

Atlas Iron Pty Ltd - Sanjiv Ridge Stage 1 Below Groundwater Table Mining

Application Number: 02667

Commencement Date:
02/11/2024

Status: Locked

1. About the project

1.1 Project details

1.1.1 Project title *

Atlas Iron Pty Ltd - Sanjiv Ridge Stage 1 Below Groundwater Table Mining

1.1.2 Project industry type *

Mining

1.1.3 Project industry sub-type

Iron ore mine

1.1.4 Estimated start date *

01/01/2028

1.1.4 Estimated end date *

01/06/2032

1.2 Proposed Action details

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

Atlas Iron Pty Ltd (Atlas) is seeking approval to revise the existing Stage 1 mine design to support below water table mining. The following provides an overview of the proposed action:

- Progression of mining within four existing open pits (Sparrow, Shark Gully, Runway North and Runway South) to allow extraction of ore from below the groundwater table;
- Establishment of three additional above water table open pits; Redlake, Pedmore, and CD15;
- Dewatering requirements for mining below the groundwater table and discharge of surplus groundwater to local surface water courses; and
- A total of 196.8 ha of native vegetation clearing is required to enable the expansion of various existing key mining areas (existing pits, waste rock landforms and other supporting infrastructure (i.e. laydown areas, access roads).

The Proposed Action will remain within the existing approved EPBC 2017/7861 Mine Development Envelope (MDE) of 2257.6 hectares (ha), which aligns with the existing Ministerial Statement (MS1125) boundary. A map of the Proposed Action within the approved Mine Development Envelope has been included as Attachment 1 – Figure 1.

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)

EPBC Number	Project Title
2017/7861	Corunna Downs Iron Ore Mining Project, Pilbara Region, 33km south Marble Bar, WA

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

Atlas has commenced development of the Sanjiv Ridge (previously known as Corunna Downs) Iron Ore Project (the Project) located, approximately 240 km southeast of Port Hedland and approximately 33 km south of the Marble Bar townsite in the Pilbara of Western Australia. The project consists of two developments, with Stage 1 being the primary operations and Stage 2 being a satellite operation (Glen Herring) located to the west of the Stage 1.

Stage 1 of the Project was referred for Commonwealth approval in 2017 to the then Department of the Environment and Energy, now the Department of Climate Change, Energy, the Environment and Water (DCCEEW), with action being approved in 2018 under EPBC 2017/7861. Stage 1 was subsequently referred to the state Environmental Protection Authority (EPA) in 2019 with approval being issued under Ministerial Statement (MS) 1125 in 2020. Stage 1 involves the mining of five open pits (Sparrow, Razorback, Shark Gully, Runway North and Runway South), all above water table mining using conventional drill and blast, load and haul methods to extract an iron ore resource of approximately 23.1 million tonnes (Mt) over a mine life of approximately six years. Ore is trucked to the run-of-mine (ROM) pad for crushing and screening with the final product hauled to Utah Point in Port Hedland for export overseas. This referral is to seek approval to expand the mine within the Stage 1 project area only to allow the extraction of ore below the groundwater table at various pits as well as increase the clearing allocation to allow for the expansion of supporting infrastructure across the Project.

Whilst Stage 2 does not form part of this referral, information is provided for context to the larger project.

Stage 2 of the Project was referred to the then Department of Agriculture, Water and Environment, now DCCEEW, in 2021, with the action being approved in 2022 under EPBC 2021/8885. Stage 2 was also referred to the state EPA in 2021 with approval issued under MS 1197 in 2022. Clearing for Stage 2 of the Project commenced in 2023 with mining commencing in 2024 resulting in an additional three open pits and two additional WRL's. The Stage 2 area is still being developed in accordance with approvals and will not be extending below the water table at this time.

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

This referral is being made under the *Commonwealth's Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). In compiling this referral, reference has been made to key guidelines and supporting documents, including the Commonwealth's *Significant Impact Guidelines 1.1* (Significant Impact Guidelines) and relevant species-specific documentation. The Significant Impact Guidelines provide guidance as to the interpretation of significance in determining the level of impact of the Proposed Action and will be used in this referral in respect of impacts on Matters of National Environmental Significance (MNES) relevant to the Proposed Action area.

Environmental approvals for this Proposed Action will also be required under various Western Australian (WA) legislation. The Proposed Action will also be referred under Part IV of the *Environmental Protection Act 1986* (EP Act) to the WA Environmental Protection Authority (EPA).

A number of studies conducted to support this referral has indicated potential impacts on terrestrial fauna, inland waters, and subterranean fauna.

Approvals under the *Mining Act 1978* (Mining Act) will also be required, comprising of a Mining Development and Closure Proposal, which will be prepared to allow amendment to the disturbance footprint currently approved for the Sanjiv Ridge operation.

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. *

Stakeholder consultation regarding the Proposed Action is ongoing. The Proposed Action is part of an existing operation that has established stakeholder engagement strategies, which include identification of relevant stakeholders, undertaking appropriate levels of consultation, and maintenance of engagement records.

Surrounding communities are kept informed of the Project activities including the Proposed Action through various modes of engagement to raise and discuss any issues, concerns or opportunities and provide feedback. Atlas have actively engaged at various levels with relevant government organisations throughout development of the Proposed Action approvals, including DCCEEW, Department of Water and Environmental Regulation (DWER), EPA, and Department of Mines Petroleum and Exploration (Formerly Department Energy Mines Industry Regulation and Safety) and will continue to do so throughout the assessment.

A specific stakeholder consultation plan regarding the Stage 1 expansion will be developed to ensure that all potential stakeholders are appropriately engaged at all stages of the process, and community concerns are recorded and taken into consideration during the planning processes.

Atlas is committed to continuing consultation with stakeholders through the approval, construction, operational and closure phases of the proposed action to ensure stakeholders are regularly consulted as the project develops and any concerns raised are addressed efficiently.

