Robe Valley Iron Ore Mine

Application Number: **02081** Commencement Date: **19/10/2023** Status: **Locked**

1. About the project

1.1 Project details

1.1.1 Project title *

Robe Valley Iron Ore Mine

1.1.2 Project industry type *

Mining

1.1.3 Project industry sub-type

Iron ore mine

1.1.4 Estimated start date *

01/12/2028

1.1.4 Estimated end date *

31/12/2056

1.2 Proposed Action details

1.2.1 Provide an overview of the proposed action, including all proposed activities. *

Robe River Mining Company Pty Ltd is proposing to expand existing iron ore mining in order to sustain operations at Robe Valley, approximately 1,140 kilometres (km) north of Perth and 146 km southwest of Karratha, near the town of Pannawonica in the Pilbara region of Western Australia (Attachment 1, Robe Valley Iron Mine - Figures, Figure 1). The Proposed Action will have a life of mine (LoM) of approximately 28-years and is scheduled to commence in 2028, with first ore in 2031.

The Proposed Action will involve clearing (shown as a conceptual footprint) of up to approximately 16,718 ha within a Development Envelope of 45,373 ha (Attachment 1, Robe Valley Iron Mine - Figures, Figure 2 and Figure 3). It includes, but is not limited to:

- Extension and development of above and below water table mine pits.
- Ore processing, transport and handling infrastructure.
- Groundwater abstraction for water supply and for the dewatering of below water table mine pits and control of seepage from tailings storage facilities.
- Borefields, water pipelines and water management infrastructure.
- Surplus water management and associated infrastructure including use in processing, on-site use and options for storage (such as aquifer storage and recovery and/or re-injection) / discharge to disused mine pits, provision to others and continued discharge of excess water to Warramboo Creek.
- Mineral waste management, such as in-pit and ex-pit waste rock landforms, in-pit and ex-pit tailings1 storage facilities, land bridges, low grade ore stockpiles.
- Topsoil and sub-soil stockpiles.
- Infrastructure to manage surface water (such as crossings, diversion drains, culverts, levees etc.).
- Linear infrastructure (such as heavy and light vehicle access roads, rail, conveyors, pipelines, power and communications distribution networks).
- Associated infrastructure (including but not limited to workshops, offices, hydrocarbon storage areas, explosives storages, landfills, laydown areas, new accommodation camps, water treatment facilities and supporting infrastructure, water storages, closure related works, all associated infrastructure etc.).

As a result of implementation of the Proposed Action, for example, the following activities have the potential to have a significant environmental impact to MNES:

- Iron ore mining and associated infrastructure and activities (including but not limited to):
  o Clearing of native vegetation (including riparian vegetation associated with waterways e.g. ephemeral watercourses)
  o Clearing and mine pit excavation activities, placement of waste rock landforms, stockpiles and infrastructure, ore processing and storage of tailings, rail, heavy haulage and vehicle movements resulting in alteration / reduction / degradation / fragmentation of fauna habitat and impact to fauna individuals
  o Disturbance from mine pit blasting and construction / operational activities (increased dust, noise, vibration, light spill)
  o Groundwater abstraction / dewatering and water management activities resulting in habitat alteration.

Exclusions:

1) The Development Envelope of the Proposed Action will overlay segments of the existing Development Envelopes for approved Actions under the EPBC Act (EPBC 2016/7843 (Extension of Mesa A Warramboo Iron Ore Project, West Pannawonica, WA) and EPBC 2017/8017 (Develop the Mesa H Iron Ore Mining Operations 16 km SW Pannawonica, WA). However, the scope of the Proposed Action excludes activities that are part of, or required for continuation of, the existing mining operations (including closure activities) at Robe Valley, as approved under the Western Australian *Environmental Protection Act 1986* (Ministerial

Statements 776, 1112 and 1141) and the EPBC Act (EPBC 2016/7843 and EPBC 2017/8017). This includes any existing accommodation camps, or upgrades to existing accommodation camps and associated facilities, which are already approved under the various Ministerial Statements.

2) For the avoidance of doubt, the realignment of the North West Coastal Highway does not form part of the Proposed Action.

3) In addition, the scope of the Proposed Action subject to assessment under the EPBC Act excludes low impact activities and associated infrastructure including but not limited to drilling and associated activities for the purposes of supporting resource evaluation assessment, geotechnical assessment and hydrogeological investigations, environmental and heritage investigations. These activities will be subject to the relevant provisions under Western Australian Environmental Laws (e.g. *Environmental Protection Act 1986* (WA), *Rights in Water and Irrigation Act 1914* (RiWI Act)). The above-mentioned activities have no potential for significant impacts to MNES. These activities and associated infrastructure are also excluded from the scope of the proposal currently subject to environmental assessment by the State under Part IV of the *Environmental Protection Act 1986* (WA).

1.2.2 Is the project action part of a staged development or related to other actions or proposals in the region?

Yes

1.2.3 Is the proposed action the first stage of a staged development (or a larger project)?

No

1.2.4 Related referral(s)

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1.2.5 Provide information about the staged development (or relevant larger project).

The Proposed Action will occur alongside the following Approved Actions and utilise much of the same key infrastructure including ore processing facilities and rail infrastructure:

- EPBC Act (EPBC 2016/7843 (Extension of Mesa A Warramboo Iron Ore Project, West Pannawonica, WA)
- EPBC 2017/8017 (Develop the Mesa H Iron Ore Mining Operations 16 km SW Pannawonica, WA).

1.2.6 What Commonwealth or state legislation, planning frameworks or policy documents are relevant to the proposed action, and how are they relevant? *

Commonwealth

Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act):
The EPBC Act is the primary Commonwealth environmental legislation protecting Matters of National Environmental Significance (MNES) and is administered by the Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW).

State

Environmental Protection Act 1986 (WA) (EP Act):
The EP Act is the principal environmental legislation in the State. The EP Act established the Environmental Protection Authority (EPA) who are charged with development of environmental protection policies under Part III of the Act, and environmental impact assessment of proposals and schemes under Part IV. The EP Act is WA's primary environmental legislation governing environmental protection and impact assessment. Part IV, Division 1 of the EP Act, provides for the referral and assessment of proposals that may significantly impact the environment. The EPA Services division within the Department of Water and Environmental Regulation (DWER) administers the impact assessment process.

Environmental Protection Act 1986 (WA) (EP Act) (Part V):
Works approvals and licences regulate industrial emissions and discharges to air, land or water and apply to 'prescribed premises' categories defined in Schedule 1 of the Environmental Protection Regulations. Assessments consider the risk to the environment, public health and amenity and the controls proposed to mitigate these risks.

Activities and prescribed premise categories applicable to the Proposed Action include, but are not limited to:
• 5 – Processing of ore
• 6 – Mine dewatering
• 12 – Screening, etc. of materials
• 64 – Class II Putrescible landfill
• 73 – Bulk storage of chemicals etc.

Iron Ore (Robe River) Agreement Act 1964 (WA):
The majority of the Proposed Action Development Envelope occurs within State Agreement Mineral Lease 248SA (ML248SA) which is held pursuant to the *Iron Ore (Robe River) Agreement Act 1964*. A State Agreement is a legal contract between the Western Australian Government and a Proponent of a major project within State boundaries. A State Agreement details the rights, obligations, terms and conditions for developing a specific project.

Mining Act 1904 (WA) (Mining Act) and *Land Administration Act 1997* (WA):
Elements of the Proposed Action located outside of the State Agreement tenure are supported by various tenures granted under the *Mining Act 1904* (WA) (Mining Act) and *Land Administration Act 1997* (WA).
A Mining Proposal is required for any mining-related disturbance within tenements (i.e., all works apart from road intersection works) outside of the State Agreement area. Mining Proposals address all Proposal elements and activities and consider the likely environmental impacts within an 'Environmental Group Site' (a grouping of mining tenements that make up a mining operation). DMIRS aims to focus its assessment on factors not regulated elsewhere (e.g., such as key environmental factors assessed under Part IV of the EP Act).

Aboriginal Heritage Act 1972 (WA) (AH Act):
Section 16 Authorisation is required to enter, excavate, examine or remove anything on an Aboriginal site.
Section 18 Notices from the Minister is required where the impact on an Aboriginal site is unavoidable.

Biodiversity Conservation Act 2016 (WA) (BC Act):
Authorisation to take threatened species (Section 40 Authorisation) is always required irrespective of any approval granted or exemption under the EP Act. The BC Act provides the ability to impose conditions on

authorisations to take threatened species that mitigate or offset the impact of such actions.

