authentic in experience;
- Produce strong economic and social benefits to the local and broader NSW community;
- Create a building design that provides a balance of good visibility, daylight penetration, energy efficiency and maximises access to views;
- Provide a new fish market that seamlessly integrates within its context.

3.4 Design guidance from Bays Precinct investigations

The Bays Precinct Sydney Transformation Plan October 2015

The NSW Government's objectives for the transformation of The Bays Precinct that provide guidance to the design of the facility include the following:

- Deliver enduring, socially inclusive and great places to benefit Sydneysiders and national and international communities;
- To achieve building design excellence and quality urban design in all destinations;
- To provide ecological and marine water improvements to enable abundant biodiversity;
- To apply integrated planning within a land and water context that considers strategic policy decisions and the interrelationships between biophysical, social and economic impacts;
- To celebrate heritage and culture by creating new experiences throughout The Bays Precinct.

The Transformation Plan seeks to initiate the redevelopment of Blackwattle Bay by rejuvenating the existing Sydney Fish Market. This would create a new world-class market food offering and dining attraction connected to the Bays Waterfront Promenade.

Master planning the Bays Market District, August 2017

Draft principles for developing a masterplan for Blackwattle Bay were identified following public consultation in August 2017 and include:

Landscape and environment

- Better connect Wentworth Park to the harbour;
- Improve access to Blackwattle Bay, the foreshore, and water activities for all users;
- Explore and interpret the history of the site;
- Pursue leading edge sustainability, climate change resilience and improved water quality outcomes;
- Minimise additional shadowing to Wentworth Park and the Glebe Foreshore in mid-winter;

Land uses and built form

- Deliver the new Sydney Fish Market at the head of Blackwattle Bay as the first step in the urban transformation process;
- Integrate housing and mixed uses suitable to living on the city's edge and the site's characteristics;
- Link the Bays Market District to the City, Glebe, Pyrmont, Ultimo, Glebe Island and White Bay;
- Maintain and enhance maritime, employment and working harbour uses and activities;
- Mandate Design Excellence in public domain, landscape and built form design;

Access and movement

- Encourage active transport by prioritising cycling and walking;
- Balance diverse traffic movement needs for all users;
- Reinforce and strengthen connections to existing and future public transport;
- Develop an effective and efficient parking response;

- Increase permeability and wayfinding;

Social, economic and community

- Support the creation of distinctive and socially inclusive communities;
- Activate public areas and establish a cultural core;
- Plan for education, health and social services to support future residents, workers and visitors;
- Expand the range of active and recreational opportunities, such as the Waterfront Promenade, that benefit the new community;
- Ensure strong coordination between public benefits and economically, socially and environmentally viable development.

The development seeks to be consistent with this master planning guidance and will be the catalyst for renewal for Blackwattle Bay. It will integrate with the master plan for Blackwattle Bay currently underway as described in Section 2.7.4 above.

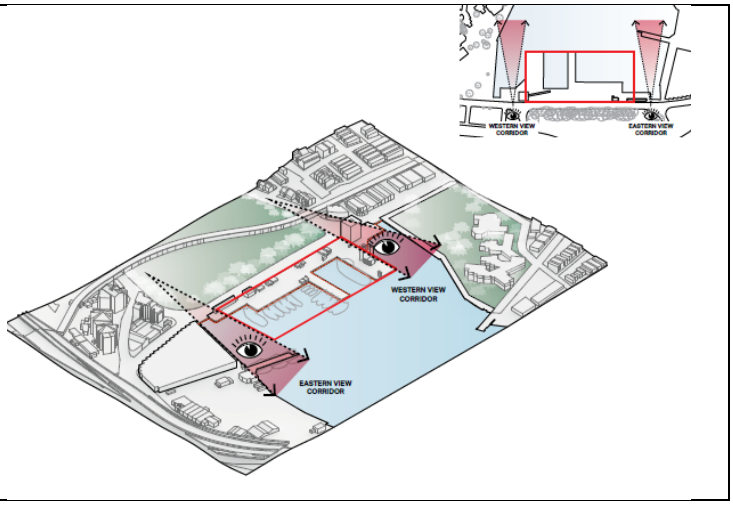
3.5 Proposed design

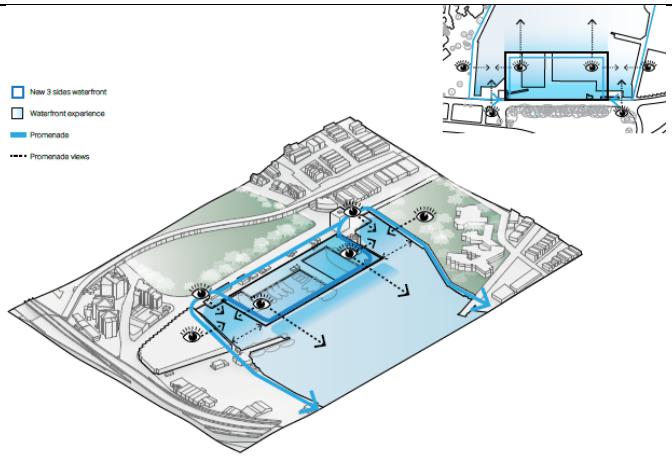
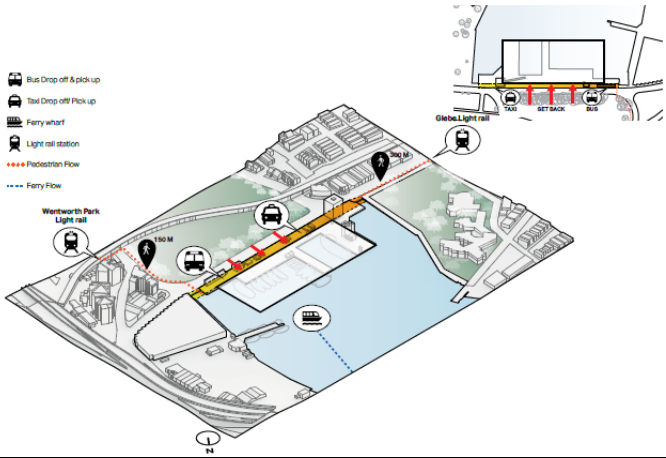
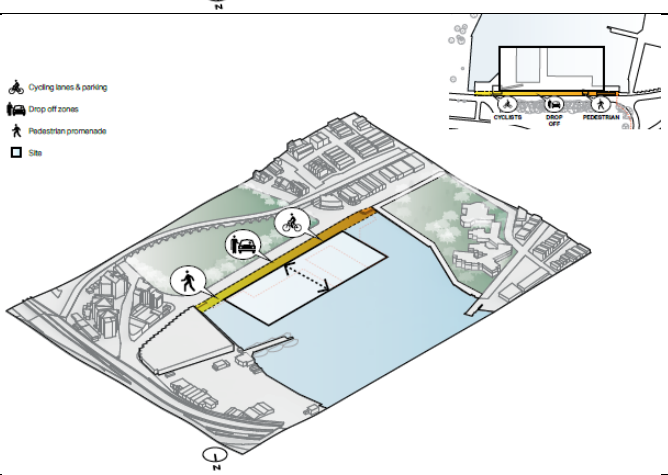
The architectural and public domain design have evolved from a detailed consideration of the site and its context, Infrastructure NSW's operational requirements for the new Sydney Fish Market and the vision of the project architects, 3XN, BVN and Aspect. The design process and description of the proposed development are contained in the design report prepared by the project architects contained in **Appendix 2** of the A3 Volume and summarised below.

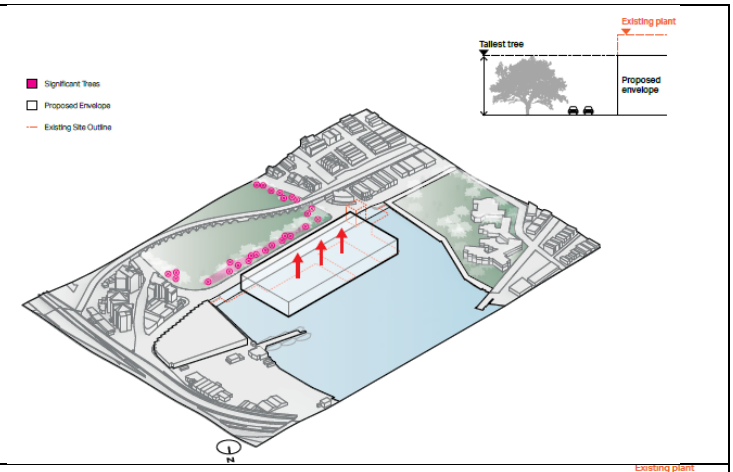
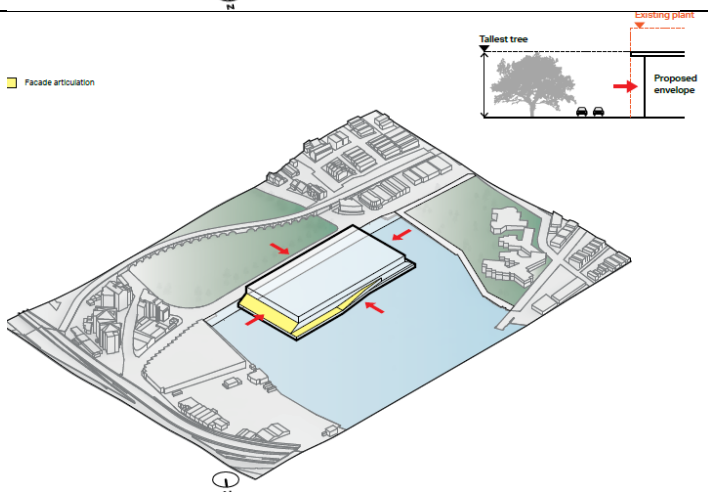
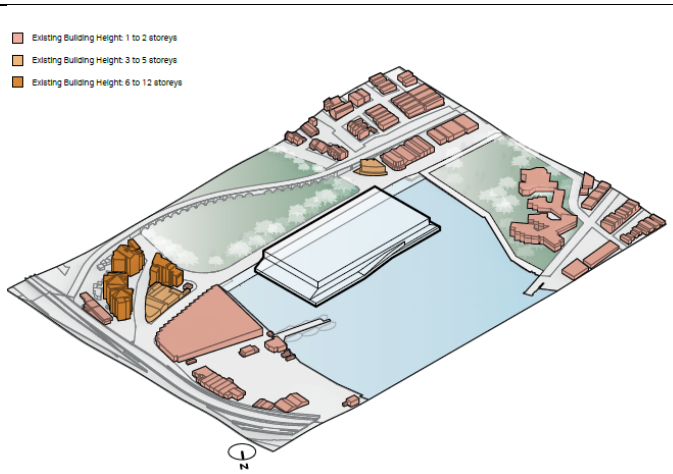
Plans of the proposed development are contained in **Appendix 1** of the A3 Volume.

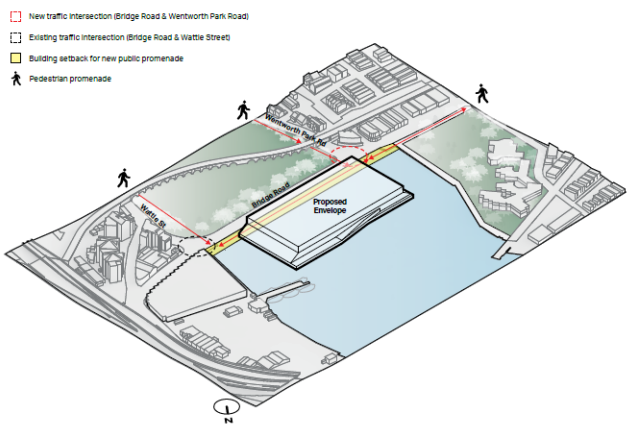
3.5.1 Response to context

The design responds to site conditions in the following manner:

Views and Vistas to Blackwattle Bay Preserving boundaries to the east and west side of the building offering new view corridors from the park and surrounding streets to Blackwattle Bay once the fences and disused industrial infrastructure is removed.	

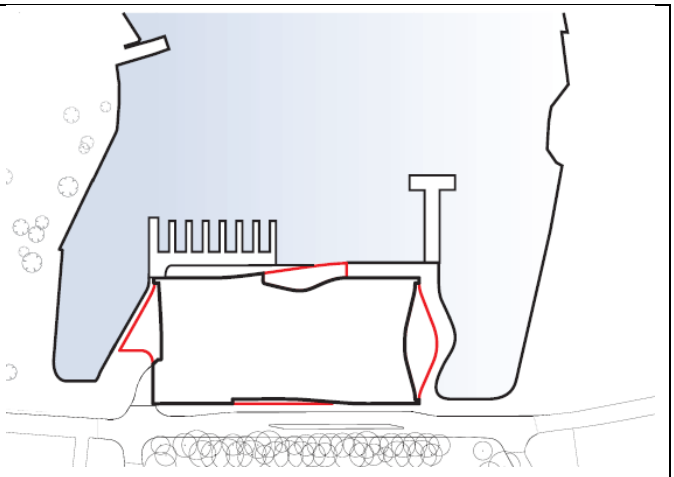
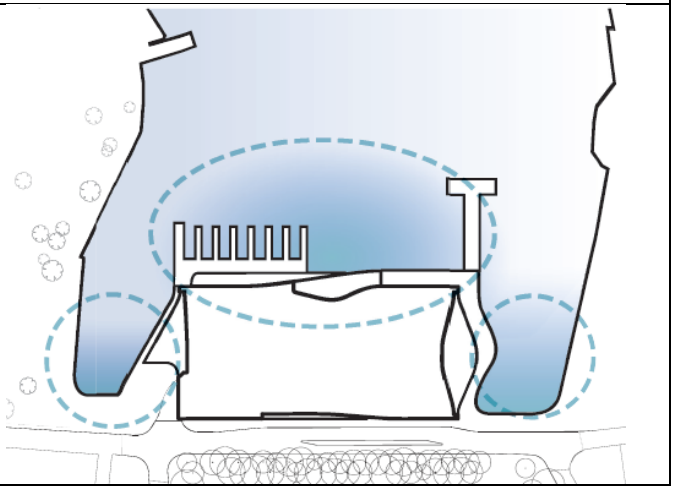
Perimeter Circulation A primary design driver for the new Sydney Fish Market development is public access to the water's edge and the ability to pedestrianise the entire waterfront promenade of Blackwattle Bay. The circuit of public access increases the waterfront edge, offering greater opportunity to connect with the harbour waterfront along the eastern and western edges.	
Connectivity The site is a node for connectivity and can accommodate all modes of transport with preference to active transport (walking and cycling) and public transport (light rail, bus, taxi, Uber, and ferry). Wentworth Park, the Fish Market and Glebe light rail stations are in walkable distance to the proposed site, and the pedestrian movement will encourage movement across park and along water.	
Potential Building Setback Given the anticipated high number of pedestrian and cyclist movements to and around the new Sydney Fish Market, the building will be setback from Bridge Road to accommodate a wider footpath.	

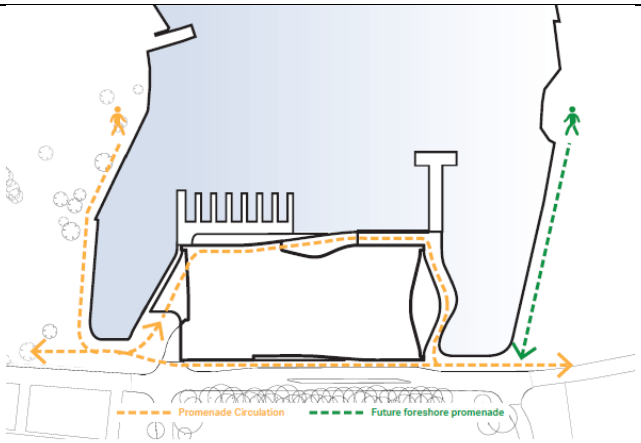
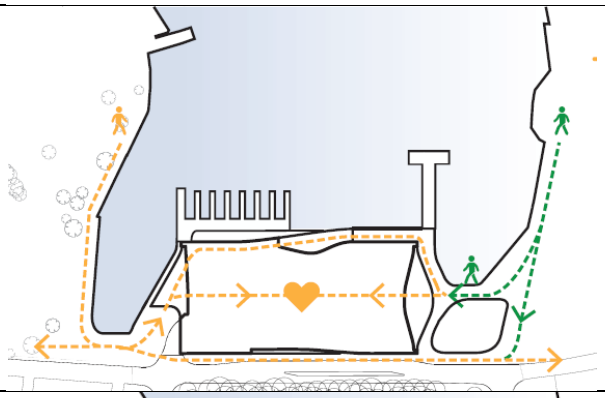
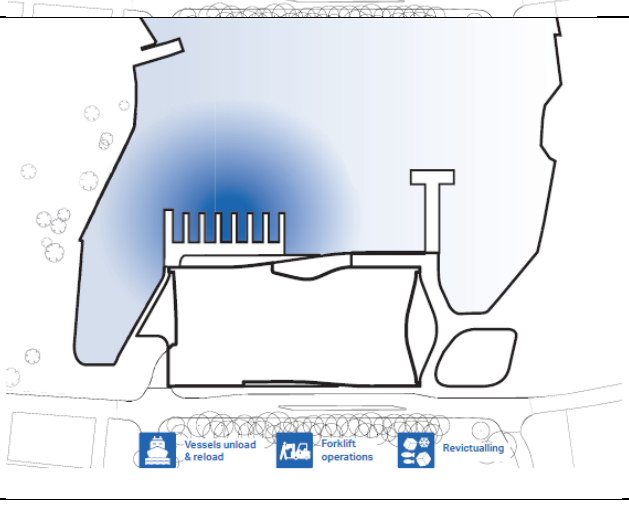
Height and scale of building The significant trees in Wentworth Park informed the height of the proposed building with the roof edge seeking to relate to the tree line, and not exceed the height of existing cement batching plant (28.7 metres high) as a reference datum. This also reduces the visual and shadowing impacts on Wentworth Park.	
Articulation of building, bulk and scale The proposed facades are set back to reduce the scale of its massing to Bridge Road. In particular the Bridge Road setback will feature a creation of green promenade with new planting references. Each facade provides an opportunity as a connector through featured landscape stairs in order to relate the promenade and building. This can also break the bulk of the mass to a more human street scale to activate the public realm.	
Built Form The built forms to the west of Wentworth Park (Glebe) are made up of small lots with majority of terrace houses with some more recent multi-storey apartment developments. The built form to the east of Wentworth Park (Ultimo and Pyrmont) consist of buildings with larger footprints, mainly in the 3 to 12 storey height range. The proposed development will consist of 3 levels above ground.	

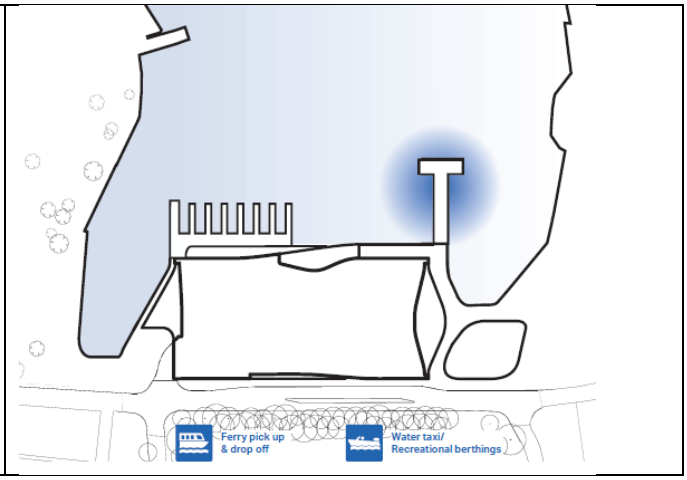
Street activation and public accessibility New signalised crossing at Bridge Road and Wentworth Park Road intersection, and changes to Bridge Road and Wattle Street intersection will be implemented for safe pedestrian crossing and vehicle movements in and out of the proposed development.	

3.5.2 Design strategy

The location of the site at the head of Blackwattle Bay allows for the exploration of different conditions at the water's edge and creates new opportunities for the public to engage with the water. The development incorporates the following elements.

Promenade Stairs The promenade stairs define public space and connection to the water, while lifting the public thoroughfare over the industrial activities of the wharves and goods handling areas of the new Sydney Fish Market. This maintains the authenticity of the market, allowing the operation functions to be visible along ground floor while separating goods and public movement providing public access 24 hours a day to the public domain including equivalent lift access.	
Water On Three Sides Being located at the head of Blackwattle Bay, the public open space offers the opportunity to create distinct spaces and experiences of water and the water's edge. To the north is the working harbour and ferry zone. Two plazas to the east and west are new public spaces with differing conditions.	

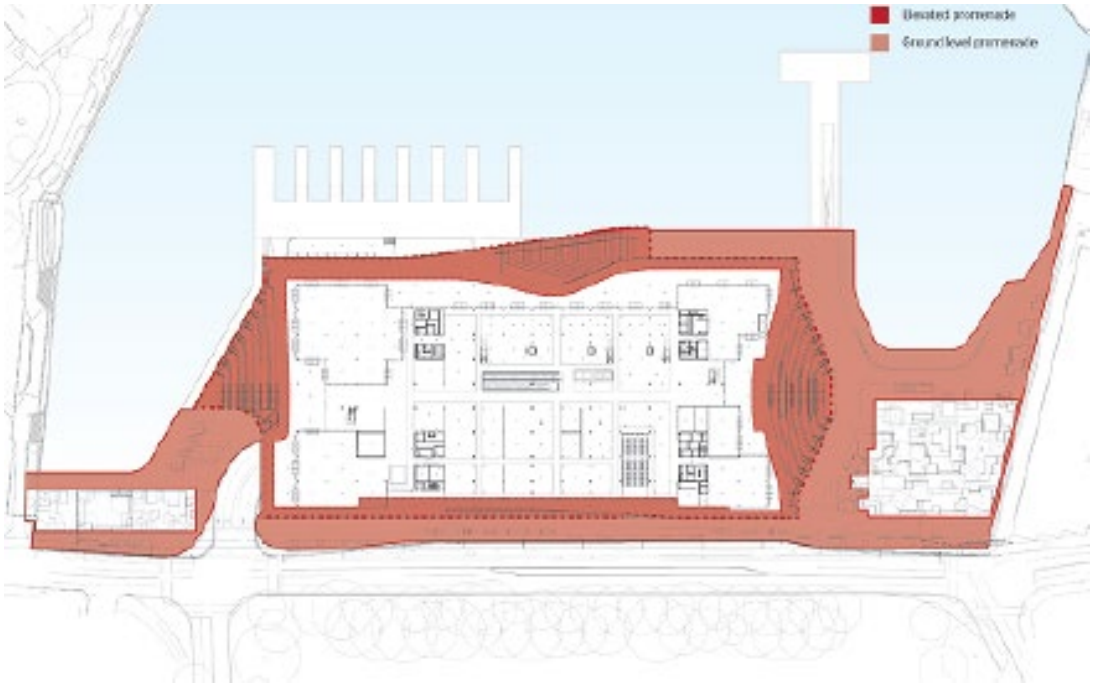
Circulation Circulation paths around the new Sydney Fish Market include a shared promenade connection along Bridge Road and the establishment of a public pedestrian promenade along the foreshore of Blackwattle Bay.	
New Bridge Connection And Day Time Access A bridge has the double purpose of defining a landscaped ecological zone in the eastern inlet, and connecting a central boulevard and harbour promenade of the development.	
Wharves - Operation The piers of the new Sydney Fish Market are separated in function, with the westerly piers serving commercial and working harbour purposes.	

Wharf - Recreational And Ferry Easterly piers serving public purposes including a public ferry station, water taxi services and recreational berthing for day-trippers to the new Sydney Fish Market.	

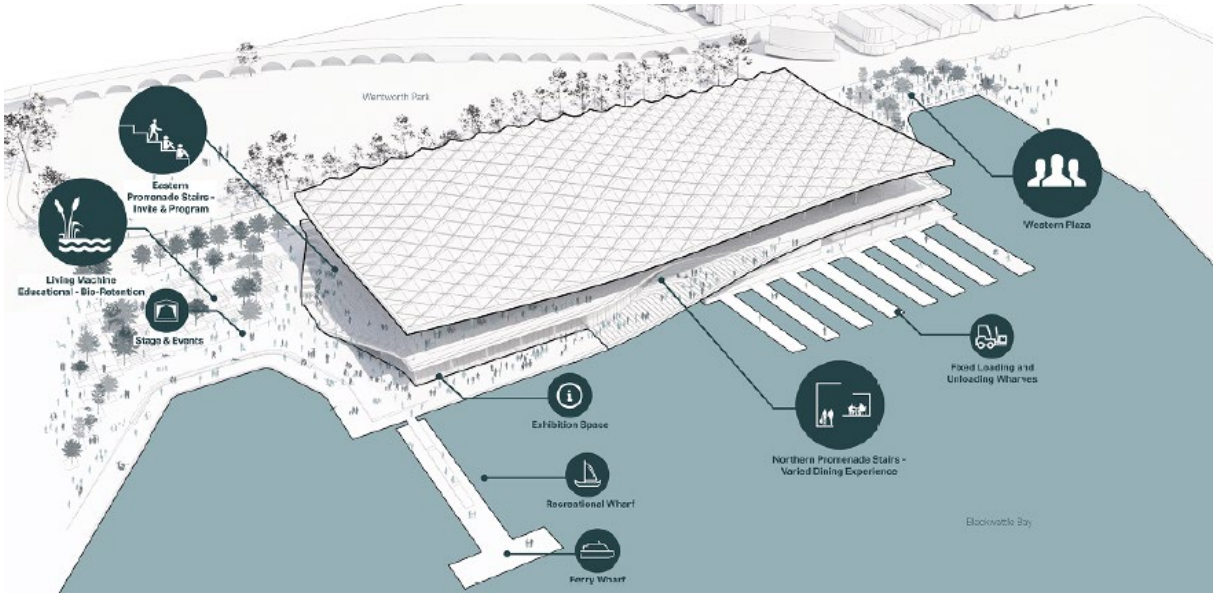
3.5.3 Promenades and activation zones

Sculptured stepped ramps of generous proportions form a key component of the public domain provide access to the upper ground floor and public areas of the building. Those facing water can may be double-programmed with plantings for passive climate control or seating for events and performances. The ramps form multiple options for access and egress connecting to the surrounds.

The design incorporates various promenade experiences ranging from a green promenade along Bridge Road to a waterfront promenade along the edge of Blackwattle Bay, including an elevated promenade that transitions visitors from the ground level to the upper ground level. These allow for different experiences and reflects the duality of the site as being one between water and park.



At the upper ground floor level the promenade is accessible 24 hours a day and integrates with activity spaces within the building including outdoor dining.



3.5.4 Key access and arrival points

Promenade ramps on all sides of the building provide a number of key access points from the promenade to the upper ground floor. These will be supported by public lift access.

3.5.5 Façade design

A high degree of facade transparency allows for visitor visibility into the operational and functional activities of the new Sydney Fish Market at ground floor and permeability, outlook and light at the upper levels. This is an important aspect of maintaining the authenticity of the new Sydney Fish Market. Façade materials include ceramic tile fascias, tile cladded masonry walls, operable façade glass, fixed glass elements and frameless glass balustrades. Materials and colour are indicated on the drawings. Facades are highly modulated and light in appearance. Walls are generally recessed within the building footprint, particularly at the upper levels providing areas of outdoor activation and pedestrian permeability.

3.5.6 Roof form

The roof is the main architectural element binding the design together in one sweeping movement. Diverse activities are consolidated under a distinctive floating roof that serves to distinguish the new Sydney Fish Market as an inclusive and iconic destination. It is visually the most dominant part of the new building and highly visible from the surrounds such as the Anzac Bridge. The roof has been subject to careful architectural development to create the impression of gentle wave like moving canopy, encompassing a bustling market underneath.

Visual connection and permeability are key qualities to establishing an exciting and authentic marketplace feel. A large, floating canopy reveals the life of the market inside, making apparent the activities and events that happen at the new Sydney Fish Market.

The roof form is a direct response to a simple series of principles. Programmatic demands requiring variations in built form raise the roof locally, while view lines sculpt the edge condition. The roof surface responds to the sun, permitting reflected light to naturally illuminate the upper levels while screening out direct rays. Finally the entire surface operates as a water harvesting device, recycling rainwater for use.

The principle geometry of the roof cassette pattern is designed to accommodate these functions. Specific modules remain permeable to ventilate the space underneath using pressure differentials. Photovoltaic panels generate electricity for operations according to Green Star targets. The units possess an integrated guttering system to channel and harvest rainwater, and have a modular construction logic, for ease of construction and repair.

Energy generation

The size and geometry of the roof make it suitable for energy production from integrated PVs integrated into the design of the roof. The roof form is being studied for PV integration to create the optimal balance between energy harvesting, aesthetics and practical implications regarding maintenance and buildability.

Rain water collection

The roof is designed to lead and guide the rainwater to designated collection points from where it will be transferred and utilised inside the fish market.

Natural ventilation

The new Sydney Fish Market is largely naturally ventilated. The roof plays a pivotal role in the ventilation strategy that will both help distinguish the market and reduce the energy consumption for mechanical ventilation. Fresh air intake through the skylights and the predominantly light character of the roof minimises heat gain underneath, which also helps minimise the demand for high intensity ventilation.

Indirect daylight

The raised skylights of the roof are oriented to permit the influx of indirect daylight from south, while shading direct sunlight from north. This simple geometric form helps minimize energy consumption for electrical light while maximising the amount of healthy daylight, that will help convey the feeling to the visitors of being under a canopy in an authentic market.

Healthy materials

The main structure that supports the roof cassettes is made from timber. The roof is built from repetitive modular elements, creating a seemingly complex shape from a relatively simple system. This modular pre-fab approach will minimise waste of materials, and help ensure a safe and resource efficient building process.

3.5.7 Ecologically sustainable development

The project is committed to achieving a formal Green Star Rated outcome (6 Star target) under Green Star - Design & As Built – v1.2. The project will implement a number of sustainable design principles and includes initiatives designed to mitigate the environmental impact of the following:

- Energy – including reduction in energy associated to demolition, construction and operation, across the building and its associated sources (30% reduction target in Greenhouse Gas Emissions from operations);
- Water Efficiency – including reduced potable water demand and improved stormwater quality (45% reduction target in potable water consumption);
- Passive Design Principles – reducing the development's overall requirement for building services;
- Ecology - Maintaining ecology through landscaping where practical;
- Materiality – Considering the whole of life impact of materials in demolition, construction and operation stages, and considering their selection to minimise harm to the environment;
- Waste – implementation of best practice management techniques to reduce waste going to landfill (landfill diversion rate is targeted at 90% for construction and demolition waste, and 80% for operational waste);
- Transport – encouraging alternate low carbon means of transportation to and from the New Sydney Fish Market.

The above are assessed using a holistic built environment sustainability rating tool - Green Star Tool Design & As Built v1.2 - to demonstrate equivalence with industry best practice.

3.5.8 Building metrics and compliance

Building height

The maximum building height is RL 28 AHD to the highest point of the roof cassettes. The roof height varies with the height of the roof fascia, the visible part of the roof from the surrounding public domain, variable along each frontage and having a height up to RL24.6 AHD at the corners. This compares with the height of the fig trees in Wentworth Park to approximately RL25.48 AHD and the height of existing structures on the site at the Bridge Road frontage of RL30.7 AHD.

Gross floor area

The gross floor area is accommodates a GFA of approximately 26,751m^2 as measured in accordance with the Standard Instrument. GFA measurements in accordance with the definition in SREP 26 shown on the DA drawings contained in **Appendix 1** of the A3 Volume. These drawings show the breakdown of GFA for particular activities and comprises:

Use	Gross Floor Area
Ground Floor – fish market operations	11,111m^2
Upper Ground Floor – retail and food and drink premises	11,105m^2
Mezzanine Floor – Sydney Seafood School and commercial premises	4,535m^2
Total	26,751m^2

Boundary setbacks

The building is setback from the Bridge Road property boundary at ground level by approximately 15 metres providing the opportunity for an enhanced promenade, cycle path, landscaping and drop-off area. East and west setbacks are generous to provide for view corridors and water activation.

Structural

Details of the proposed building structure are contained in the Structural, Civil and Maritime Design Report (**Appendix 10**) prepared by Mott MacDonald.

BCA

The development has been designed to ensure compliance with the provisions of the BCA. Performance based solutions may be required in some instances (**Appendix 17A**).

Access

An access review of the proposed design has been undertaken by Group DLA (**Appendix 17B**). The review addresses the accessibility provisions of the building and surrounding public domain areas that form part of the proposed works in general. The review seeks to ensure compliance with statutory requirements including:

- Disability Discrimination Act 1992 (DDA);
- Disability Access to Premises Standards 2010 (Premises Standards), including Access Code;
- Building Code of Australia (BCA 2019) – Part D3, Part E3.6, F2.4, F2.9
- • Applicable Australian Standards AS1428.1:2009, AS1428.4.1:2009, AS2890.6:2009, AS1735.12-1999.

The report seeks to provide compliance the Disability Discrimination Act 1992. In doing so, the report attempts to eliminate, as far as possible, discrimination against persons on the grounds of disability. The report concludes as follows:

> *In our opinion, with ongoing design development and with inclusion of the access provisions and design requirements outlined within Section 4.0 Accessibility Assessment of this report, the proposed design is capable of compliance with the statutory accessibility legislation outlined above. This will be achieved through a combination of compliance with the deemed to satisfy (DTS) provisions and the Performance Requirements of the BCA, listed in the Section 5.0. Summary of Access Performance Solutions identified at this stage of the design.*

3.6 Distribution of uses

The new Sydney Fish Market will be used for a variety of purposes as outlined in the Concept DA and including:

- Wholesale services space including product storage and processing;
- Auction rooms and associated refrigeration and handling space and offices;

- Wharf and boating facilities including up to eight operational wharves for fishing fleet servicing and product unloading/loading and a multi-purpose wharf for recreational vessels and the like with capacity for a private-operated ferry stop;
- Retail premises including, fresh food retail, shops, markets, kiosks, food and drink premises (internal and external areas and with the potential for liquor licenses);
- Business premises and office premises;
- Multi-functional spaces and areas for exhibitions, events, functions including community events;
- Education establishments (culinary education);
- Publicly accessible promenade and recreation areas;
- Staff amenities and end of journey facilities;
- Parking for service and delivery vehicles, smaller coaches and private vehicles up to approximately 417 vehicles;
- Waste management facilities associated with the development;
- Storage areas including temporary overflow storage;
- Ancillary back of house spaces and storage;
- Cleaning and utility rooms;
- Plant areas, equipment and services;
- Ancillary uses.

Proposed uses will be distributed across the development to physically separate wholesale and general retail operations, enhancing functionality and operations, efficiency, logistics, presentation and safety. The distribution of uses maintains the authenticity of existing Sydney Fish Market, allowing visitors to visually participate in the working harbour and auction operations from the surrounding public domain. Auction and wholesale operations are consolidated on one level to streamline operational work flows.

The architectural drawings indicate the following uses of the new Sydney Fish Market, level by level:

Below Ground Level

- Parking for service and delivery, smaller coaches and private vehicles (417 vehicle spaces);
- Plant and storage;
- Waste Management facilities; and
- End of journey facilities for staff.

Ground Level - Outside of Building

- Up to eight operational wharves for fishing fleet servicing and product unloading/loading, multi-purpose wharf space, private-operated ferry stop, recreational vehicles and the like;

- Vehicular access driveways;
- Publicly accessible promenade;
- Temporary overflow storage; and
- Community events and activation areas.

Ground Level - Within Building

- Wholesale services space including product storage and processing;
- Auction floor and associated refrigeration and handling space;
- Loading dock including time-limited delivery and service vehicle parking area;
- Waste management facilities;
- Office space including buyers room;
- Staff amenities, plant and storage;
- Exhibition and multi-functional space; and
- Retail premises.

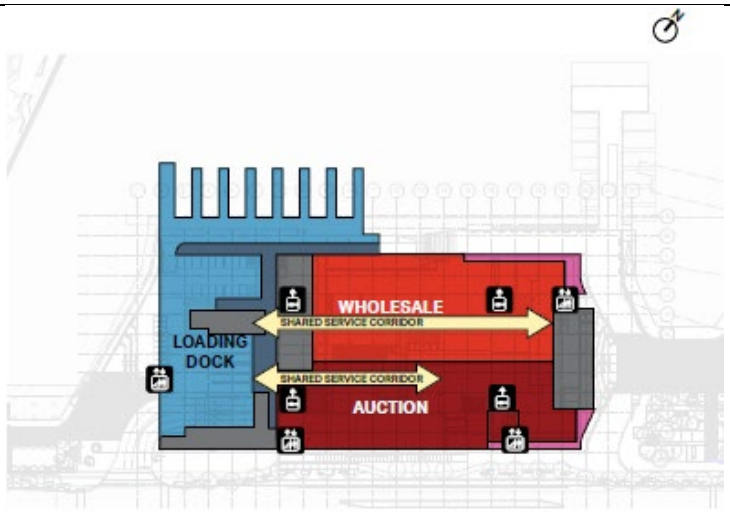
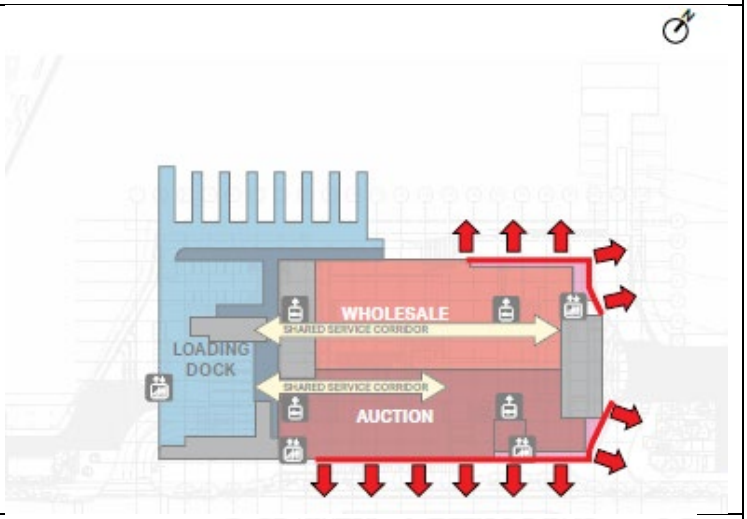
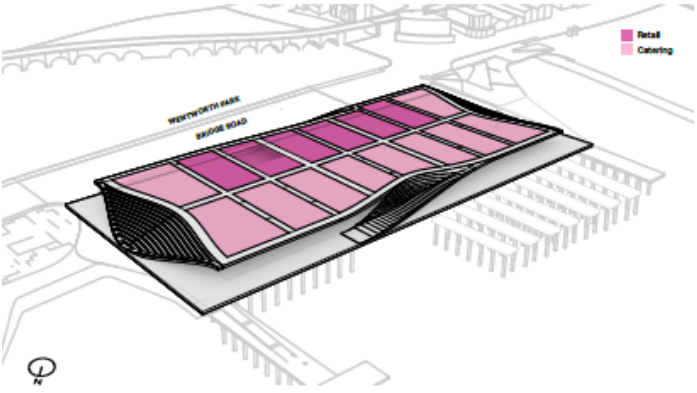
Upper Ground Level (L1)

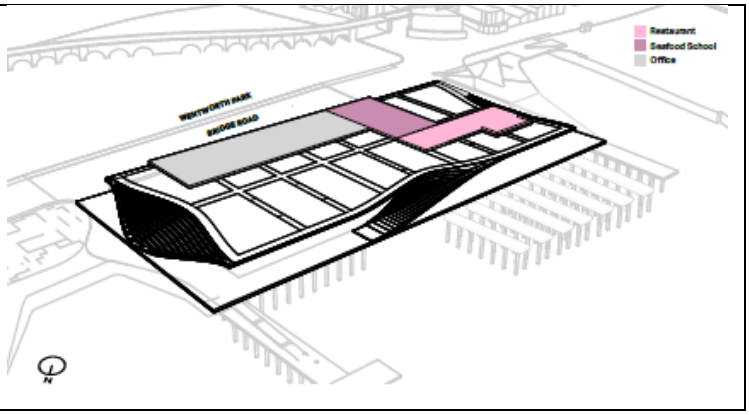
- Retail premises including fresh food retail, food and drink premises including harbour side dining (with the potential for liquor licenses);
- External/shared dining space;
- Ancillary back of house space and staff amenities; and
- Circulation areas.

Mezzanine Level (L2)

- Catering space and food and drink premises (with the potential for liquor licenses);
- Culinary education;
- Tenant and sub-tenant business and office premises; and
- Plant and storage space.

The functional distribution of uses is as follows:

Ground Level New Sydney Fish Market operations (loading, waste management etc) occupy the west side of the site. Auction and wholesale functions take up the east, with auction and staff functions accessible from Bridge Road. The ground floor emphasises the market authenticity of the proposal by incorporating a dedicated loading dock and operational wharf that are visible from the surrounding promenade and Blackwattle Bay. Adjacent to the operations are the wholesale and auction functions which are aligned along the northern and southern facade of the building. The three programs are connected together with a shared service corridor which will cater for the transportation of goods.	
Ground Level Active Frontage A high degree of facade transparency at the ground floor allows for visitor visibility into the operational and functional activities of the new Sydney Fish Market. The transparency of these programs also allows for daylight penetration.	
Upper Ground Level The upper ground level is a publicly accessible level, in combination with the waterfront promenade. This increases the potential of access and views to the water while safely separating public and the operational and industrial functions. Restaurants and retail areas that have the potential to be open according to different operating schedules will be located on the upper ground level. Restaurants areas would typically face the water.	

Mezzanine Level Office functions, the Sydney Seafood School and specialist dining areas occupy mezzanine areas above the general retail level.	

The internal layout of the upper levels is subject to detailed design with the floor plate designed to allow flexibility in layout whilst maintaining pedestrian permeability, particularly on the upper ground floor retail level. The indicative breakdown of floor space by use is as follows:

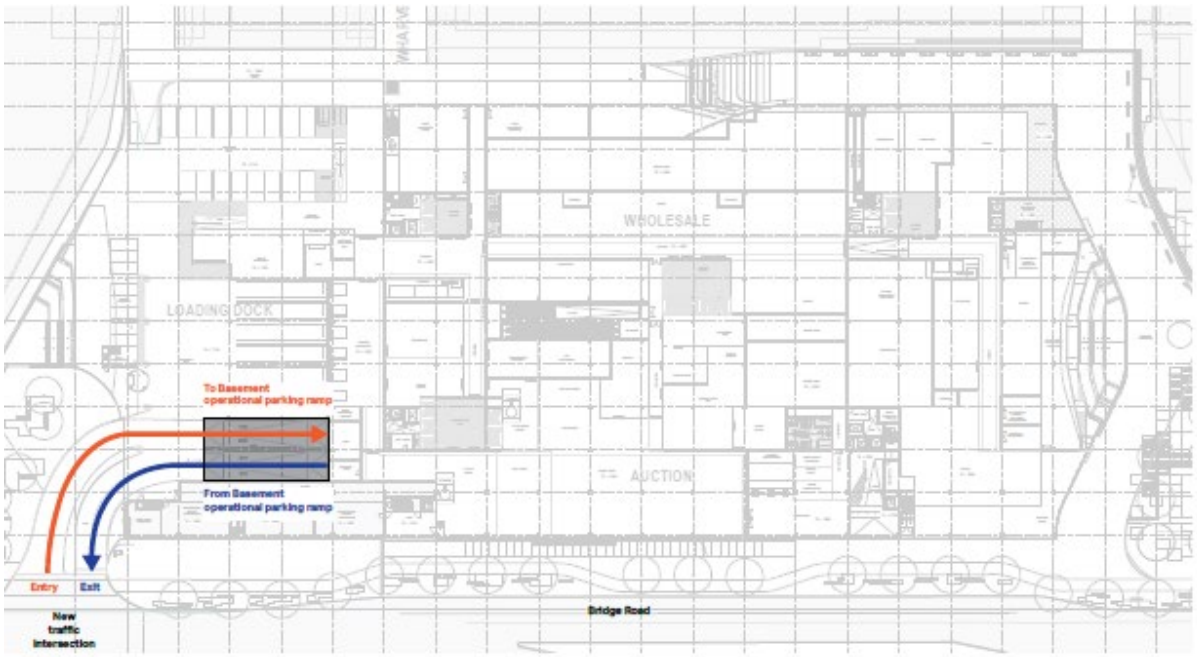
Use	Indicative floor space
Ground Floor – fish market operations (excluding loading and waste management)	11,110m^2
Upper Ground Floor – retail areas	4,100m^2
Upper Ground Floor – food and drink premises (indoor and outdoor areas)	6,800m^2
Mezzanine /floor – Sydney Seafood School	800m^2
Mezzanine /floor – commercial premises	2,000m^2
Mezzanine /floor – food and drink premises (indoor and outdoor areas)	1,200m^2

3.7 Access and parking

Concepts for site access and parking are described in the Traffic Impact Assessment (**Appendix 11**) and summarised below.

3.7.1 Vehicular flow

All road vehicle access to the site is from a new traffic controlled intersection at the corner of Bridge Road and Wentworth Park Road.



