

Environmental Approval

PURSUANT TO SECTION 69 OF THE *ENVIRONMENT PROTECTION ACT 2019*

Approval number	EP2022/014-001
Approval holder	Chief Executive Officer of the NT Department of Infrastructure, Planning and Logistics
Australian business number (ABN)	84 085 734 992
Registered business address	Level 3, Manunda Place 38 Cavenagh Street Darwin, Northern Territory 0800
Address for notices	Floor 5, Energy House, 18-20 Cavenagh Street, Darwin, Northern Territory 0800
Action	Mandorah Marine Facilities

Action description

Construct and operate a safer and weather-resistant ferry berthing facility near the existing Mandorah ferry facility to improve transport connectivity between the Cox Peninsula and Darwin, especially for passengers requiring mobility assistance. The proposed action includes:

- installation of maritime infrastructure components including rock armoured breakwaters, a floating pontoon, gangway, piles, a boat ramp and causeway
- establishment of landside infrastructure including a car park and a ferry terminal
- refurbishment of the current building to serve as the ferry terminal
- capital dredging to remove up to 30,000 m³ of unconsolidated sediments and up to 70,000 m³ of rock material
- unconsolidated marine sediments disposal about 1 km offshore within the Darwin Harbour
- maintenance dredging to occur every 5-7 years.

The proposed project life is approximately 50 years.

Advisory notes

- i. Approval is granted under section 69 of the *Environment Protection Act 2019* for the action to be undertaken in the manner described, including the implementation of the environmental management measures, commitments and safeguards documented in the Referral information (including the Referral Report and Appendices), Supplementary Environmental Report (**SER**) (including the **SER** and Appendices), additional information submission dated 3 July 2023 and response to a submission on the additional information dated 11 July 2023. If there is any inconsistency between the **SER** and this environmental approval, the requirements of this environmental approval prevail.
- ii. This approval does not authorise the approval holder to undertake an activity that would otherwise be an offence under the *Northern Territory Aboriginal Sacred Sites Act 1989*.
- iii. Submission of all notices, reports, documents or other correspondence required as a condition of this approval must be provided in electronic form by emailing environmentalregulation@nt.gov.au

Environmental approval conditions

1 Limitations and extent of action

1-1 When implementing the action, the approval holder must ensure the action does not exceed the following limitations and extent:

Action element	Figure	Limitation or maximum extent
Landside development envelope	Figure 1	No more than 3 hectare (ha) to be cleared within the approved extent .
Marine development envelope	Figure 1	No more than 3.7 ha to be developed within the approved extent .
Capital dredging	Figure 1	No more than 70,000 m ³ of rock and 30,000 m ³ of unconsolidated material to be dredged within the 2.02 ha dredge area of the approved extent .
Maintenance dredging	Figure 1	Maintenance dredging to occur within the 2.02 ha dredge area of the approved extent
Spoil disposal	Figure 2	Spoil disposal to occur over no more than 0.3 ha of the dredge spoil disposal area within the approved extent .

2 Terrestrial environmental quality

2-1 The approval holder must implement the action to achieve the following environmental objectives:

- (1) no **material environmental harm** to land and soils beyond the **approved extent**;
- (2) no **material environmental harm** to flora and fauna values including biodiversity and ecological functioning beyond the **approved extent**.

2-2 Prior to **substantial implementation**, to meet the environmental objectives at condition 2-1, the approval holder must implement an **Erosion and Sediment Control Plan (ESCP)** that:

- (1) has been developed by a Certified Professional in Erosion and Sediment Control (**CPESC**) in accordance with the International Erosion Control Association Australasia 2008, *Best Practice Erosion and Sediment Control*, and achieves the environmental objectives specified in condition 2-1;
- (2) provides details of the design, implementation, monitoring, maintenance and removal of erosion, sediment and drainage controls in all **construction** and temporary work areas; and

- (3) is reviewed by a **CPESC** within 12 months of **substantial implementation** or at any time during the **life of the action** if:
 - (a) ongoing monitoring identifies a failure of the **ESCP**; or
 - (b) an accelerated or changed work program is required.