Rights in Water and Irrigation Act 1914 (WA) (RiWI Act):
Assessments of licence applications and permits for activities including abstraction of groundwater, construction of bores, permit to disturb beds/banks (e.g. Section 26D licence required to construct dewatering and water supply bores; Section 5C licence required for the abstraction of groundwater; Section 11/17/21A Permit required to interfere or obstruct bed or banks).

Dangerous Goods Safety Act 2004 (WA):
Dangerous Goods (DG) Licence is required for the storage and handling of hazardous materials during construction. Dangerous goods licence applications require risk assessments demonstrating the dangerous goods site can be operated with minimal risk to people, property and the environment.

1.2.7 Describe any public consultation that has been, is being or will be undertaken regarding the project area, including with Indigenous stakeholders. Attach any completed consultation documentations, if relevant. *

The Proponent has undertaken consultation on the Proposed Action as summarised in Attachment 2, Robe Valley Iron Ore Mine - Supporting Tables, Table 1. Consultation to date has included State and Commonwealth regulators, representatives from the Robe River Kuruma Aboriginal Corporation, Shire of Ashburton, and leasees of the Yarraloola and Yalleen Pastoral Stations. Specific engagement activities have included:

- Briefings and presentations with key stakeholders to provide information and request feedback on the Proposed Action.
- Face to face meetings, meetings via MS Teams, telephone calls and written correspondence with potentially affected stakeholders to provide updates on the Proposed Action and obtain additional feedback.

The Proponent will continue to consult with relevant stakeholders during the environmental assessment process and during implementation of the Proposed Action. Identified key stakeholders include:

- The Robe River Kuruma Peoples.
- Robe River Kuruma Aboriginal Corporation.
- Shire of Ashburton.
- Leasees of the Yarraloola and Yalleen Pastoral Stations.
- Commonwealth Department of Climate Change, Energy, the Environment and Water.
- Western Australian Environmental Protection Agency.
- Western Australian Department of Water and Environmental Regulation.
- Western Australian Department of Jobs, Tourism, Science and Innovation.
- Main Roads Western Australia.
- Community of Pannawonica.

1.3.1 Identity: Referring party

Privacy Notice:

Personal information means information or an opinion about an identified individual, or an individual who is reasonably identifiable.

By completing and submitting this form, you consent to the collection of all personal information contained in this form. If you are providing the personal information of other individuals in this form, please ensure you have their consent before doing so.

The Department of Climate Change, Energy, the Environment and Water (the department) collects your personal information (as defined by the Privacy Act 1988) through this platform for the purposes of enabling the department to consider your submission and contact you in relation to your submission. If you fail to provide some or all of the personal information requested on this platform (name and email address), the department will be unable to contact you to seek further information (if required) and subsequently may impact the consideration given to your submission.

Personal information may be disclosed to other Australian government agencies, persons or organisations where necessary for the above purposes, provided the disclosure is consistent with relevant laws, in particular the Privacy Act 1988 (Privacy Act). Your personal information will be used and stored in accordance with the Australian Privacy Principles.

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Alternatively, email us at privacy@awe.gov.au.

☑ **Confirm that you have read and understand this Privacy Notice ***

1.3.1.1 Is Referring party an organisation or business? *

Yes

Referring party organisation details

ABN/ACN	71008694246
Organisation name	ROBE RIVER MINING CO. PTY. LTD.
Organisation address	152-158 St Georges Terrace, Perth WA 6000

Referring party details

Name	Stephen Jones
Job title	Director
Phone	+61 4 3668 2503
Email	rtioenvapprovals@riotinto.com
Address	152-158 St Georges Terrace, Perth WA 6000

1.3.2 Identity: Person proposing to take the action

1.3.2.1 Are the Person proposing to take the action details the same as the Referring party details? *

No

1.3.2.2 Is Person proposing to take the action an organisation or business? *

Yes

Person proposing to take the action organisation details

ABN/ACN	71008694246
Organisation name	ROBE RIVER MINING CO. PTY. LTD.
Organisation address	152-158 St Georges Terrace, Perth WA 6000

Person proposing to take the action details

Name	Stephen Jones
Job title	Director
Phone	+61 4 3668 2503
Email	rtioenvapprovals@riotinto.com
Address	152-158 St Georges Terrace, Perth WA 6000

1.3.2.14 Are you proposing the action as part of a Joint Venture? *

Yes

Joint Venture Name	Business Address	ABN/ACN	Responsible Person	Email
Mitsui Iron Ore Development Pty Ltd	WA 6000	85008734361		
Nippon Steel Australia Pty Ltd	NSW 2000	64001445049		
Rio Tinto Limited	WA 6000	96004458404		

1.3.2.15 Are you proposing the action as part of a Trust? *

No

1.3.2.17 Describe the Person proposing the action's history of responsible environmental management including details of any proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources against the Person proposing to take the action. *

The Proponent (Robe River Mining Co. Pty Ltd) and Rio Tinto Limited have satisfactory records of environmental management. There are no current proceedings involving the Proponent or Rio Tinto Limited regarding protection of the environment or the conservation and sustainable use of natural resources.
The Proponent is a member of the Rio Tinto group of companies. Rio Tinto's iron ore business has over 50 years of experience mining iron ore responsibly in the Pilbara region of Western Australia. With a network of 15 mines, including joint ventures, four port facilities, 1,700 km of rail network and related infrastructure, the company produces more than 300 million tonnes of iron ore annually. Rio Tinto has developed and refined environmental management policies, systems and procedures over decades of operational mining experience in the Pilbara region. These are successfully applied at the company's existing Pilbara iron ore mine sites and will be applied to the Proposed Action.

The key components of Rio Tinto's environmental management approach that are applicable to the Proposed Action include:

- Rio Tinto's Iron Ore Health, Safety, Environment and Communities (HSEC) Policy (Attachment 4, Rio Tinto's Iron Ore Health, Safety, Environment and Communities Policy). The HSEC Policy is the guiding document for environmental management and provides context and direction for continuous improvement.
- Rio Tinto's Environmental Management System (EMS) This is a continuous improvement model that covers key elements including systematic assessment of environmental risk and legal requirements and the development of objectives and targets for improvement, as well as systems for training, operational control, communication, emergency response, corrective actions, audits and review.

1.3.2.18 If the person proposing to take the action is a corporation, provide details of the corporation's environmental policy and planning framework

The Rio Tinto Iron Ore HSEC Policy (Attachment 4, Rio Tinto's Iron Ore Health, Safety, Environment and Communities Policy) is the guiding document for environmental management and provides context and direction for continuous improvement. Rio Tinto's iron ore mines in the Pilbara region operate under an Environmental Management System (EMS) which is a continuous improvement model covering systematic assessment of environmental risk and legal requirements and the development of objectives and targets for improvement, as well as systems for training, operational control, communication, emergency response, corrective actions, audits and review. The Proposed Action will be undertaken in accordance with both HSEC Policy and the EMS.

1.3.3 Identity: Proposed designated proponent

1.3.3.1 Are the Proposed designated proponent details the same as the Person proposing to take the action? *

Yes

Proposed designated proponent organisation details

ABN/ACN	71008694246
Organisation name	ROBE RIVER MINING CO. PTY. LTD.
Organisation address	152-158 St Georges Terrace, Perth WA 6000

Proposed designated proponent details

Name	Stephen Jones
Job title	Director
Phone	+61 4 3668 2503
Email	rtioenvapprovals@riotinto.com
Address	152-158 St Georges Terrace, Perth WA 6000

1.3.4 Identity: Summary of allocation

Confirmed Referring party's identity

The Referring party is the person preparing the information in this referral.

ABN/ACN	71008694246
Organisation name	ROBE RIVER MINING CO. PTY. LTD.
Organisation address	152-158 St Georges Terrace, Perth WA 6000
Representative's name	Stephen Jones
Representative's job title	Director
Phone	+61 4 3668 2503
Email	rtioenvapprovals@riotinto.com
Address	152-158 St Georges Terrace, Perth WA 6000

Confirmed Person proposing to take the action's identity

The Person proposing to take the action is the individual, business, government agency or trustee that will be responsible for the proposed action.

ABN/ACN	71008694246
Organisation name	ROBE RIVER MINING CO. PTY. LTD.
Organisation address	152-158 St Georges Terrace, Perth WA 6000
Representative's name	Stephen Jones
Representative's job title	Director
Phone	+61 4 3668 2503
Email	rtioenvapprovals@riotinto.com
Address	152-158 St Georges Terrace, Perth WA 6000

Confirmed Proposed designated proponent's identity

The Person proposing to take the action is the individual or organisation proposed to be responsible for meeting the requirements of the EPBC Act during the assessment process, if the Minister decides that this project is a controlled action.