1.3.1 Identity: Referring party

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1.3.1.1 Is Referring party an organisation or business? *

Yes

Referring party organisation details

ABN/ACN	63110396168
Organisation name	ATLAS IRON PTY LTD
Organisation address	1314 Hay St, West Perth WA 6005

Referring party details

Name	Larissa Byrne
Job title	Specialist Approvals and Compliance
Phone	+61 6228 8235
Email	larissa.byrne@atlasiron.com.au
Address	1314 Hay St, West Perth WA 6005

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? *

Yes

Person proposing to take the action organisation details

ABN/ACN 63110396168

Organisation name ATLAS IRON PTY LTD

Organisation address 1314 Hay St, West Perth WA 6005

Person proposing to take the action details

Name Larissa Byrne

Job title Specialist Approvals and Compliance

Phone +61 6228 8235

Email larissa.byrne@atlasiron.com.au

Address 1314 Hay St, West Perth WA 6005

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

No

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. *

Atlas has a satisfactory record of responsible environmental management. The Sanjiv Ridge operation has been managed by Atlas, with no significant environmental incidents recorded. The Environmental Management System in place at Atlas ensures that any incidents are investigated, and controls are put in place to prevent reoccurrence.

Compliance with existing EPBC approvals (see Item 1.2.4) are reported annually and available via the Atlas website. To date, only two non-compliances with EPBC approval conditions have been recorded. In 2023, two non-compliances were recorded against conditions 8A and 8B of EPBC 2017/7861, both relating to failure to report incidents and non-compliances with commitments made in plans. These related to a failure to meet one of the Significant Species Management Plan (SSMP) targets of zero significant species deaths, as well as a finding that the fence around one turkeys nest on site was 0.3m lower than the 1.8m height committed to in the SSMP.

No convictions under any environmental legislation have been recorded relating to Atlas operations.

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

Atlas has an environmental Policy (Attachment 2 – Environmental Policy) that outlines their commitment to responsible and efficient environmental management and performance at their operations.

The Environmental Management System (EMS) in place ensures compliance with all applicable environmental legislation and other regulatory requirements is maintained. This EMS also ensures continual improvement in environmental management, through innovation, technology and long-term planning.

Atlas strives to improve environmental awareness in both employees and contractors, by ensuring visibility of environmental requirements, and integration of these requirements into work processes.

Environmental risks at Atlas' operations are managed through regular risk assessment, including identification, assessment and mitigation of environmental risks across all phases of operation. These risks are regularly reviewed to ensure that operations are conducted in an environmentally sustainable manner.

Please refer to Attachment 2A for the Environmental Management System.

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	63110396168
Organisation name	ATLAS IRON PTY LTD
Organisation address	1314 Hay St, West Perth WA 6005
Proposed designated proponent details	
Name	Larissa Byrne
Job title	Specialist Approvals and Compliance
Phone	+61 6228 8235
Email	larissa.byrne@atlasiron.com.au
Address	1314 Hay St, West Perth WA 6005

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	63110396168
Organisation name	ATLAS IRON PTY LTD
Organisation address	1314 Hay St, West Perth WA 6005
Representative's name	Larissa Byrne
Representative's job title	Specialist Approvals and Compliance
Phone	+61 6228 8235
Email	larissa.byrne@atlasiron.com.au
Address	1314 Hay St, West Perth WA 6005

✔ 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.

Same as Referring party information.

