

Department of Planning, Housing and Infrastructure

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Port Botany Quayline Equalisation

State Significant Infrastructure Assessment Report (SSI-798778464)

August 2026





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Port Botany Quayline Equalisation (SSI-798778464) Assessment Report

Cover photo: Image of Port Botany Quayline Equalisation (Source: EIS)

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Preface

This assessment report provides a record of the Department of Planning, Housing and Infrastructure's (the Department) assessment and evaluation of the State significant infrastructure (SSI) application for the Port Botany Quayline Equalisation Project at Brotherson Dock within the Port Botany Lease Area, Port Botany, lodged by Port Botany Operations Pty Ltd as Trustee for Port Botany Unit Trust (NSW Ports). The report includes:

- an explanation of why the project is declared SSI and who the approval authority is
- an assessment of the project against government policy and statutory requirements, including mandatory considerations
- a demonstration of how matters raised by the community and other stakeholders have been considered
- an explanation of any changes made to the project during the assessment process
- an assessment of the likely environmental, social and economic impacts of the project
- an evaluation which weighs up the likely impacts and benefits of the project, having regard to the proposed mitigations, offsets, community views and expert advice; and provides a view on whether the impacts are on balance, acceptable
- an opinion on whether the project is approvable or not, along with the reasons, to assist the Independent Planning Commission, as the delegate of the Minister for Planning and Public Spaces, in making an informed decision about whether infrastructure approval for the project can be granted and any conditions that should be imposed.

Executive Summary

This report details the Department's assessment of the State significant infrastructure (SSI) application (SSI-79878464) for the Port Botany Quayline Equalisation project.

This report will be provided to the Independent Planning Commission (the Commission) as delegate of the Minister for Planning and Public Spaces (the Minister) for its consideration when deciding whether to approve the carrying out of the SSI.

Project

Port Botany Operations Pty Ltd as Trustee for the Port Botany Unit Trust (the Proponent) proposes to:

- construct an extended quayline on the southern side of Brotherson Dock and reclaim land adjacent to the extended quayline
- demolish the existing Bulk Liquids Berth (BLB1) and associated pipeline infrastructure
- construct and operate a new Bulk Liquids Berth (BLB3) and associated pipeline and bulk liquids handling infrastructure.

The project is located in Port Botany in the Bayside Council and Randwick City Council local government areas (LGAs).

The project has an estimated development cost of \$760,917,439 and is expected to generate an average of 30 workers (both employees and contractors) onsite daily during construction, peaking at 60 during piling and wharf works. If approved, construction of the project is proposed to commence in 2027 and be completed by 2032. The project includes the operation of the new BLB3 and associated pipeline infrastructure. Operation of the extended quayline and associated wharf area for container terminal uses will be subject to separate planning approval.

Strategic context

The Department considers the project to be consistent with the strategic planning framework at the district, metropolitan, State and national levels. Key policies including the *Greater Sydney Region Plan*, the *Eastern Harbour City District Plan* and local strategic planning statements emphasise the need for infrastructure that supports forecast growth, protects international trade gateways and preserves industrial and urban services land. The project meets these objectives by expanding quayline capacity, equalising berth lengths across stevedores and relocating existing Bulk Liquid Berth

infrastructure to ensure Port Botany can accommodate future increases in vessel size and maintain its critical role in servicing Greater Sydney's freight needs.

The project aligns with broad transport and freight strategies, including the *Future Transport Strategy*, the *NSW Freight and Ports Plan*, the *State Infrastructure Strategy* and the *National Freight and Supply Chain Strategy*. These policies prioritise efficient, reliable and productive freight networks supported by targeted infrastructure investment. By enhancing berthing capacity, improving freight handling efficiency and strengthening the resilience of the port supply chain, the project directly contributes to these strategic objectives and supports the long-term economic productivity of NSW.

Statutory context

Under section 5.28(1) of State Environmental Planning Policy (Transport and Infrastructure) 2021 (the Transport and Infrastructure SEPP), development is declared to be State significant infrastructure (SSI) under section 5.12 of the *Environmental Planning and Assessment Act 1979* (the EP&A Act) if it is carried out on land within the Lease Area, the development is permissible without development consent, and the development is for the purposes of port and wharf facilities that has an estimated development cost of more than \$100 million by or on behalf of a public authority.

The site is within the Lease Area of Port Botany and is zoned SP1 Special Activities under the Transport and Infrastructure SEPP. Under section 5.16(1) of the Transport and Infrastructure SEPP, development for port facilities with an estimated development cost of more than \$100 million by or on behalf of a public authority may be carried out without development consent on land within Zone SP1 Special Activities. Chapter Five of the Transport and Infrastructure SEPP defines a public authority as including the Port Operator, as the Proponent is the Port Operator of the port of Botany Bay, it is defined as a public authority under the Transport and Infrastructure SEPP for the development of port facilities.

The project is SSI under section 5.12 of the EP&A Act. The Minister for Planning and Public Services is the approval authority for SSI projects under section 5.14 of the EP&A Act. The Proponent has declared reportable political donations under section 10.4 of the EP&A Act. On 14 September 2011 the Minister delegated his determination functions under Part 5.1 (now Part 5.2) of the EP&A Act to the Planning Assessment Commission (now the Independent Planning Commission) (the Commission) where a reportable political donation declaration has been made. Therefore, the project will be determined by the Commission as the Minister's delegate.

Engagement

The Department exhibited the project's environmental impact statement (EIS) from 24 September to 22 October 2025. During the exhibition period, the Department received:

- advice from the following government agencies:
 - Department of Primary Industries and Regional Development (DPIRD) Fisheries
 - Department of Climate Change, Energy, the Environment and Water (DCCEEW)
 - Port Authority of NSW (Port Authority)
 - Environmental Protection Authority (EPA)
 - Transport for NSW (TfNSW)
 - Heritage NSW
 - Fire and Rescue NSW (FRNSW)
 - Civil Aviation Safety Authority (CASA)
 - Sydney Airport Corporation Limited (SACL)
- submissions from Randwick City Council and Bayside Council commenting on the project
- four submissions from the public (one submission from a special interest group and three submissions from individuals). Of these public submissions, three were objections and one provided comments.

Key concerns raised in public submissions related to:

- contamination caused by dredging
- risk posed by the transportation of hazardous goods
- impacts on airport operations
- air quality (nuisance, dust, odours), noise and traffic impacts
- marine biodiversity impacts.

The Proponent submitted a submissions report on 12 January 2026 to address the issues raised in submissions and agency advice.

Assessment

The Department has considered the EIS, the issues raised in submissions, the Proponent's response to submissions report and supplementary information in the assessment of the project. The Department considers the key assessment issues to be:

- water quality – sediment dispersal
- contamination
- aquatic ecology

- hazards and risk.

Water quality - sediment dispersal

Construction of the project would result in visible sediment plumes from dredging and discharge of water from the dewatering of dredge slurry in the reclamation area. Impacts would primarily be visible in the immediate area of dredging around Brotherson Dock, but may be visible outside of this area. The demolition of the tugboat berths and BLB1, the construction of BLB3 and the bund and extended quayline would cause minor water quality impacts, that can be effectively managed. Operation of BLB3 would not cause additional environmental impacts, as it relocates an existing bulk liquids berth to a new location. Dredging of spoil for the extended quayline and hardstand would change the seabed within Brotherson Dock, but not have significant impacts on wave energy and sediment dispersion within Botany Bay.

Contamination

The Proponent prepared a Preliminary Site Investigation (PSI) endorsed by a site auditor, consistent with EPA processes. The PSI concluded the construction of the project presented a limited contamination risk. Contaminants in the project area are influenced by areas of environmental interest adjoining and within the project area. Contamination present at concentrations above relevant assessment criteria, are potentially widespread and have exposure pathways (human and ecological) if not managed. With proposed management measures, exposure levels can be reduced to low. Elutriate testing has been undertaken and, except for perfluorooctanesulfonate (PFOS), contaminants are all above the 95% Level of Species Protection guideline values. PFOS concentrations levels are within the Australian and New Zealand Guidelines for Fresh and Marine Water Quality. The Department considers that the potential impacts of the project have been appropriately assessed and that, subject to compliance with the recommended mitigations measures, the project is unlikely to have a significant impact on the environmental or human health.

Aquatic ecology

There would be direct impacts from loss of habitat (the removal of existing infrastructure and dredging) to species. While recolonisation is likely to occur, the recolonising species composition cannot be predicted. These impacts would occur within the working port area and with the proposed mitigation measures are considered by the Department to be acceptable.

Indirect impacts to marine ecology caused by changes in water quality during construction are unlikely to have a significant impact and can be managed. Minimal operational stage impacts associated with water quality changes and residual impacts would be offset. There would be

underwater noise impacts to the marine environment from the project, although impacts to marine species can be mitigated via management measures such as soft start procedures and work shut down zones. There would be increased risks to the marine environment during construction from vessel strike and lighting, however this would be minor and temporary in nature.

Hazards and risks

The Quantitative Risk Assessment for the project was undertaken in accordance with the Department's Hazardous Industry Planning Advisory (HIPAP) guidelines and has demonstrated that the project would not increase the overall risk to people working in the vicinity of the bulk liquid berths. The influence of the project to the risk levels in the Port Botany Land Use Safety Study is negligible. The risk of an aircraft crash to BLB3 was assessed with the likelihood of such an incident as being considered rare.

Conclusion

Overall, the Department's assessment concludes the project would:

- create a more competitive environment for container stevedores operating at Port Botany, and help deliver port infrastructure that continues to meet changes to international shipping fleets and ultimately provide cost-effective services
- maintain the capacity of the bulk liquid berths during construction, and operationally with direct replacement of BLB1 with BLB3
- be consistent with State transport and freight strategies by enhancing berthing capacity, improving freight handling efficiency and strengthening the resilience of the port supply chain and supporting the economic productivity of NSW
- be appropriately managed or mitigated through the Proponent's environmental mitigation measures and recommended conditions of approval.

As such, the Department considers the project is in the public interest and concludes that the project is approvable, subject to conditions.

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1 Introduction

1.1 The project

1. Port Botany Operations Pty Ltd as Trustee for Port Botany Unit Trust (the Proponent) proposes to undertake development to provide equitable operational quayline lengths between the three container stevedore companies operating at Port Botany. Hutchison and Patrick, located on the northern side of Brotherson Dock, have quayline lengths that can berth up to three large container vessels simultaneously. DP World, situated on the southern side of the dock, has a shorter quayline length and can only berth two longer vessels and one smaller vessel at the same time.
2. The project involves:
 - construction of an extended quayline (BD12) on the southern side of Brotherson Dock adjoining the DP World container terminal, including dredging of the Brotherson Dock channel and berths to provide material for reclamation of land for associated wharf hardstand area
 - demolition of the existing Bulk Liquids Berth 1 (BLB1) and construction and operation of a new Bulk Liquids Berth (BLB3) in a more southerly location, and associated changes to pipework and bulk liquids handling infrastructure within the port. The types and volumes of bulk liquids would remain unchanged. This is required to facilitate the extension of BD12.
3. The project does not include the establishment of operational infrastructure on the extended quayline and wharf area. The operation of the additional wharf area would be subject to separate planning approval.

1.2 Project location

4. The subject site is located in Port Botany, in the Bayside and Randwick local government areas (LGAs), about 6.5 kilometres south of the Central Business District and wholly within the Port Botany Lease Area (see **Figure 1** for regional context and lease area boundary). The land is legally known as Lot 3 DP 116561, Lot 50 and Lot 52 DP1182618, Lot 21 DP 1126332; and Lot 200 DP 1183399.
5. The project's extended quayline (BD12) is located at Brotherson Dock (36-42 Friendship Road, Port Botany) and BLB3 at Fishburn Road, Port Botany, in the Randwick LGA. The dredge area is in the Bayside LGA. Construction compounds and sites are located in the Bayside and Randwick LGAs.



6. The project site is surrounded by port-related facilities, bulk liquid and gas storage terminals, hydrocarbon storage, fuel pipelines, and road and rail lines that connect to broader transport networks. To the east and northeast of the site, land uses comprise residential and industrial development. Land uses to the north and north-west comprise a mix of light industrial, warehousing, open space (Foreshore Park and Botany Golf Course), and Penrhyn Estuary, an ecologically important habitat. Land uses to the southeast include Botany Cemetery and recreational (Yarra Bay Bicentennial Park). The land uses surrounding Port Botany, and the location of the project area are shown in **Figure 2**.

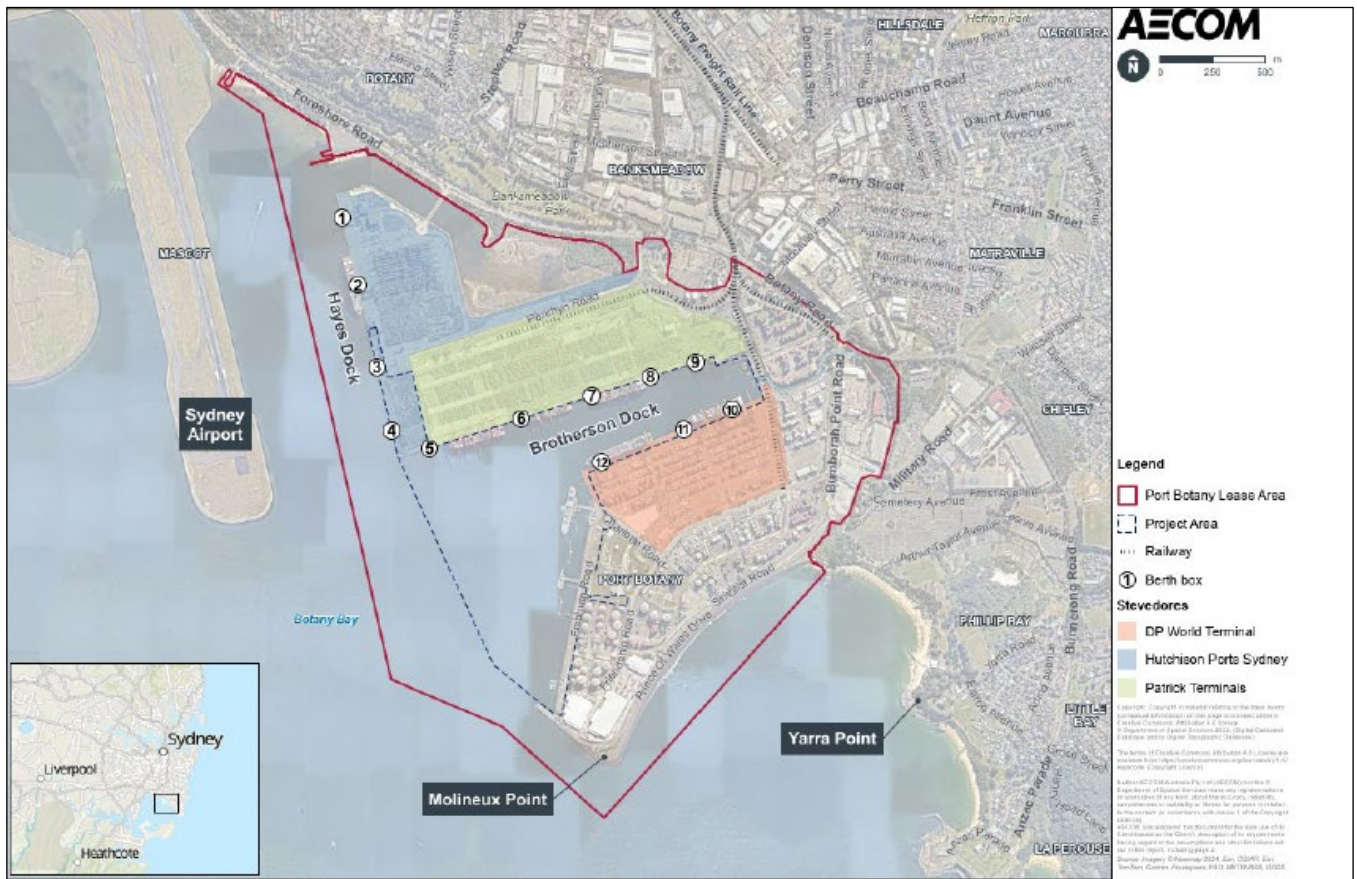


Figure 2 | Port Botany and surrounding land uses (Source: EIS)

1.3 Related projects and works

7. The completed project will support future container operations by DP World on the southern side of Brotherson Dock. However, the installation and operation of the future container terminal and handling infrastructure and equipment (the facilitated development) will be subject to a separate planning approval
8. While the installation and operation of container handling infrastructure is not included in the scope of the project, the Environmental Impact Statement (EIS) considered the potential implications of such future development to identify key interactions between the project and the anticipated container operations on the extended quayside and wharf area.

2 Project

2.1 Project overview

- 9. The Proponent proposes to increase the length of the existing quayline (BD12) on the southern side of Brotherson Dock, and expand the adjacent wharf hardstand area, to facilitate the docking and unloading of up to three large container vessels simultaneously.
- 10. Construction of the project will require dredging of the Brotherson Dock channel and berths to provide material for the reclamation of land to the west of the southern part of Brotherson Dock. In addition, an existing bulk liquids berth (BLB 1) will be demolished and a new BLB constructed on the southwestern side of Molineaux Point.
- 11. The key components of the project are provided in detail in the Project Description chapter of the EIS and outlined in **Table 1**.

Table 1 | Key project components

Aspect	Description
Project area	Extension of the quayline on the southern side of the Brotherson Dock by 314 metres providing a total quayline length of around 1,250 metres and an additional 5.3 hectares of wharf hardstand area adjoining the DP World container terminal.
Physical layout and design	Key structures and features include: • 5.3 hectare wharf area adjacent to the extended quayline comprising reclaimed area (4 hectares) and suspended deck (1.3 hectares) • new BLB (BLB3) between the existing BLB2 and Molineux Point, including alterations and additions to, and removal of bulk liquid pipelines and demolition of BLB1 • exchange facility on Fishburn Road to the south of BLB2 in addition to the existing exchange facility near BLB1 • two-storey operations control facility housing operational controls and parking for 18 vehicles adjacent to BLB3 • demolition of tugboat jetty off Molineux Point • construction and operation of one waterside construction compound and four landside construction compounds.

Aspect	Description
Uses and activities	- The extended quayline on the southern side of Brotherson Dock would be operated consistent with operations across the existing container terminal, subject to separate planning approval - BLB3 and associated pipelines would be operated consistent with the operation of the existing BLBs.
Timing and sequencing	6 year staged construction commencing in 2027.