Same as Person proposing to take the action information.

1.4 Payment details: Payment exemption and fee waiver

1.4.1 Do you qualify for an exemption from fees under EPBC Regulation 5.23 (1) (a)? *

No

1.4.3 Have you applied for or been granted a waiver for full or partial fees under Regulation 5.21A? *

No

1.4.5 Are you going to apply for a waiver of full or partial fees under EPBC Regulation 5.21A?

No

1.4.7 Has the department issued you with a credit note? *

No

1.4.9 Would you like to add a purchase order number to your invoice? *

No

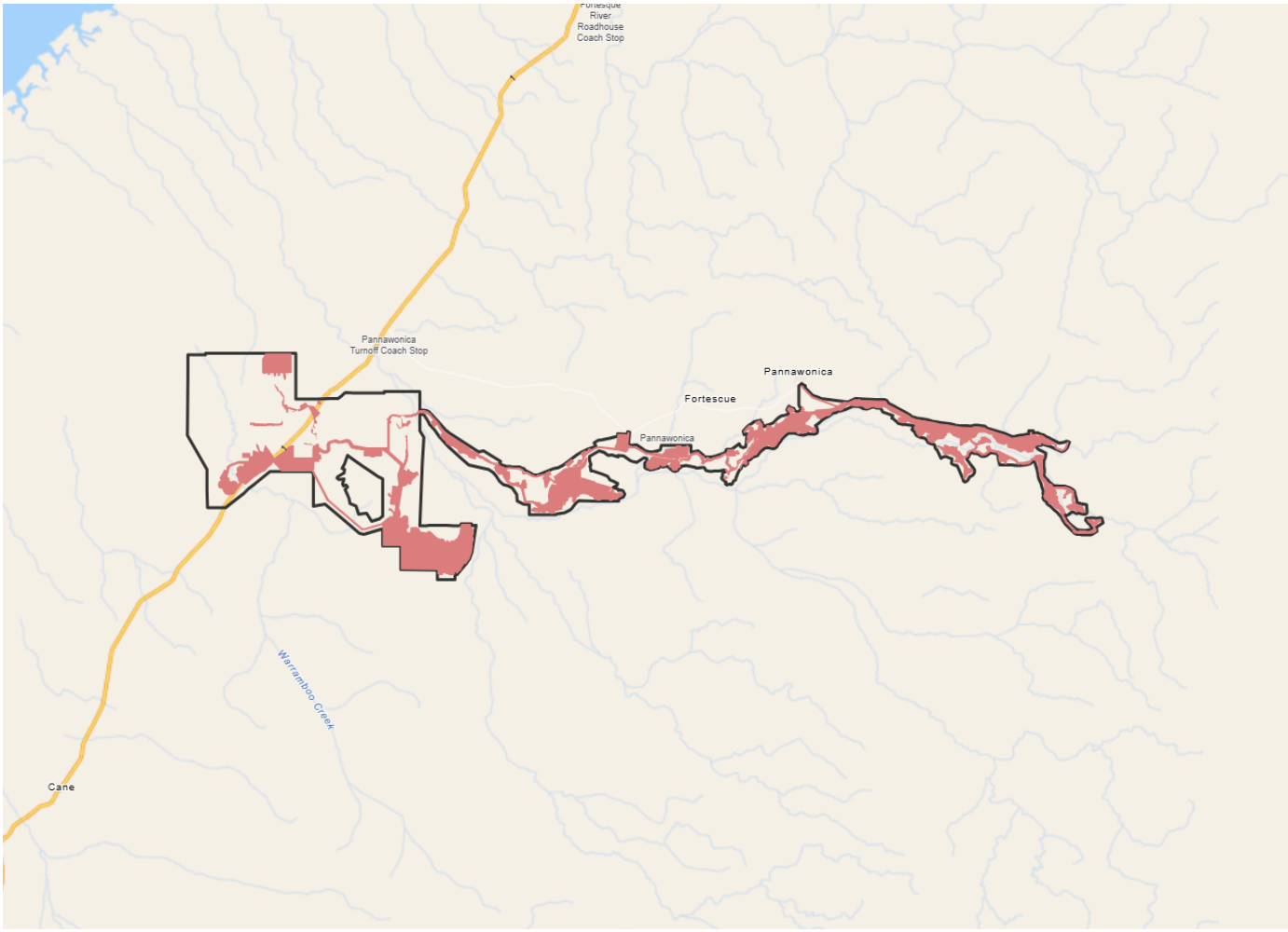
1.4 Payment details: Payment allocation

1.4.11 Who would you like to allocate as the entity responsible for payment? *

Proposed designated proponent

2. Location

2.1 Project footprint



Project Area: 45517.47 Ha **Disturbance Footprint:** 16772.02 Ha

2.2 Footprint details

2.2.1 What is the address of the proposed action? *

Shire of East Pilbara approximately 162km southwest of Karratha (via North West Coastal Highv

2.2.2 Where is the primary jurisdiction of the proposed action? *

Western Australia

2.2.3 Is there a secondary jurisdiction for this proposed action? *

No

2.2.5 What is the tenure of the action area relevant to the project area? *

The premises is accessed via the North West Coastal Highway, approximately 162 km southwest of Karratha (by road). The Proposed Action Development Envelope is located on Crown Land comprising the following:

- Reserves (R9701 and R39702).
- General Leases, for various purposes including water supply, rail corridor and railway areas, powerlines, road areas, industrial areas and the Pannawonica townsite.
- Pastoral Leases - Yarraloola and Yalleen Pastoral Stations Leases (N49500 and N49492 respectively) held by entities associated with members of the Robe River Iron Associates Joint Venture (Yalleen Pastoral Co. Pty Ltd and the Yarraloola Pastoral Station Partnership, respectively).
- Public Roads (North West Coastal Highway and Pannawonica Road).
- Unallocated Crown Land.
- Closed Road.

The majority of the Proposed Action Development Envelope occurs within State Agreement Mineral Lease 248SA (ML248SA) which is held pursuant to the *Iron Ore (Robe River) Agreement Act 1964*, as well as Exploration Licences held under the *Mining Act 1978*. These exploration licences will be converted to appropriate tenure to support development of the Proposed Action.
The Proposal is located on the traditional lands of the Robe River Kuruma Peoples. The Proposal intersects the Kuruma Marthudunera Part B Native Title Determination Area (WCD2018/003). Traditional Owner usage of the land within the Proposal area is ongoing.
Land subject to interests held by third parties will be subject to the grant of additional tenure or subject to access agreements prior to ground disturbing activities.
Tenure held pursuant to the *Iron Ore (Robe River) Agreement Act 1964 and Mining Act 1978* is shown in Attachment 1, Robe Valley Iron Mine - Figures, Figure 4.

3. Existing environment

3.1 Physical description

3.1.1 Describe the current condition of the project area's environment.

The Proposed Action Development Envelope and surrounds has been subject to pastoral land use activities for over a century and iron ore mining since the late 1900s when productive mining commenced in the Mesa K, Mesa L, Mesa M, Mesa N and Middle Robe areas.
No local land use planning or zoning laws are applicable to the Proposal, as it is managed under various types of tenure pursuant to the Iron Ore (Robe River) Agreement Act 1964 and the Mining Act 1978.
The majority of the vegetation present in the Proposed Action Development Envelope has been assessed as in Excellent or Very Good condition. Exceptions include areas cleared for the previous and existing mine operations, infrastructure, vehicle tracks, rail line and drill pads as well as areas with high weed infestations and areas that have been heavily grazed or trampled by cattle. Large tracts of vegetation at Middle Robe, Mesa G, Mesa I and north of Mesa A have also been subject to bushfire during the past 18 months.
The ephemeral Robe River itself is subject to extreme natural events (e.g. large rainfall events such as from tropical cyclones and extended dry spells) which determine the structure of pool morphology, riparian condition and consequently the pool ecological assemblages. The biodiversity and predictability of biodiversity can be significantly changed and effectively 'reset' by these events.

3.1.2 Describe any existing or proposed uses for the project area.

Existing land uses include iron ore mining, mineral exploration, pastoral activities (Yarraloola and Yalleen Stations) and traditional owner activities such as camping, fishing and hunting.

3.1.3 Describe any outstanding natural features and/or any other important or unique values that applies to the project area.

