

Division 5.1 Determination

Determination Statement

I, the Chief Executive Officer (CEO) of Port Authority of New South Wales (Port Authority), having considered the impact on the environment of the proposed activity referred to in Schedule 1, pursuant to Division 5.1 of the *Environmental Planning and Assessment Act 1979* (EP&A Act), have determined:

- the proposed activity is not likely to have a significant impact on the environment and therefore an Environmental Impact Statement (EIS) is not required.
- the proposed activity will not be carried out in a declared area of outstanding biodiversity value and is not likely to significantly affect threatened species, populations or ecological communities, or their habitats or impact biodiversity values, meaning a Species Impact Statement (SIS) and/or Biodiversity Development Assessment Report (BDAR) is not required.
- the proposed activity may proceed subject to the implementation of the mitigation measures specified in Schedule 2.

Yours sincerely,

DocuSigned by:

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John McKenna

Chief Executive Officer & Director

Date: 29-06-2025 | 10:36 AM AEST

Schedule 1

Item	
Proponent	Port Authority of New South Wales
Determining Authority	Port Authority of New South Wales
Land	Lot 10 DP 1288503, and White Bay Cruise Terminal, White Bay
Activity	The Activity described in the Addendum Review of Environmental Factors Shore Power Project – White Bay Cruise Terminal, Seawater Exchange Cooling System 17 June 2025
Activity under Division 5.1 of the EP&A Act	The development is an Activity under Division 5.1 of the EP&A Act, because it is a development of a kind described in Part 2.3, Sections 2.44 and 2.80 of the State Environmental Planning Policy (Transport and Infrastructure) 2021 (TI SEPP)

Schedule 2

Summary of mitigation measures

No.	Impact	Environmental Safeguards	Responsibility	Timing
1	Localised sessile invertebrate mortality	To reduce impacts on sessile invertebrates during caisson wall preparation, construction activities to be limited to the smallest area necessary for pipework installation. Habitat enhancement measures such as installing textured surfaces to promote attachment may be considered as an ecologically positive initiative following construction.	Contractor	Construction
2	Removal of seawall habitat	To mitigate habitat loss from excavation and drilling on the seawall, construction shall avoid unnecessary disturbance to adjacent areas. Post-construction habitat enhancement measures, such as installing artificial reef modules or textured surfaces may be considered as an ecologically positive initiative; this will offset habitat loss and promote recolonisation of sessile organisms.	Contractor	Construction
3	Turbidity and contaminant release from sediment resuspension	Whilst caisson excavation is occurring, if there is a risk of sediment resuspension under the caisson unit, silt curtains shall be deployed around the work area to contain sediment resuspension and prevent contaminants from dispersing into White Bay. Water quality monitoring to be conducted regularly from the wharf during construction to ensure turbidity levels remain within acceptable limits as seen in Table 6-1 of the AREF.	Contractor	Construction
4	Pollution from wastewater discharges	To prevent water quality impacts associated with dewatering or tidal flux within the caisson, several mitigation measures shall be employed. Once caisson excavation has begun, water chemistry testing for hydrocarbons and heavy metals shall be undertaken. If contamination is found above ANZG (2018) guideline values for marine waters, a water treatment unit shall be used to apply filtration, chemical treatment, and oil-water separation as required. If no chemical contamination is detected, prior to discharging water into the harbour, it must still be tested for turbidity and acidity levels to ensure compliance with ANZG (2018) guidelines. If elevated turbidity is detected, filtration will be required prior to returning the water to the harbour. If the water within the caisson is found to have an altered pH during dewatering, mitigation measures shall be implemented to adjust the pH before returning the water to the harbour. A suitable water treatment unit shall be used to adjust the pH. After pH adjustment, treated water to be tested again to verify that it falls within permissible ranges (typically between 6.5 and 8.5 for marine environments). Continuous monitoring during discharge ensures that any deviations are detected promptly and corrected. Monitoring protocols shall be established to continuously assess water quality during dewatering operations, ensuring that any unexpected changes are identified and addressed promptly.	Contractor	Construction

