# Environmental Scoping Document

## Ridley Magnetite Project

04/07/2025

# Authorisation

| Version | Reason for Issue | Prepared | Checked | Authorised | Date |
|---|---|---|---|---|---|
| 1.0 | Issued for use | M. Bird | S. McGunnigle | M. Wood | 15/08/2023 |
| 2.0 | Revised to address regulator comments | S. McGunnigle | M. Bird | J. Merrells | 20/09/2024 |
| 3.0 | Revised to address regulator comments | M. Bird | M. Bird | J. Merrells | 05/12/2024 |
| 4.0 | Revised to address regulator comments | D. Morley | M. Bird | J. McKail | 04/07/2025 |

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# Abbreviations

| | |
|---|---|
| ACHMP | Aboriginal Cultural Heritage Management Plan |
| BC Act | *Biodiversity Conservation Act 2016* |
| DMPE | Department of Mines, Petroleum and Exploration |
| DPLH | Department of Planning, Lands and Heritage |
| DWER | Department of Water and Environmental Regulation |
| EP Act | *Environmental Protection Act 1986* |
| EPA | Environmental Protection Authority |
| EPBC Act | *Environment Protection and Biodiversity Conservation Act 1999* |
| ERD | Environmental Review Document |
| ESD | Environmental Scoping Document |
| MNES | Matters of National Environmental Significance |
| SSMP | Significant Species Management Plan |

# 1 Introduction

The Environmental Protection Authority (EPA) has determined that the Ridley Magnetite Project (the Proposal) is to be assessed under Part IV of the *Environmental Protection Act 1986* (EP Act).

Concurrently, the Commonwealth Department of Environment, Energy, Climate Change and Water (DCCEEW) has determined that the proposal is a controlled action, and that the project will be assessed by accredited assessment process at the level of Public Environmental Review.

The purpose of this Environmental Scoping Document (ESD) is to define the form, content, indicative timing and procedure of the environmental review, required by s. 40(3) of the EP Act.

Atlas Iron Pty Ltd (the Proponent) has prepared this ESD according to the procedures in the EPA's *Procedures Manual*.

The EPA requires the proponent to undertake the environmental review according to the procedures in the EPA's *Administrative Procedures* and *Procedures Manual*, and the *Instructions and Template: How to prepare an Environmental Review Document* (EPA 2024d).

## 1.1 The Proposal

*Table 1-1: General Proposal and Proponent Information*

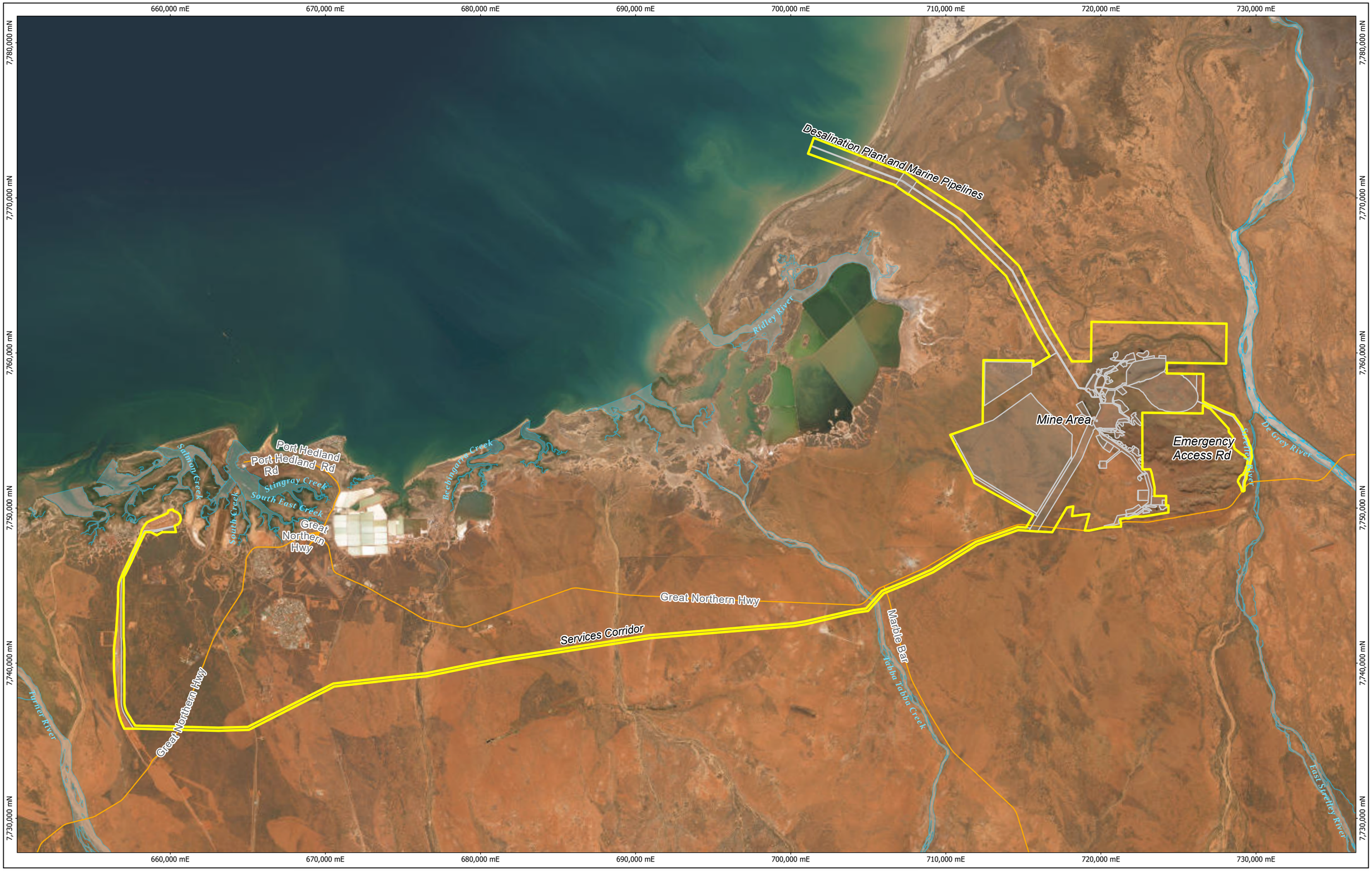
| **Proposal information** | |
|---|---|
| **Proposal Name** | Ridley Magnetite Project |
| **Proponent** | Atlas Iron Pty Ltd |
| **EPA Assessment Number** | 2362 |
| **Local Government Area** | Town of Port Hedland |
| **Public Review Period** | Environmental Review Document (ERD) – 6 weeks |
| **EPBC Reference No.** | 2023/09477 |

