



Environmental  
Protection  
Authority

# Telfer-Havieron Gold Mine Proposal

Greatland Pty Ltd (ABN 98 108 498 997)

Report 1806

April 2026

This assessment report has been prepared by the Environmental Protection Authority (EPA) under s. 44 of the *Environmental Protection Act 1986* (WA). It describes the outcomes of the EPA's assessment of the Telfer-Havieron Gold Mining Project proposal by Greatland Pty Ltd.

This assessment report is for the Western Australian Minister for Environment and sets out:

- what the EPA considers to be the key environmental factors identified in the course of the assessment
- the EPA's recommendations as to whether or not the proposal may be implemented and, if it recommends that implementation be allowed, the conditions and procedures, if any, to which implementation should be subject
- other information, advice and recommendations as the EPA thinks fit.



**Darren Walsh**  
Chair  
Environmental Protection Authority

23 March 2026

# Contents

Summary .....	2
1 Proposal.....	13
2 Assessment of key environmental factors .....	24
2.1 Flora and vegetation .....	24
2.2 Terrestrial fauna.....	39
2.3 Inland waters and subterranean fauna.....	63
2.4 Greenhouse gas emissions .....	80
2.5 Social surroundings.....	87
3 Holistic assessment.....	96
4 Offsets .....	98
5 Recommendations.....	104
6 Other advice.....	105

## Figures

Figure 1 : Project location .....	22
Figure 2 : Development envelope and indicative disturbance footprint .....	23
Figure 3 : Records of <i>Goodenia hartiana</i> (P2).....	28
Figure 4 : Terrestrial fauna habitat types .....	43
Figure 5 : Drawdown extent upper confined aquifer.....	67

## Tables

Table 1 : Summary of elements of the Proposal Content Document .....	15
Table 2: Regional <i>Goodenia hartiana</i> records.....	32
Table 3 : Cumulative impacts to vegetation .....	35
Table 4 : Summary of assessment for flora and vegetation.....	37
Table 5 : Fauna habitat types and regional extent .....	41
Table 6 : Fauna habitat types within indicative disturbance footprint.....	48
Table 7 : Summary of assessment for terrestrial fauna .....	58
Table 8 : Summary of assessment for inland waters and subterranean fauna.....	77
Table 9 : Summary of assessment for greenhouse gas emissions.....	85
Table 10 : Summary of assessment for social surroundings .....	94

## Appendices

Appendix A: Recommended conditions.....	106
Appendix B: Decision-making authorities.....	141
Appendix C: Regulation under other statutory processes .....	143
Appendix D: Environmental Protection Act principles.....	145
Appendix E: Other environmental factors.....	150

Appendix F: List of submitters ..... 154  
Appendix G: Assessment timeline ..... 155  
Appendix H: Relevant policy, guidance, procedures and references..... 156  
Appendix I: Contemporising of Ministerial Statements 605, 606, and 650 ..... 162

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# Summary

## Proposal

The Telfer-Havieron Gold Mining Proposal is a significant amendment to Ministerial Statements (MS) 606 and 605 (as amended by MS 650), by developing and including the Havieron underground mine, within a development envelope encompassing both the Telfer-Havieron operations.

The proposal is located approximately 400 kilometres south-east of Port Hedland in the Great Sandy Desert region of Western Australia.

The proposal includes the development of the Havieron deposit including, underground mine, waste rock landforms, evaporation ponds, expanded ground water abstraction, and haul road for trucking ore from Havieron to Telfer for processing, for a combined total of 32 million tonnes of ore production.

## Context

The proposal is situated within the geological Paterson Province region in north-western Western Australia. The development envelope predominantly lies within the Great Sandy Desert (GSD) Interim Biogeographic Regionalisation of Australia (IBRA) bioregion, with a smaller portion intersecting the Little Sandy Desert (LSD). It spans the Mackay subregion of the GSD and the Rudall subregion of the LSD.

Although there are no permanent surface water bodies in the immediate vicinity of the proposal, the GSD, an internally draining basin, includes Lake Dora, part of the Rudall River system listed in the Directory of Important Wetlands (DIWA). Lake Dora is located approximately 35 km southeast of the proposal area. While permanent waterbodies are absent, seasonal salt lakes of ecological and cultural importance occur in close proximity to the proposal area.

The proposal area lies on unallocated crown land within the Native Title Determination Areas of Martu and Ngurrara Peoples (WCD1996/078, WCD2002/002, and WCD2013/002).

## Environmental values

Flora and vegetation, terrestrial fauna, terrestrial environmental quality, inland waters and subterranean fauna, greenhouse gas emissions and social surroundings associated with Aboriginal cultural heritage are the key environmental factors that may be impacted by the proposal.

## Consultation

The EPA published the proponent's referral information for the proposal on its website for 7 days public comment. The EPA also published the proponent's additional information, being the environmental review document (Talis 2024), on its website for public review for 3 weeks (from 13 November 2024 to 4 December

2024). The EPA considered the comments received during these public consultation periods in its assessment.

## Mitigation hierarchy

The mitigation hierarchy is a sequence of proposed actions to reduce adverse environmental impacts and emissions. The sequence commences with avoidance, then moves to minimisation, rehabilitation, and offsets are considered as the last step in the sequence.

The proponent has considered the mitigation hierarchy in the development and assessment of its proposal, and as a result will:

- avoid direct impacts on critical habitat for the night parrot (*Pezoporus occidentalis*)
- avoid disturbance to night parrot roosting sites
- avoid disturbance to greater bilby active burrows
- avoid direct impacts to Aboriginal cultural heritage sites, including 17 sites of significance as identified and agreed upon with the native title party representatives (Jamukurnu-Yapalikurnu Aboriginal Corporation (JYAC))
- minimise disturbance to priority flora
- minimise disturbance to Aboriginal cultural heritage values
- minimise impacts of construction on significant terrestrial fauna (habitat),
- minimise spread of weed species through implementation of weed hygiene and management measures
- minimise dust emissions through implementation of speed limits, dust suppression measures, and sealing of the haul road
- minimise impacts to significant fauna species by implementing speed limits and adaptive lighting
- minimise alteration of surface water flows by optimising mine planning and through surface water diversion and management measures
- minimise the footprint extent of tailings storage facilities by incorporating tailings into a paste for backfilling the depleted Havieron underground mine
- minimise impacts to cultural heritage values by ensuring ongoing access to country, implementing cultural awareness training, and designing permanent landforms in consultation with the native title parties
- undertake closure planning and rehabilitation in a progressive manner
- rehabilitate landforms to be safe, stable, and non-polluting
- rehabilitate vegetation and fauna habitat with native species of local provenance, as informed by consultation with the Banjima Traditional Owners
- implement environmental offsets to counterbalance the residual impacts to night parrot (*Pezoporus occidentalis*) and greater bilby (*Macrotis lagotis*) habitat

## Assessment of key environmental factors

The EPA has identified the key environmental factors (listed below) in the course of the assessment. For each factor, the EPA has assessed the residual impacts of the proposal on the environmental values and considered whether the environmental outcomes are likely to be consistent with the EPA environmental factor objectives.