The Development Envelope is located in the Robe Valley. It is associated with the Robe Land System which is characterised by dissected plateaux and long lines of low mesas, traversed by the Robe River. Mesa formations are relatively common in the western Pilbara region and not considered rare at the national, regional or local level, nor are they under any formal protection. In-tact mesa escarpments in particular may comprise or include environmental and heritage values. The Proponent is committed to continuing to design mining operations in this area such that, with the exception of access points, proposed mining will largely be confined to the internal sections of mesa landforms in order to retain the intrinsic values of the mesa escarpments.

The Proponent has committed to implementing designs that will also minimise fragmentation of habitat between the mesa escarpment and the Robe River and riparian habitat along the Robe River. In addition, ongoing consultation with Robe River Kuruma Aboriginal Corporation will be conducted to inform designs and activities that avoid or minimise impacts to the cultural significance of mesa landforms in the Proposed Action Development Envelope.

Robe Valley Mesa Formations
The Proposed Action Development Envelope spans a 90 km section of the Robe Valley which includes Exposed Robe Pisolite mesas that have formed in ancestral drainage channels of the Robe River. As a result of on-going regional uplift and erosion of the surrounding formations, the Robe Pisolite which once formed along valley / drainage floors now forms an inverted topography occurring as mesa-form outcrops ranging from 30 to 50 m above the present surrounding landscape. It is estimated between 250 and 300 exposed Robe Pisolite mesas occur in the western Pilbara region with 34 named mesas and numerous un-named minor mesa formations and breakaways occurring in the Robe Valley.

Mesa formations in the Robe Valley can provide important ecological habitats, primarily the gullies and breakaway habitats associated with the outer mesa escarpments. Sections of the escarpments often host features such as caves, rock crevices, overhangs, fissures and boulders that may provide a range of habitats for fauna, including conservation significant fauna.

Mesas also have significant Aboriginal heritage and cultural values, particularly associated with the mesa escarpments and can include artefact scatters, rockshelters, scarred trees and quarries. The mesa landforms themselves can comprise features of the landscape with cultural significance, including serving as navigational landmarks.

Robe River
The Robe Valley is traversed by the ephemeral Robe River, which is one of several major river systems in the Pilbara and flows generally westward over approximately 250 km. The Robe River intersects the Proposed Action Development Envelope in several locations (Attachment 1, Robe Valley Iron Mine - Figures, Figure 3). For the majority of its course, the river is ephemeral with a wide, shallow floodplain. During the dry season, water is often restricted to a series of semi-permanent and permanent pools that are maintained by sub-surface flow.

The semi-permanent and permanent pools of the Robe River and associated riparian vegetation may represent important habitat features for terrestrial fauna. Pools of the Robe River may also have importance for both the local community and the Robe River Kuruma Peoples for cultural heritage significance and importance and for camping, fishing and hunting.

3.1.4 Describe the gradient (or depth range if action is to be taken in a marine area) relevant to the project area.

The Proposed Action will occur across mesa landforms and surrounding plains of the Robe Valley. The Robe Valley spans approximately 90 km from west to east and plains in the Development Envelope occur at elevations ranging from 60 m AHD in the west to 230 m AHD in the east. The highest mesa, located in the Middle Robe area, is approximately 75 m high (300 m AHD). The mesa escarpments have variable gradients ranging from approximately 5º to 30º.

3.2 Flora and fauna

3.2.1 Describe the flora and fauna within the affected area and attach any investigations of surveys if applicable.

Ecological Communities

No Commonwealth listed threatened ecological communities have been recorded in the Proposed Action Development Envelope and none are expected to occur.

Flora

No Threatened flora species listed under the EPBC Act have been recorded in the Proposed Action Development Envelope and none are expected to occur (refer to Attachment 7 - Robe Valley Iron Ore Mine - Flora and Fauna Supplementary Information, Section 1.2, page 1 for further detail).

Terrestrial Fauna

Six terrestrial fauna species listed under the EPBC Act as MNES have been previously recorded within the Proposed Action Development Envelope and one additional MNES species is considered likely to occur. Further detail on survey effort to date and an assessment of the likelihood of occurrence for MNES species is provided in the text below.

Previous Survey Effort

Over 28 fauna surveys have been previously commissioned within the Proposed Action Development Envelope and surrounds between 1991 and 2020, comprising 14 Detailed (formerly Level 2) surveys and 14 Targeted fauna surveys (Attachment 2, Robe Valley Iron Ore Mine - Supporting Tables, Table 2). In total, the 14 Detailed surveys included 162 trap sites open for a total of 39,637 trap nights, as well as over 1,110 motion sensitive camera trap nights, 231 echolocation recording nights, 333 hours of avifauna census, 134 hours of spotlighting, 33 hours of active foraging and over 127 habitat assessments.

Likelihood of Occurrence of Terrestrial Fauna MNES

Six terrestrial fauna species listed under the EPBC Act as MNES have been previously recorded within the Proposed Action Development Envelope. Four of these are listed as Threatened under the EPBC Act and the remaining 2 as Migratory:

- Northern Quoll (*Dasyurus hallucatus*) (Endangered)
  The Development Envelope contains gorge/gully and breakaway/cliff habitats which contain rocky environments of high relief, some of which may provide Northern Quoll denning sites for breeding and shelter and diverse microhabitats for foraging. Northern Quolls have been previously recorded at locations where these habitat types have been mapped: Mesa A Hub, Mesa D, Mesa F, Mesa G, Mesa I, Mesa J Hub, Mesa LMN and Middle Robe. In addition, sections of Rocky Hill, Major Drainage, Riparian and Wetland habitats that are present within the Development Envelope may provide diverse microhabitats that are beneficial for Northern Quoll foraging and dispersal habitat.
- Ghost Bat (*Macroderma gigas*) (Vulnerable)
  A number of Ghost Bat diurnal roost caves and feed caves are present within sections of gorge/gully and breakaway/cliff habitats in the Development Envelope. These microhabitats may provide roosting sites for breeding and sheltering, and support prey species and foraging sites for the Ghost Bat. Ghost Bats have a relatively broad foraging habitat ranging across tree-lined drainage lines, isolated trees on the outskirts of plains and productive plains of thin woodland over clumped tussock or Triodia hummock grass which are present within Alluvial Plain, Clay Plain, Major Drainage, Minor Drainage, Riparian, Rocky Hill, Stony Plain and Wetland habitats in the Development Envelope. Ghost Bats have previously been recorded within some gorge/gully and breakaway/cliff habitats present including areas at Mesa A Hub, Mesa D, Mesa F, Mesa G, Mesa I, Mesa J Hub, Mesa LMN and Middle Robe.
- Pilbara Leaf-nosed Bat (*Rhinonicteris aurantia*) (Vulnerable)
  The Pilbara Leaf-nosed Bat has been recorded within the Development Envelope on numerous occasions in areas of gorge/gully and breakaway/cliff habitat, but despite extensive survey, there are no known Category 1, 2 or 3 roosts within the Development Envelope.
- Pilbara Olive Python (*Liasis olivaceus barroni*) (Vulnerable).
  Some caves and overhangs within Gorge/Gully and Breakaway habitats may provide suitable

denning sites and ambush locations for this species. The thick vegetation, log piles/woody debris and water sources may also provide shelter and ambush locations within Major Drainage, Riparian and Wetland habitats. Pilbara Olive Python have been recorded at Mesa I, Mesa LMN, Mesa A Hub, Mesa J Hub and Middle Robe.

- Common Sandpiper (*Actitis hypoleucos*) and Oriental Pratincole (*Glareola maldivarum*) (Migratory). No 'high value' migratory bird habitat is present within the conceptual footprint of the Proposed Action. Migratory birds typically inhabit coastal/tidal floodplains and will generally temporarily utilise inland water pools for shelter and refuge purposes. The Major Drainage, Riparian and Wetland habitat types may provide adequate sheltering locations for migratory birds, such as Common Sandpiper and Oriental Pratincole, and may be used on occasions where these species are blown inland.

An interim report summarising previous surveys in the region (Attachment 5, Robe Valley Next Steps Interim Vertebrate Fauna Assessment (November 2024), Section 4.4.4, Page 52) also identified one additional MNES species that is considered likely to occur within the Proposed Action Development Envelope:

- Grey Falcon (*Falco hypoleucos*) (Vulnerable).
  The nearest record for the Grey Falcon is approximately 14 km north-east of the Middle Robe area (DBCA Threatened and Priority species database; Department of Biodiversity, Conservation and Attractions 2022). The Grey Falcon is considered a scarce visitor to the Pilbara where it is found mostly on the coastal plains between the De Grey and Ashburton rivers. The species prefers lightly wooded coastal and riverine plains. Suitable habitat is in a number of areas across the Proposed Action Development Envelope and is not restricted to this or the wider subregion.

