

Hemi Gold Project

Application Number: **01585**Commencement Date: **13/12/2022**Status: **Locked**

1. About the project

1.1 Project details

1.1.1 Project title *

Hemi Gold Project

1.1.2 Project industry type *

Mining

1.1.3 Project industry sub-type

Other

1.1.4 Estimated start date *

01/07/2024

1.1.4 Estimated end date *

31/12/2038

1.2 Proposed Action details

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

The Hemi Gold Project (Hemi, or the Project) is 100% owned by De Grey Mining Ltd (De Grey) and is located 85 km south of Port Hedland in Western Australia. Project components will comprise:

- Open cut mining of gold bearing ore from six pits collectively known as the Hemi deposits (Aquila, Brolga, Crow, Diucon, Eagle, and Falcon).
- Construction and subsequent operation of a ~10 million tonne per annum (mtpa) processing plant. Storage of tailings in a two-cell, Integrated Waste Landform (IWL) Tailings Storage Facility (TSF).
- Water supply from the local groundwater aquifer with accompanying groundwater and surface water management infrastructure to facilitate mine dewatering and managed aquifer reinjection.
- Discharge of surplus water that is of acceptable quality into the Turner River, via water management ponds.
- Stockpiling of waste rock with planned progressive rehabilitation to form safe, stable and non-polluting landforms. Stockpiling of low grade ore.
- Stockpiling of stripped topsoil for future use for rehabilitation. Stockpiling of suitable gravel and other construction materials.
- Two linear infrastructure corridors providing options to access the Karratha to Port Hedland Gas Pipeline or the electrical grid, north of the Hemi deposits. Once a decision is made regarding power supply, redundant corridors can be removed from the Development Envelope.
- Two linear infrastructure corridors for a sealed access road; dewatering infrastructure and potential power infrastructure, east of the Hemi deposits.
- Power supply option to connect to the North West Interconnected System (NWIS), which supplies electrical power to the Pilbara region, with the potential for an on-site solar farm.
- Construction and operation of a sealed airstrip that can accommodate the operation of aircraft with capacity for approximately 100 passengers.

- Construction of additional supporting infrastructure including offices, workshops, laydowns, explosives magazines, accommodation village, wastewater treatment, landfills, surface water management infrastructure, pipelines, and borrow pits.
- An anticipated 15-year Life of Mine (including an initial two year dewatering phase) followed by a closure phase.

The Project will commence with a two-year period of dewatering, earthworks (including pre stripping), and construction activities, followed by operational pre-strip mining and processing. Dewatering activities will be ongoing for the life of mine.

The action does not include:

- Existing, ongoing and future exploration activities and support infrastructure;
- Resource definition drilling;
- Feasibility-related studies including but not limited to ongoing test work, geotechnical and geophysical assessments, water monitoring and management trials/activities.
- Heritage, environmental and geotechnical surveys; and
- Any associated rehabilitation.

A location plan is provided in Att_1 – Assessment of Impacts to MNES (Section 2.2, Figure 2-1, page 5); a tenement plan and Development Envelope in Att_1 – Assessment of Impacts to MNES (Section 2.2, Figure 2-2, page 6) and an indicative site layout in Att_1 – Assessment of Impacts to MNES (Section 2.2, Figure 2-3, page 7). The Project's development envelope is 22,194 ha, within which the Project proposes to disturb 5,830 ha.

A summary of the potential direct and/or indirect impacts for each of the construction activities is provided in Att_1 - Assessment of Impacts to MNES (Section 2.2, page 3-4).

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

No

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

Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)

The Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) provides for the protection of Matters of National Environmental Significance (MNES). MNES applicable to Hemi are 'listed threatened species and ecological communities' and 'migratory species'. De Grey submitted this referral to the Department of Climate Change, Energy, the Environment and Water (DCCEEW) on 15 May 2023. An assessment on whether the proposed action is likely to have a significant impact on MNES will determine if a classification of 'Controlled Action' will be applied. In the event this outcome is reached, approval under the EPBC Act will be required.

Native Title Act 1993 (Commonwealth)

The determined Kariyarra Native Title Claim (WCD2018/015) covers the Project. De Grey has negotiated a Native Title Mining Agreement with the Kariyarra Aboriginal Corporation (KAC) and its members, which was executed with the Native Title Holders on 16 December 2022.

Environmental Protection Act 1986 (Western Australia)

Part IV of the *Environmental Protection Act 1986* (EP Act) provides for the environmental impact assessment of proposals that are likely to have a significant impact on the environment. De Grey intends to refer the project to the WA Environmental Protection Authority (EPA). Once the project has been referred, the EPA will determine if the project requires assessment and the level of assessment required.

Clearing of native vegetation in Western Australia requires a permit under Part V, Division 2 of the EP Act unless an exemption applies. De Grey will need to apply for a clearing permit unless the EPA assesses the Project under Part IV of the EP Act.

Emissions and discharges to the environment are regulated under Part V, Division 3 of the EP Act. Prescribed activities include processing of ore and tailings storage; mine dewatering discharge; sewage treatment; used tyre storage; landfill; screening and bulk chemical storage. De Grey requires a Works Approval and Environmental Licence to construct, commission and operate the Project.

Mining Act 1978 (Western Australia)

The Project will proceed under *Mining Act 1978* (Mining Act) tenure.

De Grey has submitted applications for a mining lease and miscellaneous licences for the Project. The Department of Mines, Industry Regulation and Safety (DMIRS) must assess and approve a Mining Proposal and Mine Closure Plan before construction and operations can commence. This includes assessment and management of environmental risks.

Rights in Water and Irrigation Act 1914 (Western Australia)

De Grey requires 26D Licences to Construct a Well for the proposed borefield and aquifer reinjection system. A 5C licence to take groundwater is also required for mine dewatering and operation of the borefield. Any abstraction must be within allocation limits and in accordance with groundwater licence conditions.

A Bed and Banks permit is required for any interference with creeks or river systems.

Country Areas Water Supply Act 1947 (WA)

The Project is adjacent to the Yule River Water Reserve (YRWR) which is a Public Drinking Water Source Area (PDWSA). The YRWR is shown in Att_2- Additional Information on Hydrology and Hydrogeological Studies (section 2, Figure 2-1, page 2). The Project has been designed to exclude the YRWR from the Development Envelope, avoiding any potential direct or indirect impacts.

Aboriginal Heritage Act 1972 and Aboriginal Cultural Heritage Act 2021 (Western Australia)

The *Aboriginal Cultural Heritage Act 2021* (ACH Act) will replace the *Aboriginal Heritage Act 1972* (AH Act) and uses a tiered approvals approach for disturbances to Aboriginal heritage sites. It has been announced that the ACH Act's tiered approach will be enacted on 1 July 2023; until this time, consent to disturb any Aboriginal site is required in accordance with Section 18 of the AH Act. A final decision on which Act's process will be followed is yet to be made.

If the Project proceeds under the ACH Act De Grey will implement the Project in accordance with a Cultural Heritage Management Plan approved by the Department of Planning, Lands and Heritage (DPLH). The plan will detail how De Grey intends to maintain the heritage value of sites. Maintaining the heritage value does not simply mean avoiding direct disturbance, but includes additional aspects including access, environmental protection, and amenity.

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. *

Several engagement mechanisms have been used to undertake consultation with stakeholders and to undertake the Project's Social Baseline and Impact Assessment process. These include:

Community:

- Website and monthly community newsletter.
- Project Briefings, personal meetings, and one-on-one discussions with key stakeholders e.g., Traditional Owners, pastoralists, and community groups. This builds on over 160 formal briefings and engagements.
- Town Hall Meetings targeting the broader community. The inaugural meeting was held 22 March 2022 with 30 attendees. Further Town Hall Meetings were held on 24 June 2022 and 8 November 2022.
- Personal meetings/ interviews with 33 participants across 26 stakeholder groups.
- Attendance at Port Hedland Community and Business Events, engaging with 21 individuals across 14 stakeholder organisations.

Government:

- Meetings with EPA Services (Department of Water and Environmental Regulation) on 11 February 2022 and 16 November 2022. Items discussed included an overview of the project; environmental studies; overview of environmental factors and potential impacts. Meeting in February 2022 and formal correspondence with the Department of Mining, Industry Regulation and Safety (DMIRS).
- Meeting and workshop with the DPLH.
- Pre-referral meeting with the Department of Climate Change, Energy, the Environment and Water (DCCEEW) in August 2022. Various meetings with the Town of Port Hedland with various Councillors, officers, the Chief Executive Officer(CEO) and the Mayor.