No.	Impact	Environmental Safeguards	Responsibility	Timing
		Runoff from equipment cleaning shall be collected and treated before discharge into White Bay. Spill kits should be made available on-site, and all contractors must follow strict protocols for handling oils and grease to prevent accidental pollution.		
5	Pollution from waste disposal	Construction waste management plans to be implemented to prevent accidental or deliberate disposal of waste into the marine environment. Waste materials must be stored securely on land until properly disposed of at approved facilities. Regular site inspections shall ensure compliance with waste management protocols. Sediments excavated from the caisson should be tested for contamination. If detected, sediments to be removed and disposed of at approved waste management facilities.	Contractor	Construction
6	Deposition of construction debris	During coring of the caisson seawall, external catchment devices such as plates will be used if drilling from the inside. This will prevent debris entering the water column and settling on the seabed. If drilling is occurring from the outside, a submersible suction dredge should be used, if practical, to collect debris. Any matter collected during construction must be disposed of at approved facilities.	Contractor	Construction
7	Noise impacts on marine fauna and marine mammals	To minimise underwater noise impacts during construction activities such as drilling and sheet piling within the caisson, noise-reducing technologies (e.g., mufflers or dampening systems) shall be employed on machinery where feasible. Personnel should monitor for the presence of marine mammals entering the area, and if any sightings are made, noise producing activities will be temporarily halted until the animals have left the area. Where possible a soft start of machinery should be employed to provide mobile fauna the opportunity to move away from the sound source.	Contractor	Construction
8	Release of microplastics and chemical residues	Plastic-based components and coatings used in construction must meet stringent durability standards to reduce fragmentation or leaching into the marine environment. Biocide-free coatings to be prioritised wherever possible. Components to be inspected during installation to ensure that any plastics or chemicals are not being inadvertently abraded into the marine environment.	Contractor	Construction
9	Introduced species	To prevent the spread of invasive species, specific action shall be taken for each species identified as occurring or possibly occurring on the caisson wall. If removal of oysters is required, biological debris to be collected with a submersible suction dredge to prevent dispersion of the Pacific Oyster (<i>Crassostrea gigas</i>). Surface preparation activities on the caisson wall to include an inspection for the Pleated Sea Squirt in affected areas. If any are found, they can be removed manually by divers and collected for disposal on land. Surface preparation can then proceed in the usual fashion.	Contractor	Construction
10	Behavioural changes in mobile fauna	To ensure impacts from elevated temperatures within the thermal plume are consistent with expectations, a validation program shall be implemented to assess plume dimensions and ensure concurrence with hydrodynamic modelling predictions.	Port Authority	Operation
11	Entrainment of marine fauna	Intake structures must include screens or barriers designed to minimise the entrainment of small organisms while maintaining operational efficiency. To comply with NSW Fisheries fish screen best practice guidelines (Boys, 2021), screens should be designed	Contractor / Port Authority	Detailed design / Construction / Operation

No.	Impact	Environmental Safeguards	Responsibility	Timing
		<p>with mesh sizes small enough to prevent juvenile fish, larvae, and plankton from passing through while allowing adequate water flow. The guidelines recommend that approach velocities at the intake should not exceed 0.1–0.15 m/s to ensure that fish can swim away from the screen without becoming impinged or trapped. Additionally, sweeping flows parallel to the screen should be maintained to guide organisms safely past the intake structure, reducing the likelihood of injury or mortality.</p> <p>To further mitigate entrainment impacts, screens shall incorporate self-cleaning mechanisms to prevent debris accumulation, which can hinder performance and increase the risk of impingement. Regular maintenance and monitoring of intake structures are essential to ensure compliance with these standards and to adapt operations based on seasonal variations in biological activity, such as larval production or plankton blooms.</p>		
12	Thermal impacts (localised temperature increase)	To ensure thermal impacts from heated water discharge, are as expected, a validation program shall be implemented when one berth is operating at its peak to assess plume dimensions and ensure concurrence with hydrodynamic modelling predictions.	Port Authority	Operation
13	Impacts on benthic habitat and sessile organisms	To minimise thermal impacts on benthic habitats and sessile organisms near the outfall, discharge points to be positioned as high as possible to reduce direct contact between warm water plumes and the seabed.	Contractor / Port Authority	Detailed design / Construction / Operation
14	Biofouling impacts	<p>To minimise the risk of biofouling in a harbour seawater cooling system, the following mitigation measures are recommended:</p> <p>Apply Anti-Biofouling Coatings</p> <ul style="list-style-type: none"> • Use silicone-based foul-release coatings or copper-based antifouling paints on submerged infrastructure. • Target high-risk areas such as intake pipes, screens, and heat exchanger surfaces. • Ensure coatings are environmentally compliant and suitable for local fouling organisms. • Reapply coatings during scheduled maintenance cycles. <p>Conduct Routine Inspections and Cleaning</p> <ul style="list-style-type: none"> • Perform regular inspections of intake structures, pipelines, and heat exchangers using divers or ROVs. • Monitor flow rates and differential pressures to detect early fouling. • Use mechanical or chemical cleaning methods (e.g. pigging, hydroblasting, chlorination) as needed. • Dispose of removed biofouling material in a biosecure manner. <p>Incorporate Filters and Physical Barriers</p>	Contractor / Port Authority	Detailed design / Construction / Operation