As the proposal is a significant amendment to an existing proposal the EPA's assessment has been undertaken in the context of the existing proposal, having regard to the combined and cumulative effects on the environment. The EPA has also considered whether to inquire into the implementation conditions for the existing proposal.

## Flora and Vegetation

Residual impact or risk to environmental value		Assessment finding
1.	Clearing of up to 630 ha of native vegetation in 'Excellent' condition within the development envelope	<p>The clearing of vegetation in 'Excellent' condition within, and immediately adjacent to, the Great Sandy Desert bioregion represents a significant residual impact. This vegetation contributes to regional biological diversity and provides habitat for conservation-significant flora and fauna species.</p> <p>The EPA considers that, subject to the recommended conditions (including limits on clearing, progressive rehabilitation, and offsets: recommended conditions A1, B1, B3, B7 and B8), this significant residual impact can be counterbalanced. On this basis, the environmental outcome is likely to be consistent with the EPA's objective for the Flora and Vegetation factor.</p>
2.	Direct impacts to priority flora species.	<p>The proposal will impact one (1) Priority flora species, <i>Goodenia hartiana</i> (P2). The EPA considered that species-specific clearing limits for this priority flora were unnecessary, as the broader clearing limits established to protect other environmental values are likely to constrain impacts to <i>G. hartiana</i>. Cumulatively, the proposed clearing is estimated to directly impact approximately 0.3% of the known abundance of the species, based on data from regionally proximate proposals. This level of impact is not considered significant.</p> <p>On this basis, and subject to rehabilitation using native species of local provenance (recommended condition B7), implementation of the recommended conditions is expected to achieve an environmental outcome consistent with the EPA's objective for flora and vegetation.</p>
3.	Indirect impacts associated with the introduction/spread of weeds, altered hydrological regimes, sediment deposition, dust, and altered fire regimes	<p>The proposal has the potential to result in indirect impacts to values of flora and vegetation.</p> <p>The EPA considers that active management is required and that the proposal should be implemented to avoid, and where unavoidable, minimise indirect impacts to flora and vegetation (recommended condition B1-2), and that indirect impacts to claypan and other fauna habitat should be avoided and where unavoidable, minimised (recommended condition B4-2).</p>

		<p>The EPA advises that subject to limits on clearing, DMA regulation, the recommended objective-based conditions (condition B1-2, and B4-2), and recommended outcome-based and prescriptive conditions for progressive rehabilitation (condition B7), residual impacts associated with the introduction and/or increase of weeds, altered hydrological regimes, sediment deposition, dust, and altered fire regimes are not likely to be significant.</p> <p>Therefore, the EPA considers that the environmental outcome is likely to be consistent with the EPA’s objective for flora and vegetation.</p>
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Terrestrial Fauna

Residual impact or risk to environmental value		Assessment finding
1.	<p>Clearing of up to 630 ha of terrestrial fauna habitat, including supporting habitat for night parrot, critical habitat for greater bilby</p>	<p>The proposal includes clearing of up to 630 ha of habitat used by conservation significant fauna, including critical habitat for the greater bilby and critical and supporting habitat for the night parrot. The EPA notes that 7.7 ha of potentially suitable night parrot roosting habitat has been mapped within the development envelope, and that the proponent has committed to avoid disturbance of this habitat.</p> <p>The EPA considers that there is likely to be a risk of significant residual impacts on the night parrot and greater bilby due to their conservation status, expected habitat loss, and potential nighttime use of the Telfer-Havieron haul road.</p> <p>While some residual impacts will remain, unmanaged fire and feral animals are the primary threats to the night parrot and greater bilby. The EPA considers that the proposed offsets focused on fire and feral pest management are likely to deliver a net benefit to the species and broader ecological gains, including for the great desert skink.</p> <p>The EPA advises that subject to the recommended conditioned limits on clearing (recommended condition A1), protection of mapped critical night parrot habitat (recommended condition B2-1), progressive rehabilitation of fauna habitat (recommended condition B7), and implementation of offsets (recommended condition B8), the</p>

		environmental outcome is likely to be consistent with the EPA's objective for terrestrial fauna.
2.	Direct mortality or injury to fauna from clearing and construction activities, vehicle strikes on haul and access roads	<p>The proposal has the potential to kill or injure conservation significant fauna, including the night parrot and greater bilby, during clearing and from collisions with operational vehicles or entrapment in project infrastructure.</p> <p>The EPA considers that the risk of direct mortality can be substantially reduced through prescribed speed limits (recommended condition B2-5), prohibition of night-time operations on the Telfer-Havieron haul road (recommended condition B2-5(3), pre-clearance surveys (condition B2-4), use of fauna spotters, exclusion buffers around active burrows and roosts (recommended condition B2-5(4)), and fauna crossings to maintain ecological connectivity (recommended condition B2-3).</p> <p>Subject to the recommended conditions, the EPA considers that the environmental outcome is likely to be consistent with the EPA's objective for terrestrial fauna.</p>
3.	Disturbance or degradation of habitat from noise, light and vibration associated with construction and operations	<p>Noise, light and vibration from the proposal may result in residual impacts to the night parrot and greater bilby, including displacement from preferred habitat, reduced foraging efficiency, disturbance of roosting sites and potential abandonment of burrow systems.</p> <p>The EPA notes the proponent's commitments to daylight-only clearing, use of directional lighting, and exclusion buffers around significant fauna locations.</p> <p>Subject to the recommended conditions to avoid disturbance of conservation significant fauna from artificial light (recommended condition B2-2), prohibition of Telfer-Havieron haul road night-time operations (recommended condition B2-5(3)), and require adaptive management where proposal-related disturbance is detected (recommended condition B2-6), the EPA considers that indirect sensory disturbance can be appropriately managed and that the environmental outcome is likely to be consistent with the EPA's objective for terrestrial fauna.</p>

4.	Indirect degradation of fauna habitat from dust deposition, altered fire regimes, altered surface and groundwater regimes, and weed invasion; and indirect impacts from increased presence or activity of feral fauna.	<p>Implementation of the proposal may result in residual indirect impacts through changes in vegetation structure, soil moisture, fire behaviour and weeds, as well as increased feral predator activity.</p> <p>The EPA considers that, subject to the recommended limits on clearing (recommended condition A1), maintenance of hydrological regimes (recommended condition B1-2), and conditions requiring no detectable increase in feral fauna and weed abundance (recommended condition B2-1 and B1-1), these impacts can be appropriately minimised. With these provisions, the EPA considers the environmental outcome is likely to be consistent with the EPA's objective for terrestrial fauna.</p>
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#### Inland waters and subterranean fauna