2.2 Physical layout and design

- The project's design is shaped by the need to integrate with the existing quayline and meet operational requirements, such as accommodating larger vessel lengths. Within these constraints, key design options were explored, including the structural form of the wharf, sources of reclamation materials, and dredging methods. Additional considerations included piling configurations, concrete deck designs, and construction techniques to ensure feasibility and alignment with project goals.
- The key components of the project and their location are illustrated in **Figure 3**. An indicative cross section of the extended quayline and wharf area is illustrated in **Figure 4**. An indicative layout of the new BLB is shown in **Figure 5**. The layout and location of the proposed pipeline and bulk liquids handling infrastructure connecting BLB3 with the existing pipeline network, and new bulk liquids operations/control facility are shown in **Figure 6**.

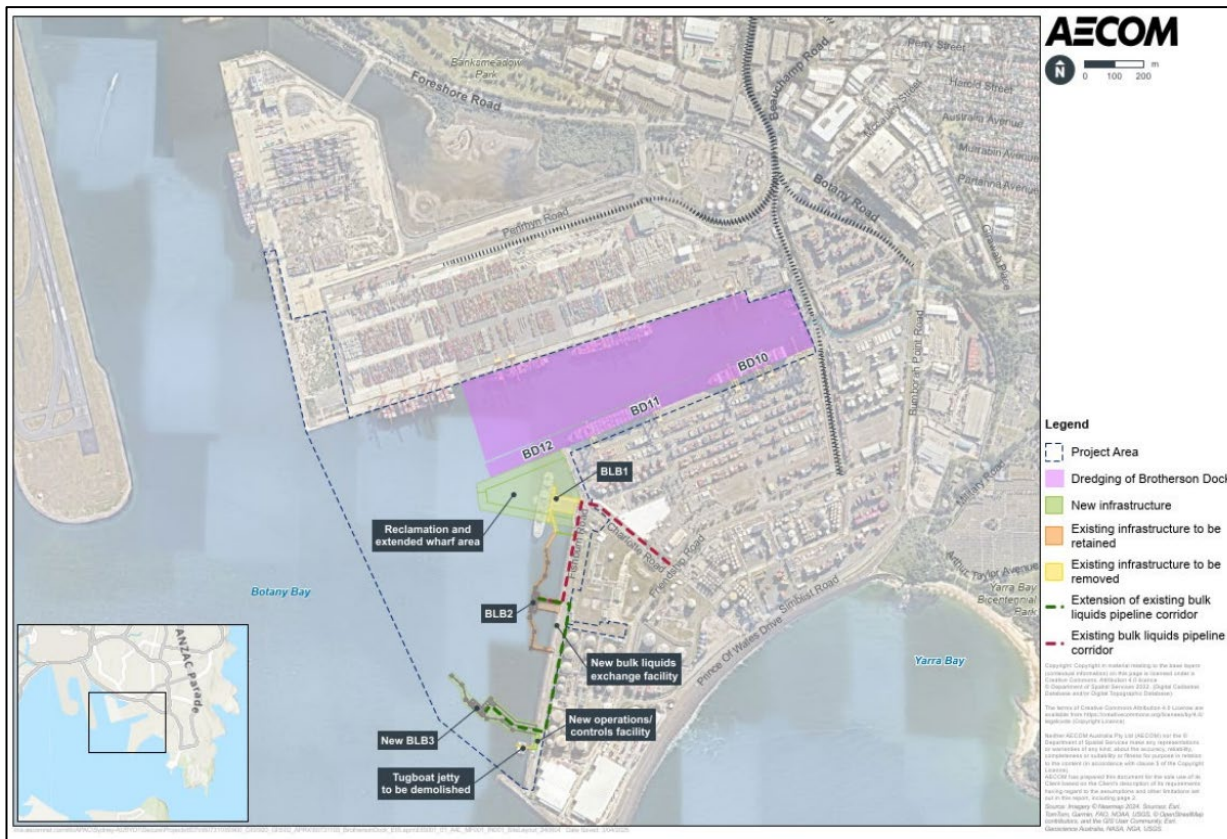


Figure 3 | Project overview (Source: EIS)

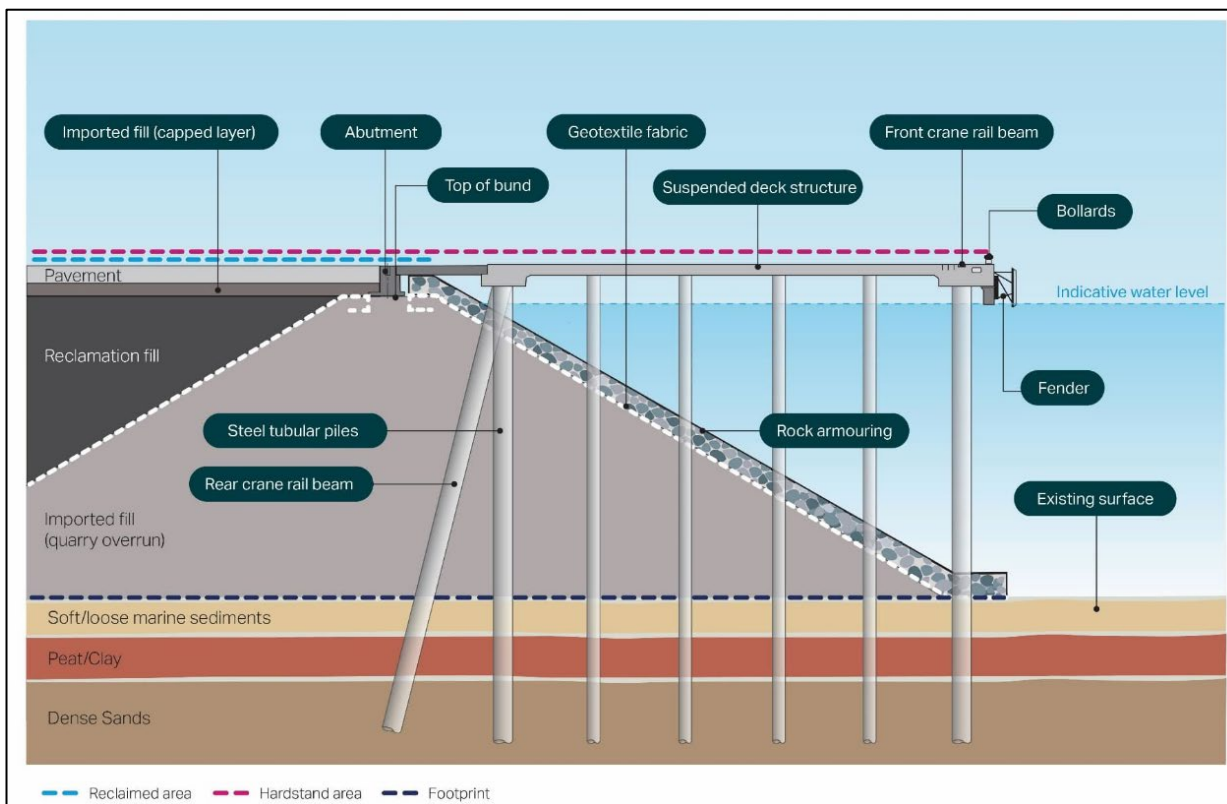


Figure 4 | Indicative cross section of extended quayline and wharf area (Source: EIS)

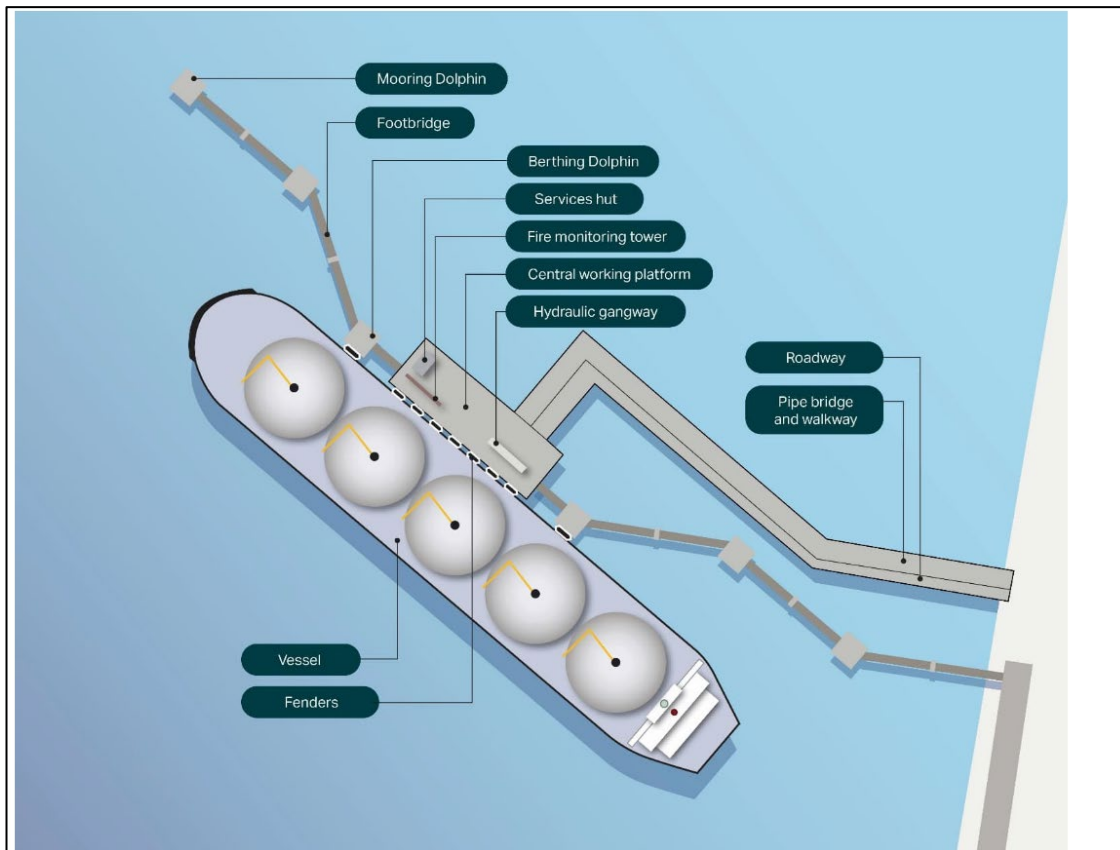


Figure 5 | Indicative layout of BLB3 (Source: EIS)



Figure 6 | Indicative location of proposed new BLB3 pipeline (Source: EIS)

2.3 Construction of the project

14. One waterside and four landside construction compounds will be established to facilitate construction of the project. The location of these are shown in **Figure 7**. Key construction activities at the sites are summarised in **Table 2**.

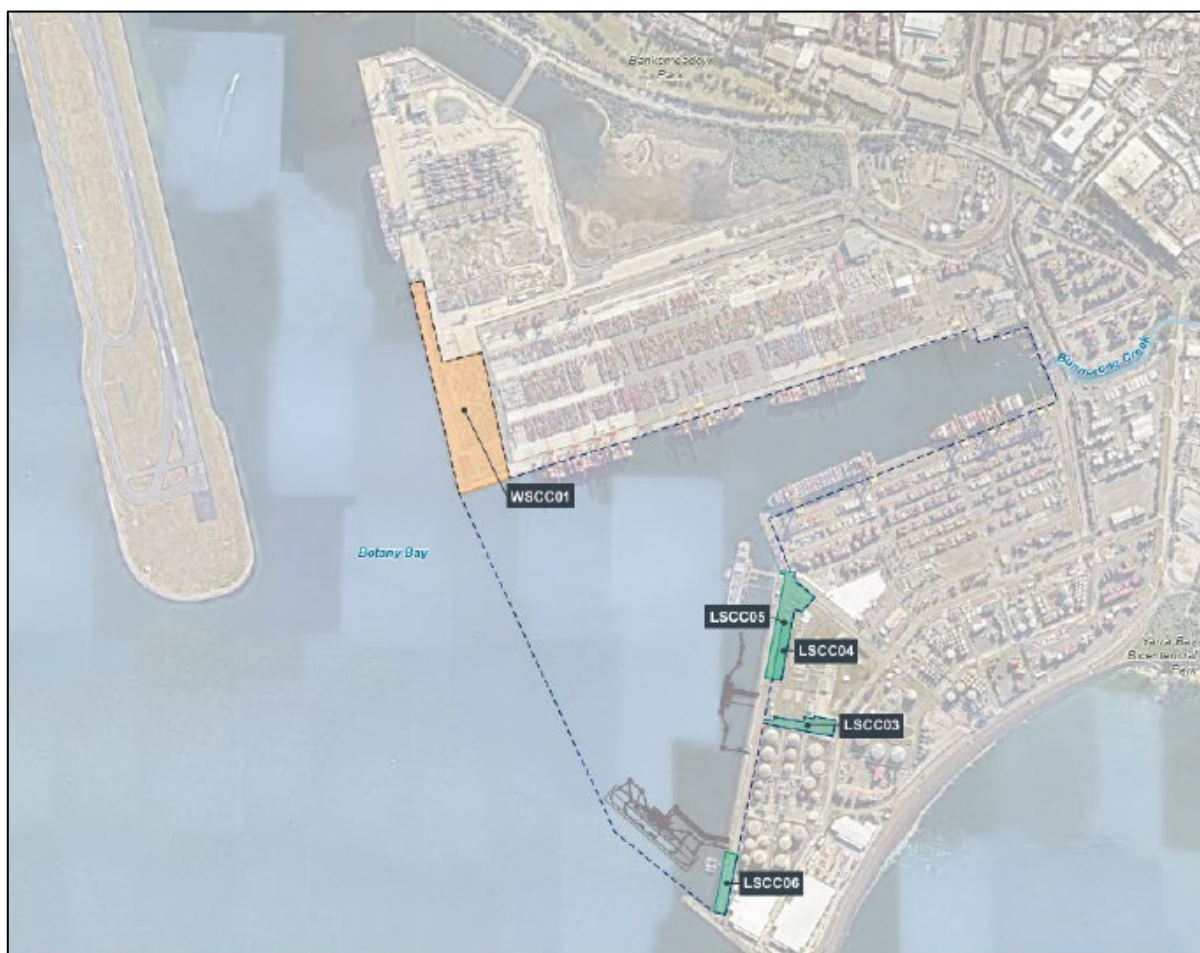


Figure 7 | Location of construction compounds (Source: EIS)

Table 2 | Construction compound activities (Source: EIS)

Construction Compound/site	Anticipated construction activities
WSCC01 (northern Brotherson Dock)	To support construction of BLB3, including: • storage of materials, BLB marine loading arms (MLAs), gangway, walkways and fire monitor towers • erection of mobile cranes to unload and load material on barges • construction of concrete mooring dolphins.

Construction Compound/site	Anticipated construction activities
LSCC03 to LSCC06 (southern Brotherson Dock)	- welding machines and a hot work area - concrete agitator trucks to deliver concrete - storage of earthwork stockpiles at LSCC06 - construction of minor access roads and property access alterations at LSCC04 and LSCC05 - storage of materials including pre-assembled pipeline product - racks, steel formwork and associated valves and fittings - removal of excavated material - mobile cranes to unload and load material on trucks.
Reclaimed extended quayline and wharf area (once built)	- storage of pre-cast concrete elements - concrete agitator trucks to deliver concrete - crawler cranes to facilitate the movement of equipment and material - installation of fenders.

15. The key construction components are summarised in **Table 3**.

Table 3 | Main construction components of the project (Source: EIS)

Construction component	Activities
Site establishment and enabling works	- establishment of construction compounds including installation of fencing, security measures, signage, vehicle parking, site offices, and worker amenities - provision of utility services to construction compounds including potable water, sewerage, power and telecommunications - installation of mooring points at waterside compounds - installation of temporary environmental and safety controls including sediment and erosion controls - installation of access arrangements for landside construction compounds - relocation, adjustments and protection of existing utilities.

Construction component	Activities
Construction of extended quayline and wharf area	• construction of bund wall • dredging within Brotherson Dock channel and berths • reclamation with dredged material • piling works to accommodate the suspended deck structure supported by steel tubular piles • wharf and suspended deck construction • installation of utility services – stormwater, security.
Construction of BLB3	• installation of nine mooring dolphins using piling • piling and construction of a suspended deck structure • installation of new pipeline rack • installation of electrical services, fire monitor towers, walkways, fenders, marine loading arms and gangway • construction of new bulk liquids exchange facility along Fishburn Road.
Construction of operations control facility	• excavation • construction of building using timber frames and block walls • installation of utility conduits.
Demolition and decommissioning	• decommissioning, demolition and removal of BLB1, including mooring dolphins, piles, access bridge, central working platform, fire monitor towers, marine loading arms and gangways (where not being used). • demolition of tugboat jetty.
Bulk liquids transfer pipelines	• decommissioning and removal of BLB1 bulk liquids transfer pipelines • installation of new pipeline infrastructure along Fishburn Road to connect BLB3 and BLB2 with existing bulk liquids storage facilities, including six (6) additional pipelines (2 fuel, 3 gas, 1 bitumen).

16. Dredging involves the following activities:

- dredging of Brotherson Dock to 19 m below water level, which is 4.5 m deeper than current seabed levels

- extraction of approximately 600,000 m³ of material using a trailer suction dredge (as shown in Figure 8)
- dewatering of dredged material
- dredged slurry pumped into the reclamation area behind a rock bund
- total suspended solids (TSS) monitoring maintained to keep discharge below 50 mg/L
- surplus dredged material redistributed to deeper areas of Brotherson Dock.