Consultation with the Kariyarra Aboriginal Corporation (KAC) and its members who are the Traditional Owners:

- The development and implementation of a Negotiation Protocol.
- Seven formal negotiation meetings in 2021 in Port Hedland and West Perth.
- Separate meetings with 10 of the 11 apical family groups (one group declined the offer of a meeting).
- Meeting with Elders and Knowledge Holders at the proposed mine site on 1 September 2022.
- Meeting with Elders and Knowledge Holders at South Hedland on 29 September 2022.
- Native Title Community Meeting was held 28 November 2022 with approximately 100 attendees and representatives of each of the 11 family groups. Unanimous vote to enter into Native Title Mining Agreement with De Grey.
- Entering into a Native Title Mining Agreement, referred to as the De Grey / Kariyarra Mining Agreement, which was executed on 16 December 2022.
- Regular attendance of De Grey Community Relations Manager at KAC board meetings.

Further detail on consultation with the traditional owners is provided in Att_3 - Additional Information on Traditional Owner Consultation.

1.3.1 Identity: Referring party

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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.

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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	65094206292
Organisation name	DE GREY MINING LTD
Organisation address	6008 WA
Referring party details	
Name	Sarah Thomas
Job title	Environment Superintendent
Phone	0861179328
Email	sarah.thomas@degreymining.com.au
Address	2 Kings Park Road, 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? *

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	65094206292
Organisation name	DE GREY MINING LTD

Organisation address	6008 WA
Person proposing to take the action details	
Name	Glenn Jardine
Job title	Managing Director
Phone	+61 8 6117 9328
Email	glenn.jardine@degreymining.com.au
Address	2 Kings Park Road, 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. *

The Hemi Gold Project will be De Grey Mining Limited's first operating mine and this is its first EPBC referral. De Grey is not subject to any proceeding under Commonwealth, State or Territory legislation. De Grey is currently undertaking exploration activities authorised by exploration licences and mining and miscellaneous leases issued under the *WA Mining Act 1978*.

De Grey Mining Limited (including its Board of Directors) has a satisfactory record of responsible environmental management.

Glenn Jardine (Managing Director, De Grey Limited), the person proposing to undertake the action, is not subject to any proceedings under Commonwealth, State or Territory legislation. Glenn Jardine has a satisfactory record of responsible environmental management.

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

At the time of this referral De Grey's activities have been limited to exploration and project scoping, with major project works not scheduled to begin until 2024.

Management systems, including incident, corrective action, and stakeholder engagement registers are in place to support the current exploration activities and are provided as Att_4 – Exploration Environmental Management Plan_2023. Present systems are appropriate to the current nature and scale of the operation and are generally considered adequate for the present stage of the project and the hazards encountered. These systems will be updated as the Project transitions into the operational phases.

De Grey is at an advanced stage of developing an integrated work, health and safety management system and an environmental management system, which adopt appropriate standards, as the project progresses through feasibility to execution, commensurate with the hazards entailed and level of risk and informed by statutory obligations in environmental approvals.

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	65094206292
Organisation name	DE GREY MINING LTD
Organisation address	6008 WA
Proposed designated proponent details	
Name	Glenn Jardine
Job title	Managing Director
Phone	+61 8 6117 9328
Email	glenn.jardine@degreymining.com.au
Address	2 Kings Park Road, 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	65094206292
Organisation name	DE GREY MINING LTD
Organisation address	6008 WA
Representative's name	Sarah Thomas
Representative's job title	Environment Superintendent
Phone	0861179328
Email	sarah.thomas@degreymining.com.au
Address	2 Kings Park Road, 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.

ABN/ACN	65094206292
Organisation name	DE GREY MINING LTD
Organisation address	6008 WA
Representative's name	Glenn Jardine
Representative's job title	Managing Director
Phone	+61 8 6117 9328
Email	glenn.jardine@degreymining.com.au
Address	2 Kings Park Road, West Perth, WA 6005

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

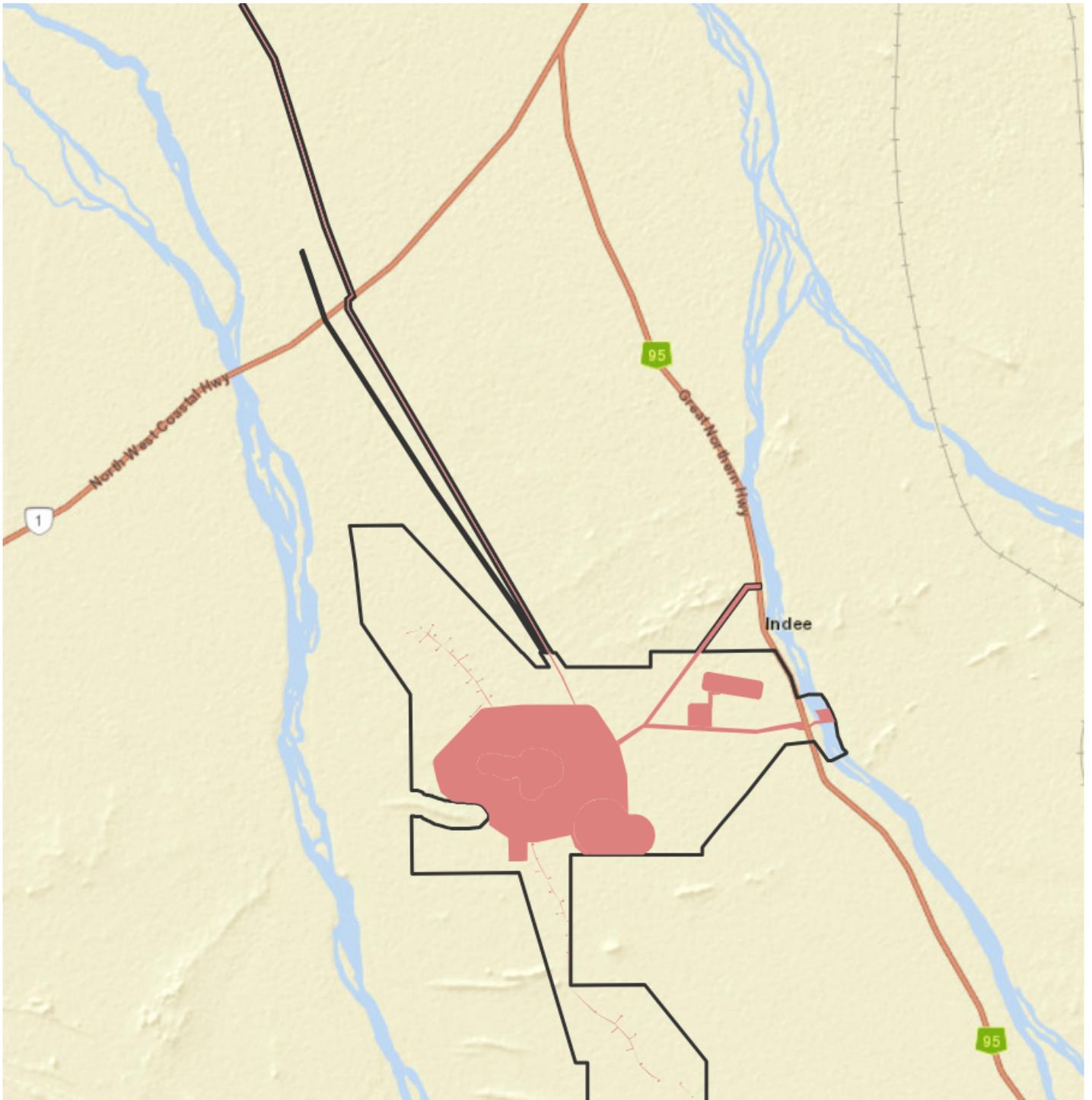
1.4 Payment details: Payment allocation

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

Proposed designated proponent

2. Location

2.1 Project footprint



2.2 Footprint details

2.2.1 What is the address of the proposed action? *

Mt Dove Access Road, Great Northern Highway, Indee, Western Australia, 6721

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 Project is in the Pilbara region of Western Australia, approximately 85 km south of Port Hedland, within the Town of Port Hedland Local Government Area. The project is situated on the Indee Pastoral lease (PLN050012) and Mundabullangana (PLN049806) and is accessed via Great Northern Highway.

An application by Last Crusade Pty Ltd, a wholly-owned subsidiary of De Grey Mining Pty Limited, for Mining Lease 47/1628 is currently pending for the Project and covers the Hemi deposits.

De Grey has also several Miscellaneous Licences: L45/600, L45/604 (pending), L 45/605, L45/612 (pending), L47/1047 (pending), L47/1048, L47/1049, L47/966 (pending), L47/963 (pending), L45/642, L47/1069, L47/1070, L47/1071.

These will be used for other supporting infrastructure including access roads, borefields, pipelines and powerline corridors.

The optimum route for the linear infrastructure corridors is still being determined and not all miscellaneous licences will be utilised.