Residual impact or risk to environmental value		Assessment finding or Environmental outcome
1.	Groundwater drawdown from abstraction.	<p>The drawdown associated with groundwater abstraction for underground mine dewatering is not expected to impact significant environmental values or other nearby licensed bore users.</p> <p>Vegetation within the extent of predicted drawdown is not considered to be groundwater dependent. Significant impacts to vegetation from drawdown are not expected.</p> <p>The EPA advises that subject to recommended conditions (abstraction limit in conditions A1, and B4-1) and regulation under RiWI Act, the environmental outcome is likely to be consistent with the EPA objective for inland waters.</p>
2.	Impacts associated with altered surface water hydrology	<p>The proposal has the potential to alter existing hydrological regimes, including changes to surface water drainage. The EPA notes that the indicative disturbance footprint has been designed to avoid all mapped claypans, ensuring no direct disturbance to these features, and that infrastructure has been located to avoid obstruction of surface water pathways, thereby maintaining natural drainage patterns important for episodic recharge.</p>

		<p>The EPA considers that potential impacts to surface water flow and quality can be appropriately avoided or mitigated through the recommended condition B4-2, which requires the avoidance or minimisation of impacts to claypans, fauna habitats from changes in surface water hydrology, in conjunction with regulation under other statutory decision-making processes. With the implementation of these measures, the EPA considers that the environmental outcome for Inland Waters is likely to be consistent with the EPA's objective for this factor.</p>
3.	Potential impacts to subterranean fauna from groundwater abstraction/quality changes	<p>Hydrogeological investigations and biological surveys recorded no troglofauna taxa, and the EPA considers that troglofauna are unlikely to be impacted by the proposal. A total of four stygofauna taxa were identified as potentially restricted within impact areas. The EPA considers that the combination of low species richness, habitat connectivity and the modest magnitude of predicted drawdown within the upper unconfined aquifer indicates that significant impacts to stygofauna are unlikely.</p> <p>While some limitations were identified in the geological and hydrogeological information available at the time of assessment, the EPA considers the findings sufficient to indicate that impacts to stygofauna are likely to be low. Notwithstanding these limitations, the EPA has recommended outcome-based condition B4-1(2) (maintain groundwater level and quality to support stygofauna habitat stygofauna), in combination with other recommended conditions for Inland Waters, to ensure that the objective for Subterranean Fauna is likely to be met.</p>
4.	Potential impacts to groundwater and surface water quality from surface spills and leaks	<p>Small volume incidental spillages and leaks of chemicals, and fuel may occur. However, with standard operational controls and mitigation measures, supported through other DMA processes, the EPA considers there to be a low likelihood of significant adverse impacts to groundwater or surface water quality.</p>

## Greenhouse Gas Emissions

Residual impact or risk to environmental value	Assessment finding
<p>1. The proposal's scope 1 GHG emissions are estimated to be on average 250,865.2 t CO<sub>2</sub>-e per annum (up to a maximum of 475,000 t CO<sub>2</sub>-e per annum) and reduce to net zero by 2050.</p> <p>Scope 2 GHG emissions are not expected, given that electricity will be generated onsite rather than sourced from the grid.</p> <p>Estimated net emissions are proposed to be reduced by 21.4% (2025- 2030), 18.2% (2030-2035) and to net zero by 2050.</p> <p>Scope 3 GHG emissions are predicted to be on average 185 kt CO<sub>2</sub>-e per annum.</p>	<p><b>Avoidance and minimisation measures to reduce scope 1:</b></p> <p>The proponent's strategy to reduce greenhouse gas emissions includes maintaining fuel-efficient vehicles and equipment, integrating energy-efficient plant, and gradually adopting alternatives such as gas, electric, hybrid systems, and renewable sources like solar and wind. Optimising site layout will reduce haulage distances and related emissions, while use of existing infrastructure will minimise emissions from land clearing. Ongoing monitoring and clean production initiatives, alongside technological improvements, support continuous emission reductions.</p> <p><b>Regulation under Safeguard Mechanism</b></p> <p>The approved proposal is classified as a large facility under the Commonwealth National Greenhouse and Energy Reporting Act 2007 and is currently regulated by the Australian Government's Safeguard Mechanism. Designated facilities under the Safeguard mechanism must reduce emissions in line with national targets: 43% below 2005 levels by 2030 and net zero by 2050.</p> <p>For the existing facility, the proponent has applied for facility-specific emissions intensity values, 0.0072 t CO<sub>2</sub>-e/tonne for metal ore and 0.5765 t CO<sub>2</sub>-e/MWh for electricity generation, to replace default baselines, gradually transitioning to industry benchmarks by 2030.</p> <p>After 2030, the proponent must meet an annual emissions decline rate of 4.9% from FY 2023 to 2029, then 3.285% annually from July 2030 onward, following a linear path to net zero by 2050.</p> <p>Consistent with current regulation of the existing facility, the combined proposal will also be subject to regulation under the Safeguard Mechanism as described above.</p>

		<p>The EPA has recommended a condition that requires the proponent to notify the State of a substantial change to its obligations under the Safeguard Mechanism (recommended condition B5).</p> <p><b>Scope 2 emissions:</b> No scope 2 emissions arise from this proposal.</p> <p><b>Scope 3 emissions:</b> Scope 3 emissions associated with this proposal predominantly arise from the downstream processing of mined ore and are estimated to be 185,000 t CO<sub>2</sub>-e per annum.</p> <p>The proponent has provided some evidence of consideration and implementation of scope 3 emissions reduction opportunities. While scope 3 emissions are not subject to direct regulatory control in WA, the scope 3 emissions associated with the proposal would be considered scope 1 emissions for other facilities that may have established emissions reductions targets.</p> <p><b>Offsets</b> The EPA acknowledges that, despite prioritising greenhouse gas avoidance and reduction, some residual emissions will require offsetting. To cover any shortfall in meeting emissions-reduction targets, the proponent will purchase verified, high-integrity offsets from accredited schemes. Offsets will be used only when necessary, including if emissions exceed the project's Safeguard Mechanism baseline, and are expected to account for no more than about 30% of baseline Scope 1 emissions.</p>
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Social Surroundings

Residual impact or risk to environmental value		Assessment finding
1.	Direct impacts to Aboriginal cultural heritage values.	The EPA advises there is a risk of residual impacts to Aboriginal cultural heritage values associated with clearing for the proposal, including disturbance of ethnographic and/or archaeological sites.

		<p>It is noted that the proponent is required to seek approval under the <i>Aboriginal Heritage Act 1972</i> (AH Act) to directly disturb Aboriginal heritage sites.</p> <p>The EPA advises that the proposal should be subject to recommended condition B6 to ensure there is no disturbance to heritage sites unless consent is granted under the AH Act and has involved consultation with the relevant Traditional Owners.</p> <p>Subject to the recommended conditions and DMA regulation, the environmental outcome is likely to be consistent with the EPA's objective for social surroundings.</p>
2.	Indirect impacts to Aboriginal cultural heritage values.	<p>The EPA that there is a risk of residual indirect impacts to Aboriginal cultural heritage values including loss of plants and animals of cultural significance from noise, dust, and vibration on sensitive receptors and altered hydrological regimes.</p>
3.	Loss or restriction of access to land for traditional customary practices.	<p>The EPA advises there is a risk of residual impact to Aboriginal cultural heritage through the loss or restriction of access to land used for traditional or cultural purposes.</p> <p>The EPA recommends condition B6-1(2) to ensure ongoing access to land for traditional or cultural purposes, subject to reasonable health and safety requirements is maintained.</p> <p>The EPA considers that implementation of the recommended condition would ensure consistency with the EPA's objective for social surroundings.</p>
3.	Visual and landscape impacts.	<p>The EPA advises that there is a risk of residual impact to visual and landscape amenity from implementation of the proposal.</p> <p>The EPA recommends condition B6-3 to ensure rehabilitation and closure are undertaken in consultation with the native title party/ies, including permanent landforms such as waste rock dumps which are regulated under Part V of the EP Act and under the Mining Act.</p> <p>Subject to the recommended conditions and regulation under the Mining Act, the environmental outcome is likely to be consistent with the EPA's objective for social surroundings.</p>

## Holistic assessment

The EPA considered the connections and interactions between relevant environmental factors and values to inform a holistic view of impacts to the whole environment. The EPA formed the view that the holistic impacts would not alter the EPA's conclusions about consistency with the EPA's factor objectives.