The Ridley Magnetite Project (the Proposal) is located approximately 57 km east of Port Hedland. The revised Proposal is located within a 19,102 ha Development Envelope (DE) with an indicative disturbance footprint (IF) of 8,484 ha (Figure 1 & Figure 2). The proposal is for the mining and processing of iron ore up to 16.5 million tonnes per annum (Mtpa) of magnetite concentrate for export.

The Proposal includes a single pit (below water table), run-of-mine pad, concentrate stockpiles, laydown areas, waste dumps, desalination plant and pipelines (intake, outfall), processing plant, power infrastructure, tailings storage facility and supporting infrastructure including groundwater bores, process water storage ponds/tanks, roads, accommodation camp, administration buildings, communications infrastructure, borrow pits, explosives magazine, fuel storage and landfill. A services corridor will run from the site to a dewatering plant at Port Hedland.

The Proposal will initially transport concentrate by truck to Port Hedland and will transition to a slurry pipeline on completion of construction of this element.

The Proposal described in this ESD is the revised Proposal agreed to by EPA on 24 January 2025 and DCCEEW on 17 April 2025.




| | | | |
|---|---|---|---|
| File Name: P526053_Ridley_PCD_ESD_Amendment.aprx | Projection: GDA2020 MGA Zone 50 | Main Roads | Figure No: |
| Date: 27/11/2024 | 0 0.5 1 2 3 kilometres | Development Envelope | Development Envelope and Indicative Footprint |
| Drawn: Carmen.Liang | | Indicative Footprint | 1 |
| Doc No: | Scale 1:220,000 Page size: A3 | Watercourses | |

710,000 mE

720,000 mE

730,000 mE

7,760,000 mN

7,750,000 mN

Ord City River

Strelley River

Great Northern Hwy

| | | | |
|---|---|---|---|
| File Name: P526053_Ridley_PCD_ESD_Amendment.aprx | Projection: GDA2020 MGA Zone 50 | Main Roads<br>Development Envelope<br>Indicative Footprint<br>Watercourses | Development Envelope and Indicative Footprint<br>- Mine Site Areas | Figure No: 2 |
| Date: 27/11/2024 | 0 1 2 kilometres | | | |
| Drawn: Carmen.Liang | | | | |
| Doc No: | Scale 1:70,000 Page size: A3 | | | |

## 1.2 Indicative Timing of the Environmental Review

The indicative timing of the environmental review agreed between the EPA and the proponent is set out in Table 1-2.

*Table 1-2: Indicative timing of the environmental review (indicative timeline)*

| Key assessment milestones | |
|---|---|
| EPA approves Environmental Scoping Document | July 2025 |
| Proponent submits first draft Environmental Review Document | August 2025 |
| EPA provides comment on first draft Environmental Review Document.<br>*(6 weeks from receipt of ERD)* | October 2025 |
| Proponent submits revised draft Environmental Review Document | November 2025 |
| EPA authorises release of Environmental Review Document for public review (including DCCEEW review).<br>*(2 weeks from EPA approval of ERD)* | November 2025 |
| Proponent releases Environmental Review Document for public review for 6 weeks | November 2025 |
| Close of public review period | January 2026 |
| EPA provides Summary of Submissions (including DCCEEW comments)<br>*(3 weeks from close of public review period)* | January 2026 |
| Proponent provides Response to Submissions | February 2026 |
| EPA reviews the Response to Submissions (includes DCCEEW review)<br>*(4 weeks from receipt of Response to Submissions)* | March 2026 |
| EPA finalises Assessment report (including two-week consultation on draft conditions) and gives report to Minister. Assessment Report (which includes draft Ministerial Statement) to be provided to DCCEEW.<br>*(6 weeks from completion of assessment)* | May 2026 |

## 1.3 Commonwealth Government Approvals

The Proposal has been referred and determined to be a controlled action under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and that further assessment is needed. DCCEEW has also decided that potential impacts of the project will be assessed by accredited assessment process under Part IV of the EP Act at the level of Public Environmental Review.