3 Coastal processes

3-1 The approval holder must implement the action to achieve the following environmental objective:

- (1) maintain the beach within its natural extent under non-cyclonic conditions for a distance up to 400 m south from the existing Mandorah jetty.

3-2 Prior to **substantial implementation**, to meet the objective at condition 3-1, the approval holder must implement a Coastal Processes Monitoring and Management Plan (**CPMMP**) for the **life of the action**.

3-3 The **CPMMP** required by condition 3-2 must:

- (1) be prepared as an adaptive management plan in consideration of the *Northern Territory Environment Protection Authority Guidance on Adaptive Management*;
- (2) be endorsed by an **independent qualified person**;
- (3) include a requirement for the action to achieve the environmental objective required by condition 3-1;
- (4) provide a field-validated assessment of the baseline conditions for the beach and adjacent areas;
- (5) provide mapping and a description of specific areas in the intertidal zone that require management and protection, and analysis of the risks to those areas from the action;
- (6) include monitoring methods, control/reference sites, and trigger criteria for management responses;
- (7) include methods and indicators for determining whether any exceedance of management **trigger values** is attributable to the action;
- (8) provide appropriate adaptive management responses and procedures that would be implemented to maintain the achievement of the environmental objective specified in condition 3-1;
- (9) provide the layout and cross sectional drawings of any permanent infrastructure (such as structures for shoreline impact mitigation) to be used to maintain the environmental objectives specified in conditions 3-1 and 4-1; and
- (10) include certification from a registered engineer confirming the stability and integrity of any permanent infrastructure to be used.

4 Marine environmental quality and marine ecosystems

4-1 The approval holder must implement the action to achieve the following environmental objectives:

- (1) no **material environmental harm** to the environmental values and declared **beneficial uses** of water in Darwin Harbour beyond the **approved extent**, including but not limited to ecosystem health, cultural, aesthetic, recreational, aquaculture;
- (2) no **material environmental harm** to **benthic habitats and communities** beyond the **zones of impact**; and
- (3) risks of physical injury, mortality, behavioural changes or health impacts on marine megafauna are minimised.

4-2 At least 10 business days prior to **substantial implementation**, the approval holder must submit to the **Minister a Dredge Management Plan (DMP)** to meet the requirements specified in condition 4-3.

4-3 The **DMP** required by condition 4-2 must:

- (1) be endorsed by an **independent qualified person**;
- (2) include a requirement for all **maritime activities** to achieve the environmental objectives required by 4-1;
- (3) include benthic mapping showing the field-validated extent, distribution and health of potentially affected **benthic habitats and communities**, as well as critical sensitive areas requiring protection;
- (4) clearly stated objectives, methods and outcomes including a conceptual model that defines stressors and potential impacts in the receiving environment and identifies the links between predicted responses and the monitoring indicators to be monitored;
- (5) include an integrated water quality and benthic habitat monitoring and management program based on **pressure-response pathways** associated with **maritime activities** including but not limited to:
 - (a) reference and impact monitoring site locations pertinent to sensitive benthic habitats and modelled **zones of impact** and **zones of influence**;
 - (b) management trigger criteria, including **trigger values** for key indicators such as turbidity (NTU) and **PAR** (benthic and surface) (mol/m²/day or DLI);
 - (c) defined relationships between monitoring indicators such as suspended solids and turbidity, and **PAR**;
 - (d) continuous logging with on-line near real-time monitoring capability for turbidity, **PAR** (benthic and surface) and water depth/pressure at reference and impact sites, with a baseline data collection phase;