## Conclusion and recommendations

The EPA has taken the following into account in its assessment of the proposal:

- environmental values which may be significantly affected by the proposal
- assessment of key environmental factors, separately and holistically (this has included considering cumulative impacts of the proposal where relevant)
- likely environmental outcomes which can be achieved with the imposition of conditions
- consistency of environmental outcomes with the EPA's objectives for the key environmental factors
- EPA's confidence in the proponent's proposed mitigation measures
- whether other statutory decision-making processes can mitigate the potential impacts of the proposal on the environment
- principles of the *Environmental Protection Act 1986*.

The EPA has recommended that the proposal may be implemented subject to conditions recommended in Appendix A.

## Other advice

The EPA considers that rehabilitation of native vegetation impacted by large-scale mining in Western Australia is critically important, yet there is limited evidence of success over the last 60 years. The EPA has recommended conditions for rehabilitation and expects to see tangible progress towards achieving rehabilitation at an appropriate rate and scale.

# 1 Proposal

The Telfer-Havieron Gold Mining Project (the proposal) is located approximately 400 kilometres south-east of Port Hedland, in the Great Sandy desert region of Western Australia (see Figure 1).

The proposal is for the expansion of the Telfer Project to include the new Havieron below water table deposit, as well as extensions to existing operations and supporting infrastructure, including:

- new below water table mining at the proposed Havieron deposit
- new waste rock landforms, run of mine pad, evaporation and raw water storage ponds
- an increase in mine dewatering and surplus water at Havieron
- new camp and associated infrastructure
- new dry tailings to paste plant
- new 55 km haul road and infrastructure corridor, access roads and borrow pits

The significant amendment includes an additional 630 ha of clearing of native vegetation and a combined development envelope of 36,647 ha. This would increase the total clearing to 7,516 ha within a development envelope of 36,647 ha.

Proposal elements of the significant amendment include underground mine excavation, increased groundwater abstraction and discharge, continued surplus water discharge to Havieron evaporation ponds, ore and topsoil stockpiles, waste management, processing and transport infrastructure, including ancillary and other supporting infrastructure.

In addition, existing proposals authorised under Telfer Project, Expansion of Telfer Gold Mine, Great Sandy Desert (Ministerial Statement (MS) 606), and Telfer Project, Power Supply and Infrastructure Corridor, Port Hedland to Telfer Gold Mine, Great Sandy Desert (MS 605, amended by 650) are to be amalgamated and consolidated into the proposal (Figure 1). The addition of the significant amendment to the approved proposals and the existing operations have been taken into account during assessment. A new consolidated ministerial statement will be published with conditions that consolidate and modernise the existing operations.

The proponent for the proposal is Greatland Pty Ltd (the proponent). The proponent referred the proposal to the Environmental Protection Authority (EPA) on 21 April 2023. The referral information was published on the EPA website for seven days public comment. On 23 May 2024, the EPA decided to assess the proposal at the level Referral Information with additional information required. The EPA also published the additional information on its website for public review for 3 weeks from 13 November 2024 to 4 December 2024. After receiving the response to public submissions document from the proponent, the EPA published the proponent's response to submissions document (Greatland, 2025a) and revised referral

supporting document (Greatland 2025b) on its website. The proposal is set out in section 1 of the proponent's revised referral supporting document.

The elements of the proposal which have been subject to the EPA's assessment are included in Table 1.

The EPA has assessed the residual impacts of the significant amendment by considering the expansions and changes which are now proposed in the context of the approved proposal. The EPA has also considered the combined impacts of the approved proposal and the significant amendment, and the cumulative impacts other proposals in the region. The EPA has not reassessed the approved proposal.

**Table 1 : Summary of elements of the Proposal Content Document**

Proposal element	Location	Original proposal (MS 605, 606, 650)	Existing project (Havieron stage 1 approved under secondary approvals)	Significant amendment	Combined proposal
Physical elements					
Development Envelope	Figure 1	No Development Envelope previously defined	No Development Envelope previously defined	A single Development Envelope encompassing: <ul style="list-style-type: none"> <li>Telfer power supply corridor (MS 605 and 650)</li> <li>Telfer mine operations and associated infrastructure (MS 606)</li> <li>Havieron stage 1 (mining proposals 89453 and 121684)</li> <li>Proposed Havieron stage 2 and infrastructure corridor between Havieron and Telfer</li> </ul>	<b>36,647 ha</b>
Disturbance Footprint	Figures 1-5	6,607 ha comprising: <ul style="list-style-type: none"> <li>Telfer power supply infrastructure corridor – 1,500 ha (completed under MS 605, with issuance of MS 650 to amend MS 605 with additional fauna management conditions)</li> </ul>	279 ha comprising: <ul style="list-style-type: none"> <li>Havieron stage 1 mining proposal rev3 (Registration ID 89453) 203 ha</li> <li>Havieron stage 1 mining proposal rev4 (Registration ID 121684) 76 ha</li> </ul>	Additional <b>630 ha</b> disturbance	No more than <b>7,516 ha</b> disturbance within a 36,647 ha Development Envelope

		<ul style="list-style-type: none"> <li>Telfer Mine operational footprint – 4,921 ha (completed under MS 606).</li> <li>186 ha of historic unaccounted for disturbance at Telfer (prior to MS 605 and MS 606)</li> </ul>			
Waste rock landforms	Figures 2-5	Up to 1,562 Mt of waste rock (MS 606)	Up to 260,000 m <sup>3</sup> of waste rock	Addition of <b>five Mt</b> of waste rock	Up to <b>1,567 Mt</b> of waste rock
Infrastructure corridor	Figures 2-5	NA	55 km track between Havieron and Telfer	Widening and sealing of track to form a 55 km infrastructure corridor (transport, electricity and water) between Havieron and Telfer	55 km infrastructure corridor
Evaporation ponds	Figure 5	NA	Three evaporation pond cells (ponds 1-3) (maximum operating volume of 477,130m <sup>3</sup> )	Addition of <b>three</b> evaporation pond cells (ponds 4-6) (maximum operating volume of 477,130m <sup>3</sup> )	<b>Six</b> evaporation ponds for with a total maximum operating volume of <b>609,550 m<sup>3</sup></b> an evaporation surface area of <b>60 ha</b>
Raw water ponds	Figure 5	NA	NA	Addition of <b>raw water storage ponds (5 ha)</b>	Up to <b>5 ha</b> raw water storage pond
Havieron permanent camp	Figure 5	NA	NA	Addition of <b>permanent camp (9 ha)</b>	Up to <b>9 ha permanent Havieron camp</b>