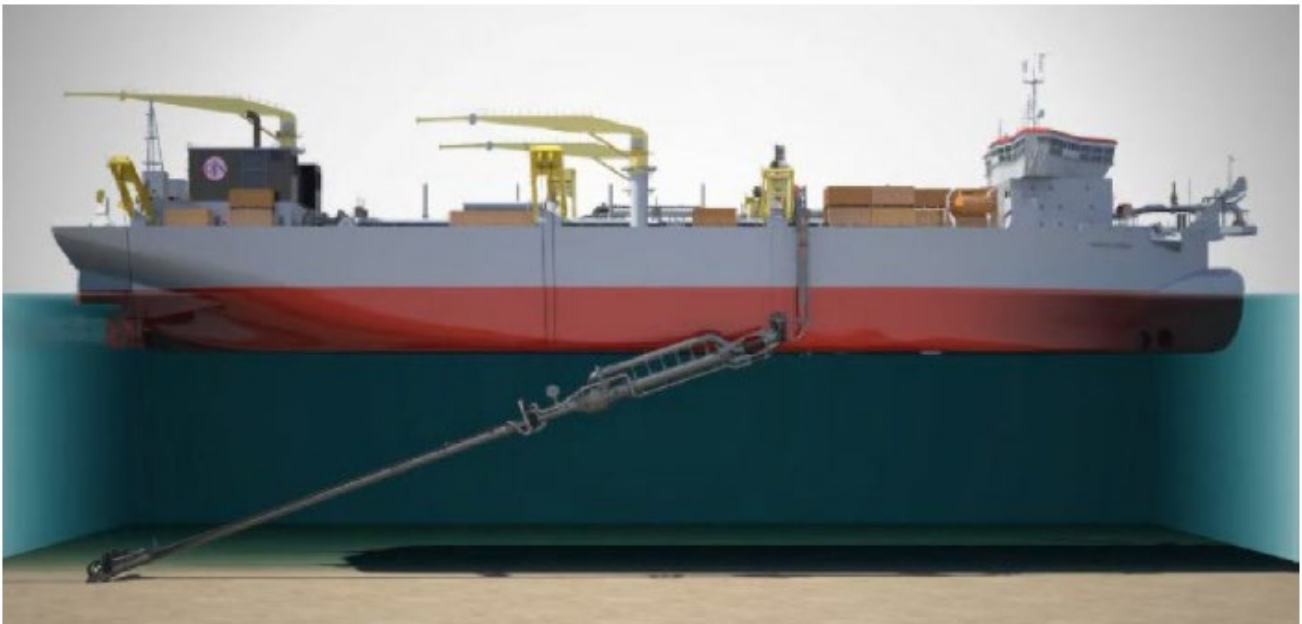


Figure 8 | Typical trailer suction dredge and pipeline (Source: EIS)

2.4 Construction hours, timing and workforce

17. Dredging operations in Brotherson Dock, would be undertaken 24 hours a day, seven days a week. The dredging works would include operation of the Trailing Suction Hopper Dredge (which includes operation of the suction head and drag arms, pumping of the dredged material to the shipboard hopper, unloading of dredged material into the reclamation area) and operation of ancillary vessels supporting dredging activities. Other construction activities would be carried out during the standard construction hours:

- Monday to Friday 7:00 am to 6:00 pm
- Saturdays 8:00 am to 1:00 pm
- no work on Sundays and public holidays.

18. There may be some situations where works may need to be undertaken outside of standard construction hours, such as large concrete pours which cannot be suspended as they would affect the integrity of the concrete, delivery of wide loads which require partial road closures, and pipeline testing.
19. An average of 30 workers (both employees and contractors) would be onsite daily during construction, peaking at 60 during piling and wharf works.
20. Construction is expected to take approximately 6 years and is planned to commence in 2027. The indicative overall construction program for the project is shown in **Table 4**. Construction will be undertaken sequentially, with construction of BLB3 and associated pipeline infrastructure occurring initially. Once these works are complete and BLB3 is operational, BLB1 will be decommissioned and removed to enable construction of the bund wall, dredging and reclamation of land for the extended quayline to commence.

Table 4 | Indicative construction timetable (Source: EIS)

Construction phases	Indicative timing																							
	2027				2028				2029				2030				2031				2032			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Enabling works																								
Establishment of construction compounds and laydown area works																								
Construction of the new BLB3																								
Decommissioning and removal of BLB1 and tugboat jetty																								
Construction of bund wall, dredging and reclamation																								
Piling and wharf deck construction																								
Site demobilisation																								

2.5 Operation of the project

21. The extended quayline will allow longer ships to berth on the southern side of Brotherson Dock, matching the capacity of other stevedores. The project does not include the operation of the extended quayline and the associated new wharf/hardstand area. The project would

enable future container terminal operations in conjunction with the DP World terminal, which will be subject to planning approval.

22. The new BLB3 will function as a common user berth, consistent with existing operations at BLB1 and BLB2. Key operational components will include a central working platform equipped with marine loading arms (MLAs), a hydraulic gangway, product-specific hoses, a pipe manifold, and fire control infrastructure. An access bridge will connect the platform to shore, supporting both vehicular and pedestrian access, as well as suspended pipeline corridors. Berthing and mooring dolphins, connected by walkways and fenders will facilitate vessel mooring. The new BLB3 is illustrated in **Figure 5**.
23. A new operations control facility (with 18 parking spaces) would manage the transfer of product from BLB2 and BLB3 via pipelines to bulk liquid storage facilities within the port precinct. The new operations control facility is adjacent to BLB3.

3 Strategic context

3.1 Key strategic issues

24. The strategies, plans and policies relevant to the project are listed in **Table 5**. The Department considers that the project is consistent with these.

Table 5 | Summary of relevant strategies, plans and policies

Strategy, plan or policy	Consistency	Comments
Greater Sydney Region Plan: A Metropolis of Three Cities 2018-2038 (Greater Sydney Commissions, 2018)	Consistent	The Plan aims to provide infrastructure that supports the three cities and meets future needs. The project involves the expansion of the existing port to facilitate future growth and vessel sizes as well as equalising berth lengths across the stevedores. This aligns with the following objectives of the Plan: • Objective 1: Infrastructure that aligns with forecast growth • Objective 2: Infrastructure that adapts to future needs by accommodating for future container vessel size growth in line with demand, and • Objective 23: Industrial and urban services land is planned, retained and managed by equalising berth lengths across Port Botany's stevedores and relocating the existing BLB infrastructure.
Eastern Harbour City District Plan 2018 – 2038 (Greater Sydney Commission, 2018b)	Consistent	The <i>Eastern Harbour City District Plan 2018 – 2038</i> (the District Plan) sets out the vision for the extension of the quayline and construction of BLB3 to enhance the Port's function as an international gateway for freight. This is consistent with Planning Priority E9 of the District Plan: • <i>Growing international trade gateways</i> by protecting Port Botany's function as an international gateway for freight and logistics and supporting port-related land uses and infrastructure in the area around the port. The extension of the quayline also aligns with Planning Priority E12: • <i>Managing industrial and urban services land within the Port Botany trade gateway</i> by equalising berth lengths across Port

Strategy, plan or policy	Consistency	Comments
		Botany's stevedores and relocating the existing BLB infrastructure.
Future Transport Strategy: Our vision for transport in NSW (Transport for NSW, 2020)	Consistent	<i>Future Transport Strategy</i> (the Strategy) sets the strategic directions for Transport in NSW and includes 14 strategic directions. Strategic Direction E1 aligns with the project, being: • <i>Freight networks and supply chains are efficient and reliable</i> by ensuring ports have the capacity and reliable connectivity to accommodate forecasted freight growth by accommodating for future container vessel size growth in line with demand. The project would enhance Port Botany's capacity to accommodate increasing container vessel lengths in line with future demand. This improvement would strengthen the port's reliability for importers and deliver cost efficiencies by making the infrastructure more adaptable to varying vessel sizes
NSW Freight and Ports Plan 2018 – 2023 (Transport for NSW, 2018)	Consistent	The <i>NSW Freights and Ports Plan 2018-2023</i> sets out priorities for the sector and has identified five key objectives. The project aligns with the following objectives that invest in port infrastructure to improve the flow of freight and increase handling capacity at Port Botany: • Objective 1 – Economic growth, by investing in port infrastructure • Objective 2 – Efficiency, connectivity, and access by improving the flow of freight through trade gateways to meet the increase in trade volumes at Port Botany, and • Objective 3 – Capacity by providing infrastructure that aligns with forecasted growth and adapts to future needs by accommodating for future container vessel size growth in line with demand.
Staying Ahead: State Infrastructure Strategy 2022 – 2042 (Infrastructure NSW, 2022)	Consistent	<i>Staying Ahead</i> sets out the NSW Government's priorities for the next 20 years and brings together infrastructure investment and land-use planning NSW. The project will provide for future vessel size growth and is consistent with Objective 1 of the strategy: • <i>Boost economy-wide productivity and competitiveness</i> by improving freight efficiency, security and capacity to support New South Wales's industries and supply chains by

Strategy, plan or policy	Consistency	Comments
		accommodating for future container vessel size growth in line with demand.
National Freight and Supply Chain Strategy (Transport and Infrastructure Council, 2019)	Consistent	The <i>National Freight and Supply Chain Strategy</i> sets a future focused national vision for freight systems and supply chains. Four Critical Areas were identified for national action. The project aligns with Critical Area 1: • <i>Smarter and targeted infrastructure investment</i> by providing infrastructure that supports growing freight needs, ensuring freight is moved in the most efficient and effective manner.
Randwick Local Strategic Planning Statement: Vision 2040 Shaping Randwick's Future (Randwick City Council, 2020)	Consistent	Randwick City Council's <i>Local Strategic Planning Statement</i> (LSPS) outlines the community's vision for the desired future of the LGA. The built components of the project are located within the Randwick LGA and the planning priorities that the project aligns with are: • <i>Planning Priority 9 – Focus economic development, innovation, and jobs growth in strategic centres</i>, by equalising berth lengths across Port Botany's stevedores and relocating the existing BLB infrastructure • <i>Planning Priority 13 – Recognise the importance of industrial and urban service lands</i> by supporting port-related land uses and infrastructure in the area in and around the port, and • <i>Planning Priority 22 – Align planned growth with infrastructure delivery</i>, by accommodating for future container vessel size growth in line with demand.
Bayside Local Strategic Planning Statement: A land-use vision to 2036 (Bayside Council, 2020)	Consistent	Bayside City Council's <i>Local Strategic Planning Statement</i> (LSPS) focuses on the vision and priorities for land use within the LGA. The LSPS identifies the key role of the Port Botany gateway in the growth of Sydney's economy, job generation, and increased productivity. outlining 24 Bayside Planning Priorities. The project aligns with the two priorities: • <i>Planning Priority B14 – Protect and grow the international trade gateways</i> by protecting Port Botany's function as an international gateway for freight and logistics and supporting port-related land uses and infrastructure, and

Strategy, plan or policy	Consistency	Comments
		• <i>Planning Priority B18 – Support the growth of targeted industry sectors through investment in additional berthing infrastructure and depths at Port Botany.</i>

4 Statutory context

4.1 Permissibility and assessment pathway

25. Details of the legal pathway under which approval is sought and the permissibility of the project are provided in **Table 6** below.

Table 6 | Permissibility and assessment pathway

Consideration	Description
Public authority for the purposes of Chapter 5 of the Transport and Infrastructure SEPP	• NSW Ports (the Proponent) is a ‘public authority’ for the purposes of Chapter 5 of State Environmental Planning Policy (Transport and Infrastructure) 2021 (the Transport and Infrastructure SEPP), as the Port Operator of the port of Botany Bay. • Section 5.2(1) of the Transport and Infrastructure SEPP states that in Chapter 5 of the Transport and Infrastructure SEPP ‘public authority’ includes the Port Operator. • Additionally, section 5.2(1) of the Transport and Infrastructure SEPP states that in relation to the port of Botany Bay, Port Operator has the same meaning as in the <i>Ports and Maritime Administration Act 1995</i>. • On 2 May 2013, the Proponent was declared the Port Operator of the private port of Port Botany under section 3(1) of the <i>Ports and Maritime Administration Act 1995</i>. • Therefore, the Proponent is a public authority for the purposes of development activities within the Port Botany Lease Area under Chapter 5 of the Transport and Infrastructure SEPP.
Permissibility	• Section 5.16(1)(e) of the Transport and Infrastructure SEPP states that development by public authorities (including the Port Operator) of port facilities with an estimated development cost of more than \$100 million on land zoned SP1 Special Activities may be carried out without development consent. • The project involves the development of port facilities with an estimated development cost of more than \$100 million, is being carried out by a public authority (the Port Operator of Port Botany) and is wholly located on land zoned SP1 Special Activities under Chapter 5 of the Transport and Infrastructure SEPP. • The project is therefore permissible without development consent under section 5.16(1)(e) of the Transport and Infrastructure SEPP.
Assessment pathway	• Section 5.28(1) of the Transport and Infrastructure SEPP states that development is declared State significant infrastructure (SSI) pursuant to section 5.12(2) of the EP&A Act if:

Consideration	Description
	(a) it is carried out on land within a Lease Area or on unzoned land under Chapter 5 of the Transport and Infrastructure SEPP; and (b) the development on that land is, by the operation of a State Environmental Planning Policy (SEPP), permissible without development consent under Part 4 of the EP&A Act; and (c) the development is for the purposes of port facilities carried out by or on behalf of a public authority and has an estimated development cost of more than \$100 million, or for the purposes of capital dredging, or development that involves reclamation. • The project is for the purpose of port facilities carried out by a public authority on land within the Lease Area of Port Botany, is permissible without development consent, and has an estimated development cost of more than \$100 million. • The project is therefore SSI under section 5.12(2) of the EP&A Act and satisfies the criteria for SSI under section 5.28(1) of the Transport and Infrastructure SEPP.
Decision maker	Minister for Planning and Public Spaces • The Minister is the approval authority for the SSI under section 5.19 of the EP&A Act.
Reportable Political Donations	• The Proponent has made a declaration under section 10.4 of the EP&A Act that it has made reportable political donations in the two-years prior to the lodgement of the SSI application.
Delegate	Independent Planning Commission • In accordance with Schedules 1 and 2 of the Minister's Instrument of Delegation dated 14 September 2011 (the 2011 Delegation), the Minister's determination functions under the EP&A Act can be delegated to the Independent Planning Commission to determine the SSI application. • The 2011 Delegation does not apply to applications (including those with a reportable political donation) made by a public authority (Schedule 2). • While the Proponent is considered a 'public authority' for the purposes of Chapter 5 of the Transport and Infrastructure SEPP, they are not considered a 'public authority' for the purposes of the 2011 Delegation to the Commission.

4.2 Other approvals and authorisations

26. Under section 5.23 of the EP&A Act, other authorisations required are considered during the assessment of the SSI application, hence, these approvals are not required to be obtained separately. Under section 5.24 of the EP&A Act, further authorisations are required, however, these must be substantially consistent with any SSI approval for the project (eg: Environmental Protection Licence (EPL) under section 42 of the Protection of the Environment Operations Act 1997).
27. The Department has consulted with and considered the advice of the relevant government agencies responsible for these other authorisations in its assessment of the project (see **Section 5** and **Section 6**). Suitable conditions have been included in the recommended conditions of approval (see **Appendix D**).

4.3 Planning Secretary’s environmental assessment requirements

28. The Department’s review determined that the EIS addresses each matter set out in the Planning Secretary’s environmental assessment requirements (SEARs) issued on 24 March 2025 and is sufficient to enable an adequate consideration and assessment of the project for determination purposes.

4.4 Matters for consideration

4.4.1 Matters of consideration required by the EP&A Act

29. Section 5.19 of the EP&A Act sets out the matters to be considered by the Minister when deciding whether to approve the carrying out of SSI. The Department’s consideration of these matters is shown in **Table 7**.

Table 7 | Matters for consideration

Matter for consideration	Location
Planning Secretary’s report	This report
Advice provided by the responsible portfolio Minister	Section 5 - Engagement and Section 6 - Assessment

Matter for consideration	Location
IPC findings or recommendations	N/A.

4.4.2 Objects of the EP&A Act

30. In determining the application, the Commission, as the Minister's delegate, should consider whether the project is consistent with the relevant objects of the EP&A Act (section 1.3) including the principles of ecologically sustainable development. Consideration of those factors is described in Appendix C.
31. As a result of the analyses in Appendix C, the Department is satisfied that the development is consistent with the objectives of the EP&A Act and the principles of ecologically sustainable development (ESD).

4.4.3 Biodiversity development assessment report

32. The EIS was accompanied by a Biodiversity Development Assessment Report (BDAR) as required by section 7.14 of the *Biodiversity Conservation Act 2016* (the BC Act).
33. Section 7.14 of the BC Act requires the approval authority to take into consideration the likely impact of the proposed development on biodiversity values as assessed in the BDAR.
34. The BDAR and the overall impact of the project on biodiversity values is assessed in **Section 6**.

5 Engagement

5.1 Preparation of Secretary's environmental assessment requirements (SEARs)

35. During the preparation of the SEARs, the Department consulted relevant state government agencies and local council(s).

5.2 Department's engagement

36. The Department publicly exhibited the project from 22 September to 22 October 2025 on the NSW Planning Portal.

37. The Department notified and invited comment from government agencies, Bayside Council and Randwick City Council, and conducted a site visit on 29 January 2026.

5.3 Summary of submissions

38. The Department received 4 submissions during the public exhibition period of the EIS (1 submission from a special interest group and 3 submissions from individuals). Of these submissions, 3 objected to the project, and 1 provided comment. A link to the submissions is provided in **Appendix B**.

39. The key issues raised by the public submissions included:

- contamination caused by dredging
- risk posed by the transportation of hazardous goods
- impacts on airport operations
- air quality (nuisance, dust, odours), noise and traffic impacts
- marine biodiversity impacts.

5.4 Summary of advice received from government agencies

40. The Department received advice from 9 government agencies on the EIS. A summary of the agency advice is provided in **Table 8**. A link to the full copy of the advice is provided in **Appendix B**.

Table 8 | Summary of agency advice

Agency	Advice summary
Department of Climate Change, Energy, the Environment and Water (DCCEEW)	DCCEEW's Conservation Programs, Heritage and Regulation (CPHR) Group stated there was uncertainty about the assumed dredged fines content of the dredging material. CPHR recommended the Proponent be required to undertake geotechnical investigations prior to construction, and recommended that, if approved, the conditions of approval require the Proponent to implement the mitigation measures from the BDAR and Marine Ecology Impact Assessment report.
Transport for NSW (TfNSW)	TfNSW raised concerns regarding the scope and adequacy of the dredging assessment and impact on the Marine Biodiversity Offset Strategy (MBOS) which formed part of the Kamay Ferry Wharf approval, particularly in relation to seagrass rehabilitation and aspects regarding seahorses. It requested confirmation that the proposal would not compromise TfNSW's ability to meet its required success metrics of the Kamay Ferry Wharf's MBOS.
Heritage NSW	Heritage NSW recommended that a Maritime Archaeological Assessment (MAA) be undertaken, to assess the potential for riverine heritage items / Underwater Cultural heritage in the proposal area. Heritage NSW requested information that adequate consultation was undertaken with Registered Aboriginal Parties (RAP)s and that an updated Aboriginal Heritage Information Management System AHIMS search be undertaken. Recommended draft conditions were also provided.
Department of Primary Industries and Regional Development (DPIRD) Fisheries	DPIRD Fisheries noted that the cumulative impact assessment did not consider past projects in its assessment of impacts against the baseline that existed prior to other projects in the area. The use of a 'shifted' baseline (includes existing impacts caused by past projects and currently operating projects) may have masked the actual cumulative impact. The agency recommended conditions including requirements relating to offsetting impacts on Key Fish Habitat.