- (e) periodic monitoring of suspended solids, nutrients, pH, conductivity, temperature, metals and metalloids, dissolved organic matter, spectrophotometric water colour, sediment deposition and condition of benthic communities (particularly seagrass meadows) at reference and impact monitoring sites, with a baseline data collection phase;
 - (f) procedures for determining whether any exceedance of management **trigger values** is attributable to the action;
 - (g) a trigger action response plan incorporating a tiered adaptive monitoring and management approach to achieve the environmental objectives required by condition 4-1(1) and 4-1(2);
 - (h) procedures for determining when the impacts of **maritime activities** beyond the **approved extent** return to baseline conditions after the cessation of these activities;
 - (i) quality assurance methods and reporting of results;
- (6) include monitoring and management measures to achieve the environmental objective required by condition 4-1(3) including but not limited to:
- (a) measures to avoid direct impacts of entrainment and vessel strikes on marine megafauna, such as imposing speed limits on vessels and specifying safe distance for marine megafauna encounters during the **maritime activities**;
 - (b) defined observation and exclusion zones, along with protocols for marine megafauna observation, and keeping a record of sightings and locations in the vessels' daily log book;
 - (c) trained marine megafauna observers to be present during **maritime activities**;
 - (d) procedures for observing marine megafauna during night time (if night operations are proposed) and low visibility conditions;
 - (e) procedures for reporting any incidents related to marine megafauna injury or mortality to the relevant regulators;
- (7) provide measures to prevent the introduction of marine pests; and
- (8) provide procedures to minimise the impacts on marine ecosystems from **construction** noise and artificial lighting.

4-4 Any maintenance dredging required must be conducted in accordance with a **DMP** to meet the environmental objectives at condition 4-1.

4-5 The **DMP** referred to in condition 4-2:

- (1) must be reviewed and revised as and when directed by the **Minister**; and
- (2) may be reviewed and revised for the approval holder's own purposes.

- 4-6 The approval holder must provide a copy of any revised **DMP** to the **Minister** at least 10 business days prior to any amendment(s) being implemented, accompanied by:
- (a) a tabulated summary of the amendment(s) with references to supporting documents;
 - (b) reasons for the amendment(s);
 - (c) an assessment of environmental risks and potential impacts associated with the amendment(s); and
 - (d) a written review and endorsement from an **independent qualified person** stating that the amended plan appropriately identifies and mitigates environmental risks and complies with the conditions of this approval.
- 5 Commencement of action**
- 5-1 This approval expires 5 years after the date on which it is granted, unless **substantial implementation** has commenced on or before that date.
- 5-2 The approval holder must provide notification in writing to the **Minister**, at least 10 business days prior to the commencement of **substantial implementation**.
- 6 Completion of construction**
- 6-1 The approval holder must provide notification in writing to the Minister, within 10 business days after completion of **construction** of the action.
- 7 Change of contact details**
- 7-1 The approval holder must notify the **Minister** in writing of any change of its name, physical address or postal address for the serving of notices or other correspondence within 10 business days of such change.
- 8 Operation**
- 8-1 The approval holder must meet the environmental objectives specified in this approval at all times throughout the **life of the action**.
- 9 Environmental performance and compliance reporting**
- 9-1 The approval holder must:
- (1) within 12 months after completion of **construction** of the action and after closure of the action, and within 6 months after any maintenance dredging activities and/or implementation of shoreline mitigation activities, prepare a report to address conditions 9-2(1) to 9-2(7); and
 - (2) submit each report to the **CEO** within 30 days of the report's completion.
- 9-2 The reports required by condition 9-1 must:

- (1) provide all monitoring data (inclusive of any raw and processed data) and reportable incidents required by the conditions of this approval;
- (2) provide an analysis and interpretation of monitoring data to demonstrate whether compliance with the requirements of conditions 2-1, 3-1 and 4-1 has been achieved;
- (3) provide a comparison between the actual and predicted impacts;
- (4) include an assessment of the effectiveness of monitoring, management and contingency measures implemented to comply with conditions 2-1, 3-1 and 4-1 of this environmental approval;
- (5) identify all non-compliances and describe corrective actions taken;
- (6) include a statement as to whether the approval holder has complied with the conditions of this approval; and
- (7) include a written review and endorsement by an **independent qualified person**.

10 Provision of environmental data

- 10-1 All environmental monitoring data required to be collected or obtained under this environmental approval must be retained by the approval holder for a period of not less than 50 years commencing from the date that the data is collected or obtained.
- 10-2 The approval holder must, as and when directed by the **Minister**, provide any validated environmental data (including sampling design, sampling methodologies, empirical data and derived information products such as maps) relevant to the assessment of the action and implementation of this environmental approval, to the **Minister** in the form and manner, and at the intervals, specified in the direction.