The relevant Matters of National Environmental Significance (MNES) for this proposal are:

- Threatened species and ecological communities (s.18)
- Migratory species (s.20)
- Commonwealth marine area (s.23 & s.24)

Threatened and migratory species currently identified for the purpose of controlling provisions s.18 and s.20 are listed in Table 1-3. No relevant ecological communities have been identified for s.18.

*Table 1-3: Threatened and Migratory Species Identified Under s.18 and 20 of the EPBC Act*

| Common Name | Scientific Name | Listing Status (s.18) | Listing Status (s.20) |
|---|---|---|---|
| Curlew Sandpiper | *Calidris ferruginea* | Critically Endangered | Migratory |
| Eastern Curlew | *Numenius madagascariensis* | Critically Endangered | Migratory |
| Great Knot | *Calidris tenuirostris* | Vulnerable | Migratory |
| Greater Sand Plover | *Charadrius leschenaultii* | Vulnerable | Migratory |
| Lesser Sand Plover | *Charadrius mongolus* | Endangered | Migratory |
| Northern Siberian Bar-tailed Godwit | *Limosa lapponica menzbieri* | Endangered | |
| Red Knot | *Calidris canutus* | Vulnerable | Migratory |
| Flatback Turtle | *Natator depressus* | Vulnerable | Migratory |
| Green Turtle | *Chelonia mydas* | Vulnerable | Migratory |
| Hawksbill Turtle | *Eretmochelys imbricata* | Vulnerable | Migratory |
| Loggerhead Turtle | *Caretta caretta* | Endangered | Migratory |
| Leaf-scaled Seasnake | *Aipysurus foliosquama* | Critically Endangered | |
| Dwarf Sawfish | *Pristis clavata* | Vulnerable | Migratory |
| Northern Quoll | *Dasyurus hallucatus* | Endangered | |
| Olive Python - Pilbara subspecies | *Liasis olivaceus barroni* | Vulnerable | |
| Pilbara Leaf Nosed Bat | *Rhinonicteris aurantia* | Vulnerable | |
| Ghost Bat | *Macroderma gigas* | Vulnerable | |
| Grey Falcon | *Falco hypoleucos* | Vulnerable | |
| Greater Bilby | *Macrotis lagotis* | Vulnerable | |
| Barn Swallow | *Hirundo rustica* | | Migratory |
| Common Sandpiper | *Actitis hypoleucos* | | Migratory |
| Oriental Plover | *Charadrius veredus* | | Migratory |
| Pectoral Sandpiper | *Calidris melanotos* | | Migratory |
| Yellow Wagtail | *Motacilla flava* | | Migratory |
| Osprey | *Pandion haliaetus* | | Migratory |
| Reef Manta Ray | *Manta alfredi* or *Mobula alfredi* | | Migratory |
| Humpback Whale | *Megaptera novaeangliae* | | Migratory |
| Dugong | *Dugong dugon* | | Migratory |

It Is anticipated that the Proposal may have direct and indirect impacts on the MNES listed in Table 1-3 through actions including, but not limited to, those listed in Table 1-4.

*Table 1-4: Potential Impacts on MNES*

| Matters of National Environmental Significance | Relevant Environmental Factor | Potential Impacts |
|---|---|---|
| Threatened species and ecological communities (s.18) | Marine fauna | Disturbance or fragmentation of habitat<br>Fauna interactions<br>Increased predation<br>Behavioural changes due to light and noise |
| | Terrestrial fauna | Disturbance or fragmentation of habitat<br>Fauna interactions<br>Increased predation<br>Behavioural changes due to light, noise and vibration |
| Migratory species (s.20) | Marine fauna | Disturbance or fragmentation of habitat<br>Light<br>Noise<br>Fauna interactions<br>Behavioural changes due to light and noise |
| | Terrestrial fauna | Disturbance or fragmentation of habitat<br>Fauna interactions<br>Increased predation<br>Behavioural changes due to light, noise |
| Commonwealth Marine Area (s.23 & s.24) | No potential impacts are expected.<br>NOTE: The current proposal no longer intersects the Commonwealth marine area. However, as the Commonwealth marine area was identified as a controlling provision in the Controlled Action decision, an assessment of direct and indirect impacts is still required. | |

As stated above, the project will be assessed through the accredited assessment process at the level of Public Environmental Review.

This ESD outlines the proposal-specific additional work that is required, as it relates to preliminary key environmental factors and that has not been undertaken to support referral (refer Table 2-1). As per EPA guidance, this document does not address work that was completed as part of the referral process or that is already required to be included in the ERD.

This required work will be reported on in the ERD in relation to MNES, including the threatened and migratory species listed in Table 1-3 and any others identified during the assessment where the proposal has the potential to have an impact. The ERD will also address the matters in Schedule 4 of the *Environmental Protection and Biodiversity Conservation Regulations 2000*.

Proposed offsets to address significant residual impacts on MNES will be discussed in the ERD.

# 2 Form and Content (Required Work)

The EPA requires that the form of the report on the environmental review required under section 40 of the EP Act is in accordance with the Instructions and Template: How to prepare an Environmental Review Document.