Additional tenure (inside the proposed Development Envelope) will be applied for as needed.

A location plan is provided in Att_1 – Assessment of Impacts to MNES (Section 2.2, Figure 2-1, page 5); a tenement plan in Att_1 – Assessment of Impacts to MNES (Section 2.2, Figure 2-2, page 6) and an indicative site layout in Att_1 – Assessment of Impacts to MNES (Section 2.2, Figure 2-3, page 7).

3. Existing environment

3.1 Physical description

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

The Project is located on active pastoral leases (PLN050012 and PLN049806), 85 km South of Port Hedland in the Pilbara Region of Western Australia. Dominant land uses of this region are grazing, Aboriginal Lands and Reserves, Unallocated Crown Land and Crown Reserves, Conservation and Mining Leases.

Cattle can impact native vegetation due to grazing, trampling or through soil damage, however, the vegetation in the Development Envelope is mostly undisturbed and was assessed as generally in excellent or very good condition during flora surveys. Poorer conditions were noted in some areas due to cattle grazing and trampling and the presence of invasive weeds. This was particularly evident in riparian areas.

Construction equipment and ongoing material supply will be delivered to the site via Great Northern Highway from Perth. Alternatively, some materials may arrive via the Port of Port Hedland and will subsequently be transported to the project via Great Northern Highway. Gold dore bar will be transported from the site to the Perth mint via airplane.

Other disturbances in the Development Envelope include roads and tracks, drill pads and other mineral exploration and pastoral disturbances.

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

Current land uses in the Development Envelope are mineral exploration, traditional land uses and pastoralism. The Project is a greenfields project and the closest mining operation is Atlas Iron's Mt Dove operation, 10 km south of the Hemi deposits. This is currently in care and maintenance.

The proposed Hemi Gold Project is located in the Kariyarra Native Title Area, whose Prescribed Body Corporate is the Kariyarra Aboriginal Corporation (KAC). Consultation and negotiations between De Grey and KAC have culminated in a Native Title Agreement, referred to as the De Grey/Kariyarra Mining Agreement, that was executed on 16 December 2022.

The Project is predominately located on the Indee Station Pastoral Lease (PLN050012) with a small portion of the northern miscellaneous licences intersecting the Mundabullangana Station Pastoral Lease (PLN049806). An access agreement for exploration and mining activities has been signed with the Indee Pastoral Lease holder.

The location of the pastoral leases in relation to the Development Envelope is shown in Att_1 – Assessment of Impacts to MNES (Section 2.2, Figure 2-2, page 6).

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

There are no outstanding natural features in the Development Envelope.

The mine area is located 10 km east of the Yule River Water Reserve (YRWR) which is a Public Drinking Water Source Area (PDWSA). It is also located 30 km south of a borefield inside Water Reserve 33015 that supplies Port Hedland with water. The Project has been designed to avoid impacts to the YRWR and Water Reserve 33015. The locations of the YRWR, Water Reserve 33015 and Borefield are provided in Att_2 - Additional Information on Hydrology and Hydrogeological Studies (Section 2, Figure 2-1, page 2). The dewatering drawdown zone is provided in Att_2 - Additional Information on Hydrology and Hydrogeological Studies (Section 2, Figure 2-2, page 3).

De Grey has purposefully applied for multiple miscellaneous licences and undertaken ecological survey work so that multiple options are available for linear infrastructure corridors.

A Sand Dune land system is adjacent to the Project's eastern boundary and forms part of the Gregory Land System Priority Ecological Community (PEC). Although this PEC is not subject to any legislative protection, a 564 ha area consisting of the mapped PEC and a 300 m buffer zone around it, has been excluded from the Project's Development Envelope (Att_1 – Assessment of Impacts to MNES (Section 2.2, Figure 2-2, page 6)).

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 mine area is relatively flat and approximately 70 m above sea level at the Hemi deposits. The proposed northern linear infrastructure corridors extend northwards towards the coast and elevation decreases to about 30 m above sea level at the northernmost extent.

A topographic map is provided in Att_2 - Additional Information on Hydrology and Hydrogeological Studies (Section 2, Figure 2-1, page 2).

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.

Survey Effort

De Grey has assembled a Project Team of well-established Perth based consultants with experience in mining projects in the Pilbara, supplemented by its own in-house expertise. Together this Project Team has undertaken a comprehensive suite of environmental studies to characterize the baseline environment and analyse potential impacts. Detail on relevant studies completed is provided below. The baseline environment is well characterized as areas surveyed are typically four to six times greater than the proposed disturbance footprint.

Regional Setting

The Hemi deposits are situated between the Yule and Turner Rivers in the Chichester subregion (PIL1) of the Pilbara region, as described by the Interim Biogeographic Regionalisation for Australia (IBRA) Version7 (DAWE, 2012).

The dominant vegetation type in the Development Envelope can broadly be described as *Acacia* species over *Triodia* low hummock grassland/shrubland. The location of the Project is relatively flat and slopes gradually to the north-northwest with only local minor relief caused by occasional bedrock outcrop or sand dunes. Soils are typically sandy plains and pebbly plains.

Flora and Vegetation

Flora surveys, covering a total area of 29,522 ha (approximately five times larger than the disturbance footprint of 5,830 ha) for the Project were undertaken in March 2021 and between March and July 2022. The survey report is included as Att_5 - Flora and Vegetation Studies Hemi - Part 1 ; Att_5 - Flora and Vegetation Studies Hemi - Part 2 ; Att_5 - Flora and Vegetation Studies Hemi - Part 3 and Att_5 - Flora and Vegetation Studies Hemi - Part 4 to the EPBC Act Referral.

The following have been identified:

- 17 native vegetation types.
- No EPBC Act listed Threatened Ecological Communities (TECs)
- One flora species listed as endangered (Cth)- *Seringia exastia*. This species was recently delisted under the WA *Biodiversity Conservation Act 2016* following taxonomic review. It is considered widespread and common in the region. Further information is provided in Att_7 - Status of *Seringia exastia* Hemi_2022.
- Ten introduced species.

An overview of the flora survey effort is provided in Att_1 – Assessment of Impacts to MNES (Section 3.1, Figure 3-1, page 13). Vegetation types are shown in Att_1 – Assessment of Impacts to MNES (Section 3.1, Figure 3-2, page 14; Figure 3-3, page 15 and Figure 3-4, page 16). A description of vegetation codes is provided in Att_1 – Assessment of Impacts to MNES (Section 3.1, page 17).

Terrestrial Fauna

Western Wildlife completed a detailed vertebrate fauna survey at the Project over two seasons in September 2021 and March 2022, with additional targeted surveys in August 2022 and deployment of six camera traps of which three have been in place for over 12 months. The total survey area covered 34,687 ha, approximately six times the proposed disturbance footprint of 5,830 ha. The final survey report is provided as Att_6 – Detailed Vertebrate Fauna Survey 2021-2022.

Six fauna habitats were identified in the survey including:

- Spinifex Sandplain.
- Sandplain Drainage.
- Sand Dune.
- Stony Hills.
- Major River.
- Rocky Outcrops.

None of these support a particularly unique faunal assemblage and although relatively diverse, the fauna present are typical of the Pilbara Bioregion. Two of the habitat types present, Rocky Outcrop and Sand Dune, are limited in extent in the study area and the region, these habitats have been excluded from the Project's disturbance footprint.

The faunal assemblage in the survey area comprises predictions drawn from a literature review and Western Wildlife's survey recordings and is as follows

- 10 Frogs species predicted, six recorded.
- 115 reptiles species predicted, 56 recorded.
- 165 birds species predicted, 83 recorded.
- 36 native mammals species predicted, 22 recorded.
- Eight introduced mammals species predicted, six recorded.

Two EPBC Act listed species or evidence of the species were recorded within the Development Envelope:

- Northern Quoll (*Dasyurus hallucatus*) – Endangered – Recorded along Turner River
- Pilbara Leaf-nosed Bat (*Rhinonictis aurantia*) – Vulnerable

Secondary signs of the following species were recorded:

- Greater Bilby (*Macrotis lagotis*) – Vulnerable – Secondary signs recorded (outside of the Project's disturbance footprint)

The following EPBC Act listed species are considered likely to or may occur but were not recorded within the Development Envelope:

- Ghost Bat (*Macroderma gigas*) – Vulnerable – Likely to occur – Not Recorded
- Pilbara Olive Python (*Liasis olivaceus barroni*) – Likely to occur – Not Recorded
- Grey Falcon (*Falco hypoleucos*) – Likely to occur – Not Recorded
- Fork-tailed Swift (*Apus pacificus*) – Likely to occur – Recorded north of the Development Envelope.
- Night Parrot (*Pezoporus occidentalis*) – Endangered – Possibly occurs – Not Recorded

Additionally, fourteen migratory species potentially occur in the Development Envelope.