11 Rehabilitation and closure

- 11-1 The approval holder must submit to the **Minister** a rehabilitation plan 12 months before the end of the **life of the action**. The plan should include information related to:
- (1) rehabilitation objectives and criteria;
 - (2) consultation outcomes with relevant stakeholders, clearly identifying assets to be retained, decommissioned, remediated and rehabilitated, and associated costs;
 - (3) proposed tenure and management arrangements including the maintenance or handover of useable assets;
 - (4) program of works, including specific trials and monitoring to demonstrate progress towards meeting the rehabilitation objectives; and
 - (5) a contingency plan outlining corrective actions if monitoring indicates that the rehabilitation objectives are unlikely to be achieved.

Definitions

The terms used in this approval have the same meaning as the terms defined in the *Environment Protection Act 2019* and *Environment Protection Regulations 2020*.

Term	Definition
approved extent	The extent identified in Figure 1 and Figure 2 of this approval that is the area of land and water that will be directly disturbed by the construction of structures, dredging and dredge spoil disposal.
beneficial uses	The uses of water as defined in section 4 of the <i>Water Act 1992</i> .
benthic habitats and communities	The areas of seafloor that support functional ecological communities (e.g. high relief reef, platform reef, sand, silt and the depth they occur at). The communities may include light dependent taxa (e.g. algae, seagrass, corals, some sponges, mangroves) or animals that obtain their energy by consuming live or dead organisms (e.g. ascidians, sponges, soft corals).
CEO	The Chief Executive Officer of the Department of Environment, Parks and Water Security [or another name for that department, which may vary from time to time], or their delegate.
construction	Works and activities undertaken to establish the action including land clearing, earthworks, stockpiling, capital dredging and spoil disposal, and building of landside and marine infrastructure. Construction excludes periodic maintenance dredging and any Mandorah beach maintenance.
CPESC	Certified Professional in Erosion and Sediment Control
CPMMP	Coastal Processes Monitoring and Management Plan
DEPWS	Department of Environment, Parks and Water Security
DMP	Dredge Management Plan that includes management of dredge spoil disposal (referred to in the referral and SER as Dredging and Spoil Disposal Management Plan)
EP Act	Environment Protection Act 2019
ESCP	Erosion and Sediment Control Plan
independent qualified person	A qualified person as defined under section 4 of the EP Act; and who also meets the following requirements: a) was not involved in the preparation of the SER ; and b) is independent of the personnel involved in the design, construction and implementation of the action; and c) has obtained written approval from the CEO to be the qualified person to satisfy the independent qualified person reporting requirements under this approval.
life of the action	The period of time from substantial disturbance until the issue of a closure certificate under section 213 of the EP Act , or revocation of the environmental approval by the Minister at the request of the approval holder under section 114 of the EP Act .
maritime activities	The actions that occur in the intertidal and marine environment, as presented in Figures 1, 2 and 3
material environmental harm	The environmental harm as defined under section 8 of the EP Act

Term	Definition
PAR	Photosynthetically active radiation
pressure-response pathways	The pathways through which environmental or ecological systems respond to seasonal variations or changes in stressors. These pathways can encompass the sequence or chain of events that occur in response to external pressures or disturbances.
SER	Supplementary Environmental Report
substantial implementation	Any substantial disturbing activity relating to the action within the approved extent , including, but not limited to, land clearing, civil works, construction works or dredging works. Substantial implementation does not include preliminary works such as geotechnical, hydrographic and aerial investigations, as well as other pre-construction activities that do not involve land clearing or disturbance of intertidal/marine areas.
trigger value	The values of monitored environmental parameters that indicate when response actions are required to prevent or minimise impact.
Zones of impact	Defines the areas within which benthic habitats and communities are impacted by a particular event or action.
Zones of influence	Defines the areas within which environmental quality would be effected by a particular event or action but the effects would not result in detectable impacts to benthic habitats and communities .

Location and extent of action

Spatial data depicting information provided in Figures 1 and 2 are held by the Department of Environment, Parks and Water Security as follows:

- NTEPA2022/0040-013 – Spatial Files – Department of Infrastructure, Planning and Logistics – Mandorah Marine Facilities.