The EPA requires that the content of the ERD is in accordance with the Instructions and Template: How to prepare an Environmental Review Document.

## 2.1 Preliminary Key Environmental Factors

The preliminary key environmental factors to be addressed in the ERD are:

1. Benthic communities and habitats
2. Coastal processes
3. Marine environmental quality
4. Marine fauna
5. Flora and vegetation
6. Subterranean Fauna
7. Terrestrial environmental quality
8. Terrestrial Fauna
9. Inland waters
10. Air quality
11. Greenhous gas emissions
12. Social surroundings

## 2.2 Specific additional work required for assessment of proposal

The general form and content of the ERD will be completed in accordance with the Instructions and Template: How to prepare an Environmental Review Document. This applies to the completion of the assessment with respect to the preliminary key environmental factors listed in Section 2.1 above and as presented in Table 3 below.

Conceptual mine closure will be addressed in the ERD to outline considerations for rehabilitation and closure.

Unless stated otherwise this ESD outlines the proposal-specific additional work that is required, as it relates to the identified preliminary key environmental factors (Table 2-1). *As per EPA guidance, this document does not address work that was completed as part of the referral process or that is already required to be included in the ERD.*

The ERD will address the requirements of the EPA's *Instructions: How to Prepare an Environmental Review Document* (EPA 2021), including consideration of the relevant Environmental Factor Guideline.

*Table 2-1: Proposal specific additional required work*

| **All environmental factors** | |
|---|---|
| Required work | 1. The ERD will address the requirements of the EPA Instructions and Template *How to Prepare an Environmental Review Document* (EPA 2023 & EPA 2024c), including consideration of the relevant EPA Environmental Factor Guidelines and EPA technical guidance.<br>2. The ERD will be undertaken in consideration of DCCEEW's relevant scientific and policy guidance for MNES. Refer to the Species Profile and Threats (SPRAT) Database for details: https://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl. |

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| **Benthic communities and habitats** | |
| Required work | 3. Conduct a benthic communities and habitat survey to characterise and accurately map extent of benthic habitats in the vicinity of the project.<br>4. Assessment of the environmental values and significance of the benthic communities likely to be impacted by the project, including identification of risks to benthic communities and habitats, and assessment of the extent, severity and duration of direct and indirect impacts. |
| **Coastal processes** | |
| Required work | 5. Complete a coastal geomorphology assessment to identify the potential impacts to coastal processes as a result of the construction and presence of the pipeline and marine infrastructure. |
| **Marine environmental quality** | |
| Required work | 6. Complete appropriate design of the brine discharge diffuser to ensure rapid mixing and dilution of brine to minimise impacts to the marine environment.<br>7. Undertake brine dispersion modelling to ensure diffuser design is appropriate and achieves expected water quality objectives under varying marine conditions. A hydrodynamic model will be developed to incorporate baroclinic characteristics, large tidal range and coastal bathymetry. The results of this modelling will also demonstrate the negligible risk to the Eighty Mile Beach Commonwealth Marine Park.<br>8. Undertake sediment dispersion modelling to quantify the potential magnitude, intensity, and spatial distribution of suspended sediment concentrations and sedimentation from dredging operations required to construction the seawater intake.<br>9. Complete a baseline water and sediment quality assessment to characterise the existing marine environment. |

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|---|---|
| **Marine fauna** | |
| Required work | 10. Complete an assessment of potential direct and indirect impacts to marine fauna, including MNES, resulting from construction and operation of marine infrastructure, including seawater intake, brine discharge and jetty. This assessment will also consider potential impacts to critical habitats and during key ecological windows.<br>11. Complete a survey for marine turtles in accordance with the National Guidelines for the Survey of Cetaceans, Marine Turtles and the Dugong (DCCEEW 2024) to determine turtle nesting activity along the beach intersected by the Development Envelope, including identification of species present and the significance of the habitat to turtles. Field surveys will be conducted in accordance with the National Light Pollution Guidelines for Wildlife (DCCEEW 2023).<br>12. Undertake a light spill study to consider the direction and intensity of expected light sources to determine whether the Proposal could attract turtle hatchings or otherwise alter their behaviour. If the light spill study determines that Proposal light emissions are deemed to be visible at any turtle nesting beaches, then the cumulative lighting impacts on the turtle population of the North West Shelf will be considered.<br>13. Conduct modelling to predict the impacts of underwater noise on marine fauna during construction from pile driving, dredging and/or excavation.<br>14. Policy and guidance to be considered in surveys and impact assessment:<br>a. National Light Pollution Guidelines for Wildlife (DCCEEW 2023)<br>b. National Guidelines for the Survey of Cetaceans, Marine Turtles and the Dugong (DCCEEW 2024)<br>c. Recovery Plan for Marine Turtles in Australia (DEE 2017) |
| **Flora and vegetation** | |
| Required work | 15. Complete a detailed and targeted flora and vegetation survey of the Development Envelope in accordance with current EPA Technical Guidance, including infrastructure corridors. Identify and describe the flora species recorded from the studies and surveys. Determine whether any flora species recorded are of State and Commonwealth significance and provide an analysis of local and regional context.<br>16. Identify and describe the vegetation present in the Development Envelope, determine whether any vegetation is of State and Commonwealth significance and provide an analysis of the vegetation units in local and regional context. |
| **Terrestrial Fauna** | |
| Required work | 17. Undertake a detailed level terrestrial fauna survey of the main project area in accordance with EPA guidance to assess species, assemblages and habitats within the Development Envelope, including MNES and feral/invasive species.<br>18. Undertake a basic and targeted terrestrial fauna survey of infrastructure corridors to assess significant species and habitats within the infrastructure corridors, including MNES.<br>19. Complete a short-range endemic (SRE) invertebrate fauna survey of the Development Envelope, including contextual sampling outside the survey area, as required.<br>20. Complete field surveys for migratory shorebirds to delineate the extent of fauna habitats, assess presence of migratory shorebird species and |