An overview of the fauna survey effort is provided in Att_1 – Assessment of Impacts to MNES (Section 4.2, Figure 4-1, page 23). Habitat types are described in Att_1 – Assessment of Impacts to MNES (Section 4.2, Table 4-1, page 25) and shown with the locations of listed species on Att_1 – Assessment of Impacts to MNES (Section 4.2, Figure 4-2, page 24).

Short Range Endemic Fauna

Wet and dry season subterranean fauna surveys were undertaken by Bennelongia in November 2021 and April 2022. No listed Short Range Endemic species were identified.

Subterranean Fauna

Stygofauna and troglofauna surveys for the Project were undertaken by Bennelongia Limited. No listed species were identified.

Aquatic Fauna

Baseline aquatic ecology surveys were undertaken in the Yule and Turner Rivers by Stantec Limited. No listed aquatic species were identified.

eDNA analysis did not detect the Pilbara Olive Python in the Yule or Turner Rivers but did detect the Northern Quoll along the Turner River, which is consistent with the findings of Western Wildlife's terrestrial fauna survey.

Pools on the Turner River are seasonal and semi-permanent and considered to be of low to moderate ecological value in the local area. By comparison pools on the Yule River were larger, more permanent, groundwater-fed and considered to be of moderate to high ecological value. The Yule River has been excluded from the Development Envelope avoiding potential direct or indirect impacts.

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

A total of 17 vegetation types were identified in the survey area during flora surveys. Due to historic and current exploration and pastoral activities, as well as infrastructure corridors, there is existing disturbance in the Development Envelope. Outside of this disturbance, the 2022 flora survey assessed 22,092 ha of vegetation in excellent condition; 6,700 ha in very good condition; 10 ha in good condition and 17 ha in poor condition. There is clear evidence of cattle grazing and 10 introduced species have been recorded.

Vegetation types are shown in Att_1 – Assessment of Impacts to MNES (Section 3.1, Figure 3-2, page 14; Section 3.1, Figure 3-3, page 15; section 3.1, Figure 3-4, page 16). A description of vegetation codes is provided Att_1 – Assessment of Impacts to MNES (Section 3.1, page 17). Vegetation condition is shown on Att_1 – Assessment of Impacts to MNES (Section 3.1, Figure 3-5, page 18).

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 heritage places in or near the Project.

The Heritage Council of Western Australia maintains a State Register of Heritage Places under the *Heritage Act 2018* (WA). No Heritage Places are listed within the Development Envelope and the closest non- Indigenous heritage site is 13 km east of the Hemi deposits, outside of the Development Envelope:

- Place 18421, Indee Station (site of plane crash) was registered on 28 November 2007. The site is the location where 31 people lost their lives after their plane crashed on 31 December 1968, making it one of the worst aviation disasters in Australian history (Heritage Council, n.d.).

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

The Project is located in the Kariyarra Native Title area whose Prescribed Body Corporate is the Kariyarra Aboriginal Corporation (KAC).

A Native Title Mining Agreement referred to as the De Grey / Kariyarra Mining Agreement (the Agreement), was executed on 16 December 2022 by De Grey and the Native Title Holders. Att_3 - Additional Information on Traditional Owner Consultation (Section 7, Figure 7-1, page 6) shows the KAC native title area and the agreed Project Agreement Area.

A total of 14 heritage surveys along with extensive consultation with the Kariyarra People has been undertaken to determine the indigenous heritage values of the Development Envelope and surrounds. The survey work within the Development Envelope equates to approximately 100 survey days with the list of heritage surveys undertaken is provided in Att_3 - Additional Information on Traditional Owner Consultation (Section 8, Table 8-1, page 7). Additional details of heritage surveys and consultation with Traditional Owners are provided in Att_3 - Additional Information on Traditional Owner Consultation.

A search of the Department of Planning, Lands and Heritage (DPLH) Aboriginal Heritage Inquiry System shows a total of five registered Aboriginal sites, one lodged site and four Other Heritage Places are located across the development envelope. These are listed in Att_3 - Additional Information on Traditional Owner Consultation (Section 9, Table 9-1, page 9) and shown in Att_3 - Additional Information on Traditional Owner Consultation (Section 9, Figure 9-1, page 10).

Other heritage sites have also been identified in the area during surveys and consultations. The KAC has requested that the details and locations of these are kept confidential. Ongoing management of these sites will be agreed upon with the Traditional Owners and formalised in the Agreement's Cultural Heritage Management Plan. Where disturbance is required, this will be in agreement with Traditional Owners and in accordance with Western Australian laws.

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 Project is located in an internal surface water catchment between the Yule River and Turner River catchments. The nearest proposed mining infrastructure is located approximately six kilometres east of the Yule River and two kilometres west of the Turner River.

Pools downstream on the Turner River are seasonal and semi-permanent and considered to be of low to moderate ecological value in the local area. By comparison pools on the Yule River are larger, more permanent, groundwater-fed and considered to be of moderate to high ecological value as well as having cultural value to the Kariyarra People. The Yule River has been excluded from the Development Envelope, avoiding potential direct or indirect impacts to cultural and ecological values.

The Turner River has comparable flow characteristics to the Yule River. Its headwaters commence below Pullcunah Hill and drain northward via a braided river channel. The Turner River contains two permanent pools, Kunagunarinna Pool, 54 km upstream of the dewatering outfall, and Moorambine Pool, 40 km downstream and in the section of the river that will receive surplus mine water. The Turner River also supports riverine and groundwater dependent ecosystems and is used for various purposes including pastoralism (stock), domestic use and limited mining/quarrying.

Despite an upstream catchment area of approximately 528 km², there are no clearly defined drainage lines within the development envelope and the Great Northern Highway separates the central mining and infrastructure area from the Turner River. Drainage lines, creeks and rivers in the Pilbara are typically ephemeral and flow for only a short duration following rainfall events. Modelling predicts that prior to surface water management controls, stormwater flow will result in sheet flow over much of the internal catchment containing the Project, draining to the north/northwest and eventually forming a series of disorganised drainage lines. Drainage within the internal catchment does not flow to the Turner or Yule River systems. Surface water controls will be applied to manage stormwater runoff within the Project footprint.

A map of the catchments is provided in Att_2 - Additional Information on Hydrology and Hydrogeological Studies (Section 2, Figure 2-1, page 2).

Mining at Hemi will be conducted below the water table and mine dewatering is required for safe operations. Surplus water will be reinjected into the palaeochannel aquifer as well as discharged into the Turner River. Water management ponds will also be constructed for the Project.

The abstraction borefield has been designed so that groundwater, depending on its quality, can be directed for discharge or for reinjection or reuse, with a dual header system preventing mixing of these streams. Reinjection bores will target a palaeochannel. To ensure that shallow-rooting vegetation is not impacted by mounding, the reinjection borefield has been designed by a hydrogeologist and the bores spaced to ensure that the water table remains deeper than 2 m below ground level.

The modelled extent of groundwater drawdown (defined as the area where drawdown is expected to be 1m or more), mounding at reinjection bores and location of the palaeochannel are shown in Att_2 - Additional Information on Hydrology and Hydrogeological Studies (Section 2, Figure 2-2, page 3). A map showing the maximum extent of inundation in the Turner River is provided in Att_2 - Additional Information on Hydrology and Hydrogeological Studies (Section 2, Figure 2-3, page 5). Drawdown and reinjection are not predicted to impact either the Yule or Turner Rivers, or the YRWR.

For the first three years of dewatering, the Project is estimated to discharge up to 10 GL/year of surplus water to the Turner River. Once the processing plant is commissioned and operating at nameplate capacity, the utilisation of abstracted groundwater for the processing will reduce discharge into the Turner River. Intermittent discharge of up to 4 GL/year may occur in years 4 - 6 and intermittent discharge of 0-2 GL/year is expected from year seven until the end of the Project.

Modelling of the surplus water discharge into the Turner River has been undertaken by SWS. Modelling of no-natural-flow conditions indicates that at the surplus water discharge rates predicted during the Project's first three years, the wetting front will progress from the outfall at approximately 5 km per month. The wetting front is not anticipated to extend beyond 50 km downstream of the outfall. The modelled maximum extent of the wetting front is shown in Att_2 - Additional Information on Hydrology and Hydrogeological Studies (Section 2, Figure 2-3 page 5).