Public transport

The new Sydney Fish Market site is served by three light rail stops all within a short walk. Transport for NSW is currently planning for the Sydney Metro West which will include a new station in the Bays Precinct, providing improved public transport accessibility to the proposal.

The proposed recreational wharf has capacity to accommodate a ferry stop.

Walking and cycling

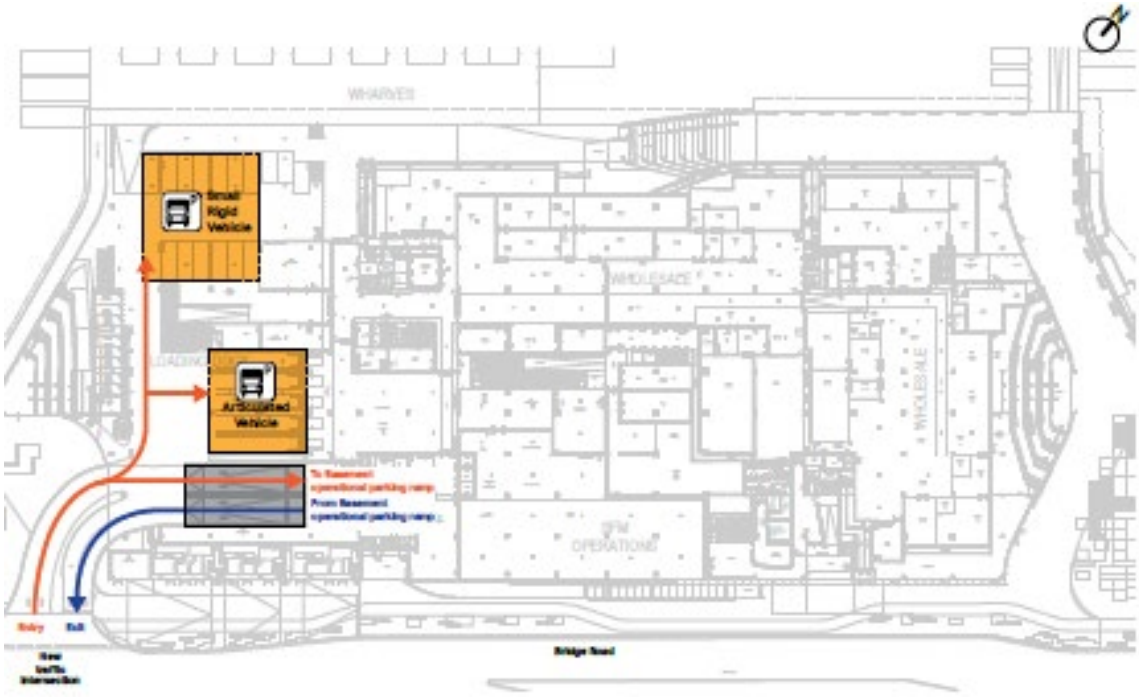
The site is well served a number of good quality walking and cycling routes. Improvements proposed include:

- Upgrade of the Bridge Road / Wattle Street intersection including the removal of the existing pedestrian island;
- Additional signalised intersection at Bridge Road / Wentworth Park Road to provide access to the site and facilitate improved accessibility south towards Wentworth Park;
- Enhanced pedestrian experience along Bridge Road, with a significantly widened footpath and boardwalk directly adjacent to the new site;
- New dedicated off-road cycling connection along Bridge Road adjacent to the frontage of the site;
- Staff and public bicycle parking including end of trip facilities for staff;
- A dedicated vehicle drop off and pick up area outside the site fronting Bridge Road, to be used for buses, coaches and point to point transport vehicles (e.g. taxis and ubers).

Vertical transport is provided in the form of promenade steps and lifts.

Service and delivery vehicles

Deliveries and servicing will occur within the building accessed from the new signalised intersection. A dedicated loading dock and servicing area within the site is provided.



There is provision for 17 truck parking areas and 5 loading docks on the ground floor level. Approximately 180 car parking spaces in the basement parking level are designed with flexibility to accommodate 137 delivery vehicles (SRVs) during the early morning wholesale and auction period. Six accessible spaces are provided.

Emergency vehicles

Emergency vehicles will access the site using the proposed Wentworth Park Road / Bridge Road / new Sydney Fish Market access unless otherwise directed. An alternative would be to use the new drop off / pick up bay provided on Bridge Road.

Vehicle drop off

A dedicated vehicle drop off and pick up area outside the site fronting Bridge Road, to be used for buses and coaches, private vehicles and taxis/ubers etc.

3.7.2 Parking

The development provides approximately 417 on-site parking bays. This is consistent with the current on-site provision at the existing Sydney Fish Market, despite the forecast increase in visitor activity to the site. Six accessible spaces are provided.

Analysis indicates that the level of on-site parking will be generally sufficient to accommodate the parking demand on a typical weekday. On a weekend demand will exceed the available on-site capacity by approximately 80 car parking spaces between 11am and 2pm. Consistent with the current operation of the existing Sydney Fish Market, during major events at the

Sydney Fish Market (e.g. 36 hour seafood marathon, Easter Friday etc.) parking demand will increase further, and therefore a number of strategies have been put forward to manage parking demands during peak periods, including:

- On-site parking for staff and visitors will be charged at market rates in line with those at other nearby commercial car parks. Reducing the number of staff parking on site by approximately 50% would provide sufficient capacity within the on-site car park to accommodate demand on weekdays and weekends.
- Using off-street car parks in close proximity to accommodate overflow parking demand.
- Providing a drop off bay to allow visitors and shoppers to be collected out front.

Smaller coaches can use shared spaces in basement during off-peak times, larger coaches leave the site and return to collect passengers. Coaches will be required to park and wait off site on nearby streets such as Bank Street, Wattle Street and Wentworth Park Road.

During busy periods for operations in early mornings, some visitor parking spaces will be used by service vehicles. Operational vehicles are able to access the basement car park via a dedicated entry and exit ramp. Goods are taken via dedicated vertical good lifts to ensure ease of transport between levels.

3.7.3 Sustainable transport and travel choice

The development of the new Sydney Fish Market provides an opportunity to heavily promote sustainable travel modes to staff and visitors of the site and strongly encourage travel behaviour change. A suite of measures is proposed to reduce the reliance of private vehicles as a means of accessing the new Sydney Fish Market, including:

- No increase in the number of on-site car parking spaces;
- Bicycle parking for staff and visitors within the public domain;

- End of trip facilities for staff (showers, lockers, tool kits, etc.);
- On-site parking to be charged at market rates for staff and visitors; and
- Promotion of off-site deliveries to reduce overall travel demand.

3.8 Bridge Road works

Works are proposed to Bridge Road to raise the level of the road by approximately one metre between its intersections with Wattle Street and Wentworth Park Road. This has a number of benefits:

- The ground floor of the development and surrounding public domain would be similar to the level of Wentworth Park providing visual integration with the park;
- Assist in managing flooding at the site in a manner that has no significant adverse impacts in the surrounding area;
- Provide for localised widening of Bridge Road to provide an improved and widened footpath area, a drop-off area, dedicated cycle path, landscaping, a central median and compliant lane dimensions.

The existing lane widths on Bridge Road are non-compliant with current RMS standards. Since the road is being reconfigured for the new facility, and being brought up in level, there is a requirement to bring it up to current standard. The new lanes widths inform the pedestrian concourse and available space for drop off zones, bike paths etc.

Drawings of the proposed works are contained in **Appendix 3** of the A3 Volume and the works are described in greater detail in the Structural Civil and Maritime Design Report (**Appendix 10**).

3.9 Landscaped public domain

The proposed landscaped public domain is described in detail in the Architectural and Urban Design Report and shown on the Architectural and Public Domain Drawings contained in the A3 Volume and includes the following key elements:

1. The Civic Plaza - The main public plaza and harbour side entry;
2. The Water Plaza - An educational, bio-filtration and water play public plaza;
3. The Western Plaza - The extension of the existing Glebe Foreshore;
4. The Harbour Steps - The grand steps connecting the public domain to the harbour's edge;
5. Bridge Road - The new major boulevard and green link.

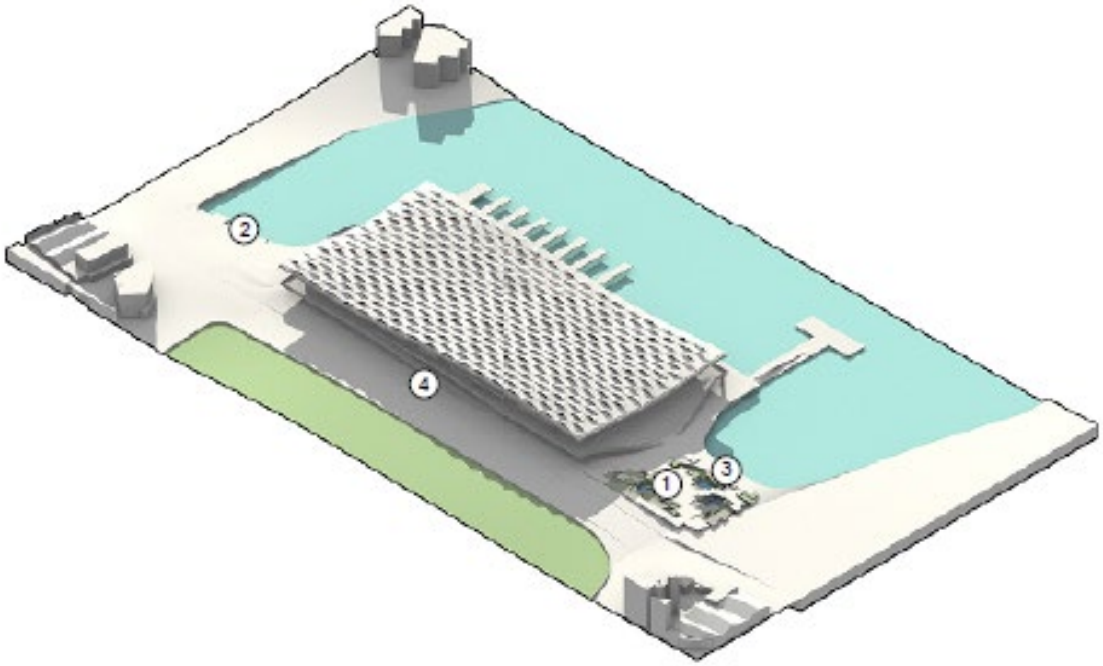
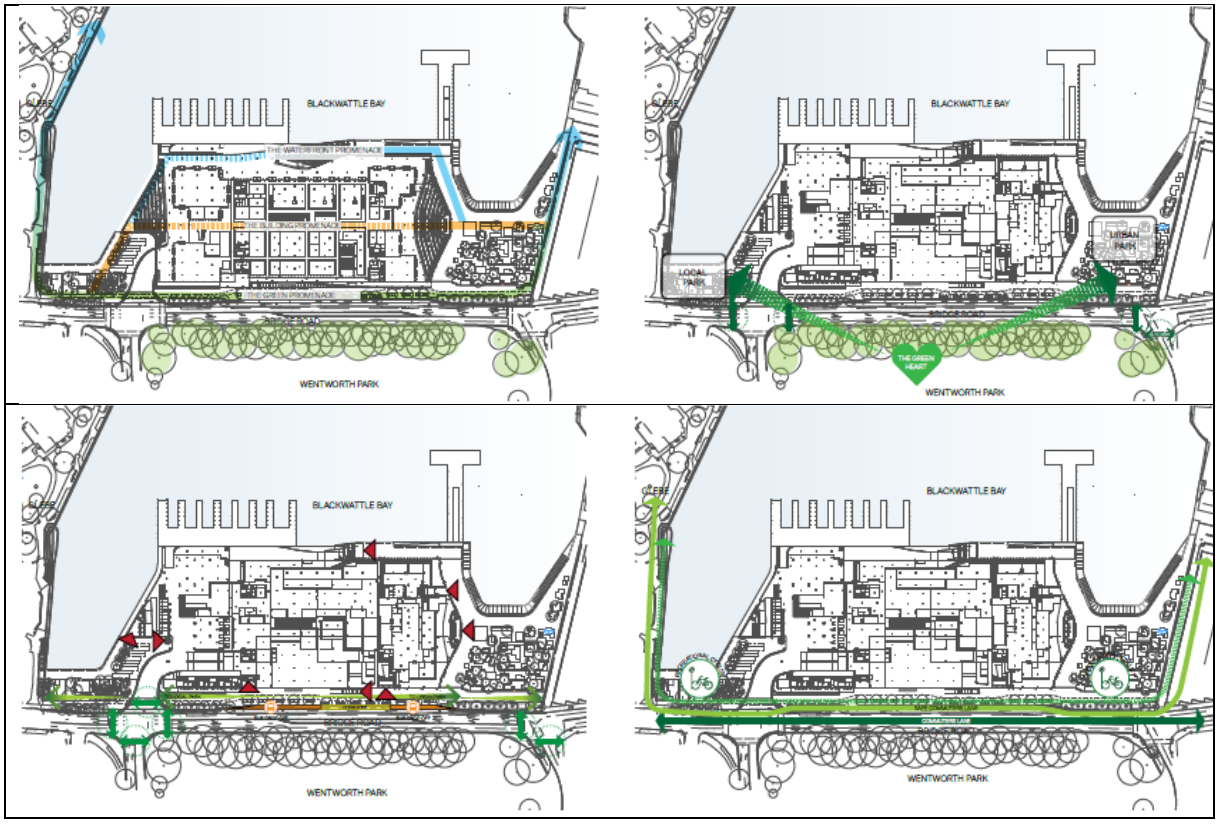


Figure 6 Public Domain Key Areas

3.9.1 Design approach

The design approach is summarised in the following diagrams:



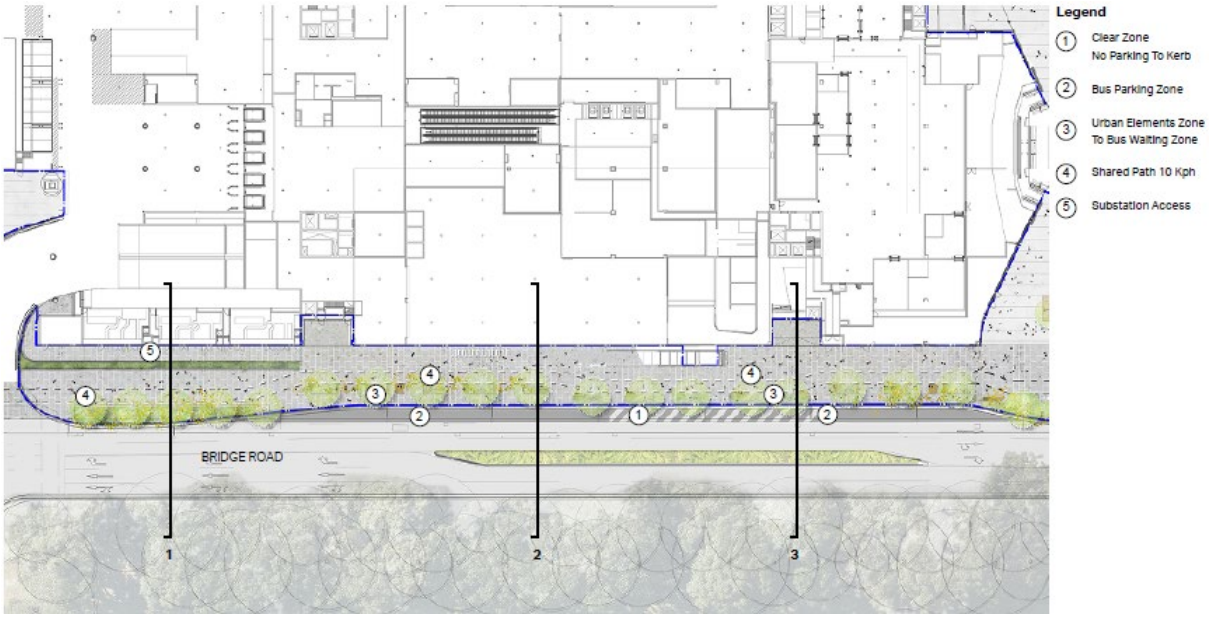
3.9.2 Enhanced public access and spaces

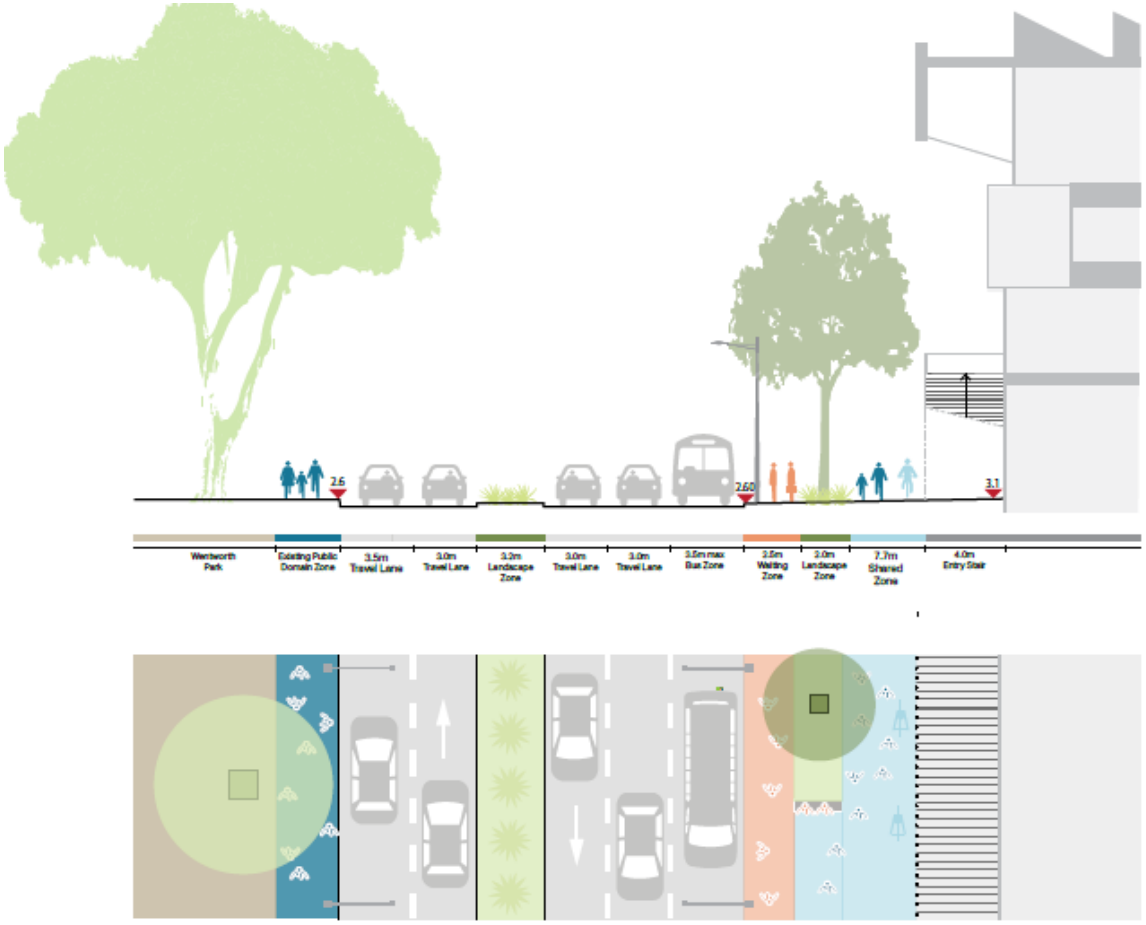
The public domain seeks to create a legible new public heart in the centre of Blackwattle Bay and provide the following:

1. Enhancing the user experience for the community and visitors to the markets by linking the 'Green Heart' of Bridge road with the two public plazas to the eastern and western edges of the building, completing the link from park to harbour and community to the CBD;
2. Supporting the transformation and activation of Blackwattle Bay through the extension of the Glebe Foreshore waterfront promenade through and around the building and Bridge Road to the future promenade to the east;
3. Directly connecting to the site through three main pedestrian promenades which offer a range of arrival and user experiences both internally and externally to the building edges;
4. Connecting with the wider community by providing logical, clear and direct connections into the surrounding public transport network;
5. Enhancing the transport experience of customers by offering streamlined intermodal connections to the following:
    a. Chartered bus drop off and pick up zones along Bridge Road;
    b. Taxi, car share and private vehicle drop off zone in conjunction with the above; and
    c. Bicycle parking facilities located within each of the main plaza spaces and along Bridge Road;
6. Perhaps most importantly, create a legible new public heart in the centre of Blackwattle Bay in the form of a series of new public and civic spaces. These spaces must become a new place for every visitor and user of the site - places of vibrant activity on evenings and weekends which connects customers, communities and workers within a single public and democratic environment.

3.9.3 Bridge Road frontage treatment

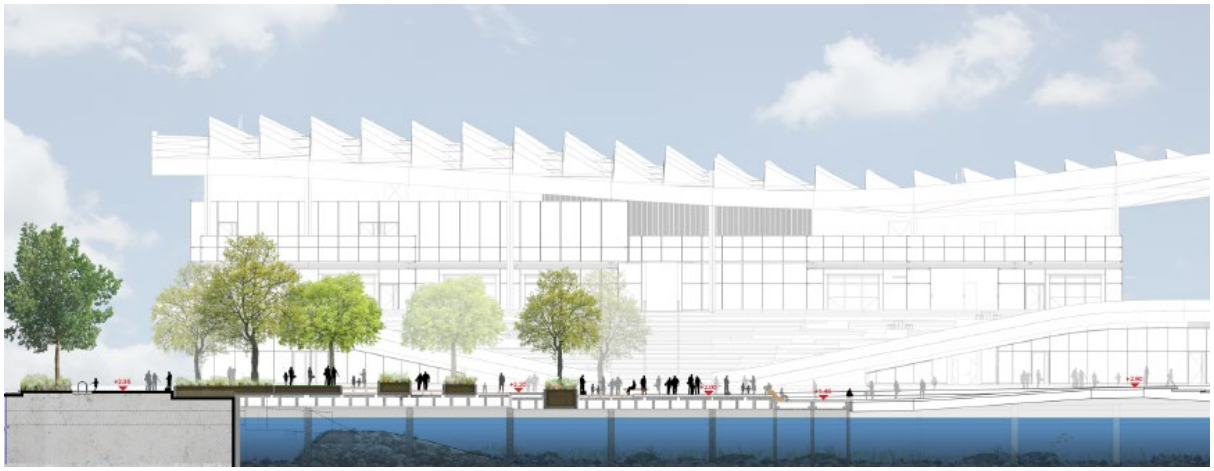
The green heart along Bridge Road seeks to open east west connections along Bridge Road, as well as reinforce the green link and connection to Wentworth Park. The widened frontage to Bridge Road provides enhanced visual connection to Wentworth Park, a street address to the facility, bus drop-off, cycleway and pedestrian movement, activated street frontage with views of the workings of the fish market and landscaping.


Legend
1 Clear Zone
No Parking To Kerb
2 Bus Parking Zone
3 Urban Elements Zone
To Bus Waiting Zone
4 Shared Path 10 Kph
5 Substation Access
BRIDGE ROAD
1
2
3


2.5
2.60
3.1
Wentworth Park
Existing Public Domain Zone
3.5m Travel Lane
3.0m Travel Lane
3.2m Landscape Zone
3.0m Travel Lane
3.0m Travel Lane
3.0m max Bus Zone
2.5m Waiting Zone
2.0m Landscape Zone
7.7m Shared Zone
4.0m Entry Stair

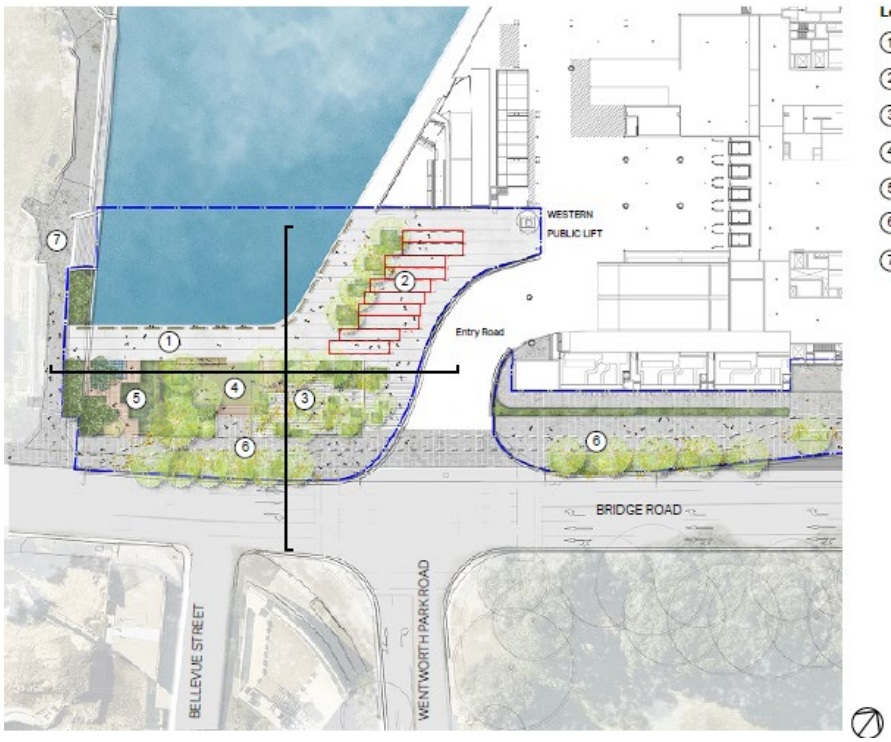
3.9.4 Civic plaza

The Civic Plaza provides a welcoming and intuitive experience with simple, uncluttered plaza spaces ensuring accessibility and connectivity within the new Sydney Fish Market precinct, including the Bridge Road works. The plaza will provide high quality public domain outcomes and amenity to both customers and the public and connect the harbour, street and park as a cohesive and integrated public domain. The design of the plaza prioritises the experience of both the customer and general public in and around the fish markets and broader precinct. It provides a fully integrated user experience which interacts with the harbour, park and new fish market building, offering educational, experiential and public amenity to all users. It provides a series of soft and hardscaped plaza zones for people to meet, gather and circulate through which ties into the surrounding harbour and parkland precinct and a bio-filtration element to treat and discharge treated overflow catchments back into the harbour.



3.9.5 Western plaza

The design of the Western Plaza provides an opportunity to extend the existing Glebe Foreshore into the new Sydney Fish Market site. The plaza provides an opportunity to draw in the surrounding community and fine grain waterfront conditions, allowing people to engage in the water's edge, as well as offering direct links to Bridge Street and the new Sydney Fish Market.



3.9.6 Waterfront promenade

The Waterfront Promenade is the new Sydney Fish Market main public pedestrian connection and address to the waterfront. It connects the existing Glebe foreshore with the future waterfront promenade associated with the future renewal of Blackwattle Bay to the east. It strengthens Sydney's emerging 'Cultural Ribbon' and is a link in one of the world's great waterfront walks.

3.9.7 Materials and finishes

The existing public domain within the precinct is comprised of a range of disparate materials and unconsolidated furnishings. The redevelopment of the new Sydney Fish Market provides an opportunity to re-introduce a consistent material palette to the public domain. This will enable a streamlined language of both ground treatment and bespoke furnishings throughout the harbour. The design seeks to minimise the need for way-finding, signage road markings and bollards through the use of appropriate public domain materials.

The proposal builds upon the design guidelines and in order to create new and improved public spaces incorporating the following principles:

- Use materiality to integrate into the surrounding context
- Demonstrate sustainable design by retaining and reusing materials where possible
- Incorporate human scaled spaces by punctuating large areas of existing paving with smaller landscape spaces
- Use materials to define a clear hierarchy of open spaces and shared paths
- Celebrate the character of the site through the use of sympathetic materials

3.9.8 External lighting

Street lighting, pedestrian lighting and feature lighting would be provided in accordance with Australian Standards and the recommendations of the CPTED consultant (**Appendix 26**).

3.9.9 Connections to light rail and bus

The site is in easy walking distance from three light rail stations at Glebe, Wentworth Park and the Fish Market Station located approximately 250m and 400m walking distance from the site. Bus services along Bridge Road are limited. The development has the potential to support additional services subject to discussions with Transport for NSW which would also would occur as part of the regeneration of the remainder of Blackwattle Bay.

3.9.10 Off-site public domain works and linkages to surrounding areas

Off-site public domain works include the following works to Bridge Road:

- Raising the level of the road and the provision of improved visual connections to Wentworth Park;
- Improvements to the intersections of Bridge Road with Wattle Street and Wentworth Park Road to improved pedestrian access across Bridge Road;
- The reconstruction of Bridge Road in the vicinity of the site to contain improved pedestrian and cycle connections along the Bridge Road frontage of the site;
- Integrating with the pedestrian and cycle path along the western edge of Blackwattle Bay and potential connections on the eastern side of Blackwattle Bay to be implemented with the on-going Blackwattle Bay renewal process.

3.10 Signage strategy

The iconic built form will signify the presence of the new Sydney Fish Market. Otherwise signage would be integrated into the architecture of the development and would be the subject of a separate application. A wayfinding design and signage strategy for the site will be prepared that will include suitably located identification/directional signage to clearly designate alternative accessible paths of travel (ie. lifts) from non-accessible paths of travel (ie. stairs).

3.11 Wharves and wharf operation

3.11.1 Proposed wharves and use

A number of wharves are proposed including:

- Operational wharves on the western side - provision of dedicated, fixed loading and unloading wharves suitable for supplying provisions for fishing fleet and commercial operators. These are located adjacent to an external loading dock the function of which would be to facilitate the unloading of fishing vessels moored at the wharf and general boating activities; and
- A public wharf on the eastern side capable of accommodating recreational vessels and a ferry stop.

3.11.2 Wharves access

The working wharves will have restricted access and would be associated with the wholesaling and auction functions of the working fish market. There is no public access to this area. The eastern wharf is to be accessible to the public.

3.11.3 Services

Wharves are to be provided with a range of utility services for the Sydney fishing fleet such as water, electricity and including provision of ice.

3.11.4 Public transport access

The eastern public wharf is to have the capacity for a ferry service.

3.12 Stormwater management

3.12.1 Proposed measures

A stormwater management plan has been prepared indicating the stormwater management system under consideration (**Appendix 4** in the A3 Volume). WSUD principles under consideration for implementation by the project and specifically for water reuse are indicated in the following diagrams. The site is targeting a minimum 45% net reduction of potable water against current industry norms. The development aims to in the first instance reduce the need for potable water consumption, capture non-potable water and reuse water where possible.

The proposed water quality treatment includes:

- Rainwater harvesting and re-use of roof runoff;
- Proprietary filters; and
- Bioretention systems (including tree pits).

Rainwater will be used to serve landscaping and amenities such as toilets. Other applications would include wash downs for the crate washing areas, auction hall, storage and refrigerated areas, and for motor vehicles. Rainwater harvesting was modelled based on the following design assumptions:

- Minimum connected roof area – It has been assumed that low flows from the entire upper roof area (1.61 ha) will drain directly connected to the rainwater tank.
- > A 100 kL rainwater tank was adopted.
- > The average daily reuse volume adopted was 100 kL/day, predominantly for the cooling tower.

Two types of proprietary filters are proposed to be used:

- Pit Basket Inserts (eg; OceanGuard) - Pit baskets typically consist of a wire basket with a filtration bag liner. They predominantly remove sediment, litter and debris. Low flows are captured and filtered through the filtration bag and provision is made for flows in excess of the treatment capacity to bypass and enter straight into the stormwater network.
- Jellyfish Filter - A Jellyfish Filter uses gravity and filtration cartridges containing membranes to remove litter, oil, solids and particulate bound pollutants (including nutrients, metals and hydrocarbons). They typically have a smaller footprint than other treatment devices.

The pollutant removal rates are presented in the Flooding and Water Quality Assessment Report prepared by Cardno (**Appendix 12**).

3.12.2 Erosion and water quality management

Proposed erosion and sediment control measures are outlined in Section 6.15. Stormwater runoff, sedimentation and turbidity would require treatment by measures such as turbidity curtains, silt fences, filter socks and sedimentation basins.

Water quality monitoring would be carried out prior to works commencing (baseline) and during demolition and construction. Water quality monitoring is to be undertaken at all discharge locations into the Bay.

3.13 Utility services

A Utilities and Infrastructure Report for the development has been prepared by Aecom (**Appendix 14**). This identifies proposed upgrades to utilities and infrastructure and servicing options considered, including wastewater and stormwater recycling for non-potable use, and alternative water and energy supply. An infrastructure staging plan is also prepared to support civil works.

Preliminary calculations undertaken as a part of this report have indicated that the new development site will require:

- An Average Daily Demand (Potable Water) of approximately 820 – 1,110 kL / day;
- An Average Dry Weather Flow (Wastewater) of approximately 705 - 950 kL /day;
- An electrical load requirement of 11.5 MVA;
- A gas load requirement of 491m^3 /hr; and
- Associated telecommunications infrastructure.

Based on a preliminary review of the existing utility infrastructure and proposed works, the majority of services may have the capacity to service the development however further consultation with utility authorities is required. In particular potential upgrade works include:

- Potable Water upgrades on Bridge Road;
- Wastewater upgrades on Bridge Road;
- Potential new feeder cables from the Camperdown Zone Substation;
- Gas infrastructure upgrades

Services can be reasonably upgraded to meet the needs of the development.

3.14 Associated works

The construction of the new Sydney Fish Market involves associated works including a temporary coffer dam, minor extensions to existing stormwater outlets, construction of revetment walls in localised areas of the public domain and adjustment to seabed levels within the coffer dam in the vicinity of the basement to allow for the continued use of existing stormwater culverts and basement construction. These works are described in detail in the Structural Civil and Maritime Design Report (**Appendix 10**).

3.15 Waste Management Plan

3.15.1 Waste Management Strategy

The Waste Management Plan prepared for the development by Aecom (see **Appendix 15**) details strategies for reduction, re-use and recycling of waste management practices to achieve the best environmental outcome. Waste management has been assessed for demolition, construction and operations.

The waste management assessment involved an analysis of the waste characteristics for the proposal, identifying types and approximate quantities of waste streams likely to be produced. An initial desktop waste classification has been undertaken in accordance with the EPA's Waste Classification Guidelines.

The management strategies for the site have been prepared in accordance with the WARR Strategy and the City of Sydney requirements. As such, management strategies developed for each waste stream have been designed to be consistent with the waste management hierarchy, meet relevant legislation and policy, and achieve the environmental objectives of the operational works.

The following is the preferred order of adoption of waste management practices:

*" • **Avoid** the potential of waste by identifying appropriate materials and procuring them;*

- ***Reduce** waste by optimising operation;*
- ***Re-use** waste by identifying sources that can utilise the waste;*
- ***Recycle** waste by identifying facilities that are able to recycle waste;*
- ***Recovery** of waste materials; and*

• ***Disposal*** *of waste when there is no reuse or recycling potential at an appropriate facility."*

The underlying objective of effective waste management is to minimise the impacts to environmental and social values and to implement sustainability principles. To deliver effective waste management across the development, a number of measures would be adopted as discussed in the WMP.

3.15.2 Construction waste management

The WMP identifies means of waste avoidance, reuse, recycling and disposal for all waste streams including contaminated or hazardous waste and liquid waste. Details of waste management during demolition and construction are provided in **Appendix 15**.

The key objectives for the management of waste generated by and construction are to:

- minimise waste generation on site and recycling generated;
- segregate waste on site to maximise recycling;
- segregate hazardous waste for appropriate treatment and disposal, where applicable; and
- divert 95% of construction waste away from landfill in the long term.

3.15.3 Operation waste management

Objectives of waste management

The objectives for the management of waste generated by the operations are to:

- minimise waste generation on site and recycling generated;
- segregate waste on site to maximise recycling;
- identify solutions to manage specific waste streams in a manner that maximises diversion from landfill (e.g. expanded polystyrene); and
- divert at least 80% of total operational waste and recycling from landfill.

Waste generation

The new Sydney Fish Market will have a number of different waste generating areas on site including:

- retail and catering;
- wholesale trading area;
- auction hall and loading dock;
- wharves/wharf operations;
- offices;
- the Sydney Seafood School;
- external shared public dining.

Total estimated waste and fish offal generation is shown in the following tables.

Table 2: Total Estimated Waste Generation Rates at the new Sydney Fish Market

Waste Stream	m^3/week	Tonnes / week	Tonnes / year
Residual Waste (excluding food organics)	158	27	1,390
Sub-total Residual Waste	**158**	**27**	**1,390**
Food Organics	25	30	1,543
Fish Offal	40	48	2,500
Sub-total Organic waste	**65**	**78**	**4,053**
Cardboard	110	8.8	458
Expanded Polystyrene (EPS)	86	2.4	126
Pallets	14	2.2	114
Comingled recyclables	2.5	0.8	42
Steel	0.02	0.02	1.01
Soft Plastic	0.02	0.01	0.34
Motor oil (from boats)	0.85	0.75	39
Sub-total Recyclables	**213**	**15**	**780**
Total	**436**	**120**	**6,223**

The design accommodates a waste management room in the basement to provide appropriate storage for all forms of waste, including refrigerated rooms for fish offal. Other crucial waste infrastructure would be located at the loading dock to accommodate functions such as a waste compactor for residual waste, a cardboard baler, baled cardboard temporary storage, extra residual waste and organic waste mobile garbage bins and skips for broken pallets and scrap metal.

Waste facilities will be designed and managed to minimise and control the following impacts:

- land and surface water contamination as a result of spills or inappropriate storage, handling, transportation and disposal of solid and liquid wastes;
- noise impacts associated with waste collection, movement and transport;
- odours and vermin resulting from improper storage and treatment of solid and putrescible wastes;
- visual amenity impacts resulting from waste storage and movements at the Site (e.g. bins storage, collection and transport); and
- off-site land and water pollution due to windblown wastes following inappropriate storage, handling, and transportation of wastes.

3.16 Odour management

During construction

An assessment of dust and other emissions during construction has been undertaken and measures recommended for minimising amenity impacts from dust and emissions during

construction. These have been considered in the CEMP contained in **Appendix 13** and will be implemented during construction.

During operation

Based upon a review of activities that are proposed to occur at the new Sydney Fish Market, potential air emission sources associated with the operational phase have been identified as follows:

- Odours and particulates from retail kitchens;
- Odours from handling, processing and storage of seafood and waste;
- Odours and Volatile Organic Compounds (VOCs) from polystyrene recycling;
- Odours from wastewater treatment;
- Products of combustion from operational phase road and marine traffic;
- Products of combustion from generator/fire pumps/hot water generators;
- VOCs from diesel storage room; and
- Refrigerant gases from plant rooms.

A comprehensive exhaust ventilation system is proposed in order to capture and, if necessary, treat the emissions prior to release via dedicated discharge vents located on the roof of the building. Also, odour generation will be controlled by temperature control in the wholesale processing areas and auction hall and associated areas (e.g. direct sales, bulk bin unpack, transhipment etc.). A refrigerated room (maintained at 4ºC) will be provided within the waste management room for storage of offal. Implementation of best practice facility management in terms of cleaning and waste removal and management.

3.17 Hours of operation

The proposed hours of operation of the new Sydney Fish Market are:

- Fish market operations (loading and unloading, wholesale areas and other functions on the ground floor) and the wharves and operations parking would operate 24 hours a day, seven days a week as is the case at the existing Sydney Fish Market;
- Upper level retail and food and beverage areas and the mezzanine office area and Sydney Seafood School would operate from 7.00am to 10.00pm Sundays to Thursdays and 7.00am to 12.00am (midnight) Fridays and Saturdays.
- Extended trading would occur at Easter, Christmas and New Year;
- Public domain areas including stairs, promenades and public lifts to the upper promenade level would be open 24 hours a day seven days a week.

3.18 Facility management

Facility management will be the responsibility of the operator. The facilities management services include:

- Building Maintenance and life cycle replacement;
- Cleaning;
- Waste Management;

- Odour Management;
- Pest Control;
- Grounds Maintenance;
- Utilities Management;
- Security;
- Complaints handling procedures;
- Emergency response planning.

A number of proven management information systems will be used for this purpose and will be incorporated into an operations management plan to be prepared prior to operations commencing.

3.19 Public domain management

The public domain will be retained in the ownership of the NSW Government and managed by Infrastructure NSW. Infrastructure NSW has developed a preliminary management structure for the site and adjoining lands within Blackwattle Bay to achieve the following outcomes:

- support the precinct as a place for people, with positive social, cultural and economic outcomes for workers, visitors and the surrounding community;
- a diverse high-quality mix of experiences and activities that complement the new Sydney Fish Market as an international destination;
- highly enjoyable publicly accessible open space that has a high quality of amenity and enhances the character of the area;
- public safety.

This will be achieved by a governance structure that seeks to:

- facilitate the use, upkeep and enjoyment of the site and adjoining public domain in Blackwattle Bay as a whole;
- unite all stakeholders to ensure enduring and sustainable place management and programming;
- support a transparent, inclusive and consistent decision-making framework with a clear approach to membership and mechanisms for financial sustainability;
- maintain independence of each component, but ensure coordination, shared responsibility and appropriate involvement in decision making;
- create an equitable (fair and reasonable) and agreed position in terms of responsibilities, obligation and contributions;
- maintains flexibility to ensure the renewal programme for Blackwattle Bay can be carried out in stages respond to changing requirements.

3.20 Staging

Construction will be staged as indicated in the construction staging report (**Appendix 16**). It is likely that Bridge Road upgrade works will be the first stage of construction. In the event that consent is granted, the applicant requests a separate schedule of consent conditions for the road works.

Works on the building will be completed prior to demolition works on part of the existing Sydney Fish Market site (approved under the concept DA). Once the new Sydney Fish Market becomes operational and the existing Sydney Fish Market closes, the remainder of the public domain works will be completed. An interim occupation certificate (or equivalent) would be required to enable relocation of existing Sydney Fish Market operations prior to completing the public domain.

It is envisaged that subdivision would occur once the works are completed and final surveys undertaken.

3.21 Subdivision

Subdivision of land forms part of this application:

a) subdivision of the land to create an allotment on which the new Sydney Fish Market would be built. A plan of proposed subdivision is provided in **Appendix 5** of the A3 Volume. The proposed subdivision will create 2 lots (Lot 100 and Lot 101) to allow the leasing of the site and is intended to reflect the boundary of the development footprint (Figure 4); and

b) a further subdivision of proposed Lot 100 to create lots to enable the building to be on a separate lot to the public domain and water, and to allow the building to be leased in separable parts, as contemplated in the proposed plans provided in **Appendix 5** of the A3 Volume.

4. CONSULTATION

Engagement with key stakeholders, affected landowners, neighbours and the broader community is an important aspect of this environmental assessment and was required by the SEARs.

The NSW Government's vision is to create a world-class food and dining attraction on Sydney's inner harbour that will be dynamic, sustainable, and sympathetic to the local area. This vision is inspired by the community's aspirations and feedback from the extensive public consultation that UrbanGrowth has undertaken to inform this EIS.

Extensive consultation has taken place since 2014 to inform various stages of the planning for the Bays Precinct. The early consultation focused on Bays Precinct as a whole in order to form the vision for the precinct. Later consultation focused on Blackwattle Bay in order to inform the specific vision for the site and the planning process. A summary of the key consultation activities carried out to inform this EIS are outlined below.