Agency	Advice summary
Environment Protection Authority (EPA)	The EPA made comments on: - the water quality criterion used for total suspended solids and assumptions regarding sediment grain size of dredged material - possible contaminants in dredged material and the management actions that would be triggered by exceedances of sediment contaminant criteria - absence of assessment of water quality guideline exceedances in the water column during dredging, including the risk of dissolved contaminants being discharged into the water column - risk of mobilisation of hydrocarbons into the water column - lack of specific management measures to manage water quality impacts. The EPA recommended that additional information be provided on water quality and contaminant management and mitigation measures, dredging and overflow dredging risks associated with dissolved and sediment attached contaminants, and management of dewatered discharges from the reclamation area. It also recommended additional information on the potential for soil and groundwater contamination in the vicinity of BLB1, and for the project to impact on the remediation works for the nearby Joint User Hydrant Installation (JUHI) pipeline leak. The EPA recommended conditions to manage construction noise and vibration.
Fire and Rescue NSW	Recommended conditions requiring a Fire Safety Study (FSS), Emergency Plan (EP), and an Emergency Services Information Package (ESIP) be developed and implemented for the dangerous goods facility.
Port Authority of NSW	The Port Authority of NSW supported the project, requested preparation of a Marine Traffic Management Plan, and ongoing consultation to ensure safe navigation and address potential impacts. The Port Authority of NSW noted that that Harbour Master approval is required for any operational marine traffic changes proposed within the port area. Sensitive habitats at Penrhyn Estuary and Foreshore Beach must be protected; risks from dredging are low but monitoring of Total Suspended Solids (TSS) during construction is recommended, and adverse impacts on coastal processes must be mitigated. Operations at BLB3 align with existing practices. If new products are introduced, they must be included in hazard assessments and management plans, and Harbour Master permission under the Ports and Maritime Administration Regulation 2021 is required.

Agency	Advice summary
Civil Aviation Safety Authority (CASA)	CASA acknowledged that the proposal met relevant guidelines and advised it would be involved during detailed design phase to provide advice on equipment that is taller than the height limits specified in the Procedures for Air Navigation Services – Aircraft Operations (PANS-OPS).
Sydney Airport Corporation	Sydney Airport does not have any objections to the development as the height proposed is 3m AHD in an area where the maximum height of structures allowed is 15.4m above the existing ground height.

41. DCCEEW – Water Group did not provide comments.

5.5 Summary of council submissions

42. Randwick City Council and Bayside Council provided comments on the project. A summary of the issues raised is provided in **Table 9** and a link to the council submissions is provided in **Appendix B**.

Table 9 | Summary of issues raised by council

Council	Submission summary
Randwick City Council	• Lack of detail on impacts to ecological and marine habitat and Key Fish Habitat offset requirements. • Cumulative individual risk contour mapping be prepared, incorporating the BLB3, extended quayline and foreseeable changes in Dangerous Goods. • Lack of consideration on the impacts and risks to aircraft. • Incorporate emerging hazards to the risk assessment. • Lack of details on escalation and emergency response. • A Detailed Site Investigation and independent site auditor is required to review site contamination issues. • Lack of consideration on noise impacts particularly to nearby residents. • Lack of details on traffic and transport issues. • Requests ongoing community consultation regarding the proposed development.
Bayside Council	Recommended the Proponent monitor Lady Robinsons Beach foreshore and shorelines in Botany Bay during and post-works to ensure the proposal causes no erosion. If acid sulfate soils are disturbed an Acid Sulfate Soils assessment is required. Environmental considerations such as retaining native plants (Native Couch <i>Cynodon dactylon</i>, native Weeping Grasses <i>Microlaena stipoides</i> and <i>Juncus usitatus</i>), removal of marine pests and monitoring the new artificial structures for five years for net gain in artificial habitat. Post disturbance habitat surveys for Sea Horses to be carried out for five years. Ongoing community consultation during various stages of the proposed development.

5.6 Response to submissions

43. Following the EIS public exhibition period, the Department required the Proponent to respond to the issues raised in submissions and advice received from government agencies. The Proponent provided a response to submissions report (RtS) to the Department on 5 January 2026 (Appendix A).

44. The Department published the RtS report on the NSW Planning Portal on 13 January 2026.

5.7 Request for further information

45. On 10 November 2025, the Department required the Proponent to provide further information to address:

- the number of construction vehicles
- what activities are included as reclamation activities and subject to 24 hour works
- clarification of information relating to:
 - hazards
 - traffic
 - contamination
 - construction noise
 - aircraft movements.

6 Assessment

46. The Department has considered the EIS, the issues raised in submissions, the Proponent’s response to submissions report and supplementary information in the assessment of the project. The Department considers the key assessment issues to be:

- water quality – sediment dispersal
- contamination
- aquatic ecology – including wandering and diving birds
- hazards and risk.

47. Other issues were considered and assessed to be relatively minor, the Department’s assessment is in **Table 12 (Section 6.5)**.

6.1 Water quality - sediment dispersal

48. Construction of the project would result in visible sediment plumes from dredging and discharge of water from the dewatering of dredge slurry in the reclamation area. Impacts would primarily be visible to the immediate area of dredging around Brotherson Dock, but may be visible outside of this area. The demolition of the tugboat berths and BLB1, the construction of BLB3, the bund and extended quayline would cause minor water quality impacts that would be able to be managed. Operation of BLB3 would not cause additional environmental impacts as it relocates an existing bulk liquids berth to a new location. Dredging of spoil for the extended quayline and hardstand would result in changes to the seabed within Brotherson Dock but will not have significant impacts on wave energy and sediment dispersion within Botany Bay.

Issue

49. The water quality assessment was based on water sampling carried out during dry and wet weather conditions, across the same six locations; three within the immediate area of Brotherson Dock, one at Penrhyn Estuary, one adjacent to the end of the third runway, and one further into Botany Bay in line with Sydney Airport’s third runway (**Figure 9**).

50. The sampling demonstrated the water quality within the project area is comparable to that of surrounding monitoring sites within Botany Bay. Water quality in Botany Bay is variable, reflecting current uses and the highly urbanised surrounding land uses and is influenced by estuary inflows and vessel operations. Construction of the project would result in visible sediment plumes from dredging and discharge of water from the dewatering of dredge slurry in the reclamation area.

However, impacts would primarily be restricted to the immediate area of dredging with limited dispersal expected.

51. Visibility of dispersal will be influenced by the hydrodynamics of Botany Bay and background levels of suspended solids, which can be variable. The hydrodynamics assessment concluded that the project would not have material impacts to coastal processes and hydrodynamics.

52. The Proponent has committed to actively monitor Total Suspended Solid (TSS) levels during dredging and dewatering discharge, and would facilitate an active management response to minimise criteria exceedances and subsequent environmental impact.

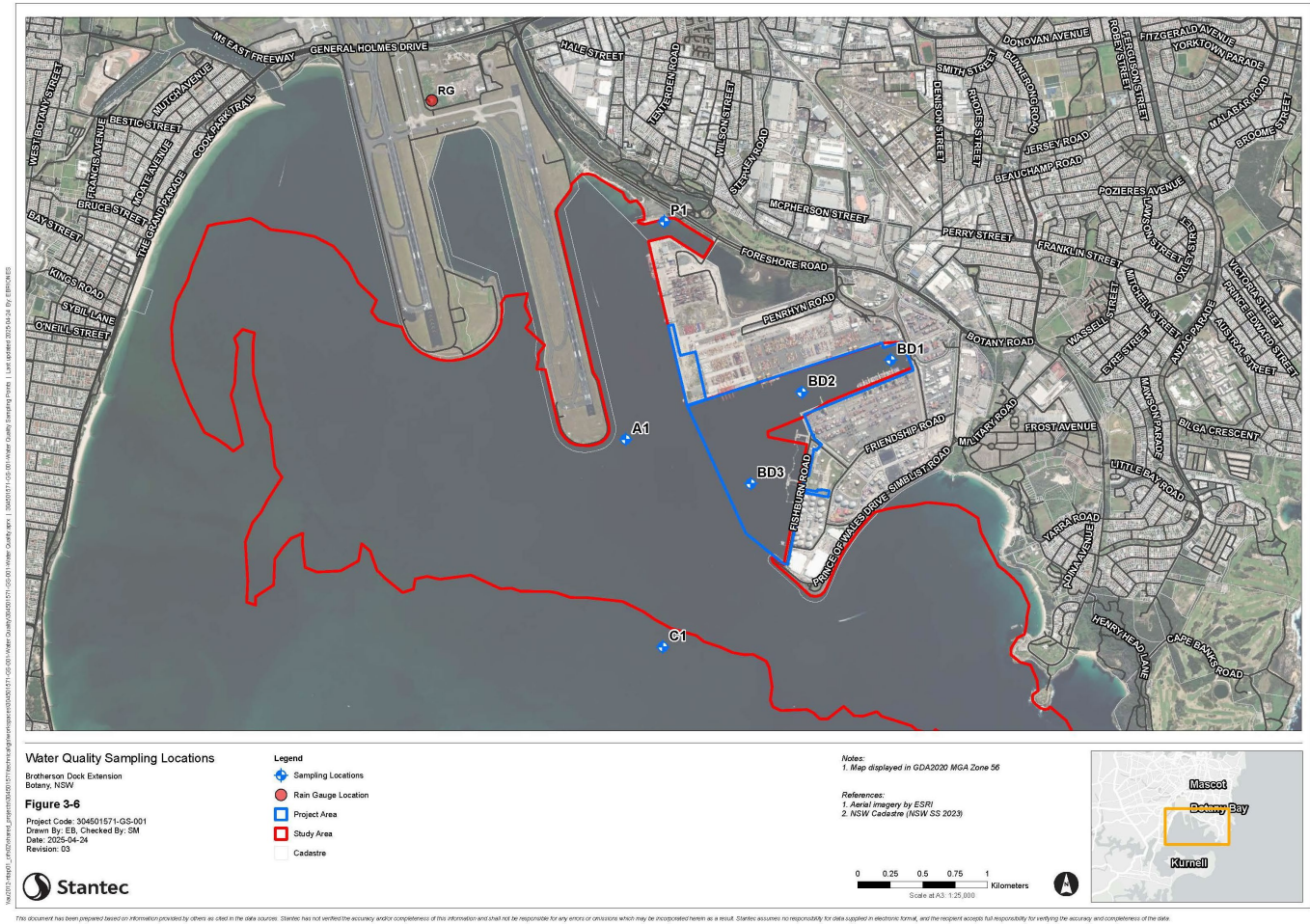


Figure 9 | Water Quality sampling locations (Source: EIS)

Consideration

Construction of the project would result in visible sediment plumes from dredging and discharge of water from the dewatering of slurry in the reclamation area. Impacts would primarily be visible in the immediate area of dredging around Brotherson Dock, but may be visible outside this area

53. There would be impacts to water quality from the mobilisation of sediments into the water column during each stage of construction. Water quality impacts could be caused by dredging for reclamation materials, dewatering of the reclamation area, pile driving, and bund construction.
54. The Department notes potential for contaminants on the bed of Brotherson Dock to be mobilised by dredging, to spread within the water column attached to sediments and to potentially become bioavailable (see **Section 6.2**).
55. Dredging would be undertaken using a Trailing Suction Hopper Dredge (TSHD), with dredge slurry discharged to the reclamation area via a floating pipeline. Dredge slurry in the reclamation area would be dewatered, with discharge water from dewatering occurring on the southern side of the reclamation area.
56. These activities would generate a sediment plume, which the Proponent's turbidity modelling indicates:
- would extend out of Brotherson Dock and potentially across about one third of Botany Bay with a TSS of up to 5 to 10mg/L
 - have peak TSS of up to 300mg/L which would be contained within Brotherson Dock under worst case modelling assumptions
 - a maximum TSS of up to 50mg/L at the boundary of Brotherson Dock and Botany Bay
 - a visible surface plume in Brotherson Dock within the area of the dredge operation, that would extend in decreasing intensity into Botany Bay.
57. TSS concentrations are known to vary based on tide stage, catchment inflows, wind conditions and transient storm events that can elevate sediment levels; however, when surface TSS is elevated to greater than 5 mg/L, a sediment plume may be visible.
58. Elevated TSS would extend into Botany Bay, although the sediment load is considered more comparable to background levels and therefore less likely to have a visible surface plume.
59. Sediment deposition is expected to be contained to Brotherson Dock and the areas immediately adjacent to Brotherson Dock. Deposition of sediments settling out of the water column is expected to be up to 5 to 10 centimetres (cm) within Brotherson Dock, and no more than 1 millimetre (mm) outside Brotherson Dock.
60. The EPA raised concern about the amount of fine sediment content within the dredge material, with fine sediments taking longer to settle within the water column and thus more likely to be dispersed. The Proponent advised that additional geotechnical investigations undertaken post-EIS show that there is less fine sediment (approximately 7%) in the dredge area than forecast at the EIS stage (15%), and that the dredge modelling is likely to be conservative. The EPA advised it was satisfied with the reduced level of fines identified in additional geotechnical testing.

61. The Proponent has committed to undertake real time monitoring of turbidity via buoys within, and outside of, Brotherson Dock to ensure that the upper limit of 50 mg/L TSS is not exceeded. This includes a commitment to having lower trigger values on live monitoring buoys which would be set with a value of 20 mg/L at the entrance to Brotherson Dock. This information would enable dredging operations to reduce spoil output or be relocated prior to exceeding the 50 mg/L upper trigger value.
62. The EPA requested that the Proponent utilise silt curtains to manage turbidity within the dredge area of Brotherson Dock; however, the Department acknowledges that the use of silt curtains would be extremely difficult from an operational perspective, and notes that there may be a risk of the TSHD ingesting silt curtains if they were used. The Department has recommended a condition that requires the Proponent to assess the use of alternative sediment control solutions and justify the use or rejection of alternative solutions.

The demolition of the tugboat berths and BLB1, the construction of BLB3, the bund and extended quayline, would cause minor water quality impacts that would be able to be managed

63. The water quality impacts from the demolition of the tugboat berths and BLB1 would be similar to impacts caused by dredging although at a significantly smaller scale. The impacts would be caused by disturbance of the seabed during the extraction of the tugboat berth piles, and the cutting of the BLB1 piles, or the driving of piles when constructing BLB3 and the extended quayline.
64. Additional potential water quality impacts include waste and construction materials being dropped into the water. This can be managed through standard measures such as debris shrouds and pollution booms.
65. The construction of the bund would have potential impacts on water quality, through mobilising sediments during the placement of rock armour which would be either placed, or tipped from trucks, into the water.
66. Demolition and construction activities would be undertaken from the structures themselves and support vessels and Jack Up Barges (JUBs). JUBs would have a minor direct impact when using anchors and lowering the support legs onto the sea-floor and mobilising sediments. Associated with these activities would be potential impacts from the loss of materials or fluids; although, these can be managed via standard construction management processes such as the use of catch nets at construction sites and floating spill containment booms.
67. These water quality impacts would occur prior to the commencement of the dredging and reclamation dewatering and the associated generation of large sediment plumes from those activities.
68. The Department has considered the Proponent's mitigation commitments, which include preparation of a Construction Environmental Management Plan (CEMP) which includes measures such as

containment booms in the water and ‘catch shrouding’ to prevent potential debris entering the water. The Department has recommended conditions which include requiring a CEMP and the implementation of erosion and sediment controls.

Operation of BLB3 would not cause additional environmental impacts as it relocates an existing bulk liquids berth to a new location

69. The operation of BLB3 would not introduce increased impacts to the environment. The project is simply relocating an existing operation at BLB1 to a new location at BLB3.
70. The operation of BLB3 would have risks associated with it such as minor spills and leaks from small failures associated with the various liquids pipelines and pumping equipment, and were an incident to occur, it would be managed in the same way that any incidents are managed at BLB1 and the adjoining BLB2. A standard hierarchy of controls is used throughout the design and construction to minimise the chances of operational spills, and to reduce impacts if spills do occur. These include the use of spill detection sensors and spill containment.
71. Similarly, separate operational risks are associated with vessels berthed at BLB3. Water quality risks could include the discharge of fuels, greywater or ballast water, or the loss of onboard equipment into Botany Bay when moored at BLB3.
72. The Department notes that these are risks already present at BLB1 and, apart from a location change, the risk profile of these events would not be altered due to the location change to BLB3. Discharge from vessels is already prohibited within Botany Bay.
73. The Department is satisfied that the proposed relocation of operations from the existing BLB1 to the new BLB3 location would not introduce new water quality impacts, and that the potential operational impacts from the use of BLB3 instead of BLB1 are minor, typical of these types of operations and are able to be managed.
74. The Department has recommended hazards related conditions, including the preparation of a Fire Safety Study (to be reviewed by FRNSW), a Hazard and Operability Study, a Final Hazard Analysis, and a Construction Safety Study prior to construction commencing. The Proponent is also required to develop an Emergency Plan and a Safety Management System prior to commissioning the new BLB3. These requirements would ensure that operation of the BLB3 is consistent with the Department’s Hazardous Industry Planning Advisory guidelines.

There would be work on land, including the construction of a new gatehouse and pipelines from the new BLB3, to tie into the existing pipeline network. These works present a minor water quality risk and can be appropriately managed

75. The Proponent is proposing landside works that present a minor risk to water quality. These include the construction of a new security gatehouse directly adjacent to the water (where the existing

tugboat berth is) and pipework which would tie the new BLB3 liquid pipes into the existing liquids distribution network.

76. This construction work would be managed with standard erosion and sediment control methods such as the use of the controls within Managing Urban Stormwater – Soils and Construction (Volume 1 & 2A) (Landcom 2004, 2009) (the “Blue Book”) and present a minimal risk for water quality impacts.

Dredging of spoil for the extended quayline and hardstand would change the seabed within Brotherson Dock, but not have significant impacts on wave energy and sediment dispersion within Botany Bay

77. The project would alter the seabed within Brotherson Dock, with the dredged section up to 4.5 metres deeper than the existing seabed profile. Sediment is known to move to deeper areas, so it could be expected that sediment would migrate towards the newly dredged areas, although this would occur slowly and would be managed, consistent with the Proponent’s existing active maintenance dredging program.
78. The proposed location of BLB3 to the south of BLB2 does not require dredging as there is sufficient water depth for a berth box.
79. The project will have a very minor impact on the hydrodynamics of Botany Bay. Modelling demonstrates that there would be a reduction of 0.06% of the annual volumetric exchange (89.2 km³ through the mouth of the bay) of tidal water, compared to the existing conditions. There would be a minor change in wind and wave energy within Botany Bay with an estimated wave energy reduction of 50% inside Brotherson Dock and between 0.1% and 0.2% along the southern side of Botany Bay at Towra Point and Silver Beach.
80. The Department notes that the seabed profile in Brotherson Dock would be changed by the project which could result in other changes within the physical environment of Botany Bay, such as altered currents and wave energy. The EIS considered these changes to be negligible and unlikely to change the shoreline of Botany Bay.