SWS prepared three cross sections of the Turner River: at the outfall (Att_2 - Additional Information on Hydrology and Hydrogeological Studies, Section 2, Chart 2-2, page 9); 4 km downstream of the outfall (Att_2 - Additional Information on Hydrology and Hydrogeological Studies, Section 2, Chart 2-3, page 9); and 12 km downstream of the outfall (Att_2 - Additional Information on Hydrology and Hydrogeological Studies, Section 2, Chart 2-4, page 10). Due to the width of the Turner River at these locations (circa 1.5 km), the charts' horizontal scale (width) is very compressed relative to the vertical scale (depth). At the 4 km and 12 km locations, the modelled high and low-flow surplus water discharge conditions are compared to flow events, expressed as Annual Exceedance Probabilities (AEP). The discharge will not cover the entire riverbed (approximately 1.5 km), being principally contained within the river's low flow channel estimated to be 10% of the average width of the Turner River.

The majority of the surplus water discharge area is expected to be shallow with 71% less than 20 cm deep and 91% less than 40 cm deep. The maximum expected depth is 130 cm in pools or depressions, however only 2% of the discharge area is expected to exceed 80 cm in depth. In comparison, a 10% AEP event spreads across more than 80% of the river bed at a depth of approximately 3.5 m.

The proposed discharge of surplus water to the Turner River will cause a temporary shift from seasonal to continual flows. The shift is expected to be approximately one year at the greatest extent of discharge and up to 2.5 years closer to the discharge point with some intermittent discharge continuing for the life of the mine. The continual flow will result in aquatic habitat that favours resident fauna or flora species adapted to perennial flows, potentially causing a change in the dominant biological communities during the temporary discharge period.

However, it is considered highly unlikely that any species will be lost from the Turner River, given the broader distribution of the taxa found throughout the region, and their ability to disperse or recolonise in newly created flows or via mobile adult stages following cessation of discharge.

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.

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. *

There are no World Heritage areas in or near the Project.

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. *

There are No National Heritage sites in the Project.

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. *

There are no RAMSAR wetlands in or near the Project.

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
No	No	Calidris ferruginea
No	No	Charadrius leschenaultii
Yes	Yes	Dasyurus hallucatus
No	No	Erythroriorchis radiatus
Yes	Yes	Falco hypoleucos
Yes	Yes	Liasis olivaceus barroni
Yes	Yes	Macroderma gigas
Yes	Yes	Macrotis lagotis
No	No	Numenius madagascariensis
Yes	Yes	Pezoporus occidentalis
Yes	Yes	Rhinonictes aurantia (Pilbara form)
No	No	Rostratula australis
Yes	Yes	Seringia exastia

Ecological communities

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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. ***Overview**

No direct or indirect impacts are expected for species considered not to occur in the Development Envelope. These species are listed in Att_6 – Detailed Vertebrate Fauna Survey Hemi_2023 (Appendix 9, page 152) with a justification. The following species were either recorded or may occur.

Seringia exastia (Fringed Fire-bush)

S. exastia was recorded at two locations in the Development Envelope which have been excluded from the disturbance footprint. Potential direct impacts include clearing of individuals and habitat. Potential indirect impacts include introduction of invasive species.

A recent study (Binks et al., 2020) synonymised *S. exastia* with the unlisted *S. elliptica* which is common and widespread. Before this study, *S. exastia* at Hemi would have been identified as *S. elliptica* and not considered a MNES.

S. exastia was delisted under the *WA Biodiversity Conservation Act 2016* and is common and widespread in the region. Significant impacts are not anticipated. Additional detail is in Att_1 – Assessment of Impacts to MNES (Section 3.2, page 19) and in Att_7 - Status of *Seringia exastia* Hemi.

Dasyurus hallucatus (Northern Quoll)

The Northern Quoll was recorded in the Yule and Turner Rivers with Rocky Outcrop and Major River habitats identified as critical together with any habitat within 1 km that may be used for foraging and dispersal. A map of records and critical habitat is provided in Att_1 – Assessment of Impacts to MNES (Section 4.3, Figure 4-3, page 27). Critical Major River habitat extends beyond the survey area, along the Yule River (~250 km long) and Turner River (~220 km long).

Potential direct impacts include habitat loss and vehicle strikes. Potential indirect impacts include changes to the fire regime; increased feral predators, introduction of invasive species, and changes to the wet/dry cycle and water quality in the Turner River.

De Grey has applied the following controls:

- Exclusion of the Yule River and associated foraging habitat from the Development Envelope.
- Exclusion of all Rocky Outcrop from the Development Envelope.
- Limited disturbance to the Turner River to the minimum required for access and the dewatering pipeline corridor and outfall which comprises ~35 ha (~3% of the mapped extent of the Major River Habitats of the Yule and Turner Rivers). Clearing for the outfall is low impact in nature and will avoid impacts to potential shelter habitat.
- Apart from the minimal disturbance described above, all other infrastructure has been designed to avoid Northern Quoll habitat.

Surplus water discharge into the Turner River will be of an acceptable quality and regulated under Part V of the *Environmental Protection Act (1986)* (WA). Modelling indicates that it will remain confined to the main channel of the Turner River and that the wetting front will extend by ~5 km a month to a maximum of up to 50 km downstream before dewatering discharge slows after two years at which time the wetting front begins to recede.

De Grey will implement a Fauna Management Plan for the Project (Att_8 - Fauna Management Plan Hemi_2022). This plan includes measures to:

- Prevent mortality during clearing.
- Control feral animal populations.
- Prevent changes to the existing fire regime.
- Avoid inadvertently introducing exotic grasses.
- Adopt appropriate actions from the Commonwealth's Threat Abatement Plans.
- Manage clearing activities.

With the exclusion of critical habitat and proposed management measures, significant impacts to the Northern Quoll are not anticipated. Additional detail is provided in Att_1 – Assessment of Impacts to MNES (Section 4.3, page 26).

Macrotis lagotis (Greater Bilby)

The fauna survey recorded secondary signs disused burrows and diggings of the Greater Bilby (Bilby), which is considered to periodically inhabit Spinifex Sandplain, Sandplain Drainage and Sand Dune habitats. A map of critical habitat and records of historic diggings is provided in Att_1 – Assessment of Impacts to MNES (Section 4.4, Figure 4-4, page 34). Of note is despite deployment and monitoring of three camera traps since March 2022 to date, no Bilbies have been recorded.

Potential direct impacts include habitat loss and vehicle strike. Potential direct impacts include changes to fire regime and increase in feral predation.

Nearly all Bilby records were near the Yule River and a sand dune that are excluded from the Development Envelope. There is a single record in the Development Envelope of a Bilby digging, however, this area has been excluded from the disturbance footprint.

De Grey will implement a Fauna Management Plan (Att_8 - Fauna Management Plan Hemi_2022) which includes:

- Prevent mortality during clearing.
- Control feral animal populations.
- Prevent changes to the existing fire regime.
- Avoid inadvertently introducing exotic grasses.
- Adopt appropriate actions from the Commonwealth's Threat Abatement Plans.
- Manage clearing activities.

With management measures in place, significant impacts are not anticipated. A detailed assessment is in Att_1 – Assessment of Impacts to MNES (Section 4.4, pages 33).

Rhinonictes aurantia (Pilbara Leaf-nosed Bat)

Critical habitat for the Pilbara Leaf-nosed Bat (PLNB) is underground, warm and humid diurnal roosts. Foraging individuals were recorded on passive acoustic monitors, however, no roosting habitat is present in the Development Envelope and the action will not impact any roosting habitat. The closest known roost is Yule River 4.7 km west of the Development Envelope. PLNB records are shown in Att_1 – Assessment of Impacts to MNES (Section 4.5, Figure 4-5, page 40).

Potential direct impacts include vehicle strikes, which will be mitigated via the enforcement of speed limits. Potential indirect impacts include invasive species.

A significant impact to the PLNB is not anticipated. A detailed assessment is in Att_1 – Assessment of Impacts to MNES (Section 4.5, page 38).

Macroderma gigas (Ghost Bat)

The Ghost Bat was not recorded during fauna surveys, nor any suitable roosting habitat; however, it is considered likely to occur as a foraging visitor as there are recent records nearby (closest record 1.7 km east of the Development Envelope) and suitable foraging habitat is present.

Potential direct impacts include foraging habitat loss, vehicle strikes and fence collision. Potential indirect impacts include predation, and competition with feral predators, and fire regime change.

As no roosting habitat or foraging habitat near roosting habitat will be impacted, the proposed action is not anticipated to have a significant impact. De Grey will implement measures to control clearing and so limit impacts to foraging habitat and adopt appropriate actions from Commonwealth Threat Abatement Plans.

A detailed assessment is in Att_1 – Assessment of Impacts to MNES (Section 4.6, page 44).