4.1 Specific consultation by UrbanGrowth prior to DA lodgement

Date	Activity/Stakeholder	Feedback	Action
29 March 2019	On behalf of UrbanGrowth NSW, Sydney Fish Market met with key representatives of the local fishing fleet.	• The general view of the fishers was option 4 could work best subject to the following considerations: ○ Due to the inherent design of trawlers, they are difficult to maneuvre, particularly when they are carrying a load of fish and will need to drive into their berths bow first, ○ Trawlers (and long-liners) have their decks configured in a way that restricts unloading/loading to the right hand-side of the vessel. ○ The net repair zone must be located behind the trawl fleet	• Consider the fishers points in the wharf design.
29 March 2019	Meeting with the Rowers, dragon boaters and the Sydney Fish Market	• UrbanGrowth NSW presented five different options to the rowers that have been specifically developed to address their concerns. • After discussion on all options, all parties agreed that option 4 provided the best outcome for both the rowers, dragonboaters and the Sydney Fish Market. • The rowers said, if that option is pursued there may be no need to reconfigure the public pontoon in front of the Glebe Rowing Club. • It was reiterated however, that the option needed to be discussed with the fishers. • In addition, both the rowers and the dragon boaters requested that	• Test option four with the fishers • Undertake a needs analysis of users in the entire bay

Date	Activity/Stakeholder	Feedback	Action
		UrbanGrowth NSW undertake a needs analysis of users in the bay to capture everyone who has access to the bay and what their on-water intention is.	
13 February 2019	Attended a community meeting hosted by Hands off Glebe – attended by about 50 people	Questions included: • Why will the new Sydney Fish Market be moved to the head of Blackwattle Bay? • Will UrbanGrowth NSW still deliver the harbour promenade? • Will there be development on Wentworth Park? • How will you accommodate the increase in traffic? • How will you handle contamination through the new build? • How will you ensure the new development wont impact rowers?	
10 January 2019	***Briefing of Bays Precinct Community Reference Group***	• Expressed a desire to be kept up to date on the DA submission • Had questions about the plans for the existing Sydney Fish Market site	
17 December 2018	***Property Council Australia member briefing – 150 people***	• Positive feedback on the design and the future opportunities for Sydney	
15 December 2018	***Open community information session held at Broadway Shopping Centre – 81 people attended***	• 68.4% of attendees expressed favorable sentiment towards the design of the new Sydney Fish Market. • many people expressed positive feedback about the new shared pedestrian/cycle path, the plan for public plazas at each end of the new Sydney Fish Market, and news that the plans will not impact the current green space of Wentworth Park. • Maintaining Wentworth Park as a public open space and protecting the Moreton Bay fig trees along Bridge Road was ranked as the number one important item from community feedback forms. • People welcomed the proposal to limit the number of parking spaces as to not encourage more cars onto the roads. However, more detail regarding public transport solutions for the area was ranked as the second most important item from community feedback forms.	
8 December 2018	***Open community information session held at St Barnabas***	• As above	

Date	Activity/Stakeholder	Feedback	Action
	Church – 67 people attended		
4 December 2018	***Open community information session held at the St Barnabas Church – 52 people***	• As above	
1 December 2018	***Open community information session held at the Glebe markets – 25 people attended***	• As above	
20 November 2018	***Tourism and Transport Forum Briefing with the Sydney Fish Market***	• Positive feedback on the design and the future opportunities for Sydney	
19 November 2018	***Sydney Business Chamber breakfast briefing with the Sydney Fish Market – 34 people***	• Positive feedback on the design and the future opportunities for Sydney	
19 November 2018	***Meeting with Rowing representatives, Dragon boaters and Sydney Fish Market*** ***The meeting was held at Glebe Rowing Club, give all participants the opportunity to see the rowing club in the context of the new Sydney Fish Market site***	• Rowing reps are concerned about the proximity (54m) between the proposed commercial fishing wharves at the new market and the launching pontoon at the Glebe Rowing club. They are also concerned that this distance will shorten even further when the respective vessels are launching and returning. • Shifting the pontoon to angle in the other direction could be part of the solution (Glebe Rowing is amenable to this). This may also mean that the University ramp next door would need to be reangled so there is enough launching distance between the two sites. • A navigation path for the fishing boats entering the new market will be required. • There was some concern that the fishing boats will find it difficult to see the lit rowing boats if the new market is lit behind them. • The rowers asked if jetties could be removed from the new Fish Market design and the trawlers pull up to the wharf horizontally. SFM and UrbanGrowth NSW said they would look at that.	• All parties to consider solutions then reconvene as a smaller group to discuss. • Involve RMS and representatives from the fishermen in the next meeting.
28 November 2018	***Meeting with strata of 82 Wentworth Park Road***	Detailed briefing with a constructive discussion • Concerned about the structural integrity of their building	• Dilapidation report will be requested • Traffic assessment to

Date	Activity/Stakeholder	Feedback	Action
		• Concerned about noise and pollution caused during construction and operations • Concerned about the potential for vermin and birds to impact the building • Raised traffic impacts as an issue	review and assess impacts if any of new facility? • Evacuation plan should be considered for new facility on major storm event • Crime prevention assessment to include adjoining areas • Lighting to ensure it considers adjoining properties • Reflectivity of roof structure and building façade to consider adjoining properties
26 November 2018	***Briefing of City of Sydney Councillors at Council Chambers, Town Hall***	Detailed presentation of new fish market design • Concern raised about safety and proximity of new facility's commercial wharves to Glebe Rowing Club launching pontoon • Question raised about whether the proposed cycle path on the north side of Bridge Road was a dedicated path or a shared path. • Question about opportunity to provide at grade access to commercial wharves during 'off hours'. • Suggestion to consult with Sustainable Destination Partnership	• Continue consultation with Glebe Rowing Club, Sydney University Boat Club, Dragon Boats NSW, and Sydney Fish Market
November 2018	***Phone call or email leading up to, and day of announcement of the design***		
	Monica Barone, City of Sydney	None	**None**
	Jamie Parker, Member for Balmain	Requested briefing	**Briefing currently being scheduled.**
	Patricia Forsyth, Sydney Business Chamber	None	**None**
	Romily Madew, Green Building Council of Australia	None	**None**
	Jane Fitzgerald, Property Council of Australia	None	**None**
	Bays Oversight Group / Senior Officers Group	None	**None**

Date	Activity/Stakeholder	Feedback	Action
	Angus Mitchell, RMS	None	**None**
	Elizabeth Kincade, DPE	None	**None**
	Graham Jahn, City of Sydney	None	**None**
	Cathy Thurly, DPC	None	**None**
	Brendan Bruce, iNSW	None	**None**
	Project Working Group (CoS and DPE)	None	**None**
	Ben Hewett and Olivia Hyde, NSW Government Architect	None	**None**
	Michael Heenan, AJ&C	None	**None**
	Australian Institute of Architects	None	**None**
	Planning Institute of Australia	None	**None**
	Colin Rudd, Project Management Office	None	**None**
	Paul Walter, NSW Chapter – Australian Institute of Architects	None	**None**
	Andrew Nimmo, NSW Chapter – Australian Institute of Architects	None	**None**
	Pam Garrett, Sydney Local Health District	None	**None**
	NSW Office of Environment and Heritage	None	**None**
	Sydney Water	None	**None**
	Mark McEnearney, Ausgrid	None	**None**
	Andrew McKinnon, Boat Owners Association	None	**None**
	Michael Jarvin, Boating Industry Association	None	**None**
	Monique Andrew, Cement, Concrete & Aggregates Australia	None	**None**
	Ian Ford, Commercial Vessel Association	None	**None**
	Peter Geoghegan, Consult Australia	None	**None**
	Wendy Hayhurst, NSW Federation of Housing Associations Inc.	None	**None**

Date	Activity/Stakeholder	Feedback	Action
	Vincent Ogu, Southern Sydney Regional Organisation of Councils	None	**None**
	Charles Rich, Sydney Alliance	None	**None**
	Mal Hiley, Sydney Harbour Maritime Forum	None	**None**
	Carol Giuseppi, Tourism Accommodation Australia	None	**None**
	Steve Mann, UDIA	None	**None**
	Chris Johnson, Urban Taskforce	None	**None**
12 November 2018	***Briefing of recreational on water users:*** *Dragon Boats NSW Purple Storm Outrigger Club Rowing NSW Glebe Rowing Club Sydney University Boat Club Pacific Dragons*	Positive response from group about the design. - concern that the length of one of the new wharves is too close to the wharf used by Glebe Rowing Club and poses a safety risk. - general concerns that there will be further growth of the wharves over time and it will encroach further into the Bay.	- UGDC to investigate interaction of marine construction works with Glebe foreshore at the Western Plaza zone. - A on water manoeuvring plan is to be prepared to better understand the interaction of the fishing fleet and the two rowing wharves - A lighting study it to be prepared to understand the impact of how the lighting from the new facility could impact the recreational on water users.
12 November 2018	***Briefing of Bays Precinct Industry Reference Group***	Positive response about the design.	**No action required**
30 October 2018	***Briefing of Bays Precinct Community Reference Group***	Positive response from group about the design. - Wanted more information on roads, transport & cycling paths. - Concerns that cyclists won't like a shared pedestrian/bike path.	**Committed to continued dialogue**

Date	Activity/Stakeholder	Feedback	Action
29 October 2018	***Blackwattle Bay Secondary School – meeting with Principal***	Positive response about the design. - Wants parking and access to their school addressed. - 10/10 -10/11 are HSC exams. Would like construction noise considered during this time. - Concerns re public domain and access to the school – suggests landscaping could assist in delineation.	**Committed to continued dialogue** **Committed to follow-up with Katie Joyner and Rod McKay**
30 August 2018	***Email to agencies*** Email seeking feedback and offering formal briefing on the proposed development to the following agencies:		
	NSW Roads and Maritime Services	No response	
	Transport for NSW	No response	
	NSW Office of Environment and Heritage	No response	
	NSW Department of Primary Industries	No response	
	Environment Protection Authority	No response	
	Sydney Water	No response	
	The Port Authority of NSW	General comments	**Addressed in EIS**
	Property NSW	No response	
	NSW Police	No response	
	Department of Education	No response	
	Sydney Local Health District	No response	
16 August 2018	***NSW Schools Infrastructure - Meeting to discuss works to land owned by the school***	Support for proposal. Need for UrbanGrowth to continue to consult with Principals.	Commitment to continued dialogue
10 & 12 August 2017	***Community Engagement Workshops***	Part of the ongoing Design Excellence Strategy. Design solution has focused on maintaining the authenticity of the working fish market whilst ensuring public access to the waterfront, and improving amenities of the site.	Part of the ongoing Design Excellence Strategy. Design solution has focused on maintaining the authenticity of the working fish market whilst ensuring public access to the waterfront and improving amenities of the site.

4.2 General and regular consultation

Infrastructure NSW engages on a regular basis with key stakeholders and hold regular information events. The following table outlines the consultation undertaken specifically in relation to the Bays Precinct, Blackwattle Bay and/or the new Sydney Fish Market.

Stakeholders	Consultation Method	Frequency	Issues
NSW Government Senior Officers Group	• Meetings	• Typically monthly	• Review and discuss cross agency items
Design Review Panel	• Meetings	• Typically monthly	• Part of the ongoing Design Excellence Strategy. • Design has been amended to reflect DRP concerns, including changes to the promenade and promenade stairs; Bridge Rd public domain; building planning; ongoing public lift studies.
City of Sydney	• Meetings • Workshops • Briefings • Emails/phone calls	• Regularly as a member of the Design Review Panel for the new Sydney Fish Market • Fortnightly as part of the Project Working Group for Blackwattle Bay. • Other times as required.	• Design excellence for the new Sydney Fish Market • Strategic input into the urban renewal of Blackwattle Bay • Feedback on destinations.

Community	• Meetings
	• Phone calls
	• Emails
	• Open House program
	• Call for Great Ideas – Community Advisory Panel
	• Events
	• Workshops
	  ○ Design Principles Consultation Aug 2017
	  ○ Climate Change Study Nov 2017
		• As required
		• 300+ email responses per year.
		• Open Houses on the following dates:
		  ○ 15, 22, 24 and 28 November 2015
		  ○ 20, 21, 27 February and 5 March 2016
		  ○ 21, 28 May and 19 June 2016
		• Public Events/Markets:
		  ○ Glebe Markets, Mar 2016, May 2016, Aug 2016,
		  ○ Glebe Street Fair, Nov 2016
		  ○ Central Park Markets, Feb 2016,
		  ○ Balmain Markets, Feb 2016
			• Input into the future vision for the Bays Precinct
			• Impacts on local infrastructure and properties
			• Opportunities for business and community

Stakeholders	Consultation Method	Frequency	Issues
		○ Rozelle Markets, Feb 2016, May 2016, Aug 2016, Nov 2016 ○ Brewery Yards Market, June 2016, Sep 2016, Dec 2016, Feb 2017 ○ Pyrmont Growers Market, June 2017 ○ Bay Run, 6 Aug 2017, 5 Aug 2018 ○ Blessing of the Fleet, 17 Sep 2017, 23 Sep 2018 • Info Sessions: ○ 24, 28 Nov 2015 ○ 6, 8 April 2017	
The Bays Precinct Reference Group *(41 members including community, business, industry, and peak groups)*	• Meetings. Forum to share information and provide feedback on the program. • Phone calls • Emails	• Meetings ○ 2015, Dec ○ 2016, Mar, Aug, Dec ○ 2017, Mar, Aug, Nov ○ 2018 Apr/May • Attendance at Active Recreational Needs Study Commencement workshop 28 April 2016 • Climate Change Workshop	• Input into the future vision for the Bays Precinct • Impacts on business operations, infrastructure and properties • Opportunities for business and community
School students	• Letters • Facilitation of two fieldwork trips and competition "Mastering the Bays" in partnership with Observatory Hill Environmental Education Centre for World Town Planning Day • Launch of 'The Big Plan' • Observatory Hill Environmental Education Centre's fieldwork program for Stage 3 (Primary) • Teacher survey • Phone calls, emails	• Letters in October 2015 about Transformation Plan • 'The Big Plan' distributed to schools in May 2016 and workshop on 19 May 2016 at Annandale North Public School. • Field trips ○ November 2015 ○ Term 3 2016 • 21 teacher surveys completed providing feedback on the Big Plan	• Input into the future vision for the Bays Precinct
University students	• Lectures and presentations as part of course	• University round table event with a focus on The Bays held on 2 October 2015.	• Input into the future vision for the Bays Precinct

Stakeholders	Consultation Method	Frequency	Issues
	• University round tables	• Other University Round Table Events were held 20 November 2015, 15 February 2016, 6 May 2016. • Exhibition of university student work on White Bay Power Station at event in 30 October 2015 • As required	• Design, heritage and other aspects of existing spaces • Access to buildings/land
Sporting groups	• Meetings • Emails, phone calls • Active Recreational Needs Study Commencement workshop 28 April 2016	• Attendance at Active Recreational Needs Study Commencement workshop 28 April 2016 • Climate Change workshop	• Current and future provision of sporting facilities
Government Communication Managers	• Meetings • Phone calls • Emails	• Monthly	• Coordination of communication messages across government.

4.3 Consultation for technical studies supporting the EIS

Study	Stakeholder	Date of consultation	Feedback received	Action
Biodiversity Development Assessment Report – Ecological	N/A			
Marine Ecology Assessment – Ecological	N/A			
Navigation Impact Assessment – Royal Haskoning	Port Authority of NSW	Phone and email correspondence with Philip Holliday (Harbour Master) and Sharad Basin (Manager, Compliance and Planning) between 20th September and 31st October 2018.	Written comments within Navigation Impact Assessment Report: • corrected terminology for 'Marine Notice' • clarification that RMS would control communication to boating community at project site • requested inclusion of Harbour Master Approval process for	Text edits made to Section 4.6 and Section 4.8 of reports to address terminology and RMS management of Marine Notices. Included summary of Harbour Master Approval process for disturbance to the port bed under Section 67ZN of the *Ports and Maritime Administration Regulation 2012*,

Study	Stakeholder	Date of consultation	Feedback received	Action
			disturbance to the port bed in mitigation measures for construction phase	within Section 4.6 and Section 4.8 of reports.
Structural Civil and Maritime Design Report – Mott MacDonald	Road and Maritime Services (RMS)	Thursday 13/09/18	RMS design review comments have been provided and response have been provided and/or discussed in the stakeholder meeting. There are minor general design comments that need to be incorporated. Wider traffic impact issues need to be considered in the overall intersection design.	Design comments have been addressed and incorporated in the latest Bridge Road design. The revised concept design for Bridge Road drawings and report have been included in Appendix B of the report.
Traffic Impact Assessment - Arup	Transport for NSW	07 / 12 / 2017	Advice regarding light rail, bus stops and ferry planning	Feedback incorporated in public transport section within TIA
	Roads and Maritime	14 / 12/ 2017	Advice on planning for Pyrmont Road network	Advice incorporated in traffic analysis contained in the TIA
	City of Sydney Council	30 / 01 / 2018	Input to the transport planning considerations for the project, particularly active transport network	Feedback addressed within walking and cycling section within TIA, as well as within the overall design
	Roads and Maritime	13 / 09 / 2018	Discussion around Bridge Road design and layout	Incorporated in Bridge Road design as assessed in the TIA
Flooding and Water Quality Assessment – Cardno	City of Sydney	15/12/2017	Discussion and agreement on flood modelling methodology.	Agreed modelling approaches were adopted in all flood modelling as summarised in our report.
Utilities and Infrastructure Report – AECOM	Ausgrid	Ausgrid: • 10/10/2017 • 07/06/2018 • 21/08/2018 • Various phone calls	Ausgrid: • Ausgrid advised works required for relocation of existing substations; • Darling Harbour ZS likely not have sufficient capacity, supply may need to come from Camperdown (subject to further Ausgrid investigations)	Ausgrid: • Potential feeder route to Camperdown is assessed • Substations are assumed to be naturally ventilated if low voltage connections

Study	Stakeholder	Date of consultation	Feedback received	Action
			• As per NS113, basement chamber substations are allowed in the Sydney Metro Area • Fish Markets substation would be naturally ventilated as the site is not within range of the CBD SCADA network	Sydney Water: • Proposed connections are shown with the report
		Sydney Water: • IWCM Workshop 12/09/2017 • Mid-2018 various phone calls Jemena • Mid-2018 various phone calls NBN • 10/05/2018	Sydney Water: • Held IWCM framework workshop • Sydney Water confirmed supply was availability for water/wastewater though some upgrades may be required subject to further investigations Jemena • Jemena confirmed that supply is available NBN • NBN confirmed that supply is available	Jemena • Proposed connections are shown with the report NBN • Proposed connections are shown with the report
Services Demolition and Infrastructure - AECOM	Ausgrid	Ausgrid: 06/02/2018	Ausgrid: Ausgrid provided Design information Package for substation decommissioning works	Ausgrid: • Relocation requirements included into substation decommissioning design
Waste Management Plan – AECOM	City of Sydney	09/10/2017	City of Sydney: - Consultation was on wider Bays East precinct but short list of options was created.	City of Sydney: While for the broader precinct, the principles discussed in the workshop were applied to the new Fish Market site.
Aboriginal Cultural Heritage Assessment – Artefact	Office of Environment and Heritage (OEH CBD office)	1/3/2017	Provided list of groups & persons.	All identified groups were included in consultation for Aboriginal Cultural Heritage Assessment

Study	Stakeholder	Date of consultation	Feedback received	Action
				Report (Artefact 2017 – see Appendix 3).
	Metropolitan Local Aboriginal Lands Council (MLALC)	1/3/2017	N/A	MLALC included in consultation for Aboriginal Cultural Heritage Assessment Report (Artefact 2017).
	Greater Sydney Local Land Services (LLS)	1/3/2017	N/A	
	City of Sydney council	1/3/2017	N/A	
	The registrar National Native Title Tribunal (NNTT)	1/3/2017	No Native Title Claims in Study area	Cited in Aboriginal Cultural Heritage Assessment Report (Artefact 2017) Section 1.6.2
	Native Title Service Corporation (NTSCORP)	1/3/2017	Advised that the study area is in freehold tenure, which extinguishes native title. Therefore the NNTT has no information available on the area	Cited in Aboriginal Cultural Heritage Assessment Report (Artefact 2017) Section 1.6.2
	Various other interested parties, as per report.	8/3/2017		

4.4 Early Bays Precinct Engagement

Date	Activity/Stakeholder	Responses	Output
May 2015	***Call for Great Ideas*** Campaign calling for ideas submissions.	213 submissions	
May 2015	***Sydneysiders Summit*** A free public event at ATP's Exhibition Hall that included interactive displays and, displays showing the sites history and current uses. There was a series of short talks and the opportunity to provide feedback, suggestions and ideas about what the community would like to see in the area. It aimed at building public knowledge, understanding and participation in the transformation of The Bays Precinct.	1,200 participants	
May 2015	Release of discussion paper ***Transforming City Living: The Bays Precinct*** for public comment	4,300 items of feedback submitted	**The Bays Precinct Sydney: Urban Transformation Plan**
April 2015	***Discovery Day.*** Open day that gave the public access to normally inaccessible waterfront land on	25,000+ participants	

Date	Activity/Stakeholder	Responses	Output
	Sydney's harbour that makes up The Bays Precinct program area. This event allowed Sydneysiders a chance to see close-up what the area is like today, learn about its past, and consider its future.		
November 2014	***Bays Precinct Sydney International Summit.*** This included: - 1 day workshop focusing on financing and funding - 2 day event that included urban transformation practitioners, academics, policymakers and invited community in discussions, presentations, Q&S's and formal feedback opportunities.	350 participants	**May 2015. Discussion paper: Transforming City Living: The Bays Precinct**

4.5 Direct design outcomes from consultation

Engagement reports	Feedback points outlined in the report	Reflected design outcome
Discussion paper: Transforming City Living: The Bays Precinct Informed by Bays Precinct International Summit and Discovery Day	To deliver enduring, socially inclusive and great places to benefit Sydneysiders and national and international communities	The new fish market has been designed to be accessible to all. Based on suggestions from the public, the new fish market is proposed to be relocated to the head of Blackwattle Bay.
	To deliver housing choices, including affordable housing options, through design, finance, and construction excellence	Not applicable. No housing proposed as part of the new fish market.
	To deliver a world class mass and active transit solution that unlocks the economic and human potential of The Bays Precinct and demonstrates a model of environmental excellence	The new fish market will deliver both an expanded footpath on the north side of Bridge Road to encourage active transport to/from the new facility and a new section of the waterfront promenade which when completed will link Glebe to Woolloomooloo.
	To achieve building design excellence and quality urban design in all Destinations	In accordance with the Design Excellence Strategy, and from when 3XN/BVN were engaged in June 2017, the design team has presented to a Design Review Panel (DRP) on eight occasions. The feedback from the DRP has informed and shaped the design of the new fish market.
Informing the Transformation Plan and The Bays Precinct Sydney: Urban Transformation Plan Informed by: Sydneysiders Summit	**Objectives**	
	To provide ecological and marine water quality improvements to enable abundant biodiversity	The design of the new fish market will include marine elements on the new piles and sections of seawalls to improve biodiversity.
	To deliver integrated utilities solutions that enable advanced energy generation and technologies	The design team has prepared an Ecologically Sustainable Development (ESD) strategy which seeks to improve water and energy consumption and

Engagement reports	Feedback points outlined in the report	Reflected design outcome
and Call for Great Ideas		waster generation. Refer to the ESD report.
	To celebrate heritage and culture by creating new experiences throughout The Bays Precinct	The new fish market will deliver a cultural facility which celebrates the history of Blackwattle Bay as a working harbour and the home of the Sydney Fish Market.
	Specific Destination Feedback: Promenade	
	Extension of the Promenade to create a continuous circuit.	The new fish market will deliver a new section of the waterfront promenade which when completed will link Glebe to Woolloomooloo.
	Making the Promenade wide enough to accommodate both pedestrians and cyclists.	The expanded footpath on the north side of Bridge Road will be wide enough to accommodate both pedestrians and cyclists and will encourage active transport to/from the new facility.
	Ensure that activities along the Promenade allow people to connect to the water (eg allowing boats to tie up alongside the Promenade).	The new facility at the head of Blackwattle Bay will deliver new public plazas at each side (east and west) of the new fish market. These plazas will allow for people to connect with the water. Additionally, the new fish market will include a public jetty that will allow for a potential new ferry stop in Blackwattle Bay and for boating day-trippers to tie up their craft for a short time period.
	Make the Promenade accessible by public transport and link it to other areas within The Bays Precinct.	The new sections of promenade will be accessible by all.
	Complete the Promenade as soon as possible.	The new fish market will deliver the first section of this new promenade.
	Include Glebe Island Bridge in the Promenade	Not applicable for this section of promenade
	Consider creating elevated or water-based sections for the Promenade to overcome constraints – for example, the Bays Skywalk idea suggested an elevated walkway along the western shore of Rozelle Bay.	A section of the new waterfront promenade will be elevated over the commercial wharf where the Sydney fishing fleet off loads their daily catch at the new fish market. Public lifts will ensure this section of the elevated promenade will remain accessible.
	Establish an advanced utility services spine under the Promenade to futureproof the provision of utility services throughout The Bays Precinct.	The section of promenade along Bridge Road will incorporate utility services.
	Soften the Promenade edges and introduce 'living sea walls' to improve water quality and create habitats to increase biodiversity.	The design team is investigating several different options to improve the water quality and create habitats to increase biodiversity.
	Specific Destination Feedback: Market District	
	Include Wentworth Park as part of The Bays Precinct so that Wentworth Park is connected to the waterfront and the Sydney Fish Market.	No works are proposed to Wentworth Park as part of the new fish market, however connectivity improvements are proposed. Physical and visual connections to/from the park to the bay

Engagement reports	Feedback points outlined in the report	Reflected design outcome
	Retain elements that are valued (eg the fishing fleet)	have been improved through the proposed reconfiguration of the Wattle St/Bridge Rd intersection and a new signalised intersection at Wentworth Park Rd/Bridge Rd. Both will greatly improve pedestrian access and safety.
	Concerns that the market's authenticity would be lost during the rejuvenation and that prices would increase	Two primary principles have been established to guide the rejuvenation of the new fish market; authenticity and connectivity. Key to the authenticity is showcasing the operations of a working fish market.
	Culture and history in the area should be maintained, including maritime related industries.	An art strategy and a heritage interpretive strategy will be developed to celebrate the cultural and historical attributes of the area.
	Support for the expansion of the retail offering at the Bays Market District to include a new fresh food and produce market.	The new fish market will include an expanded retail offering.
	The need for improved access and connectivity to support the rejuvenation.	Two primary principles have been established to guide the rejuvenation of the new fish market; authenticity and connectivity. Access and connectivity have been improved through the new foreshore promenade, widened Bridge Rd footpath and improved pedestrian crossings at the intersections of Wentworth Park Rd and Wattle St.
	The Sydney Fish Market should be sustainable using renewable energy.	The design team is investigating several sustainable opportunities. The design team is targeting a 5-Star Green Star rating for the new fish market.
	Water within the harbour should be cleaned and free of pollution so that everyone can enjoy it.	Rainwater which falls on the site will be harvested for reuse within the new facility. Any water which is not reused for operations will be cleaned prior to releasing into the bay.
	Relocate all or part of Sydney Fish Market to the head of Blackwattle Bay.	The proposed site of the new fish market is at the head of Blackwattle Bay.
	Relocate Bridge Road (behind the viaduct or a new east-west corridor in place of the Greyhound Track) to create the new Sydney Fish Market site.	The relocation of Bridge Road was analysed and determined to provide no significant benefit to the project.
	Diversify produce, dining offerings, operating hours and expand the Destination to enhance the experience for locals and tourists. Integrate the Bays Promenade with the market district using floating walkways and pontoons and activate with temporary and permanent uses allowing continuous public access to water.	The new fish market will offer an expanded food and beverage, including retail experience for local and visitors alike. It is intended that the new market will trade longer with extended business hours.
	Mixed debate regarding the suitability of the area for housing; while some people supported this approach and requested	No residential development is proposed to occur on the site of the new fish market.

Engagement reports	Feedback points outlined in the report	Reflected design outcome
	housing that would suit a diversity of residents, others did not consider the area to be appropriate for housing.	
Consultation Report: Bays Market District draft masterplan principles Informed by Bays Market District draft masterplan principles consultation	**Final design Principles post consultation**	
	Landscape & Environment	
	Improve access to Blackwattle Bay, the foreshore, and water activities for all users	The new facility at the head of Blackwattle Bay will deliver new public plazas at each side (east and west) of the new fish market. These plazas will allow for people to connect with the water. The site is currently not publicly accessible and cuts off access to the water. The proposal will allow public access to Blackwattle Bay, the foreshore and will support passive and formal water activities.
	Minimise additional shadowing to Wentworth Park and the Glebe Foreshore in mid-winter	The new fish market will not overshadow the Glebe Foreshore and will only over shadow the very north end of Wentworth Park during the mid to late afternoon hours during mid-winter.
	Pursue leading edge sustainability, climate change resilience and improved water quality outcomes	The design team is targeting a 5-Star Green Star rating for the new fish market.
	Access & Movement	
	Prioritise movement by walking, cycling and public transport	The expanded footpath on the north side of Bridge Road will be wide enough to accommodate both pedestrians and cyclists and will prioritise active and public transport to/from the new facility.
	Balance diverse traffic movement and parking needs for all users	The new fish market will provide the same number of car parking spaces as the current facility (417 spaces). These spaces will be utilised by both the operations vehicles (during the late evening and early morning hours) and the retail vehicles (during the day and early evening hours).
	Link the Bays Market District to the City, Glebe, Pyrmont, Ultimo, Glebe Island and White Bay	The new fish market improves links, access and connectivity between City, Glebe, Pyrmont, Ultimo, Glebe Island and White Bay through the new foreshore promenade, widened Bridge Rd footpath and improved pedestrian crossings at the intersections of Wentworth Park Rd and Wattle St.
	Land Uses & Built Form	
	Mandate Design Excellence in public domain, landscape and built form design	In accordance with the Design Excellence Strategy, and from when 3XN/BVN were engaged in June 2017, the design team has presented to a Design Review Panel (DRP) on eight occasions. The feedback from the DRP has informed and shaped the design of the new fish market.

Engagement reports	Feedback points outlined in the report	Reflected design outcome
	Integrate housing, employment and mixed uses suitable to living on the city's edge and the site's characteristics	The new fish market will support employment and mixed uses suitable to the city's edge and the site's characteristics. No residential/housing uses are proposed for the site of the new fish market.
	Maintain and enhance water-based uses and activities	The new fish market will provide facilities for both motorised and non-motorised watercraft.
	Allow for co-existence of land uses over time	The new fish market will allow for co-existence of land uses over time.
	Social, Economic & Community	
	A place for everyone that is inviting, unique in character and socially inclusive	The design of the new fish market will be unique in character, socially inclusive and open and accessible to all.
	Expand the range of active, recreational and community facilities, such as the Waterfront Promenade,	The new fish market expands the range of active and recreational facilities through the new foreshore promenade, widened Bridge Rd footpath and improved pedestrian crossings at the intersections of Wentworth Park Rd and Wattle St.
	Plan for education, health, social and cultural needs	The new fish market will deliver a cultural facility which celebrates the history of Blackwattle Bay as a working harbour and the home of the Sydney Fish Market.

5. STATUTORY AND STRATEGIC CONTEXT

5.1 Environmental Planning and Assessment Act 1979

The EP&A Act and the EP&A Regulation provide the framework for statutory environmental planning in NSW and include provisions relating to approval of development to ensure that proposals which have the potential to impact the environment are subject to detailed assessment, and provide opportunity for public involvement.

5.1.1 Objects of the EP&A Act

The proposed development is consistent with the objects of the EP&A Act as discussed in **Table 3**. Site investigations have determined that the proposed development will not result in any significant negative impacts that cannot be adequately mitigated or managed.

Table 3: Objects of the EP&A Act

Objectives	Response
(a) to promote the social and economic welfare of the community and a better environment by the proper management, development and conservation of the State's natural and other resources,	The development conserves and manages resources by providing for an efficient and effective new fish market facility that promotes the social and economic welfare of the local and broader community.
(b) to facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment,	The development incorporates a range of ESD measures which are a key feature of the design and operation of the facility as outlined in the Design Report (**Appendix 2** of the **A3 Volume**) and the ESD report (**Appendix 21**).
(c) to promote the orderly and economic use and development of land,	The development represents an efficient and economic use of land consistent with environmental planning instrument strategies and policies under the EP&A Act. The development will enable public accessibility to land and harbour frontage which is currently not accessible to members of the public.
(d) to promote the delivery and maintenance of affordable housing,	The development is not inconsistent with this objective.
(e) to protect the environment, including the conservation of threatened and other species of native animals and plants,	The development has been designed and proposed to operate in a manner that minimises impacts to the environment, including threatened species, population and ecological communities, and their habitats. All relevant

Objectives	Response
ecological communities and their habitats,	impacts have been assessed and mitigation and management measures have been proposed to encourage the protection of the environment (Refer to Appendices 7 and 8).
(f) to promote the sustainable management of built and cultural heritage (including Aboriginal cultural heritage),	The cultural heritage of the site has been fully investigated and is to be managed in the design, construction and operation of the proposal as outlined in this EIS including appendices 22 to 24.
(g) to promote good design and amenity of the built environment,	Good urban design and amenity has been achieved with implementation of a design excellence strategy and competitive design process. it is consistent with the objectives and considerations of *Better Placed – An integrated design policy for the built environment of New South Wales* released in May 2017 by the NSW Government Architect.
(h) to promote the proper construction and maintenance of buildings, including the protection of the health and safety of their occupants,	The development would be constructed in accordance with current building standards providing a healthy and safe environment for workers and visitors.
(i) to promote the sharing of the responsibility for environmental planning and assessment between the different levels of government in the State,	The development proposal has evolved in consultation with a range of State government agencies and City of Sydney Council.
(j) to provide increased opportunity for community participation in environmental planning and assessment.	The consent authority will provide opportunity for the involvement and participation in accordance with the requirements of relevant legislation. Consultation has also be undertaken prior to lodgement of the development application with a range of agencies, individuals and organisations as outlined in Section 5.

5.1.2 State significant development

A State environmental planning policy may declare any development, or any class or description of development, to be State significant development (refer to discussion on State Environmental Planning Policy (State and Regional Development) 2011 below). There are a number of provisions of this SEPP and the EP&A Act relating to SSD including:

- Development consent may be granted despite the development being partly prohibited by an environmental planning instrument;
- If part of a single proposed development that is State significant development requires development consent to be carried out and the other part may be carried out without

development consent, that other part of the proposed development is taken to be development that may not be carried out except with development consent;

- If a single proposed development the subject of one development application comprises development that is only partly State significant development, the remainder of the development is also declared to be State significant development (clause 8(2) of State Environmental Planning Policy (State and Regional Development) 2011);
- A development application for SSD that is wholly or partly prohibited may be considered in accordance with Division 3.5 in conjunction with a proposed environmental planning instrument to permit the carrying out of the development.

5.1.3 Requirement for an Environmental Impact Statement

S4.12(8) of the EP&A Act requires that a development application for State significant development is to be accompanied by an Environmental Impact Statement.

5.1.4 Crown Development Application

This development application is a Crown development application because it is a development application made by or on behalf of the Crown. The Crown in this context includes a public authority (not being a council). Infrastructure NSW is a public authority.

5.2 Environmental Planning and Assessment Regulation 2000

This EIS has been prepared in accordance with clauses 6 and 7 of Schedule 2 of the EP&A Regulation.

5.3 Other Legislation

5.3.1 Biodiversity Conservation Act 2016

The Biodiversity Conservation Act 2016 aims to maintain a healthy, productive and resilient environment in the interest of the wellbeing of the community now and in the future that are consistent with the principles of ecologically sustainable development. Specifically, the Biodiversity Conservation Act 2016 relates to the terrestrial environment being animals and plants and not fish and marine vegetation.

An assessment of the terrestrial environment protected under this Act and likely to be affected by the development has been undertaken (**Appendix 7**) including an assessment of the Commonwealth Significant Impact Criteria (Commonwealth of Australia 2013). A referral to the Commonwealth is not required.

5.3.2 National Parks and Wildlife Act 1974

The National Parks and Wildlife Act 1974 ('the NPW Act') provides the basis for legal protection and management of Aboriginal sites in NSW. An Aboriginal Cultural Heritage Assessment Report and supplementary investigations have been prepared for the development (see **Appendix 22**). An Aboriginal heritage impact permit under Section 90 of the National Parks and Wildlife Act 1974 is not required for SSD.

5.3.3 Heritage Act 1977

The key objects of the Heritage Act 1977 are to promote the understanding and encourage the conservation of the State's European cultural heritage, and to provide for the identification, registration and protection of items of State heritage significance.

Under the Heritage Act, approval is required to demolish, move, alter or in some way develop a place, building or land covered by an interim heritage order or a State Heritage Register (SHR) listing. An excavation permit is required to disturb or excavate any land that is likely to result in a relic being discovered, exposed, moved, damaged or destroyed. This may be the case with maritime artefacts in Blackwattle Bay. However, an approval under Part 4, or an excavation permit under Section 139, of the Heritage Act 1977 is not required for SSD.

There is one known item of European cultural heritage significance on the site - the Sydney Water stormwater drain listed under S170 of the Heritage Act 1977. There are a number of items listed on the SHR near the site but not in close proximity (Wentworth Park viaduct, Glebe Island Bridge, Bellevue (house), and Lyndhurst (house)).

5.3.4 Roads Act 1993

Under Section 138 of the Roads Act 1993, a person must not impact or carry out work on or over a public road otherwise than with the consent of the appropriate roads authority. Works are proposed on Bridge Road to improve access to the site. As a result, approval is required under the Roads Act prior to such works being undertaken.

5.3.5 Ports and Maritime Administration Act 1995

Under the regulations to this Act approval is required to activities in the harbour including disturbance to the seabed.

5.3.6 Local Government Act 1993

Under Section 68 of the Local Government Act 1993 a permit is required for certain works including construction of a hoarding. Any required approvals would be obtained.

5.3.7 Water Management Act 2000

The Water Management Act 2000 controls the extraction of water, the use of water, the construction of works such as dams and weirs and the carrying out of activities in or near water sources in NSW. Works otherwise affected by this Act are to be undertaken. However approval under this Act is not required for SSD.

5.3.8 Fisheries Management Act 1994

The objectives of the Fisheries Management Act 1994 are to conserve, develop and share the State's fishery resources for the benefit of its present and future generations. The relevant provisions of Part 7A of the Fisheries Management Act 1994 are discussed in the Marine Ecology Report (**Appendix 8**). A permit under Sections 201, 205 or 219 of the Fisheries Management Act 1994 is not required for SSD.

5.3.9 Protection of the Environment Operations Act 1997

The objectives of the Protection of the Environment Operations Act 1997 are to:

- Protect, restore and enhance the quality of the State's environment having regard to the need to maintaining the principles of ecologically sustainable development;
- Increase the opportunities for public involvement and participation in environment protection;
- Provide access to the community to relevant and meaningful information about pollution;
- Reduce risks to human health and prevent the degradation of the environment by promoting the prevention of pollution, elimination of harmful wastes, reduction of the use of materials and the promotion of recycling, and the monitoring and reporting of environmental quality on a regular basis.

Schedule 1 of the Act identifies those activities for which a licence is required for the premises at which it is carried out. Any required licences would be obtained.

5.3.10 List of Approvals and Authorisations Required

All necessary authorisations and approvals would be obtained as required prior to construction or operation. This includes, but is not limited to, the following:

- S138 of the Roads Act 1993;
- Protection of the Environment Operations Act 1997;
- Clause 67ZN of the Ports and Maritime Administration Regulation 2012;
- Approvals under relevant food safety legislation.

5.4 Environment Protection and Biodiversity Conservation Act 1999

The Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) commenced on 16 July 2000. The Act introduces a new assessment and approvals system for:

- Actions that have a significant impact on matters of national environmental significance;
- Actions that have a significant impact on the environment of Commonwealth land; and
- Actions carried out by the Commonwealth Government.

Under the assessment and approval provisions of the EPBC Act, actions that are likely to have a significant impact on a matter of national environmental significance are subject to a rigorous assessment and approval process. An action includes a project, development, undertaking, activity, or series of activities.

The Act identifies 9 matters of national environmental significance:-

- World Heritage properties;
- National Heritage places;
- Ramsar wetlands of internal significance;
- Nationally listed threatened species and ecological communities;
- Listed migratory species;
- Commonwealth marine areas;

- The Great Barrier Reef Marine Park;
- Nuclear actions (including uranium mining); and
- A water resource, in relation to coal seam gas development and large coal mining development.

There are no relevant World Heritage properties, National Heritage places, Ramsar wetlands, or Commonwealth marine areas on the site.

The findings of the Biodiversity Development Assessment Report (see **Appendix 7**) concluded that the development is not likely to have a significant impact on any matter of national environmental significance listed under the Environment Protection and Conservation Act 1999.

5.5 Consistency with Concept Development Application (SSD8924)

Section 4.24(2) of the EP&A Act states that while any consent granted on the determination of a concept development application for a site remains in force, the determination of any further development application in respect of the site cannot be inconsistent with the consent for the concept proposals for the development of the site.

The proposed development is consistent with the concept DA in every regard and consequently, it can be expected that the determination of this application would not be inconsistent with any determination of the concept DA.

5.6 Environmental Planning Instruments and Council Policies

5.6.1 Summary of planning instruments zoning land

A number of planning instruments apply to the proposed development footprint providing a range of land use zones and related planning provisions. These are presented indicatively on the following figure and are discussed below.

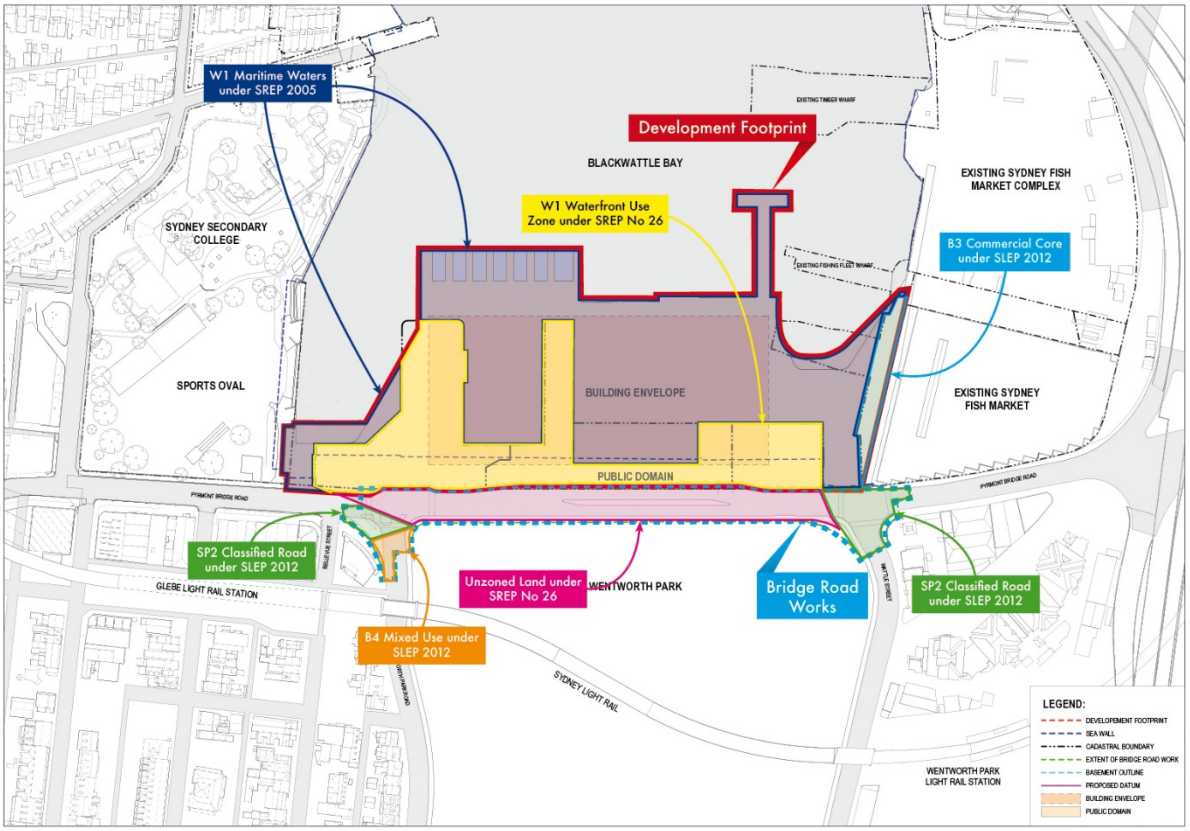


Figure 7 Land Use Zoning – Relevant Instruments

5.6.2 State Environmental Planning Policy (State and Regional Development) 2011

The new Sydney Fish Market is partly on land identified as being within the Bays Precinct State Significant Development Site and development on this land will have a capital investment value in excess of $10 million (see **Figure 7**). It is State Significant Development ("SSD").

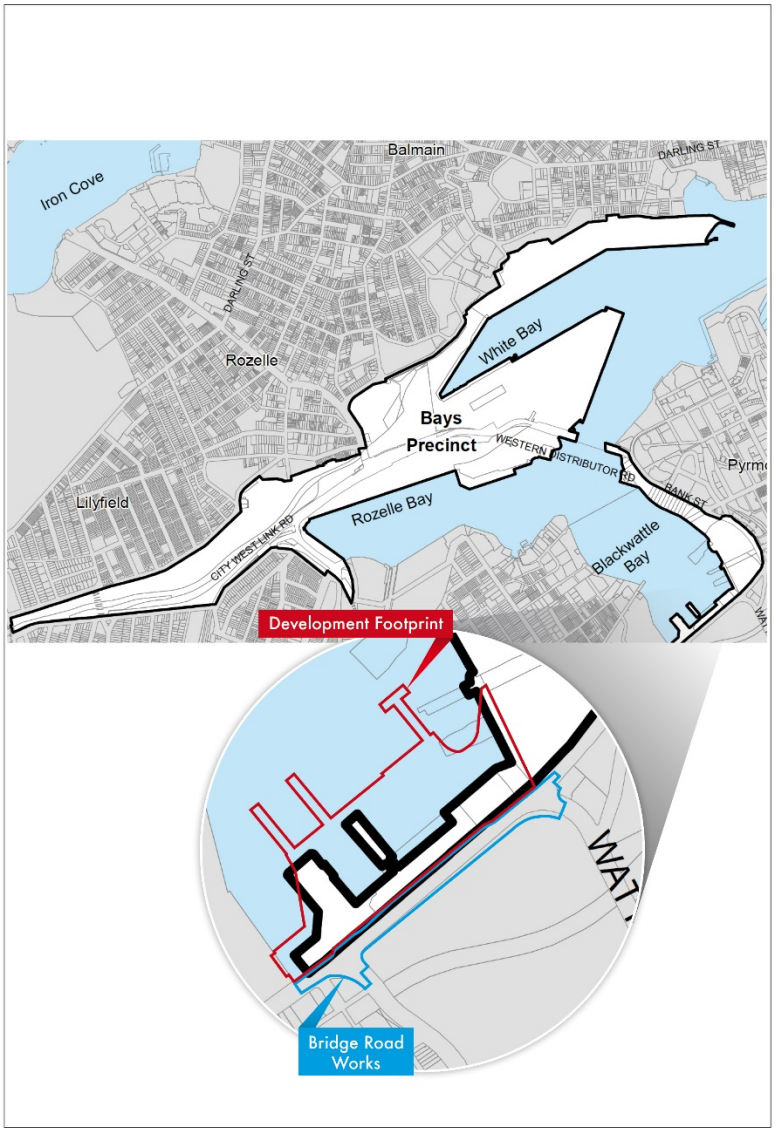


Figure 8 Bays Precinct Map SEPP State and Regional Development 2011

Provisions of SEPP State and Regional Development 2011 relevant to a development application for consent for SSD:

- the Minister for Planning is the consent authority;
- if a single proposed development the subject of one development application comprises development that is only partly State significant development the remainder of the development is also declared to be State significant development;
- development control plans (whether made before or after the commencement of this Policy) do not apply to State significant development;

- development that is the subject of a subsequent development application to a concept development application for SSD is also SSD; and
- any part of a concept development application that is the subject of a separate development application is also SSD whether or not it has a capital investment value of more than $10 million.