6.2 Contamination

81. The Proponent prepared a Preliminary Site Investigation (PSI), endorsed by a site auditor and consistent with EPA endorsed processes, and concluded the construction of the project presented a limited contamination risk. Contaminants in the project area are influenced by areas of environmental interest (AEIs) adjoining and within the project area. Contamination present at concentrations above relevant assessment criteria are potentially widespread and have exposure pathways (human and ecological) if not managed. With proposed management measures (including appropriate Personnel Protective Equipment (PPE) and ongoing assessment of dredge material and structures to be demolished), exposure levels can be reduced to low. Elutriate testing (a simulated release of contaminants from sediment during dredged material disposal) has been undertaken and, with the exception of perfluorooctanesulfonate (PFOS), contaminants are all above the 95% Level of Species Protection guideline values. PFOS concentrations levels are within the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (Australian and New Zealand Governments (2018)). The Department considers that the potential impacts of the project have been appropriately assessed and that, subject to compliance with the recommended mitigations measures, the project would be unlikely to have a significant impact on the environment or human health.

Issue

82. The project is in an area dominated by heavy industrial land uses, within Port Botany and the broader surrounding industrial areas to the north and northeast.
83. Current and historical land uses off-site, adjacent and topographically upgradient to the project with potential contaminants are the Vopak remediation works (pipeline leak); Orica groundwater remediation site and Ampol Banksmeadow Terminal (regulation under the Contaminated Land Management Act 1997); Opal site under assessment; and Sydney Airport (under PFAS (Per- and polyfluoroalkyl substances) investigation and management).
84. Previous investigations in Brotherson Dock indicated localised sediment contamination (such as metals, total petroleum hydrocarbons (TPH) and tributyltin (TBT)).
85. The Proponent has undertaken a PSI in accordance with Contaminated Land Guidelines, Consultants Reporting on Contaminated Land (NSW EPA (2020)) and the processes outlined in State Environmental Planning Policy (Resilience and Hazards) 2021 (Chapter 4 – Contamination of Land).
86. The PSI reviewed previous site investigations and reports within Port Botany, site inspections, and desktop study to assess the presence and likelihood of contamination.
87. The Proponent undertook project specific sediment contamination testing at select locations within Port Botany (Figure 10).

88. The results of these investigations determined that the contaminants that exceeded the National Assessment Guidelines for Dredging (NADG) (DCCEEW, 2009) screening levels were Tributyltin (TBT), Total petroleum hydrocarbons (TPH), arsenic, mercury, lead and zinc.
89. The Proponent's assessment of previous investigations and studies, and project specific sediment investigations, determined that the concentrations of Contaminants of Potential Concern (CoPC) are generally within the same order of magnitude, with exceedances identified for similar contaminants. CoPCs are chemical substances that are reasonably expected to be present based on known or suspected current and/or past activities, and may pose a risk to human health or the environment if present at sufficient concentrations.



Figure 10 | Location of previous sediment investigations in Brotherson Dock (Source: Figure 3.5 EIS Appendix I)

90. Elutriate sampling and testing was undertaken during a 2024 investigation for maintenance dredging. This investigation indicated that the relevant contaminants were unlikely to become bioavailable to concentrations that could significantly impact on marine organisms in the water column during dredging.
91. The Proponent concluded that as contaminants were unlikely to become bioavailable, that dredging for reclamation material in Brotherson Dock would present little to no risk to the environment.

Consideration

The Proponent prepared a PSI was endorsed by a site auditor and consistent with EPA endorsed processes, and concluded the construction of the project presented a limited contamination risk

92. The Proponent prepared a PSI which was assessed and endorsed by an independent EPA accredited site auditor who considered that “the PSI has adequately assessed past and present activities that may have caused contamination at the site and is considered appropriate to support the EIS for the development.”
93. Concerns were raised in public submissions regarding contamination issues. These included that the contamination investigations were insufficient and/or unclear, that a Detailed Site Investigation (DSI) should have been undertaken, exceedances of screening limits, concerns about the proximity of known contaminated sites and COPCs including PFAS, and the health risks for beach users of nearby beaches.
94. Randwick Council’s concerns included land reclamation, sediment contamination and testing processes, mobilisation of potentially contaminated sediments, requests for a DSI, and involvement of an independent site auditor. Bayside Council did not raise concerns regarding sediment or contamination and agreed with the Proponent’s approach.
95. The Department notes the concerns from Randwick Council; however, the request for a DSI is inconsistent with the process whereby the PSI determined that a DSI is not required, and the PSI was endorsed by a site auditor. The standard EPA process of undertaking a PSI and having that assessed by an independent site auditor has determined that while contamination may be present, the risk of adverse environmental impacts is acceptable.

Contaminants in the project area are influenced by Areas of Environmental Interest adjoining and within the project area. Contamination present at concentrations above relevant assessment criteria are potentially widespread and have exposure pathways (human and ecological) if not managed.

96. The Proponent identified and assessed areas where a potential source of contamination is known, suspected, or has been identified, based on review of site history information, visual observation, or available analytical data. These Areas of Environmental Interest (AEI) include sources or activities that are within, adjacent or topographically up-gradient and within 500 meters of the project area. This resulted in seven AEIs’ being assessed (**Figure 11**).
97. CoPCs that were identified as potentially within the AEIs included heavy metals, Polycyclic aromatic hydrocarbons (PAH), TPH, total recoverable hydrocarbons (TRH), Benzene, toluene, ethylbenzene, ethylbenzene and naphthalene (BTEXN), volatile organic compound (VOCs), semi-volatile organic compounds (SVOCs), phenols, organochlorine pesticide (OCPs), nutrients, asbestos (bonded/friable), polychlorinated biphenyls (PCBs), and Per- and Poly-fluoro Alkyl Substances (PFAS). The materials tested for CoPCs included sediments, surface water, groundwater and soils.

Table 8 | Contamination results of metals (Source RTS)

Metal	Default Guideline Value	Number of exceedances	Maximum exceedance
Arsenic	20 mg/kg	7	86.7 mg/kg
Copper	65 mg/kg	4	71.4 mg/kg
Lead	50 mg/kg	4	124
Mercury	0.15 mg/kg	4	0.6 mg/kg
Zinc	200 mg/kg	2	322 mg/kg

101. Elutriate testing that was undertaken showed that metals were not present above the adopted relevant Default Guideline Value (DGV). TBT was detected above the DGV of 0.009 mg/kg in four samples with a maximum concentration of 0.137 mg/kg reported. The testing that was undertaken included organotins, PAHs, PCB and OCPs.
102. Elutriate testing is an assessment of the ability for contamination in sediments that are water soluble to migrate out of sediments and become bioavailable.
103. The results for all contaminants were analysed against DGVs and the upper confidence limits (UCL) established for each contaminants. This found that the UCL for each contaminant were not exceeded.
104. The PSI established that contaminants are potentially present at concentrations above the relevant assessment criteria, are potentially widespread and that exposure pathways (human and ecological) exist.
105. The PSI concluded that the potential mobilisation of contaminants from dredging and reclamation has a medium level of risk (a combination of the likelihood of a contaminant being present and the consequences of exposure), which is reduced to low with the application of mitigations.
106. Mitigations proposed by the Proponent include the application of an unexpected finds procedure, sampling and analysis to be carried out prior to construction commencing to confirm findings in accordance with a Sampling and Analysis Quality Plan (SAQP) in the Construction Environmental Management Plan (CEMP), and managing dredging to reduce disturbance of known contamination.
107. PFAS was not detected within the sediments that will be dredged during the construction of the project.

Elutriate testing has been undertaken and, except for perfluorooctanesulfonate (PFOS), contaminants are all above the 95% Level of Species Protection guideline values. PFOS concentrations levels are within the Australian and New Zealand Guidelines for Fresh and Marine Water Quality

- 108. The Proponent has undertaken and reported on elutriate testing that was conducted for two contamination assessments: maintenance dredging in 2024 and for this project in August 2025.
- 109. The results of the maintenance dredging investigation were that the relevant contaminants were unlikely to become bioavailable at concentrations that could significantly impact on marine organisms, and that there was little risk to the environment.
- 110. Additional testing that was undertaken for this project (and supplied with the RtS) indicate that the concentrations of contaminants, when released to the water column, were below the 95% Level of Species Protection (LOSP) DGVs, and, apart from PFOS, were also below the 99% LOSP DGV. The Proponent’s elutriate analysis results indicate that the contaminant concentrations in the water after disposal and the initial settlement period (estimated at four hours) would not exceed the 95% LOSP DGVs.
- 111. The Proponent has noted that while PFOS exceeded the 95% LOSP DFV, the concentrations were below the *Australian and New Zealand Guidelines for Fresh and Marine Water Quality* (ANZG, 2018) 95% LOSP in moderately disturbed ecosystems and the *PFAS NEMP Version 3.0* (HEPA, 2025) recreational water quality guideline.
- 112. The Department notes EPA concerns regarding the elutriate testing, the use of different guidelines, and exceedances of guideline values. The EPA ultimately noted that there is a residual risk, but provided recommended mitigation measures that the Department has incorporated into recommended conditions of approval.
- 113. The Department considers that the Proponent has undertaken appropriate investigations of the potential for contaminants to become disturbed and mobilised due to dredging. The Department recognises that there is a potential risk associated with bioavailability of contaminants; however, the recommended mitigation measures would reduce these risks.
- 114. The Department notes that sediments are already disturbed during current port operations, such as when tugs are assisting ships to enter and depart berths, or during regular maintenance dredging. The project would be unable to proceed without disturbing and mobilising any sediment (and potential contaminants) at all.

6.3 Aquatic ecology - including wandering and diving birds

- 115. There would be direct impacts from loss of habitat (removal of existing infrastructure and dredging) to species because of the project. While recolonisation may occur, the recolonising species

composition and return cannot be predicted. These impacts would occur within the working port area, and the proposed mitigation measures are considered by the Department to be acceptable.

116. Indirect impacts to marine ecology caused by changes in water quality during construction are unlikely to have a significant impact and can be managed. There would be minimal operational-stage impacts associated with water quality changes, and residual impacts would be offset. There would be underwater noise impacts to the marine environment from the project, although impacts to marine species can be mitigated via management measures such as soft start procedures and works shut down zones. There would be minor increased risks to the marine environment from vessel strike and lighting, however this would be minor and temporary in nature.

Issue

117. The Proponent’s study area represents an area of more than 13 square kilometres within Botany Bay, and was informed by the modelled Total Suspended Solids (TSS) zone of influence. The study area includes Port Botany directly adjacent to Bare Island, and partially within, and adjacent to, Yarra Bay and Frenchmans Bay (**Figure 12**).

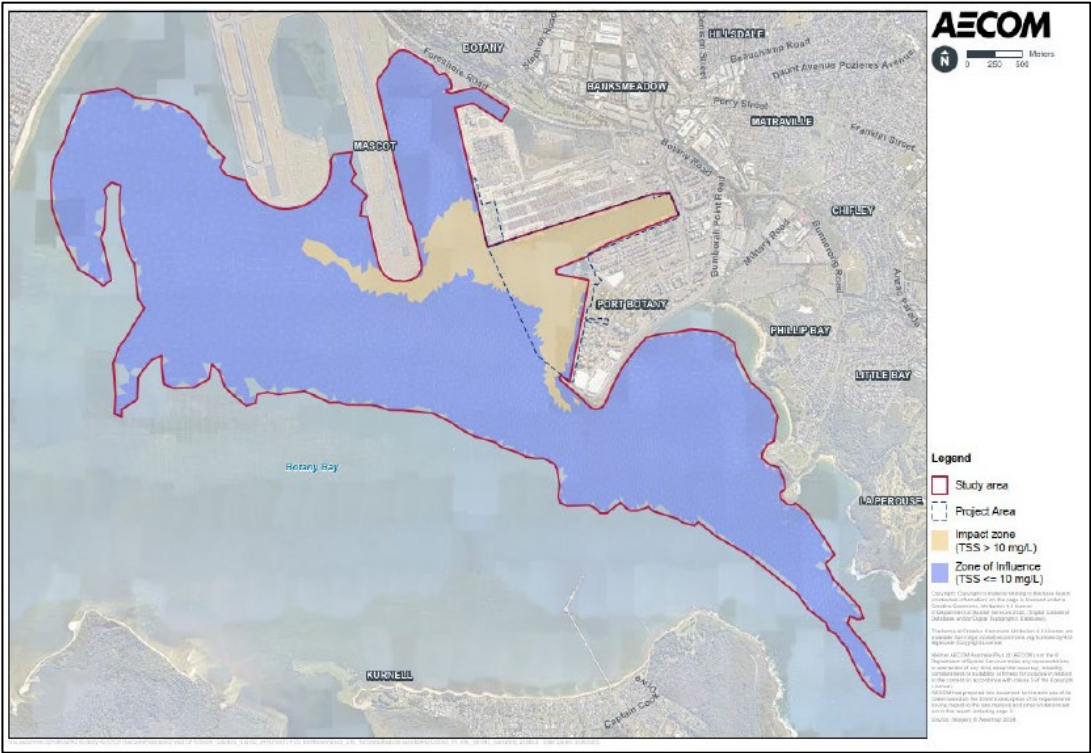


Figure 12 | Marine ecology study and project area (Source EIS)

118. The Proponent identifies that there are three areas recognised as formal areas of marine conservation significance that are within five kilometres of the project: Towra Point Nature Reserve, Towra Point Aquatic Reserve, and Cape Banks Aquatic Reserve (**Figure 13**).

119. The Penrhyn Estuary located to the north of the project while not a listed conservation area, is recognised for its saltmarsh (an endangered ecological community), mangroves, and intertidal mud flats, which are used by migratory shorebirds.
120. The Proponent has identified that there are no critical habitats under the *Fisheries Management Act 1994* (FM Act) or areas of outstanding biodiversity value under the *Biodiversity Conservation Act 2016* (BC Act) present within the project study area.

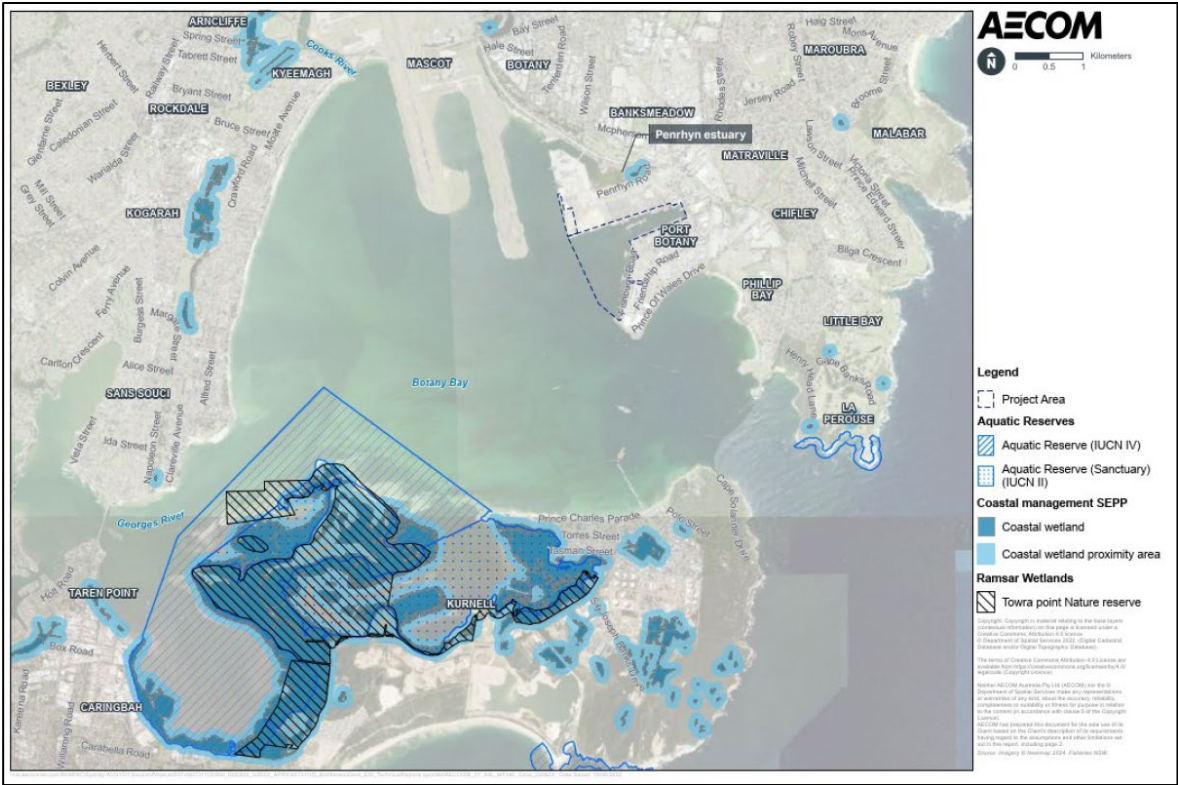


Figure 13 | Areas of conservation significance within Botany Bay (Source: EIS)

121. The Proponent assessed the marine habitats in the study area and notes that two species of seagrasses, *Zostera muelleri* subsp. *capricorni* and *Halophila ovalis*, are known to occur near the project study area. The only known location of seagrass communities within the study area is at Frenchmans Beach, where low density mixed communities of *Zostera* and *Halophila* occur. *Zostera* and *Halophila* have also been observed at Foreshore Beach and Brighton Le-Sands Beach in fragmented patches (Type 1 Key Fish Habitat (KFH)), though these locations are not within the study area.
122. The Proponent reports that *Posidonia australis* has not been recorded within the study area, with the closest occurrence known to be four highly fragmented mono-specific patches approximately 15 metres outside the eastern extent of the study area. The various marine habitats identified in the study area are summarised in Table 12.