A further 19 species were considered Possible to occur in some areas of the Development Envelope (see Attachment 7, Robe Valley Iron Ore Mine - Flora and Fauna Supplementary Information, Section 1.3.2, Page 2).

Refer to Attachment 5, Robe Valley Next Steps Interim Vertebrate Fauna Assessment (November 2024) (Table 14, Section 4.4.1, Page 45) for additional detail on assessment of the likelihood of occurrence for significant species across the Development Envelope.

Ongoing Survey Effort

Database searches and literature reviews indicate 370 vertebrate fauna species have been recorded within a 50 km radius of the Proposed Action Development Envelope. A total of 273 species have been recorded within the Development Envelope or surrounds, representing 74% of expected species. The fauna assemblages recorded across the Development Envelope are considered typical for the subregion and the broader Pilbara bioregion (Attachment 5, Robe Valley Next Steps Interim Vertebrate Fauna Assessment (November 2024), Executive Summary, Page iv).

Given the high percentage of expected species recorded across previous surveys, a review by Astron Environmental Services in 2024 (Attachment 10, Rio Tinto Robe Valley Fauna Recommendations Document, Executive Summary, pages iv and v) recommended the following additional (infill) surveys be undertaken to meet current State Environmental Protection Authority and Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) guidance documents:

- Detailed two phase survey, including habitat mapping in the Dinner Camp Bore and Mesa F areas if development is proposed here.
- Ground-truthing in remaining non-mapped areas for Highway, Mesa D and E.
- Targeted survey for MNES species.

These surveys are currently underway.

Habitat Features

Twelve broad fauna habitats have been identified across the Proposed Action Development Envelope and surrounds: Alluvial Plain, Breakaway/Cliff, Clay Plain, Disturbed, Gorge/Gully, Low Hills and Slopes, Major Drainage, Minor Drainage, Riparian, Rocky Hill, Stony Plain and Wetland. None of these habitats are considered restricted at the local, sub-regional or regional scale (Attachment 5, Robe Valley Next Steps Interim Vertebrate Fauna Assessment (November 2024), Section 5.1, Page 55).

A large number of habitat features have been previously recorded throughout the Development Envelope, comprising caves/overhangs and water bodies. Further detail is provided in Attachment 7, Robe Valley Iron Ore Mine - Flora and Fauna Supplementary Information, Section 1.4, Page 4.

Aquatic Fauna

No Commonwealth listed aquatic fauna (with exception of the Blind Cave Eel discussed under Subterranean Fauna below) have been recorded in the Proposed Action Development Envelope and none are expected to occur (see Attachment 7, Robe Valley Iron Ore Mine - Flora and Fauna Supplementary Information, Section 1.5, Page 4).

Subterranean Fauna

One MNES stygofauna species has been recorded within the Proposed Action Development Envelope, *Ophisternon candidum* (Blind Cave Eel; BCE), listed as Vulnerable under the EPBC Act. The species is considered to be associated with the regional alluvial aquifer of the Robe River (Attachment 9, Subterranean Fauna Assessment (Biota 2019), Section 4.4.1.1, Page 38) and the alluvial aquifers of Jimmawurrada and Bungaroo Creeks. Conditions relating to minimising impacts to the species are included in EPBC 2017/8017 (*Develop the Mesa H Iron Ore Mining Operations 16 km SW Pannawonica, WA*).

Observational and eDNA records of the BCE from ongoing targeted surveys confirm the continued presence of this species throughout the Robe River catchment, including within the predicted groundwater drawdown extent of Mesa H. The proponent has commissioned additional targeted surveys to improve understanding of Blind Cave Eel habitat both within the Development Envelope and the broader region. This survey work commenced in 2022 and is ongoing.

3.2.2 Describe the vegetation (including the status of native vegetation and soil) within the project area.

Regional vegetation

The Proposed Action is located within the Fortescue Botanical District, which is a part of the Eremaean Province. The Fortescue Botanical District is essentially a tree and shrub-steppe with Eucalyptus trees, Acacia shrubs, *Triodia pungens* and *Triodia wiseana*. Some mulga (Acacia aneura and close relatives) occurs in valleys and there are short-grass plains on alluvia.

Regional scale vegetation associations have been defined from broad vegetation mapping of Western Australia (WA), completed on a broadscale (1:1,000,000 and 1:250,000). The dominant vegetation associations within the Proposed Action Development Envelope include:

- 82 (Hamersley 82.3) – Hummock grasslands, sparse shrub steppe; kanji and *Acacia bivenosa* over hard spinifex *Triodia basedowii* and *Triodia wiseana*
- 609 (Hammersley 609) – hummock grassland with scattered bloodwoods and snappy gum Triodia spp., *Corymbia dichromophloia, Eucalyptus leucophloia*
- 173 (Chichester 173.2) – Hummock grasslands, shrub steppe; kanji over soft spinifex and *Triodia wiseana* on basalt
- 583 (Stuart Hills 583) – Hummock grasslands, low tree steppe; snappy gum over *Triodia wiseana.*

Local vegetation

As discussed above, vegetation in the Proposed Action Development Envelope is generally well understood with over 70 reconnaissance/targeted/detailed flora and vegetation surveys completed within the Development Envelope and surrounds between 1995 and 2020.

Previous surveys have identified 182 vegetation types which broadly fit within the following vegetation descriptions:

- Acacia dominated vegetation at varying densities (i.e., scattered shrubs to tall, closed scrub) over *Triodia* hummock grassland (75 vegetation types).
- Eucalypt (*E. victrix, E. leucophloia, E. camaldulensis, C. hamersleyana, C. zygophylla*) scattered trees to woodland with a frequently *Acacia*-dominated mid-storey over *Triodia* hummock grassland (99 vegetation types).
- *Grevillea wickhamii* dominated shrubland (three vegetation types).
- *Triodia*-dominated hummock grassland (four vegetation types).

None of the vegetation units identified were considered rare or restricted, or to match the descriptions of a Threatened Ecological Community (TEC). Within the Proposed Action Development Envelope and surrounds, vegetation condition ranged from Excellent to Degraded.

Soils

Fifteen (15) broad soil landscape units have been mapped across the Proposed Action Development Envelope. The dominant units include:

- Gf1: steep ranges on basic lavas along with dolomites, tuff, banded iron formations, and dolerite dykes, with some narrow valley plains and high-level gently undulating areas of limited extent.
- FA13: ranges of banded jaspilite and chert along with shales, dolomites, and iron ore formations; some areas of ferruginous duricrust as well as occasional narrow winding valley plains and steeply dissected pediments. This unit is largely associated with the Hamersley and Ophthalmia Ranges.
- Oc66: Gently undulating pediplains extending out from breakaways capped by Robe pisolite deposits and other related formations. There may be a few small flat-topped residuals rising above the pediplains.

3.3 Heritage

3.3.1 Describe any Commonwealth Heritage Places Overseas or other places recognised as having heritage values that apply to the project area.

There are no Commonwealth listed heritage areas within the Proposed Action Development Envelope.

3.3.2 Describe any Indigenous heritage values that apply to the project area.

The details provided in this section do not include any culturally sensitive information. The referral form was provided to the Robe River Kuruma Aboriginal Corporation seeking feedback in December 2024, prior to submission of the referral to DCCEEW.
The Proposed Action is located largely within the Robe River Kuruma Native Title determined areas.
The Proponent has negotiated and executed a claim wide land use agreement with the Robe River Kuruma Peoples. This agreement provides the framework through which both parties work together on Country to manage and maintain the cultural values in the areas in which the Proponent operates. Ongoing engagement with the Robe River Kuruma Aboriginal Corporation is maintained through formal and informal engagement frameworks.
The Proponent has established a baseline understanding of the cultural values of the Proposed Action through ongoing implementation of the agreement, the ongoing relationship with the Robe River Kuruma Peoples, and extensive archaeological and ethnographic surveys undertaken to date within the Proposed Action Development Envelope.
A number of indicative cultural heritage sites have been recorded in the Proposed Action Development Envelope including tangible sites (e.g. physical sites such as artefact scatters, rock shelters and modified trees) and intangible values (e.g. mythologies, stories and song lines linked to one or more landscape features).
In addition, water systems are of high cultural significance to the Robe River Kuruma Peoples. Water systems not only sustain the landscape, they form the basis of long and continued understandings of Country and are often key markers of cultural identity.
The Proponent is committed to consultation with the Robe River Kuruma Peoples to identify further places of cultural heritage significance, and to facilitate appropriate management of cultural heritage values.
The Proposed Action will affect access to the area during operations and upon closure by the Robe River Kuruma Peoples, noting that this access is already affected by existing Robe Valley operations.