5.6.3 State Environmental Planning Policy (State Significant Precincts) 2005

The aims of this Policy are as follows:

- to facilitate the development, redevelopment or protection of important urban, coastal and regional sites of economic, environmental or social significance to the State so as to facilitate the orderly use, development or conservation of those State significant precincts for the benefit of the State;
- to facilitate service delivery outcomes for a range of public services and to provide for the development of major sites for a public purpose or redevelopment of major sites no longer appropriate or suitable for public purposes.

The new Sydney Fish Market is partly on land identified as being within the Sydney Harbour Port and Related Employment Lands pursuant to the State Environmental Planning Policy (State Significant Precincts) 2005 ("SSP SEPP") map.

As outlined in Section 2.7.4, the Minister for Planning has also identified the Bays Precinct as a State Significant Precinct. The Department has prepared Study Requirements for the rezoning of the Bays Market District (now Blackwattle Bay) Investigation Area, in accordance with the SSP SEPP.

5.6.4 State Environmental Planning Policy (Infrastructure) 2007

State Environmental Planning Policy (Infrastructure) 2007 ("the Infrastructure SEPP") aims to facilitate the effective delivery of infrastructure across the State by (relevantly) improving regulatory certainty and efficiency through a consistent planning regime for infrastructure and the provision of services, and providing greater flexibility in the location of infrastructure and service facilities.

Under Clause 68(4) of the Infrastructure SEPP development for the purpose of wharf or boating facilities may be carried out by or on behalf of a public authority without consent on any land. Pursuant to Section 4.38(4) of the EP&A Act, any part of SSD that is permissible without consent is taken to be development that may not be carried out except with development consent.

In terms of the Clause 104 'Traffic-generating development' of the Infrastructure SEPP, the proposal is development that requires referral to the RMS as it provides for commercial premises of more than 10,000m^2 and more than 200 car spaces. In this regard a Transport, Traffic Management Plan has been prepared by ARUP for the development (see **Appendix 11**).

Bridge Road is a classified State road. The relevant provisions in the Infrastructure SEPP are as follows.

"101 Development with frontage to classified road

(1) The objectives of this clause are:

(a) to ensure that new development does not compromise the effective and ongoing operation and function of classified roads, and

(b) to prevent or reduce the potential impact of traffic noise and vehicle emission on development adjacent to classified roads.

(2) The consent authority must not grant consent to development on land that has a frontage to a classified road unless it is satisfied that:

(a) where practicable, vehicular access to the land is provided by a road other than the classified road, and

(b) the safety, efficiency and ongoing operation of the classified road will not be adversely affected by the development as a result of:

(i) the design of the vehicular access to the land, or

(ii) the emission of smoke or dust from the development, or

(iii) the nature, volume or frequency of vehicles using the classified road to gain access to the land, and

(c) the development is of a type that is not sensitive to traffic noise or vehicle emissions, or is appropriately located and designed, or includes measures, to ameliorate potential traffic noise or vehicle emissions within the site of the development arising from the adjacent classified road."

The proposal requires a vehicular access to Bridge Road and is a use considered appropriately located on a classified road. There is no alternative access to the site. Based on the Transport Impact Assessment (**Appendix 11**), it is concluded that the safety, efficiency and ongoing operation of the classified road will not be adversely affected by the development in that:

- vehicular access to the site is via a new signalized intersection which facilitates efficient and safe access to the site;
- the emission of smoke or dust from the development would not have any significant impact on the operation of the classified road;
- the nature, volume or frequency of vehicles using the classified road to gain access to the development can be accommodated by the existing road network.

The development is of a type that is not sensitive to traffic noise or vehicle emissions, is appropriately located and designed and can include measures, where required, to ameliorate potential traffic noise or vehicle emissions within the site of the development arising from the adjacent classified road.

Clause 102 'Impact of road noise or vibration on non-road development' does not apply to the proposal as the uses proposed are all commercial and not nominated as a purpose likely to be affected by road noise.

5.6.5 State Environmental Planning Policy No 33 – Hazardous and Offensive Development

Relevant aims of this policy include:

(d) to ensure that in determining whether a development is a hazardous or offensive industry, any measures proposed to be employed to reduce the impact of the development are taken into account, and

(e) *to ensure that in considering any application to carry out potentially hazardous or offensive development, the consent authority has sufficient information to assess whether the development is hazardous or offensive and to impose conditions to reduce or minimise any adverse impact, and*

(f) *to require the advertising of applications to carry out any such development*

Clause 8 requires consideration of departmental guidelines in determining whether a development is (a) a hazardous storage establishment, hazardous industry or other potentially hazardous industry, or (b) an offensive storage establishment, offensive industry or other potentially offensive industry, and consideration must be given to current circulars or guidelines published by the Department of Planning, Industry and Environment relating to hazardous or offensive development.

Clause 12 provides that a person who proposes to make a development application to carry out development for the purposes of a "potentially hazardous industry" must prepare (or cause to be prepared) a preliminary hazard analysis (PHA) in accordance with the current circulars or guidelines published by the Department of Planning, Industry and Environment and submit the analysis with the development application.

Clause 13 requires that in determining an application to carry out development for the purposes of a "potentially hazardous industry" or a "potentially offensive industry", the consent authority must consider (in addition to any other matters specified in the EP&A Act or in an environmental planning instrument applying to the development):

(a) *current circulars or guidelines published by the Department of Planning relating to hazardous or offensive development, and*

(b) *whether any public authority should be consulted concerning any environmental and land use safety requirements with which the development should comply, and*

(c) *in the case of development for the purpose of a potentially hazardous industry—a preliminary hazard analysis prepared by or on behalf of the applicant, and*

(d) *any feasible alternatives to the carrying out of the development and the reasons for choosing the development the subject of the application (including any feasible alternatives for the location of the development and the reasons for choosing the location the subject of the application), and*

(e) *any likely future use of the land surrounding the development.*

It is expected that the provisions of this SEPP would not be triggered. The development would include cool rooms, freezer rooms and ice making facilities for the storage of fish and seafood and new refrigeration systems will be installed. A review of the hazardous materials and dangerous goods at the proposed facility undertaken by RiskCon Engineering (**Appendix 28**) identified that only two materials were classified as Dangerous Goods (as listed in the Australian Dangerous Goods Code) being liquefied carbon dioxide and ammonia (anhydrous) used as refrigerants. RiskCon concludes:

> *The NSW Department of Planning and Environment (DPE) has published a guideline to assist regulators in determining the application of SEPP33, "Applying SEPP33), which contains threshold levels of DGs above which SEPP33 would apply. The analysis conducted and reported in this document has identified that the threshold levels of Dangerous Goods, proposed for charging to the refrigeration systems at the nSFM, do not exceed the threshold levels listed in "Applying SEPP33". Further, the transport of DGs does not exceed the threshold levels published in "Applying SEPP33"*

and there are no "offensive" operations at the site. Hence, it is concluded that SEPP33 would not apply to the proposed site.

Small quantities of other hazardous materials would be stored on site for a range of purposes. Chemicals and hydrocarbons will be maintained within bunded area(s) with impervious floors. Spill kit(s) will be provided on site at all times as required and it is proposed that staff are appropriately trained in their use. Storage of minor quantities of hazardous chemicals / fuels will be undertaken in accordance with AS1940 – The storage and handling of flammable and combustible liquids and AS3780- 2008-The storage and handling of corrosive substances.

5.6.6 State Environmental Planning Policy 55 – Remediation of Land

SEPP55 requires the consent authority to consider whether the site is contaminated. If the site requires remediation to ensure that is made suitable for a proposed use, the consent authority must be satisfied that the land can and will be remediated before the land is used for that purpose.

SEPP55 further requires the preparation of a report specifying the findings of a preliminary investigation of the land concerned, carried out in accordance with the contaminated land planning guidelines, to be considered by the consent authority before determining an application for consent to carry out development that would involve a change of use on that land. An Environmental Site Assessment (**Appendix 4**) and a Remediation Action Plan (RAP) (**Appendix 5**) have been prepared and accompany the development application. The RAP document presents a summary of known and suspected site conditions, a conceptual site model (CSM) of contamination conditions and identification of existing data gaps in relation to the proposed development, an evaluation of potential remedial strategies, identification of preferred strategies and details of site management and associated validation requirements to be implemented during the proposed works.

The proposed actions outlined in the RAP 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.

Subject to the successful implementation of the measures described in the RAP and with consideration to the limitations presented in the RAP, the contamination consultants consider that the site can be made suitable for the intended uses 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.

This enables the consent authority's obligations under SEPP55 to be met.

5.6.7 Sydney Regional Environmental Plan No 26—City West

Aims

The aims of Sydney Regional Environmental Plan No 26—City West (SREP26) are:

- to establish planning principles of regional significance for City West as a whole with which development in City West should be consistent, and

- to establish planning principles and development controls of regional significance for development in each Precinct created within City West by this plan and by subsequent amendment of this plan, and
- to promote the orderly and economic use and development of land within City West.

The proposed development is consistent with these aims in that it is consistent with the planning principles and development controls of the City West area and the Bays Precinct as outlined below and it enables the orderly and economic use and development of the site.

Zoning and permissibility

The part of the site comprising the existing wharves (excluding the waters of Blackwattle Bay) is within the City West area and the Bays Precinct as defined under this plan and is zoned as ('Waterfront Use'). Clause 20B of SREP26 states:

> *"Only uses which the consent authority is satisfied are generally consistent with one or more of the zone objectives are permissible within this zone.*
>
> *The **objectives of this zone** are:*
>
> - *to provide for development of water-based commercial and recreational activities, including facilities for the servicing, mooring, launching and storage of boats, and*
> - *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, and*
> - *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, and*
> - *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 will not be permitted."*

The development is generally consistent with a number of these objectives as outlined in Table 4 and is therefore permissible in the zone.

Table 4: Consistency with Zone Objectives of SREP26

Objective	Consistency
to provide for development of water-based commercial and recreational activities, including facilities for the servicing, mooring, launching and storage of boats, and	The development includes water based commercial and recreational activities. This includes retail and fish market and the provision of areas for public recreational enjoyment through improvements to the public domain.
to allow a range of commercial maritime facilities (such as boating industry facilities,	A range of commercial maritime facilities is provided including accommodation for the Sydney fishing

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, and	fleet and a variety of other vessels and maritime uses taking advantage of the waterfront location. The development also includes 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 uses.
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, and	Public access will be improved with the Ultimo-Pyrmont foreshore promenade from Blackwattle Bay to Rozelle Bay and link with public access networks surrounding the precinct both existing and planned.
to create, retain and enhance views and links between Wentworth Park and the foreshores of Blackwattle Bay.	Links with Wentworth Park will be improved and views between the park and the foreshores of Blackwattle Bay improved, particularly along the alignments of Wattle Street and Wentworth Park Road.

Development for the purposes of roads, rail and light rail transport undertakings and facilities, fire stations and other emergency services facilities, and public utility undertakings are permissible in any zone. Development may be carried out on any land which is shown uncoloured on the zoning map (which includes Bridge Road) only for a purpose which is permissible on land adjoining that land.

Building height and FSR controls

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

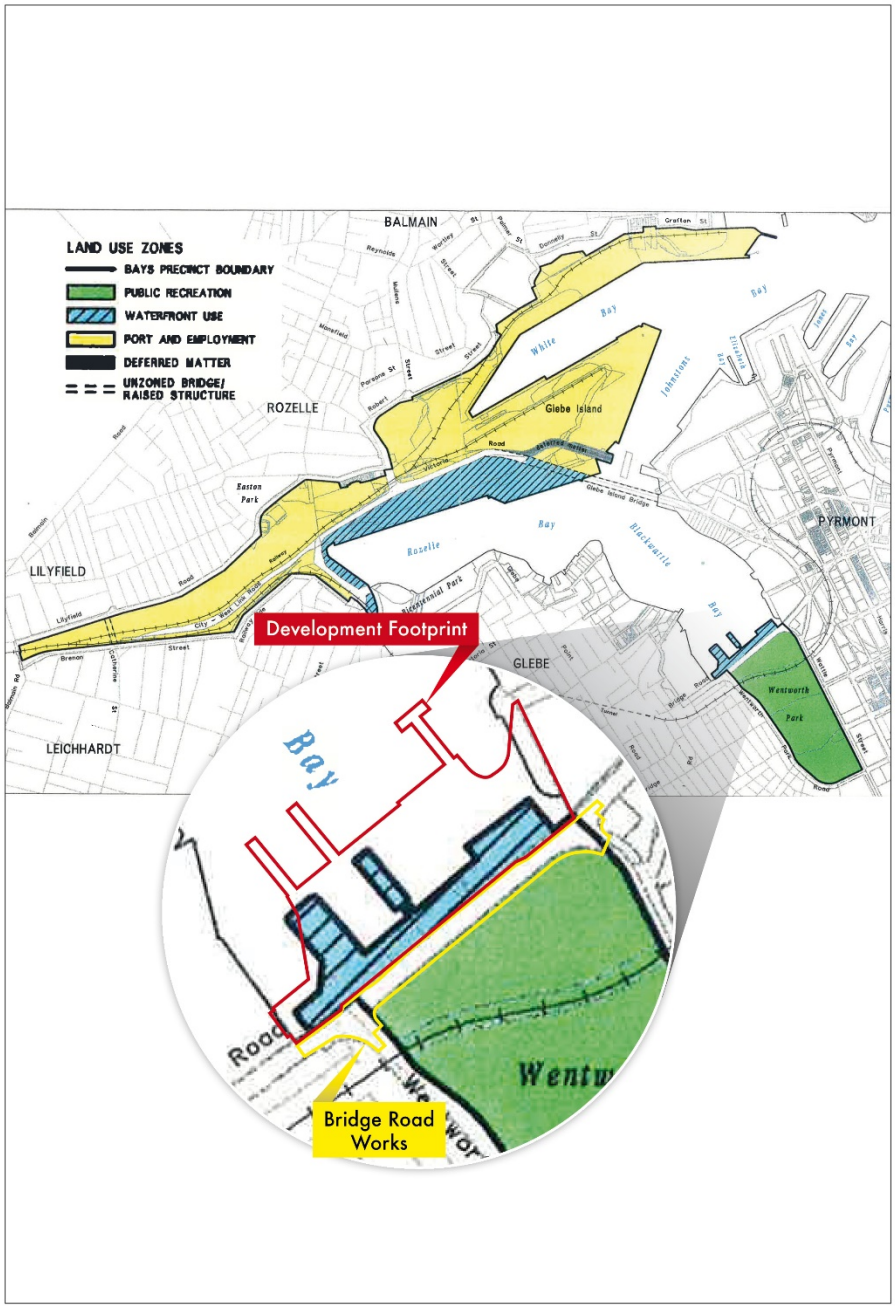


Figure 9 City West SREP land use zoning map

Planning principles of regional significance for City West

Before granting consent to a development application relating to land within City West, the consent authority must take into consideration the aim of this plan that development within City West should be consistent with the planning principles for City West.

The development is consistent with the planning principles for City West, as outlined in the following table.

Table 5: Consistency with Planning Principles for City West Area

Planning Principles	Consistency
Regional Role	
Development in City West is to promote urban consolidation in the Sydney Region and consequently contribute to Sydney's status as a financial, commercial, residential and tourist city of world standing.	Consistent in that the development contributes to urban consolidation and promotes commercial and tourist development.
Development in City West is to provide benefits to the people of the Sydney Region and New South Wales.	Consistent in that the facility will be accessible to residents of the Sydney region and NSW.
The types and intensities of development in City West are to reflect its central location and accessibility to public transport and are to support and to complement development in the city centre.	Consistent.
Land Use Activities	
Development in City West is to contribute to an integrated mixed-use development pattern containing a wide range of housing and employment opportunities, and educational, recreation and cultural activities.	Consistent.
Mixed Living and Working Environment	
Development in City West is to house an increased population and to provide an increased quantity and range of employment opportunities which are compatible with the achievement of a high-quality mixed living and working environment.	Consistent in that the development is compatible with the achievement of a high-quality mixed living and working environment.
Development in City West is to promote and retain close to the city centre a socially diverse residential population representative of all income groups.	Consistent to the extent relevant.
Development in City West is to provide different kinds of housing, including affordable housing, to ensure that low to moderate income households may continue to be able to live in City West.	Consistent to the extent relevant.
Development in City West is to provide opportunities for people to live and work at places in close proximity.	Consistent.
Education	
Development relating to educational establishments should be based on strategies for their growth and response to technological and other changes, and their integration with surrounding development.	Consistent to the extent relevant.
Leisure and Recreation	
Full advantage is to be taken of the leisure and recreation facilities and the public open space in the city centre and in surrounding areas (particularly in City West) and the use of Sydney Harbour for leisure and recreation.	Consistent in that access to the waterfront is improved, an upgraded public domain is provided and the facility will be an important tourist attraction and recreational opportunity.
Public access to the entire foreshore in City West is to be provided. Opportunities for waterfront and water-based recreation and tourism activities, compatible with adjoining land uses, are to be provided.	Public access to the foreshore is provided together with waterfront recreation and tourist activities.
Port Functions	

Planning Principles	Consistency
The operation, concentration and rationalisation of commercial shipping facilities is to be supported to meet the changing needs of Sydney Harbour as a commercial port.	Consistent and noted.
Social Issues	
The needs of existing and future communities, including needs for social facilities and services are to be accommodated.	Consistent in that improved recreational opportunities are provided on a site that currently has no public waterfront access.
Environmental Issues	
Development in City West is to ensure a high level of environmental quality by addressing issues of air quality, noise levels, wind conditions, access to light and sunshine, privacy, soil conditions and water quality.	Environmental impacts associated with the development can be managed to an acceptable level.
Development in City West is to have regard to the principles of ecologically sustainable development (namely, the precautionary principle, inter-generational equity, conservation of biological diversity and ecological integrity, and improved valuation, pricing and incentive mechanisms).	The design of the development has had regard to the principles of ecologically sustainable development as outlined in Section 6.20 and Appendix 21 of this EIS.
Development in City West is to:	
• incorporate measures to minimise waste, including (where practicable) utilising recycled materials and renewable building resources, recycling building and demolition wastes, and providing facilities for recycling and composting, and	Waste management plans accompany the development application and include measures to minimise waste.
• implement total water cycle management, including (where practicable) reducing consumption of potable water, treating and recycling waste water for re-use, minimising site run-off and stormwater generation, and reusing stormwater, and	The design of the development has had regard to the principles of ecologically sustainable development as outlined in Appendix 12 of this EIS.
• incorporate measures to conserve energy, including (where practicable) reducing energy consumption, and increasing inherent energy efficiency through design and materials selection, and	The design of the development has had regard to the principles of ecologically sustainable development as outlined in Appendix 21 of this EIS.
• promote biological diversity by measures that include (where practicable) increasing habitat through appropriate retention, planting and maintenance of native flora considered representative of the locality, and	Marine habitat opportunities will be created through additional piles and bio retention facilities. The development has no significant adverse impact on native flora and fauna given the highly disturbed nature of the site.
• complement and reinforce the development and use of the existing and planned integrated public transport, pedestrian and cycling networks in City West.	The development is integrated into the emerging waterfront promenade of Pyrmont/Ultimo and is within easy access to public transport.
Urban Design and the Public Domain	
Development in City West is to enhance, complement and contribute to the development of the public domain in order to create a high-quality physical environment for access, enjoyment and recreation for residents and workers.	The development makes a significant contribution to the public domain through the provision of improved access to the waterfront with associated outdoor recreational opportunities.
Development in City West is to contribute to a high level of residential amenity and convenience.	Consistent to the extent relevant.
Heritage	

Planning Principles	Consistency
The items and areas of heritage significance in City West are to be conserved and enhanced. New development is to respect the character of heritage items and conservation areas. The re-use of heritage buildings through adaptation and modification is to be encouraged.	Consideration has been given to heritage items in the vicinity of the site.
Movement and Parking	
A range of housing and work, leisure and service facilities is to be provided in City West so that the need for travel is minimised.	The development is in close proximity to existing public transport.
A high degree of accessibility is to be provided to places in and outside City West for both able and disabled persons. Walking, cycling and use of public transport are to be encouraged as the means of movement.	The development facilitates improved accessibility and enhances access by pedestrians and cyclists.
Development in City West is to facilitate the provision and operation of a comprehensive regional public transport network.	The development supports the existing public transport network.
Development, particularly that which is employment related, is to be within the capacities of existing and proposed public transport and arterial road systems.	As confirmed in the traffic impact assessment accompanying the DA, the development has good access to public transport and the arterial road network and can be accommodated within the capacities of each.
The provision for vehicular movement is to be consistent with the development of a high-quality pedestrian environment within the street system.	The development accommodates a high level of pedestrian access consistent with the operational requirements of a working fish market.
Parking controls are to support public transport strategies of the Government and to reflect road network capacities.	Parking is provided to meet the anticipated needs of the development having regard to available public transport and the role and function of the fish market. Parking provision is the same as for the existing Sydney Fish Market. Changes to staff parking arrangements, the provision of a travel plan and the provision of cycling facilities support public transport use.
Implementation and Phasing	
Development is to contribute towards the efficient use of City West's existing infrastructure and towards the provision of physical and social infrastructure as part of the development process, in accordance with the provisions of the Act.	The development makes an important contribution to the public domain and makes efficient use of existing available infrastructure.

Planning principles for Bays Precinct

Before granting consent to a development application relating to land within a Precinct, the consent authority must take into consideration the aim of this plan that development within the Precinct should be consistent with the planning principles for the Precinct. Part of the site is within the Bays Precinct. Before granting consent to the erection of a building, the consent authority must be satisfied that the building will be consistent with the urban design planning principles for the Precinct.

The development is consistent with the Bays Precinct planning principles, as outlined in the following table.

Table 6: Consistency with Planning Principles for the Bay Precinct

Planning Principles	Consistency
Role and land use activities	
Development should reinforce and complement the role of the Precinct as a major inner-harbour port and maritime location. Development should recognise that the port operates for 24 hours of the day and that the generation of noise, lighting and traffic movement is necessarily associated with its operation.	The development complements the role of the precinct as an inner-harbour port and maritime location with 24 hour operation.
Development in the Precinct is to provide for a mixture of commercial port, port-related, employment, waterfront and recreational uses, but is not to include residential development. The existing diversity and maritime character of the Precinct, particularly the mixed use of waterfront areas, should be retained.	Consistent in that the development provides port-related, employment, waterfront and recreational uses, and does not include residential uses.
Development is to take full advantage of the Precinct's location and its infrastructure, particularly rail or light rail facilities, for the port and other employment generating activities.	Consistent in that the development takes advantage of its accessibility by light rail being close to two stations on the Sydney Light Rail Network. It also has good access to the main road network and to the waterways.
Development is to encourage the environmental rejuvenation of the Precinct. Where possible, future development is to encourage the segregation of port traffic from residential and recreational areas.	The development provides the opportunity to rejuvenate the precinct by improving environmental outcomes from the operation of the new Sydney Fish Market. Traffic associated with the development uses existing main roads for access.
Development is to make efficient use of surplus government owned land.	The development is an appropriate use of government owned land comprising the existing wharf structures.
Development is to encourage the conservation of and adaptation for re-use of existing heritage items and structures for uses compatible with new development.	The development retains an existing heritage item - the stormwater drain on Sydney Water's s170 heritage register will be retained and protected as required. A Heritage Interpretation Strategy will be prepared prior to construction.
Development is to contribute to improved water quality in Rozelle Bay and Blackwattle Bay.	Erosion and sediment controls will be in place prior to construction commencing. Water quality measures are proposed to treat stormwater prior to discharge from the site which is an improvement on the present case.
Development on the waterfront and on land adjoining Rozelle Bay and Blackwattle Bay is to enhance the environmental quality of those areas for all users.	Consistent in that access to the waterfront is improved and the appearance of the site improved by the provision of a building of architectural quality and design excellence including enhanced ESD measures.
Urban design	

Planning Principles	Consistency
Design principles to be developed in detailed planning should recognise the working industrial nature of the Precinct in close proximity to residential areas.	Consistent in that the development achieves a high standard or architecture and urban design that recognises the industrial nature of the precinct. The design has had full regard to the surrounding context including the nearby residential areas.
Development along the Precinct boundary should relate to and not adversely affect the adjoining street systems and built forms.	Consistent in that the development has an appropriate relationship to the adjoining street system in terms of building height relative to street width. Pedestrian movement along and across the adjoining street is improved. The development comprises a building of high quality design and materiality making a positive contribution to its mixed built form context.
The siting and form of development in all areas must consider impacts on views from within the Precinct and to and across the Precinct from surrounding areas.	Consistent in that the impact on views is addressed in the Visual Impact Assessment contained in the **A3 Volume**.
Public domain	
Public recreation areas are to provide for a range of recreational opportunities for those working in and visiting the Precinct.	Consistent in that recreation areas are provided and are accessible to the public and workers of the area.
The siting and form of development must consider creating, retaining and enhancing views and vistas from the water and public domain.	The development will result in an overall improvement in views from the water by replacing underutilised buildings and structures with a building of design merit and from the adjoining public domain by improving access to the waterfront.
Links for pedestrians, cyclists, and persons with disabilities are to be provided through the Precinct and to link and integrate the Precinct with adjoining areas.	The development makes an important contribution to the waterfront promenade in the area and links with adjoining sites.
Links through the Precinct, including public access to the foreshores, should recognise the safety and security issues associated with commercial port and maritime activities.	Consistent in that the development provides public access to the waterfront in a manner that enables the safe operation of maritime activities.
Development should help to create a high quality public domain in the Precinct.	Consistent in that the development accommodates a high quality public domain as indicated on the landscape concepts for the site.

Requirement for a Master Plan

Part of the site is within an area on which development consent cannot be granted unless there is a Master Plan for the land, and the consent authority has taken the Master Plan into consideration. In these circumstances, Section 4.23 of the EPA Act provides that this obligation may be satisfied by the making and approval of a concept development application

in respect of that land[2]. Any such concept development application is to contain the information required to be included in a master plan under SREP26. A concept development application has been submitted.

Land containing the existing structures at the head of Blackwattle Bay has been the subject of the *Master Plan for Rozelle and Blackwattle Bay Maritime Precincts* prepared by the Waterways Authority and adopted in 2002. This document intended to guide redevelopment from 2002 to 2007. This master plan identified the existing wharves as continuing as use for commercial boating. This master plan is now outdated and is to be replaced by the concept DA in so far as it applies to the site.

Scale and alignment of building facades

Before granting consent to the erection of a building, the consent authority must be satisfied that the scale and alignment of the building facades on the street boundary or boundaries respects the width of the street, adjoining heritage items or other contextual elements, as may be defined in an urban development plan prepared and adopted under Division 7 of this plan, or defined in a Master Plan prepared and adopted under Division 8 of this plan.

The proposed building has a maximum height of approximately 25.5 metres (RL27.5) and is setback from the street boundary by approximately 13.5 metres to provide an enhanced public domain on the southern side of the building. Bridge Road is 20 metres wide. The building height provides an appropriate relationship to the street and a sense of enclosure to the street complementing the line of Fig trees in Wentworth Park.

Other Provisions of SREP26

The following table addresses other relevant provisions of the SREP26:

Table 7: Consistency with Other Provisions of SREP26

SREP26 Provision	Response
49 Land decontamination	
The consent authority must not consent to development on a site or part of a site unless:	
• it has taken into consideration whether there is any risk to public health or safety from contamination of the site or part by past industrial use, and	Addressed in Section 6.10 and Appendices 4 and 5.
• where such a risk exists on the site or part, it is satisfied that appropriate remediation measures will be undertaken to remove such a risk before development commences on that site or part.	Addressed in Section 6.10 and Appendices 4 and 5.
49A Removal of sandstone	
Removal of sandstone for the provision of car parking or plant or storage associated with future residential or business development is taken to be an ancillary use and not to be extractive industry no matter whether the extracted material is reused or resold.	Noted. No sandstone to be removed.
50 Services	

[2] Clause 95 of Schedule 1 of the Environmental Planning and Assessment (Savings, Transitional and Other Provisions) Regulation 2017 deems that any requirement for a master plan is a requirement for a DCP.

SREP26 Provision	Response
Development must not be carried out on any land until arrangements have been made for the supply of water, sewerage and drainage which are satisfactory to the Water Board.	Addressed in Section 3.13 and Appendix 14.
51 Advertising of certain development applications	
Development that is proposed by a development application made after the commencement of Sydney Regional Environmental Plan No 26—City West (Amendment No 9) is advertised development for the purposes of the Act if, in the opinion of the consent authority, the development:	Provisions of the EP&A Act in relation to State Significant development prevail.
• would cause irreversible harm to a heritage item, or	
• does not conform to a Master Plan, or	
• would have significant environmental effects.	
This clause ceases to have effect when a development control plan that provides for notice to be given of the proposed development to which this clause applies is approved by the Director-General.	
52 Views of other bodies about development in Precincts	
Before granting consent to a development application relating to land in the Bays Precinct, the consent authority must, where it considers it appropriate, seek the views of the Leichhardt Council, the City West Development Corporation, the Sydney Ports Corporation, the Office of Marine Administration, the Maritime Authority of NSW, the Rail Access Corporation, the State Rail Authority, the Freight Rail Corporation and the Director-General of the Department of Transport.	This is a matter for the consent authority. The applicant has undertaken consultation as outlined in Section 5.
The consent authority must consider any views of a body received within 21 days of giving notice of the application to the body.	

5.6.8 Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005

Sydney Regional Environmental Sydney Harbour Catchment 2005 ("the Harbour SREP") (a deemed State Environmental Planning Policy) applies to the site because the site is within the area defined as the Sydney Harbour Catchment. The site is also within the Foreshores and Waterways Area. The aims of the Harbour SREP and the consistency of the development with these aims is presented in the following table:

Table 8: Consistency with Aims of Harbour SREP

Harbour SREP Aims	Consistency
2 Aims of plan	
(1) This plan has the following aims with respect to the Sydney Harbour Catchment:	
(a) to ensure that the catchment, foreshores, waterways and islands of Sydney Harbour are recognised, protected, enhanced and maintained:	
(i) as an outstanding natural asset, and	The development recognises, protects, enhances and maintains the natural asset of the catchment by providing a high quality development enabling the public to obtain improved access around the foreshore and vantage points to appreciate the harbour from

Harbour SREP Aims	Consistency
(ii) as a public asset of national and heritage significance, for existing and future generations	The development provides a new Sydney Fish Market for future generations in a manner that respects and enhances to attributes of the harbour
(b) to ensure a healthy, sustainable environment on land and water,	The development includes sustainability measures and has no significant impact on marine or terrestrial biodiversity.
(c) to achieve a high quality and ecologically sustainable urban environment,	The development includes sustainability measures and has no significant impact on marine or terrestrial biodiversity.
(d) to ensure a prosperous working harbour and an effective transport corridor,	The development is consistent with the concept of a working harbour.
(e) to encourage a culturally rich and vibrant place for people,	The proposed public domain represents a significant improvement in access to the harbour as a place for people.
(f) to ensure accessibility to and along Sydney Harbour and its foreshores,	Complies through the provision of an extensive public domain and foreshore promenade.
(g) to ensure the protection, maintenance and rehabilitation of watercourses, wetlands, riparian lands, remnant vegetation and ecological connectivity,	The development has no significant impact on marine or terrestrial biodiversity or connectivity.
(h) to provide a consolidated, simplified and updated legislative framework for future planning.	Not relevant
(2) For the purpose of enabling these aims to be achieved in relation to the Foreshores and Waterways Area, this plan adopts the following principles:	
(a) Sydney Harbour is to be recognised as a public resource, owned by the public, to be protected for the public good,	The development provides public access to an area otherwise accessible to the public with the site remaining in public ownership.
(b) the public good has precedence over the private good whenever and whatever change is proposed for Sydney Harbour or its foreshores,	The development provides a public facility in the form of the new Sydney Fish Market and associated public domain.
(c) protection of the natural assets of Sydney Harbour has precedence over all other interests.	Noted

Planning principles and matters for consideration

The Harbour SREP provides planning principles for land within the Sydney Harbour Catchment. The planning principles for land within the Sydney Harbour Catchment and the consistency of the proposed development with these principles are discussed in the following table.

Table 9: Consistency with Planning Principles for Sydney Harbour Catchment

Planning Principles	Consistency
(a) development is to protect and, where practicable, improve the hydrological, ecological and geomorphological processes on which the health of the catchment depends,	Yes. This will be achieved by the implementation of erosion and sediment controls during construction and stormwater and wastewater management during operation.
(b) the natural assets of the catchment are to be maintained and, where feasible, restored for their	Yes. The development has no significant impact on biodiversity and the scenic qualities will be improved

Planning Principles	Consistency
scenic and cultural values and their biodiversity and geodiversity,	by the introduction of a modern and attractive building consistent with the emerging character of the area
(c) decisions with respect to the development of land are to take account of the cumulative environmental impact of development within the catchment,	Yes to the extent relevant.
(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),	Yes. Measures are proposed to manage erosion and sedimentation during construction and manage and treat stormwater during operation.
(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),	Yes. Refer to Appendices 10, 12 and 14.
(f) development that is visible from the waterways or foreshores is to maintain, protect and enhance the unique visual qualities of Sydney Harbour,	Yes. The visual qualities of the harbour would be enhanced by the development.
(g) the number of publicly accessible vantage points for viewing Sydney Harbour should be increased,	Yes. Public access to the foreshore of the bay would be increased.
(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,	Yes. Stormwater run-off from the site will be collected and treated prior to discharge to the harbour.
(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,	Yes. The development would have no significant impact on biodiversity or natural qualities of the harbour.
(j) development is to protect and, if practicable, rehabilitate watercourses, wetlands, riparian corridors, remnant native vegetation and ecological connectivity within the catchment,	Yes, to the extent relevant.
(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,	Yes, in that acid sulfate soil will be managed during the construction process.
(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.	As above.

Consistency with the planning principles for land within the Foreshores and Waterways Area is discussed in the following table.

Table 10: Consistency with Planning Principles for Foreshores and Waterways Area

Planning Principles	Consistency
(a) development should protect, maintain and enhance the natural assets and unique environmental qualities of Sydney Harbour and its islands and foreshores,	Yes.
(b) public access to and along the foreshore should be increased, maintained and improved, while minimising its impact on watercourses, wetlands, riparian lands and remnant vegetation,	Yes. Public access to the foreshore is increased and improved with no significant biodiversity impacts.
(c) access to and from the waterways should be increased, maintained and improved for public recreational purposes (such as swimming, fishing and boating), while minimising its impact on watercourses, wetlands, riparian lands and remnant vegetation,	Access to the waterways in this section of Blackwattle Bay would be improved with additional access opportunities and maintenance of existing public access points.
(d) development along the foreshore and waterways should maintain, protect and enhance the unique visual qualities of Sydney Harbour and its islands and foreshores,	Yes. The visual qualities of the harbour would be enhanced by the development by the provision of a building of design excellence for use as a functioning fish market.
(e) adequate provision should be made for the retention of foreshore land to meet existing and future demand for working harbour uses,	Yes. Provision is made for on-going operation of the Sydney fishing fleet and associated servicing functions.
(f) public access along foreshore land should be provided on land used for industrial or commercial maritime purposes where such access does not interfere with the use of the land for those purposes,	Yes.
(g) the use of foreshore land adjacent to land used for industrial or commercial maritime purposes should be compatible with those purposes,	Yes. Future development of the Bays Precinct would be compatible with the on-going operation of the new Sydney Fish Market.
(h) water-based public transport (such as ferries) should be encouraged to link with land-based public transport (such as buses and trains) at appropriate public spaces along the waterfront,	Yes. There is the opportunity for ferry services to the site.
(i) the provision and use of public boating facilities along the waterfront should be encouraged.	Yes. Some public boating facilities would be provided.

The following matters are to be taken into consideration by consent authorities before granting consent to development in the foreshores and waterways area:

Table 11: Matters for Consideration for Foreshores and Waterways Area

Matters for Consideration	Consideration
21 Biodiversity, ecology and environment protection	
The matters to be taken into consideration in relation to biodiversity, ecology and environment protection are as follows:	
(a) development should have a neutral or beneficial effect on the quality of water entering the waterways,	WSUD and water quality measures are proposed as outlined in Sections 3.11 and Appendix 12, 21 and Appendix 2 of the A3 Volume.
(b) development should protect and enhance terrestrial and aquatic species, populations and ecological communities and, in particular, should avoid physical damage and shading of aquatic vegetation (such as seagrass, saltmarsh and algal and mangrove communities),	The development would have no significant impact on terrestrial or marine biodiversity as discussed in Section 6.7 and Appendices 7 and 8.
(c) development should promote ecological connectivity between neighbouring areas of aquatic vegetation (such as seagrass, saltmarsh and algal and mangrove communities),	There are no opportunities for connectivity in this disturbed area of the harbour as discussed in Section 6.7 and Appendices 7 and 8.
(d) development should avoid indirect impacts on aquatic vegetation (such as changes to flow, current and wave action and changes to water quality) as a result of increased access,	These indirect impacts on aquatic vegetation are minimised with additional opportunities for marine vegetation as discussed in Section 6.7 and Appendices 7 and 8.
(e) development should protect and reinstate natural intertidal foreshore areas, natural landforms and native vegetation,	The development would have no significant adverse impacts on natural intertidal foreshore areas, natural landforms and native vegetation as discussed in Section 6.7 and Appendices 7 and 8.
(f) development should retain, rehabilitate and restore riparian land,	The development is located in a reclaimed area that is highly urbanised with no clearly defined riparian land.
(g) development on land adjoining wetlands should maintain and enhance the ecological integrity of the wetlands and, where possible, should provide a vegetative buffer to protect the wetlands,	The development is not on land adjoining wetlands.
(h) the cumulative environmental impact of development,	Discussed in Section 7 of this EIS and Appendices.
(i) whether sediments in the waterway adjacent to the development are contaminated, and what means will minimise their disturbance.	The sediments in the waterway adjacent to the development are contaminated. Existing contamination will be managed during the development process so that disturbance is minimised as discussed in Sections 6.10, 6.11, 6.12 and 6.15.
22 Public access to, and use of, foreshores and waterways	
The matters to be taken into consideration in relation to public access to, and use of, the foreshores and waterways are as follows:	
(a) development should maintain and improve public access to and along the foreshore, without adversely impacting on watercourses, wetlands, riparian lands or remnant vegetation,	The development provides additional opportunities for public access to the foreshore as shown on the DA drawings contained in the A3 Volume.
(b) development should maintain and improve public access to and from the waterways for recreational purposes (such as swimming, fishing and boating),	The development provides additional opportunities for public access to the waterways for recreational purposes and maintains current public access

Matters for Consideration	Consideration
without adversely impacting on watercourses, wetlands, riparian lands or remnant vegetation,	arrangements as shown on the DA drawings contained in the A3 Volume.
(c) if foreshore land made available for public access is not in public ownership, development should provide appropriate tenure and management mechanisms to safeguard public access to, and public use of, that land,	Not relevant as the land is, and will remain, in public ownership.
(d) the undesirability of boardwalks as a means of access across or along land below the mean high water mark if adequate alternative public access can otherwise be provided,	Noted. Boardwalks are not proposed. New wharf structures would provide improved pedestrian access along the waterfront with existing public access along Bridge Road maintained.
(e) the need to minimise disturbance of contaminated sediments.	Contaminants and acid sulfate soils would be managed during the construction process.
23 Maintenance of a working harbour	
The matters to be taken into consideration in relation to the maintenance of a working harbour are as follows:	
(a) foreshore sites should be retained so as to preserve the character and functions of a working harbour, in relation to both current and future demand,	The function of a working harbour would be retained to the extent relevant by the providing for the fishing fleet as part of the market operation.
(b) consideration should be given to integrating facilities for maritime activities in any development,	Such facilities are accommodated in the development.
(c) in the case of development on land that adjoins land used for industrial and commercial maritime purposes, development should be compatible with the use of the adjoining land for those purposes,	This would be a matter for consideration on land adjoining the site.
(d) in the case of development for industrial and commercial maritime purposes, development should provide and maintain public access to and along the foreshore where such access does not interfere with the use of the land for those purposes.	Public access along the foreshore is maintained and enhanced.
24 Interrelationship of waterway and foreshore uses	
The matters to be taken into consideration in relation to the interrelationship of waterway and foreshore uses are as follows:	
(a) development should promote equitable use of the waterway, including use by passive recreation craft,	The development provides opportunities for access to the site by a range of craft including recreational craft and ferries as discussed in Section 6.6 and Appendix 9.
(b) development on foreshore land should minimise any adverse impact on the use of the waterway, including the use of the waterway for commercial and recreational uses,	The development maintains current uses of the waterway with some minor changes required to the rowing course.
(c) development on foreshore land should minimise excessive congestion of traffic in the waterways or along the foreshore,	The traffic impacts of the development have been assessed and works are proposed to accommodate additional traffic generated by the development as discussed in Section 6.6 and Appendix 9.
(d) water-dependent land uses should have priority over other uses,	The use of the site as a fish market is consistent with this consideration.

Matters for Consideration	Consideration
(e) development should avoid conflict between the various uses in the waterways and along the foreshores.	Uses of the waterway and along the foreshore are maintained and enhanced as discussed in Section 6.6 and Appendix 9 and in drawings and reports in the A3 Volume.
25 Foreshore and waterways scenic quality	
The matters to be taken into consideration in relation to the maintenance, protection and enhancement of the scenic quality of foreshores and waterways are as follows:	
(a) the scale, form, design and siting of any building should be based on an analysis of:	The design of the development has evolved through a detailed consideration of the site and its context as discussed in Appendix 2 of the A3 Volume. This has included a competitive design process.
(i) the land on which it is to be erected, and	
(ii) the adjoining land, and	
(iii) the likely future character of the locality,	
(b) development should maintain, protect and enhance the unique visual qualities of Sydney Harbour and its islands, foreshores and tributaries,	The development would enhance the visual qualities of the harbour by the provision of a development of high quality urban and architectural design as discussed in Section 6.3 and Appendix 5 in the A3 Volume.
(c) the cumulative impact of water-based development should not detract from the character of the waterways and adjoining foreshores.	The use of the site for the purpose of a fish market would enhance the character of the waterway and adjoining foreshore as discussed in Section 6.3 and Appendix 7 in the A3 Volume.
26 Maintenance, protection and enhancement of views	
The matters to be taken into consideration in relation to the maintenance, protection and enhancement of views are as follows:	
(a) development should maintain, protect and enhance views (including night views) to and from Sydney Harbour,	The development would enhance views to and from the site and the harbour by the provision of an attractive building of high quality urban and architectural design. Existing views of the water from land are enhanced by the provision of addition waterfront access.
(b) development should minimise any adverse impacts on views and vistas to and from public places, landmarks and heritage items,	The impact of the development on views is addressed in Appendix 7 in the A3 Volume.
(c) the cumulative impact of development on views should be minimised.	The cumulative impact of the development on views is minimised.
27 Boat storage facilities	
The matters to be taken into consideration in relation to boating facilities are as follows:	The development provides accommodation for boating facilities to the extent relevant to the proposed use of the site as a fish market.
(a) development should increase the number of public boat storage facilities and encourage the use of such facilities,	The development is not for the purpose of a boat storage facility. The fishing fleet will be accommodated on the site.

Matters for Consideration	Consideration
(b) development should avoid the proliferation of boat sheds and other related buildings and structures below the mean high water mark,	The development provides additional wharf structures below the mean high water market as required to accommodate the fish market.
(c) development should provide for the shared use of private boat storage facilities,	Not relevant.
(d) development should avoid the proliferation of private boat storage facilities in and over the waterways by ensuring that all such facilities satisfy a demonstrated demand,	Not relevant.
(e) boat storage facilities should be as visually unobtrusive as possible,	Not relevant.
(f) in the case of permanent boat storage, the safety and utility of the development should not be adversely affected by the wave environment, and the development should avoid adverse impacts on safe navigation and single moorings.	The proposed wharves would be designed having regard to existing wave and wind conditions in the protected Blackwattle Bay.