Operational elements					
Mining of gold copper ore	Within the Development Envelope	Up to 29 Mt of ore per year (including dump leach ore)	NA	Addition of up to <b>three Mt</b> of ore per year from the Havieron project	Up to <b>32 Mt</b> ore per year (including dump leach ore)
Processing throughput of gold copper ore		Up to 26 Mt per year	NA	No change	Up to 26 Mt per year
Electrical power generation		Up to 160 MW	NA	No change	Up to 160 MW
Waste rock production		Up to 90 Mt per year	NA	No change	Up to 90 Mt per year
Tailings production		Up to 550 Mt	NA	No change	Up to 550 Mt
Tailings to paste plant (for underground backfill)		NA	NA	Up to <b>21.6 Mt</b>	Up to <b>21.6 Mt</b>
Groundwater abstraction for water supply and mine dewatering		Up to 200 ML/year (MS 605) Up to 29,700 ML/year (MS 606)	Abstraction of up to 1,550 ML/year under GWL 202749 (varied to current abstraction volume on 9/02/2024)	Continued abstraction of up to 1,550 ML/year under GWL 202749 Additional abstraction of up to 450 ML/year at Havieron	Abstraction of up to <b>31,900 ML/year</b>
Greenhouse gas emissions					
Construction					
Scope 1		Estimated at less than 30,000 t CO <sub>2</sub> -e	27,132 t CO <sub>2</sub> -e	A predicted addition of less than <b>20,000 t CO<sub>2</sub>-e</b>	Predicted to be less than <b>77,132 t CO<sub>2</sub>-e</b>
Scope 2		0 t CO <sub>2</sub> -e	0 t CO <sub>2</sub> -e	No change	0 t CO <sub>2</sub> -e*
Scope 3		Not assessable at the time	Included in combined Havieron GHG assessment	Predicted to be <b>311 kt CO<sub>2</sub>-e</b>	Estimated at <b>311 kt CO<sub>2</sub>-e</b>

Operation				
Scope 1 Annual average <sup>1</sup>	127,356 t CO <sub>2</sub> -e	Included in combined Havieron Stage 1 and Stage 2 assessment	A predicted addition of <b>123,510 t CO<sub>2</sub>-e</b> per year	<b>250,865.2 t CO<sub>2</sub>-e</b> per year
Scope 1 Total Life of Mine	1,655,625 t CO <sub>2</sub> -e	Included in combined Havieron Stage 1 and Stage 2 assessment	A predicted addition of <b>1,605,626 t CO<sub>2</sub>-e</b>	A predicted total of <b>3,261,251 t CO<sub>2</sub>-e</b>
Scope 2	No scope 2 emissions due to electricity generation from the onsite power station.			0 t CO <sub>2</sub> -e
Scope 3	Included as combined assessment			A predicted annual average of 185 kt CO <sub>2</sub> -e per year
Rehabilitation				
Progressive rehabilitation at completion or redundancy of feature will be undertaken over the life of the mine to achieve a safe stable and functioning landform which is consistent with the surrounding landscape and other environmental values. Rehabilitation complete within 10 years of cessation of operations.				
Commissioning				
NA				
Decommissioning				
Removal of all above-surface and buried infrastructure within 5 years of cessation of operations. Closure of the project will leave the site on a safe stable condition such that tenements can be relinquished without any future liability for the proponent or the community.				
Other elements which affect extent of effects on the environment				
Maximum Project Life	Approximately 25 years (MS606) scheduled	NA	<b>Additional 18 years</b>	<b>43 years</b>

<sup>1</sup> Peak annual average is equivalent to annual average LOM. Electricity is generated on site and there is no peak/off peak draw from the state power grid.

\* No purchased electricity at either Telfer or Havieron and construction power is diesel generators therefore included in Scope 1 estimation.

	depletion of mineral resource 2027			
Construction phase	NA	NA	~ 2.5 years	~ 2.5 years
Operations phase	NA	NA	13 years	13 years
Decommissioning phase	NA	NA	5 years	5 years

**Units and abbreviations**

GL/a – gigalitres per annum

ha – hectares

km - kilometres

m<sup>3</sup> – metres cubed

ML – million litres

Mt – million tonnes

MW – mega watts

## Proposal amendments

The original proposal is set out in section 2.3 of the proponent's referral supporting document (Newcrest Mining Limited, 2023), which is available on the EPA website.

The proponent requested changes to the original proposal during the assessment under section 43A of the Environmental Protection Act 1986 (EP Act). The changes were assessed to be unlikely to significantly increase any impacts of the proposal and some reduced potential impacts on the environment. The EPA Chair's notice, of 25 November 2025, consenting to the change is available on the EPA website.

The EPA notes the proponent has revised the proposal since referral, resulting in:

- no change to the extent of disturbance
- an increase to the development envelope from 35,523 ha to 36,647 ha to include:
  - additional borrow pits for haul road construction material,
  - addition of a permanent camp at the Havieron location,
  - addition of an area comprising an existing communications tower previously omitted, and
  - to provide flexibility for the final haul road alignment to:
    - avoid night parrot breeding and roosting habitat if encountered during pre-clearance surveys,
    - minimise sand dune disturbance associated with Aboriginal cultural values, and
    - improve road safety.

The consolidated and updated elements of the proposal which has been subject to the EPA's assessment is included in Table 1.

## Proposal alternatives

The proponent considered an alternative haul road and infrastructure corridor during the proposal design and subsequently refined the route through the assessment process. The current placement of proposal elements considered avoiding impacts associated with direct disturbance to conservation significant fauna habitats, avoiding ethnographic and archaeological sites, and maximising use of brownfield areas.

The EPA acknowledges the disturbance footprint is indicative, providing flexibility for the final layout of the infrastructure corridor route within the development envelope.

## Proposal context

The proposal is located within the Great Sandy Desert and Little Sandy Desert IBRA bioregions, with the majority of the development envelope situated in the Mackay IBRA subregion and a smaller portion extending into the Rudall IBRA subregion. Karlamilyi National Park, approximately 26 km to the southeast, is the nearest protected conservation estate. The closest residential area, the Punmu Community,

is located approximately 100 km to the east, and the nearest town, Nullagine, is approximately 200 km to the west.

Existing and proposed mining activities occur within the broader region, including the Nifty Copper Project situated approximately 65 km to the west, and the proposed Winu Project located approximately 130 km to the northwest.

The development envelope occurs on unallocated Crown land within the Native Title Determination Areas of Martu and Ngurrara Peoples (WCD1996/078, WCD2002/002, and WCD2013/002).