3.4 Hydrology

3.4.1 Describe the hydrology characteristics that apply to the project area and attach any hydrological investigations or surveys if applicable. *

The Proposed Action overlies existing and historical mining areas. The key water-related values for the Proposed Action are the ecological, social and cultural values associated with Robe River and Warramboo Creek.

Surface Water

The Proposed Action is predominantly within the Robe River catchment, with exception of the Highway deposit which is within the Warramboo Creek catchment. As for most watercourses in the Pilbara, the normal condition for the rivers and creeks is dry. Runoff in the area is ephemeral, typically only occurring following significant or long duration rainfall events.

Groundwater

The Robe Valley is comprised of channel iron deposits (CID) that form a chain of mesas which follow the Robe River palaeochannel and its associated tributaries. Groundwater in the region originates from direct infiltration of rainfall and indirectly from surface water flows. The occurrence of groundwater in Robe Valley is largely associated with primary porosity of river and creek alluvials, primary porosity and secondary weathering induced permeability of the CID and secondary permeability and porosity from weathering in the various basement formations (Marra Mamba, Wittenoom, Ashburton, Nanutarra, Duck Creek Dolomite).

Permanent and semi-permanent pools

Permanent and semi-permanent pools exist along the Robe River due to the significant subsurface flow in the coarse channel gravels of the Robe River alluvial aquifer. Water quality in these can be highly variable, ranging from fresh to brackish. There is potentially a strong hydraulic correlation between the Robe River alluvium and the underlying aquifer, the direction of interaction changes seasonally in response to stream flow events and evapotranspiration. Streamflow events also recharge groundwater, causing the groundwater level to rise, creating large and continuous pools. After a period of no flow, the hydraulic gradient between the groundwater and the pools reverse and groundwater discharges into the pools. Ephemeral pools eventually become disconnected from intermittent pools and as surface water evaporates, these pools reduce in size or disappear.

4. Impacts and mitigation

4.1 Impact details

Potential Matters of National Environmental Significance (MNES) relevant to your proposed action area.

EPBC Act section	Controlling provision	Impacted	Reviewed
S12	World Heritage	No	Yes
S15B	National Heritage	No	Yes
S16	Ramsar Wetland	No	Yes
S18	Threatened Species and Ecological Communities	Yes	Yes
S20	Migratory Species	Yes	Yes
S21	Nuclear	No	Yes
S23	Commonwealth Marine Area	No	Yes
S24B	Great Barrier Reef	No	Yes
S24D	Water resource in relation to large coal mining development or coal seam gas	No	Yes
S26	Commonwealth Land	No	Yes
S27B	Commonwealth Heritage Places Overseas	No	Yes
S28	Commonwealth or Commonwealth Agency	No	Yes

4.1.1 World Heritage

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

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4.1.1.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.1.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

No World Heritage areas or values intersect the Proposed Action.

4.1.2 National Heritage

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

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4.1.2.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.2.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

No National Heritage areas or values intersect the Proposed Action.

4.1.3 Ramsar Wetland

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

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4.1.3.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.3.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

No World Heritage areas or values intersect the Proposed Action.

4.1.4 Threatened Species and Ecological Communities

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

Threatened species

Direct impact	Indirect impact	Species	Common name
No	No	Calidris acuminata	Sharp-tailed Sandpiper
No	No	Calidris ferruginea	Curlew Sandpiper
Yes	Yes	Dasyurus hallucatus	Northern Quoll, Digul [Gogo-Yimidir], Wijingadda [Dambimangari], Wiminji [Martu]
No	No	Erythrotriorchis radiatus	Red Goshawk
No	No	Falco hypoleucos	Grey Falcon
Yes	Yes	Liasis olivaceus barroni	Pilbara Olive Python
Yes	Yes	Macroderma gigas	Ghost Bat
No	No	Numenius madagascariensis	Eastern Curlew, Far Eastern Curlew
No	Yes	Ophisternon candidum	Blind Cave Eel
No	No	Pezoporus occidentalis	Night Parrot
No	No	Rhinonicteris aurantia (Pilbara form)	Pilbara Leaf-nosed Bat
No	No	Rostratula australis	Australian Painted Snipe

Ecological communities

—

4.1.4.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

Yes

4.1.4.2 Briefly describe why your action has a direct and/or indirect impact on these protected matters. *

An EPBC Act Protected Matters Search (6 May 2024) identified 12 Listed Threatened species as potentially occurring within the Proposed Action Development Envelope and surrounds (Attachment 6, Robe Valley Iron Ore Mine - EPBC Protected Matters Search). Of these, the Proposed action has potential to cause direct or indirect impacts to the following:

- *Dasyurus hallucatus* – Northern Quoll (Endangered).
- *Macroderma gigas* – Ghost Bat (Vulnerable).
- *Liasis olivaceus barroni* – Pilbara Olive Python (Vulnerable).
- *Ophisternon candidum* – Blind Cave Eel (Vulnerable).

Despite extensive survey, there are no known Category 1, 2 or 3 Pilbara Leaf-nosed Bat (Rhinonicteris aurantia) roosts within the Development Envelope. Therefore, the action is considered unlikely to have a significant impact on this species.

Potential direct and indirect impacts to identified Protected Matters include:

- Loss of habitat leading to population decline
- Loss of habitat leading to population fragmentation.
- Degradation of habitat due to weed invasion leading to population decline.
- Increased mortality due to interactions with vehicles, equipment or infrastructure.
- Increased fauna mortality due to vegetation clearing processes.
- Increased mortality due to species interactions, including predation and competition.
- Interruptions to hydrogeological processes leading to habitat degradation or loss.
- Changes to the fire regime.
- Increased dust, light, noise or vibration.
- Direct loss of and change to subterranean fauna habitat and mortality of individuals.
- Loss of habitat through contamination.

The Pilbara biographical region supports an abundance of MNES habitats and high value biodiversity, and the Proponent recognises the important role they play in mitigating potential impacts listed above. A detailed impact assessment is currently being prepared to further consider the risk associated with each of these potential impacts and to define appropriate measures to avoid or minimise impacts. Mitigation measures being considered during the development of the Proposed Action will align to demonstrated successful measures for existing operations and are summarised in Section 4.1.4.7.

The Proponent has also demonstrated substantial experience in applying contemporary design and mitigation measures over the past 16+ years to protect MNES at Robe Valley. Attachment 1, Robe Valley Iron Ore Mine - Figure, Figure 5 and Figure 6, show where some of these measures, now considered standard practice at Robe Valley, have been incorporated into the Proposal.

4.1.4.4 Do you consider this likely direct and/or indirect impact to be a Significant Impact? *

Yes

4.1.4.5 Describe why you consider this to be a Significant Impact. *

Based on survey findings to date, the Proposed Action has the potential to fragment and/or decrease the population of MNES including Northern Quoll, Ghost Bat, Pilbara Olive Python and Blind Cave Eel.

Despite extensive survey, there are no known Pilbara Leaf-nosed Bat Category 1, 2 or 3 roosts within the Development Envelope. Therefore, no significant impacts to this species are anticipated.

4.1.4.7 Do you think your proposed action is a controlled action? *

Yes

4.1.4.8 Please elaborate why you think your proposed action is a controlled action. *

In the absence of mitigation and management measures, the implementation of the Proposed action could potentially result in significant impacts to the Northern Quoll, Ghost Bat, Pilbara Olive Python and Blind Cave Eel, through:

- Loss of habitat leading to population decline.
- Loss of habitat leading to population fragmentation.
- Degradation of habitat due to weed invasion leading to population decline.
- Increased mortality due to interactions with vehicles, equipment or infrastructure.
- Increased fauna mortality due to vegetation clearing processes.
- Increased mortality due to species interactions, including predation and competition.
- Interruptions to hydrogeological processes leading to habitat degradation or loss.
- Changes to the fire regime.
- Increased dust, light, noise or vibration.
- Direct loss of and change to subterranean fauna habitat and mortality of individuals.
- Loss of habitat through contamination.