✔ 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

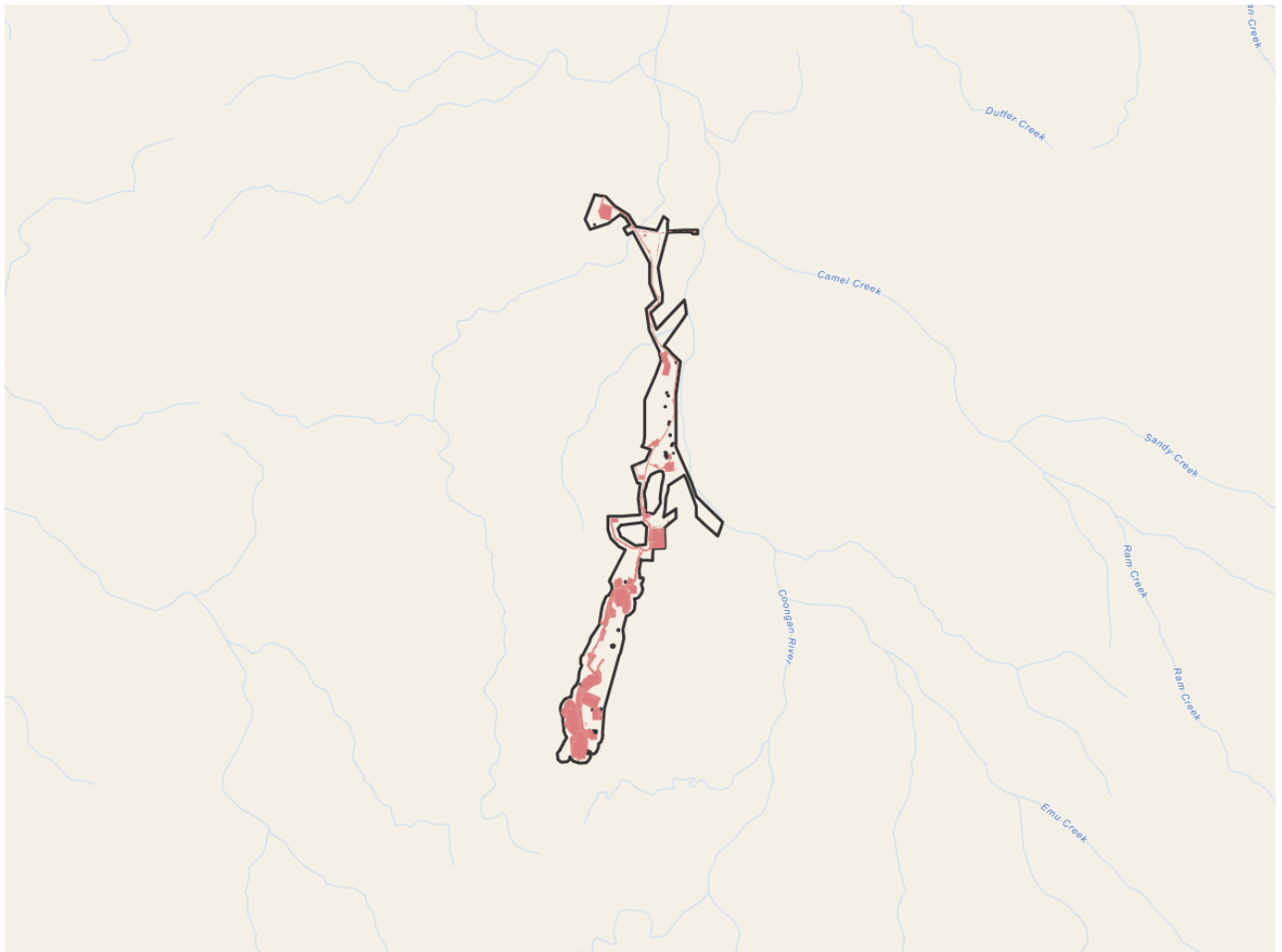
1.4 Payment details: Payment allocation

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

Person proposing to take the action

2. Location

2.1 Project footprint



Project Area: 2261.14 Ha **Disturbance Footprint:** 594.76 Ha

2.2 Footprint details

2.2.1 What is the address of the proposed action? *

N/A

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 Proposed Action is located on WA Mining Act 1978 tenure held by Atlas Iron Pty Ltd, on Mining Leases M45/1257-I, L 45/410, L 45/408, L 45/407, and G 45/339. Mining Act tenure allows Atlas to conduct mining activities on the land.

The majority of the Proposed Action is situated on Allocated Crown Land, with a portion on Unallocated Crown Land. Two pastoral leases (Eginbah and Panorama) intersect the Proposed Action. The Proposed Action is wholly within the Shire of East Pilbara.

A map outlining the regional location of the Proposed Action is included in Attachment 1 – Figure 2.

3. Existing environment

3.1 Physical description

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

The majority of the vegetation in the Study Area (90.32%) was ranked as being in Excellent condition, with little to no human disturbance and an absence or low levels of introduced flora taxa (Woodman, 2021). However, the majority of larger drainage features, including creeks and flow lines, were in comparatively poorer condition due to high densities of aggressive introduced species and high grazing and trampling impacts from cattle. Vegetation condition in these drainage features varied from Very Good to Poor, depending on the levels of introduced taxa and trampling impacts recorded. These condition scores were often inversely correlated with the size of the drainage feature, with large creeks and rivers tending to be ranked lower than smaller flow lines and creeks. Condition was also generally poorer in the north of the Study Area closer to Marble Bar.

Additional studies are being completed to support the referral and consist of Groundwater Dependant Vegetation and Aquatic Ecology baseline and impact assessments.

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

The current land use in the Proposed Action area is predominately a combination of mining, exploration and pastoral activities. The Proposed Action is consistent with the existing land use for the area.

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

No specific natural features have been identified at the Proposed Action site.

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 is located within the Pilbara region, in an area generally considered to be mountainous, rising to 1,250 m. There are two subregions occurring within the Proposed Action area. The Abydos Plain consists of alluvial plains and low stony hills and granite outcrops, while the Gorge Ranges represents rough steep and abrupt ranges dissected by narrow rivers meandering through gorges.

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.

Flora

The Proposed Action area has been surveyed and no Threatened flora listed under the EPBC Act or *Biodiversity Conservation Act 2016* (BC Act) have been recorded within the Mine Development Envelope. Desktop searches of the area proximal to the Proposed Action area have shown no Threatened flora species within the vicinity of the Proposed Action, however a number of Priority listed species under the BC Act are known to occur within a 50 km radius, with three species identified within the Proposed Action area:

- *Rothia indica subsp. australis* (P3);
- *Heliotropium murinum* (P3); and
- *Swainsona thompsoniana* (P3).

Attachment 1 – Figure 3 shows the locations of Priority flora species within the Proposed Action area and surrounds.

A further five species were considered significant as per EPA Guidance Statement No. 51 due to the identification of a taxa having anomalous features (*Abutilon* aff. *hannii*, *Oldenlandia* sp. and *Portulaca* sp.) or representing a range of extension or outlier of the main range (*Acrostichum speciosum* and *Ericaulon pusillum*).

A number of introduced pests have been recorded in the study area, however a review of the existing flora and vegetation assessments demonstrated that the only significant introduced species is *Calotropis procera* (Rubber Bush). This species is found extensively throughout the Proposed Action area and surrounds and is currently listed as a Declared Pest - s22(2) under the *WA Biosecurity and Agricultural Management* (BAM) Act 2007.

Historical Flora and vegetation studies over the Proposed Action area have been included as Attachment 3.

Fauna

Literature reviews and database searches have identified a total of 114 vertebrate fauna species or subspecies which have previously been recorded and/or have the potential to occur within the vicinity of the Proposed Action Area. This comprised of 19 mammals, 82 birds and 13 reptiles. Eight of these species were listed under the EPBC Act and have either been confirmed within the Proposed Action area or are considered likely or possible to occur. These species include:

- Northern quoll, *Dasyurus hallucatus* (EN);
- Pilbara leaf-nosed bat, *Rhinonictis aurantia* (VU);
- Ghost bat, *Macroderma gigas* (VU);
- Pilbara olive python, *Liasis olivaceus barroni* (VU);
- Greater bilby, *Macrotis lagotis* (VU);
- Grey falcon, *Falco hypoleucos* (VU);
- Fork-tailed swift, *Apus pacificus*; (MI); and
- Oriental plover, *Charadrius veredus* (MI).

Eight additional species listed under the BC Act have been identified within the Proposed Action area:

- Peregrine falcon, *Falco peregrinus* (OS);
- Spectacled hare-wallaby, *Lagorchestes conspicillatus Leichardti* (P4);
- Western pebble-mound mouse, *Pseudomys chapmani* (P4);
- Brush-tailed mulgara, *Dasycercus blythi* (P4);
- Long-tailed dunnart, *Antechinomys longicaudatus* (P4);
- Spotted Ctenotus, *Ctenotus uber johnstonei* (P2);
- Northern short-tailed mouse, *Leggadina lakedownensis* (P4); and
- Pilbara flat-headed blind-snake, *Anilius ganei* (P1).