Permissibility

That part of the site comprising the waters of Blackwattle Bay is within Zone W1 Maritime Waters (**Figure 10**).

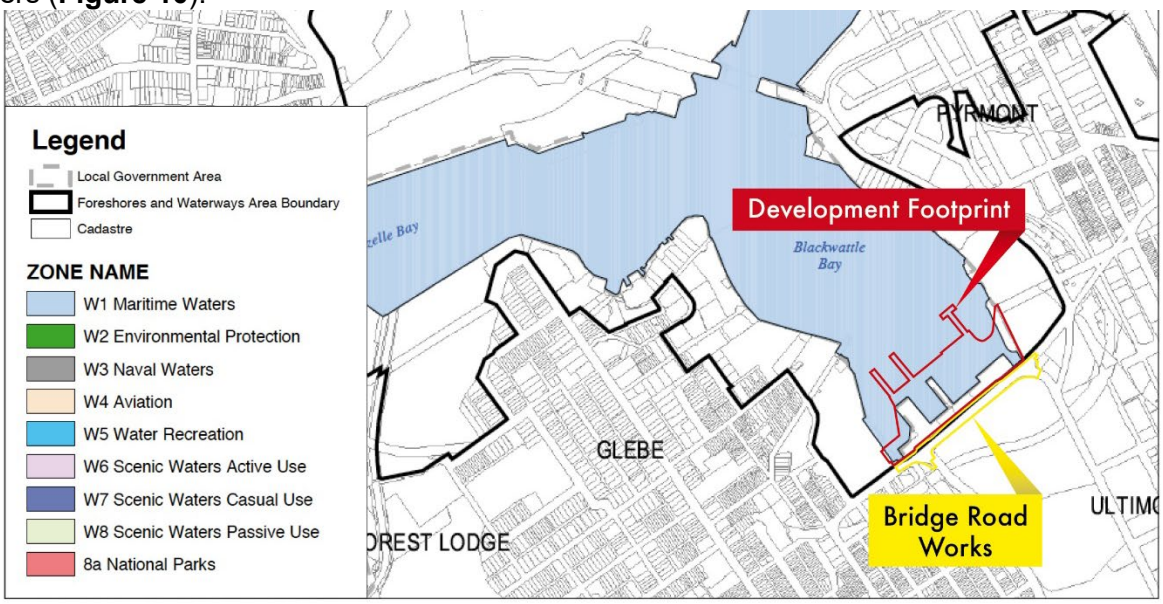


Figure 10 Zoning Map – the Harbour SREP

The objectives of this zone are:

(a) 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,

(b) 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,

(c) to promote equitable use of the waterway, including use by passive recreation craft.

The development is consistent with these objectives in that the development:

- accommodates commercial shipping being the Sydney fishing fleet and also the operations of the new Sydney Fish Market;
- has no significant impact on the use of Blackwattle Bay for commercial shipping as may be appropriate;
- promotes equitable use of the waterway for recreational purposes by accommodating existing recreational uses with only minor adjustments to activities;
- can accommodate public water transport.

The table of land uses in clause 18 of the Harbour SEPP identifies the development that may be carried out with or without development consent development that is prohibited as follows:

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), Floating boat platforms, 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

Elements of the proposed development are permissible with consent including public boardwalks, public water recreation facilities and public water transport facility. Notwithstanding the table of land uses, other development may be carried out with development consent, but only if the consent authority is satisfied that the development:

(a) is not inconsistent with the aims of this plan or the objectives of the zone in which it is proposed to be carried out, and

(b) is not inconsistent with any other environmental planning instrument that applies to the land, and

(c) will not otherwise have any adverse impacts.

The development is not inconsistent with the aims of the Harbour SREP, as discussed in Table 9, or with the objectives of the zone as discussed above. Further the development is not inconsistent with any other environmental planning instrument applying to the land and has impacts that can be mitigated by the measures included in this EIS.

Subdivision is permissible under the Harbour SEPP. Under clause 18A of the Harbour SREP, subdivision of land in the waterways is permissible where the purpose of the subdivision is to

enable the creation of a lot that is, or is to be, used only for development the subject of an existing development consent. Before granting consent to subdivision under this clause the consent authority must consider whether, and to what extent, the subdivision is likely to result in any reduction in public access to the foreshore or waterways. The proposed development results in improved access to the waterways through the provision of pedestrian promenades providing an improved pedestrian environment along Bridge Road and along the waterfront. This application includes a concept proposal for the subdivision of land to create a lot on which the new Sydney Fish Market would be located and a further subdivision of this lot to identify separate lots comprising the public domain and water, and various parts of the new Sydney Fish Market building and wharves to be leased in separable parts.

S4.38(3) of the EP&A Act provides that development consent may be granted to SSD despite the development being partly prohibited by an environmental planning instrument.

Referral to Foreshores and Waterways Planning and Development Advisory Committee

The consent authority must not grant consent to the development unless it has referred the development application to the Foreshores and Waterways Planning and Development Advisory Committee and has taken into consideration any submission received from the Advisory Committee.

Development on land comprising acid sulfate soils

The consent authority must not grant development consent unless it has considered the adequacy of an acid sulfate soils management plan prepared for the proposed development in accordance with the Acid Sulfate Soils Assessment Guidelines, and the likelihood of the proposed development resulting in the discharge of acid water.

An acid sulfate soil management plan has been prepared for the development as discussed in Section 6.11 and in **Appendix 6**.

5.6.9 Sydney Harbour Foreshores and Waterways Area Development Control Plan 2005

The following table provides an assessment the development's compliance with the provisions of the Sydney Harbour Foreshores and Waterways Area Development Control Plan 2005. As previously stated, pursuant to Clause 11 of the SRD SEPP, development control plans do not apply to State Significant Development. Nonetheless, an assessment of the development against relevant controls provided within the DCP is provided below.

Development Control	Compliance/Comment
2. Ecological Assessment	
2.2 – (General Aims) • *ecological communities, particularly those which form wildlife habitats, are protected and where feasible enhanced;* • *development is sited to retain native vegetation, wetlands and natural foreshores;*	In this regard a Marine Ecology Assessment (see **Appendix 8**) and a Biodiversity Development Assessment Report (see **Appendix 7**) have been prepared to accompany the application. The Marine Ecology Assessment concludes:-

Development Control	Compliance/Comment
• *development is accompanied by revegetation and rehabilitation of degraded foreshores, where appropriate; and* • *development does not impact adversely on water quality.*	*There is not likely to be a direct or indirect impact on threatened aquatic species, populations, ecological communities or their habitats.*
2.3 - (Identification of ecological communities	In this regard a Marine Ecology Assessment (see **Appendix 8**) and a Biodiversity Development Assessment Report (see **Appendix 7**) have been prepared to accompany the application.
3. Landscape Assessment	
3.2 – (General Aims) *All development should aim to:* • *minimise any significant impact on views and vistas from and to:* *– public places,* *– landmarks identified on the maps accompanying the DCP, and* *– heritage items;* • *ensure it complements the scenic character of the area;* • *protect the integrity of foreshores with rock outcrops, dramatic topography or distinctive visual features;* • *provide a high quality of built and landscape design; and* • *contribute to the diverse character of the landscape.*	The development is consistent with the general aims of this section of the DCP. No unacceptable view impacts would be experienced from Wentworth Park. The proposal sits comfortably within its foreshore setting and complements the scenic character of the area. It will also provide a positive contribution to Blackwattle Bay in terms of foreshore access, and high quality design.
4. Design Guidelines for Water-Based and Land/Water Interface Developments	
4.2 – (General Requirements) *The following objectives and requirements must be considered for all water-based and land/water interface developments:* • *public access to waterways and public land is maintained and enhanced;* • *congestion of the waterway and foreshore is minimised;* • *conflicts on the waterway and foreshore are avoided;* • *the development warrants a foreshore location;*	The general requirements listed in this section of the DCP have been considered. The development is consistent with the requirements and objectives in that: • Public access to a previously restricted area at the head of Blackwattle Bay will be provided. • The development will not unreasonably increase waterway congestion or interrupt navigation or other marine activities. • The development warrants a foreshore location.

Development Control	Compliance/Comment
• *the development does not interfere with navigation, swimming or other recreational activities;* • *the demand for the development has been established;* • *the structure does not obstruct or affect the natural flow of tides and currents;* • *development does not dominate its landscape setting;* • *the extent of development is kept to the absolute minimum necessary to provide access to the waterway;* • *shared usage of facilities is encouraged to minimise the number of structures and their cumulative impact on the environment of the Harbour and its tributaries; and* • *development is setback at least 2.5 metres from the division of the waterway as established by the NSW Maritime Authority and illustrated in Figure 4.*	• The development will be visible in the context and is consistent with the existing landscape setting; • The development continues to provide access to the waterway in a manner that allows continuous public foreshore access; • The development is located on the waterway as required for an operating fish market and in a manner that provides significantly improved access to the foreshore and a continuous foreshore promenade.
4.3 – (Foreshore Access)	The development is consistent with this control. It will facilitate public access to the head of the Blackwattle Bay, linking to foreshore walkways to the west and future foreshore walkways to the east.
4.4 – (Sitting of Buildings and Structures)	The proposed new Sydney fish market sits comfortably within the foreshore location.
4.5 – (Built Form)	The built form of the proposal has been the subject of design excellence (see **Appendix 2** in the **A3 Volume**), is of high quality and appropriate in the context.
4.6 – (Signage)	Signage will be the subject of future applications.
4.7 – (Marinas (Commercial and Private)	Not applicable.
4.17 – (Sea Walls)	Works are proposed to make good the existing seawall at the head of Blackwattle Bay.

5.6.10 Sydney Local Environmental Plan 2012

Works are proposed along the wharf edge of the new Sydney Fish Market site for the purpose of improvements to the public domain. This includes demolition of the existing seating area and replacement with a new public domain. This small area is subject to the provisions of Sydney Local Environmental Plan 2012 ("the LEP") is provided in **Table 12** below.

Table 12: LEP Compliance

Provision	Assessment
Zone objectives **(Clause 2.3)**	A section of the site within lot 1 in DP 835794 is zoned B3 ('Commercial Core') pursuant to Sydney Local Environmental Plan 2012 ("the LEP"). The Bridge Road portion of the site is partly zoned B4 ('Mixed Use') and SP2 ('Classified Road') within its intersection with Wentworth Park Road and partly zoned SP2 ('Classified Road') within its intersection with Wattle Street. The objectives of Zone B3) are: *"• To provide a wide range of retail, business, office, entertainment, community and other suitable land uses that serve the needs of the local and wider community.* *• To encourage appropriate employment opportunities in accessible locations.* *• To maximise public transport patronage and encourage walking and cycling.* *• To promote uses with active street frontages."* The proposed public promenade space within part of lot 1 in DP 835794 is consistent with the above objectives in that it will promote walking and cycling to meet the needs of the local and wider community. The objectives of Zone SP2 (item 1) are: *"• To provide for infrastructure and related uses.* *• To prevent development that is not compatible with or that may detract from the provision of infrastructure."* The proposed road works to Bridge Road will provide infrastructure which is vital to the functionality of the new Sydney Fish Market. The works are entirely consistent with the objectives of the zone.
Permissibility **(Clause 2.3)**	Water recreational structures are prohibited in the B3 Zone. Notwithstanding, the development proposes a water recreational structure within part of Lot 1 in DP 835794 which is permissible with consent pursuant to Schedule 1 'Additional permitted uses' of the LEP. Water recreation structures are defined in the LEP as: *"means a structure used primarily for recreational purposes that has a direct structural connection between the shore and the waterway, and may include a pier, wharf, jetty or boat launching ramp."* "Roads" are permissible with consent in the SP2 Zone.
Building Height **(Clause 4.3)**	There is no maximum building height control applying to the parts of the site zoned B3 and SP2.
Floor Space Ratio **(Clause 4.4)**	There is no maximum floor space ratio control applying to the parts of the site zoned B3 and SP2.
Heritage Conservation **(Clause 5.10)**	Pursuant to the clause 5.10 of the LEP the part of the site Zoned B3 and SP2 are not listed as a heritage item nor are they within a heritage conservation area. There are a number of items with heritage significance and heritage conservation areas located within close proximity to the site.

Provision	Assessment
	In this regard a Heritage Impact Assessment has been prepared for the development (see **Appendix 23**).
Design Excellence (Clause 6.21)	Clause 6.21 of the LEP states that development consent must not be granted unless the consent authority is satisfied that the development displays design excellence. Design excellence has been achieved through the design competition process and design excellence strategy.

There is consistency with the provisions of the LEP.

5.6.11 Draft State Environmental Planning Policy – Environment

The Harbour SREP is under review and its provisions are proposed to be consolidated into the new State Environmental Planning Policy – Environment which was exhibited from 31 October 2017 until the 31 January 2018. This SEPP consolidates the provisions of various existing SREPs and SEPPs, generally relating to water bodies and catchments, into one SEPP. In respect to the water Harbour adjoining the site its zoning is changed from Zone ('W1 Maritime Waters') to ('W3 Working Waterways').

The Draft SEPP adopts the Standard Instrument zoning tables for the W3 which is provided below.

*"**Zone W3 Working Waterways***

Direction.

The following must be included as either "Permitted without consent" or "Permitted with consent" for this zone:

Boat sheds

Environmental facilities

Environmental protection works

Water recreation structures

1 Objectives of zone

- *To enable the efficient movement and operation of commercial shipping, water-based transport and maritime industries.*
- *To promote the equitable use of waterways, including appropriate recreational uses.*
- *To minimise impacts on ecological values arising from the active use of waterways.*
- *To provide for sustainable fishing industries.*

2 Permitted without consent

3 Permitted with consent

Boat building and repair facilities; Port facilities; Wharf or boating facilities

4 Prohibited

Any development not specified in item 2 or 3"

Having regard to the objectives of this zone, it is considered that:

- the development enable the efficient movement and operation of commercial shipping and water-based transport and maritime industries being the Sydney fishing fleet, recreational and commercial vessels and facilities for receiving, preparing, processing and selling seafood;
- the equitable use of waterways is promoted by the improved public domain and access along the foreshore;
- there are minimal impacts on ecological values arising from the active use of waterways;
- the Sydney fishing fleet is accommodated.

Wharves or boating facilities are permitted with consent. These are defined to mean:

> *a wharf or any of the following facilities associated with a wharf or boating that are not port facilities:*
>
> *(a) facilities for the embarkation or disembarkation of passengers onto or from any vessels, including public ferry wharves,*
>
> *(b) facilities for the loading or unloading of freight onto or from vessels and associated receival, land transport and storage facilities,*
>
> *(c) wharves for commercial fishing operations,*
>
> *(d) refuelling, launching, berthing, mooring, storage or maintenance facilities for any vessel,*
>
> *(e) sea walls or training walls,*
>
> *(f) administration buildings, communication, security and power supply facilities, roads, rail lines, pipelines, fencing, lighting or car parks.*

The development can be characterised in part as wharves or boating facilities. The proposed development remains partly permissible on land within this zone.

5.6.12 Other changes to State environmental planning policies

The Department of Planning, Industry and Environment is currently undertaking a review of State environmental planning policies, with a view to consolidating and rationalising these where possible. The review process is considering a number of SEPPs of relevance to this project, including SREP 26 and SEPP (State and Regional Development). Early advice received from the Department indicates that the policy intent of SREP 26 is proposed to be retained and is therefore unlikely to impact the proposal. Likewise, it is understood that any changes proposed to SEPP (SRD) will not impact the current planning pathway for the proposal. Proposals to amend these instruments are yet to be publicly exhibited.

5.7 Other Policies and Strategic Plans

The proposals consistency and compliance with the relevant strategic plans and policies is outlined in **Table 13** below:

Table 13: Strategic Plans and Policies Compliance

<table>
<tr><th>Plan or Policy</th><th>Assessment</th></tr>
<tr><td>NSW Planning Guidelines for Walking and Cycling</td><td>These guidelines aim to improve consideration of walking and cycling to access urban services and public transport.

The development is located within a highly accessible location to public transport services via walking or cycling.

The proposed new Sydney Fish Market includes the following improvements to walking and cycling routes:
Upgrade of the Bridge Road / Wattle Street intersection including the removal of the existing pedestrian island;
Additional signalised intersection at Bridge Road / Wentworth Park Road to provide access to the site and facilitate improved accessibility south towards Wentworth Park;
Enhanced pedestrian experience along Bridge Road, with a widened footpath and boardwalk directly adjacent to the new site;
Provision of bicycle parking facilities for staff members (including associated end of trip facilities) and for visitors within the public domain; and
New off-road cycling connection along Bridge Road along the frontage of the site.</td></tr>
<tr><td>NSW Premier’s and State Priorities</td><td>The NSW Government is working to achieve 12 Premier’s priorities and 18 state priorities to grow the economy, deliver infrastructure, protect the vulnerable, and improve education and public services across NSW. The relevant priorities are addressed in the following table.

<table>
<tr><th>Premiers Priorities</th><th>Comment</th></tr>
<tr><td>Building Infrastructure - Key infrastructure projects to be delivered on time and on budget across the state.</td><td>The new Sydney Fish Market is a State significant development planned to be built on time and budget.</td></tr>
<tr><td>Creating jobs</td><td>The proposal will result in the creation of jobs during operation and during construction.</td></tr>
<tr><td>Driving public sector diversity - increase the number of women and Aboriginal and Torres Strait Islander people in senior leadership roles</td><td>Capable of being consistent.</td></tr>
<tr><td>Improving government services - Improve customer satisfaction with key government services every year, this term of government</td><td>Capable of being consistent.</td></tr>
<tr><th>State Priorities</th><th>Comment</th></tr>
<tr><td>Making it easier to start a business</td><td>The construction and operations budgets will assist in making it easier to start a business in the Sydney Metropolitan area</td></tr>
</table>
</td></tr>
</table>

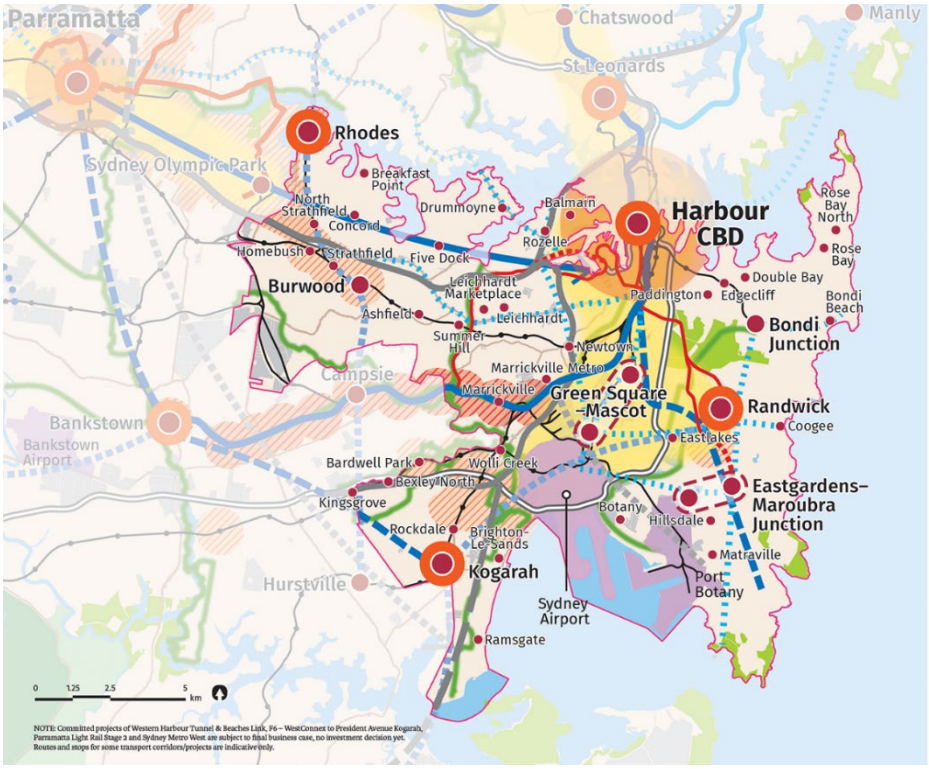
<table>
<tr><th>Plan or Policy</th><th>Assessment</th></tr>
<tr><td></td><td>
<table>
<tr><td>Encouraging business investment</td><td>The construction and operations budgets in the Sydney Metropolitan area will encourage business investment</td></tr>
<tr><td>Boosting apprenticeships</td><td>The construction program will provide additional opportunities for apprenticeships</td></tr>
<tr><td>Accelerating major project assessment</td><td>It is anticipated that the development would benefit from this</td></tr>
</table>
</td></tr>
<tr><td>Better Placed – An integrated design policy for the built environment of New South Wales</td><td>
Better Placed was released in May 2017 by the NSW Government Architect and is intended to set a policy direction for the states collective aspirations, needs and expectation for well-designed places, spaces and building, and thereby creating better cities, towns and suburbs. Seven distinct objectives have been created to define the key considerations in the design of the built environment being.

The follow provides an assessment of the proposal against each key consideration:-

1. ‘Better fit: contextual, local and of its place’: The design of the new fish market has been informed by its contextual setting at the head of Blackwattle Bay. Consideration has been given to existing harbour infrastructure, the extent of the site, Wentworth park including the Morten Bay Fig trees and Glebe Viaduct, and other existing site conditions.
2. ‘Better performance: sustainable, adaptable and durable’: The proposed development provides a high degree of performance in regards to sustainability and responsiveness to site conditions. The development integrates a number of ESD initiatives for waste, water, ecology, and transport.
3. ‘Better for community: inclusive, connected and diverse’: The development provides a publically accessible new fish market which is inclusive, well connected to other destinations along the bays precinct, and diverse creating multi use spaces that are adaptable.
4. ‘Better for people: safe, comfortable and liveable’: The new fish market will be safe, comfortable, and create a liveable environment which will be readily accessible by all members of the public.
5. ‘Better working: functional, efficient and fit for purpose’: The development proposes an operational and functional fish market facility with other ancillary commercial and circulation elements. The building and spaces proposed are efficient and will function in accordance with its intended use as a fish market.
6. ‘Better value: creating and adding value’: The proposed development will provide a high quality design in an iconic location at the head of Blackwattle Bay. Once built, the new fish market will be an iconic building along Sydney’s foreshore which will create value in terms of social, economic, and environmental benefits to the community.
7. ‘Better look and feel: engaging, inviting and attractive’: The proposed new fish market will be suitably integrated with the adjoining destinations along the bays market district as well as Wentworth Park.
</td></tr>
</table>

Plan or Policy	Assessment
	It will become a major tourism hub within the area due to its attractive and engaging built form, inviting scale and generous promenade space.
A Plan for Growing Sydney	*A Plan for Growing Sydney* was the NSW Government's plan which set out the key strategic growth priorities for "Global Sydney". The plan has, however, been superseded by the *Greater Sydney Regional Plan 2018*. A review of this plan is provided below.
Towards our Greater Sydney 2056	*Towards Our Greater Sydney 2056* was a draft amendment to update *A Plan for Growing Sydney* and was released in November 2016. This update was superseded by the final *Greater Sydney Regional Plan 2018*.
Greater Sydney Regional Plan 2018	The *Greater Sydney Regional Plan 2018* was released in March 2018. It sets out a vison, objectives, strategies and actions for a metropolis of three cities across Greater Sydney. The site is located within the Eastern Harbour City area which is identified as being a metropolitan centre pursuant to the plan. The GSRP is structured around four key themes being infrastructure and collaboration, liveability, productivity and sustainability. These themes are supported by a set of directions and objectives. The consistency of the proposal with the GSRP is outlined below:- • Objective 9 'Greater Sydney celebrates the arts and supports creative industries and innovation': The proposed fish market will include a range of local art and a public promenade which will create a space which will celebrate the arts and creative industries. Commercial tenancies located within the new fish market will contribute to Sydney's vibrant and safe night-time economy. • Objective 12 'Great places that bring people together': The new fish market will provide a premium facility which will act as a destination for collaboration and socialisation. The facility will be entirely accessible and is walkable and well connected to existing public transport systems. • Objective 13 'Environmental heritage is identified, conserved and enhanced': Areas with heritage value located within proximity to the site have been considered as part of the proposal. • Objective 18 'Harbour CBD is stronger and more competitive': The new fish market will contribute to tourism and its associated employment and investment within the Harbour CBD. • Objective 25 'The coast and waterways are protected and healthier': consideration has protecting waterways in the design of the new Sydney Fish Market. • Objective 30 'Urban tree canopy cover is increased': The proposal includes additional urban tree canopy cover. • Objective 31 'Public open space is accessible, protected and enhanced': The proposal will provide improved access to Blackwattle Bay foreshore which links to the public open space of Wentworth Park and Jubilee Park and other foreshore areas. • Objective 32 'The Green Grid links parks, open spaces, bushland and walking and cycling paths': The site is located along the Blackwattle Bay foreshore which provides access to parks and open spaces

Plan or Policy	Assessment
	through walking and cycling paths. The proposal will contribute to these existing links through improving the pedestrian experience along bridge street and continuing the foreshore connection to the east towards Pyrmont which is an objective of the Bays Precinct transformation plan via the Bays Waterfront Promenade.
Eastern City District Plan	Although the SEARs requested that the provisions of the *Draft Eastern City District Plan* be considered, the plan has since been finalised. The *Eastern City District Plan 2018* has therefore been reviewed for the purposes of this application. The *Eastern City District Plan* sets out the 20 year plan and 40 year vision for the Eastern City District, which the site is within. The site is strategically placed within the Eastern City District pursuant to the Greater Sydney Commission. The *Eastern City District Plan 2018* highlights the importance of the Bays Precinct as an innovation hub and its strategic importance within the harbour CBD. The Eastern City District Plan also identifies the potential for the Bays Precinct to become a low emissions and high environmental efficiency precinct due to the drastic urban renewal that will occur. The proposal is consisent with the following planning proirities:- • Planning Priority E6 'Creating and renewing great places and local centres, and respecting the District's heritage': The proposal provides for the creation of a new centre around Wentworth Park and the Blackwattle Bay foreshore which will be readily accessible by all members of the public. The development will also respect the emerging heritage character of the area. • Planning Priority E7 'Growing a stronger and more competitive Harbour CBD': The proposal will contribute to tourism in the Eastern Harbour CBD which will assist in growing into a stronger and more competitive Harbour CBD. • Planning Priority E16 'Protecting and enhancing scenic and cultural landscapes': identifies the opportunity for the Bays Precinct renewal can provide additional views to the coastline from public spaces. The proposal will result in the public accessibility to a space that the public is currently restricted from accessing.

Plan or Policy	Assessment
	
Sustainable Sydney 2030	Sustainable Sydney 2030 was released in 2013 and is a plan for a Green, Global and Connected City. The plan includes a set of ten targets which guide the measurement of sustainability within the city of Sydney. The proposal is supported by an ESD strategy at **Appendix 21** which details the proposals performance against relevant criteria. This report indicates that the new Sydney Fish Market will incorporate a number of ESD initiative from a self-assessed Green Star Design and As Built v1.2 Rating to complete the initiatives undertaken to reduce greenhouse gas emissions, potable water consumption and material resources of the site. Documented initiatives cover a range of categories including: • Energy and greenhouse gas emissions; • Potable water reduction; • Minimising waste to landfill; • The indoor environment; • Occupant amenity and comfort; • Land use and ecology; and • Building management.
Future Transport Strategy 2056 and supporting plans	The Draft Future Transport Strategy 2056 is an update of NSW's Long Term Transport Master Plan. It sets out the 40 year vision, directions and outcomes framework for customer mobility in NSW. Key initiatives that are relevant to the development include:-

Plan or Policy	Assessment
	• Sydney Metro West; • Eastern Suburbs to Inner West rapid bus links: Randwick to Sydney University to The Bays Precinct; • Inner Sydney Regional Bike Network within 10km of the Harbour CBD; and • Light Rail to Bays Precinct. The proposed new Sydney Fish Market will benefit from any future transport infrastructure to the site.
Sydney City Access Strategy	The Sydney Centre Access Strategy was released in December 2013 is the NSW Governments plan which details how people will enter, exit and move in and around the CBD over the next 20 years. Central to the plan is to develop a clear direction for how all the different transport modes will work together in the city centre to reduce congestion, provide for future growth, and improve the customer experience. The proposed development will enhance pedestrian links along the new foreshore promenade which is improve access to Pyrmont and the future development at the existing SFM site.
NSW Freight and Ports Plan 2013	NSW Freight and Ports Plan 2013 was released in November 2013 and is the NSW Governments 20 year road map that will ensure freight is at the forefront of its economy. The site is situated near to the Glebe Island and White Bay precinct which is an important port facility within Sydney Harbour. The proposed development does not in any way impact on the viability of nearby port functions.
Sydney's Light Rail Future	Sydney's Walking Future was released in December 2012 and is the NSW governments plan to address CBD congestion through an integrated light rail and bus network. Located approximately 400m walking distance from the site are the Fish Market and Wentworth Park Light Rail stops which is serviced by the Dulwich Hill Line which is a 23 stop, 12.8-kilometre route running from Dulwich Hill to Central station via Pyrmont.
Sydney's Ferry Future	Sydney's Ferry Future was released in May 2013 and outlines the objective modernising Sydney's ferry system. The closest existing ferry stop to the site is Pyrmont Bay. Sydney's Ferry Future 2013 identifies possible future ferry stops at Johnstons Bay and Glebe Point near the site. The proposed development does not in any way impact on the potential for these future ferry stops from being established.
The Bays Precinct Sydney: Transformation Plan	The site is located within the Bays Precinct comprising 95 hectares of predominantly government owned land with 5.5 kilometres of harbour frontage to approximately 94 hectares of waterways in Sydney Harbour. The Minister for Planning has determined that the urban renewal land within the Bays Precinct is a matter of State planning significance, and agreed to investigate the area as a potential State Significant Precinct ("SSP"). In October 2015 UrbanGrowth NSW released the *"Transformation Plan: The Bays Precinct, Sydney"* which sets out a strategy for transformation of the Bays Precinct, including a new fish market.

Plan or Policy	Assessment
	The Bays Market District comprises land on the southern and eastern sides of Blackwattle Bay. It includes land surrounding the southern pylon of the Anzac Bridge, the existing fish market and wharves at the head of Blackwattle Bay. The Bays Market District has been identified by the NSW Government as an immediate planning priority. On April 28, 2017, the NSW Department of Planning and Environment, in consultation with the City of Sydney, finalised the SSP Requirements for the Bays Market District to facilitate the preparation of new planning controls.
NSW Aquifer Interference Policy	NSW Aquifer Interference Policy was released in September 2012 and its purpose is to explain to clarify the requirements for obtaining water licences for aquifer interference activities under NSW water legislation and establishes considerations in assessing impacts that might occur to key water assets. The accompany Acid Sulfate Soils Management Plan at **Appendix 6** indicates that groundwater quality indicators and levels are not significantly changed beyond the basement footprint from the existing levels/quality during excavation activities and are re-established after the completed of construction works.

6. ENVIRONMENTAL ASSESSMENT

The following assessment has been undertaken with reference to the environmental assessment requirements specified for the project (**Appendix 1**), relevant environmental planning instruments, and relevant provisions of the EP&A Act.

6.1 Design Excellence

A design excellence strategy has been prepared in consultation with the Government Architect NSW (GA NSW) and the City of Sydney (**Appendix 2**).

GA NSW has provided advice and guidance in the application of an urban design framework for the master planning of Blackwattle Bay that includes:

- comprehensive site analysis, that places the project vision, objectives and opportunities in the context of the wider locality.
- incorporating wider stakeholder requirements and major infrastructure initiatives beyond the immediacy of a specific project;
- integrating physical development issues (e.g. the public domain & connectivity) with community well-being, environmental and economic strategies;
- helping community and stakeholders understand the principles that guide future urban design outcomes.

The Design Excellence Strategy outlines a process comprising the following to achieve design excellence for the New Sydney Fish Market:

- Scenario testing to establish the preferred site;
- An Urban Design Framework for Blackwattle Bay;
- A reference design for the preferred site;
- Selection of the lead design team by using design within a competitive process;
- A Design Review Panel, chaired by GA NSW with representation from the City of Sydney;
- Design integrity beyond Development Application;
- Integration with the Blackwattle Bay master planning process.

Infrastructure NSW carried out a two stage competitive procurement process to select a world class lead designer. The first stage included an open Registration of Interest (ROI) campaign to attract and encourage submissions from high profile local and international design teams. The assessment of the submissions was based entirely on design merit, focusing on the following evaluation criteria:

- Demonstrated capacity and ambition for creative and innovative design and ability to think laterally;
- Demonstrated capacity to relate to and service a complex client (includes key personnel);
- Demonstrated ability to design for resilience and sustainability;
- Past projects with respect to which the Respondent has provided similar services on comparable projects.

A shortlist of six design consortiums were selected by the Evaluation Committee to proceed to the second stage. The second stage involved an Invitation to Tender (ITT), which included a mid-tender design review workshop for Tenderers to present to the Evaluation Committee their 'process of creation' – their design method undertaken to arrive at their preliminary illustrative response to the Design Brief. Final tender submissions were evaluated against the following assessment criteria:

- Response to the brief;
- Approach and Methodology;
- Personnel and allocation of resources to a set budget.

Both the procurement process and the overall design process are governed by the Evaluation Committee and Design Review Panel as detailed in the framework. The Evaluation Committee and Design Review Panel includes the following representatives:

1. UrbanGrowth – financial and development viability oversight;
2. Sydney Fish Market – functional brief and operational viability oversight;
3. GA NSW – design excellence oversight (Chair);
4. City of Sydney – design excellence oversight.

In June 2017, 3XN was successful and appointed as the lead designer for the new Sydney Fish Market. Since then, 3XN has worked closely with Infrastructure NSW and other key stakeholders during the design process and public consultation phase of the project. Additionally, throughout the early design phase to date, 3XN has presented the design to the Design Review Panel on three separate occasions and appropriately incorporated the panel's feedback.

The project architects have responded to this design excellence strategy by implementing design excellence as described in the Urban Design and Architecture Report prepared by 3XN, BVN and Aspect – **Appendix 2** in the A3 Volume.

Good design is also achieved by consistency with the objectives and considerations of *Better Placed – An integrated design policy for the built environment of New South Wales* released in May 2017 by the NSW Government Architect.

6.2 Built Form and Urban Design

6.2.1 Building height

The maximum building height is RL 28 AHD with the height of the roof variable reflecting the innovative roof design. This is consistent with the Concept DA drawings. The height of the development is compatible with the height of trees in Wentworth Park and the width of the street. The building height is similar to the height of the existing industrial structures at the western end of the site.

6.2.2 Boundary setbacks

The building is setback from Bridge Road by approximately 12 metres providing the opportunity for an enhanced landscape promenade and public access area providing a landscaped and accessible setting to Wentworth Park. At ground level the building is setback from the new

kerb line by varying distances between 12 and 15 metres accommodating pedestrian and, cycle paths, landscaping, bike parking and vehicle drop-off area.

East and west setbacks are generous to provide for view corridors, civic spaces and water activation.

6.2.3 Relationship to character of the area

The development integrates into the surrounding urban and landscape context allowing for a building of modern architectural expression in an innovative and high quality public domain focussed on the waterfront and connecting to Wentworth Park. It heralds a rejuvenation of the area replacing old and disused structures alienating the waterfront and no longer required for their present and previous purpose. The building respects the character of the surrounding area with connections to surrounding public domain and generous separation of built form.

The design facilitates the continuation of the renewal process along the foreshore of Blackwattle Bay connecting with a future waterfront promenade along the eastern side of the bay to connect with the existing promenade around Pyrmont thus contributing to the completion of an extensive waterfront promenade program.

The proposed building connects the built form and communities of Glebe and Pyrmont enhancing the existing role played by Wentworth Park.

6.2.4 Relationship to remainder of Blackwattle Bay

In April 2016, the Minister for Planning declared that the Bays Precinct was a matter of State planning significance. The Department of Planning, Industry and Environment has prepared Study Requirements for the rezoning of the Bays Market District (now Blackwattle Bay) Investigation Area.

Infrastructure NSW has commenced early investigations and is in the process of preparing a master plan that will inform a State Significant Precinct Study and rezoning application to the Department of Planning, Industry and Environment. Infrastructure NSW anticipates that consultation on the master plan and proposed rezoning will occur in 2020 and lodgement in late 2020. Relocating the existing Sydney Fish Market to a new site at the head of Blackwattle Bay is the catalyst that will facilitate the rezoning and subsequent regeneration of Blackwattle Bay.

The State Significant Precinct Study will propose a new planning framework for Blackwattle Bay. It will also consider the new Sydney Fish Market and identify the most appropriate planning instrument for the site. While the State Significant Precinct investigations are only in the preliminary stages, they have considered the new Sydney Fish Market in their baseline analyses. Likewise, the design of the new Sydney Fish Market has ensured that key aspects of the project are consistent with the vision for Blackwattle Bay. In particular, the public domain design ensures a seamless connection between the new Sydney Fish Market and the remainder of the Blackwattle Bay investigation area.

6.2.5 Design quality

The building and public domain implements a design excellence strategy that enables a development of high design quality in built form and public domain. The continued implementation of design excellence through detailed design, construction and management

of the building and public domain will ensure design excellence is achieved. This is discussed in Section 6.1.

6.2.6 Bulk and scale

The building occupies a footprint of 195 metres x 95 metres (roof area) which is larger than most other buildings in the area. The height of the roof fascia varies with the shape of the roof and is approximately 20.7 metres above existing ground level and 19.7 metres above proposed public domain level at the corners of the building.

The building requires a large floor plate to accommodate existing Sydney Fish Market functions currently occupying a site area of approximately 3.6 hectares with the main building having footprint of 128 metres x 115 metres and a range of other buildings and external parking, loading and ancillary services and no defined public domain. These disparate functions are now contained under one roof in a building of significant architectural merit. The building is consistent with other buildings in the working harbour context including buildings and structures in nearby bays such as Rozelle Bay, Glebe Island and Darling Harbour. The building is distinctive and will be visible. It will be readily recognisable as the new Sydney Fish Market and an important feature of the Sydney urban environment.

The bulk and scale of the building is reduced by design features such as the high degree of facade transparency, façade modulation, setback of external walls well within the roof line, and choice of light building materials and colours. Façade materials include ceramic tile fascias, tile cladded masonry walls, operable façade glass, fixed glass elements and frameless glass balustrades.

The roof is visually the most dominant part of the new building and highly visible from the surrounds such as the Anzac Bridge. It has been designed to create the impression of gentle wave like floating canopy.

The building is distinctive and will be visible in its surrounds. The activated facades are light weight and transparent and the building elements are well proportioned and interesting. The bulk and scale of the development is appropriate in the context.

6.3 Scenic quality and visual impacts

6.3.1 Introduction

A landscape character and visual impact assessment of the proposed development has been undertaken by Clouston Associates (see **Appendix 7** in the **A3 Volume**). The key findings of this assessment are summarised below. The study aims to ensure that all possible effects of change and development in the landscape, views and visual amenity are taken into account. It focusses on how the surroundings of individuals or groups of people may be specifically affected by change in the landscape, both quantitatively and qualitatively.

6.3.2 Existing environment

The landscape character of Blackwattle Bay and its foreshore varies greatly in nature offering a spectrum of landscape experiences from open water views with a city backdrop to more intimate enclosed parkland and street spaces on the foreshore.

Landscape character and visual environment

The site is located in an established urban environment where the existing visual character is influenced by a range of structures and forms including:

- A working harbour environment with waterfront industries such as concrete batching plants, marine based servicing and repair businesses and the existing Sydney Fish Market occupying the head and eastern foreshore of the bay;
- The imposing structures of the Western Distributor and the Anzac Bridge to the east and north east of the bay;
- The waterway of Blackwattle and Rozelle Bays to the north with the site coming into view as one passes under Anzac Bridge with glimpses of the site from the northern foreshore of Rozelle Bay and eastern side of Glebe Island;
- A mix of building styles on the west facing hill slope of Pyrmont Point including high rise apartments and medium rise commercial and residential buildings;
- Modern educational building forms in a campus setting to the immediate west with fine grain residential beyond including more recent residential development on the foreshore replacing former industrial uses;
- Older style residential buildings on the east facing hill slopes of Glebe Point comprising mostly dwellings interspersed with apartment buildings;
- Glimpses of the CBD skyline;
- A waterfront promenade on the western side of the bay extending from Bridge Road to Jubilee Park;
- Wentworth Park to the south of the site, the boundary of which is delineated by an impressive line of mature fig trees and comprising other structures such as the railway viaduct structure crossing the norther part of the park and greyhound track grandstand.

The visual catchment of the site is based on combinations of topography, vegetation and built form and height of buildings. The majority of visual catchment from the public domain lies within less than 1km from the site. The ridge lines of Glebe Point and Pyrmont point set the boundary of the view shed to the north east and south west, the flat terrain to the south (Wentworth Park) and the open expanse of waterway to the north within Rozelle and Blackwattle Bays. The area contains a number of heritage items contributing to the landscape and visual quality of the area.

Views

The selection of views for detailed evaluation was based on the following sources:

- Visual assessment policy guidance in particular the NSW Land and Environment Court Planning Principles;
- Background documents and in particular the Urban Design Framework;
- Desktop mapping;
- In field evaluation undertaken for this report.

Based on the above, the selection criteria for the views to be assessed for visual impact include, in order of priority:

- Views from the public domain (principally streets, parks and waterways);
- Views of pedestrians and cyclists;
- Close and direct views;
- Views from transport (private and public);
- Distant and filtered views.

Consideration was also given to the heritage items in the vicinity of the site, particularly Bellevue at Glebe Point and Wentworth Park and the railway viaduct.

Based on these selection criteria 25 views from a variety of close and more distant viewpoints were identified and assessed.

6.3.3 Potential visual impacts

It is the professional opinion of Clouston that the scale and character of the proposal in combination with the anticipated visual impacts offset against the quality of architectural, landscape and urban design are such that the impacts would not constitute reasons to hinder planning approval on visual impact grounds.

Recognising the significant level of scene change generated by the new building, the process pursued to achieve design excellence has produced an outcome that is as much contributory to the visual scene as it is impacting.

It is acknowledged that the perceived visual impact of the proposal will vary from person to person. The methodology used to evaluate visual impact is informed by internationally accredited approaches and Clouston's experience in the field of visual impact.

The methodology takes into consideration the local context and references both international standards and local legislation, policy and NSW Land and Environment Court principles. In weighing up the overall implications of the visual impacts described in this assessment, the following conclusions can be drawn on the proposals impact to the visual amenity of the surrounding area:

- the visual catchment of the proposal is large as a result of its position on Blackwattle Bay. This location allows for views of the proposal from the surrounding foreshore of Blackwattle Bay, Bridge Road, Anzac Bridge and Wentworth Park;
- the proposal will allow for greater views of Blackwattle Bay from within it as well as from the proposed public domain areas surrounding it. Currently these areas are not accessible as a result of the concrete batching plant and the former Jones Coal Loader. These elements currently exclude or highly filter views of the bay from Bridge Road and Wentworth Park;
- the proposal will obstruct views of Wentworth Park, including some of the fig trees on the northern side of Wentworth Park, from Blackwattle Bay apart from filtered views through the eastern and western public domain areas, however these public domain areas will provide greater visual access to Wentworth Park than is currently available;
- the proposal will enhance views from Blackwattle Bay to the extent that the existing poorly maintained assembly of buildings will be replaced with a development of design excellence;

- the development would be visible from Bellevue and Wentworth Park railway viaduct, items on the State Heritage Register and would alter the views from these locations;
- the amount of built form along Bridge Road will be increased by the proposal, however this will be mitigated through the inclusion of street planting along the northern edge of Bridge Road, raising the level of vegetation from the limited amount that currently exists along Bridge Road.

6.3.4 View sharing/loss

It is anticipated that existing views would be affected as follows:

- Filtered views of the trees in Wentworth Park from some more distant views to the north, north east and north west would be lost as a result of the new building with the top canopies likely to remain visible;
- Views from the south west of the site (including the residential property at the corner of Wentworth Park Road and Bridge Road would change with more views of the water resulting from the removal of the concrete batching plant and some loss of views of smaller commercial and residential towers in the distance when looking north-east along Bridge Road will be replaced with views of the southern facade of the new building while buildings in Barangaroo should remain visible over the undulating roof of the market;
- Views from within the northern part of Wentworth Park will change with some loss of the limited filtered view of the distant Anzac Bridge.

6.3.5 Mitigation measures

Clouston's recommend the following mitigation measures:

- Some of the visual impacts looking south towards the northern façade of the project could be assisted by way of a more detailed assessment of planting opportunities;
- A minor amount of existing vegetation will be lost as a result of the project. The resulting addition of new trees and planting will increase the current vegetation on the site. 'Offsite compensation' is therefore not deemed a relevant or necessary mitigation technique;
- The site will be dramatically different in terms of scale and visibility. Given the large amount of glass within the façade, a lighting design that minimises light spill at night will assist in mitigating night time lighting impacts;
- During the Stage 1 Demolition Works it is anticipated that hoarding will run parallel to Bridge Road. As this will form a consistent and highly visible border to the south of the site it is recommended that the hoarding incorporate an artistic design facing Bridge Road and Wentworth Park to help minimise the impact of the temporary works.