#### Approved Proposal (MS 606, 605 and 650)

*Ministerial Statement 606 - Telfer Project, Expansion of Telfer Gold Mine, Great Sandy Desert*

The Telfer Project, Expansion of Telfer Gold Mine Great Sandy Desert referred to the EPA by Newcrest Mining Limited, is for the expansion of mining at the Telfer Gold Mine to include the mining and processing of 400 million tonnes of gold ore at a rate of up to 23 million tonnes per annum, and the transport of copper concentrate to Port Hedland by road.

*Ministerial Statement 605 - (as amended by Ministerial Statement 650) Telfer Project, Power Supply & Infrastructure Corridor Port Hedland to Telfer Gold Mine, Great Sandy Desert*

The Telfer Project, Power Supply & Infrastructure Corridor Port Hedland to Telfer Gold Mine, Great Sandy Desert was referred to the EPA by Newcrest Mining Limited, is for the supply of electrical power to the Telfer Gold Mine along a 440-kilometre infrastructure corridor from Port Hedland. The corridor contains a natural gas pipeline to supply a power station at the Telfer Project. The mine expansion and power supply proposals were separated with the view that the mine and power supply may eventually be operated by different proponents. Nevertheless, the proposals were developed and assessed in parallel.

#### Environment Protection and Biodiversity Conservation Act 1999

The Havieron project was referred to the Department of Climate Change, Energy, the Environment and Water (DCCEEW) in November 2021 for consideration of impacts to matters of national environmental significance (MNES) under the provisions of the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act). The proposed action, as referred to DCCEEW, the Havieron Project, includes the construction and operation of a greenfield underground gold-copper mine and associated infrastructure, including a haul road.

In December 2021 the proposed action was determined to be a controlled action (EPBC 2021/9085) to be assessed by DCCEEW by preliminary documentation. The action is not the subject of an accredited assessment, noting the differences between the action referred to DCCEEW and the proposal referred to the EPA. At the time of the EPA's assessment the EPBC Act assessment was ongoing.



Figure 1 : Project location

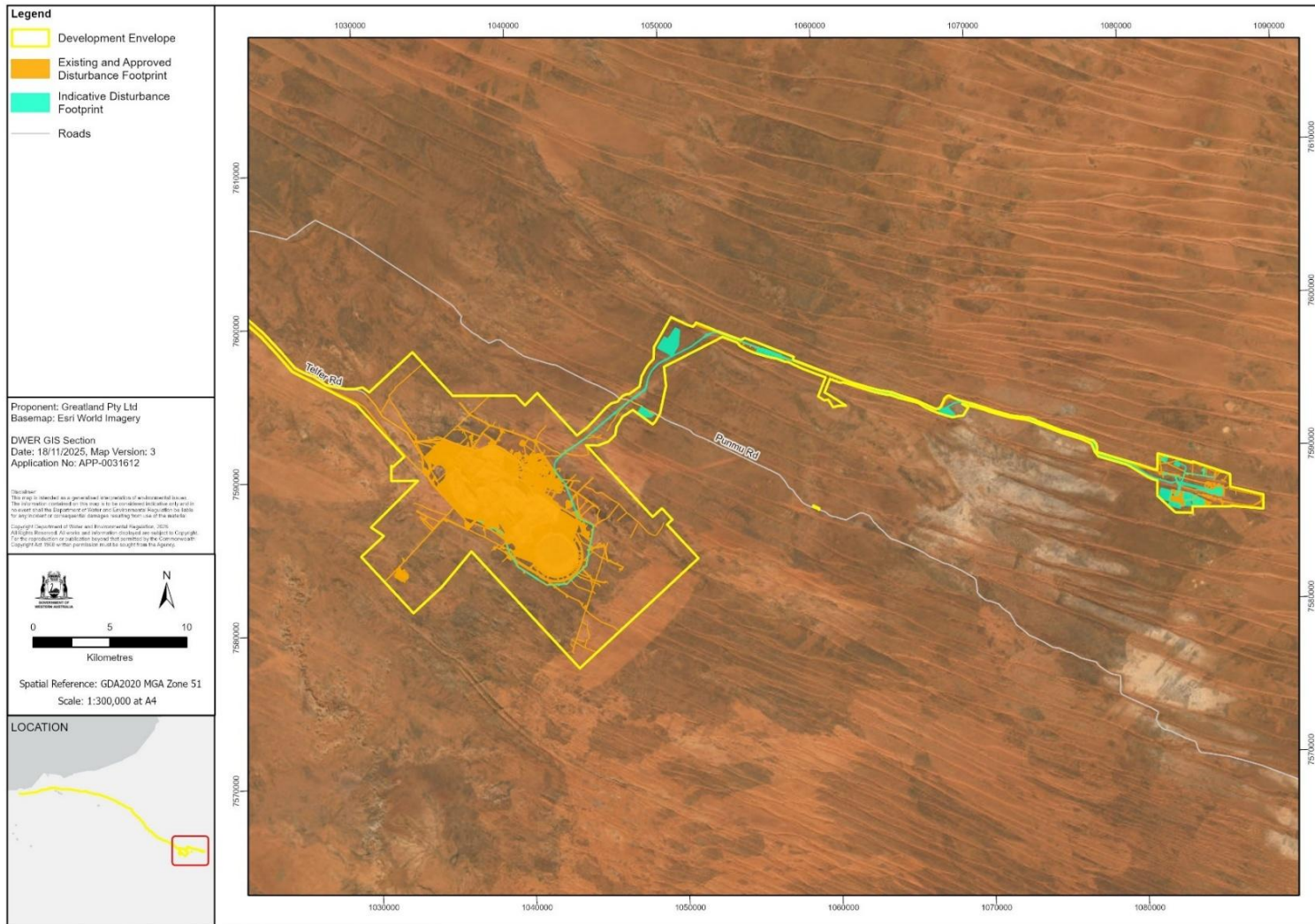


Figure 2 : Development envelope and indicative disturbance footprint

## 2 Assessment of key environmental factors

This section includes the EPA's assessment of the key environmental factors. The EPA also evaluated the impacts of the proposal on other environmental factors (landforms, terrestrial environmental quality and air quality) and concluded these were not key factors for the assessment. This evaluation is included in Appendix E.

Given the proposal is a significant amendment to an approved proposal, the EPA's assessment has been undertaken in the context of the existing proposal, approved under Ministerial Statements 606, and 605 (as amended by 650), having regard to combined and cumulative effects on the environment. The EPA acknowledges that the assessment of the combined and cumulative impacts has some limitations, noting that considerable time since the approval of the approved proposal in 2002.

The environmental impact assessment for the approved proposal, documented in EPA Reports 1059 (MS 606), 1058 (MS 605), and 1127 (MS 650), does not reflect current assessment standards. In particular, the earlier assessments did not define a mining operations development envelope, or quantify impacts to flora, vegetation, and fauna habitat types to the level expected in contemporary assessments. However, where information is available, the EPA has considered the combined and cumulative effects of implementing the original proposal on the environmental factors assessed in this report.

### 2.1 Flora and vegetation

#### 2.1.1 Environmental objective

The EPA environmental objective for flora and vegetation is *to protect flora and vegetation so that biological diversity and ecological integrity are maintained* (EPA 2016a).