| | |
|---|---|
| | determine the likelihood of occurrence of significant migratory shorebird species.<br>21. Policy and guidance to be considered in surveys and impact assessment:<br>a. Guidelines for surveys to detect the presence of bilbies, and assess the importance of habitat in Western Australia (DBCA 2017)<br>b. National Light Pollution Guidelines for Wildlife (DCCEEW 2023)<br>c. Interim Guideline for Preliminary Surveys of Night Parrot (*Pezoporus occidentalis*) in Western Australia (DBCA 2017a)<br>d. EPBC Act Referral Guideline for the Endangered Northern Quoll *Dasyurus hallucatus*: EPBC Act Policy Statement (DoE, 2016)<br>e. Survey guidelines for Australia's threatened birds: Guidelines for detecting birds listed as threatened under the Environment Protection and Biodiversity Conservation Act 1999 (DEWHA 2010a)<br>f. Survey guidelines for Australia's threatened bats: Guidelines for detecting bats listed as threatened under the Environment Protection and Biodiversity Conservation Act 1999 (DEWHA 2010b)<br>g. Survey guidelines for Australia's threatened mammals: Guidelines for detecting mammals listed as threatened under the Environment Protection and Biodiversity Conservation Act 1999 (DSEWPAC 2011a)<br>h. Survey guidelines for Australia's threatened reptiles: Guidelines for detecting reptiles listed as threatened under the Environment Protection and Biodiversity Conservation Act 1999 (DSEWPAC 2011b)<br>i. EPBC Act Policy Statement 3.21 - Industry guidelines for avoiding, assessing and mitigating impacts on EPBC Act listed migratory shorebird species (DoEE 2017a)<br>j. Threatened Species Scientific Committee: Conservation Advice *Pezoporus occidentalis* Night Parrot. Canberra: Department of the Environment (TSSC 2016a)<br>k. Threatened Species Scientific Committee: Conservation Advice *Macroderma gigas* Ghost Bat. Canberra: Department of the Environment (TSSC 2016b)<br>l. Threatened Species Scientific Committee: Conservation Advice *Rhinonicteris aurantia* (Pilbara form) (Pilbara Leaf-nosed Bat). Canberra: Department of the Environment (TSSC 2016c)<br>m. Threatened Species Scientific Committee: Conservation Advice *Macrotis lagotis* Greater Bilby. Canberra: Department of the Environment (TSSC 2016d)<br>n. Threatened Species Scientific Committee: Conservation Advice for *Liasis olivaceus barroni* (Olive Python- Pilbara subspecies) Canberra: Department of the Environment, Water, Heritage and the Arts (DEWHA 2008)<br>o. National Recovery Plan for the Greater Bilby *Macrotis lagotis*. (Pavey 2006)<br>p. National Recovery Plan for the Northern Quoll *Dasyurus hallucatus*. Department of Natural Resources, Environment, The Arts and Sport, Darwin (Hill & Ward 2010)<br>q. Threatened Species Scientific Committee: Commonwealth Listing Advice on Northern Quoll (*Dasyurus hallucatus*) (TSSC 2005)<br>r. Wildlife Conservation Plan for Migratory Shorebirds (DoE 2015) |

| | |
|---|---|
| | s. A review of ghost bat ecology, threats and survey requirements (Bullen 2021a)<br>t. A review of Pilbara leaf-nosed bat ecology, threats and survey requirements (Bullen 2021b) |
| **Subterranean Fauna** | |
| Required work | 22. Complete a desktop subterranean fauna survey to assess likelihood of subterranean fauna through the presence of suitable geology and review of historic subterranean fauna records in the area.<br>23. Complete a three-phase subterranean fauna survey include sampling inside and outside the impact areas that may be directly or indirectly impacted by the Proposal. |
| **Terrestrial environmental quality** | |
| Required work | 24. Assess the potential Acid Sulfate Soils (ASS) risk within the Development Envelope and present mitigation or management measures within the ERD, where relevant. |
| **Inland waters** | |
| Required work | 25. Complete groundwater modelling to determine the impact of groundwater drawdown from water abstraction and pit drawdown. |
| **Air quality** | |
| Required work | 26. Identify the air quality risk from Proposal related dust and asbestiform minerals to potential sensitive receptors within, and in the vicinity of, the Development Envelope. Identify relevant mitigation measures within the ERD. |
| **Greenhouse gas emissions** | |
| Required work | 27. Information on the Proposal's greenhouse gas emissions will be calculated and presented in the ERD in accordance with the *Environmental Factor Guideline: Greenhouse Gas Emissions* (EPA 2024a) or within a Greenhouse Gas Management Plan, as deemed appropriate. The information presented will detail greenhouse gas contributions from the Proposal and demonstrate that emissions can be effectively managed under the Commonwealth's Safeguard Mechanism.<br>28. The ERD will consider the WA *Greenhouse Gas Emissions Policy for Major Projects* (Government of Western Australia 2024). |
| **Social surroundings** | |
| Required work | 29. Undertake a desktop noise assessment, utilising modelling to determine the expected noise levels at identified sensitive receptors as a result of the Proposal.<br>30. Undertake a comprehensive Stakeholder engagement programme, including consultation with Traditional Owners, and provide the outcomes of the consultation within the ERD.<br>31. Describe how the *Aboriginal Heritage Act 1972* processes will consider physical and biological impacts to Aboriginal cultural heritage values within the proposal area. |