6.4 Amenity

6.4.1 Overshadowing and Solar Access

Shadow diagrams have been prepared indicating the potential overshadowing associated with the building (see Architectural and Urban Design Report in **Appendix 2** of the **A3 Volume**). The overshadowing impacts do not affect surrounding properties. The orientation of the site

to the north west of Bridge Road means that there is overshadowing of the road pavement to varying degrees during winter and equinox periods. The setback of the building from Bridge Road minimises this overshadowing with continuous sunshine for summer months.

The mid-winter shadow falls on Bridge Road and the northern part of Wentworth Park commencing at about 1.00pm. This shadow does not extend further than the shadow already cast by the continuous row of fig trees lining the northern boundary of the site.

6.4.2 Privacy

There are significant separation distances between the proposed building and surrounding development to prevent any significant loss of privacy. This includes future development on the existing Sydney Fish Market site.

The nearest residential building is 84 Wentworth Park Road which would be some 50 metres to the south of the development providing adequate separation for maintenance of privacy.

6.4.3 Wind

An analysis of the impacts of the development on the pedestrian wind environment has been undertaken by Windtech (**Appendix 26**). This included a detailed investigation into the wind environment conditions for the proposed New Sydney Fish Market building.

The new Sydney Fish Market building wind testing was based on architectural drawings provided by project architects 3XN and BVN and was modelled without the effect of any forms of wind ameliorating devices such as screens, balustrades, etc. that are not already shown in the architectural drawings. The effect of vegetation was also excluded from the testing. Wind velocity coefficients representing the local wind speeds were derived from the wind tunnel and combined with a statistical model of the regional wind climate (which accounts for the

directional strength and frequency of occurrence of the prevailing regional winds) to provide the equivalent full-scale wind speeds within and around the proposed development.

The analysis of the wind conditions within and around the proposed new Sydney Fish Market building and surrounding buildings is compared with the established baseline wind conditions of the existing site conditions. This allows for comparison of the wind conditions between the two scenarios to provide design guidance and develop ameliorative in-principle treatment recommendations to mitigate any adverse winds.

Generally, the site is predominantly exposed to the prevailing winds for the Sydney region due to its exposure and relatively low-rise scattered buildings, and its location along the waterfront. The wind effects within and around the site predominantly consist of direct winds and corner acceleration effects, as well as some side streaming along the façades.

The new Sydney Fish Market building is exposed to the north-easterly, southerly and westerly prevailing winds. There is some low-level shielding offered by the buildings to the north-east, however, the shielding by surrounding built forms to the west and south is minimal.

The strongest wind conditions were measured at the corners of the New Sydney Fish Market building, caused by the prevailing winds impacting the façade and accelerating around the corners. Additionally, adverse winds along the façade at certain locations are expected due to directs winds impacting the façade and side streaming.

The line of planting to the south of the site is expected to help mitigate the direct southerly winds impacting the building. The adverse wind conditions require mitigation in order to meet relevant criteria for safety. A number of measures have been recommended by Windtech and the project architects are working with the wind consultant to design appropriate measures to mitigate the wind conditions.

6.4.4 External Lighting

External lighting will be provided to illuminate public areas and assist in crime prevention. All external and relevant internal areas of the development are to be well lit to the relevant Australian Standards, particularly at all access and entry points including lifts and stairwells, pedestrian pathways and car parking areas to comply with AS/NZS 1158 to increase surveillance opportunities during the hours of darkness.

The extent of glazing to the facades and outside dining areas creates the potential for light spill. This requires consideration in the detailed design of lighting to minimise spill and glare impacts on surrounding areas and buildings.

6.4.5 Mitigation measures

Lighting

A lighting design that minimises light spill at night is required to assist in mitigating night time lighting impacts.

Wind

The results of the wind study indicate that the building can comply with the desired criteria for pedestrian comfort and safety with the implementation of treatments for certain locations. The

suggested in-principle treatment recommendations are summarised above and in the report (**Appendix 25**), and are in the form of localised screening devices or planting. The exact size and extent of the mitigation strategies are to be quantitatively assessed through wind tunnel testing at a more detailed design phase.

6.5 Transport, traffic parking and access

A transport assessment of the development has been undertaken by ARUP (**Appendix 11**). This assessment is consistent with the transport assessment for the concept development application (SSD 8924). Key findings of this assessment are presented below.

6.5.1 Existing conditions and data collection

Data for the existing Sydney Fish Market site has been collected and used to inform the transport assessment including:

- 24 hour classified traffic counts at the Fish Market / Bank Street / Miller Street intersection which serves as the primary access point to the existing Sydney Fish Market;
- Classified peak hour traffic counts at 12 intersections in the vicinity of the existing and new Sydney Fish Market site;
- Pedestrian and cyclist counts at the entry points to the existing Sydney Fish Market;
- Occupancy and length of stay of the on-site car park serving the existing Sydney Fish Market site;
- Pedestrian and cyclist counts at the Fish Market and Wentworth Park light rail stops.

The existing Sydney Fish Market currently accommodates over three million visitors per annum, with significant attendance during peak events such as Christmas and Easter.

There are 417 formal parking bays on the site including 6 accessible spaces and 23 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 one hour.

Arrival to the site by foot is considerable – accounting for up to 39% of daily arrivals. Cycles accounted for only 1% of arrivals. Private vehicle however remains the primary mode of access, accounting for between 45%-50% of all journeys to the site.

6.5.2 Travel plan

The development of the new Sydney Fish Market provides an opportunity to heavily promote sustainable travel modes to staff and visitors of the site and strongly encourage travel behaviour change. A suite of measures has been proposed to reduce the reliance of private vehicles as a means of accessing the new Sydney Fish Market, including:

- No increase in the number of on-site car parking spaces;
- Bicycle parking for staff and visitors within the public domain;
- End of trip facilities for staff (showers, lockers, tool kits, etc.);
- On-site parking for staff and visitors to be charged at market rates;

- Promotion of off-site deliveries to reduce overall travel demand.

Details of the travel plan are contained in **Appendix 11**.

6.5.3 Vehicle access and circulation

Vehicular access into the site is proposed via a new signalised intersection at Bridge Road / Wentworth Park Road. The intersection will accommodate general traffic movements as well as heavy vehicles accessing the loading dock within the site. The proposal also includes a dedicated vehicle drop-off and pick-up lane on the northern side of Bridge Road, which will be used by coaches, taxis/Ubers and general drop off and pick up.

All loading and unloading activities (other than wharf based activities) would occur within the building.

6.5.4 Travel demand

The development of the new Sydney Fish Market will provide an enhanced offering that has the potential to change the travel demand profile compared to that of the existing site. Increases in the overall retail floor space will result in higher overall visitation numbers, however these will be more distributed across the day (particularly in the evening) due to the enhanced food and beverage offering.

It is reasonable to expect that car usage (as a proportion of overall trips) by staff and visitors travelling to the new Sydney Fish Market will decline compared to current levels, due to the following factors:

- On-site parking being maintained at current levels, despite the increase in visitation levels to the site;
- The change in retail offering provided on the site, which lends itself towards more walk up trips from Pyrmont and the Sydney CBD;
- The modified parking arrangements that will need to be in place for retail staff. The initial transport assessment has considered a likely 10% mode shift from staff away from private vehicle, however with the likely introduction of charges parking for staff and visitors, it is expected this mode shift will significantly increase.
- Improved access to public transport to the site, particularly with a new station at the Bays Precinct as part of Sydney Metro West and the potential improvements to bus services that will be investigated in the future to support Blackwattle Bay;
- Increased levels of bicycle parking to be provided on the site.

It is envisaged visitation to the new Sydney Fish Market will double over a ten year period compared to that experienced by the current site. Increases to staff numbers are however expected to be more modest over time, and coupled with the expected modal shift, the forecast increase in daily vehicle arrivals to the site is less than 40%. An assessment of likely travel demands to the new Sydney Fish Market has confirmed that the supporting transport network has the ability and capacity to accommodate future travel requirements.

6.5.5 Car parking

The development includes 417 on-site parking bays. This level of parking is consistent with the current on-site provision, despite the forecast increase in visitor activity to the site. Analysis

indicates that the level of on-site parking will generally be sufficient to accommodate the parking demand on a typical weekday. On a weekend demand will exceed the available on-site capacity by approximately 80 car parking spaces between 11am and 2pm. Consistent with the current operation of the existing Sydney Fish Market, during major events at the Sydney Fish Market (e.g. 36 hour seafood marathon, Easter Friday etc.) parking demand will increase further, and therefore a number of strategies have therefore been put forward to manage parking demands during peak periods, including:

- On-site parking for staff and visitors will be charged at market rates in line with those at other nearby commercial car parks. Reducing the number of staff (both Sydney Fish Market and tenant staff) parking on site by approximately 50% would provide sufficient capacity within the on-site car park to accommodate demand on weekdays and weekends.
- Using off-street car parks in close proximity to accommodate overflow parking demand.

6.5.6 Public transport, walking and cycling

The new Sydney Fish Market site is served by three light rail stops all within a short walk. Transport for NSW is currently planning for the Sydney Metro West which will include a new station in the Bays Precinct, providing improved public transport accessibility to the proposal. The new Sydney Fish Market is well served a number of good quality walking and cycling routes with the development providing the opportunity to complete part of the missing link in the foreshore promenade. Improvements include:

- Upgrade of the Bridge Road / Wattle Street intersection including the removal of the existing pedestrian island;
- Additional signalised intersection at Bridge Road / Wentworth Park Road to provide access to the site and facilitate improved accessibility south towards Wentworth Park;
- Enhanced pedestrian experience along Bridge Road, with a significantly widened footpath and provision of a waterfront promenade to provide an important missing link to the foreshore promenade;
- Significant increases in staff and public bicycle parking.

6.5.7 Road network assessment

Traffic modelling was undertaken to determine the impacts on the road network and any associated improvements required to support the proposal.

The analysis indicates that key intersections in the vicinity of the new Sydney Fish Market site will operate at the same level of service compared to existing conditions. Apart from the Wentworth Park Road / Bridge Road intersection (new site entry), no intersection is forecast to experience more than a 5% increase in traffic flows compared to current levels.

6.5.8 Construction traffic and pedestrian management plan

A preliminary Construction Pedestrian and Traffic Management Plan (CPTMP) has been prepared for the construction of the new Sydney Fish Market (contained in **Appendix 11**). The Contractor (once appointed) will prepare a more detailed CPTMP prior to the commencement of works on the site.

At this stage it is envisaged access to the construction site will be via the existing driveways to the site located on Bridge Road. It is not expected that on-street work zones will need to be established on Bridge Road to facilitate the construction works. Instead a hardstand area north of the existing Bridge Road footpath will be utilised to store construction vehicles. A site hoarding will be established to separate this work zone from the adjacent Bridge Road footpath so not to impact the safety of pedestrians in the area. Traffic controllers will be present at the vehicle crossover points to manage interactions with pedestrians.

Mitigation measures would be adopted during the construction phase to ensure traffic movements have minimal impact on surrounding land uses and the community in general. To ensure the safety of pedestrians and cyclists, traffic controllers with appropriate accreditation will hold construction vehicles at cross- over points and allow pedestrians to cross these work areas. At this stage it is not envisaged that any footpath closures will be required to facilitate the construction project.

6.5.9 Mitigation Measures

During construction

ARUP propose that mitigation measures would be adopted during the construction phase to ensure impacts of traffic movements on surrounding land uses and the community in general are minimised, and would include the following:

- Truck loads would be covered during transportation off-site for sensitive loads;
- Establishment and enforcement of appropriate on-site vehicle speed limits (20km/h), which would be reviewed depending on weather conditions or safety requirements;
- Neighbouring properties would be notified of construction works and timing;
- Materials would be delivered and spoil removed during standard construction hours;
- Avoid idling trucks alongside sensitive receivers; and
- Deliveries would be planned to ensure a consistent and minimal number of trucks arriving at site at any one time
- No on-site parking to be provided to encourage the use of public transport to the construction site

To manage driver conduct the following measures are to be considered for implementation:

- All deliveries are to be pre booked;
- All deliveries are to check in at the site office;
- Drivers are to give way to pedestrians.

Traffic controllers will be used to manage traffic on the public street(s) to allow trucks to enter or leave the site. Where possible, vehicles must enter and exit the site in a forward direction. They must wait until a suitable gap in traffic allows them to assist trucks to enter or exit the site. The Roads Act does not give any special treatment to trucks leaving a construction site - the vehicles already on the road have right-of-way. Vehicles entering, exiting and driving around the site will be required to give way to pedestrians.

No bus services would be impacted by construction traffic as the work is confined to off street works.

During operation

A suite of transport measures has been proposed to support the development of the site and mitigate the impacts on the transport network, as detailed in **Table 14**.

Table 14: Summary of transport measures

Mode	Recommendation	Responsibility
Light Rail	Improved wayfinding from Fish Market, Glebe and Wentworth Park light rail stops to direct customers towards the new Sydney Fish Market	Infrastructure NSW Transport for NSW
Parking	Providing no additional on-site car parking compared to existing levels, despite the increase in site activity	Infrastructure NSW
	On-site parking for staff and visitors will be charged at market rates in line with those at other nearby commercial car parks	Infrastructure NSW Future operator
	Use of off-street car parks in close proximity to Sydney Fish Market to accommodate overflow parking demand during busy periods	Infrastructure NSW Future operator
Drop off / pick up	Managed drop off and pick up area adjacent to Bridge Road to provide for improved access for those arriving by point to point vehicles	Infrastructure NSW Future operator
Pedestrians (including road safety)	Widening and enhancement of the Bridge Road footpath adjacent to the new Sydney Fish Market site	Infrastructure NSW
	New signalised pedestrian crossing at Wentworth Park Road / Bridge Road to support pedestrian crossing movements, including a dedicated pedestrian crossing across the new car park entry point.	Infrastructure NSW RMS
	Modification to the Wattle Street / Bridge Road intersection to remove the existing slip lane on the south-west approach of the intersection and provide for safer pedestrian crossings of Bridge Road	Infrastructure NSW RMS
Cycling	Provision of visible and secure bicycle parking at the new Sydney Fish Market for staff and visitors	Infrastructure NSW
	Provision of a new off-road bicycle link along Bridge Road adjacent to the frontage of the site to support the proposal and the wider Blackwattle Bay	Infrastructure NSW
Bus	Work with Transport for NSW to investigate providing improved bus services to support access to the Sydney Fish Market and wider Blackwattle Bay	Infrastructure NSW Transport for NSW
Metro	Provision of good quality connections between the new Sydney Fish Market and the proposed Sydney Metro West station in the Bays Precinct.	Transport for NSW Infrastructure NSW

Coaches	Management strategy to be implemented to manage the movement of coaches.	Infrastructure NSW Future operator
Travel demand	Preparation of a site specific travel demand management plan, including annual monitoring of travel behaviour	Infrastructure NSW Future operator

6.6 Maritime Navigation

A Navigation Impact Assessment has been prepared for the development which assesses the potential navigational impacts of the development with respects to adjacent areas such as Rozelle Bay and Blackwattle Bay and Sydney Harbour more broadly (**Appendix 9**). Specifically, the report addresses the impacts of the development both during construction and operation, which are summarised below. Consultation with the Harbour Master was undertaken.

Blackwattle and Rozelle Bays are used for a wide variety of commercial and recreational purposes as outlined in Section 2.8.

6.6.1 Impacts during construction

Stage 2 Main Works construction activities will be predominantly completed within the confines of a cofferdam enclosure, which will minimise impacts on waterway navigation during construction activities.

Construction will be undertaken using a combination of floating and land-based plant and equipment. Floating plant would also be required to install floating silt curtains around the perimeter of the work area, to complete maintenance on the silt curtains and to undertake environmental monitoring activities (e.g. water quality). Construction of the cofferdam itself would require mobilisation of floating plant and waterway occupation around the perimeter of the structure. Construction of the operational and recreational wharves would be completed outside of the cofferdam enclosure by floating plant and equipment, which would complete installation of pontoon restraint piles for the floating wharf and piling required to support the fixed operational wharves. It is expected that the pontoons would be floated to the site overwater by tugs/workboats.

The required work area around the perimeter of the development footprint would need to be clearly delineated. The required work area would be confirmed in the Contractors detailed work method plan for all water-based activities, which would form the basis for detailed consultation between Infrastructure NSW, Roads and Maritime Services, Port Authority of NSW, Harbour Master and other appropriate Authorities. The perimeter of the work area would typically be defined by a floating boom and silt curtain. The boom would be continuously floating along its entire length, brightly coloured and would be tethered to temporary buoys anchored to the seabed to retain the silt curtain in position. This feature would clearly delineate the construction work area for vessels navigating within the surrounding waterway. In particular, this would clearly define ‘no-go’ areas for non-powered craft that use the waterway for recreation and training activities (e.g. rowing, dragon boating).

Mobilisation and demobilisation of floating plant to the site would require navigation through the surrounding areas of Johnstons Bay, and Blackwattle Bay and Sydney Harbour subject to the location of available plant and equipment. This would be a ‘one-off’ activity completed at

the start and end of the works and is not considered to pose any significant navigation risks. A staging area is proposed to be established within White Bay for barge related works. The transit of barge-mounted equipment, tugs and workboats throughout the Harbour is a relatively common activity, and is particularly prevalent in Rozelle Bay and Blackwattle Bay due to the presence of several waterfront premises occupied by marine contractors. The transit of floating plant to site would need to account for the navigation restrictions imposed at the Glebe Island Bridge and Anzac Bridge (e.g. channel width and bridge clearances).

The existing rowing route within Blackwattle Bay would need to be modified to accommodate the construction work area at the head of the Bay. This would require shortening of the route so that it does not extend as far into Blackwattle Bay. It is not considered that this would have any adverse impact on the safety of non-powered craft as the available waterway width across Blackwattle Bay would generally be maintained and only the length of the Blackwattle Bay leg of the rowing route would be reduced.

The extent of the construction work area is not expected to significantly impact on boating access to existing wharf structures as the Glebe Rowing Club pontoon, Sydney University Boat Club pontoon, Sydney Fish Market northern mooring jetty and Blackwattle Bay Marine Operatives marina are at a sufficient distance away from the site.

In accordance with Clause 67ZN of the Ports and Maritime Administration Regulation 2012, works involving disturbance of the port bed shall be subject to the written permission of the relevant Harbour Master and shall be completed in accordance with the conditions attached to such permission. Port Authority of NSW have advised that they would provide their approval for the works through their Harbour Master Approval process. This requires submission of all final documentation detailing the proposed works (assessment reports and plans) for review together with a completed Harbour Master Approval Application Form (available on the Port Authority of NSW website). The Harbour Master may impose conditions on any approval to disturb the seabed.

A detailed work method plan for all water-based activities should be prepared by the Contractor in consultation with Infrastructure NSW, Roads and Maritime Services, Port Authority of NSW, Harbour Master and other appropriate Authorities. This plan would form the basis for a 'Notice to Mariners' which would be issued in coordination with Port Authority of NSW to advise the boating community of the extent, nature and duration of the construction activities. Several Notices to Mariners may need to be issued to cover different phases of the proposed works.

Notwithstanding the issue of Notices to Mariners, an appropriate program of consultation and information should be developed to ensure that stakeholders (e.g. rowing clubs, dragon boating clubs, marina facilities, marine contractors) and the general public are fully notified of proposed construction activities and associated exclusion zones. Consultation with user groups has been undertaken and would continue prior to and during construction.

6.6.2 Mitigation measures during construction

The following measures would be implemented during construction to minimise and mitigate potential navigational impacts of the development:

- Delineation of construction work areas and exclusion zones with a floating boom and silt curtain;

- Modification (shortening) of the existing rowing route to accommodate the construction work area at the head of the Bay;
- Issue of a 'Notice to Mariners' in coordination with Port Authority of NSW to advise the boating community of the extent, nature and duration of the construction activities;
- an appropriate program of consultation and information should be developed to ensure that stakeholders (e.g. rowing clubs, dragon boating clubs, marina facilities, marine contractors) and the general public are fully notified of proposed construction activities and associated exclusion zones.

6.6.3 Impacts during operation

Wave climate

The wave climate at the proposed location of operational and recreational wharves proposed as part of the new Sydney Fish Market will generally satisfy the 'moderate' conditions specified within AS3962-2001 for oblique seas. Oblique seas would generally be expected for vessels berthed alongside in the same orientation as the alignment of wharf structures.

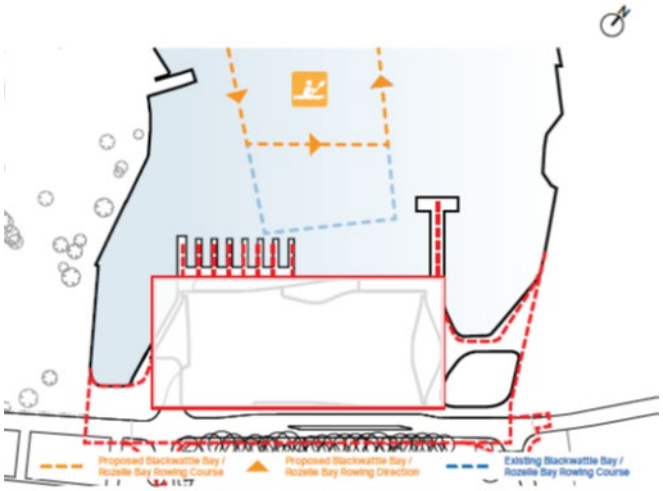
Water depths

Comparison of the required seabed levels for berthing and fairway access and the existing seabed demonstrates that existing water depths satisfy the requirements of AS3962-2001. As such, dredging is not required to provide additional water depth at the proposed wharves. Although sailing yachts do not currently access the existing Sydney Fish Market wharf facilities, the available water depths at the proposed wharves could accommodate sailing yachts up to the maximum size that would fit under the Sydney Harbour Bridge.

Waterway encroachment

The proposed footprint of the new Sydney Fish Market building and perimeter promenade extends out to the approximate quay line of existing structures, such as the concrete batching plant and Blackwattle Bay Marina. The proposed wharf structures extend a further 30 metres (Fixed Loading and Unloading Wharf) and 65 metres (Recreational Floating Wharf) into Blackwattle Bay. The waterway encroachment of the proposed development is not considered to impact on existing boating access from other surrounding wharf structures or foreshores. Embayments have been maintained to the west and east of the development, which maintain the existing foreshores. The nearest existing boating access structure to the development is the Glebe Rowing Club pontoon, which will not be impacted by the proposal as it is approximately 50m away from closest proposed wharf.

The proposed wharf structures will be in close proximity to the existing alignment of the rowing route in Blackwattle Bay. As such, the rowing route would need to be modified to accommodate the new Sydney Fish Market. Royal HaskoningDHV recommend that the rowing route is shortened to provide a minimum distance of 45m to the proposed wharf structures as per the current offsets applied in the existing rowing route from the Blackwattle Bay Marina and Sydney Fish Market main concrete jetty.



This would improve waterway safety by reducing interaction between powered and non-powered craft in the vicinity of the proposed wharves and relocate the end of the rowing route to a convenient position opposite the Glebe Rowing Club pontoon. It is not considered that this rowing route modification would have any adverse impact on the safety of non-powered craft as the existing available waterway width across Blackwattle Bay would be maintained and only the length of the Blackwattle Bay leg of the rowing route would be reduced by 80-90 metres.

Vessel approach and manoeuvring

Water depths on the approach to the proposed wharves are more than sufficient to accommodate the expected range of vessels at the facility. The width of the waterway available for navigation is also adequate with the narrowest width being 180 metres. Adequate waterway area is available for vessels to manoeuvre and adjustments can be made to wharf use to suit the range of vessels.

Vessel Interaction

The new Sydney Fish Market development involves the relocation of existing vessel operations from the existing northern mooring jetty, main concrete jetty and public pontoon in the south-eastern corner of Blackwattle Bay to the immediately adjacent waterway area at the head of the Bay. The existing number of daily vessels movements for charter boats and fishing trawlers using the Sydney Fish Market wharves is relatively low at 3-10 vessels per day. As such, the impact of the relocation of existing operations to the new site with respect to interaction with other motorised craft is minimal.

6.6.4 Mitigation measures during operation

The following measures would be implemented during operation to minimise and mitigate potential navigational impacts of the development:

- existing 4 knot speed limit and no wash zone within Blackwattle Bay / Rozelle Bay are to be maintained;
- shortening of the rowing route at the head of Blackwattle Bay to provide a minimum distance of 45m to the proposed wharf structures and to maintain a buffer for vessel turning and ferry manoeuvring at the head of wharves;

- approaching and departing vessels using the proposed wharves would need to keep a proper lookout at all times and vessels other than ferries should give way to passive recreational craft. These navigation requirements should be written into the 'berthing rules' and/or a Plan of Management and included as part of the berthing agreement and planning documentation for use of the wharf facilities.
- Safe navigation requirements should also be reinforced and made clearly visible to regular wharf users, visiting seasonal vessels and recreational vessels by installing signage in prominent locations throughout the wharf facilities to outline the following:
    - no anchoring at the head of Blackwattle Bay;
    - keeping a proper lookout for non-powered craft at all times;
    - notification of peak times for passive recreation (e.g. dawn and dusk); and,
    - giving way to passive recreational craft including rowing boats, dragon boats and outrigger canoes.
- Preparation of a Vessel Traffic Management Plan (VTMP) for the New Sydney Fish Market to provide guidance to enhance marine safety and navigation for all vessels using the wharf facilities and the surrounding waterway area.

6.6.5 Glebe Island Development

Proposed future development in the Glebe Island area comprises the following two projects:

- Glebe Island Multi-User Facility; and,
- Glebe Island Concrete Batching Plant (SSD Application 8544).

The Glebe Island Multi-User Facility has been proposed by Port Authority of NSW and involves the construction and operation of a multi-user facility for the import, storage and distribution of dry bulk materials (e.g. sand and aggregates) at the existing Glebe Island Berths 1 and 2, located on the eastern side of Glebe Island. The proposed facility would facilitate ship off-loading and include radial electrical stackers and an enclosed storage building designed to enable feeding material from the stackers through building slot/s into the storage bays. The building slot/s would be closed when there is no ship-offloading.

It would also feature internal truck receival and delivery facilities to reduce noise emissions. It should be noted that the existing Glebe Island Berths 1 and 2 are currently operating as a multi-user facility for the unloading/loading of dry goods, as well as other occasional ad hoc port-related uses and laying-up of vessels. The project proposal has been documented in a Review of Environmental Factors, which has been put on public exhibition. Port Authority of NSW are currently preparing a Response to Submissions report prior to undertaking further consultation.

The Glebe Island Concrete Batching Plant has been proposed by Hanson Construction Materials Pty Ltd to facilitate relocation of their current concrete batching plant operations from Blackwattle Bay in order to make way for the new Sydney Fish Market. A new aggregate handling facility and concrete batching plant is proposed adjacent to Glebe Island Berth 1 and is considered to be complementary to the proposed dry bulk material handling facilities at Glebe Island Berth 1 and 2 (i.e. the Glebe Island Multi-User Facility). The proponent is currently reviewing submissions received from the SSD application and EIS.

Cumulative impacts can occur when two or more projects are carried out concurrently and in close proximity to each other. The impacts can be caused by both construction and operational activities.

The construction schedule of all projects has not been determined. However, the new Sydney Fish Market works are located at the head of Blackwattle Bay and are considered to be at a sufficient distance away from the Glebe Island Berths such that cumulative impacts from conflicting navigation and operation of floating construction plant would not occur. Furthermore, the Glebe Island projects comprise predominantly land-based construction works undertaken on the hardstand area behind the existing berth face. As such, occupation of the waterway by floating construction plant in the vicinity of the Glebe Island berths would be limited to periodic delivery of plant, equipment and supplied by barge (e.g. delivery of aggregate silo modules for proposed Hanson facilities).

The distance between the proposed new Sydney Fish Market and the Glebe Island Berths is considered to be sufficient to mitigate any navigation impacts during the operational phase. The Glebe Island Berths are currently operating as a multi-user facility for the unloading/loading of dry goods and this shipping is therefore an existing use of this port area. Similarly, the new Sydney Fish Market is relocation of pre-existing boating access facilities, which have operated in conjunction with shipping activities at Glebe Island and White Bay for a long period of time. The relocation of the Hanson concrete batching plant operations to Glebe Island is considered to provide an improvement in navigation conditions within Blackwattle Bay. Furthermore, any interaction of boating traffic associated with the new Sydney Fish Market and Glebe Island shipping would occur in Johnstons Bay, where a broader waterway area is available to accommodate vessel passing and manoeuvring. It is expected that vessel navigation would be managed using existing operational protocols established for interaction of shipping with other recreational and commercial vessels in the Bays Precinct, and that no cumulative impact on navigation would occur.

6.7 Biodiversity

6.7.1 Impacts on marine ecology

Eco Logical Australia (ELA) has undertaken a Marine Ecology Assessment for the proposed new Sydney Fish Market (**Appendix 8**).

Data Collection

A desktop search using online databases was used to identify threatened aquatic species, populations or communities near the study area. A field survey using a boat-mounted underwater camera was completed to map the 'key fish habitat' within Blackwattle Bay and determine if any threatened aquatic species, populations or communities were present or could potentially use the area and be impacted by the works.

Existing Environment

ELA found during their field survey that the aquatic environment surrounding the site had limited biodiversity and a low number of fish observed, potentially due to the lack of habitat complexity. The survey found that the aquatic habitat of the site had been modified by a vertical seawall, the existing wharf structure, pontoons, piles and disturbance by regular boat traffic.

The following district zones were identified which are detailed in the Marine Ecology Assessment:

- Manmade structures
- Subtidal Sand
- Intertidal rock rubble
- Macroalgae.

No threatened species, population or communities were observed within the site nor are any expected to use the site. Microalgae growing predominately along the western seawall is capable of supporting threatened species, however, no seahorses or other *Syngnathiformes* were observed during the field survey, and are unlikely to use the structures within the proposed area of the works as habitat.

Impact assessment

Demolition and construction

ELA identify three impact types are likely to occur during wharf demolition and construction:

- underwater noise generation and disturbance during pile removal and installation;
- benthic disturbance from demolition/construction vessels and sediment reprofiling; and
- changes to water quality, circulation and sedimentation.

Any potential sediment pluming that occurs during pile removal and installation would be contained by a silt curtain as prescribed in the CEMP (**Appendix 13**). As the piling is through bedrock and predominantly coarse sands and would be performed during calm conditions, drill cuttings and suspended sediments are likely to settle locally in a similar habitat type. Finer sediments could disperse further, depending on tidal dynamics, but would be contained within a silt curtain surrounding the works.

The site is classed as having a 'high probability' of acid sulphate soil (ASS) within the benthic sediments. These soils can cause harm to marine flora and fauna if disturbed, exposed to oxygen and then resubmerged (eg piling in an intertidal area during low tide which exposes the soil, which is then covered again at high tide). Fine-scale sediment plumes, which may release the acid sulphate, would be contained within the construction site by a silt curtain in stage one and a cofferdam with a silt curtain covering the access gap during stage two. The silt curtain should not be removed until the risk of sediment contamination is negligible.

Underwater noise from hammering piles has the potential to cause disturbance or physical impact to marine fauna in the area. Fish in the vicinity would be affected by excessive underwater noise. Impacts range from mortality to interruption of communication, depending on species anatomy (eg fish with swim bladders closer to the ear are more sensitive to acoustic impact than species with swim bladders further from the ear). Due to the shallow depth, fish would not be able to escape under the silt curtain.

During sediment reprofiling, there would be a direct loss of benthic infauna and smothering of adjacent similar habitat. Given the area is currently heavily shaded by the existing wharf, the species occupying the sediment would likely be those tolerant of disturbed areas. Species would recolonise the area over time, resulting in only a minor and temporary impact to the benthic infauna, and foraging resources in the area. Indirect impact may arise if bed sediment particles become entrained in the water, increasing turbidity and potentially releasing

contaminants, if present. Best practise construction methods, such as a silt curtain and water quality monitoring (turbidity), would reduce this risk and the potential impact would be minor.

During operation

ELA identify three impact types likely to occur during operation of the fish markets:

- boat traffic using the facility;
- shading impact on benthic habitat; and
- creation of new aquatic habitat.

The impacts which could occur to marine habitats during operation are typically associated with boat wash, disturbance of sediments, and an increase in pollutants and litter. Given the location and existing high-intensity use of the area, the following impacts are considered minor:

- boat wash would not impact the foreshore, which is stabilised by a seawall;
- pollutants expelled from boats would be the same as the existing conditions. Commercial fishing vessels, ferries and recreational vessels all frequent the area regularly. Frequency is not expected to increase significantly.

Absolute and partial shading from the proposed works and changes to the number of piles may have an indirect impact on benthic habitat. There will be additional areas of shading and fewer piles leading to some loss of habitat of minimal sensitivity.

Conclusion

The assessment concluded 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. Direct and indirect impact through piling and shading would occur on unvegetated substrate (minimally sensitive key fish habitat). New hard surfaces from piles, pontoons and vertical walls may supplement habitat loss due to the new structure, but there would still be an overall net loss of key fish habitat. The use of habitat enhancing features would also increase and improve habitat and help offset the loss of habitat. Three small mangrove seedlings would be harmed equating to the loss of less than 1 m^2 of type 2 key fish habitat.

Mitigation measures

Although the work would not directly or indirectly harm marine vegetation (besides three small mangrove seedlings), the following mitigation measures are recommended to minimise the risk of impact during construction and operation:

- Machinery and engine maintenance schedule to reduce oil/fuel leakage.
- Low impact barge positioning to prevent propeller scouring and thrust wash onto shallow habitats.
- Minimise footprint and establish no-go zones in sensitive habitats.
- Biological hygiene (e.g. prevent spread of noxious species on and off the site).

- Establish no-go zones to avoid damage to nearby habitats (e.g. macroalgae). No-go zones should be marked on a map and displayed inside the construction barge and office. All staff responsible for manoeuvring the barge should check the map before selecting a new position. A brief pre-construction survey should be undertaken to confirm the extent of sensitive habitat types (no-go zones) present, e.g. the extent of macroalgae to the west of the subject site.

- Work positioning barges, drilling and pile driving should occur during calm conditions.
- No anchors or mooring blocks/lines should be placed on the intertidal rock habitat. All lines should be suspended off the sea floor to minimise drag across benthic communities.
- Use a floating boom with silt curtain to contain sediment plumes during pile removal, drilling and pile hammering. As the site is large, the silt curtain should encompass the area where work is being undertaken, rather than encompassing the entire site. The silt curtain should not be removed until the risk of sedimentation is negligible. The silt curtain should be placed across the gap in cofferdam or around piling activities until it is closed after piling.
- All waste material should be disposed of on land, stored away from stormwater drains and not reused in the construction.
- The noxious marine alga Caulerpa taxifolia was not observed in the study area. Care should be taken not to introduce this species to the area by using contaminated vessels and machinery. For example, a drill head or anchor used at another site with Caulerpa should be thoroughly cleaned of plant propagules and sediment before being used at another location. Fragments of Caulerpa can remain viable for up to three days out of the water. Best hygiene practices are outlined in the NSW Control Plan for the Noxious Marine Alga Caulerpa taxifolia (NSW I&I 2009).
- Although large marine mammals are not expected to occur, gentle start-up hammering is recommended to allow undetected aquatic fauna to leave the area and avoid hearing damage. Work should be stopped if large fauna is observed nearby.
- Avoid piling or minor excavation works in intertidal zones at low tide, to reduce the risk of exposing ASSs. A silt-curtain should be used to contain sediment plumes. Refer to the Acid Sulphate Soil Management Plan developed by JBS&G for further mitigation measures.
- Submersible pump heads should be covered in a filter to prevent fauna being sucked into the pump. Pumps must also be of a suitable size and capacity with a slow enough velocity to allow fish to escape during any dewatering process.
- Develop an aquatic biodiversity management plan (ABMP). This should be developed by a suitably qualified aquatic ecologist during the detailed design phase of the project and address the on-going management of the aquatic biodiversity in Blackwattle Bay.
- Monitor water quality at the frequencies recommended in the Flooding and Water Quality Assessment (**Appendix 12**). If trigger values are exceeded then works should cease, and water treated prior to works continuing.

6.7.2 Biodiversity Development Assessment

ELA has undertaken a Biodiversity Development Assessment Report (BDAR) for the proposed new Sydney Fish Market (**Appendix 7**). The assessment found as follows.

Data Collection

ELA reviewed a number of online data bases to accompany field surveys undertaken for the purposes of their BDAR (see **Appendix 7**).

A vegetation survey was undertaken by ecologist Mitchell Scott on 22 and 31 August 2017.

Existing Environment

The development site is entirely modified and disturbed, and contains exotic species, weeds and planted native or non-indigenous species. Vegetation within the development site includes native canopy species including the Port Jackson Fig and Moreton Bay Fig. Exotic canopy species are also present on the eastern portion of the site near the Jones Brother coal loader including the Japanese Hackberry and Magnolia. Mid-storey and groundcover species are present on the development site including Lantana, Veldtgrass and Fountain Grass.

No mapped Plant Community Types (PCTs), as defined by the NSW BioNet Vegetation Classification system had previously been recorded within the development site. The development site does not contain any mapped streams or wetlands, but does contribute to a Biodiversity Corridor mapped by Greater Sydney Local Land Services (GSLLS). The development site is mapped with the soil landscape 'Disturbed Terrain'. These areas were previously swamps, estuaries, and wetlands, which have been cut and filled using estuarine sand and mud, and rocks and local soil materials, along with a variety of artificial material. The development site inspection solely identified scattered planted (or naturally established) native and exotic vegetation within the development site.

Impact assessment

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.

Due to the absence of PCTs within the development site, no ecosystem credit or species credit species were predicted to occur.

Pteropus poliocephalus (Grey-headed Flying Fox; GHFF), listed as Vulnerable under the Biodiversity Conservation Act and EPBC Act, and non-threatened 'small birds' (as a general group of local conservation significance under the UESAP) were identified with the potential to occur within the development site. Although the development site lacks areas of dense native mid-storey vegetation, canopy vegetation provides potential habitat for 'small birds' including Yellow Thornbill, Australian Reed-warbler, Superb Fairywren, Spotted Pardalote, and Silvereye, all birds of local conservation significance.

The proposed works would remove approximately 0.19 ha of potential foraging habitat (2 Ficus spp., 1 Angophora costata and 10 juvenile Lophostemon confertus) for GHFF, and approximately 0.37 ha of potential foraging habitat for small birds.

The development site is located in the southern portion of Blackwattle Bay and has substantially avoided biodiversity impacts on small birds and GHFF by utilising, as much as possible, already disturbed sites and existing infrastructure. However, the development will directly impact a small amount of potential foraging habitat for small birds of local conservation significance, and the GHFF.

The direct impacts of the development as assessed using the Biodiversity Assessment Method is outlined below:

- No PCTs were identified within the site during the site inspection, and thus 0 ha of PCT will be cleared during the proposed works;
- A total of 0.37 ha of 'Urban Native and Exotic Cover' would be removed by the proposed works, which includes:

- approximately 0.29 ha of native species which has been planted or naturally established would be removed by the proposed works
- approximately 0.08 ha of exotic species would be removed by the proposed works

- None of the Fig trees located along the southern boundary of the study area will be removed, although the canopy of the stand partially overhangs the works area and may require trimming. This report assumes that canopy overhanging the works area will be trimmed, and includes this as a direct impact.

Potential indirect impacts of the proposed works would include sediment runoff, mitigated by using sediment barriers, and light spill to adjacent stand of Fig trees (potential foraging habitat for GHFF), mitigated by intentional direction of lighting. Based on the data available as identified in the report, the proposed works would not have any Serious and Irreversible Impacts (SAII).

No PCTs (ecosystem credits) or threatened species credit species were recorded within the site, and thus no offsets are required under the Biodiversity Conservation Act. It is noted that the GHFF is an ecosystem credit species (for foraging and non-breeding habitat) and the small birds of local conservation significance are not listed threatened species, and therefore, due to the absence of PCTs within the development footprint, do not require an offset.

One Matter of National Environmental Significance (MNES) was identified as potentially adversely affected by the proposed works. The Grey-headed Flying-fox is listed as Vulnerable under the EPBC Act, and it is considered that this species is likely to use some of the site for foraging.

An assessment of the Commonwealth Significant Impact Criteria (Commonwealth of Australia 2013) was undertaken for the Grey-headed Flying-fox. The assessment concluded that the project would not have a significant impact on this species, and as such, a referral to the Commonwealth was not required.

Furthermore, offsets for this species are not required as impacts are associated with an ecosystem credit species.

All impacts to MNES have been avoided as far as practicable and all impacts have been assessed in accordance with Commonwealth guidelines.

Mitigation measures

Mitigation strategies have been put into place to manage potential impacts to MNES and are contained in Table 6 of the BDAR contained in **Appendix 7** and reproduced below.

Measure	Risk before mitigation	Risk after mitigation	Action	Outcome	Timing	Responsibility
Displacement of resident fauna	Moderate	Minor	• In lieu of identified habitat trees (e.g. hollow-bearing trees) within the Development Site, if fauna are located within the Development Site during the proposed works a qualified ecologist/licensed wildlife handler must be contacted during tree removal in accordance with best practise methods	Relocation of fauna in a sensitive manner	Prior to and during clearing works	Project Manager
Timing works to avoid critical life cycle events such as breeding or nursing	Moderate	Minor	• Winter/early spring is breeding/nesting period for birds and fruit bats (including Grey-headed Flying Fox). Observe trees for fauna if works are to be conducted during this period, and if fauna are utilising trees, notify a qualified ecologist/licensed wildlife handler.	Impacts to fauna during nesting/nursing avoided	During clearing works	Project Manager
Sediment barriers or sedimentation ponds to control the quality of water released from the site into the receiving environment	Minor	Negligible	• Appropriate controls will be utilised to manage exposed soil surfaces and stockpiles to prevent sediment discharge into waterways • Ensure all works within proximity to the drainage lines have adequate sediment and erosion controls • Commence revegetation as soon as practicable to minimise the risks of erosion	Erosion and sedimentation will be controlled	For the duration of construction works	Project Manager
Noise barriers or daily/seasonal timing of construction and operational activities to reduce impacts of noise	Minor	Negligible	• Winter/early spring is breeding/nesting period for birds and fruit bats (including Grey-headed Flying Fox). Observe trees for fauna if works are to be conducted during this period, and if fauna are utilising trees, notify a qualified ecologist/licensed wildlife handler.	Noise impacts associated with the development will be managed in accordance with guidelines	For the duration of construction works	Project Manager

			• Select quieter options of mechanic plant and equipment • Maximise the offset distance between nooisy plant items and nearby noise-sensitive receivers • Avoiding the coincidence of noisy plant working simultaneously close together and adjacent to sensitive receivers • Orienting equipment away from noisy receivers • Carrying out loading and unloading away from noise sensitive areas • Localised shielding of noisy equipment • Minimising consecutive works in the same locality • Considering periods of respite.			
Light shields or daily/seasonal timing of construction and operational activities to reduce impacts of light spill	Minor	Negligible	• Consider construction works only to occur during daylight hours, and consider not using night lights • If required, lights installed as part of the new Sydney Fish Markets should be directional so as to avoid shining into adjacent retained vegetation, adjacent to the southern boundary of the Development Site	Light impacts associated with construction will be avoided by prioritising all works to occur during daylight hours Light impact to adjacent vegetation to be minimised	For the duration of construction works	Project Manager
Adaptive dust monitoring programs to control air quality	Minor	Negligible	• Dust suppression measures will be implemented during construction works to limit dust on site • Commence revegetation as soon as practicable to minimise areas likely to create dust	Mitigate dust created during construction activities	For the duration of construction works	Project Manager

- External design of the building envelope to consider wind mitgation devices
- Erection of hoardings around high risk activities where practical to prevent migration of dust from site
- Erection of shade cloth along ATF fencing and perimeter fencing to prevent migration of dust from site
- Dust suppression through water application
- Visual dust monitoring will be conducted throughout the project and following receipt of any legitimate complaints, and works modified if necessary; If contamination is discovered and identified within the dust, works will cease, the areas will be stabilised and an investigation will be conducted.
- Areas of ground disturbance will be stabilised as soon as possible to prevent windblown dust
- Equipment and vehicles will be maintained in good operating conditions and be subject to regular servicing, daily inspections will be conducted to identify and plant or equipment that is causing visible emissions
- Plant or equipment will be switched off when not in use
- Truck loads will be covered when removing spoil off site
- Any stockpiles will either be located appropriately for protection from wind or covered

			• Works that are likely to generate high levels of dust or air borne particles will not be carried out during strong winds. • Dust would be vi			
Impact to Fig stand on the southern boundary of the Development Site. Canopy of these trees occur within the Development Site.	Moderate	Minor	• Fig tree canopy will only be trimmed where required, and will only be trimmed where canopy enters the Development Site • An arborist report will assess the stand of Fig trees • A project arborist will be appointed to ensure the trees are not damaged during construction of Bridge Road.	Minimize impact to stand of Fig trees on southern boundary of Development Site, and ensure none are removed.	For the duraciton of the construction works.	Project Manager

6.8 Heritage and Archaeology

6.8.1 Introduction

The following investigations have been undertaken into the cultural heritage impacts of the development:

- Aboriginal Cultural Heritage Assessment Report (ACHAR) by Artefact Heritage (**Appendix 22**);
- Heritage Impact Assessment by City Plan Heritage (**Appendix 23**);
- Marine Heritage Impact Assessment by Comber Consultants (**Appendix 24**).