The Proposed Action will potentially impact critical habitat for several of these species. Further detail on the impacts to these species is provided in Section 4, and Attachment 1 - Figure 4 shows the broad fauna habitats within the Proposed Action area..

Historical Fauna studies of the Proposed Action area that have been completed to date are included as Attachment 4.

A recent assessment of Significant species was undertaken to consolidate historical studies and identify any new changes amongst significant species (Attachment 4).

Additional studies to support the referral include Short Range Endemics, Subterranean Fauna and Aquatic vertebrates.

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

Under the Interim Biogeographical Regionalisation for Australia (IBRA) classification system, the Proposal is situated within the Chichester subregion of the Pilbara Biogeographic Zone. The basalt plains of this subregion, contain a shrub steppe characterised by *Acacia inaequilatera* over *Triodia wiseana* hummock grasslands, while *Eucalyptus leucophloia* tree steppes occur on the ranges.

The Proposal is located within the Fortescue District of the Eremaen botanical province (Beard, 1990). The Fortescue botanical district is characterised by tree (*Eucalyptus* spp. and *Corymbia* spp.) and shrub (*Acacia* spp., *Hakea* spp., *Grevillea* spp. and *Senna* spp.) steppe communities and *Triodia* spp. hummock grasslands (Beard, 1990).

Four vegetation associations as described by Beard (1990) occur within the Proposed Action area, all of which have over 99% of their pre-European extent remaining (DPIRD 2021). Locally, fifteen vegetation types have been mapped within the Proposed Action area.

Attachment 1 – Figure 5 depicts the mapped vegetation communities within the Proposed Action area.

Vegetation was generally determined to be well represented at the state-wide, bioregional and local government authority levels with majority of vegetation types determined locally significant due to each vegetation type providing important habitat for conservation significant species.

Two vegetation types within the Proposed Action area are considered to have a high dependence on groundwater, and two further vegetation types had a moderate to high rating for groundwater dependence. These vegetation types are considered particularly susceptible to potential impacts from groundwater drawdown within the Proposed Action area.

No vegetation types align with any Commonwealth or State listed Threatened Ecological Communities (TEC's) or State listed Priority Ecological Communities (PEC's).

The nearest Environmentally Sensitive area (ESA) is the De Grey River, located approximately 90 km to the north of the Proposed Action area. No impacts to ESAs from the implementation of the Proposal are anticipated.

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.

The Proposed Action is located in Australia, and no Commonwealth heritage places overseas will be impacted. No areas within the Proposed Action area have recognised Commonwealth heritage values.

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

The Project is located within the Nyamal-Palyku Proceeding (no 7) [2023] FCA 528 and the Nyamal-Palyku Proceeding (no 8) [2024] FCA 11 Native Title Claim Determination Area. Both the Nyamal People and the Palyku People have native title interests within the approved MDE as described below.

The Nyamal People

Atlas has a Deed of Agreement with the Nyamal People, signed on 5 December 2008. This Deed of Agreement includes (but is not limited to) consultation, heritage survey requirements and protocols, provision of environmental assessments, accountability schedules and compensation. Atlas conducts all activities in accordance with these prescribed and agreed protocols resulting in a sound working relationship with the Nyamal People and their representative body, the Nyamal Aboriginal Corporation RNTBC. There is also a 2023 Stage 2 Sanjiv Ridge Aboriginal Cultural Heritage Management Plan (ACHMP) with the Nyamal People which was a requirement of MS 1197 implementation conditions (4). However, Stage 2 does not form part of this Proposal.

The Palyku People

Following the 16 January 2024 Federal Court judgment in the Palyku-Nyamal Proceeding Atlas and the Palyku People (through its representative body the Palyku-Jartayi Aboriginal Corporation RNTBC) signed in November 2024 a Heritage Agreement that provides prescribed protocols and provisions to manage Palyku Aboriginal Cultural Heritage (ACH) located within the MDE.

Atlas is also in the process of finalising a Tripartite Agreement between Atlas, Palyku People and the Nyamal People which, among other things, provides compensation and benefits for the Palyku People from the Sanjiv Ridge mining operations, including in respect of the area the subject of the Referral. The Tripartite Agreement is reflective of arrangements agreed between the Nyamal People and the Palyku People as part of the determination of the Federal Court of Australia in *The Nyamal Palyku Proceeding (No 8)* [2024] FCA 11.

Project Aboriginal Heritage Values

The Nyamal people have completed archaeological and ethnological surveys in the MDE within the Nyamal determination area (Figure 7 13) (Big Island Research, 2013a, b, c, d; Gavin Jackson, 2014a, b, c, d; Gavin Jackson CRM, 2017; Gavin Jackson CRM & Daniel de Gand & Associates, 2014; SJC Heritage Consultants, 2010; Terra Rosa Consulting, 2016, 2019, 2020, 2021a, b, c, d, e, 2022a, b).

In May and June 2025, the Palyku People completed an ethnographic heritage survey over the Project MDE within the Palyku determination area (Terra Rosa Consulting, May 2025, AI246). Archaeological heritage surveying (Terra Rosa Consulting June 2025, AI247) was completed in the Sparrow Lake Development pit expansion area and Shark Gulley WRL to inform the activities proposed within this Referral.

Currently, no registered Aboriginal sites or other heritage places are listed in the DPLH ACHIS within the Proposed Action area. However, the DPLH ACHIS includes a number of lodged potential sites that are awaiting assessment. Some of the identified sites are likely to meet the definition of Aboriginal cultural heritage under the Aboriginal Heritage Act 1972 (AH Act).

A map of the heritage sites within the Proposed Action area has been included as Attachment 1 – Figure 6.

Engagement with Traditional Owners is ongoing and aboriginal heritage and cultural considerations will form part of the proposal where required.

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 hydrological characteristics of the Proposed Action area have been previously studied for the original Sanjiv Ridge Project. As the Proposed Action is likely to alter the impacts to local groundwater resources, additional studies are currently underway to provide further understanding of the extent and nature of the potential impacts of the proposed works. Additionally, further studies are underway to understand the potential impact from the proposed discharge of extracted groundwater.

Attachment 1 - Figure 7 outlines the regional catchments of the Proposed Action area, and Attachment 1 – Figure 8 shows the local hydrological features.