| Environmental Offsets | |
|---|---|
| Required work | 32. Preparation of an Impact Reconciliation Procedure to demonstrate the proponent's methodology for offset of significant residual impacts to the environment. This document will be prepared in accordance with the EPA's *Instructions on how to prepare Environmental Protection Act 1986 Part IV Impact Reconciliation Procedures and Impact Reconciliation Reports* (EPA 2021 or any subsequent revision). The Impact Reconciliation Procedure will also incorporate consideration of offsets for significant residual impacts to MNES under the *Environment Protection and Biodiversity Conservation Act 1999*. |

To support the making of an approval decision under Part 9 of the EPBC Act, information addressing the following economic and social matters will be provided during the assessment process:

- The cost of the proposal, including the basis for any estimations of costs and/or benefits.
- Expected employment impacts.
- Social amenity/public use of affected areas.
- Public concerns.
- Cultural and traditional activities in or relating to the affected area.
- Details of any public and stakeholder consultation activities including outcomes.

## 2.3 Stakeholder Consultation

The proponent must consult with stakeholders who are affected by or interested in the Proposal. Identification of stakeholders included assessment of individuals or groups that may be impacted by the Proposal, including underlying tenure holders, pastoral lease holders and Traditional Owners. This includes identification of relevant decision-making authorities (DMAs) (see Section 3), other relevant state (and Commonwealth) government agencies and local government authorities, the local community and environmental non-government organisations.

Key stakeholders for the Proposal include, but may not be limited to:

- Wanparta Aboriginal Corporation.
- Kariyarra Aboriginal Corporation.
- Main Roads Western Australia.
- De Grey Station.
- Strelley Pastoral Property.
- Pilbara Ports Authority.
- Water Corporation.
- WA Department of Jobs, Tourism, Science and Innovation (JTSI)
- Regulators, including:
  - WA Department of Mines, Petroleum and Exploration (DMPE).
  - WA Department of Water and Environmental Regulation (DWER).
  - Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW)
- DMAs listed under Section 3.

The proponent will address the following in the ERD:

- Identified stakeholders.
- Consultation undertaken to date, including with DMAs.
- Outcomes of the consultation.
- Ongoing and future stakeholder engagement.

## 2.4 Holistic Impact Assessment

In accordance with the EPA Instructions and Template: How to prepare an Environmental Review Document, the ERD will include a holistic impact assessment to detail connections and interactions between environmental factors which may, in combination, have potential for a significant effect on the environment. This will include an assessment of the overall environmental effect of the proposal, distinct from the assessment of each factor.

## 2.5 Cumulative Impact Assessment

The potential cumulative effects of the proposal will be assessed in the ERD, specifically in relation to past and current projects, including reasonably foreseeable projects which have not yet commenced. This assessment will consider the overlapping footprint between the proposal and the historical Pardoo Makanykarra mine site which was previously operated by the proponent and is now closed.

The ERD will include cumulative impact assessment of the following:

- Benthic communities and habitats
- Coastal processes
- Marine environmental quality
- Marine fauna (including migratory species)
- Flora and vegetation
- Subterranean Fauna
- Terrestrial Fauna (including migratory species)
- Inland waters
- Air quality
- Greenhous gas emissions
- Social surroundings

The cumulative impact assessment will also consider the *Advice of the EPA to the Minister for Environment under s. 16(e) of the EP Act on the cumulative environmental impacts of development in the Pilbara region* (EPA 2014).

The activities, scope and values relevant for cumulative impact assessment are summarised in Table 2-2 in relation to each factor.

*Table 2-2: Cumulative Impact Assessment Scope*

| Factor | Activities | Environmental Value | Scope |
|---|---|---|---|
| Benthic Communities and Habitats | Disturbance of benthic habitat for construction of desalination plant infrastructure<br>Brine discharge<br>Sediment mobilisation during construction | Benthic Communities and Habitats | Up to 75 km |
| Coastal Processes | Direct and indirect impacts to coastal processes | Coastal processes | Up to 50 km |
| Marine Environmental Quality | Brine discharge | Marine water and sediment quality | Up to 75 km |