Table 9 | Marine habitats in the study and project area (Source EIS)

Marine habitat	Area coverage in study area	Percentage of total study area	Area coverage in project area	Habitat unit
Seagrass patch greater than 5m ²	20.59 ha	1.52%	0 ha	Type 1 Key Fish Habitat (high sensitivity)
Seagrass patch smaller than 5m ²	0.00015 ha	0.00001%	0 ha	Type 2 Key Fish Habitat (moderate sensitivity)
Rocky reef with macroalgae	12.74 ha	0.94%	0.54 ha	Type 1 Key Fish Habitat (high sensitivity)
Unconsolidated soft sediment	1,265.99 ha	93.5%	95.75	Type 3 Key Fish Habitat (minimal sensitivity)
Unconsolidated soft sediment with macroalgae	43.10 ha	3.18%	0	N/A
Artificial reef with macroalgae	0.38 ha	0.02%	0	Type 2 Key Fish Habitat (moderate sensitivity)
Total KFH	1342.8 ha	99.16%	96.29 ha	

123. A range of species, populations or ecological communities listed as threatened, migratory or protected under the BC Act, FM Act) and *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) have been identified as potentially occurring within the study area.
124. Of the 185 identified entities, the Proponent identified 48 species that are listed as threatened (vulnerable, endangered, or critically endangered) and have been assessed as having moderate or high likelihood of occurrence within the study area. The species below have a high likelihood of occurrence within the study area (along with the species protected status and the Proponent’s classification of likelihood):
 - Eastern osprey (*Pandion cristatus*) (BC Act: vulnerable, protected) (High, known)
 - White’s seahorse (*Hippocampus whitei*) (FM Act: endangered; EPBC Act: endangered, marine) (High)
 - White shark (*Carcharodon carcharias*) (FM Act: vulnerable; EPBC Act: vulnerable, migratory) (High)

- Cauliflower soft coral (*Dendronephthya australis*) (FM Act: endangered; EPBC Act: endangered) (High)
- New Zealand fur-seal (*Arctocephalus forsteri*) (BC Act: vulnerable, protected; EPBC Act: marine) (High, known)
- Australian fur-seal (*Arctocephalus pusillus*) (BC Act: vulnerable, protected; EPBC Act: marine) (High, known)
- Loggerhead turtle (*Caretta caretta*) (BC Act: endangered, protected; EPBC Act: endangered, migratory, marine) (High)
- Green turtle (*Chelonia mydas*) (BC Act: vulnerable, protected; EPBC Act: vulnerable, migratory, marine) (High).

125. An additional 15 species of birds are listed with a high likelihood of occurrence in the project area but are not included in the above list. These include Sharp-tailed sandpiper (*Calidris acuminata*), Pied oystercatcher (*Haematopus longirostris*), White-bellied sea-eagle (*Haliaeetus leucogaster*), and Eastern curlew (*Numenius madagascariensis*).
126. An Eastern Osprey (*Pandion christatus*) was observed within the project area and the White-fronted chat (*Epthianura albifrons*), while not identified in the project area, are known to occur at Towra Point Nature Reserve and may overfly the project area.
127. Marine pests are known to be transported via vessels and can present as threats to the existing marine ecology. A European fan worm (*Sabella spallanzanii*) was recorded in the project area on a pile during ecological surveys for the project.
128. The Proponent has undertaken an underwater noise assessment that indicates that the predominate noise source within Botany Bay would be the existing port operations, with ships able to generate up to 190 dB re 1 μ Pa. In the deeper shipping channels, this may be attenuated to 150 dB re 1 μ Pa.
129. Fauna considered in the underwater noise assessment included (but was not limited to):
- Cetaceans (Humpback and Southern right whales, Dusky and Indo-pacific bottlenose dolphins)
 - Otariid pinnipeds (Australian and New Zealand fur-seals)
 - Fish (*Sygnathiformes* (pipefish, seahorses, pipehorses, seadragons), Blue warehou and Black rockcod)
 - Sharks and rays (White shark, Grey nurse shark, and Reef manta ray)
 - Turtles (Loggerhead, Green and Leatherback)
 - Yellow-bellied sea snake

- Birds (Wandering and diving birds), and
- Cauliflower soft coral.

130. While the construction process would generate underwater noise, the largest contributors to underwater noise would be generated by impact and vibratory piling and dredging.
131. The Proponent has proposed a series of mitigation measures that include marine noise management measures and turbidity threshold triggers to reduce the impacts of construction to the marine environment.

Consideration

There would be direct impacts from loss of habitat (removal of existing infrastructure and dredging) to species because of the project. These impacts would occur in the working port area and, with the proposed mitigation measures, are considered by the Department to be acceptable

132. The Proponent notes that direct loss of marine habitat would be associated with the removal of piles, seawall, and subtidal hard strata which provide habitat for sessile epibenthic species assemblages (anemones, oysters, or ascidians (sea squirts) etc), macroalgal species (including oysters, cunjevoi, barnacles), and algae.
133. Approximately six hectares of unconsolidated and unvegetated classed as Type 3 Key Fish Habitat (KFH) (minimally sensitive key fish habitat) would be lost within the reclamation area and require offsetting. There would also be 0.1225 hectares of lost habitat associated with piling.
134. Dredging would result in the loss of approximately 600,000m³ of predominately sandy sediments which would result in the physical loss of benthic habitat, causing direct mortality of infaunal and epifaunal species associated with the sediments being removed.
135. The Proponent notes that re-colonisation of benthic species assemblages can range from relatively fast (within months of dredging ceasing), to longer durations, or it may not occur. Re-colonisation may alter the species composition, with consequent affects such as changed benthic species predator behaviours or compositions.
136. While the loss of habitat on piles and seawalls would be temporary, recolonisation of the new bund and new piles would occur, and provide new habitats for species such as macroalgae, barnacles and molluscs.
137. The Department notes that seahorse species have been identified as potentially occurring within the project area and may be located on piles and seawalls that will be removed. The Proponent has committed to undertaking a pre-demolition survey and relocation of seahorses if they are identified. The Department has recommended a condition of approval that requires a Marine Ecology

Management Plan to be prepared in consultation with DPIRD Fisheries prior to demolition or construction commencing.

138. DPIRD Fisheries provided comments to the Department that their requirements had been addressed, although noted that it was their view that the assessment should have addressed the development within Botany Bay from its original pre-development state.
139. Direct impacts to fish species within water with increased turbidity include increased oxygen demand, stress response, disease and eye infection, and gill damage. This could result in inhibited predator and prey detection, potential avoidance of the area, or increased mortality. However, it is expected that more mobile species (fish) would relocate away from direct impacts during the construction of the project.
140. Mobile species recolonisation is likely to be related to the recolonisation of their prey species to the project area and therefore may take some time. Transient use of the project area by mobile species may occur prior to recolonisation.
141. Once construction has ceased, there would be no operational direct impacts from the project, as the existing port operations would continue in new locations and with new areas of habitat (such as seawalls and piles).
142. The Department notes that direct impacts of the project are unavoidable and cause mortality for less mobile species of benthic fauna and some fish. These impacts occur within the working port area and are considered by the Department to be acceptable, because while there would be removal of some species habitats, the project would also create new areas of habitat that may be recolonised. The Department accepts that the specific assemblages of the re-colonising species is unknown and may be different from present assemblages.

Indirect impacts to marine ecology caused by changes in water quality during construction are unlikely to have a significant impact and can be managed. There would be minimal operational impacts associated with water quality changes and residual impacts would be offset

143. The project would create changes in water quality, with the key change being significantly increased turbidity and sedimentation rates within Brotherson Dock, and, to a lesser extent, within Botany Bay.
144. Indirect impacts to species such as benthic fauna and invertebrates could include smothering from dredge spill (as dredge spill settles from the water column), inhibited predation and feeding abilities of invertebrates, and reduced photosynthesis of marine flora species. Ultimately, these impacts could increase mortality for species which are less adapted to higher turbidity and sedimentation, or have their habitats destroyed by either smothering or removal by dredging.
145. Of species with higher mobility, larvae and juveniles may be more susceptible to higher sedimentation loads and from impacts such as clogged gill structures. Inhibited predator and prey detection could impact on a species continued residences and use of an area. Species with lower

tolerances for increased turbidity and sedimentation may have increased mortality rates during the demolition and construction phases.

146. Seagrasses may be impacted by reduced light levels due to turbidity, with *Zostera* species at Foreshore Beach (Type 1 and 2 Key Fish Habitat) potentially impacted at levels that may impede growth. However, impacts to seagrasses at Frenchman's Beach and Brighton-Le-Sands would be unlikely as these locations would experience lower levels of turbidity, with consequent less of a reduction of light penetration through the water column.
147. The critical light threshold for *Zostera* species is approximately 30% of surface irradiance, while for *Halophila ovalis*, the threshold is 16%. *Zostera* is more susceptible to increased turbidity than *Halophila ovalis*.
148. There are some *Halophila* beds located along Frenchmans Beach, however given the low levels of turbidity expected in this location, reductions in light availability would be unlikely to result in detrimental effects on *Halophila*.
149. The endangered cauliflower soft coral (*Dendronephthya australis*) may occur on soft sediments within the study area and may be susceptible to increased turbidity and sedimentation as it is a suspension feeder (a species that eats food floating in the water). The likely locations for this species are Molineux Point, Bare Island and La Perouse Point, regarded as high flow environments. The turbidity loads in these areas are considered likely to have an insignificant impact on the species, as the high flow will assist in mitigating the turbidity levels.
150. The Proponent has identified that seabirds and marine megafauna (dolphins, large fish species such as rays, and whales) are likely to be deterred from using an area of significantly increased sedimentation such as within a visible sediment plume, and not anticipated to be affected by increased turbidity.
151. Fur seals are known to be in the area at Molineux Point and may be impacted by reduced visibility associated with increased turbidity near the project area. However, given their generally large foraging range, including away from the project area, they are not expected to be significantly impacted in the long term.
152. Whales and dolphins may transit through the area impacted by increased turbidity. It is expected they would avoid the area if the water column was too highly turbid. Significant impacts are not expected to these species.
153. Once the construction has ceased (particularly the dredging and reclamation processes), the increased turbidity and sedimentation rates within Brotherson Dock, and more broadly Botany Bay, would be expected to decline over time and return to a similar situation to prior to the project commencing. It is likely that mobile species will recolonise areas that were vacated or are newly built.

154. The Department considers there would be indirect impacts to the marine ecology associated with water quality changes. However the Proponent is proposing management measures to restrict turbidity to not exceed 50mg/L at the entrance to Brotherson Dock. This involves setting a more conservative management trigger levels so that alterations to the construction processes (primarily dredging) can be undertaken to ensure that the 50 mg/L limit is not exceeded.
155. Transport for NSW (TfNSW) raised concerns about potential turbidity impacts on seagrass and seahorses and mitigation measures in the Marine Biodiversity Offset Strategy for the Kamay Ferry Wharf project. The Department has recommended that the Proponent consult TfNSW in the preparation of the Dredging and Reclamation Sub-plan.
156. The Proponent has committed to prepare a marine habitat offset strategy to offset direct impacts to key fish habitats. The Department has recommended the Proponent consult DPIRD Fisheries in the preparation of the marine offsets.

There would be underwater noise impacts to the marine environment from the project, although impacts to marine species can be mitigated via management measures such as soft start procedures and works shut down zones

157. There would be impacts from noise generated by the project in the marine environment, with the Proponent using modelling of a conservative assumption of up to 1,000 pile strikes by a pile driver within a 24-hour period.
158. The Proponent assessed a range of marine animal species and how they may be impacted by noise, including marine mammals (whales, dolphins seals and fur seals), boney fish, cartilaginous fish (sharks and rays), and marine reptiles (sea snakes and sea turtles).
159. In assessing possible impacts, the Proponent considered different characteristics of species, (e.g. if the species is susceptible to higher or lower frequencies, or if they use a swim bladder for hearing). They set a noise impact criteria for different species or set anticipated zones (distances from sources) where species may be impacted.
160. Impacts to marine species could include behavioural responses, temporary threshold shift (TTS) (a temporary reduction in hearing due to exposure to increased noise) or auditory injury (damage to auditory structures or other tissues that could lead to injury or mortality).
161. For example, cetaceans susceptible to low frequency sound may experience auditory injury if within approximately 1,000 metres of piling for the full duration of 1,000 pile strikes over 24 hours. The same species may exhibit behavioural changes if located within approximately 2,200 metres of dredging.
162. Alternatively, a fish species (where the swim bladder is involved in hearing) may experience mortality or injury within 106 metres. The same fish species located approximately 925 metres from the same construction scenario may experience a TTS.

- 163. The Proponent proposed management measures that include marine mammal management zones ranging from an observation zone (by a trained marine mammal observer) to a stop work zone, as well as pre-start and soft start procedures to minimise impacts.
- 164. The modelling results indicate that vibratory piling would have the most intense impacts and the marine mammal management zones for vibratory piling are shown in **Table 13**.

Table 10 | Marine management zones (Source: EIS)

Marine Mammal Group	Zone 1 – Shut-down Work (based on AUD INJ SEL from 1,000 strikes (m)	Zone 2 – Restrict Work (based on TTS SEL from 1,000 strikes) (m)	Zone 3 Observation (based on Zone 2 + 250m) (m)
Low Frequency – Whales	100	310	560
High Frequency – Dolphins	50	130	380
Otariid pinnipeds (OW) – Seals	N/A	140	390

- 165. The Department notes there would essentially be no change in the operational underwater noise environment once the project has been constructed, as the operational environment would essentially return to the existing port operational regime and operational underwater noise impacts.
- 166. The Department considers the Proponent has adequately assessed the potential underwater noise impacts of the project, and notes impacts to marine fauna that could include mortality. However, it is considered that impacts that may cause harm to larger marine species such as whales, dolphins and seals are unlikely to be significant, as these species are expected to relocate to foraging areas away from noise sources.
- 167. The Department notes fur seals are known to occur on the southern side of Molinoux Point. It is expected that these individuals are well adapted to a higher noise environment, and would be unlikely to be significantly impacted as they can extend their foraging area further afield to avoid noise impacts.
- 168. The Department considers that the marine environment would experience underwater noise impacts (including, for some species, potentially mortal injuries), and that the impacts have been reasonably assessed. The Proponent is proposing mitigation measures for impacts to marine species, and the impacts are required for the project to be able to proceed. The likely noise impacts are unavoidable, directly related to the project, and the duration of the impacts would be temporary.

There would be minor increased risks to the marine environment from vessel strike and lighting; however, this would be minor and temporary in nature

- 169. There would be a relatively minor increased risk of vessel strikes on marine flora and fauna during the demolition and construction processes from the additional vessels and barges used during the construction processes.
- 170. There would be temporary impacts associated with lighting required during the demolition and construction. This may be directly from night lighting from vessels and barges which has the potential to attract marine species, or from changes to shading of the seabed from vessels and barges during construction.
- 171. In the operational phase, vessel strike and lighting would present a similar risk profile as presented by the current operations as there would not be a significant change from the current operational regime.
- 172. The Department considers that these construction impacts would be minor, temporary and that the risks associated with these components are acceptable.

6.4 Hazards and risk

- 173. The Quantitative Risk Assessment (QRA) for the project was undertaken in accordance with the Department's Hazardous Industry Planning Advisory (HIPAP) guidelines and has demonstrated that the project would not increase the overall risk to people working in the vicinity of the bulk liquid berths. The overall risk of the project to the risk levels in the Port Botany Land Use Safety Study Overview Report (DUAP, 1996) (Land Use Safety Study) is negligible. The risk of an aircraft crash to BLB3 was assessed, with the likelihood of such an incident being considered rare.

Issue

- 174. The project changes the bulk liquid berths at Port Botany by the construction and operation of a new bulk liquids berth (BLB3), demolition of bulk liquids berth 1 (BLB1), and associated changes to pipelines and bulk liquids handling infrastructure (see **Figure 14**) The type and volumes of bulk liquids to be handled is unchanged. Bulk liquids berth 2 (BLB2) will remain operational during the construction of BLB3 and demolition of BLB1.
- 175. Near the bulk liquids berths are port related developments, including container and bulk liquid and gas terminals and petroleum hydrocarbon storage sites (see **Figure 15**). The products transferred at bulk liquid berths include refined fuels, gases and chemicals, which remain unchanged when BLB1 is replaced by BLB3. The products are transferred by pipeline to bulk liquid storage facilities in the Port Botany industrial area.

176. The Proponent has undertaken a Multi-Level Risk Assessment of the construction and operation of BLB3 and associated infrastructure. The risk assessment concluded that the overall risk of the project would be low, and not introduce an excessive additional risk to the surrounding area. The individual risk criterion for industrial use (50×10^{-6}) is limited to the area of BLB3 (red contour in **Figure 16**). The individual risk criteria for open space, business, residential and sensitive land uses are not reached outside of the immediate port industrial area.
177. The Proponent has committed to prepare and implement relevant reports and studies in accordance with the Department's HIPAP guidelines, including a Construction Safety Study, Hazard and Operability Study (HAZOP), Fire Safety Study (FSS) and Safety Management Plan and Emergency Response Plan. A Hazard Audit would be carried out every three years for BLB3, as is current practice for BLB1 and BLB2.



Figure 14 | Bulk liquids berths and pipelines at Port Botany (Source: EIS, Appendix G)



Figure 15 | Land uses at Port Botany (Source: EIS, Appendix G)



Figure 16 | Individual fatality risk from the operation of BLB3 (Source: EIS, Appendix G)

Consideration

The Quantitative Risk Assessment was undertaken in accordance with HIPAP guidelines and demonstrated the project would not increase the overall risk to people working near bulk liquid berths

178. A Quantitative Risk Assessment (QRA) undertaken for the EIS to verify the risk from the project, found the project did not increase the overall risk to neighbouring aboveground or underground bulk storage facilities. The QRA demonstrated compliance with relevant land use safety risk criteria,

and that the project would comply with relevant recommendations as set out in the Port Botany Land Use Safety Study.

179. The Department notes the QRA was prepared in accordance with HIPAP No 6 -Hazard Analysis. The Department reviewed the critical technical assumptions for the QRA, including the transfer rate of the marine loading arms on BLB3 and the assumptions for the storage of dangerous goods in the new quayline and hard stand area (such as types of dangerous goods to be stored and whether the associated quantities were conservatively assessed). Overall, the assumptions adopted for the QRA were appropriate. Although the operation of the extended quayline does not form part of the project, for completeness the QRA assessed the risks of the operation of BLB3 and storage of dangerous goods in the future container terminal on individual risk criteria, in accordance with HIPAP No 6 - Hazard Analysis.
180. The QRA demonstrated that the individual fatality risk contour for industrial uses for BLB3 remains within the wharf area and does not impact the adjacent bulk liquid storage terminals (risk contours in **Figure 16**). The QRA assumed a conservative assessment approach and assessed risks based on BLB3 transferring dangerous goods for 100% of the time. However, based on the records of the past two years, BLB1 was used 40% of the time. The Proponent has stated that BLB3 would operate in a similar way to the existing BLB1. The QRA assessed the maximum operation of BLB3; however, based on the past operation of BLB1, the new BLB3 is expected to operate less than half the time of the QRA's maximum use assumption, further reducing the risks to workers in the immediate area.
181. The societal risk assessment considered society's aversion to accidents which can cause multiple fatalities. The assessment for the project evaluated whether any major incidents would severely injure the population surrounding the project beyond the unacceptable/intolerable limit. The assessment assumed a worker population of 15 people/ha for the area surrounding the project. The risk assessment concluded that the societal risk associated with the project is very low and within the acceptable limit as per the HIPAP risk criteria.
182. The QRA assessed the propagation risk of the project, cumulative impact from an incident on BLB3 spreading to BLB2, and vice versa. The assessment confirmed the project satisfied the relevant risk criteria for an industrial land use, and BLB3 is appropriately separated from BLB2.
183. The Department has recommended conditions of approval including a Fire Safety Study (FSS), Hazard and Operability Study (HAZOP), and Final Hazard Analysis (FHA), to ensure the appropriate design and safeguards are considered and implemented during the final design of BLB3.
184. A Construction Safety Study (CSS) and Emergency Plan (EP) are also recommended to ensure the risks from interfacing activities between the operating BLB2 and BLB1 and construction of BLB3 are appropriately mitigated. In addition, a periodic hazard audit is also recommended for BLB3, to ensure the ongoing operations and the associated risk management remain satisfactory.