#### 2.1.2 Investigations and surveys

The EPA advises the following investigations and surveys were used to inform the assessment of the potential impacts to flora and vegetation:

- Detailed Flora and Vegetation Survey Havieron Project Area (appendix C of the revised referral supporting document rev9) (Strategen JBS&G 2020a)
- Reconnaissance Flora and Vegetation Survey Havieron Access Corridor (appendix D of the revised referral supporting document rev9) (Strategen JBS&G 2020b)
- Detailed Flora and Vegetation Survey Havieron Infrastructure Corridor (appendix E of the revised referral supporting document rev9) (Strategen JBS&G 2021)
- Havieron – Telfer Project Desktop Flora Assessment (appendix F of the revised referral supporting document rev9) (Spectrum Ecology 2022a)
- Havieron Operations Weed Assessment (appendix G of the revised referral supporting document rev9) (Spectrum Ecology 2022b)

- Havieron Mine and Service Corridor Targeted Flora Survey (appendix H of the revised referral supporting document rev9) (Ecoscape 2024)

The flora and vegetation surveys were largely consistent with the *Technical Guidance – Flora and vegetation surveys for environmental impact assessment* (EPA 2016c). The EPA considered the relevant studies appropriate to inform the assessment of the potential impacts to the above environmental factor.

The EPA sought advice from DWER and the Department of Biodiversity, Conservation and Attractions (DBCA) in relation to the flora and vegetation surveys that were considered as part of this assessment.

The EPA advises the following investigations and surveys associated with the approved proposal were considered with regard to the potential cumulative impacts to flora and vegetation (appendix K of the revised referral supporting document rev9):

- Telfer Project Ecological Survey (Hart, Simpson and Associates 2002)
- Telfer Project Power Supply and Infrastructure Corridor Rare and Priority Fauna and Flora Survey (ecologia 2003)
- Telfer Borefield Flora and Fauna Survey (Syrinx Environmental PL 2007)
- *Goodenia hartiana* survey – Telfer (Syrinx Environmental PL 2010)
- Optimisation Study Area Level 2 Flora and Fauna Survey - Telfer (Syrinx Environmental PL 2013)/
- O’Callaghan’s Study Area Level 2 Flora and Fauna Survey - Telfer (Syrinx Environmental PL 2013)

### 2.1.3 Assessment context – existing environment

Approved proposal (ministerial Statements 605, 606, and 650)

A total of 6,607 ha of native vegetation has been approved to be cleared under the approved proposal. Approximately 1,500 ha of native vegetation was cleared to complete the construction of the Telfer Power supply and infrastructure corridor Port Hedland to Telfer Gold mine under MS 605. An additional 5,107 ha of native vegetation was cleared to complete the construction of the Telfer Gold Mine under MS 606. No additional clearing was approved under MS 650. Flora and vegetation was considered a relevant environmental factor for the approved proposal under the scope of ‘Flora and Fauna’.

This significant amendment proposes an additional 630 ha of clearing within a 36,647 ha development envelope equating to a total disturbance area of 7,516 ha (Greatland 2025b). The potential impacts on flora and vegetation associated with this proposal are assessed below.

#### Vegetation

The proposal is predominantly located within the Great Sandy Desert IBRA region, within the Mackay (GSD02) IBRA subregion. A small portion of the DE intersects the

Little Sandy Desert IBRA, within the Rudall (LSD01) IBRA subregion. The Mackay subregion contains open hummock grasslands dominated by *Triodia pungens* and *Triodia schinzii* with scattered trees of *Owenia reticulata* and *Corymbia* spp., with shrubs such as *Acacia* species, *Grevillea wickhamii* and *G. refracta*. These occur on Quaternary red longitudinal sand dunes overlying Jurassic and Cretaceous sandstones of the Canning and Amadeus Basins (Kendrick 2001a). The Rudall subregion contains sparse shrub-steppe over *Triodia basedowii* on stony hills, with River Gum communities and bunch grasslands on alluvial deposits in and associated with ranges (Kendrick 2001b).

The development envelope contains three broad pre-European vegetation associations, namely mosaic hummock grassland of *Triodia* species and grass steppe; spinifex (association 134), mosaic sparse low tree-steppe / sparse shrub steppe (association 157), and bare areas; salt lakes (association 125) (Strategen JBS&G 2020a, 2020b and 2021). All three associations have at least 98% of the pre-European extents remaining.

Eighteen vegetation types have been recorded across the development envelope, as described in section 5 of the revised referral supporting document (Greatland 2025b) and supported by appended survey reports (Strategen JBS&G 2020a, 2020b, 2021 and Spectrum Ecology 2022a). Of these, five communities were identified as potentially surface or groundwater dependent (6i, VT2, 6j, 6e, and 6b). Vegetation type, 6i, was also considered restricted within the local area. These vegetation communities are discussed further within this report.

No threatened ecological communities (TEC) or priority ecological communities (PEC) listed under the *Biodiversity Conservation Act 2016* (BC Act), or the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) were recorded within 100 km of the development envelope based on the desktop assessments and none were recorded during field surveys (Strategen JBS&G 2020 and 2021).

The vegetation mapped within the development envelope was predominantly in 'Excellent' condition excluding existing cleared areas associated with the approved proposal and exploration drilling. Overall, 99% of the native vegetation surveyed was in 'Excellent' condition (Strategen JBS&G 2020a, 2020b, 2021).