4.1.4.10 Please describe any avoidance or mitigation measures proposed for this action and attach any supporting documentation for these avoidance and mitigation measures. *

Existing mining operations at Mesa A, H and K hubs in the Robe Valley demonstrate that areas of critical habitat such as mesa escarpments are stable, and the structural integrity can be maintained during mining by ensuring retention of an adequate width of escarpment and implementation of appropriate blast management techniques.
Annual monitoring and compliance reporting under existing approved Actions (EPBC 2016/7843 and EPBC 2017/8017) consistently demonstrates the persistence of MNES in the vicinity of existing operations in the Robe Valley. Further studies have been commissioned by the proponent to assess the efficacy of Mining Exclusion Zones that have been implemented in the vicinity of these operations.
Given the above, mitigation measures being considered during the development of the Proposed Action will align to demonstrated successful measures for existing operations and include:

Avoid:

- With the exception of mine access points, designs will largely avoid disturbance to in-tact mesa escarpments where the majority of the Gorge/Gully, Breakaway/Cliff and Rocky Hills fauna habitats are known to occur (see Attachment 1, Robe Valley Iron Ore Mine - Figures, Figure 5 and Figure 6). Segments of the mesa escarpments can provide suitable denning, roosting and foraging habitat for fauna species.
- Designs will avoid direct impacts to all recorded caves considered to be critical habitat (Category 2 caves and Category 3 caves in an apartment complex) for Ghost Bats.
- The use of barbed wire will be avoided except where legislated.

Minimise:

- Designs will minimise fragmentation of habitat between in-tact mesa escarpments and the Robe River and riparian habitat along the Robe River.
- Designs will minimise direct impacts to alluvial aquifers where the Blind Cave Eel has been recorded.
- Infrastructure will be located to avoid or limit clearing within Major Drainage, Minor Drainage, Riparian and Wetland habitats which are thought to be conduits for fauna dispersal and movement between foraging sites.
- Previously disturbed areas will be preferentially used where practicable.
- Existing infrastructure will be utilised where practicable.
- Direct impacts to fauna from vehicle strikes will be minimised through the use of speed limits and strict management of access outside of the active mining area.
- The Proponent will utilise surplus water from mine pit dewatering for water supply as far as practicable.
- Continued implementation of a Blast Management Framework to limit vibration emissions and subsequent structural damage to bat roosts or disturbance to Ghost Bat individuals roosting.
- Temporary mobile lighting will be installed in active mine pits and active operational areas, similar to the existing operations at Robe Valley. Lights will be directed inwards towards mine activities to minimise lighting effects on fauna in adjacent areas.
- Dust emissions will be managed through continued application of dust suppression methods including water sprays, where applicable.
- The Proponent has well established strategies for monitoring and management of the risk of weed ingress, feral animals and increase in fire at its Pilbara operations that will continue to be implemented in the Development Envelope to manage these risks.
- Groundwater abstraction will be minimised to that required to access the below water table resource and to meet site water requirements.
- Hydrocarbons will be handled, stored and disposed of in accordance with legal requirements.
- Hydrocarbon storage will be inspected on a regular basis to identify any maintenance requirements.
- Spill response procedures will be followed to contain and clean-up any hydrocarbon spills.

Rehabilitate:

- Preparation and implementation of a Mine Closure Plan in accordance with the DMIRS *Statutory Guidelines for Mine Closure Plans* (March 2020 v4.0).
- The Mine Closure Plan will include a closure objective to ensure that vegetation on rehabilitated land is self-sustaining and compatible with the final land use.

Additional surveys and studies have been commissioned to improve understanding of the receiving environment, inform the design process and facilitate a revision of the above mitigation measures to ensure they are adequately robust across the construction, operations and closure phases of the Action.

4.1.4.11 Please describe any proposed offsets and attach any supporting documentation relevant to these measures. *

The Proponent will develop an offset approach for any significant residual environmental impacts, including offsets for disturbance of significant habitat or habitat critical for the survival of significant species, in consultation with DCCEEW.

4.1.5 Migratory Species

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

Direct impact	Indirect impact	Species	Common name
Yes	Yes	Actitis hypoleucos	Common Sandpiper
No	No	Apus pacificus	Fork-tailed Swift
No	No	Calidris acuminata	Sharp-tailed Sandpiper
No	No	Calidris ferruginea	Curlew Sandpiper
No	No	Calidris melanotos	Pectoral Sandpiper
No	No	Charadrius veredus	Oriental Plover, Oriental Dotterel
No	No	Crocodylus porosus	Salt-water Crocodile, Estuarine Crocodile
Yes	Yes	Glareola maldivarum	Oriental Pratincole
No	No	Hirundo rustica	Barn Swallow
No	No	Motacilla cinerea	Grey Wagtail
No	No	Motacilla flava	Yellow Wagtail
No	No	Numenius madagascariensis	Eastern Curlew, Far Eastern Curlew
No	No	Pandion haliaetus	Osprey

4.1.5.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

Yes

4.1.5.2 Briefly describe why your action has a direct and/or indirect impact on these protected matters. *

An EPBC Act Protected Matters Search (6 May 2024) (Attachment 6, Robe Valley Iron Ore Mine - EPBC Protected Matters Search) identified 12 Listed Migratory species as potentially occurring within the Proposed Action Development Envelope and surrounds. Of these, the Proposed action may result in minor direct or indirect impacts on the following:

- Common Sandpiper (*Actitis hypoleucos*)
- Oriental Pratincole (*Glareola maldivarum*).

Migratory birds typically inhabit coastal/tidal floodplains and will generally temporarily utilise inland water pools for shelter and refuge purposes. The Major Drainage, Riparian and Wetland habitat types provide adequate sheltering locations for migratory birds, such as Common Sandpiper and Oriental Pratincole, and may be used on occasions where these species are blown inland.

4.1.5.4 Do you consider this likely direct and/or indirect impact to be a Significant Impact? *

No

4.1.5.6 Describe why you do not consider this to be a Significant Impact. *

Suitable habitat for the migratory species listed above is not restricted to the Proposed Action Development Envelope or wider subregion and these species are considered unlikely to utilise any of the habitats within the Development Envelope as major feeding, roosting or nesting areas.

4.1.5.7 Do you think your proposed action is a controlled action? *

No

4.1.5.9 Please elaborate why you do not think your proposed action is a controlled action. *

The proposed Action is unlikely to have a significant impact on migratory species potentially occurring within the Proposed Action Development Envelope and surrounds. Suitable habitat for the migratory species including the Common Sandpiper and Oriental Pratincole is not restricted to the Proposed Action Development Envelope or wider subregion and these species are considered unlikely to utilise any of the habitats within the Development Envelope as major feeding, roosting or nesting areas.

4.1.5.10 Please describe any avoidance or mitigation measures proposed for this action and attach any supporting documentation for these avoidance and mitigation measures. *

The Proponent will consistently employ the mitigation hierarchy while implementing the Proposed Action so as to minimise impacts to Migratory species. Please refer to Section 4.1.4.10 of this application which outlines relevant mitigation measures being considered during the development of the Proposed Action. Additional surveys and studies have been commissioned to improve understanding of the receiving environment, inform the design process and facilitate a revision of these mitigation measures to ensure they are adequately robust across the construction, operations and closure phases of the Action.

4.1.5.11 Please describe any proposed offsets and attach any supporting documentation relevant to these measures. *

No offsets for these species are proposed.

4.1.6 Nuclear

4.1.6.1 Is the proposed action likely to have any direct and/or indirect impact on this protected matter? *

No

4.1.6.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

The Proposed action does not include any nuclear actions.

4.1.7 Commonwealth Marine Area

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

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4.1.7.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.7.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

The Proposed Action is terrestrial based and will not impact on any Commonwealth Marine Areas.

4.1.8 Great Barrier Reef

4.1.8.1 Is the proposed action likely to have any direct and/or indirect impact on this protected matter? *

No

4.1.8.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

The Proposed Action is located in Western Australia and will not impact on the Great Barrier Reef.

4.1.9 Water resource in relation to large coal mining development or coal seam gas

4.1.9.1 Is the proposed action likely to have any direct and/or indirect impact on this protected matter? *

No

4.1.9.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

The Proposed Action is not for a large coal mining development or coal seam gas project.

4.1.10 Commonwealth Land

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

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4.1.10.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.10.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

No World Heritage areas or values intersect the Proposed action.

4.1.11 Commonwealth Heritage Places Overseas

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

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4.1.11.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.11.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

No Commonwealth Heritage places or values intersect the Proposed action.