Overall risk of the project to the risk levels in the Port Botany Land Use Safety Study is negligible

185. The Port Botany Land Use Safety Study (the Study) was undertaken by the Department in 1996. The Study assessed the risks associated with the future development of Port Botany, some of which have been implemented and some of which are still just proposed.
186. The risk results presented in the Study continue to represent the worst-case scenario as land uses in Port Botany are primarily focused on container terminal activities with associated dangerous goods storage facilities.
187. Higher-risk land uses — such as manufacturing plants that typically contribute to a greater overall risk profile — have not developed at Port Botany. As a result, the Study's assumptions about maximum credible risks remains applicable and as the project demonstrates it would not increase the overall risk identified in the Study, its impact to the land beyond the boundary of Port Botany would be negligible.
188. The QRA addressed the recommendations of the Study and concluded that the project did not have a significant effect on the cumulative risk of Port Botany. The Department agrees with this conclusion, as the location of the proposal is close to the wharf line and further from the industrial land uses in Port Botany. In addition, the extent of consequences from various dangerous goods releases are unlikely to spread offsite; BLB3 would have effective controls such as dry-break coupling and automatic transfer shutdown to limit the release of inventory during transfer operations.

The risk of an aircraft crash to BLB3 was assessed in the QRA and considered an external hazard. The likelihood of such an incident is rare, and the project is outside the Public Safety Area of the Sydney Kingsford Smith Airport

189. A community submission raised concern about the increased risk of an aircraft crash to the proposed BLB3, as it is closer to the end of the Third Runway at Sydney Kingsford Smith Airport (the airport). BLB3 is located approximately 1260 metres southeast of the Third Runway, approx. 200 metres closer than BLB1 (1460 metres). The QRA considered an aircraft crash at BLB3, or a docked vessel shipping fuel, or the pipelines connecting to bulk liquids terminals would be extremely rare, of the order of one in billions of years. Due to the extremely low likelihood of these occurrences, aircraft crash scenarios were screened out for further assessment.
190. The Department agrees with the assumptions adopted for the risk assessment, particularly the screening out of extremely rare occurrences. It is acknowledged that such an incident would be catastrophic as the infrastructure and pipelines are not designed to withstand such force from an aircraft crash; however, such a scenario is unlikely.
191. The project has been assessed under Guideline I of the *National Airport Safeguarding Framework* (NASF) (Department of Infrastructure, Transport, Regional Development, Communications, Sport

and the Arts, 2018). Guideline I provides guidance on development near the end of an airport runway, where there are potential increases in risk to public safety from an aircraft accident. Public Safety Areas (PSA) are areas of land at the end of a runway where development can be restricted to manage the number of people on the ground at risk of injury or death in the event of an aircraft accident during take-off or landing.

192. The project is outside the PSA of the third runway.

6.5 Other issues

193. The Department's consideration of other issues is summarised in **Table 12**.

Table 11 | Assessment of other issues

Issue	Findings and conclusions	Recommended conditions
Terrestrial noise and vibration	- The existing acoustic environment in the project area is ship operations, container handling cranes and other heavy machinery, truck and freight rail movements, and general industrial operations. - The nearest sensitive receivers are in Botany to the north, Matraville to the east, and La Perouse and Little Bay to the south-east. Construction - Construction activities would be carried out during standard construction hours (Monday to Friday 8.00am to 6.00pm and Saturdays 8.00am to 1.00pm and no work on Sundays and Public Holidays). - The Proponent proposes to undertake dredging operations (operation of the Trailing Suction Hopper Dredge, unloading of dredged material via booster pump into the reclamation area, and operation of ancillary vessels) 24 hours a day, seven days a week. During the night period of 10.00pm to 7.00am, the only construction activities are the operation of the dredge and booster pump. Other activities, such as large concrete pours, delivery of wide loads, and pipeline testing, may occasionally be required outside standard construction hours. - The noise assessment predicted the only construction noise that would be heard at nearby residences during standard construction hours would be from the decommissioning and removal of BLB1 and construction of the new BLB3. These activities would be heard at residences in Phillip Bay to the east, where exceedances of the Noise Management Level (NML) (the level which represents the point above which there may be some community reaction to noise) by 1-10 dB are predicted. There are no highly noise affected residences (noise levels above 75 dB) during standard construction hours. - The noise assessment assessed construction activities outside the standard construction hours, periods between 6.00pm to 10.00pm Monday to Friday, 1.00pm to 10.00pm on Saturdays and 7.00am to 10.00pm on Sundays, collectively called “daytime out of hours” work. Most construction during these periods would be	- Prepare and implement a construction noise sub-plan to manage construction noise impacts. - Construction hours restricted to Monday to Friday 8.00am to 6.00pm and 8.00am to 1.00pm Saturday. - Permit dredging to be carried out 24 hours per day and seven days per week. - Preparation of an Out of Hours work Protocol for works outside standard hours. - Monitoring of construction vibration levels.

“noticeable” at residences in the suburbs to the north and east of the project site (see Figure 17). Noise levels would be 1-5 dB above the NML (which could be barely perceptible to audible). However, noise levels which are “clearly audible” (5-10 dB above NML) could be experienced at residences in Philip Bay during decommissioning and removal of BLB1 and construction of BLB3.

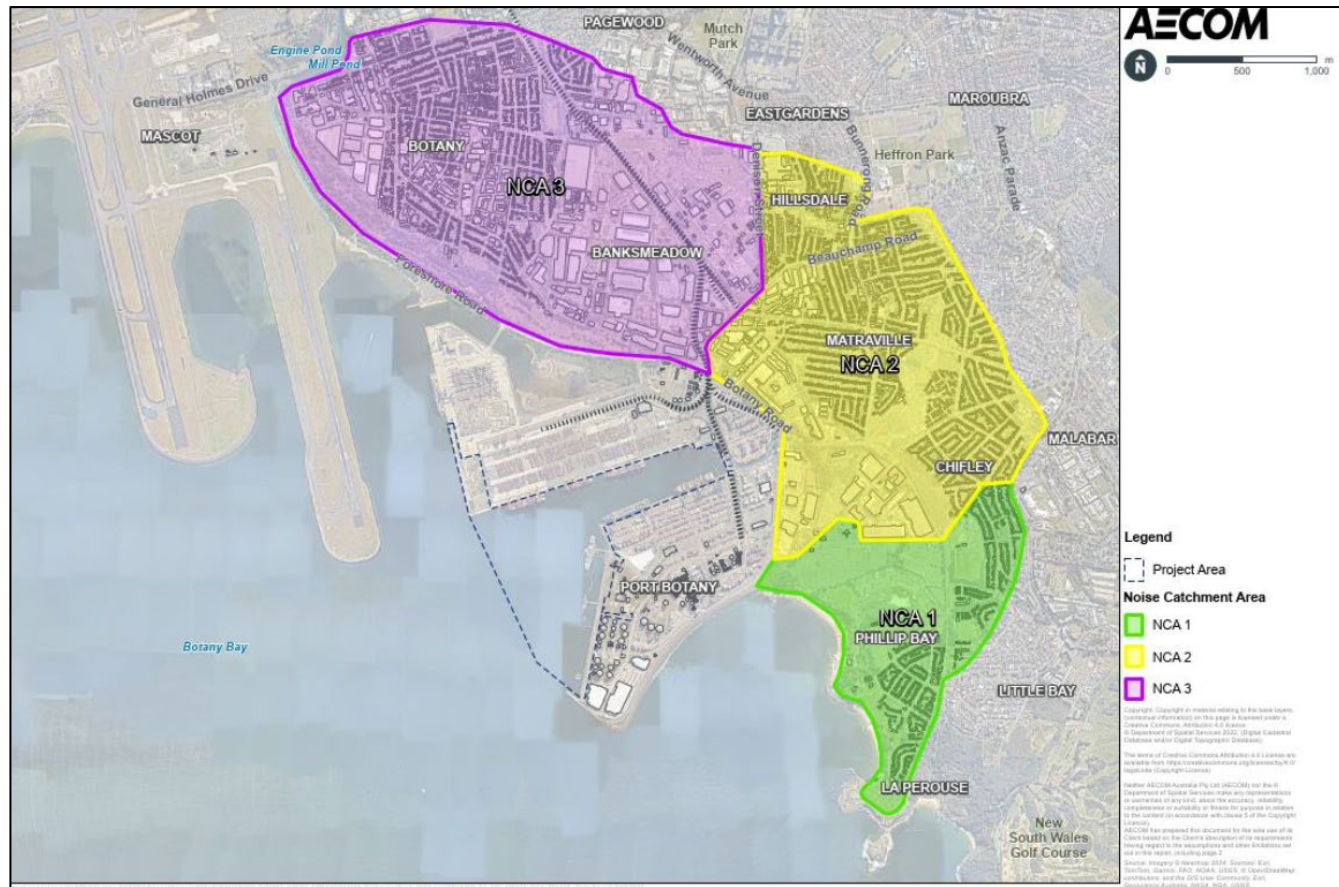


Figure 17 | Noise catchment areas (Source: EIS Appendix K)

Issue	Findings and conclusions	Recommended conditions
	- Dredging is the only activity that would take place during the night-time period (10.00pm to 7.00am 7 days/week). Noise levels at four residences in Matraville are predicted to exceed the nighttime NML by 0-5 dB. Sleep disturbance from dredging operations during the night-time period was assessed and predicted that no residential receivers are expected to exceed the sleep disturbance screening criteria. - The Proponent has committed to implement a Construction Noise and Vibration Management Plan to address potential noise impacts on workers near the site and nearby sensitive receivers. The Department notes construction noise would be temporary and during standard construction hours would be similar to the existing port acoustic environment. The noise assessment predicted that no sensitive receivers would be highly noise affected (greater than 75 dB(A)) and that noise disturbance criteria would not be exceeded. Vibration - The assessment identified three sources of construction vibration, these being: ➤ vibratory compaction during ground compaction of newly reclaimed land ➤ hydraulic hammers from demolition of BLB1 and the tugboat jetty ➤ vibratory or percussive piling from construction of BLB3 and the new wharf hardstand. - The vibration assessment predicted that the 20 mm/sec structural damage criteria would not be exceeded at any commercial and industrial building from the above construction scenarios. - The Elgas liquified petroleum gas storage facility (Elgas Cavern) is located to the south of BLB1 (proposed reclamation and hardstand area). The closest vibration inducing activity to the footprint of the Elgas Caven would be from vibratory rolling associated with land reclamation, which at the surface is 94 m from the 130 m deep cavern (resulting in a slant distance of approximately 165 m).	

Issue	Findings and conclusions	Recommended conditions
	- The peak particle velocity (PPV) of 1 mm/sec adopted for the Elgas Cavern has an exceedance distance of 120 m for vibratory rolling and 275 m for percussion piling. The vibration assessment predicted these limits would not be exceeded during construction of the project. - The Department is satisfied an appropriate assessment of potential construction vibration impacts has been undertaken and notes the Proponent's commitment to validate modelling assumptions through monitoring to inform construction methodology and type of equipment. Operation - Operational noise generated by the project would be the operation of BLB3 and associated pipeline infrastructure, similar to the existing operation of BLB1. - The new BLB3 would be located approximately 750 m to the southwest of BLB1, which increases the distance to sensitive receivers to the north and east of BLB1. The assessment predicted noise impacts to residences in Phillip Bay and La Perouse would increase by 0.5 dB, due to a reduction in the separation distances of BLB3 compared to BLB1. However, the assessment noted the operation of BLB3 would be similar to BLB1, and that the predicted increase in noise would be imperceptible due to the existing noise environment of Port Botany. - The Department notes operational noise impacts would be similar to the existing operation. Future use of the extended quayline and reclaimed land would be subject to separate assessment, but would have a similar noise profile to the existing port operations.	
Coastal processes and hydrology	- The Proponent undertook modelling ("weak" and "moderate" wind and tide scenarios) to assesses potential hydrodynamics and coastal process impacts due to the construction of the project. - The dredging would cause changes to the seabed of Brotherson Dock, increasing its depth by up to 4.5 metres. BLB3 would not require any dredging or result in significant seabed changes.	No conditions recommended.

Issue	Findings and conclusions	Recommended conditions
	- Wave energy within Brotherson Dock could decrease by up to 50%, due to the reclamation area providing increased sheltering from the wind. - Modelling suggests that the southern side of Botany Bay could experience a decrease in wave energy of 0.1% at Towra Point and 0.2% at Silver Beach. The Department considers these small changes likely to occur at these locations, and it is unlikely to significantly change erosion or deposition at these locations. - Within Brotherson Dock, the potential decrease in wave energy is unlikely to result in significant changes to the environment, as these would occur within a working port with hard wharf and seawall structures, not natural shorelines that may be affected by changes in wave energy. - The modelling assessed that there would be changes to the flushing rates of Brotherson Dock, with the “weak” scenario indicating a water residence time decrease of 0.7 days (inner Brotherson Dock) and 2.7 days (outer Brotherson Dock). The “moderate” model indicates residence times in outer Brotherson Dock would remain at 1.2 days, while inner Brotherson Dock residence time would increase by about one day to 1.7 days. The water residence time of Penrhyn Estuary would remain the same as the current conditions under all modelled scenarios. - The modelling indicated that there not be material impacts to the coastal processes and hydrodynamics caused by the project, with estimates of changed water levels of 0.1 millimetres and changes to currents of less than 0.1 millimetres per second. Additionally, modelling suggests a minor reduction of 0.06% of the annual volumetric exchange (total exchange estimated at 89.2 km³ through the mouth of the bay) of tidal water compared to the existing conditions. - The Department acknowledges Bayside Council requested any excess dredge spoilt to be used for beach restoration works; however, notes the Proponent’s response that there would not be any excess dredged spoil.	

Issue	Findings and conclusions	Recommended conditions
	The Department is satisfied that the Proponent's modelling is sufficient for assessment purposes, and there would not be significant impacts to the coastal processes or hydrology because of this project.	
Traffic and transport	- The project has access to major roads which service Port Botany (Foreshore Road and Botany Road) and which provide direct access to the regional road network (General Holmes Drive) and Sydney's Orbital Network (M1 Pacific Motorway, M5 East, M8 and Sydney Gateway). - Many of the roads around Port Botany are designated heavy vehicle routes which can accommodate large vehicles, and are used to move road freight. Direct site access would mainly be from working port roads, including Penrhyn Road, Simblist Road, Friendship Road, and Bumborah Point Road. - Both Council's commented on traffic impacts from the development (future container terminal expansion), in particular that any increase in operational traffic to be subject to community consultation (Bayside Council) and infrastructure capacity, modal shift to rail, and protection of residential amenity (Randwick City Council). - The traffic assessment included Signalised and Unsignalised Intersection Design and Research Aid (SIDRA) intersection modelling which indicated that, with one exception, the major intersections surrounding the Project are currently operating at Levels of Service (LoS) A or B, with average delays that range from 4 to 27 seconds. The exception is the Foreshore Drive/Botany Road intersection that operates at LoS "D" in the morning peak and "C" in the afternoon peak. This represents a delay of 49 and 42 seconds respectively. - Peak traffic movements are expected during the site establishment phase, when the daily peak vehicle numbers are expected to be up to 753 heavy and 548 light vehicles, for a total site establishment phase estimate of 35,484 heavy and 30,264 light vehicle movements. - The addition of these construction vehicles into the SIDRA intersection modelling identified that the assessed intersections would continue to operate at the existing LoS with a very minor increase of up three	- Prepare and implement a construction traffic sub-plan to manage construction traffic impacts. - Manage construction vehicle parking and queuing on public roads.

Issue	Findings and conclusions	Recommended conditions
	seconds. In two instances, the Proponent’s modelling indicates that the average delay may decrease by seven seconds (Foreshore Road/General Holmes Drive) and one second (Foreshore Road/Ulm Avenue). • The SIDRA modelling indicates a very minor increase in vehicle queuing lengths during construction, with largest increase estimated at 31 metres (approximately 2 truck lengths) with most increases no more than approximately five metres. • The Project would provide construction worker parking within construction compounds or along internal port access roads. There would be no impacts to parking on nearby public roads. • The operation of the project does not increase demand for the movement of goods through Port Botany. BLB3 is a direct replacement for BLB1, with a similar quantity and type of products being received. The bulk liquids are moved through pipelines to existing bulk liquids storage facilities within Port Botany. The distribution of bulk liquids by road, and the traffic generated by the operation of an expanded container terminal from these storage terminals, would be subject to separate planning assessment and approval. There would be no change in external road traffic which could be directly attributed to the operation of the project. The only change would be in roads used by vehicles accessing the relocated bulk liquids berth office; however, these are internal port access roads. • The Proponent has identified that the project would not generate additional landside transport requirements (including road traffic movements). However, the project may redistribute transport movements due to increased competition between the Port Botany stevedores. Ultimately, the Proponent has identified that the project would not change existing operational road traffic volumes to or from Port Botany, which the Department considers to be a reasonable assumption. • The Proponent has committed to preparing a Traffic Management Plan which would outline the access routes for construction vehicles, which has been reinforced as a recommended condition.	