Groundwater

Groundwater resources within the Proposal are primarily contained in two distinct units: the fractured bedrock aquifer and ephemeral alluvial systems associated with surface water drainage lines. Groundwater levels exhibit significant variability, with depths ranging from 3 to 60 meters below ground level.

The alluvial groundwater system is mainly linked to the Coongan River and its tributaries, which run along the Corunna Downs Ridge, situated to the east of the Proposal. Groundwater in this system is typically present during and immediately after significant rainfall events, though it may persist for long periods in the areas with a more substantial aquifer. Recharge to the fractured bedrock aquifer through leakage from the alluvial system may play a significant role in local groundwater dynamics.

The fractured bedrock aquifer lies beneath the alluvial groundwater system, which consists of a series of discrete, highly compartmentalised aquifers. These aquifers are primarily formed in areas of secondary porosity, such as a fault zones, folds, and contacts between different geological units. The groundwater flow and hydraulic conductivity within the fractured bedrock aquifer is highly variable, as is the connectivity between strata and with adjacent geological units.

Groundwater and hydrogeological studies completed to date have been provided in Attachment 5.

Surface Water

The Proposal lies within the middle reaches of the Coongan River catchment which sits within the De Grey River Basin. The De Grey River Basin covers an area of 56,890 km² with its major tributaries being the Strelley, Shaw, Coongan, Oakover and Nullagine Rivers. Major pools of the Coongan River, which are likely surface expressions of locally perched groundwater, are located upstream of the Proposal. The Coongan River is typically ephemeral in nature; however, surface water is present throughout the year in pools along the main rivers and creeks. These pools are most likely surface expressions of locally perched groundwater within the alluvium.

Surface flow in the region occurs almost exclusively as a direct response to high intensity rainfall events and is highly skewed to summer events (80% of flows occur from December to March). These events lead to rapid overland flow response, with only minor sustained flow within shallow alluvial deposits daylighting within depressions and small pools between rainfall events during the wet season. Flow in the smaller channels is typically of short duration and ceases soon after the rainfall event passes.

A hydrological impact assessment has been conducted for the Proposed Action area, with the Proposed Action considered unlikely to have more than a minor effect on streamflow within the local area, with the exception of localised effects immediately downstream of operations. The small catchment reductions are considered to be insignificant within the regional catchment.

Surface waters are generally fresh, although brackish conditions have previously been recorded in both the wet and dry seasons due to evapoconcentration effects.

Surface water and hydrological studies completed to date have been provided in Attachment 6.

As the Proposed Action is likely to alter the impacts to local groundwater resources, additional studies are currently underway to provide further understanding of the extent and nature of the potential impacts of the proposed works.

Pools

Eleven pools that are considered to be significant water sources have been identified within the Proposed Action area and surrounds. Five of these pools are considered to be perennial, providing critical resources for the local ecosystems during dry periods when water in the region is scarce. The majority of the perennial pools are also considered to be highly dependent on groundwater connectivity. Additionally, one of these groundwater dependent pools, pool CO-WS-14, is of particular importance as it is also believed to be intrinsically linked to cave CO-CA-03, a non-permanent breeding roost for the Pilbara Leaf-nosed Bat.

No major impacts to the hydrology of the pools within the Proposed Action area are considered likely to occur as a result of the Proposed Action, however additional hydrological and hydrogeological studies are underway to inform likely impacts.

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	No	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 properties are located within the vicinity of the Proposed Action. The nearest World heritage area the Ningaloo Coast in Western Australia, approximately 600 km from the Proposed Action area.

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.

—

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.

*

The closest National Heritage places are approximately 600 km from the Proposed Action location. The Ningaloo Coast is approximately 600 km to the west of the Proposed Action area, and the West Kimberley is approximately 600 km to the north east of the Proposed Action area. No impacts to these National Heritage areas are expected.

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.

—

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.

*

There are no Ramsar wetlands within the vicinity of the Proposed Action. The nearest Ramsar wetland is Eighty-mile Beach, located approximately 260 km to the north east of the Proposed Action area.

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	<i>Calidris acuminata</i>	Sharp-tailed Sandpiper
No	No	<i>Calidris ferruginea</i>	Curlew Sandpiper
Yes	Yes	<i>Dasyurus hallucatus</i>	Northern Quoll, Digul [Gogo-Yimidir], Wijingadda [Dambimangari], Wiminji [Martu]
No	No	<i>Erythroriorchis radiatus</i>	Red Goshawk
No	Yes	<i>Falco hypoleucos</i>	Grey Falcon
Yes	Yes	<i>Liasis olivaceus barroni</i>	Pilbara Olive Python
No	No	<i>Liopholis kintorei</i>	Great Desert Skink, Tjakura, Warrarna, Mulyamiji
Yes	Yes	<i>Macroderma gigas</i>	Ghost Bat
Yes	Yes	<i>Macrotis lagotis</i>	Greater Bilby
No	No	<i>Pezoporus occidentalis</i>	Night Parrot
No	No	<i>Polytelis alexandrae</i>	Princess Parrot, Alexandra's Parrot
Yes	Yes	<i>Rhinonictis aurantia</i> (Pilbara form)	Pilbara Leaf-nosed Bat
No	No	<i>Rostratula australis</i>	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. *

The Proposed Action will directly impact on Terrestrial Fauna through clearing of native vegetation causing a reduction in available habitat. including important habitat for these species, including denning, breeding, foraging and dispersal habitat. Further direct impacts may include fauna mortalities from vehicle strike or entrapment, and impacts through changes in hydrology affecting habitat quality.

Indirect impacts on fauna may include the effects of dust generation, and noise, vibration, or light pollution. The spread of weeds may also impact the quality of fauna habitat available.

Specific impacts on each species identified as potentially occurring in the Proposed Action area are outlined below.

Calidris acuminata

Calidris acuminata is considered highly unlikely to occur within the Proposed Action area, however it may be an occasional visitor following significant rainfall events. Suitable habitat is not present as the species favours flooded samphire flats and grasslands, mangrove creeks, mudflats, beaches, river pools, saltwork ponds, sewage ponds and freshwater soaks. Records have been located within 50 km.