4.1.12 Commonwealth or Commonwealth Agency

4.1.12.1 Is the proposed action to be taken by the Commonwealth or a Commonwealth Agency? *

No

4.2 Impact summary

Conclusion on the likelihood of significant impacts

You have indicated that the proposed action will likely have a significant impact on the following Matters of National Environmental Significance:

- Threatened Species and Ecological Communities (S18)

Conclusion on the likelihood of unlikely significant impacts

You have indicated that the proposed action will unlikely have a significant impact on the following Matters of National Environmental Significance:

- World Heritage (S12)
- National Heritage (S15B)
- Ramsar Wetland (S16)
- Migratory Species (S20)
- Nuclear (S21)
- Commonwealth Marine Area (S23)
- Great Barrier Reef (S24B)
- Water resource in relation to large coal mining development or coal seam gas (S24D)
- Commonwealth Land (S26)
- Commonwealth Heritage Places Overseas (S27B)
- Commonwealth or Commonwealth Agency (S28)

4.3 Alternatives

4.3.1 Do you have any possible alternatives for your proposed action to be considered as part of your referral? *

No

4.3.8 Describe why alternatives for your proposed action were not possible. *

Justification of the Proposal

The Proponent supplies the global market with iron ore from the Pilbara and progressively seeks to develop resources within tenure, environmental and social constraints. This Proposed Action is required as part of the long-term plan to sustain iron ore production from Robe Valley. The Proposed Action has been designed to utilise existing infrastructure and facilities as far as practicable.

Production from the Proposed Action is strategically important for continued production of Robe Valley Fines and Robe Valley Lump iron ore products. These speciality iron ore products have a long history of production and are valued by specialty steel producers for their unique metallurgical applications. The Proposed Action will result in economic benefits for Australia and Western Australia through:

- Contribution to the value of mineral exports
- Royalties and taxation payments
- Development and ongoing sustaining capital investment
- Sustaining direct and indirect employment opportunities in the Pilbara and other regions of WA
- Sustaining demand for goods and services supporting the national, state and local economy.

The ongoing activities of the Proponent will continue to support social and economic development projects, including:

- Continued education, training, employment and business opportunities for local people, including the Robe River Kuruma Peoples.
- Continued funding for a range of organisations in the region, including sporting and cultural groups.

The Proposed Action will continue to use Robe River Mining Company Pty Ltd’s existing infrastructure, including ports and railway, power, communications and road networks. This will reduce the extent of new infrastructure required and result in a smaller conceptual footprint than would otherwise be required for a greenfields project of this scale.

Location Alternative and Project Optimisation

The location of the Proposed Action is necessarily constrained by the location of target iron ore mineralisation. While flexibility will be employed where possible to mitigate impacts via appropriate mine planning and risk-based siting and design, the Proponent is pursuing development of the Proposed Action to maintain production levels as guided by the business planning process.

The mitigation hierarchy and a risk-based approach has and will continue to be employed during all phases of developing and implementing the Proposed Action to limit impacts to the receiving environment and MNES-listed species.

Knowledge of relevant environmental values gained through previous and ongoing site investigations will inform the planning and design of the Proposed Action.

Siting and design of key infrastructure features, such as waste rock landforms, tailings storage facilities, ore haulage routes and mineralised material stockpiles will be considered strategically to minimise impacts, including loss or fragmentation of habitat, and to achieve optimal closure outcomes.

5. Lodgement

5.1 Attachments

1.2.1 Overview of the proposed action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Attachment 1 - Robe Valley Iron Ore Mine - Figures.pdf Robe Valley Iron Ore Mine Referral - Supporting Figures	17/03/2025	No	High

1.2.7 Public consultation regarding the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Attachment 2 - Robe Valley Iron Ore Mine - Supporting Tables.pdf Robe Valley Iron Ore Mine Referral - Supporting Tables	17/03/2025	No	High

1.3.2.17 (Person proposing to take the action) Proposer's history of responsible environmental management

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Attachment 3 - Robe River Mining Co. Pty Ltd - ASIC Company Extract (redacted).pdf Robe River Mining Co Pty Ltd - Asic Company Extract (redacted version)	06/03/2025	No	High
#2.	Document	Attachment 3 - Robe Valley Iron Ore Mine - Robe River Mining Co. Pty Ltd - ASIC Company Extract.pdf Robe Valley Iron Ore Mine - ASIC Company Extract	06/03/2025	Yes	High
#3.	Document	Attachment 4 - Rio Tinto's Iron Ore Health, Safety, Environment and Communities Policy.pdf Rio Tinto Iron Ore Health, Safety, Environment and Communities Policy	06/03/2025	No	High

3.2.1 Flora and fauna within the affected area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Attachment 10 - Rio Tinto Robe Valley Fauna Recommendations Document.pdf Robe Valley - Review of previous fauna surveys and recommendations for future survey	20/11/2024	No	High
#2.	Document	Attachment 5 - Robe Valley Next Steps Interim Vertebrate Fauna Assessment (November 2024).pdf	20/11/2024	No	High

		Robe Valley Next Steps Interim Vertebrate Fauna Assessment			
#3.	Document	Attachment 6 - EPBC Act Protected Matters Report.pdf EPBC Act Protected Matters Report	06/05/2024	No	High
#4.	Document	Attachment 7 - Robe Valley Iron Ore Mine - Flora and Fauna Supplementary Information.pdf Supplementary flora and fauna information	18/03/2025	No	High
#5.	Document	Attachment 8 - Targeted Night Parrot Fauna Assessment (Astron 2018).pdf Targeted Night Parrot Fauna Assessment Report	10/04/2018	No	Medium
#6.	Document	Attachment 9 - Subterranean Fauna Assessment (Biota 2019).pdf Subterranean fauna assessment report for the Robe Valley locality	15/02/2019	No	Medium
#7.	Link	Threatened and Priority Fauna Database. https://www.dbca.wa.gov.au/management/threatened..			High

4.1.4.10 (Threatened Species and Ecological Communities) Avoidance or mitigation measures proposed for this action

	Type	Name	Date	Sensitivity	Confidence
#1.	Link	Mine Closure Plan Guidance https://www.dmp.wa.gov.au/Documents/Environment/..			High

5.2 Declarations

Completed Referring party's declaration

The Referring party is the person preparing the information in this referral.

ABN/ACN	71008694246
Organisation name	ROBE RIVER MINING CO. PTY. LTD.
Organisation address	152-158 St Georges Terrace, Perth WA 6000
Representative's name	Stephen Jones
Representative's job title	Director
Phone	+61 4 3668 2503
Email	rtioenvapprovals@riotinto.com
Address	152-158 St Georges Terrace, Perth WA 6000

☑ Check this box to indicate you have read the referral form. *

☑ I would like to receive notifications and track the referral progress through the EPBC portal. *

☑ By checking this box, I, **Stephen Jones of ROBE RIVER MINING CO. PTY. LTD.**, declare that to the best of my knowledge the information I have given on, or attached to this EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence. *

☑ I would like to receive notifications and track the referral progress through the EPBC portal. *

Completed Person proposing to take the action's declaration

The Person proposing to take the action is the individual, business, government agency or trustee that will be responsible for the proposed action.

ABN/ACN	71008694246
Organisation name	ROBE RIVER MINING CO. PTY. LTD.
Organisation address	152-158 St Georges Terrace, Perth WA 6000
Representative's name	Stephen Jones

Representative's job title	Director
Phone	+61 4 3668 2503
Email	rtioenvapprovals@riotinto.com
Address	152-158 St Georges Terrace, Perth WA 6000

☑ Check this box to indicate you have read the referral form. *

☑ I would like to receive notifications and track the referral progress through the EPBC portal. *

☑ I, **Stephen Jones of ROBE RIVER MINING CO. PTY. LTD.**, declare that to the best of my knowledge the information I have given on, or attached to the EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence. I declare that I am not taking the action on behalf or for the benefit of any other person or entity. *

☑ I would like to receive notifications and track the referral progress through the EPBC portal. *

✔ Completed Proposed designated proponent's declaration

The Proposed designated proponent is the individual or organisation proposed to be responsible for meeting the requirements of the EPBC Act during the assessment process, if the Minister decides that this project is a controlled action.

Same as Person proposing to take the action information.

☑ Check this box to indicate you have read the referral form. *

☑ I would like to receive notifications and track the referral progress through the EPBC portal. *

☑ I, **Stephen Jones of ROBE RIVER MINING CO. PTY. LTD.**, the Proposed designated proponent, consent to the designation of myself as the Proposed designated proponent for the purposes of the action described in this EPBC Act Referral. *

☐ I would like to receive notifications and track the referral progress through the EPBC portal. *