Liasis olivaceous barroni (Pilbara Olive Python)

The Pilbara Olive Python was not recorded in terrestrial fauna surveys or in eDNA analysis from the Yule and Turner Rivers. The closest record on DBCA's Threatened and Priority Fauna Database is 12.9 km northeast of the Development Envelope. As suitable habitat is present within the Development Envelope, it is still considered likely to occur. Critical habitats are Major River and Rocky outcrops; however, individuals will pass through a variety of habitats when dispersing. Critical habitat is shown in Att_1 – Assessment of Impacts to MNES (Section 4.7, Figure 4-6, page 53)

Potential direct impacts to the Pilbara Olive Python include loss of habitat and vehicle strike. Potential indirect impacts include fire regime change and increase in feral predation and competition. Most critical habitat has been excluded from the Development Envelope, however, low-impact clearing of Major River habitat is required for the dewatering outfall. With environmental management measures in place, the proposed action is not anticipated to have a significant impact.

A detailed assessment is provided in Att_1 – Assessment of Impacts to MNES (Section 4.7, page 48).

Falco hypoleucos (Grey Falcon)

The Grey Falcon was not detected during fauna surveys but is considered likely to occur at the Project on occasion due to suitable habitat being present.

Potential direct impacts include vehicle interaction and habitat loss. Potential indirect impacts include increased feral fauna. Disturbance to breeding habitat along the Yule and Turner Rivers has been excluded from the disturbance footprint. De Grey will implement management measures to prevent an increase in feral fauna, accidental over clearing, and vehicle interaction. With environmental management measures in place, as described in the Fauna Management Plan the proposed action is not anticipated to have a significant impact on the Grey Falcon.

A detailed assessment of impacts is provided in Att_1 – Assessment of Impacts to MNES (Section 4.8, page 54) and a map of critical habitat is provided in Att_1 – Assessment of Impacts to MNES (Section 4.8, Figure 4-7, page 58).

Pezoporus occidentalis (Night Parrot)

The current distribution of the Night Parrot within Australia is uncertain and, although not detected within the Development Envelope, it has been assessed as possibly occurring due to the presence of isolated patches of mature spinifex clumps. Clumps are present in very small patches at a scale far finer than habitat mapping. Due to the apparent absence of this species within the Development Envelope, the isolated mature spinifex clumps are unlikely to be critical for the species' survival.

Potential direct impacts include habitat loss. Potential indirect include fire regime change and increased feral predators. De Grey will implement measures to limit clearing to the minimum required; avoid changing the fire regime, and control existing feral fauna populations. It is not anticipated that the Project will have a significant impact on the Night Parrot.

A detailed assessment of impacts to the Night Parrot is provided in Att_1 – Assessment of Impacts to MNES (Section 4.9, page 60).

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

No

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

Species-specific significant impact assessments are provided in Att_1 – Assessment of Impacts to MNES (Section 3.2, page 19 and Section 4, page 21). No significant impacts to MNES recorded or potentially occurring in the Development Envelope were identified, with the principal reasons being:

***Seringia exastia* (Fringed Fire-bush)** - A recent taxonomic survey (Binks et al., 2020) synonymised *Seringia exastia* with the common and widespread *Seringia elliptica*. Prior to this study, the *Seringia exastia* at Hemi would have been identified as *Seringia elliptica* (Att_7 - Status of *Seringia exastia* Hemi_2022). During field surveys, two populations were located within the Development Envelope, however have been excluded from the disturbance footprint. The Project may impact *Seringia exastia*, however, as the species is now known to be widespread, any impacts are not significant. *Seringia exastia* was degazetted as a Threatened species by the Western Australian Government in September 2022.

***Dasyurus hallucatus* (Northern Quoll)** - Critical rocky outcrop habitat has been excluded from the Project's Development Envelope. The critical Major River habitat associated with the Yule River has been excluded from the Development Envelope. Clearing of critical Major River habitat associated with the Turner River, and critical foraging and dispersal habitat within 1 km of the river is limited to the minimum necessary for the construction of an access road and dewatering pipeline and outfall. De Grey will implement a Fauna Management Plan for the Project (Att_8 - Fauna Management Plan Hemi_2022).

***Macrotis lagotis* (Greater Bilby)** - Evidence of the Bilby was recorded near the Yule River and the Sand Dune PEC that have been excluded from the Development Envelope. There is a single digging record inside the Development Envelope, however, this area has been excluded from the disturbance footprint. Clearing of critical habitat is limited to areas where there were no primary or secondary signs of Bilbies. De Grey will implement a Fauna Management Plan for the Project (Att_8 - Fauna Management Plan Hemi_2022).

***Rhinonictis aurantia* (Pilbara Leaf-nosed Bat) and *Macroderma gigas* (Ghost Bat)** - The Development Envelope does not contain critical roosting habitat for the Pilbara Leaf Nosed Bat or the Ghost Bat.

***Liasis olivaceous barroni* (Pilbara Olive Python)** - This species was not detected during terrestrial fauna surveys or in eDNA analysis from the Yule and Turner Rivers. Critical habitat for this species, Major River and Rocky outcrops, has been purposely excluded from the Project's Development Envelope, with the exception of clearing of some Major River habitat to enable the construction of the surplus water discharge outfall.

***Falco hypoleucos* (Grey Falcon)** - This species was not detected during fauna surveys and direct disturbance to breeding habitat along the Yule and Turner Rivers has been excluded from the disturbance footprint.

***Pezoporus occidentalis* (Night Parrot)** - This species was not detected during fauna surveys. Due to the isolated nature of the mature spinifex clumps within the Development Envelope, and the absence of the species, this habitat is considered unlikely to be critical for the species' survival; hence, any clearing of this habitat would not constitute a significant impact.

In general – The Project has been designed to exclude and limit disturbance to critical habitat for listed species. De Grey will implement mining industry standard environmental management measures in the Fauna Management Plan which are detailed in Section 4.1.4.10 below.

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

No

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

De Grey acknowledges the presence of *Seringia exastia* (Fringed Fire-bush), which although delisted at a State level, remains an EPBC Act listed species and critical habitat for the *Macrotislagotis* (Greater Bilby) within the Project's Development Envelope.

As detailed in Att_1 – Assessment of Impacts to MNES (Section 3.2, page 19 and Section 4, page 21), De Grey's species significant impact assessments have not identified that the proposed action is likely to have any significant direct or indirect adverse impact to EPBC Act listed species, prevent the recovery of any listed species or cause a listed species to decline. However, in line with EPBC Act Section 68(1), De Grey is of the view that the action has the potential to be classified as a controlled action in light of the Commonwealth Government's Nature Positive Plan (DCCEEW, 2022), which calls for the adoption of "decisions that are nature positive". The term Nature Positive is defined as "circumstances where nature – species and ecosystems – is being repaired and is regenerating rather than being in decline (DCCEEW, 2022).

As discussed with DCCEEW officers during the August 2022 pre-referral meeting, although De Grey's environmental impact assessment has not identified any potentially significant impacts MNES, the Commonwealth Minister for the Environment and Water, or their delegate, will wish to undertake their own assessment.

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. *

Standard management measures for the Project are listed under the subheadings below.

Threatened species-specific mitigation measures are provided in Att_1 – Assessment of Impacts to MNES (Section 4, page 21). De Grey has captured fauna management measures in a Greater Bilby and Northern Quoll Management Plan (Att_8 - Fauna Management Plan Hemi_2022) which will be implemented for the Project.

Measures to avoid critical habitat include:

- Exclusion of Yule River and surrounds from Development Envelope.
- Exclusion of the Sand Dune/ Gregory Land System PEC from the Development Envelope.
- Exclusion of Rocky Outcrop habitat from Development Envelope.

Measures to minimise clearing of critical habitat include:

- Limiting disturbance in the Turner River to low-impact clearing for dewatering outfall.
- Limiting disturbance near the Turner River to the dewatering pipeline and access road.

Measures to manage clearing of vegetation include:

- Limiting clearing to the minimum required.
- Using previously disturbed areas to the extent possible.
- Implementation of an internal permitting system for clearing.
- Annual review of clearing areas.
- Progressive rehabilitation where feasible.

Measures to avoid changing the existing fire regime include:

- Using a permit system for hot work.
- Installation of fire breaks around critical infrastructure.
- Effective maintenance of vehicles.
- Provision of fire extinguishers in all vehicles.
- Maintaining and implementing emergency response procedures.
- Conducting any controlled burns in consultation with the WA Department of Biodiversity, Conservation and Attractions (DBCA).
- Including fire education in the site induction.
- Limiting driving off tracks.

Measures to control feral species include:

- Implementing best practice waste management measures.
- Limiting the creation of permanent water bodies.
- Fencing of artificial water sources where practicable and any putrescible landfills.
- Monitoring and control measures as required.
- Provision of training to employees and contractors on how to interact with feral fauna.
- Prohibiting feeding of feral fauna.
- Prohibiting pets on site.

Measures to prevent fauna injury or mortality from vehicles include:

- Speed limits will be assigned and enforced.
- Driving at night will be limited to the extent possible.
- Mine vehicles will be required to stay on existing roads and tracks when not involved in clearing activities.
- Hooning and misadventure will be prohibited.
- Sightings and incidents will be reported.
- Personnel will be educated on conservation significant fauna.