No significant direct or indirect impacts are expected for this species.

Pezoporus occidentalis

Pezoporus occidentalis is considered highly unlikely to occur within the Proposed Action area. Suitable habitat is not present; however, the species may be an occasional visitor. The nearest known record is approximately 135 km SW of the Proposed Action area.

Habitat preferences of the Night Parrot in the Pilbara are not well understood, however it has been suggested that any area containing long unburnt (15+ years) areas of spinifex (*Triodia sp.*) is likely to be classified as potential habitat.

All habitat types described types described and mapped within the Proposed Action area contain *Triodia* species, as does most of arid Australia (MWH, 2018). However, large mature spinifex is largely absent from the Proposed Action area as a result of fire in October 2013.

The Night Parrot is not considered to be significantly impacted by the Proposed Action.

Liasis olivaceus barroni

Liasis olivaceus barroni is known to occur in the area and has been recorded on 14 occasions within the Proposed Action area, with a further eight records identified within 60 km of the area. Rocky Ridge and Gorge habitats provide critical breeding, foraging and dispersal habitat, with several other habitats providing supporting foraging and dispersal habitat.

The Proposed Action will result in disturbance to all of the habitat types that support the Pilbara olive python, other than Granite Outcrops. There will be direct impacts to the species through disturbance of critical and supporting habitats, and vehicle strike and entrapment on site are also risks.

Indirect impacts may include increased noise, light and dust emissions, as well as impacts from increased drawdown impacting on water levels in local permanent and ephemeral pools, which are frequently used by this species.

Falco hypoleucos

Falco hypoleucos has not been identified within the Proposed Action area, however there are records within 50 km. The species is considered possible to occur within the Proposed Action area, as the species may occasionally visit for foraging. Potential nesting habitat also exists within the Riverine and Drainage habitats of the Proposed Action Area.

The Proposed Action is not considered to have any significant direct impacts on this species.

Indirect impacts from the Proposed Action may include increased noise, light and dust emissions, potentially impacting on species behaviour.

Calidris ferruginea

Calidris ferruginea is considered highly unlikely to occur within the Proposed Action area. Suitable habitat is not present in the Proposed Action area, as this species generally roosts on bare dry shingle, shell or sand beaches, sandspits and islets in or around coastal or near-coastal lagoons and other wetlands.

No significant direct or indirect impacts are expected for this species.

Erythrorchis radiatus

Erythrorchis radiatus is considered highly unlikely to occur within the Proposed Action area due to lack of suitable habitat, as this species generally inhabits tall open forests and woodlands, often in association with drainage lines and fertile soils. The species may be an occasional visitor to the area following significant rainfall events.

No significant direct or indirect impacts are expected for this species.

***Rhinonictis aurantia* (Pilbara form)**

Rhinonictis aurantia has been commonly recorded within the Proposed Action area and wider vicinity. One cave within the Proposed Action vicinity has been identified as a permanent diurnal roost (CO-CA-01), and one as a non-permanent breeding roost (CO-CA-03). Both of these caves have been excluded from the Proposed Action area, with buffers in place as per original approval conditions. No direct disturbance of caves will be undertaken, however supporting habitat in the vicinity of these caves will be cleared.

All habitat types within the Proposed Action area are considered to be critical foraging and dispersal habitat for the PLNB, when located within 20 km of a critical roosting habitat. This covers all of the Proposed Action area. As such, implementation of the Proposed Action will have direct impacts through reduction of available critical habitat for the Pilbara leaf-nosed bat. Direct impacts may also include vehicle strike and entrapment. Indirect impacts are also likely, from increased noise, dust and light emissions, as well as potential impacts to local water sources from groundwater drawdown.

Macrotis lagotis

Macrotis lagotis has commonly been recorded within the vicinity of the Proposed Action area, with 169 records within 50 km of the Proposed Action area. Only one record of a dead individual has been recorded within the Proposed Action area.

The occurrence of greater bilbies in the study area is unlikely to represent an important population for the species' long-term persistence at a local and regional level, as the relatively low number of records suggests limited suitable habitat is available.

The Spinifex Stony Plain habitat is considered to be critical habitat for breeding, foraging and dispersal of the greater bilby, with supporting habitat present as Riverine and Drainage Line habitats.

The Proposed Action will directly impact areas of critical Spinifex Stony Plain habitat, as well as small areas of Drainage and Riverine areas. The greater bilby may also be indirectly impacted through increased noise, dust and light emissions, as well as potential impacts to local water sources from groundwater drawdown.

Rostratula australis

Rostratula australis is considered highly unlikely to occur within the Proposed Action area due to lack of suitable habitat as this species favours recently flooded areas in shallow lowland freshwater temporary or permanent wetlands. However, the species may be an occasional visitor to the area for foraging purposes following significant rainfall events.

No significant direct or indirect impacts are expected for this species.

Polytelis alexandrae

Polytelis alexandrae is considered highly unlikely to occur within the Proposed Action area, as suitable habitat for this species is not present in the Proposed Action area. The princess parrot inhabits low open eucalypt woodlands and savannah shrublands in arid deserts, usually with *Triodia* grasses, mixed shrubs and *Casuarina*, *Allocasuarina* or *Eucalyptus* tree species. The species primarily nests in hollows formed in marble gum trees.

No significant direct or indirect impacts are expected for this species.

Liopholis kintorei

Liopholis kintorei is considered highly unlikely to occur within the Proposed Action area due to a lack of suitable habitat. The preferred habitat for this species appears to comprise at least 50% bare ground with a mosaic landscape comprising different aged post-fire vegetation regeneration.

No significant direct or indirect impacts are expected for this species.

Dasyurus hallucatus

Dasyurus hallucatus has been commonly recorded in the Proposed Action area and surrounding region. A number of the habitat types within the Proposed Action area are considered to be critical shelter and denning habitat for the northern quoll, with Drainage and Riverine habitats also considered critical for foraging and dispersal habitat where they are within close proximity to denning habitat.

The Proposed Action will directly impact areas of critical habitat for this species through clearing of potential shelter and denning habitat. Direct impacts may also include vehicle strike and entrapment on site. The northern quoll may also be indirectly impacted through increased noise, dust and light emissions from the Proposed Action area, as well as potential impacts to local water sources from groundwater drawdown.