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		<ul style="list-style-type: none"> • Install coarse screens or trash racks at the intake to block larger organisms and debris. • Use fine-mesh wedge wire screens or drum filters to intercept larvae and algae. • Add secondary strainers upstream of sensitive equipment. • Design filter cleaning and waste disposal processes to prevent ecological spread. <p>Implement Water Quality Monitoring and Control</p> <ul style="list-style-type: none"> • Monitor parameters like temperature, turbidity, and nutrient levels to anticipate biofouling risk. • Apply intermittent chlorination or biocide dosing (if permitted) to control biofilms and larvae. • Consider periodic thermal treatment (hot water flushing) to remove internal fouling. • Use automated systems to detect abnormal flow or pressure changes. <p>Optimise System Design and Operation</p> <ul style="list-style-type: none"> • Maintain internal water velocities above 1.5 m/s to discourage settlement. • Design piping with smooth internal surfaces to limit adhesion. • Include redundancy (e.g. multiple intakes) to allow maintenance without shutdown. • Avoid thermal discharge conditions that create favourable environments for fouling. 		
15	Corrosion impacts	<p>To minimise the risk of corrosion in a harbour seawater cooling system, the following mitigation measures are recommended:</p> <p>Material Selection</p> <ul style="list-style-type: none"> • Use corrosion-resistant materials such as: <ul style="list-style-type: none"> ○ Duplex stainless steels ○ Titanium alloys ○ Non-metallic options like high-density polyethylene (HDPE) or polyvinyl chloride (PVC) ○ Match material choice to specific environmental conditions (e.g., salinity, temperature, flow rate). <p>Protective Coatings and Barriers</p> <ul style="list-style-type: none"> • Apply coatings to isolate metal surfaces from seawater exposure, such as: <ul style="list-style-type: none"> ○ Epoxy or polyurethane coatings 	Contractor / Port Authority	Detailed design / Construction / Operation

No.	Impact	Environmental Safeguards	Responsibility	Timing
		<ul style="list-style-type: none"> ○ Fusion-bonded epoxy (FBE) for pipelines ○ Thermal spray coatings (e.g., aluminium or zinc) ○ Use anti-fouling coatings to minimise biofouling-related corrosion. <p>Cathodic Protection Systems</p> <ul style="list-style-type: none"> ● Implement sacrificial anode systems (e.g., zinc, magnesium) for passive protection. ● Use impressed current cathodic protection (ICCP) for larger or critical structures. <p>Routine Maintenance and Monitoring</p> <ul style="list-style-type: none"> ● Conduct regular inspections and surface condition assessments. ● Perform wall thickness measurements and corrosion rate monitoring (e.g., via probes or coupons). ● Monitor key water quality parameters (e.g., pH, salinity, dissolved oxygen) to anticipate changes in corrosion risk. ● Keep detailed records of maintenance and inspection results for trend analysis and early intervention. 		