| Factor | Activities | Environmental Value | Scope |
|---|---|---|---|
| Marine Fauna | Habitat disturbance<br>Direct interaction<br>Light | Marine fauna | Up to 75 km |
| Flora and Vegetation | Clearing of vegetation | Native vegetation<br>Significant flora | On a value-specific basis with consideration to the local and regional significance and the conservation risk of the species |
| Subterranean Fauna | Groundwater drawdown<br>Habitat removal through mining | Subterranean fauna | Local developments within 30 km |
| Terrestrial Environmental Quality | Clearing and disturbance of soils<br>Rehabilitation | Soil quality | Not considered |
| Fauna | Clearing of habitat<br>Direct fauna interactions | Fauna Habitat<br>Significant fauna | On a value-specific basis with consideration to the local and regional significance and the conservation risk of the species |
| Inland Waters | Groundwater drawdown<br>Catchment changes | Surface water quality and quantity<br>Groundwater quality and quantity | Local developments within 30 km |
| Air Quality | Dust emissions during construction and operations | Air Quality | Up to 75 km |
| Greenhouse Gas Emissions | Proposal emissions | Greenhouse Gas Emissions | Greenhouse gas emissions will be reviewed against the cumulative emissions within WA to determine the contribution made by the Proposal. |
| Social Surroundings | Physical presence of the project<br>Indirect impacts | Amenity and cultural values | Up to 75 km |

# 3 Decision-making Authorities

The DMAs remain as per those identified in the referral, with the addition of those listed in the EPA's *Notice of Decision to Assess Proposal*.

*Table 3-1: Decision-making authorities and processes*

| Decision-making authority | Legislation or Agreement regulating the activity | Approval required (and specify which proposal element the approval is related to) | Whether and how statutory decision-making process can mitigate impacts on the environment? (Yes/No and summary of reasons Include a separate line item for each relevant impact, and discuss how the EPA's factor objective will be met) |
|---|---|---|---|
| **Western Australian DMAs** | | | |
| Minister for Aboriginal Affairs | *Aboriginal Heritage Act 1972* | Section 16 authorisation to enter, excavate or remove anything on an Aboriginal site.<br><br>Section 18 to certain uses, where impact to an Aboriginal site is unavoidable.<br><br>Aboriginal Cultural Heritage Management Plan (ACHMP).<br><br>Relates to Social Surroundings. | Yes<br><br>This is a statutory process for assessing and authorising impacts to sites of potential Aboriginal heritage significance.<br><br>An ACHMP will also be developed for the project to manage Aboriginal heritage risks for approval by the Department of Planning, Lands and Heritage (DPLH).<br><br>This process provides for adequate regulation of potential impacts to sites of potential Aboriginal heritage significance as it relates to the EPA factor for Social Surroundings. |

| Decision-making authority | Legislation or Agreement regulating the activity | Approval required (and specify which proposal element the approval is related to) | Whether and how statutory decision-making process can mitigate impacts on the environment? (Yes/No and summary of reasons Include a separate line item for each relevant impact, and discuss how the EPA's factor objective will be met) |
|---|---|---|---|
| Minister for Environment | *Biodiversity Conservation Act 2016* | Authorisation to take threatened flora species.<br><br>Authorisation to take or disturb threatened fauna species.<br><br>Relates to Flora and Vegetation, Terrestrial Environmental Quality, Terrestrial Fauna. | Yes<br><br>The BC Act provides a statutory basis for the protection of threatened species, specially protected species, threatened ecological communities, critical habitat and key threatening processes. |
| Minister for Lands | *Land Administration Act 1997* | s. 79 lease of Crown land (note: approval of Minister for Mines also required under section 16 of the *Mining Act 1978*)<br><br>s. 91 Licence over Crown land<br><br>s. 144 Easement over Crown land | Yes<br><br>Provides for activities over Crown Land which is included within the Development Envelope. |
| Minister for Mines and Petroleum<br><br>Mining Registrar | *Mining Act 1978* | Provisions for granting of a mining lease, exploration licence, general purpose lease, retention licence, miscellaneous licence, prospecting licence | Yes<br><br>Provision for mining tenure which includes specific conditions relating to activities on that tenure. |
| Minister for Ports | *Port Authorities Act 1999* | s. 28 Lease/licence/Easement of land within control of Port Authority (term exceeding 5 years) | No<br><br>Provision for works within a Port Authority. |

| Decision-making authority | Legislation or Agreement regulating the activity | Approval required (and specify which proposal element the approval is related to) | Whether and how statutory decision-making process can mitigate impacts on the environment? (Yes/No and summary of reasons Include a separate line item for each relevant impact, and discuss how the EPA's factor objective will be met) |
|---|---|---|---|
| Minister for Transport | *Main Roads Act 1930* | Approval for commissioner to construct roads | No<br><br>Provision for works in relation to road construction. |
| Minister for Water | *Rights in Water and Irrigation Act 1914* | Section 5C Licence to take water<br><br>Section 26D Licence to construct or alter a well.<br><br>Relates to Inland Waters, Flora and Vegetation, Subterranean Fauna. | Yes<br><br>Provides a statutory process to assess and approve the construction of bores and abstraction of groundwater. |
| Chief Executive Officer, Department of Water and Environmental Regulation | *Environmental Protection Act 1986* | Part V Works Approval and Licence for construction and operation of a prescribed premises.<br><br>Relates to Benthic Communities and Habitats, Marine Environmental Quality, Marine Fauna, Flora and Vegetation, Terrestrial Environmental Quality, Inland Waters, Air Quality.<br><br>Native Vegetation Clearing Permit.<br><br>Relates to Flora and Vegetation, Terrestrial Fauna, Inland Waters, Terrestrial Environmental Quality. | Yes<br><br>The Works Approval and Licence enables the Department of Water and Environmental Regulation (DWER) to regulate emissions from a Project, providing prescriptive limits on emissions to air, water and land. This process will provide adequate regulation of emissions and discharges from the Proposal. |