Macroderma gigas

Macroderma gigas has been commonly recorded within the Proposed Action area, as there are a number of caves within the vicinity of the Proposed Action area that represent critical roosting habitat for this species. There are nine Category 2 caves that are considered critical habitat within the vicinity of the Proposed Action, occurring within Rocky Ridge and Gorge, Ironstone Ridgetop and Rocky Foothill habitat types. The majority of the surrounding habitat is also considered critical to the species for foraging and dispersal, where found within 12 km of critical roost sites.

The Proposed Action area has excluded all Category 2 caves, and no direct impacts to these sites are expected. Clearing of surrounding habitat will be undertaken as part of the Proposed Action implementation. Direct impacts may also include vehicle strike and entrapment on site. The ghost bat may also be indirectly impacted through increased noise, dust and light emissions from the Proposed Action area, as well as potential impacts to local water sources from groundwater drawdown, which may also indirectly affect cave suitability.

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. *

In accordance with the Significant Impact Guidelines, an action will require approval if the action has, will have, or is likely to have a significant impact on threatened species listed under the EPBC Act 1999. The significant impact criteria further describe significant impacts on threatened species to include any action that will reduce the area of occupancy of the species or adversely impact on habitat critical to the survival of the species and or lead to a long-term decrease in the size of an important population of a species. The Proposed Action has the potential to significantly impact threatened species by the removal of important habitat critical to the survival of the species resulting in a reduction of the area of occupancy for the species as well as fauna mortality due to the increase in vehicle movements.

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. *

The Proposed Action requires an additional 196.8 ha of clearing which will remove important habitat to listed Threatened species under the EPBC Act 1999.

Dewatering of mine voids to extend mining below the groundwater table could alter natural water regimes in nearby water resources and or pools that provide important habitat features for threatened species (Pilbara Olive Python, Bat Caves).

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. *

Atlas have applied the following mitigation hierarchy to the Proposed Action:

1. Avoid
2. Minimise
3. Rehabilitate
4. Offset

Key mitigation factors centre around protection of significant habitat features within the Proposed Action area and surrounds. As such, important habitat features have been excluded from the Proposed Action area, with buffers to remain for the proposed expansion works. Key measures to protect significant features within the Proposed Action area include:

- Implementation of a 340 m buffer between the Proposed Action area and cave CA-CO-01 (Pilbara leaf-nosed bat permanent diurnal roost);
- Implementation of a 50 m buffer between the Proposed Action area and cave CA-CO-03 (Pilbara Leaf nosed Bat non-permanent breeding roost). This creates an effective 68 m buffer from the nearest pit to the rear of the cave);
- Implementation of a 50 m buffer between the Proposed Action area and all perennial and ephemeral pools other than CO-WS-14, which is limited to a 20 m buffer.
- Mining at Razorback Pit will not extend below the water table to prevent impacts to CA-CO-03 and CO-WS-14. Razorback Pit will be backfilled with benign waste material during operations.

Additional mitigation measures to minimise the potential impacts on conservation significant species within the Proposed Action area include:

- Clearing to be undertaken progressively as much as possible, to only clear that required for operational purposes. Atlas have established disturbance procedures which include requirements to clearly demarcate clearing boundaries and any exclusion zones;
- Blasting operations limited to daytime only, to limit disturbance to fauna including bats;
- Noise, dust and light emissions will be controlled where possible to avoid excessive disturbance to native fauna, including directing lights to working areas, shielding lights to reduce flow, and using conventional dust suppression techniques (i.e. water trucks);
- Speed limits on roads will be 50km/h south of the run-of-mine pad (i.e. where the Proposed Action area intersects the majority of significant fauna habitat) and 80km/h north of the run-of-mine pad to limit vehicle strikes to conservation significant fauna;
- Vehicle hygiene procedures in place to minimise spread of weeds and plant pathogens;
- Implementation of site management plans; and

Measures will be implemented to offset any significant residual impacts on MNES arising from the Proposed Action.

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

Planned offsets for the Proposed Action include contribution to the Pilbara Environmental Offsets Fund (PEOF), managed by DWER. Details are yet to be determined, however projects undertaken by the PEOF will have a focus on significant species occurring in the Pilbara, including the listed species likely to be impacted by the Proposed Action.

Further detail on the proposed offsets will be developed as the Proposed Action progresses, and will include input from DCCEEW, DWER and DBCA to ensure that the proposed offsets are appropriate and will achieve agreed outcomes.

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
No	No	<i>Actitis hypoleucos</i>	Common Sandpiper
No	No	<i>Apus pacificus</i>	Fork-tailed Swift
No	No	<i>Calidris acuminata</i>	Sharp-tailed Sandpiper
No	No	<i>Calidris ferruginea</i>	Curlew Sandpiper
No	No	<i>Calidris melanotos</i>	Pectoral Sandpiper
No	No	<i>Charadrius veredus</i>	Oriental Plover, Oriental Dotterel
No	No	<i>Glareola maldivarum</i>	Oriental Pratincole
No	No	<i>Hirundo rustica</i>	Barn Swallow
No	No	<i>Motacilla cinerea</i>	Grey Wagtail
No	No	<i>Motacilla flava</i>	Yellow Wagtail

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

No

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

*

No migratory species are considered likely to occur in the Proposed Action area, due to lack of suitable habitat. Several species may visit the Proposed Action area following rainfall events; however, the Proposed Action is not likely to significantly impact any of the species identified as potentially occurring within the Proposed Action area.

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 involves continuation of mining at an existing site. The materials on this site do not contain significant levels of naturally occurring radioactive materials.

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.

—

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 does not occur in the vicinity of any 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 in Western Australia. No impacts on the Great Barrier Reef are expected.

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 does not include any coal seam gas or coal mining development.

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.

—

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 Commonwealth lands are proposed to be impacted as a part of 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.

—

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. *

The Proposed Action is located in Western Australia.