6.8.2 Aboriginal cultural heritage assessment

The site includes land-based and water-based areas. The land-based areas have previously been assessed for Aboriginal archaeological and cultural heritage values during the preparation of *The Bays Market Precinct Rezoning Aboriginal Cultural Heritage Assessment Report* (ACHAR) for the Bays Precinct (1 August 2018). Water based areas were not subject to assessment as they would not have archaeological potential. An addendum to the ACHAR updates the ACHAR to include an impact assessment for the new proposed development within the study area (also included in **Appendix 22**). The ACHAR did not include a small area of foreshore land forming part of the adjacent school site which will be developed to provide a connection to the existing promenade on the western side of Blackwattle Bay. A due diligence report of this area is also contained in **Appendix 22**.

Impact assessment

The findings of the ACHAR and supplementary reports are that the location of the proposed new Sydney Fish Market at Glebe is of nil to low archaeological sensitivity based on extensive levels of historic disturbance comprising land reclamation and swamp infill. These alterations to landform do not diminish the traditional Aboriginal values of the study area. Areas of reclaimed land are however of nil Aboriginal archaeological potential. Areas of swamp infill are of very low to low Aboriginal archaeological sensitivity. The reports find:

- no further Aboriginal archaeological assessment of the study area is required
- existing recommendations included in the ACHAR for management and risk minimisation are appropriate;
- registered Aboriginal Parties consulted during the ACHAR preparation process have been updated on the proposed development.

Mitigation measures

The recommendations of the AHAR are as follows:

- Registered Aboriginal Parties should be advised of the proposed development (this has occurred);
- No further archaeological testing or assessment is required for the proposed development within the study area of this report;

- An unexpected finds policy should be put in place during eventual construction of the proposal for development. This would include recommendation that if Aboriginal objects are identified during construction work should stop immediately and RAPs, OEH and an archaeologist contacted to identify and record the objects;
- If suspected human remains are located during any stage of the proposed works, work should stop immediately and the NSW Police and the Coroner's Office should be notified. RAPs, OEH and an archaeologist should be contacted if the remains are found to be Aboriginal.

6.8.3 Heritage impact (including historical archaeology) assessment

Heritage items

The following heritage items are located in the surrounding area:

Table 15: Heritage

Heritage listing	Heritage item or conservation area
State Heritage Register	Glebe and Wentworth Park Railway Viaducts; Wentworth Park, Jubilee Park, Johnstons Creek, Glebe, NSW 2037; SHR no. 01034. Lyndurst, 61 Darghan Street Glebe, item no. 00158; Bellevue, 55-57 Leichhardt Street Glebe Point, item no. 00470; and Glebe Island Bridge, Bank Street, Victoria Road Pyrmont, item no. 01914.
Sydney Water Heritage Register	Blackwattle Bay Stormwater Channel No.17, the northern extent of which is located within the site.
Sydney Local Environmental Plan 2012	Glebe former incinerator and interpreted sheds, Forsyth Street, item no. I683; Kauri Foreshore Hotel including interior, 2 Bridge Road, item no. I657; Street trees, Wentworth Park Road, item no. I816; Commercial building "Brelco", 48-64 Wentworth Park Road, item no. I817; Bus shelter, Argyle Street, item no. I673; Warehouse "Greens Woolstore" including interior, 22 Bridge Road, item no. I658; Former MWS & DB Sewage Pumping Station No.2 including interior, 103 Pyrmont Bridge Road, item no. I1257; Railway Viaduct, Railway Street, item no. I800; House "Bellevue" including interior, 55 Leichhardt Street, item no. I792; Blackwattle Bay Park including landscaping, 242 St Johns Road, item no. I649; Glebe Point HCA, C28;

	Lyndhurst HCA, C31.
Sydney Regional Environmental Plan No.26 - City West	Wentworth Park rail viaduct, item no. 10; NCA Steward's Building, Wentworth Park, item no. 13; Store Building, Wentworth Park, item no. 14; and NCA Entry tower, Wentworth Park, item no. 15. Landscape Item - Wentworth Park, item no. 16. Water Board Pumping Station, 10A Wattle Street, item no. 55.

Areas of archaeological potential

Based on the history of development in the area there are a number of areas of archaeological potential as shown in the following table.

Table 16: Areas of Archaeological Potential

Address	Dating/ Phase	Nature of potential remains and degree of likelihood for survival
Pyrmont Bridge Rd	Early European settlement (1788-1815)	Causeway - high
	Reclamation of the Bay (1859-1909)	Wall constructed for reclamation - high Stone sea wall - high
	Industry - government coal depots (1910-1925)	First Monier plate sea wall piling - moderate Reclamation and fill - high Coal depots - moderate
	Industry – Commercial Coal Depot (1926-1943)	Second Monier plate sea wall - high Coal depot - moderate to high
		Timber wharf - moderate
	Redevelopment of wharfage (1945-1950)	Completion of sea wall - high R.W. Miller structures - moderate
	1959-1975	Coal silos, office buildings and sheds - moderate
		Conveyor wharf - high
Blackwattle Bay	Industry - government coal depots (1910-1925)	Sea wall piling for wharves - moderate
Wentworth Park	Reclamation of the Bay (1859-1909)	Stormwater channels - high

The site also contains what remains of a former coal loader including the former office/weighbridge, timber coal bins visible from Bridge Road and part of a gantry crane over a timber and concrete deck. Previous investigations in 2004 established some heritage significance to the structures although their condition has deteriorated since.

Impact assessment

City Plan Heritage (CPH) was consulted throughout the design process and provided recommendations for management of heritage aspects of the precinct and its surrounding heritage items as well as recommendations and guidelines for mitigating any potential impacts on both listed heritage items/ Heritage Conservation Areas (HCAs) and potential heritage items/ archaeological sites. While the proposed works will result in the demolition of the former coal loader and the office/ weighbridge building this will enable the development of the new Sydney Fish Market precinct in line with the overall vision for the Bays Precinct.

The details to avoid any physical impact of the proposed works on the heritage listed stormwater channel are yet to be finalised through consultation with Sydney Water. Notwithstanding, as the heritage item is currently obscured from view from within the public domain, further obstruction through the proposed new Sydney Fish Market is considered an acceptable impact, due to the other heritage benefits afforded by the proposed works. Any required mitigation measures recommended by Sydney Water would be implemented at the detailed design stage.

City Plan Heritage Services note the following impacts of the development:

- The former coal loader and the office/ weighbridge building have been previously identified as being of significance; however, have not been listed on any statutory instrument to date. The proposed demolition of the former coal loader and office/ weighbridge building, and the construction of a new contemporary building has been discussed with CPH and it is found necessary to meet changes in health and safety requirements and current retail and dining experiences. Consideration has been given to the impact the proposed development of the site would have on the relatively intact former coal loader. However, it is in a poor condition and it has been determined that due to current condition, and various other factors such as ecology, urban design, it is not viable to retain or relocate the former coal loader in full. As the works would require complete demolition, a loss of the fabric of the former coal loader, in its current form and context will occur. This loss will be mitigated through the measures put forward below. The proposed development will improve the visual appeal and usability of the public domain, waterfront promenade and the site generally through creation of an architecturally excellent and world class building and precinct;
- The waterfront promenade will create connectivity along the foreshore, providing an opportunity to provide a heritage walk with interpretation between the Jackson's Landing and Jubilee Park/ Glebe Point heritage foreshore walks. This walkway will form portion of a future continuous walkway that will be built as part of the redevelopment of the existing Sydney Fish Market site. This walkway will enhance the experience of the Blackwattle Bay precinct and encourage public engagement with the early industrial heritage and working harbour history of the area;
- The proposed works will improve the aesthetic appearance of a part of the Blackwattle Bay area facilitating the future renewal of the Sydney Fish Market site improving the setting of known heritage items in the vicinity;

- The proposed works provide an opportunity for enhancing the appreciation of the heritage context of the Blackwattle Bay precinct by improving connectivity of the foreshore. This will in turn provide an increased engagement of visitors with heritage items across and in close proximity to the subject site;
- The Sydney Fish Market has been designed so as to provide a significant number of opportunities for disseminating information about the history of the site through heritage interpretation both physical and visual. This includes using salvaged material from the coal loader and office/ weighbridge buildings and displaying archaeological deposits in a manner that provides an additional and educational opportunity to engage the public in the history of the area.
- The works may result in the loss of archaeological deposits, known and unknown;

- The physical impact of the proposed works on the heritage listed stormwater channel will be prevented by implementing required mitigation measures following consultation with Sydney Water. Construction in the close vicinity or above a heritage listed stormwater channel is common throughout Sydney and impacts on its fabric is generally avoided through careful design and appropriate mitigations measures to the standards of Sydney Water. Therefore, the proposed works around the stormwater channel will most likely to be an acceptable one with mitigation measures considered to minimise any detrimental impact.

Mitigation measures

The following recommendations are proposed as mitigation measures in recognition of the loss of assessed heritage values:

- **Heritage listed stormwater channel**
    - A structural engineer should be engaged to undertake an assessment of the proposed works and the potential impact they will have on the heritage listed stormwater channel;
    - Consultation should be undertaken with Sydney Water regarding the potential physical impacts of the proposed works on the heritage listed stormwater channel and to obtain the appropriate methods of building over the channel as well as the temporary protection measures acceptable in line with the Sydney Water's applicable heritage policy for its assets;
    - Further details are to be prepared as part of the detailed design and provided to the heritage consultant regarding the proposed extension of the stormwater channel to ensure the proposed works will not adversely impact on the heritage item;
    - A Schedule of Conservation Works and Temporary Protection Plan should be prepared in line with the findings of the structural engineers report and any future advice given by the Sydney Water heritage officer to ensure protection of the heritage item during the proposed works and conservation following the works.

- **Site interpretation**
  - The built heritage and historical archaeology explored in this report and any historical archaeological evidence exposed during the works should be included in an interpretation plan. As indicated in the Bays Market District master planning principles (1 August 2017), physical evidence of the history of the evolution of the maritime character of Blackwattle Bay would provide opportunities to:
    - Explore and interpret the history of the site;
    - Pursue leading edge sustainability outcomes;
  - The strategies may range from in-situ preservation (preferred), archival recording, recovery and conservation of key components, to physical and/or electronic and printed interpretation material. Reuse strategies should be considered; however, reuse will be dependent on condition, material and significance of the item.

- **Physical archive**
  - Develop and maintain an archive of material associated with former coal loader, office/weighbridge building and the subject site in general. Strategies and policies for the archiving of material can be outlined in an archival or collection management plan.

- **Archival recording**
  - Undertake an archival record of the coal loader and office/weighbridge buildings in accordance with Heritage Division of the NSW Office of Environment & Heritage guidelines Photographic recording of Heritage Items Using Film or Digital Capture (2006) before commencement of any work within the site.
  - Archival recording is to include a record of the demolition process and noteworthy 'discoveries'.

- **Demolition of the coal loader and office/weighbridge building**
  - Undertaking of the works should be by a demolition contractor familiar with heritage fabric to ensure salvaging most of its fabric and elements of importance.
  - The built heritage specialist is to be on site during all critical processes that require specialist knowledge and methodology in order to salvage materials for either reuse as part of the heritage interpretation or for archival purposes as appropriate.

- **Scanning**
  - Undertake a 3D scan of the coal loader and office/weighbridge buildings prior to demolition.
  - Retain a copy of the imagery in the archives.

- **Salvage**
  - Prior to commencement of the demolition of the coal loader and the office/ weighbridge building, allow the built heritage specialist to identify significant material for salvage and storage for future reuse. Removal of any items to be carried out in accordance with specific salvage methodologies provided by the built heritage specialist.
  - Determine the future use of salvaged material as part of the urban/public domain design and develop a protocol for disposal of items no longer required.

- Salvaged materials to remain on site in secure safe storage insofar as is practicable until they are reused where nominated.
- Develop a salvage database to reflect final storage of all materials. Salvaged materials database to be maintained accordingly.
- Retain a copy of the salvaged materials database in the new Sydney Fish Market archives.

- **Archaeology**
  - Recommendations as contained within the historical, maritime and cultural archaeological reports should be adhered to and implemented in order to ensure appropriate management of potential and unknown archaeological resource.
  - The presence or absence of potential archaeological relics, should be established through test-pitting, survey or whichever means of investigation is most appropriate and would result in least impact.
  - If, during the course of the proposed works, any previously undetected or unknown shipwreck, archaeological deposit or relic is unexpectedly uncovered, the 'unexpected finds' procedure should be implemented. This requires that work cease immediately in the vicinity of the relic and:
  - That a qualified archaeologist be engaged to:
    a) assess the significance of the shipwreck/relic; and
    b) that management recommendations, which could include recovery and conservation or reburial of the relic, be provided.
  - Works which would involve intensive impact, such as the installation of deep foundation piles, should be preceded by testing performed according to an Archaeological Research Design in order to ensure that any relics are assessed by a qualified archaeologist and an appropriate management strategy put in place.
- The former Hanson cement site has not undergone any on-site archaeological investigations to date and has therefore been subject to a desktop assessment only. It is therefore recommended that test-pitting and/or a geophysical assessment be undertaken in the vicinity of the Hanson Heidelberg Cement wharf to establish whether it is comprised of the same geological / stratigraphical composition to adjacent wharf areas.

- **Future processes**

  - The built heritage specialist is to be involved in the decision-making process should any variation to agreed processes be required. These processes can include:
    - Changes in scope;
    - Changes in methodologies; and
    - Changes due to ‘discoveries’ implicating heritage fabric and archaeological resource.
  - A temporary protection plan that identifies the potential risks and outlines the measures to reduce the potential for damage to any fabric of heritage value during the works is to be developed by a built heritage specialist.
  - The built heritage specialist is to undertake regular inspections to supervise the works. Timing and frequency to be agreed with the contractor.

- The built heritage specialist is to monitor the works and ensure that compliance with conditions pertaining to heritage fabric are met.

6.8.4 Marine archaeology assessment

A Marine Heritage Impact Statement has been prepared for the development (see **Appendix 24**) which identifies potential environmental risks associated with the development within the marine environment.

The report finds that the development has the potential to disturb archaeological deposits of local significance within the sediment in the investigation area. The potential relics include those that may have originated from the use of the wharves as well as those carried into the bay via adjacent stormwater drains. The works therefore have potential to disturb archaeological deposits and relics submerged within the sediment in the investigation area. The potential relics include those that may have originated from the use of the wharves as well as those carried into the bay via adjacent stormwater drains.

The report concludes that there are no indicators to suggest the existence of shipwrecks to be present with the marine component of Blackwattle Bay, nor is there any maritime infrastructure that pre-dates reclamation works present in the study area.

The 1885-86 seawall potentially provides details of its construction and cumulative impacts arising from subsequent wharf development. Remains of timber pylons may be present within the sea bed, however the precise location of these pylons does not hold significant archaeological potential.

There is a low level of potential for archaeological deposits to be present within the vicinity of former wharves at the southern end of the Bay and from the late nineteenth century and early to mid-twentieth century timber jetties that once extended from the eastern shoreline. These deposits would be expected to consist of individual items that have fallen from the jetties or from vessels using those facilities and items that have been transported into the bay via the storm water drains at the head of the bay. Due to disturbance from propeller wash, these items are unlikely to form coherent layers of archaeological deposits.

There is a potential for archaeological deposits to be present within the development area consisting of individual items that have fallen from the jetties or from vessels using those facilities.

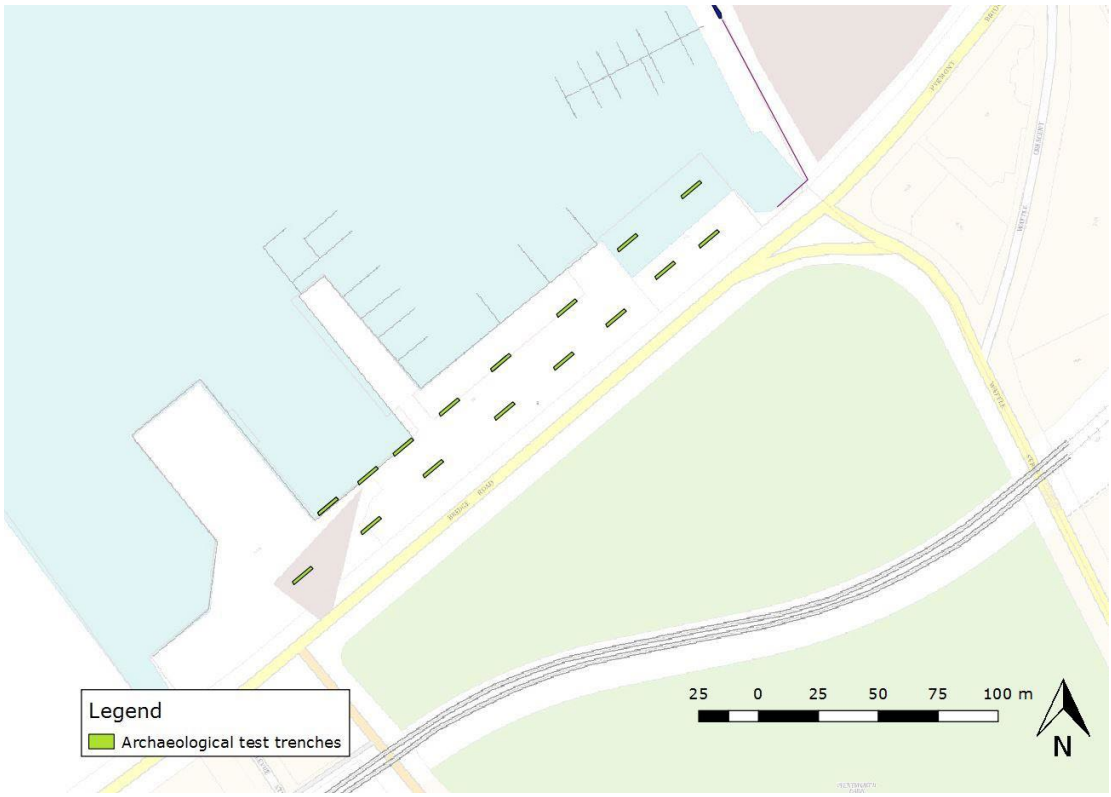
Mitigation measures

Mitigation measures for potential impacts associated with the development are outlined in the supporting Maritime Heritage Impact Statement (see **Appendix 24**) and are summarised as follows:

- **Coffer dam installation**
  - The installation of the southern wall of the cofferdam has the potential damage to remains of a nineteenth century seawall and government wharf along the southern shore. It is recommended that design development shows the relationship of the cofferdam to the sea wall and ensure that there is no impact to the seawall.

- **Removal of existing piles, installation of new piles and silt redistribution**

- In order to assess the presence of relics of local or State significance, within the meaning of the NSW Heritage Act 1976, it is recommended that the following archaeological testing is undertaken. This testing should take place prior to disturbance of the seabed occurs through the extraction of existing piles, redistribution of sediment and installation of new piles. The recommended archaeological test excavation strategy is:
    1) Use of a mechanical, long armed excavator to extract test samples from the top half metre of seabed sediment adjacent to and beneath the existing wharves and deposit them onto an adjacent screen for examination by an archaeological team equipped with pressure hoses.
    2) The test sampling would be conducted in longitudinal trenches, each trench 1m in width, 10m in length, 0.5m deep. The sediment could be retained behind the cofferdam.
    3) Recovered artefacts would be identified, catalogued, assessed for their significance, and archivally recorded.
    4) The NSW Heritage Council would be notified of any artefacts assessed as being relics under the NSW Heritage Act 1977.
    5) Such relics would have potential for inclusion in an interpretation program to inform the public of the history of the investigation area.
- The area of coverage for the archaeological test excavations should include sampling adjacent to the existing wharves as well as those areas designated for silt redistribution. The following diagram is an indicative mapping of the distribution of the test trenches, including those area that will only be accessible once existing wharf platforms have been removed.



- site inductions for all employees, contractors and subcontractors engaged in undertaking works within the marine environment of the study area include that, in the unlikely event that a shipwreck or relic is located during construction works either within the marine environment or within areas of land fill:
  i. Work should cease immediately in the vicinity of the shipwreck or relic
  ii. A qualified maritime archaeologist should be engaged to:
    a. Assess the significance of the shipwreck or relic
    b. Provide management recommendations which could include recovery and conservation or reburial of the relic.

- **Interpretation**
  - If a significant relic is uncovered during the redevelopment of the Bay, reuse strategies should be considered. Dependent upon the condition, material and significance of the item such opportunities could include:
    - Incorporation as a waterside feature in design and interpretation plans for the reuse of the current site of the new Sydney Fish Market
    - Relocated into the public domain as an artwork, similar to the approach adopted at Pyrmont with the tumbling balls retained from the former Cane-ite works.

- **Earthworks along the southern shore**
  - Any earthworks within the vicinity of the nineteenth century seawall and wharf should be monitored by a suitably qualified archaeologist. In the event that evidence of those structures is identified, work should immediately cease in that area to enable the archaeologist to assess the nature and significance of the feature and to provide advice on appropriate management.

6.9 Flooding

A flooding assessment of the proposed development has been undertaken by Cardno (**Appendix 12**). The findings of this report are presented below.

The site is located within the Blackwattle Bay catchment. In 2015 WMAwater undertook the Blackwattle Bay Catchment Flood Study (FS), Floodplain Risk Management Study (FRMS) and Floodplain Risk Management Plan (FRMP) for the City of Sydney as part of the NSW State Government floodplain planning process. These studies and plans provide the basis for the future management of those parts of the Blackwattle Bay catchment which are flood liable and within the City of Sydney local government area. The flood model developed as part of the FS study has been utilised as a basis for undertaking the flooding assessment.

6.9.1 Existing flood conditions

The site is located at the downstream end of the Blackwattle Bay catchment and there are five trunk drainage systems that discharge within the site including Wattle Street Branch and the Old Wattle Street Branch. These two branches collect stormwater runoff from a wider upstream catchment and discharge into Blackwattle Bay.

The study area is subject to overland flooding. It includes outlets for several significant stormwater culverts and overland flow paths conveying runoff from the broader catchment.

Bridge Road acts as a major overland flow path for upstream runoff to reach the outlet. The majority of the Blackwattle Bay catchment runoff flows around Wentworth Park along Wattle Street and Wentworth Park Road, which then joins Bridge Road. The road is inundated with up to 700mm flood depth for the smallest event assessed (10% AEP).

Provisional flood hazard was determined based on the definition of the NSW Floodplain Development Manual (2005) through a relation between the depth and velocity of floodwaters. This definition considers three categories for provisional hazard; High, Medium (Transition Zone) and Low. For existing conditions, in all events up to the 1% AEP event, the Study Area and adjoining roads are predominantly defined as low hazard, with the exception being the intersection of Bridge Road and Wentworth Park Road where there are areas of medium and high hazard. In the PMF event, all the adjoining roads (Bridge Road, Wattle Street and Wentworth Park Road) are predominantly high hazard.

6.9.2 Impacts on flood behaviour

Impacts were modelled for the for 10%, 1% AEP and PMF storm event. In order to assess the impacts of the development, the model was modified to include the proposed drainage network for the development and other development features such as:

- extending the model to include the study area and proposed buildings extents;
- proposed Sydney Fish Market building;
- finished surface levels of the public domain;
- new finished surface levels for Bridge Road;
- inclusion of proposed drainage networks for the Eastern Plaza and western Plaza; and
- modifications to the outlet structures discharging into the bay.

The flood behaviour for 10% AEP, 1% AEP and PMF events shows that the proposed changes in Bridge Road surface levels has resulted in minor changes in the flood behaviour within and surrounding the site. The impacts of development on the flood behaviour was found to be consistent with the requirements of SEARs and NSW Floodplain Development Manual (2005).

In the 1% AEP event, a comparison between existing and proposed scenarios shows flooding conditions have generally improved along Bridge Road with flood levels decreasing up to 0.22 m at the intersection with Wentworth Park Road. Flood levels along Wattle St, Wattle Crescent and Fig St will generally decrease by up to 0.035 m. Minor increases in water levels observed on the western foreshore promenade are localised and, being at the boundary of the model, are considered most likely due to a minor model instability rather than representing a real increase in flood levels. A minor, localised impact is also observed in Wentworth Park (largely < 0.05 m) due to the raising of Bridge Road. No adverse impacts on flooding are observed on adjoining private properties as a result of the proposed development.

In relation to hazard, there is minimal difference in hazard between the existing and proposed scenarios. The key exception being along areas of Bridge Road that have been raised in the proposed scenario and are flood free up to the 1% AEP event. They therefore also have no categorised hazard in events up to the 1% AEP event. In the PMF event, similarly to existing

conditions, all the adjoining roads (Bridge Road, Wattle Street and Wentworth Park Road) are predominantly high hazard. The exception also being the raised areas of Bridge Road, which are fully inundated, but have reduced hazard relative to existing conditions due to shallower depths.

6.9.3 Climate change assessment

Climate change is expected to cause increased rainfall intensities and sea level rise. The NSW Government's Floodplain Risk Management Guideline Practical Consideration of Climate Change (2007) provides recommendations on assessing the impact of climate change on flood behaviour. A sensitivity analysis has been undertaken by assessing the 0.5% and 0.2% AEP flood events as proxies for assessing sensitivity to an increase in rainfall intensity of flood producing rainfall events due to climate change.

For the 0.5% AEP event, increase in flood levels of less than 0.02 m are observed at the Eastern Plaza. Flood level increases of less than 0.04 m are observed at the Western Plaza. Increased water levels of less than 0.04 m are observed outside the study site, along Wattle Street and Wentworth Park Road. Increased water levels of up to 0.10 m are observed at Wentworth Park.

For the 0.2% AEP event, increases in flood levels of less than 0.07 m are observed at the Eastern Plaza. Flood level increases of less than 0.14 m are observed at the Western Plaza. In this event, impacts on flood levels outside the study site are also generally less than 0.22 m along Bridge Rd, Wattle Street and Wentworth Park Road. Increased water levels of up to 0.45 m are observed at the Wentworth Park. Flood extents within Wentworth Park significantly increase.
In summary, the impacts of increased rainfall intensity on flood levels within the study site are not significant. However, the surrounding roads and lands are potentially impacted by increased rainfall intensity, most significantly in the 0.2% AEP event.

6.9.4 Sea level rise

Climate change scenarios incorporating a 0.4m and a 0.9m 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).

With 0.4 m sea level rise, Figure S2 shows that within the study area flood level increases of less than 0.02m are observed at the Western Plaza. Outside the Study Area along Wattle Street, Wentworth Park Road, Bridge Road and in Wentworth Park, flood level increases are generally less than 0.05 m.

With 0.9 m sea level rise, Figure S4 shows increases in flood levels of up to 0.50 m in the Western Plaza. In the Eastern Plaza, flood level increases are less than 0.30 m. Outside the Study Area, along Wattle Street, Wentworth Park Road and in Wentworth Park, flood level increases are generally between 0.02m to 0.14m.

6.9.5 Emergency response management

The Blackwattle Bay catchment is located within the Sydney West Emergency Management District. Flood emergency management for this district is organised under the NSW Disaster Plan (2010). No district DISPLAN has been prepared for the district within which the

Blackwattle Bay catchment and SFM Study Area lies. The Blackwattle Bay Floodplain Risk management Study and Plan (WMAwater 2015) recommends that a DISPLAN be prepared for the Sydney West Emergency Management District. In addition, a local flood plan has not been prepared for the local area containing the Blackwattle Bay catchment.

The Blackwattle Bay Floodplain Risk management Study and Plan (WMAwater 2015) identifies that emergency response to any flooding within the Blackwattle Bay catchment will be coordinated by the lead combat agency, the SES, from their Local Command Centre located at Erskineville.

The Blackwattle Bay catchment is affected by flash flooding (i.e. floods where the warning time is less than 6 hours) and as such it is difficult to provide any warning in advance of floods. However, for flash flood catchments the BoM provides general warning services, including:

- Flood Watches – early appreciation of a developing weather system that could lead to flooding;
- Flood Warnings – water level readings from gauges;
- Severe Weather Warnings; and
- Severe Thunderstorm Warnings. As such it is difficult to provide any flood warning in advance of floods.

Shelter-in-place approach is recommended for the new SFM due to the short duration of flooding which does not allow sufficient time to evacuate. 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 the response is far more foolproof for flash flooding environments, in particular where the duration of flooding is expected to be relatively short.

6.9.6 Flood planning assessment

City of Sydney Council has an Interim Floodplain Management Policy (2014) that provides direction with respect to how floodplains are managed within the City of Sydney. This document provides general requirements for proposed development on flood prone land, Flood Planning Level requirements for different development types and guidelines on flood compatible materials. It is noted that a property is considered to be outside the floodplain where it is above the mainstream and local drainage flood planning levels including freeboard.

Levels at entrances to building will be in accordance with Council's flood planning requirements.

6.9.7 Mitigation measures

The emergency response plan for the new Sydney Fish Market should contain provisions for managing flash flood events.

6.10 Contamination Management

JBS&G Australia Pty Ltd (JBS&G) has prepared an environmental site assessment (ESA) of the site to address requirements under State Environmental Planning Policy No. 55 (**Appendix**

4). The objective of the ESA is to identify potential site contamination issues that will need to be addressed during the construction works and prior to the use of the site for a new Sydney Fish Market. The findings of the ESA have informed a Remedial Action Plan (RAP) also prepared by JBS&G to be implemented prior to the construction works such that the site can be demonstrated as suitable for the proposed land use as required under SEPP55 (**Appendix 5**).

Their findings, conclusions and recommendations are summarised below.

6.10.1 Potential Contaminating Activities

The site has been used for a number of uses that involved potential contaminating activities:

- The site and Blackwattle Bay were originally reclaimed between 1836 and 1891;
- The site was used for commercial purposes from 1900 that included timber merchants, abattoirs and garbage collectors;
- Lot 3 in DP1064339 located in the eastern portion of the site was used for unloading coal since before 1951. Coal fragments have been reported on the seafloor and within boreholes previously completed at the site;
- The site formerly had five underground storage tanks (USTs) which were removed from the site in 1995. The USTs contained gasoline, distillate, racing fuel, mineral spirit and mineral oil.
- During the UST removal, impacted soils were reportedly excavated and removed from the site. The resulting excavations were reportedly validated for total petroleum hydrocarbons (TPH), however it was further reported that heavy metal impacts remained in-situ at the limit of the completed investigations;
- Demolition of former site structures reportedly resulted in the removal of 700 m^2 of asbestos from the site; and
- The site has most recently been used as a concrete batching plant and for commercial boat hire operations.

General potential sources of environmental impact across the site include:

- impacted fill material used during land reclamation activities;
- impacted fill material used to create existing site levels other than during reclamation activities;
- general industrial land uses;
- former fuel/oil storage and dispensing infrastructure including USTs;
- former buildings, pavements and foundations containing asbestos containing materials (ACM); and
- marina and marine vehicle maintenance/storage activities where Tributyltin containing materials have been applied and/or removed from marine vehicles, infrastructure, etc.

Potential ground (landfill) gas sources may be present in reclaimed land areas where high organic matter content material has been buried, used as fill material or otherwise disturbed so as to result in conditions favouring the generation of ground gases.

6.10.2 Nature of Contamination

Soil

The concentration of contaminants of potential concern (COPCs) within all historical soil samples were below the adopted health based criteria. In addition, with the exception of zinc, the concentration of all COPCs were reported below the adopted ecological criteria. It is noted that under the proposed development there will be no land based ecological receptors within the site. On this basis, there are no identified impacts to site soils that require management or remediation with respect to making the site suitable for the proposed development.

Some further assessment of TPH is recommended to establish the potential risks to any receptors from the impact, noting that it is unlikely to pose a health risk in the absence of any exposure pathways (owing to the presence of site pavements and the non-volatile nature of the impact).

Potential indicators of ASS comprising odorous marine sediments and the presence of sea shells were observed within boreholes conducted at the site. Given that the site is located within an area of high probability for the presence of ASS, a default position that fill material and/or natural soils exposed or otherwise disturbed during works will require management for acid sulfate soil has been adopted prior to further assessment to delineate the extent of such soil/sediments.

Groundwater

Groundwater with elevated levels of copper, zinc and PAH compounds has been recorded at the site. The elevated zinc levels are considered to most likely reflect urban background conditions or a potential off-site source (possibly comprising fill material underlying Bridge Road and Wentworth Park), as the highest reported concentration was located off-site and hydraulically up gradient from the site. Elevated PAH compounds in groundwater were found to marginally exceed the adopted ecosystem criteria at a single location (PBMWH2) within the central portion of the site.

Sediments

Heavy metals, PAH and TRH contaminated sediments have been identified within the extent of the development site. A baseline ecological assessment was conducted within the Bays Precinct and included sediment sampling within the greater area of Blackwattle Bay. The report found that the sediments of Blackwattle Bay had significant metal and nutrient contamination that were indicative of highly disturbed conditions. On this basis, the elevated contaminant concentrations reported in sediments within the subject site are likely reflective of conditions throughout the extent of Blackwattle Bay as a result of historical industrial activities along the foreshore of the Bay. All sediments are also anticipated to be ASS. As such, management of the potential for acid generation conditions will be required during all ground/sediment disturbance activities completed at the site.

Ground Gases and Vapour

Ground gases were identified as a potentially impacted media due to potentially reclaimed land areas containing high organic matter content as used as fill material or otherwise disturbed so as to result in conditions favouring the generation of ground gases. A screening level gas monitoring event was undertaken at a single location in September 2015, in which the reported result was indicative of very low risk conditions with reference to the Modified Wilson and Card Classification (EPA 2012).

In addition, VOCs were identified as a COPC. Whilst completed soil and groundwater investigation have not identified the occurrence of significant volatile compound impacts in soil and/or groundwater at the site, to date there has been no specific vapour sampling or analysis undertaken to verify the absence of conditions that would require management prior to, or following the proposed construction works.

6.10.3 Conclusions

Based on the scope of work completed for the assessment the following is concluded:

- Review of currently available previous site assessment documents has identified that there is sufficient existing data to characterise soil, sediment and groundwater conditions within the area of the proposed development in order to establish a conceptual site model (CSM). Notwithstanding, a number of data gaps were identified that will require additional data to refine specific management/remedial actions during application of a future RAP;
- Environmental data sets were found to be reliable for the purposes of making decisions as part of this assessment.
- Based on the CSM presented in **Appendix 5**, the potential exposure pathways for commercial users of the site will include inhalation (gas or vapours) pathways. On-site ecological receptors will be limited as the whole site will be covered in hardstand. Exposure pathways for off-site receptors will include contaminated groundwater (if any) migrating off-site and contaminant up-take from sediments;
- Based on the results and CSM, there were no potential unacceptable health risks identified with respect to the proposed development. Notwithstanding, this is required to be confirmed with the results of a data gaps assessment;
- Heavy metal, PAH and TRH contaminated sediments have been identified within the extent of the development site that were reported to exceed both low and high trigger value sediment quality guidelines protective of ecological communities. Previous investigations reported sediments within Blackwattle Bay had significant metal and nutrient contamination that were indicative of highly disturbed conditions. This is supported by the results from sampling points outside the proposed development area (but in Blackwattle Bay) had similar levels of impact to those reported within sediments of the site.
- Sediment remediation is not straightforward and should only be undertaken where absolutely warranted. To this extent, UNSW recommend the following with respect to increasing biodiversity and restore ecosystem services within the Bays Precinct:
    - Reduction of contaminant loads through the treatment of storm water and land runoff; and

- Prevention of the resuspension of sediments during development by minimising sediment disturbance and using sediment curtains during construction activities;

- Consistent with EPA guidance, in which remediation should not proceed in the event that it is likely to cause a greater adverse effect than leaving the site undisturbed, it is considered that sediments should not be actively remediated as it will likely result in adverse impacts through requirements for excavation, dewatering, ASS treatment and off-site disposal of the resulting stabilised material to landfill. Moreover, it will likely not result in any meaningful environmental outcomes within the context of the highly disturbed conditions of Blackwattle Bay in which sediments with elevated levels of contaminants have been reported throughout the entire Bay.

- It is noted that sediments adjacent to the existing sea wall and typically beneath the proposed new Sydney Fish Market building envelope will require adjustment in location within the current site extent to facilitate continued discharge from existing stormwater culverts and allow design levels to be reached for the construction of the basement. It is understood that the adjustment sediments will extend to a maximum depth of approximately 1.4 m in minor areas of the site.

  From a review of the sediment analytical data at these locations, it can be observed that surface sediments (0-0.4 m) are impacted with heavy metals, PAHs and TRH at levels consistent with sediment samples collected across the extent of the site. Sediment samples were further collected from depths of 0.5-1.0 m and 1.0-1.5 m in which the concentrations of heavy metals and PAHs were consistent with those in the overlying surface sample (0-0.4 m) and additional surface sediment samples collected throughout the investigation area. On this basis, it is considered that these sediments are suitable from a contamination perspective to placed elsewhere within the proposed basement footprint. In addition, the removal of the surface sediments from within these locations is not expected to expose any underlying sediments (at depth) with greater contaminant concentrations that would result in a net-increase in contaminant exposure risks to ecological receptors on or in the vicinity of the site.

  Consistent with the previous point, the potential for resuspension of sediments during development works is required to be minimised such that mobilisation of contaminants and associated short-term ecological risks are appropriately managed. To enable an appropriate understanding of sediment characteristics within areas of disturbance, it is recommended that further site investigation activities be undertaken prior to the commencement of any works that will result in disturbance of the sediments. These additional works will be designed to provide a suitable data set to guide management and if required, rehabilitation of these sediments during/following the required disturbance activities.

- A temporary a coffer dam will be constructed at the limits of the development works area prior to construction activities that will isolate the construction works footprint from the balance of the Bay. This will minimise the risk of any environmental impacts beyond the site boundary. Within the site, potential environmental impacts associated with localised movement of the sediment to achieve the construction requirements will be managed via selection of a methodology to minimise the suspension of sediments in the water column. It is expected that this will include use of either a long arm excavator, clam shell apparatus or similar to collect and locally transport small quantities of saturated sediment across the bed floor, within a silt curtain surround, followed by gentle placement at the final location. Resuspension of sediment will be minimised and

with consideration to the continued saturated condition of the sediment, the low concentration of oxygen in water when compared to the atmosphere, the high buffering capacity of the marine Bay waters and the isolated nature of the works area from the balance of the surrounding environment, it is considered that the environmental (contamination and acid sulfate soil) risks associated with disturbance of the sediments may be suitably managed.

- The site is situated within an area of high probability of ASS. Indicators of potential ASS comprising sulfide odours and the presence of sea shells were observed within media inspected from boreholes conducted on both the land and water portion of the site. On this basis, the disturbance of materials during site redevelopment works will be required to be conducted in accordance with an acid sulfate soils management plan (**Appendix 6**).
- A remedial action plan (RAP) should be prepared to establish a suitable framework for management of potentially contaminated media such that upon completion of works, the site will be considered suitable for the proposed use as required under the NSW planning framework.

A remediation action plan has been prepared which presents a summary of known and suspected site conditions, a conceptual site model (CSM) of contamination conditions and identification of existing data gaps in relation to the proposed development scheme, an evaluation of potential remedial strategies, identification of preferred strategies and details of site management and associated validation requirements to be implemented during the proposed works (**Appendix 5**).

Overall, it is considered that the proposed actions outlined in this RAP conform to the requirements of the Contaminated Sites Guidelines for the NSW Site Auditor Scheme (3rd Edition) because they are: technically feasible; environmentally justifiable; and consistent with relevant laws policies and guidelines endorsed by NSW EPA.

6.10.4 Mitigation measures

Subject to the successful implementation of the measures described in the RAP and with consideration to the limitations presented in the RAP, it is considered that the Site can be made suitable for the intended uses 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.

6.11 Acid Sulfate Soil Management

An assessment of acid sulfate soil (ASS) and potential acid sulfate soil (PASS) has been undertaken and is presented in the Acid Sulfate Soil Management Plan (ASSMP) (**Appendix 6**). The site is located within an area of 'high probability' of acid sulfate soil within bottom sediments. In such areas, there is the potential for environmental risk if bottom sediments are disturbed by activities such as dredging, piling and pile removal.

Previous investigations noted potential indicators of ASS comprising odorous marine sediments with sea shells in boreholes located in the southern portion of the site (overlying the land portion of the site) and within marine sediments in Blackwattle Bay. Based on the physical observations of sediment character and previous broader information on PASS conditions around the Bay, for the purposes of this ASSMP, all marine sediments have been characterised as PASS material. Such conditions extend beyond the site boundaries in all directions.

Within the land portion of the site, the potential ASS materials were encountered within saturated marine sediments underlying the placed fill material at depths ranging from approximately 3.5-5.5m below ground surface.

Consequently an ASSMP has been prepared on the basis that all ground disturbance activities will require consideration of ASS management requirements (**Appendix 6**). The ASSMP will be implemented during all stages of demolition and construction.

6.12 Impacts on Water Quality

Section 3.11 of this EIS outlines the proposals for water sensitive design including rainwater harvesting, proprietary filters and bio-retention. Further details are provided below.

6.12.1 Proposed strategy

Rainwater harvesting

Rainwater harvesting was modelled on the following design assumptions:

- Minimum connected roof area – It has been assumed that low flows from the entire upper roof area (1.61 ha) will drain directly connected to the rainwater tank.
- > A 100 kL rainwater tank was adopted.
- > The average daily reuse volume adopted was 100 kL/day, predominantly for the cooling tower.

Proprietary filters

Two types of proprietary filters are proposed to be used:

- Pit Basket Inserts (eg; OceanGuard) - Pit baskets typically consist of a wire basket with a filtration bag liner. They predominantly remove sediment, litter and debris. Low flows are captured and filtered through the filtration bag and provision is made for flows in excess of the treatment capacity to bypass and enter straight into the stormwater network.
- Jellyfish Filter - A Jellyfish Filter uses gravity and filtration cartridges containing membranes to remove litter, oil, solids and particulate bound pollutants (including nutrients, metals and hydrocarbons). They typically have a smaller footprint than other treatment devices.

Bio-retention System

The bio-retention system would be designed to meet the required water quality targets.

6.12.2 Impact assessment

Cardno have reviewed existing surface water, hydrology and groundwater conditions and suitable water quality objectives have been established. A MUSIC water quality model was assembled to assess the existing hydrology and water quality conditions and the impact of the proposed works. MUSIC has also been used to demonstrate that the proposed WSUD strategy is able to meet the relevant targets.

6.12.3 Mitigation measures

For the purpose of managing any impacts during construction, monitoring of water quality parameters is required. The objective of the monitoring is to establish the systems and processes that would be required to identify any deviations from the baseline existing water quality conditions for the Study Area. Water quality monitoring would be carried out during the following project stages:

- Pre-construction (baseline monitoring);
- Demolition Phase; and
- Construction Phase.

Water quality monitoring is to be undertaken at all discharge locations into the Bay. Water samples for analysis are to be collected from the treated water on site prior to discharge into the Bay, and in the receiving environment immediately adjacent to the discharge outlet in the Bay.

6.13 Noise and vibration impacts

SLR Consulting Australia Pty Ltd has undertaken an assessment of the noise impacts associated with the proposed construction and operation of the new Sydney Fish Market located on Blackwattle Bay, Glebe (**Appendix 19**). This assessment has been carried out in accordance with NSW regulatory requirements.

6.13.1 Existing acoustic environment

The existing noise environment is generally controlled by road traffic noise. The major arterial road near the project is the Western Distributor/Anzac Bridge, which passes to the north of the development in an elevated location. Other major roads near the site include Pyrmont Bridge Road, Bridge Road and Wattle Street to the south east of the site.

The Dulwich Hill Light Rail line passes around the north, east and south east of the site, with the Fish Market, Wentworth Park and Glebe stops being located around 50 m and 100 m away from the proposal site. The track alignment to the north is located in a cutting whereas the track to the south east is on embankment through Wentworth Park.

Noise from light rail vehicles was audible around Wentworth Park, however it was not audible in any other areas surrounding the project due to high road traffic noise levels. While the rail noise may be audible at times in the vicinity of the elevated rail at Wentworth Park, it is unlikely to be a controlling noise source due to the significant road network nearby.

Existing industry premises are located within the northern section of the site, on Bank Street, and noise levels measured in the vicinity of these premises are currently influenced by industrial noise, especially where line of sight to the Western Distributor is shielded by intervening structures.

Potentially affected receivers include:

- Residential apartments to the south west on Wentworth Park Road near Bridge Road and nearby dwellings in Glebe some of which are elevated;

- Residential apartments to the south east on at Wattle Crescent and Pyrmont Bridge Road;
- Sydney Secondary College – Blackwattle Campus to the west and dwellings close to the foreshore and the hill side of Glebe leading to Glebe Point Road.