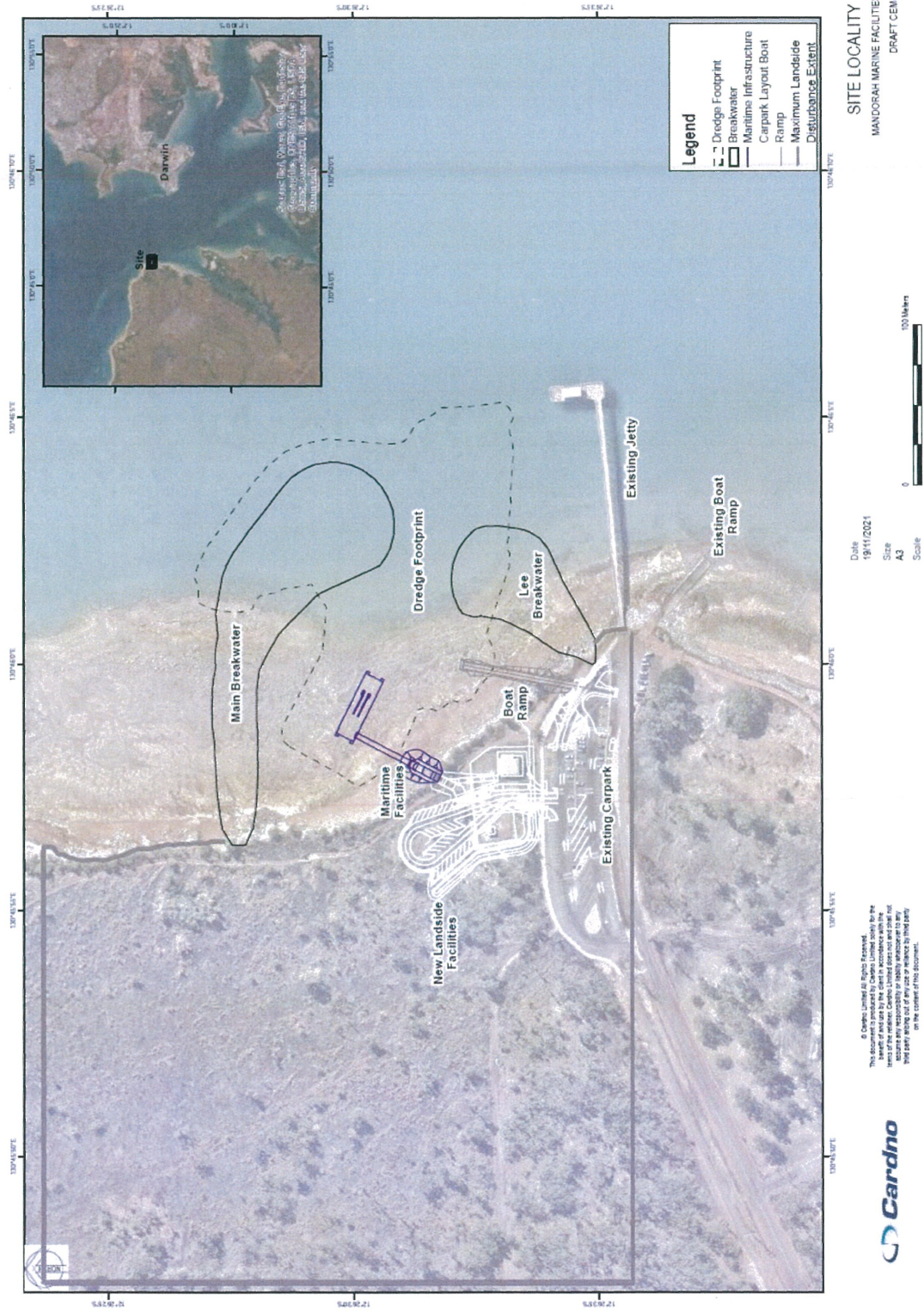


Figure 1. Location and approved extent of the proposed action (Source: adapted from Mandorah Marine Facilities Referral, p.18)



Figure 2. Location and approved extent of dredge spoil disposal area (Source: DIPL, 15 August 2023)