Issue	Findings and conclusions	Recommended conditions
	• The Department considers that there would be minor impacts to vehicle movements in the area around Port Botany and that the roads and intersections have sufficient capacity to absorb the impacts. • The increase in small and large workboats associated with the construction of the project would not impact on the public as they would be contained within the operational area of the port, restricted from public recreational access. • Changes in operational ship movements will be driven by operational demands, and managed through the existing operational controls via the Port Authority of NSW (Port Authority)'s Harbour Master's Directions. There would be a minor change in the location of ships berthed at the new BLB3 and the extended quayline. • The Port Authority requested a Marine Traffic Management plan be prepared for changes to marine vessels associated with construction of the project. The Proponent has committed to prepare a Marine Traffic Management Plan, in consultation with the Harbour Master, for maritime construction vessels. • The Department does not consider that vessel and ship movement changes associated with construction or operation of the project are significant and considers that they can be appropriately managed.	
Soils	• The project area is predominately located on or over marine sediments, with a limited area of the project being located on reclaimed land. • The reclaimed land is not considered to present a significant issue. Standard construction management measures i.e. the Managing Urban Stormwater – Soils and Construction (Volume 1 & 2A) (Landcom 2004, 2009) (the “Blue Book”) would be used to control impacts such as erosion and sedimentation into Botany Bay. • The marine sediments range from coarse sand to fine silts, typically with finest sediments located in the deepest sections of the study area away from the shoreline. Acid Sulphate Soil (ASS) is considered a high probability of occurrence (>70%), due to the location of the Project in the marine environment.	• Prepare and implement an Acid Sulfate Soils Management Plan to manage potential acid sulfate soils during construction.

Issue	Findings and conclusions	Recommended conditions
	- Potential ASS impacts include the oxidisation and acidification of ASS material once exposed to air during reclamation. This could impact on water quality via the reclamation dewatering, and/or have acidic impacts to construction materials with consequent potential reductions to material lifecycles. - The Proponent is proposing to undertake ASS management measures such as sediment investigations, use of appropriate dredging techniques, and application of neutralising agents to reclamation fill. - The Department is satisfied that the risks associated with this project from potential landside soil issues and marine ASS risks are acceptable and are able to be managed.	
Air quality and odour	- Sensitive receivers near the project include Matraville (780 m east), Chifley (1.13 km east), Botany (1.5 km north), and Phillip Bay (1.7 km southeast), and recreational areas at La Perouse, Phillip Bay, and Henry Head. - The six-year construction project poses medium unmitigated dust soiling risk to human receivers and low health and ecological risks, due to low PM10 levels and low sensitivity of nearby environments. - Dust from vehicles, vessels, and equipment during construction are unlikely to impact local air quality if standard mitigation measures are applied. These include covering dust-generating loads, installing wheel-washing systems and rumble grids at site exits, and using water-assisted sweepers to clean any material tracked onto nearby access roads. - Air emissions from construction plant and equipment will be reduced by using mains electricity or battery-powered equipment instead of fuel-powered generators where possible, turning off vehicles and machinery when not in use, and selecting lower-emission plant and equipment wherever feasible. - Dredging may cause minor, temporary odour from disturbed organic material and contaminants, but with appropriate dredging methods such as trailer suction dredging, and safeguards such as strict water quality monitoring, spill and sediment controls, air quality and odour impacts at the sensitive receivers are not expected.	Management of construction air quality and odour impacts through CEMP.

Issue	Findings and conclusions	Recommended conditions
	- Relocating BLB3 may slightly alter volatile organic compounds (VOC) dispersion, but overall fugitive emissions remain unchanged. The Project enables longer ships, potentially causing increases in peak and average pollutant concentrations, though annual emissions and air quality impacts are expected to remain consistent with current operations under <i>International Convention for the Prevention of Pollution from Ships</i> (known as MARPOL) standards. - The new BLB3 is expected to operate like the existing BLB1, with negligible changes to environmental or community impacts. Fugitive air emissions are unlikely to affect sensitive receivers given the berth's distance from communities. - Based on this assessment, including the assessment of construction and operational emissions, implementation of standard and best-practice mitigation measures, and consideration of sensitive receivers, the Department is satisfied that the project is unlikely to result in significant adverse air quality or odour impacts. - The risks during construction are temporary and manageable, and operational emissions will remain consistent with existing conditions and MARPOL standards. With the commitment to mitigation measures outlined in the CEMP, and ongoing monitoring and management, the Department considers the air quality impacts to be acceptable.	
Heritage (environmental and cultural)	- A Maritime Archaeological Assessment (MAA) was undertaken of the proposed dredging area, proposed quayside extension area and location of the new BLB3. The MAA assessed the maritime archaeological potential of the project area. There are 22 shipwrecks within or on approach to Botany Bay, of which two possible wrecks – the Prompt and the Minnie Wamsley – are within the project area or Botany Bay. - The MMA identified that the location of these vessels is unknown, although the Prompt would be expected outside the project area in the Penrhyn Estuary area. The location of the Minnie Wamsley is unknown, although no physical evidence of either vessel was identified in the MMA investigations.	Carrying out the project in accordance with the MMA and its recommendations.

Issue	Findings and conclusions	Recommended conditions
	- Several seabed features were identified and able to be discounted in the MMA as natural features, with one anomaly (identified as Contact 0001) requiring further investigation. Contact 0001 is located approximately 50 metres north of the proposed quayline extension area. The anomaly was investigated and assessed as highly unlikely to be a shipwreck or other maritime archaeological site, and most likely to be a natural seabed topographic feature. While a definitive identification cannot be made without diving, the MMA identifies a mitigation measure of creating a buffer zone around the anomaly where dredging, quayline construction activities and the use of Jack Up Barges would not occur. - Heritage NSW was satisfied with the MMA's maritime archaeological investigation and findings. - The Proponent has committed to establish a construction exclusion zone around Contact 0001, and no anchoring or mooring of vessels within a 5 metre radius of the site. - The MMA includes a Maritime Archaeological Unexpected Finds Protocol, in the event an unexpected maritime archaeological find is discovered during construction. - The Department has reviewed the information contained within the MMA and considers the investigation is appropriate. The Department considers that Contact 0001 is most likely to be the north-eastern extension of a larger seabed geological feature. - The Department considers that the risk mitigation measures for poteial maritime heritage are appropriate. - The Department notes no Aboriginal Heritage sites were identified in the project area. The highly modified nature of the landscape (i.e. with the Port area being created from reclaimed land) suggests a low risk of uncovering Aboriginal artefacts during the minimal amount of work that would happen on land. Due to the nature of the dredging and reclamation, there would be no opportunity to identify Aboriginal heritage items during the dredging and reclamation process. - The Department is satisfied that there is minimal risk of impacting Aboriginal and environmental heritage items.	

Issue	Findings and conclusions	Recommended conditions
Terrestrial biodiversity	• The EIS included a Biodiversity Development Assessment Report (BDAR), which identified that the project would have very limited terrestrial ecological impacts, due to the project footprint being within either highly disturbed reclaimed land or located in maritime waters. • Direct impacts are confirmed to be approximately 4.35 ha of urban native/exotic regrowth vegetation not considered suitable habitat for threatened flora or fauna species. • No direct impacts on threatened species are anticipated. Surveys confirmed no threatened flora were present and no suitable fauna habitat including hollows, roosts or sensitive microhabitats. Protected shorebirds could potentially fly through the Project area, although it is not anticipated there would be impacts to these species. • An Eastern Osprey nest exists on a light pole at Hayes Dock, approximately 400 metres north. No disturbance of the nest is anticipated due to the distance from the project area. • Potential indirect impacts include noise, vibration, dust deposition, light spill and accidental disturbance of adjacent vegetation. These impacts were assessed as negligible, and able to be managed with standard management measures. • The BDAR was reviewed by NSW DCCEEW's Conservation Programs, Heritage and Regulation (CPHR) Group who advised that the BDAR was appropriate and supported proposed mitigation measures including standard construction measures to reduce residual impacts such as (but not limited to) minimise dust emissions, control runoff, manage weeds, and unexpected fauna occurrences. • The Department has reviewed the ecological assessment, is satisfied that the findings are appropriate, and that the project's impacts on terrestrial biodiversity would be minimal. The impacted vegetation is of low ecological value, and no significant direct or indirect impacts to threatened species or habitats have been identified. The Department is confident that, with the full implementation of the proposed mitigation and management measures, residual risks to terrestrial biodiversity remain low.	• Carrying out the project in accordance with the mitigation measures in the BDAR and the Marine Ecology Report. • Preparation of an unexpected finds procedure.

Issue	Findings and conclusions	Recommended conditions
Climate change	- The Department reviewed the climate risk assessment and confirms that, with the proposed adaptation measures (such as locating plant rooms in higher locations and overdesigning stormwater systems) embedded into design and operation, the project's key climate change risks for 2040 and 2090 (including sea level rise, storm surge, extreme rainfall and heatwaves) are manageable and reduced to acceptable (moderate) levels. - The Department notes two bushfire-related risks remain, given current limitations in practicable design or delivery interventions. These risks reflect the broader regional exposure at Port Botany, rather than a project specific deficiency. On this basis, the Department supports the adaptation approach.	No conditions recommended.
Social impact	- The Social Impact Assessment provided in the EIS assessed potential impacts to each of the subcategories that make up Way of Life, Surroundings and Livelihood. - The assessment concluded that there would be low significance negative impacts to all the "Way of Life" and "Surroundings" subcategories, and the Business impacts-amenity subcategory in "Livelihoods". The assessed impacts to the other "Livelihoods" categories were Low (positive) for Business impacts – expenditure, and Medium (positive) for Economic impacts. - The EIS assessed potential noise and vibration impacts on people in the water, and concluded that people may hear piling if they are within Botany Bay and that the noise levels would increase the closer a person came to the piling. - The assessment shows that there could be behavioural changes from people within the water within approximately 1,750 metres of impulsive piling. The direct path around Molineaux Point from the approximate piling location to the nearest public beach is about 1,980 metres, outside the behavioural response zone. The Department considers it possible that some people may still experience an impact that could result in a behavioural change in this area.	No conditions recommended.

Issue	Findings and conclusions	Recommended conditions
	• If people are in the water, and within 350 metres, they could experience a Temporary Threshold Shift (TTS) which is a temporary change in hearing ability, and injury could occur for people in the water within 138 metres. The Proponent notes there should be no people within these distances as they overlap with the active shipping channels; there should be no people in the water in the operational port areas. • The Proponent is proposing to undertake community notification to advise when piling will be occurring as a management measure to assist the community in being able to plan their activities. • The construction of the project is generally expected to result in only low-level, short-term impacts to the community, with most disruptions well-contained within the existing port environment. Typically, there would be minor amenity impacts to surrounding residential areas, primarily resulting from minor noise impacts. These social impacts are expected to be limited in scale and unlikely to significantly impact residents or businesses. • The Department considers it likely that piling may impact on some people if they are in the water, but notes that this would be a behavioural response to potential discomfort. People at the closest beach to the project would not be in a region where damage to the body is predicted to occur. • The Department considers that the construction impacts are generally considered to be minor and of a temporary nature, and notes that the project may also deliver modest economic benefits through expenditure in the local and broader regional economy. • The operation of the project would only create negligible to low impacts across environmental, social and economic receptors, and not expected to result in significant changes within the surrounding environment. The operation of the project would not directly cause significant change within the environment or the way it is experienced by the community. Any changes would be caused by the increasing demand for shipping through Port Botany.	

Issue	Findings and conclusions	Recommended conditions
Visual amenity	• The Department considers that the construction of the project would result in a noticeable but temporary increase in both terrestrial and marine activity within the Port Botany environment. While this would introduce additional visual elements, such as construction equipment, vessel movements, and occasional night-time lighting, these changes would be largely contained within an already established industrial port landscape. • The visual exposure for sensitive receivers is expected to be limited. Motorists, shoreline users, and recreational boaters may see project works, but residential areas and public open spaces set back from Botany Bay are unlikely to have clear views due to distance and existing screening provided by topography, vegetation and built infrastructure. The Department notes that lighting required outside standard construction hours would be managed to minimise glare and spill beyond what is typical for port operations. • Given the industrial character of Port Botany, and the limited visibility of detailed construction activity for most public receivers, the Department finds that the sensitivity of visual receivers would be low and the magnitude of change modest. As such, the overall visual impact during construction is assessed as low and adverse. • The Department considers that visual impacts associated with the operation of the project would be minimal, with the majority of assessed viewpoints experiencing negligible to moderate (neutral) changes in view.	• Design specifications of the construction and operational lighting must conform to the requirements of the Civil Aviation Regulations 1988 to minimise lighting impacts on the operation of Sydney Airport. • The height of operational equipment must be below the obstacle limitation surface of Sydney Airport.

7 Evaluation

194. The Department's assessment considered the relevant matters and objects of the *Environmental Planning & Assessment Act 1979*, including the principles of ecologically sustainable development (**Sections 3 and 6**), advice from government agencies, local councils and public submissions (**Section 5**), and strategic government policies and plans (**Section 4**).
195. This includes consideration of:
- Port Botany Quayline Equalisation Project Environmental Impact Statement (EIS), Aecom, September 2025
 - Port Botany Quayline Equalisation Project, Submissions Report, Aecom, December 2025
 - Port Botany Quayline Equalisation Project – Desktop Maritime Archaeological Assessment, March 2026 MTS (MTS) Heritage Pty Limited.
196. If approved, it is expected the project would create a more competitive environment for container stevedores operating at Port Botany, deliver port infrastructure that continues to meet changes to international shipping fleets, and ultimately provide cost-effective services.
197. The Department considers that the key issues to be water quality impacts associated with the construction (primarily the dredging component and associated contamination) and the associated potential marine ecology impacts that may occur.
198. The Proponent identified environmental mitigation measures which it has committed to applying to the project, and the Department has recommended a range of conditions to manage any residual environmental impacts.
199. Overall, the Department concludes the impacts of the project are acceptable and can be appropriately managed or mitigated through recommended conditions of approval. Consequently, the Department recommends that the project:
- is in the public interest
 - should be approved, subject to conditions.

Glossary

Abbreviation	Definition
AHD	Australian height datum
BLB	Bulk Liquids Berth
CASA	Civil Aviation Safety Authority
CPHR of NSW DCCEEW	Conservation Programs, Heritage and Regulation group of the NSW Department of Climate Change, Energy, the Environment and Water
DCCEEW	NSW Department of Climate Change, Energy, the Environment and Water
Department	Department of Planning, Housing and Infrastructure
DPIRD	Department of Primary Industries and Regional Development
EDC	Estimated Development Cost
EIS	Environmental impact statement
EPA	NSW Environment Protection Authority
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EP&A Regulation	Environmental Planning and Assessment Regulation 2021
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
EPI	Environmental planning instrument
EPL	Environment protection licence
ESD	Ecologically sustainable development
FRNSW	Fire and Rescue NSW
Heritage	Heritage NSW, within the NSW Department of Climate Change, Energy, the Environment and Water

Abbreviation	Definition
IPC	Independent Planning Commission
LSCC	Landside Construction Compound
Minister	Minister for Planning and Public Spaces
Port Authority	Port Authority of New South Wales
SACL	Sydney Airport Corporation Limited
SEARs	Planning Secretary's Environmental Assessment Requirements
Secretary	Secretary of the Department of Planning, Housing and Infrastructure
SEPP	State environmental planning policy
SSI	State significant infrastructure
TfNSW	Transport for NSW
TSS	Total Suspended Solids
WSCC	Waterside Construction Compound

Appendices

Appendix A – List of referenced documents

Port Botany Quayline Equalisation Project Environmental Impact Statement (EIS), Aecom, September 2025

<https://www.planningportal.nsw.gov.au/major-projects/projects/port-botany-quayline-equalisation>

Port Botany Quayline Equalisation Project, Submissions Report, Aecom, December 2025

<https://www.planningportal.nsw.gov.au/major-projects/projects/port-botany-quayline-equalisation>

Port Botany Quayline Equalisation Project – Desktop Maritime Archaeological Assessment, March 2026 MTS (MTS) Heritage Pty Limited

<https://www.planningportal.nsw.gov.au/major-projects/projects/port-botany-quayline-equalisation>

Appendix B – Submissions and government agency advice

All submissions and government agency advice can be found on the NSW Planning Portal at:

<https://www.planningportal.nsw.gov.au/major-projects/projects/port-botany-quayline-equalisation>

Appendix C – Statutory considerations

Objects of the EP&A Act

A summary of the Department’s consideration of the relevant objects (found in section 1.3 of the EP&A Act) are provided in **Table 17** below.

Table 12 | Objects of the EP&A Act and how they have been considered

Object	Consideration
(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 project would not directly impact on the social and economic welfare of the community. • The project may contribute to reduced freight fees associated with importation or exportation of products through Port Botany.

Object	Consideration
(b) to facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment,	• The project has considered the principles of Ecologically Sustainable Development (ESD) and integrated the principles into the Proponent's project development and assessment processes. • This included consideration of the precautionary principle which has guided the EIS assessment process and resulted in the removal of a proposed construction compound (WSC))2) to reduce potential impacts. • The project considered intergenerational equity in assessing the short-term construction impacts, compared to some of the longer term economic impacts such as facilitating the use of the Port by future vessels and creating a more competitive stevedoring environment. • The project considered the potential impacts on biodiversity, and appropriate actions have been committed to including an adaptive dredging plan to limit impacts to the environment depending on the level of turbidity that is being generated. • The Proponent has committed to undertaking a Marine Biodiversity Offset Strategy to consider impacts to the marine environment and consider physical offset that can be undertaken, prior to consideration of offset payments.
(c) to promote the orderly and economic use and development of land,	• The project promotes the use of land within an existing port precinct and is not proposing to develop a new port.
(d) to promote the delivery and maintenance of affordable housing,	• Not applicable.
(e) to protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats,	• The project has recommended mitigation measures to reduce the risk of impacts to threatened species and communities.

Object	Consideration
(f) to promote the sustainable management of built and cultural heritage (including Aboriginal cultural heritage),	The project would not impact known Aboriginal or European heritage.
(g) to promote good design and amenity of the built environment,	The project is located in an active port precinct and has limited ability to be innovative in design.
(h) to promote the proper construction and maintenance of buildings, including the protection of the health and safety of their occupants,	The project involves limited construction of buildings.
(i) to promote the sharing of the responsibility for environmental planning and assessment between the different levels of government in the State,	- The project was exhibited and referred to government agencies for advice, and advice received has been considered. - Submissions were received from Randwick City Council and Bayside Council and comments addressed.
(j) to provide increased opportunity for community participation in environmental planning and assessment.	- The community had an opportunity to comment on the project. - Three submissions in the nature of objections were received from four community submissions.

EP&A Regulation 2021

The EP&A Regulation requires the Proponent to have regard to the *State Significant Infrastructure Guidelines* when preparing their application. In addition, the SEARs require the Proponent to consider:

- Social Impact Assessment Guideline for State Significant Projects*
- Undertaking Engagement Guidelines for State Significant Projects*
- Cumulative Impact Assessment Guidelines for State Significant Projects.*

The Department considers that the Proponent has appropriately considered these guidelines in preparing the EIS for the project, or has been able to adequately justify why compliance with a guideline may not have occurred.

Appendix D – Recommended instrument of approval

The recommended instrument of approval (SSI-79878464) can be found on the NSW Planning Portal at:

<https://www.planningportal.nsw.gov.au/major-projects/projects/port-botany-quayline-equalisation>