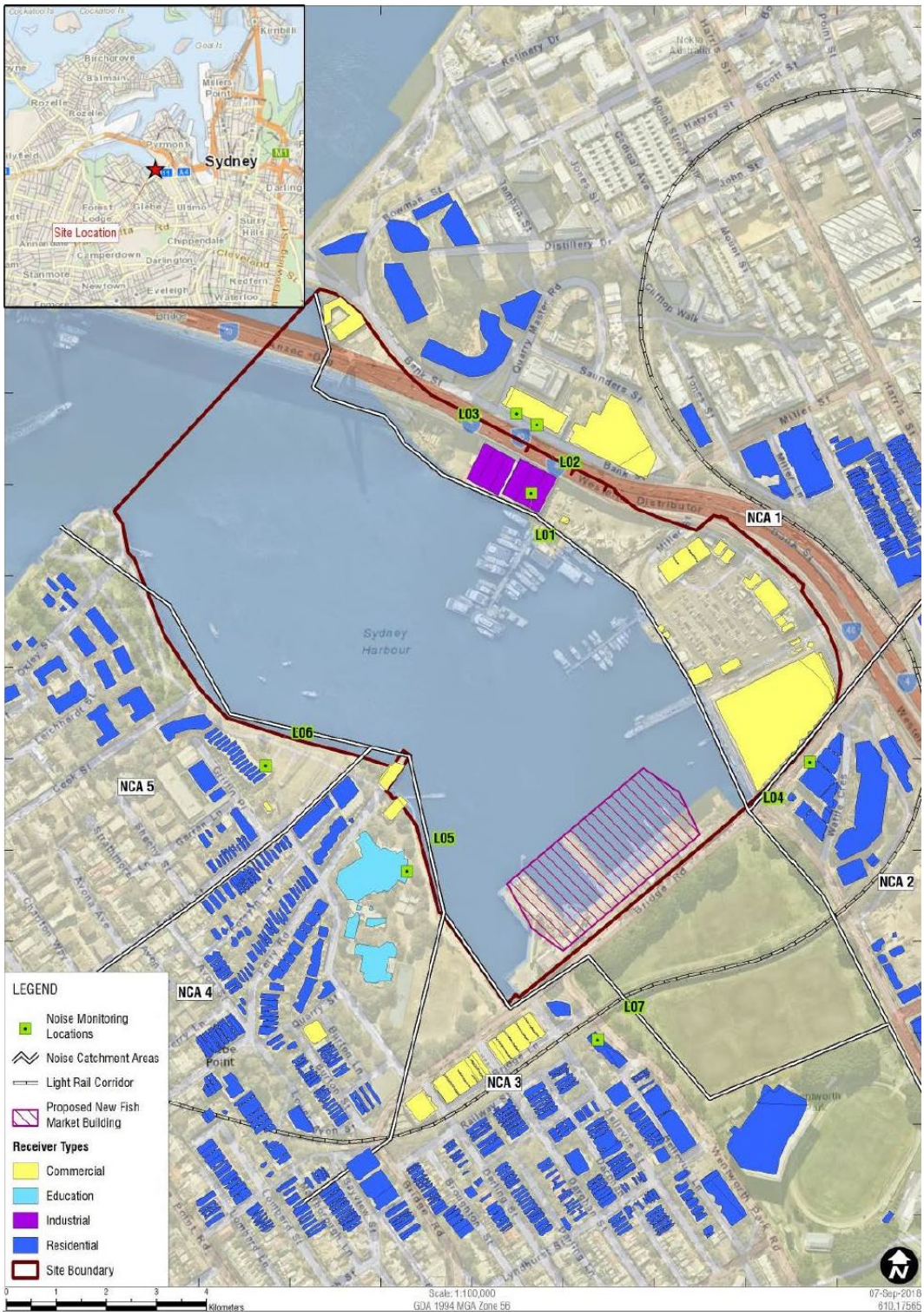


Figure 11 Noise catchment areas and surrounding receivers

6.13.2 Noise and vibration impact assessment

In order to predict noise levels associated with the construction and operation of the proposed development at the surrounding sensitive receivers, a SoundPLAN model was developed for the project area. The computer model generates noise emission levels taking into account factors such as the source sound power levels, distance attenuation, ground absorption, air absorption and shielding attenuation, as well as meteorological conditions. Heights of buildings, screens and other structures included in the noise model were estimated based on site inspection, and aerial photography.

Construction

Where possible, the construction works would be undertaken in accordance with the Interim Construction Noise Guidelines during the standard daytime working hours of:

- 7.00 am to 6.00 pm Monday to Friday
- 8.00 am to 1.00 pm on Saturdays.

On this basis, the potential noise impacts during construction have been predicted during the daytime period only.

The predicted noise levels (without additional mitigation) in each of the noise catchment areas (NCAs) for the various work activities are representative of the worst-case impacts and are intended to give an overview of the likely worst-case noise levels from the construction works. For most construction activities, it is expected that the construction noise levels would frequently be lower than predicted at the most-exposed receiver, as the noise levels presented in this report are based on a realistic worst-case assessment.

Construction has the potential to exceed noise management levels (NML) at nearby locations (NCA3 andNCA4 – see Figure 11) to the south and west of the site. Thus feasible and reasonable work practices are to be investigated to minimise noise emissions. When considering the predicted noise levels and NML exceedances from the project, the analysis indicates that:

- The highest impacts are generally seen in NCAs that have receivers in close proximity to the worksites, and includes NCA3 and NCA4 to the south and west;
- Noise levels at the nearest receiver in NCA3 are predicted to exceed the “highly noise affected” NML;
- The highest noise levels are seen during the use of noise intensive plant items such as the hydraulic hammer and concrete saw. When these items of plant are not in use, noise levels would be significantly lower;
- The receivers in closest proximity to construction in NCA4 are likely to be highly noise affected during ‘worst case scenario’ construction periods.

Piling noise detailed assessment

SLR has assessed different piling methods in order to minimize the potential impact of this element of the works on the surrounding community. This assessment looked at the noise profile over a typical day from piling activity at the likely most impacted receiver. Two piling methodology options were considered, being screw pile and driven pile. Calculations assumed that the closest receiver was situated 100m from the source.

The analysis shows that using a screw piling methodology, the "highly noise affected" level of 70 dBA (as defined in the ICNG) is exceeded for only one hour of the day. Using a driven pile methodology, the "highly noise affected" level is exceeded for four hours of each day.

In relation to sheet piling required to form the coffer dam for the construction of the basement of the building, there are two methodology options, being driven pile and the option to use press-in pile technology. A press-in-pile methodology would result in a noise level that would not exceed the "highly noise affected" level of 70 dBA (as defined in the ICNG) at any surrounding receiver at any point of the day.

Operational noise

Sources of industrial noise associated with the operation of the proposal will likely consist of the following:

- Loading dock activity noise breakout - the loading dock is located on the south-east corner of the development at ground level and is visible from the receivers in NCA3 on the corner of Bridge Road and Wentworth Park Road.
- Maritime loading / unloading on wharfs - the wharfs are located on the north side of the development and are shielded from view of the receivers in NCA3 on the North side of the development. The receivers in NCA4, including Sydney Secondary College, will have line of sight view of the maritime activities. However, the peak operating period of the maritime activities is expected to take place outside the operating hours of these facilities.
- Noise from fixed mechanical plant - at this stage in the project exact details of the mechanical plant are unknown and would not be confirmed until detailed design. For the purposes of this assessment, mechanical plant has been assumed to be roof mounted to ensure a conservative assessment.
- Patron noise associated with patron congregation areas and food and beverage premises. It is noted that the largest patron area being screened to the closest receivers by the Fish Market building itself and the smaller patron areas being appreciable distances from the other sensitive receivers.
- Noise from public address - at this stage in the project, there is no public-address system proposed for the design of the development. If future design requires such a system, it will be designed to not cause an increase in noise levels above the criteria for outdoor licenced areas at the surrounding noise sensitive receivers.

Noise predictions for loading dock activity have been based on the following HGV (semi-trailer) movement numbers provided by Infrastructure NSW:

- Day: eight per hour (equivalent to two per 15min assessment period)
- Evening: one per hour (equivalent to one per 15min assessment period)
- Night: four per hour (equivalent to one per 15min assessment period)
- Morning: four per hour (equivalent to one per 15min assessment period)

The predictions within the noise impact assessment are based on the number of movements above and appropriate operational management measures should be put in place to ensure these are correct to prevent actual noise emissions being higher than predicted.

Operational noise levels have been predicted to the receivers surrounding the proposal. The noise levels include the cumulative impact of the currently identified sources of industrial noise. The analysis shows that exceedances of the Project Noise Trigger Level (PNTL) are anticipated at the nearest receiver in NCA3 during all assessment periods. Minor exceedance of the PNTL is also predicted at Sydney Secondary College in NCA4 during the daytime assessment period, and at the nearest receiver in NCA4 during the night-time assessment period.

As exceedances of Project Noise Trigger Levels are predicted, noise mitigation is required to be investigated to minimise noise emissions from the operation on the loading dock. The following table summarises the potential mitigation measures that could be used to reduce noise emissions.

Table 17: Loading Dock Mitigation Assessment

Location	Mitigation Measure	Potential Reduction	Discussion
Source	Provide absorption to Loading Dock area to reduced reverberant noise build up	-3 dBA	Adopted. Considered feasible and reasonable. This mitigation measure will be adopted and absorption is to be applied to the entire underside of the soffit of the Loading Dock area
Source	Remove the need for reversing alarms within the Loading Dock	-2 dBA	Not Adopted. Not considered feasible on the grounds of safety in the Loading Dock.
Source	Management measure to permit only vehicles with broadband reversing alarms to use the Loading Dock	-2 dBA	Adopted. Considered feasible and reasonable. UrbanGrowth NSW have confirmed that a management policy will be in place to only permit vehicles with broadband reversing alarms in the Loading Dock
Source	Remove the 'airbrake' noise source contribution	-1 dBA	Not Adopted. Not considered feasible. It is not believed Semi's can operate without this gas release.
Path	Break line-of-sight from Loading Dock to 84 Wentworth Park Road	-5 dBA	Not Adopted. Not considered feasible. This was investigated with numerous sightline studies performed by the design team. It is not believed that line-of-sight can be broken to the receivers due to the need to access the Loading Dock from the road junction in its current location.
Path	Acoustically rated Roller Door on Loading Dock	-15 to -20 dBA	Not Adopted. Not considered feasible. Due to the volume of traffic entering the facility from this entrance (including smaller vans accessing basement, etc.) the roller door would be open for the vast majority of the time. Further, additional noise from semi's and other vehicles stopping to wait outside while the door opens, along with the noise of the door itself, will likely mean that potential noise reductions would be much lower than the theoretical potential
Receiver	Provide "at-property" treatments to 84 Wentworth Park Road to reduce internal noise impacts	TBA	Considered, see **Section 5.3.6**.

With the inclusion of the loading dock mitigation as per the table above, there is a 4 dBA residual exceedance of the night-time PNTL at the residential receiver at 84 Wentworth Park Road.

The 4 dBA residual exceedance for the residential apartments at 84 Wentworth Park Road is classified as “Moderate”. As a result, suitable at-property mitigation to these receivers may include measures such as:

- Mechanical / Comfort ventilation
- Upgraded external building fabric (such as glazing, doors, etc).

It is understood that the residential apartments at 84 Wentworth Park Road were approved by City of Sydney Council under approval number D2004/01275. Condition 33 of this approval requires the units to be designed to achieve the internal noise levels within AS2107:1989. There are currently high levels of external traffic noise from Bridge Road incident on 84 Wentworth Park Road (approximately 70 dBA during the daytime and 65 dBA during the night-time) and this is unlikely to have significantly changed from the time of approval. As a result, it is considered likely that in order to meet Condition 33 of the approval, the apartments are likely to have been constructed with high performance building facades as well as being provided with mechanical ventilation. Should this be the case, any further “at property” treatments to these apartments may not result in any significant performance improvements. It is recommended that this is investigated further in detailed design, including inspection of the eligible apartments. Additional treatment should only be provided where they significantly reduce (ie ≥ 3dBA) external noise ingress.

No exceedances are predicted from other sources of operational noise.

It is expected that the development can comply with standard noise mitigation measures for mechanical plant which may include:

- Appropriate selection of all equipment;
- Local mitigation at each item of plant if required (encasing units, applying in-duct attenuators, etc).

Patron noise assessment indicates no exceedances of the established criteria are predicted from patron noise. This is due to the largest patron area being screened to the closest receivers by the Fish Market building itself and the smaller patron areas being appreciable distances from the other sensitive receivers.

The increase in vehicular trips to the proposed development will not generate a significant increase in traffic noise in the area.

6.13.3 Mitigation measures

SLR identify the following noise mitigation strategies.

Construction

The expected noise management level (NML) exceedances may be concerning for surrounding residents at times and particular effort should be directed towards the implementation of all feasible and reasonable noise mitigation and management strategies. The standard suite of mitigation measures includes management measures such as community consultation, site inductions (with guidance on how to minimise noise and vibration) and the preparation of site specific construction noise and vibration management plans.

Examples of mitigation measures which may be considered appropriate for these works are:

- Judicious selection of mechanical plant and equipment (e.g. quieter machinery and power tools).
- Maximising the offset distance between noisy plant items and nearby noise sensitive receivers.
- The use of appropriate respite periods where receivers are likely to be highly noise affected. For example, the RMS *Construction Noise and Vibration Guideline* states that (noise intensive) work may be carried out in continuous blocks not exceeding three hours each with a minimum respite from those activities and works of not less than one hour between each block.
- Avoiding the coincidence of noisy plant working simultaneously close together and adjacent to sensitive receivers.
- Orienting equipment away from noise sensitive areas.
- Carrying out loading and unloading away from noise sensitive areas.
- Localised shielding of noisy equipment.
- Minimising consecutive works in the same locality.
- Considering periods of respite.

Once further details surrounding the proposed construction methodology, equipment and phasing is known, it is recommended that the construction contractor produces a comprehensive Construction Noise and Vibration Management Plan in accordance with the framework for compliance established in **Appendix 19**. Details of equipment to be used, work methodologies to be employed and phasing are not known yet. Procedures and requirements for construction noise monitoring would be determined as the project progresses, with an appropriate monitoring protocol being defined in the Construction Noise Management Plan.

The potential impacts from vibration would be assessed as the project progresses through detailed design when more information is available on the schedule for the works, the equipment to be used and the localised geotechnical conditions. In general, where vibration impacts are considered likely, mitigation measures that should be considered are summarised as follows:

- Relocate vibration generating plant and equipment to areas within the site in order to lower the vibration impacts;
- Use lower vibration generating items of excavation plant and equipment, such as smaller capacity rockbreakers or concrete crushers/pulverisers in place of rockbreakers;
- Use dampened rockbreakers and/or “city” rockbreakers to minimise the impacts associated with rockbreaking works;
- If vibration intensive works are required within the safe working distances, vibration monitoring or attended vibration trials would be undertaken to ensure that levels remain below the cosmetic damage criterion;
- Building condition surveys should be completed, where necessary, both before and after the works to identify existing damage and any damage due to the works.

Operations

Mitigation measures for the operation of the loading docks are discussed above in Section 6.13.2.

Mitigation may be required to individual plant items in order to achieve compliance and would be determined during detailed design. It is expected that this can be achieved with standard mitigation measures which may include:

- Appropriate selection of all equipment;
- Local mitigation at each item of plant if required (encasing units, applying in-duct attenuators, etc.);
- Room acoustic control within enclosed plant rooms if required (acoustically absorbent finishes applied to walls);
- Appropriate selection of acoustic louvres and/or screening around plant equipment.

The requirement for noise mitigation of mechanical plant and any public address system would need to be reviewed and confirmed during detailed design.

6.13.4 Monitoring measures

As the project is at development application stage, details of equipment to be used, work methodologies to be employed and phasing are not known yet. Procedures and requirements for construction noise monitoring would be determined as the project progresses, with an appropriate monitoring protocol being defined in the Construction Noise and Vibration Management Plan.

6.14 Air Quality and odour impacts

An air quality impact assessment of the development has been undertaken by SLR (**Appendix 18**).

6.14.1 Existing air quality

The primary sources of air emissions in the area immediately surrounding the site is expected to be vehicles travelling along 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 visiting Darling Harbour and recreational boating.

Other industrial sources in proximity to the site include concrete batching plants on the site (recently closed and to the north of the site (Hymix)). The closure of the Hanson plant on the site will result in reduced particulate emissions.

The rate and composition of air pollutant emissions from road vehicles and boats is a function of a number of factors, including the type, size and age of the vehicles/boats, the type of fuel combusted, number and speed of vehicles/boats and (for road traffic) the road gradient.

The area surrounding the site includes lands zoned as local centre, commercial core, mixed use, general residential, public recreation and infrastructure. There are a number of existing residences located southwest and west of the site. The nearest existing residential receptor is located approximately 50m from the site boundary, at the corner of Bridge Road and Wentworth Park Road.

6.14.2 Impacts of construction on air quality

The main potential sources of air emissions were identified as dust impacts and machine exhausts during construction period.

The potential for off-site dust impacts was assessed using a qualitative risk-based approach prescribed by the Institute of Air Quality Management (IAQM). The results of this assessment indicate that dust impacts due to the Stage 1 works can be adequately managed with the implementation of site-specific mitigation measures, and that the residual impacts are likely to be low for construction activities and negligible for track out activities.

6.14.3 Impacts during operation

The main potential sources of air emissions from the new Sydney Fish Market were identified odour, volatile organic compounds (VOC), products of combustion and particulates during the operational phase. The potential for off-site air quality impacts due to operation phase activities was assessed using a qualitative risk-based approach. The main sources of odour are from the handling, processing and storage of seafood and waste and kitchen operations.

In relation to kitchen operations, all kitchens are proposed to be equipped with AS and BCA compliant air extraction systems. Electrostatic precipitators (ESP) are also proposed to be installed in order to control particulate, smoke and odour emissions.

Given the nature and scale of the operations proposed, SLR consider that, provided appropriate mitigation measures are implemented as part of the detailed design stage, the relevant air quality criteria will not be exceeded as a result of the construction and operation of the development.

A comprehensive exhaust system is being designed for the Site in order to extract emissions and discharge them to atmosphere via dedicated discharge vents located on the roof of the building. Treatments under consideration include a range of equipment such as cyclonic filters, electrostatic precipitators, UV control systems, activated carbon adsorption and wet scrubbing. Temperature control will also be used in processing and waste storage areas. The containment of most operational activities within the building provides opportunities to capture and treat odours and to implement appropriate management strategies. Cleaning and maintenance and waste removal and management are important to odour minimisation and should be included in operations management plans.

Pollutant emissions may also be managed by minimising the pollutant reaching the atmosphere through filtration or treatment at source and temperature control. Operational controls are also recommended including cleaning and maintenance and regular waste removal and management and raw materials handling.

6.14.4 Mitigation measures

- The CEMP is to include specific measures to manage dust, combustible emissions and odour;
- Implement the mitigation and monitoring measures outlined in Section 6.4 of the Air Quality Report (**Appendix 18**);
- The Operations Management Plan is to contain measures to monitor and manage odours from the site and to respond to complaints from surrounding land uses.

6.15 Sediment and Erosion

The proximity of the site to the harbour and the works proposed to remove and install piles and other structures over or near water requires careful management of sedimentation and turbidity during the construction process.

Stormwater runoff will be treated by a number of measures such as turbidity curtains, silt fences, filter socks and sedimentation basins. The potential impacts from the management of soil from construction are:

- Sediment migration into the stormwater system and harbour; and
- Mixing of contaminated and non-contaminated materials.

As outlined in the Flooding and Water Quality Assessment Report prepared by Cardno (**Appendix 12**), water quality monitoring is proposed for the purpose of managing any impacts during construction. The objective of the monitoring is to establish the systems and processes that would be required to identify any deviations from the baseline existing water quality conditions for the development. Water quality monitoring would be carried out during the following project stages:

- Pre-construction (baseline monitoring);
- Demolition Phase; and
- Construction Phase.

Water quality monitoring is to be undertaken at all discharge locations into the Bay.

Sediments in Blackwattle Bay are contaminated and require management during construction. Environmental consultants JBS&G (**Appendix 4**) note the following recommendations with respect to increasing biodiversity and restore ecosystem services within the Bays Precinct:

- Reduction of contaminant loads through the treatment of storm water and land runoff; and
- Prevention of the resuspension of sediments during development by minimising sediment disturbance and using sediment curtains during construction activities.

As outlined in the CEMP (**Appendix 13**) a sedimentation and erosion control plan will be prepared by the appointed contractors prior the commencement of any construction works. This plan will generally be developed by the contractor's specialist environmental representative in conjunction with the contractor and subcontractor undertaking the works.

6.16 Utilities and infrastructure

Utility services will be provided to the site as described in Section 3.13 and in the utility and infrastructure servicing report **Appendix 14**. This provides a mechanism for the delivery of services to the site. All utility services are available or can be reasonably extended to meet the needs of the development.

6.17 Sea level rise

Implications of sea level rise is discussed in the flooding report contained in **Appendix 12** and summarised in Section 6.9 above.

6.18 Contributions

City of Sydney Contributions Plan 2015 ('the plan') commenced on 1 July 2016 and was prepared by the City of Sydney Council under S7.11 of the EP&A Act 1979. The existing wharves are within the West Precinct of the plan.

The plan requires contributions on a per additional worker basis towards the costs of the following public amenities and services:

- Open space (acquisition, embellishment and upgrades for residents and workers)
- Community facilities (multi-purpose community facilities);
- Traffic and transport (pedestrian, cycling and traffic calming).

The Minister for Planning, as the consent authority for SSD may impose such a condition to vary any contribution calculated in accordance with the plan.

It is submitted that an exemption should be granted to the application of this requirement for a contribution in its entirety for the following reasons.

The primary objective of the development is to expand and improve the functions of the existing Sydney Fish Market in a new setting designed to achieve design excellence, functional performance and environmental sustainability.

As detailed elsewhere in this EIS, the development will generate strong economic and social benefits to the local and broader NSW community. These benefits include:

- Jobs during construction and operation;
- Training for jobs during construction and operation;
- Linkages to the existing waterfront promenade around Blackwattle Bay;
- Improved linkages to Wentworth Park and to the adjoining public transport network;
- Outdoor areas for dining and passive recreation spaces, facilities for bicycle parking, public seating, water access, public art and the like; and
- Improvements to Bridge Road including an improved pedestrian experience, a cycle path and coach and car drop-off bay.

Infrastructure NSW is committed to maximising these benefits and to maintaining the public domain so as to achieve the following outcomes:

- support the precinct as a place for people, with positive social, cultural and economic outcomes for workers, visitors and the surrounding community;
- a diverse high-quality mix of experiences and activities that complement the new Sydney Fish Market as a major destination;
- highly enjoyable publicly accessible open space that has a high quality of amenity and enhances the character of the area.

The development provides open space and public domain facilities managed by State government for the public benefit including the residents and workers of the West Precinct of Glebe. The provision of these facilities more than offsets the likely demand for the facilities

and services provided under the plan created by development on that part of the site to which the plan applies.

Any demand the development would create for the facilities and services provided by Council under the contributions plan would be more than offset by the public domain, amenities and services incorporated into the proposal.

6.19 Safety and security

6.19.1 Crime prevention through environmental design

Impact Assessment

A Crime Prevention Through Environmental Design Report has been prepared by Aecom (**Appendix 26**). This assessment concludes that the design of the site demonstrates that consideration for passive surveillance has been included, particularly in areas overlooking promenades; safe car parking for tenants and patrons of the development; safe and secure service access: and an activated frontage and pedestrian access to the promenades

Recommendations and mitigation measures:

Aecom's key recommendations from the CPTED assessment include:

- During detailed design:
    - Consider wayfinding signage to show separation of public and private areas, and assist with legibility of the site given its retail use nature;
    - landscaping to deter malicious damage, provide amenity and show ownership of all elements of the site;
    - lighting to deter opportunistic crime and provide safety for tenants and pedestrians at all times;
    - active surveillance at access points to the development and areas that are unlikely to receive passive surveillance and increased activation of open spaces to encourage resident community activity.
- Ensure that all external and relevant internal areas of the development are well lit to the relevant Australian Standards. Lighting is particularly important at all access and entry points including lifts and stairwells, pedestrian pathways and car parking areas and these should comply with AS/NZS 1158 to increase surveillance opportunities during the hours of darkness.
- Ensure landscaping does not interrupt sightlines and is used on external surfaces to deter malicious damage, show ownership and improve aesthetics. Landscaping will be particularly important surrounding the development. It will also be important to ensure that landscaped areas do not provide opportunities for concealment or entrapment.
- Opportunities for passive surveillance should be provided where possible, particularly around promenade areas.

6.19.2 Security

A Security Risk Assessment report has been prepared by Aecom (**Appendix 27**) providing an overview of the foreseeable security risks faced by the new Sydney Fish Market and providing

recommendations on possible security treatment measures that could be implemented. The objective of this report is to protect and preserve people, property and information within the new Sydney Fish Market precinct by identifying, assessing, evaluating and treating security related risks.

The crime levels experienced within the City of Sydney Local Government Area (LGA), Glebe Suburb in particular, within which new Sydney Fish Market precinct will be located, are reasonably Stable. This can be partially attributed to the fact that the LGA is committed to ensuring the area is safe for business and living by actively engaging local community and partnering with Local Area Commands in developing and implementing programs that address community safety and crime prevention. In the most recent three-year crime trend data for the City of Sydney LGA, shows that ten most prevalent crimes applicable to new Sydney Fish Market are either stable or declined over this period. Based on these trends, the likelihood of these offences occurring in the future should either remain the same as currently assessed, or reduce.

Key Recommendations

Recommended security treatment measures include, but not limited to the following:

- Develop, implement and maintain Security Management Plans, Policies, and Procedures;
- Develop, implement and maintain Security Risk Management Plans, Policies, and Procedures;
- Develop, implement and maintain Business Continuity Management Plans, Policies, and Procedures;
- Develop, implement and maintain Emergency Management Plans, Policies, and Procedures;
- The deployment of electronic security measures to provide surveillance, detection, deterrence, and to electronically control access into and out of restricted spaces;
- Develop, implement and maintain cash handling policies and procedures to ensure that uniform, secure and best industry practices are implemented;
- Implement physical security measures to physically control/restrict access to restricted areas of the precinct and throughout the precinct including Hostile Vehicle Mitigation (HVM); and
- Implement personnel security measures such as on-site security personnel during trading hours and over peak periods, staff and contractor pre-employment screening, and security awareness training(s).

6.20 Ecologically Sustainable Development

The project is committed to achieving a formal Green Star Rated outcome (minimum 5 Star target) under Green Star - Design & As Built – v1.2. The project will implement a number of sustainable design principles and includes initiatives designed to mitigate the environmental impact of the following:

- Energy – including reduction in energy associated to demolition, construction and operation, across the building and its associated sources (30% reduction target in Greenhouse Gas Emissions from operations);

- Water Efficiency – including reduced potable water demand and improved stormwater quality (45% reduction target in potable water consumption);
- Passive Design Principles – reducing the development's overall requirement for building services;
- Ecology - Maintaining ecology through landscaping where practical;
- Materiality – Considering the whole of life impact of materials in demolition, construction and operation stages, and considering their selection to minimise harm to the environment;
- Waste – implementation of best practice management techniques to reduce waste going to landfill (landfill diversion rate is targeted at 90% for construction and demolition waste, and 80% for operational waste);
- Transport – encouraging alternate low carbon means of transportation to and from the New Sydney Fish Market.

The above are assessed using a holistic built environment sustainability rating tool - Green Star Tool Design & As Built v1.2 - to demonstrate equivalence with industry best practice.

Clause 7(1)(f) of Part 3 of Schedule 2 of the EP&A Regulation requires an EIS to include the reasons justifying the carrying out of the development in the manner proposed, having regard to biophysical, economic and social considerations, including the principles of ecologically sustainable development. These principles are discussed in detail in the ESD report (**Appendix 21**) and summarised in **Table 18**.

Table 18: Principles of Ecologically Sustainable Development

Principles of ESD	Comment
(a) ***the precautionary principle**, namely, that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. In the application of the precautionary principle, public and private decisions should be guided by:* *(i) careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment, and* *(ii) an assessment of the risk-weighted consequences of various options,*	There are no perceived threats of serious or irreversible environmental damage as a result of the development. The site has been used previously for a range of waterfront and industrial purposes and is presently underutilised. The development incorporates measures to reduce environmental damage with best practice initiatives such as creating green spaces, enhanced biodiversity for landscaping and incorporating micro-climatic design. Adequate investigations have been undertaken to enable the consequences of the development to be understood and measures have been incorporated into the design to manage and mitigate impacts.
(b) ***inter-generational equity**, namely, that the present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations,*	The development conserves inter-generational equity through minimising the consumption of resources whilst providing environments which will ensure the health and well-being of occupants into the future. Demand for resources is reduced by introducing a number of best practice energy and water conservation measures. These initiatives will free up

Principles of ESD	Comment
	more resources for future generations, instead of their immediate consumption by the current generation. The development includes new landscaping and constructed wetlands that will enhance the environmental quality of the site. The limited diversity of the environment currently on the site will be maintained or improved upon by this project. All waste streams will be dealt with in ecologically safe methods; waste water and stormwater will be plumbed to the sewers or stormwater drains as required by law. In addition, waste water will be lower for this development compared with a standard practice development as low-flow fixtures and fittings will be used to reduce water consumption throughout the building. Through a commitment of adopting Water Sensitive Urban Design (WSUD), a monitoring system will record both consumption and demand, rainwater reuse, landscape irrigation, stormwater detention systems, stormwater treatment and/or natural bio-retention systems for improving water quality. Inter-generational equity is realised in the use of energy and water efficiency measures which aim to reduce the consumption of limited resources, preserving these for future generations.
(c) ***conservation of biological diversity and ecological integrity****, namely, that conservation of biological diversity and ecological integrity should be a fundamental consideration,*	The portion of the site that is currently land-based is considered to have limited terrestrial and marine biodiversity. It is considered that the development enhances biological diversity and ecological integrity through green landscaping, constructed wetlands and a water treatment function (bio-retention).
(d) ***improved valuation, pricing and incentive mechanisms****, namely, that environmental factors should be included in the valuation of assets and services, such as:* *(i) polluter pays, that is, those who generate pollution and waste should bear the cost of containment, avoidance or abatement,* *(ii) the users of goods and services should pay prices based on the full life cycle of costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any waste,*	The development considers the integration of a number of initiatives which aim to internalise pollution and other undesirable environmental outcomes. Contractors are required to provide and abide by an Environmental Management Plan and Environmental Management System which would be in accordance with NSW Environmental Management Systems Guidelines. The contractor will be required to achieve minimum 80% recycling of construction waste. This would have a greater financial cost to the project, however it provides a more accurate reflection of the full life cycle costs of the materials which were on the site, and the waste from the new materials as a result of the construction. The increased cost of recycling construction materials will also incentivise the purchase of less materials, thereby reducing over-ordering and material wastage.

Principles of ESD	Comment
(iii) environmental goals, having been established, should be pursued in the most cost effective way, by establishing incentive structures, including market mechanisms, that enable those best placed to maximise benefits or minimise costs to develop their own solutions and responses to environmental problems	The costs of producing the following pollution: sewage, landfill waste, and CO2 emissions are partially borne by the project team and accounted for in the project's sustainability initiatives. The project has voluntarily elected to: • improve their water consumption efficiency, thereby paying to reduce their production of sewage; • reduce their energy consumption, which means the project has paid for the design and implementation of solutions which will reduce CO2 emissions; • recycle waste streams in the construction and operation of the project, which will cost more than standard practice where all material waste is directed to landfill; • adapt to future changes including effects of climate change, increasing population and tourism impacts, increasing cost of on-grid utilities and surrounding land use.

Best practice ESD initiatives incorporated into the design, construction and operation of the facility are discussed in the report contained in **Appendix 21**.

7. GENERAL ENVIRONMENTAL RISK ASSESSMENT

The following table summarises the potential environmental impacts which may arise as a result of the proposed development and, where relevant, identifies the mitigation measures that will be undertaken.

The environmental risk assessment has been adapted from Australian Standard AS4369:1999 *Risk Management and Environmental Risk Tools*. In accordance with the SEARs, the ERA addresses the following significant risk issues:

- The adequacy of baseline data;
- Justification of impacts;
- Consideration of potential cumulative impacts due to other development in the vicinity of the site; and
- Measures to avoid, minimise and if necessary, offset the predicated impacts, including detailed contingency plans for managing any significant risks to the environment.

The significance of impact is assigned a value between 1 and 5 based on:

- The receiving environment.
- The level of understanding of the type of impacts.
- The likely community response to the environmental consequence of the project.

The manageability of environmental impacts is assigned a value between 1 and 5 based on:

- The complexity of mitigation measures.
- The known level of performance of safeguards proposed.
- The opportunity for adaptive management.

The sum of the significance and manageability of the values provides a ranking of potential impacts after mitigation measures are implemented which are also detailed in the table. Indicative rankings (between 1 and 10) are listed in the figure below.

Significance of impact	Manageability of impact				
	5 Complex	4 Substantial	3 Elementary	2 Standard	1 Simple
1 – Low	6 (Medium)	5 (Low/Medium)	4 (Low/Medium)	3 (Low)	2 (Low)
2 – Minor	7 (High/Medium)	6 (Medium)	5 (Low/Medium)	4 (Low/Medium)	3 (Low)
3 – Moderate	8 (High/Medium)	7 (High/Medium)	6 (Medium)	5 (Low/Medium)	4 (Low/Medium)
4 – High	9 (High)	8 (High/Medium)	7 (High/Medium)	6 (Medium)	5 (Low/Medium)
5 – Extreme	10 (High)	9 (High)	8 (High/Medium)	7 (High/Medium)	6 (Medium)

Table 19: Environmental Risk Analysis

Item	Phase	Potential Environmental Impact	Proposed Mitigation Measures and / or comment	Significance of Impact	Manageability of Impact	Residual Impact
Communications	Prior to construction	Lack of effective communications management	Infrastructure NSW will appoint a communications manager who will be the point of contact for the community during demolition and construction.	3	2	5 Low/Medium
	Prior to operation	Lack of effective communications with community	Infrastructure NSW will appoint a responsible officer who will be the point of contact for the community during operation in relation to the public domain.	3	2	5 Low/Medium
	Prior to operation	Operations management	An Operational Management Plan will be developed for the new Sydney Fish Market that will include direct lines of communication with residents in the immediate surrounding area.	3	2	5 Low/Medium
Construction Impacts	Prior to construction	Increase in noise levels, dust, and traffic during construction	Infrastructure NSW will develop a Construction Environmental Management Plan (CEMP) for the project.	3	3	6 Medium
Aboriginal Heritage	Construction	Destroying of items of aboriginal heritage significance	Infrastructure NSW will advise Registered Aboriginal Parties of the proposed development.	2	2	4 Low/Medium
	Construction	Impact on Aboriginal Heritage items	An unexpected finds policy should be put in place during demolition and construction of the proposal for development. This would include recommendation that if Aboriginal objects are identified during construction work should stop immediately and RAPs, OEH and an archaeologist contacted to identify and record the objects.	2	2	4 Low/Medium

Item	Phase	Potential Environmental Impact	Proposed Mitigation Measures and / or comment	Significance of Impact	Manageability of Impact	Residual Impact
	Operation	Potential uncovering of human remains during	If suspected human remains are located during any stage of the proposed works, work should stop immediately and the NSW Police and the Coroner's Office should be notified. RAPs, OEH and an archaeologist should be contacted if the remains are found to be Aboriginal.	2	2	4 Low/Medium
European Heritage	During construction and operation.	Potential impacts of the development on listed heritage items on the site and in the vicinity of the site	The recommendations of the Heritage Impact Assessment (Appendix 23 of the EIS) will be implemented.	3	2	5 Low/Medium
Maritime Heritage	During construction and operation	Impacts of the development during construction and operational activities on the potential marine archaeological deposits	The recommendations of the Maritime Heritage Impact Statement (Appendix 24 of the EIS are to be implemented.	3	3	6 Medium
Flood Management	Operation	Impacts of the development on flood behaviour during storm events	An Operational Management Plan will be developed for the new Sydney Fish Market that will include an emergency response plan for managing flash flooding events.	2	2	4 Low/Medium
Contamination	Demolition and Construction	Potential contaminating activities as a result of proposed demolition and construction works	The preferred strategies and details of site management and associated validation requirements of the Remediation Action Plan are to be implemented during demolition and construction.	3	3	6 Medium
	Prior to construction	Management of unexpected finds in relation to contamination	The Construction Environmental Management Plan to be prepared is to include an unexpected finds protocol and details of the site induction for unexpected finds during the demolition and construction	3	3	6 Medium

Item	Phase	Potential Environmental Impact	Proposed Mitigation Measures and / or comment	Significance of Impact	Manageability of Impact	Residual Impact
Acid Sulfate Soils Management	Construction	Management of Acid Sulfate Soils located within sediments underlying the site	The Acid Sulfate Solis Management Plan will be implemented during all stages of construction.	3	3	6 Medium
Water Pollution	Construction	Sediments runoff into Blackwattle bay Erosion of the seawall or other features of the site	Erosion and sedimentation controls will be installed and managed during construction.	3	3	6 Medium
	Construction	Impacts on the water quality of Blackwattle Bay	Water quality monitoring will be undertaken during construction as recommended in the EIS.	3	3	6 Medium
	Operation	Impacts of the water quality of Blackwattle Bay due to operations of the development	Chemicals and hydrocarbons will be maintained within bunded area(s) with impervious floors. Maintain spill kit(s) on site at all times, and ensure all staff are appropriately trained in their use. Storage of minor quantities of hazardous chemicals / fuels to be undertaken in accordance with AS1940 – The storage and handling of flammable and combustible liquids and AS3780- 2008-The storage and handling of corrosive substances.	2	2	4 Low/Medium
	Operation	Impacts of the development on water quality	The water sensitive urban design measures identified in the EIS will be implemented including water quantity and quality control measures.	2	2	4 Low/Medium
Noise and Vibration	Prior to construction	Noise and vibration impacts associated with the construction of the development	A Construction Noise and Vibration Management Plan will be prepared implemented during construction and will be developed in accordance with the	4	3	7 High/Medium

Item	Phase	Potential Environmental Impact	Proposed Mitigation Measures and / or comment	Significance of Impact	Manageability of Impact	Residual Impact
			recommendations of the Noise and Vibration Impact Assessment accompanying this EIS.			
	Construction	Noise and vibration impacts associated with the construction of the development	Consultation and notification of works for nearest receivers will occur. Notification will identify works proposed, duration and potential mitigation measures.	4	3	7 High/Medium
	Construction	Noise and vibration impacts associated with the construction of the development	Any proposed out of hours works would be: • Assessed to determine if there are any impacts at nearest receivers. • If works are likely to be audible, residents would be consulted on likely impacts, proposed mitigation and management measures. Monitoring of noise impacts would occur to verify predictions.	4	3	7 High/Medium
	Prior to Operation	Nosie impacts associated with the operation of the development	An Operational Management Plan will be prepared including procedures for managing noise and noise complaints.	3	3	6 Medium
Terrestrial Biodiversity Fauna	Construction and Operation	Impacts on vulnerable flora and fauna species	Implement the management strategies in Table 6 of the Biodiversity Development Assessment Report contained in Appendix 7 of the EIS.	2	2	4 Low/Medium
Maritime Biodiversity	Construction and Operation	Impacts on marine biodiversity in the immediate and wider vicinity of the site in Blackwattle Bay	Implement the management strategies in the Marine Ecology Assessment for the proposed new Sydney Fish Market contained in Appendix 8 of the EIS.	2	2	4 Low/Medium

Item	Phase	Potential Environmental Impact	Proposed Mitigation Measures and / or comment	Significance of Impact	Manageability of Impact	Residual Impact
Odour and Air Quality Impacts	Operation	Odour emissions from the operation of the fish market	Odour emissions will meet appropriate NSW guidelines at sensitive receptors.	3	3	6 Medium
	During detailed design	Air emission from the new SFM such as odour, volatile organic compounds, products of combustion and particulates during the operational phase	The Operations Management Plan is to contain measures to monitor and manage odours from the site and to respond to complaints from surrounding land uses.	2	2	4 Low/Medium
Traffic	Prior to construction	Construction traffic and pedestrian management impacts	A Construction Traffic and Pedestrian Management Plan will be finalized and implemented during demolition and construction.	2	2	4 Low/Medium
	Prior to construction	Promotion of sustainable modes of transport to reduce reliance of private vehicles as a means of accessing the site	A Travel Plan will be finalised and implemented during occupation.	2	3	5 Low/Medium
Maritime Navigation	Prior to Construction	Impacts on maritime navigation in the waters of Blackwattle Bay from the construction of the development	• Construction work areas and exclusion zones will be delineated with a floating boom and silt curtain; • The existing rowing route will be shortened in consultation with the coordination with Port Authority of NSW to accommodate the construction work area at the head of the Bay; • A Marine Notice will be issued in coordination with Roads and Maritime Services to advise the boating community of the extent, nature and duration of the construction activities;	3	3	6 Medium

Item	Phase	Potential Environmental Impact	Proposed Mitigation Measures and / or comment	Significance of Impact	Manageability of Impact	Residual Impact
			• An appropriate program of consultation and information will be developed to ensure that stakeholders (e.g. rowing clubs, dragon boating clubs, marina facilities, marine contractors) and the general public are fully notified of proposed construction activities and associated exclusion zones			
	Operation	Impacts on maritime navigation in the waters of Blackwattle Bay during the future operation of the development	• Existing 4 knot speed limit and no wash zone within Blackwattle Bay / Rozelle Bay will be maintained. • The existing rowing route will be shortened to provide a minimum distance of 45m to the proposed wharf structures to maintain a buffer for vessel turning and ferry manoeuvring at the head of wharves; • Safe navigation requirements will be reinforced and made clearly visible to regular wharf users, visiting seasonal vessels and recreational vessels by installing signage in prominent locations throughout the wharf facilities to outline the following: o A 4 knot speed limit with no wash zone; o no anchoring at the head of Blackwattle Bay; o keeping a proper lookout for non-powered craft at all times;	3	3	6 Medium

Item	Phase	Potential Environmental Impact	Proposed Mitigation Measures and / or comment	Significance of Impact	Manageability of Impact	Residual Impact
			○ notification of peak times for passive recreation (e.g. dawn and dusk); and, ○ giving way to passive recreational craft including rowing boats, dragon boats and outrigger canoes. • A Vessel Traffic Management Plan (VTMP) for the New Sydney Fish Market will be prepared to provide guidance to enhance marine safety and navigation for all vessels using the wharf facilities and the surrounding waterway area			
Visual Impact	Construction	Light spill impacts	Lighting design that minimises light spill at night will be provided to assist in mitigating night time lighting impacts.	3	2	5 Low/Medium
	During detailed design	Landscaping	Consideration will be given to additional treatments on the northern facade.	2	2	4 Low/Medium
	During detailed design	Site landscaping design	Implement the landscaping strategy proposed by Aspect Studios.	1	1	2 Low
External lighting	During detailed design	Prevention of antisocial and criminal behaviour	External lighting would be designed to comply with Australian Standard, AS4282, "Control of the Obtrusive Effects of Outdoor Lighting".	2	2	4 Low/Medium

Item	Phase	Potential Environmental Impact	Proposed Mitigation Measures and / or comment	Significance of Impact	Manageability of Impact	Residual Impact
	During detailed design	Light spill impacts	Luminaires would be designed and controlled to minimise light spill.	3	2	5 Low/Medium
Amenity – Wind	During detailed design	Wind environment conditions in the surrounding environment of the site	Incorporate measures into the design to mitigate the effects of strong southerly winds recommended in the wind impact assessment where safety criteria are expected to be exceeded (**Appendix 25**).	3	2	5 Low/Medium
Ecologically Sustainable Development	During detailed design	Implementation of ecologically sustainable development initiatives in the detailed design of the development	The project will implement a number of sustainable design principles and includes initiatives designed to mitigate the environmental impact of the following: • Energy – including reduction in energy associated to demolition, construction and operation, across the building and its associated sources (30% reduction target in Greenhouse Gas Emissions from operations); • Water Efficiency – including reduced potable water demand and improved stormwater quality (45% reduction target in potable water consumption); • Passive Design Principles – reducing the development's overall requirement for building services; • Ecology - Maintaining ecology through landscaping where practical;	3	2	5 Low/Medium

Item	Phase	Potential Environmental Impact	Proposed Mitigation Measures and / or comment	Significance of Impact	Manageability of Impact	Residual Impact
			• Materiality – Considering the whole of life impact of materials in demolition, construction and operation stages, and considering their selection to minimise harm to the environment; • Waste – implementation of best practice management techniques to reduce waste going to landfill (landfill diversion rate is targeted at 90% for construction and demolition waste, and 80% for operational waste); • Transport – encouraging alternate low carbon means of transportation to and from the New Sydney Fish Market. Other measures recommended by the ESD Report accompanying the development application.			

8. CONCLUSION

The potential environmental impacts, both direct and cumulative, have been identified and assessed as part of this EIS. The assessment finds that the development will provide the potential for a new Sydney Fish Market of international standing acting as a catalyst for the rejuvenation of the eastern foreshore of Blackwattle Bay.

The assessment concludes that no significant environmental impacts have been identified as a result of the development. Any potential impacts can be satisfactorily mitigated through a range of measures that have been identifies within the EIS.

In addition, the development is consistent with relevant Government policies and strategies.

It is considered that the development is in the public interest and warrants approval with conditions.