Measures to prevent injury or death to Bilbies during clearing include:

- Undertaking pre-clearance surveys of clearing areas to ensure that no Bilbies are present.
- Relocating individuals found inside clearing areas
- Ensuring any burrows found inside proposed clearing areas are inactive prior to clearing.
- On going camera monitoring.

Impacts from fencing will be managed by:

- Minimising fencing to amount required.
- Not using barbed wire fencing where practicable.
- Use of bat reflectors where required.

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

In the absence of any significant residual impacts to Matters of National Environmental Significance, no offsets are proposed.

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
Yes	Yes	Actitis hypoleucos
No	No	Apus pacificus
Yes	Yes	Calidris acuminata
No	No	Calidris ferruginea
Yes	Yes	Calidris melanotos
Yes	Yes	Calidris ruficollis
No	No	Charadrius leschenaultii
Yes	Yes	Charadrius veredus
Yes	Yes	Gelochelidon nilotica
Yes	Yes	Glareola maldivarum
No	No	Hirundo rustica
Yes	Yes	Hydroprogne caspia
No	No	Motacilla cinerea
No	No	Motacilla flava
No	No	Numenius madagascariensis
Yes	Yes	Pandion haliaetus
Yes	Yes	Plegadis falcinellus
Yes	Yes	Tringa glareola
Yes	Yes	Tringa nebularia
Yes	Yes	Tringa stagnatilis

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. *

Migratory species identified to likely occur in the Development Envelope may be impacted by project activities including but not limited to clearing of habitat, discharge of surplus water into the Turner River, vehicle and aircraft interaction, the potential introduction of weeds, light spill, and noise. The Fork-tailed Swift (*Apus pacificus*), was identified in the survey area, however as the species is almost entirely aerial in Australia (Att_6 – Detailed Vertebrate Fauna Survey 2021-2022 (Section 5.2.2, page 75) no indirect or direct impacts are anticipated.

Migratory species identified in the search of the EPBC Protected Matters Search Tool that have been considered not to occur in the survey area are not anticipated to be indirectly or directly impacted by the Project activities. (Att_6 – Detailed Vertebrate Fauna Survey 2021-2022 (Appendix 9, page 152).

Additional detail is provided in Att_1 – Assessment of Impacts to MNES (Section 4.10, page 62).

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. *

The Project does not contain any nationally or internationally important wetlands or habitat likely to support ecologically significant populations of migratory birds. An area is only considered to be an internationally significant site for Migratory shorebirds if it supports 20,000 birds or 1% or more of the flyway population of a species, or a nationally significant site if it supports 2,000 birds or 0.1% or more of the flyway population of a species (DEE, 2017). There were no populations of Migratory species recorded in the survey area that would be classified as an international or national important population.

De Grey will implement measures to mitigate habitat loss and degradation, control existing feral fauna populations, and direct mortality. It is not anticipated that the proposed action will substantially modify important habitat, result in the establishment of an invasive species harmful to a migratory species, or disrupt the breeding cycle of an ecologically significant portion of the population of a migratory species.

Additional information is provided in Att_1 – Assessment of Impacts to MNES (Section 4.10, page 62).

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 not anticipated to have any significant direct or indirect impacts to migratory species or important migratory bird habitat.

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. *

Avoidance and mitigation measures include:

- Exclusion of the Yule River from the Project's Development Envelope.
- Minimisation of clearing in and near the Turner River.
- Avoiding clearing of floodplain systems.
- Avoiding changes to existing fire regime.
- Avoiding mortality or injury from vehicles.
- Controlling existing populations of feral species.
- Management of mine water discharge in accordance with environmental licence.

Further detail is provided in Att_1 – Assessment of Impacts to MNES (Section 4.10, page 62).

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

No offsets are proposed for this Project.

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. *

Project does not involve mining or processing of uranium ore or the storage of radioactive wastes.

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. *

Project is located on land and will not impact 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. *

Project is located on land in Western Australia.

The Project is committed to achieving net zero greenhouse gas emissions before 2050, so contributing to Australia's efforts to minimise the impacts of Climate Change on the 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. *

Project is not associated with a coal mining or coal seam gas 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. *

Project is not located on or near Commonwealth land.

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. *

Project is located in 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:

None

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)
- Threatened Species and Ecological Communities (S18)
- 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. *

The Project's footprint is constrained by the location of the ore body.

The iterative design of the Project has considered several alternatives, though none of these had a consequential impact on protected matters.

5. Lodgement

5.1 Attachments

1.2.1 Overview of the proposed action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att_1 – Assessment of Impacts to MNES This document contains the assessment of Impacts to MNES	16/03/2023	No	High
#2.	Document	Att_1 – Assessment of Impacts to MNES_Redacted.pdf This document contains the assessment of Impacts to MNES with locations of recordings redacted.	12/05/2023	No	High

1.2.6 Commonwealth or state legislation, planning frameworks or policy documents that are relevant to the proposed action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att_2 - Additional Information on Hydrology and Hydrological Studies This document contains supporting information on hydrology and hydrogeological studies for the Project.	16/03/2023	No	High

1.2.7 Public consultation regarding the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att_3 - Additional Information on Traditional Owner Consultation This document contains additional information on traditional owner consultation	16/03/2023	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	Att_4 - Exploration Environmental Management Plan_2023 This document is the overarching systems for Environmental Management	20/01/2023	Yes	High

2.2.5 Tenure of the action area relevant to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att_1 – Assessment of Impacts to MNES This document contains the assessment of Impacts to MNES	15/03/2023	No	High
#2.	Document	Att_1 – Assessment of Impacts to MNES_Redacted.pdf This document contains the assessment of Impacts to MNES with locations of recordings redacted.	11/05/2023		High

3.1.2 Existing or proposed uses for the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att_1 – Assessment of Impacts to MNES This document contains the assessment of Impacts to MNES	15/03/2023	No	High
#2.	Document	Att_1 – Assessment of Impacts to MNES_Redacted.pdf This document contains the assessment of Impacts to MNES with locations of recordings redacted.	11/05/2023		High

3.1.3 Natural features, important or unique values that applies to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att_1 – Assessment of Impacts to MNES This document contains the assessment of Impacts to MNES	15/03/2023	No	High

#2.	Document	Att_1 – Assessment of Impacts to MNES_Redacted.pdf This document contains the assessment of Impacts to MNES with locations of recordings redacted.	11/05/2023	High
#3.	Document	Att_2 - Additional Information on Hydrology and Hydrological Studies This document contains supporting information on hydrology and hydrogeological studies for the Project.	15/03/2023 No	High

3.1.4 Gradient relevant to the project area

	Type	Name	Date	Sensitivity Confidence
#1.	Document	Att_2 - Additional Information on Hydrology and Hydrological Studies This document contains supporting information on hydrology and hydrogeological studies for the Project.	15/03/2023 No	High

3.2.1 Flora and fauna within the affected area

	Type	Name	Date	Sensitivity Confidence
#1.	Document	Att_1 – Assessment of Impacts to MNES This document contains the assessment of Impacts to MNES	15/03/2023 No	High
#2.	Document	Att_1 – Assessment of Impacts to MNES_Redacted.pdf This document contains the assessment of Impacts to MNES with locations of recordings redacted.	11/05/2023	High
#3.	Document	Att_5 - Flora and Vegetation Studies Hemi - Part 1 This document details the procedures and findings of the flora and vegetation completed within the Project area.	13/01/2023 No	High
#4.	Document	Att_5 - Flora and Vegetation Studies Hemi - Part 1_Redacted.pdf Detailed flora and vegetation assessment report with locations of conservation significant species redacted	13/01/2023 No	High
#5.	Document	Att_5 - Flora and Vegetation Studies Hemi - Part 2 This document contains Appendix N of the Baseline Flora and Vegetation Assessment 2023	13/01/2023 No	High
#6.	Document	Att_5 - Flora and Vegetation Studies Hemi - Part 2_Redacted.pdf Detailed flora and vegetation assessment report with locations of conservation significant species redacted.	13/01/2023	High
#7.	Document	Att_5 - Flora and Vegetation Studies Hemi - Part 3 This document contains Appendix N of the Baseline Flora and Vegetation Assessment	13/01/2023 No	High
#8.	Document	Att_5 - Flora and Vegetation Studies Hemi - Part 3_Redacted.pdf Detailed flora and vegetation assessment report with locations of conservation significant species redacted	13/01/2023 No	High
#9.	Document	Att_5 - Flora and Vegetation Studies Hemi - Part 4 This document contains Appendix O of the Baseline Flora and Vegetation Assessment	13/01/2023 No	High
#10.	Document	Att_6 - Detailed Vertebrate Fauna Survey 2021-2022 This document details the procedures and findings of the fauna and habitat survey completed within the Project area.	01/01/2023 No	High
#11.	Document	Att_6 – Detailed Vertebrate Fauna Survey 2021-2022_Redacted.pdf Detailed fauna and habitat assessment with locations of MNES redacted	01/01/2023 No	High
#12.	Document	Att_7 - Status of Seringia exastia Hemi_2022 This document contains information of the Status of Seringia exastia at the project area.	28/11/2022 No	High
#13.	Link	Interim Biogeographic Regionalisation for Australia, Version 7 https://www.dcceew.gov.au/sites/default/files/en..		High