| Decision-making authority | Legislation or Agreement regulating the activity | Approval required (and specify which proposal element the approval is related to) | Whether and how statutory decision-making process can mitigate impacts on the environment? (Yes/No and summary of reasons Include a separate line item for each relevant impact, and discuss how the EPA's factor objective will be met) |
|---|---|---|---|
| Chief Executive Officer, Department of Health | *Health Act 1911* | Approval for on-site disposal of waste water.<br><br>Relates to Flora and Vegetation, Terrestrial Environmental Quality, Inland Waters. | Yes<br><br>Approval for the on-site disposal of wastewater. If the predicted wastewater will be less than 540 L/day, the local government may process the application. Where wastewater is predicted to be above that daily limit, and the building serviced is not a single dwelling, the local government will prepare a report and forward the application to the Department of Health. The assessment considers whether the proposed system design has considered the appropriate wastewater system loading rates and other matters specified by the Health Regulations. |
| | *Health (Asbestos) Regulations 1992* | Ensuring that asbestos materials are handled and disposed of in ways that prevent contamination of the air and surrounding environment. | Yes<br><br>Ensuring that asbestos materials are handled and disposed of in ways that prevent contamination of the air and surrounding environment. |

| Decision-making authority | Legislation or Agreement regulating the activity | Approval required (and specify which proposal element the approval is related to) | Whether and how statutory decision-making process can mitigate impacts on the environment? (Yes/No and summary of reasons Include a separate line item for each relevant impact, and discuss how the EPA's factor objective will be met) |
|---|---|---|---|
| Executive Director, Department of Mines, Petroleum and Exploration | *Mining Act 1978*<br>- Mining Proposal and Mine Closure Plan<br>*Environmental Protection Act 1986 - Part V clearing permit* | Mining Proposal and Mine Closure Plan. Relates to Inland Waters, Terrestrial Environmental Quality, Air Quality.<br>Native Vegetation Clearing Permit.<br>Relates to Flora and Vegetation, Terrestrial Fauna, Inland Waters, Terrestrial Environmental Quality. | Yes<br>This is a statutory process for assessment and approval of impacts associated with mining activities through a Mining Proposal and Mine Closure Plan. These plans regulate:<br>• Mine infrastructure, including processing infrastructure.<br>• Waste rock dumps, stockpiles, tailings storage facilities, pits.<br>• Management of mining operations mitigate risks associated with asbestiform minerals.<br>• Mine closure, decommissioning and rehabilitation, including closure related fibrous management.<br>Regulation of mining activities by DMPE ensures the activities meet the EPA's objectives for Flora and Vegetation, Terrestrial Fauna, Inland Waters, Terrestrial Environmental Quality. |
| Chief Dangerous Goods Officer, Department of Mines Industry Regulation and Safety | *Dangerous Goods Safety Act 2004* | Regulates the manufacture, storage, possession handling, transport and use of dangerous goods.<br>Relates to Marine Environmental Quality, Benthic Communities and Habitats, Inland Waters, Flora and Vegetation, Terrestrial Environmental Quality. | Yes<br>Regulation of dangerous goods manages the environmental risk associated with transport, storage, use and disposal of dangerous goods sufficient to meet the EPA's objectives for the relevant factors. |

| Decision-making authority | Legislation or Agreement regulating the activity | Approval required (and specify which proposal element the approval is related to) | Whether and how statutory decision-making process can mitigate impacts on the environment? (Yes/No and summary of reasons Include a separate line item for each relevant impact, and discuss how the EPA's factor objective will be met) |
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| State Mining Engineer | *Mines Safety and Inspection Act 1994*<br>*Work Health and Safety Act 2020* | • Mine Safety<br>• s. 42(3)a approval to commence mining operations<br>• Management of risks associated with asbestiform minerals | Yes<br>Regulation of risks associated with asbestiform minerals, including requirements for a fibrous minerals management plan. |
| Chief Executive Officer, Department of Transport | *Marine Navigational Aids Act 1973 Navigable Waters Regulations 1958* | Reg 8 Permission to throw into or place things in port, harbour or navigable waters | No<br>Relates to marine safety. |
| Chief Executive Officer, Town of Port Hedland | *Building Act 2011* | • building permit (worker accommodation, offices etc) Planning and Development Act 2005<br>• planning approval/development approval | No.<br>Relates to planning and building permits. |
| Managing Director, Mains Roads Western Australia | *Road Traffic (Vehicles) Act 2012* | Heavy haulage approval | No.<br>Relates to heavy vehicle haulage. |
| **Commonwealth DMAs** | | | |
| Commonwealth Minister for the Environment | *Environment Protection and Biodiversity Conservation Act 1999* (Cth) | Part 9 approval to take a controlled action that will likely have a significant impact on Matters of National Environmental Significance (MNES) | Yes.<br>Listed threatened species and communities.<br>Listed migratory species. |

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