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. *

Alternatives to the Proposed Action have been considered, with the current iteration selected to minimise impacts to environmental, heritage and culturally sensitive areas. Considerations to alternatives to the proposed action were constrained by the existing mine areas, MDE, tenure boundaries and location of the ore body. The expansion considered proximity to the existing mining operations and its suitability to support future development of the Project. To not mine below the water table was not a feasible option for future growth.

The following were key mine design considerations to avoid and or minimise impacts:

Mining ore below the water table at Razorback pit (Stage1) and the Stage 2 Project area have not been proposed under this referral, to avoid impacts to sensitive receptors adjacent to the mine voids.

Relevant mine voids will be backfilled and/or partially backfilled to minimise clearing, surface disturbance, and no problematic material will be backfilled into voids that could potentially impact nearby sensitive receptors.

The expansion will remain within the existing mine development envelope

The mine design has been established to minimise the amount of clearing required.

5. Lodgement

5.1 Attachments

1.2.1 Overview of the proposed action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Attachment 1 - Figures.pdf Maps and Figures relevant to the Proposed Action	14/07/2025	Yes	High
#2.	Document	Attachment 1 - Figures_REDACTED.pdf Maps and Figures relevant to the Proposed Action - Sensitive information removed	14/07/2025	No	High

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

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Attachment 2 - Atlas Environmental Policy - Redacted.pdf Atlas Environmental Policy - Signatures Removed	01/02/2024	No	High
#2.	Document	Attachment 2 - Environmental Policy.pdf Atlas Environmental Policy	01/02/2024	Yes	High
#3.	Document	Attachment 2A - Atlas Environmental Management System Standard.pdf Atlas Environmental Management System Standard	30/01/2025	No	High

2.2.5 Tenure of the action area relevant to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Attachment 1 - Figures.pdf Maps and Figures relevant to the Proposed Action	13/07/2025	Yes	High
#2.	Document	Attachment 1 - Figures_REDACTED.pdf Maps and Figures relevant to the Proposed Action - Sensitive information removed	13/07/2025	No	High

3.2.1 Flora and fauna within the affected area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Attachment 1 - Figures.pdf Maps and Figures relevant to the Proposed Action	13/07/2025	Yes	High
#2.	Document	Attachment 1 - Figures_REDACTED.pdf	13/07/2025	No	High

Maps and Figures relevant to the Proposed Action - Sensitive information removed				
#3.	Document	Attachment 3 - Flora and Vegetation Study Part 1 REDACTED.pdf Flora and Vegetation Study for the Proposed Action area - sensitive information redacted	27/06/2025 No	High
#4.	Document	Attachment 3 - Flora and Vegetation Study Part 1.pdf Flora and Vegetation Study for the Proposed Action area	27/06/2025 Yes	High
#5.	Document	Attachment 3 - Flora and Vegetation Study Part 2 REDACTED.pdf Flora and Vegetation Study for the Proposed Action area - sensitive information redacted	27/06/2025 No	High
#6.	Document	Attachment 3 - Flora and Vegetation Study Part 2.pdf Flora and Vegetation Study for the Proposed Action area	27/06/2025 Yes	High
#7.	Document	Attachment 3 - Flora and Vegetation Study Part 3 REDACTED.pdf Flora and Vegetation Study for the Proposed Action area - sensitive information redacted	27/06/2025 No	High
#8.	Document	Attachment 3 - Flora and Vegetation Study Part 3.pdf Flora and Vegetation Study for the Proposed Action area	27/06/2025 Yes	High
#9.	Document	Attachment 4 - Fauna Studies REDACTED.pdf Fauna Studies for the Proposed Action area - sensitive information redacted	27/06/2025 No	High
#10.	Document	Attachment 4 - Fauna Studies.pdf Fauna studies for the Proposed Action area	27/06/2025 Yes	High

3.2.2 Vegetation within the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Attachment 1 - Figures.pdf Maps and Figures relevant to the Proposed Action	13/07/2025 Yes	High	
#2.	Document	Attachment 1 - Figures_REDACTED.pdf	13/07/2025 No	High	

Maps and Figures relevant to the
Proposed Action - Sensitive information
removed

3.3.2 Indigenous heritage values that apply to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Attachment 1 - Figures.pdf Maps and Figures relevant to the Proposed Action	13/07/2025	Yes	High
#2.	Document	Attachment 1 - Figures_REDACTED.pdf Maps and Figures relevant to the Proposed Action - Sensitive information removed	13/07/2025	No	High

3.4.1 Hydrology characteristics that apply to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Attachment 1 - Figures.pdf Maps and Figures relevant to the Proposed Action	13/07/2025	Yes	High
#2.	Document	Attachment 1 - Figures_REDACTED.pdf Maps and Figures relevant to the Proposed Action - Sensitive information removed	13/07/2025	No	High
#3.	Document	Attachment 5 - Groundwater Assessment_Part1.pdf Groundwater Studies for the Proposed Action area	14/07/2025	No	Medium
#4.	Document	Attachment 5 - Groundwater Assessment_Part2.pdf Groundwater Studies for the Proposed Action area	14/07/2025	No	Medium
#5.	Document	Attachment 6 - Surface Water and Hydrology Studies REDACTED.pdf Surface Water and Hydrology Studies for the Proposed Action area - sensitive information removed	27/06/2025	No	Medium
#6.	Document	Attachment 6 - Surface Water and Hydrology Studies.pdf Surface Water and Hydrology Studies for the Proposed Action area	27/06/2025	Yes	Medium

5.2 Declarations

✔ Completed Referring party's declaration

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

ABN/ACN	63110396168
Organisation name	ATLAS IRON PTY LTD
Organisation address	1314 Hay St, West Perth WA 6005
Representative's name	Larissa Byrne
Representative's job title	Specialist Approvals and Compliance
Phone	+61 6228 8235
Email	larissa.byrne@atlasiron.com.au
Address	1314 Hay St, West Perth WA 6005

☒ 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, **Larissa Byrne of ATLAS IRON 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.

Same as Referring party 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, **Larissa Byrne of ATLAS IRON 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, **Larissa Byrne of ATLAS IRON PTY LTD**, the Person proposing the action, consent to the designation of **Larissa Byrne of ATLAS IRON PTY LTD** 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. *

☒ **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, **Larissa Byrne of ATLAS IRON 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. *