3.2.2 Vegetation within the project area

	Type	Name	Date	Sensitivity Confidence
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#1.	Document	Att_1 – Assessment of Impacts to MNES This document contains the assessment of Impacts to MNES	15/03/2023	No	High
#2.	Document	Att_1 – Assessment of Impacts to MNES_Redacted.pdf This document contains the assessment of Impacts to MNES with locations of recordings redacted.	11/05/2023		High

3.3.1 Commonwealth heritage places overseas or other places that apply to the project area

	Type	Name	Date		Sensitivity Confidence
#1.	Link	InHerit http://inherit.stateheritage.wa.gov.au/Public/Se..			High

3.3.2 Indigenous heritage values that apply to the project area

	Type	Name	Date		Sensitivity Confidence
#1.	Document	Att_3 - Additional Information on Traditional Owner Consultation This document contains additional information on traditional owner consultation	15/03/2023	No	High

3.4.1 Hydrology characteristics that apply to the project area

	Type	Name	Date		Sensitivity Confidence
#1.	Document	Att_2 - Additional Information on Hydrology and Hydrological Studies This document contains supporting information on hydrology and hydrogeological studies for the Project.	15/03/2023	No	High

4.1.4.2 (Threatened Species and Ecological Communities) Why your action has a direct and/or indirect impact on the identified protected matters

	Type	Name	Date		Sensitivity Confidence
#1.	Document	Att_1 – Assessment of Impacts to MNES This document contains the assessment of Impacts to MNES	15/03/2023	No	High
#2.	Document	Att_1 – Assessment of Impacts to MNES_Redacted.pdf This document contains the assessment of Impacts to MNES with locations of recordings redacted.	11/05/2023	No	High
#3.	Document	Att_6 - Detailed Vertebrate Fauna Survey 2021-2022 This document details the procedures and findings of the fauna and habitat survey completed within the Project area.	31/12/2022	No	High
#4.	Document	Att_6 – Detailed Vertebrate Fauna Survey 2021-2022_Redacted.pdf Detailed fauna and habitat assessment with locations of MNES redacted	31/12/2022	No	High
#5.	Document	Att_7 - Status of <i>Seringia exastia</i> Hemi_2022 This document contains information of the Status of <i>Seringia exastia</i> at the project area.	29/11/2022	No	High
#6.	Document	Att_8 - Fauna Management Plan Hemi_2023_Redacted.pdf Fauna Management Plan for the Hemi Gold Project	12/05/2023	No	High
#7.	Document	Att_8 - Fauna Management Plan Hemi_2023 This document contains the fauna management plan for the Hemi Gold Project.	16/03/2023	No	High
#8.	Link	Genomic data and morphological re-assessment reveals synonymy and hybridisation among <i>Seringia</i> taxa https://10.1002/tax.12233	17/06/2020		High

4.1.4.6 (Threatened Species and Ecological Communities) Why you do not consider the direct and/or indirect impact to be a Significant Impact

	Type	Name	Date		Sensitivity Confidence
#1.	Document	Att_1 – Assessment of Impacts to MNES This document contains the assessment of Impacts to MNES	15/03/2023	No	High

#2.	Document	Att_1 – Assessment of Impacts to MNES_Redacted.pdf This document contains the assessment of Impacts to MNES with locations of recordings redacted.	11/05/2023	No	High
#3.	Document	Att_3 - Additional Information on Traditional Owner Consultation This document contains additional information on traditional owner consultation	15/03/2023	No	High
#4.	Document	Att_7 - Status of Seringia exastia Hemi_2022 This document contains information of the Status of Seringia exastia at the project area.	28/11/2022	No	High
#5.	Document	Att_8 - Fauna Management Plan Hemi_2023_Redacted.pdf Fauna Management Plan for the Hemi Gold Project	11/05/2023	No	High
#6.	Document	Att_8 - Fauna Management Plan Hemi_2023 This document contains the fauna management plan for the Hemi Gold Project.	15/03/2023	No	High
#7.	Link	Genomic data and morphological re-assessment reveals synonymy and hybridisation among Seringia taxa https://10.1002/tax.12233	17/06/2020		High

4.1.4.9 (Threatened Species and Ecological Communities) Why you do not think your proposed action is a controlled action

	Type	Name	Date		Sensitivity Confidence
#1.	Document	Att_1 – Assessment of Impacts to MNES This document contains the assessment of Impacts to MNES	15/03/2023	Yes	High
#2.	Document	Att_1 – Assessment of Impacts to MNES_Redacted.pdf This document contains the assessment of Impacts to MNES with locations of recordings redacted.	11/05/2023	No	High
#3.	Link	Nature Positive Plan: better for the environment, better for business https://www.dcceew.gov.au/sites/default/files/do..			High

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

	Type	Name	Date		Sensitivity Confidence
#1.	Document	Att_1 – Assessment of Impacts to MNES This document contains the assessment of Impacts to MNES	15/03/2023	Yes	High
#2.	Document	Att_1 – Assessment of Impacts to MNES_Redacted.pdf This document contains the assessment of Impacts to MNES with locations of recordings redacted.	11/05/2023	No	High
#3.	Document	Att_8 - Fauna Management Plan Hemi_2023_Redacted.pdf Fauna Management Plan for the Hemi Gold Project	11/05/2023	No	High
#4.	Document	Att_8 - Fauna Management Plan Hemi_2023 This document contains the fauna management plan for the Hemi Gold Project.	15/03/2023	Yes	High

4.1.5.2 (Migratory Species) Why your action has a direct and/or indirect impact on the identified protected matters

	Type	Name	Date		Sensitivity Confidence
#1.	Document	Att_1 – Assessment of Impacts to MNES This document contains the assessment of Impacts to MNES	15/03/2023	No	High
#2.	Document	Att_1 – Assessment of Impacts to MNES_Redacted.pdf This document contains the assessment of Impacts to MNES with locations of recordings redacted.	11/05/2023	No	High
#3.	Document	Att_6 - Detailed Vertebrate Fauna Survey 2021-2022 This document details the procedures and findings of the fauna and habitat survey completed within the Project area.	31/12/2022	No	High

#4.	Document	Att_6 – Detailed Vertebrate Fauna Survey 2021-2022_Redacted.pdf Detailed fauna and habitat assessment with locations of MNES redacted	31/12/2022 No	High
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4.1.5.6 (Migratory Species) Why you do not consider the direct and/or indirect impact to be a Significant Impact

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att_1 – Assessment of Impacts to MNES This document contains the assessment of Impacts to MNES	15/03/2023 No	High	
#2.	Document	Att_1 – Assessment of Impacts to MNES_Redacted.pdf This document contains the assessment of Impacts to MNES with locations of recordings redacted.	11/05/2023 No	High	
#3.	Link	EPBC Act Policy Statement 3.21 Industry guidelines for avoiding, assessing and mitigating impacts https://www.dcceew.gov.au/sites/default/files/do..		High	

4.1.5.10 (Migratory Species) Avoidance or mitigation measures proposed for this action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att_1 – Assessment of Impacts to MNES This document contains the assessment of Impacts to MNES	15/03/2023 Yes	High	
#2.	Document	Att_1 – Assessment of Impacts to MNES_Redacted.pdf This document contains the assessment of Impacts to MNES with locations of recordings redacted.	11/05/2023 No	High	

5.2 Declarations

Completed Referring party's declaration

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

ABN/ACN	65094206292
Organisation name	DE GREY MINING LTD
Organisation address	6008 WA
Representative's name	Sarah Thomas
Representative's job title	Environment Superintendent
Phone	0861179328
Email	sarah.thomas@degreymining.com.au
Address	2 Kings Park Road, 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, **Sarah Thomas of DE GREY MINING 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	65094206292
Organisation name	DE GREY MINING LTD
Organisation address	6008 WA
Representative's name	Glenn Jardine
Representative's job title	Managing Director
Phone	+61 8 6117 9328
Email	glenn.jardine@degreymining.com.au
Address	2 Kings Park Road, 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. *

I, **Glenn Jardine of DE GREY MINING 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, **Glenn Jardine of DE GREY MINING 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. *