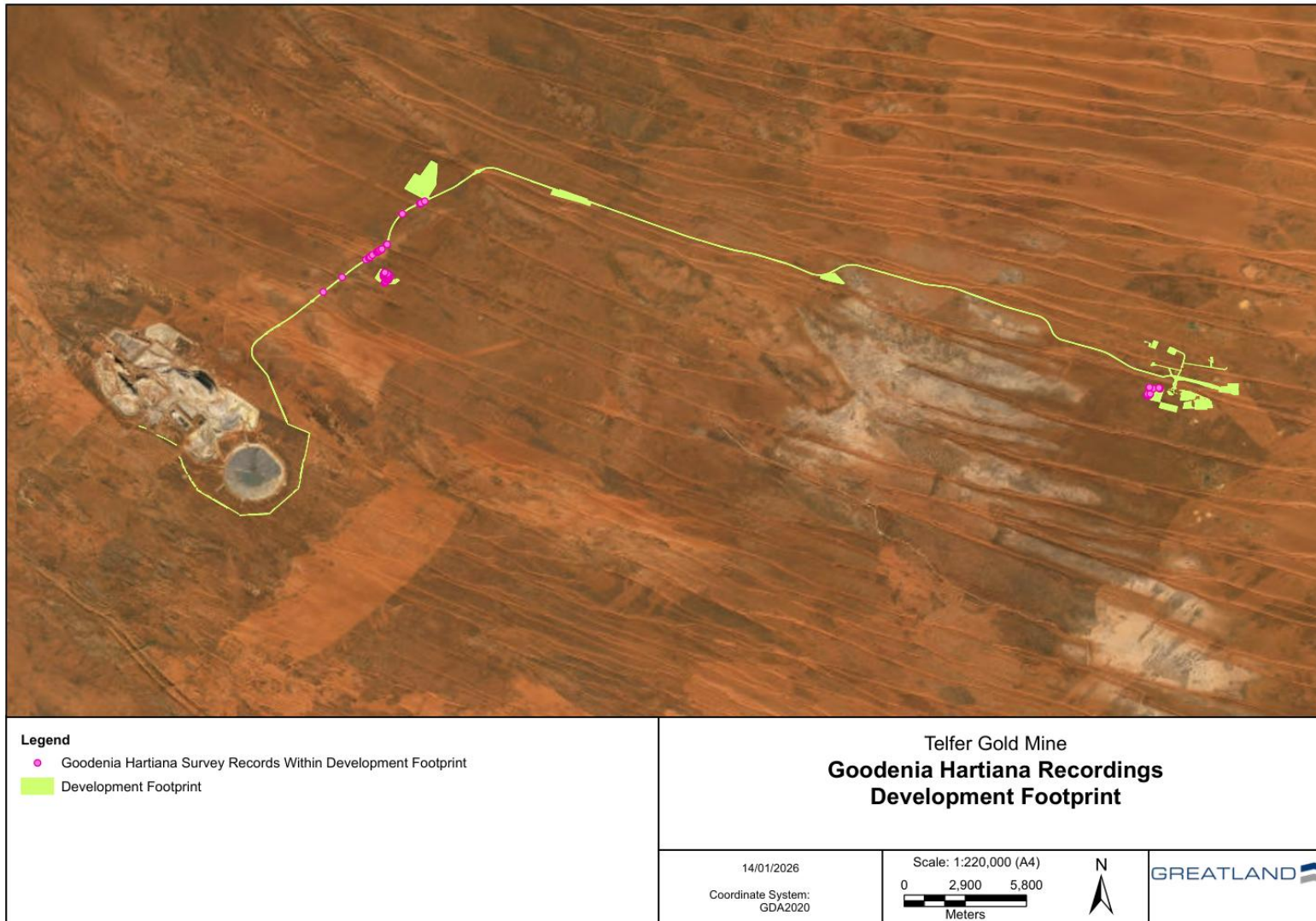
## Flora

No threatened flora listed under the BC Act, or the EPBC Act, were recorded within the development envelope. One priority flora species, *Goodenia hartiana* (priority 2) was recorded within the development envelope (Figure 3).

## Environmental weeds

Three declared pest species were recorded at the existing Telfer operational area: *Tamarix aphylla* (athel pine) and *Parkinsonia aculeata* (parkinsonia), both of which are listed as Weeds of National Significance and are declared pests under the *Biosecurity and Agriculture Management Act 2007* with an 'exempt' management category; and *Cylindropuntia fulgida* (jumping cholla), a declared pest with a

'restricted' management category that is not listed as a Weed of National Significance. No declared pest species or WoNS were recorded within the Havieron development envelope or infrastructure corridor (Greatland 2025b, DAFF 2026).



**Figure 3 : Records of *Goodenia hartiana* (P2)**

### 2.1.4 Consultation

Matters raised during stakeholder consultation and the proponent's responses are provided in the response to submissions document (Greatland 2025a).

Public consultation on the proposal raised concerns about loss of 'Excellent' condition native vegetation and associated environmental impacts.

The key matters raised during the public consultation on the proposal and how they have been considered in the assessment are described in the following sections.

### 2.1.5 Potential impacts from the proposal

#### Direct impacts

Potential direct impacts to flora and vegetation from clearing of up to the following within the development envelope:

- 630 ha of native vegetation in 'Excellent' condition
- 1,852 individuals of *Goodenia hartiana* (P2)

#### Indirect impacts

Potential indirect impacts to flora and vegetation from:

- introduction and/or spread of weeds
- altered surface drainage flow patterns
- altered fire regimes
- degradation of vegetation through dust deposition

### 2.1.6 Avoidance measures

The proponent has committed to the following flora and vegetation impact avoidance measures (Greatland 2025b):

- large trees in vegetation type 3c to be avoided
- no clearing of vegetation type 6i

### 2.1.7 Minimisation measures (including regulation by other DMAs)

The proponent has proposed the following measures to minimise impacts to flora and vegetation (Greatland 2025b):

- designing the disturbance footprint to utilise areas of existing disturbance, where possible
- clearing limits assigned to vegetation types VT2, 3a and VT6
- designing the project infrastructure to minimise alteration of surface water flow avoid obstructing surface water flow
- utilisation of surface disturbance permit for demarcation and approval of land disturbance

- prohibiting offroad access
- implementing standard weed control methods to prevent the spread or introduction of weed species
- implementing standard fire management methods to avoid where possible otherwise minimise impacts from fire
- implementing speed limits and dust suppression measures to minimise dust emissions

The issue raised during the public consultation about potential impacts associated with the loss of 'Excellent' condition native vegetation has been considered through minimisation measures.

Details regarding minimisation measures can be found in Section 5.5 of the RSD (Greatland 2025b)

#### Mining Act 1978

In accordance with section 103AO(1) of the *Mining Act 1978* (Mining Act) the proponent will be required to prepare a Mining Development and Closure Proposal consistent with DMPE guidelines (DMPE 2025). These guidelines specify requirements for rehabilitation and mine closure, including revegetation performance and landform stability.

#### 2.1.8 Rehabilitation measures

The proponent has proposed the following rehabilitation measures (Greatland 2025b):

- progressive rehabilitation at completion or redundancy of feature undertaken over the life of the mine
- topsoil spread to a minimum depth of 0.1 m
- use of local provenance native taxa seed mix for rehabilitation

#### 2.1.9 Assessment of impacts to environmental values

The EPA considers that the key environmental values for flora and vegetation likely to be impacted by the proposal are 'Excellent' condition native vegetation and priority flora species. The EPA notes that the proposal is likely to directly and indirectly disturb flora species of cultural significance (see section 2.5).

#### Vegetation

Up to 6,607 ha of native vegetation was authorised to be disturbed under the approved proposal (MS 606 and MS 605), with a further 279 ha approved under secondary approvals for the Havieron Stage 1 project. The proponent is now proposing to clear an additional 630 ha of native vegetation. This additional clearing increases the total proposal disturbance to 7,516 ha within the development envelope.

### Excellent condition native vegetation

The EPA notes that the Proposal will result in the clearing of up to 630 ha of native vegetation, all of which is in 'Excellent' condition as defined under the EPA's Technical Guidance (EPA 2016a). Vegetation surveys undertaken for the proposal found that approximately 99% of the surveyed native vegetation was in Excellent condition, with only small pockets of existing cleared disturbance. Because the proponent has advised that 630 ha of native vegetation will be cleared, the EPA has taken this to mean that the entire 630 ha proposed to be cleared represents 'Excellent' vegetation. The loss of this extent of 'Excellent' condition vegetation is therefore assessed to be a significant residual impact.

The EPA considers that the significant residual impact can be regulated through reasonable conditions (A1-1 and B1-1), progressive rehabilitation (B7) and counterbalanced by offsets (condition B8, see section 4) so that the environmental outcome is likely to be consistent with the EPA's factor objective for flora and vegetation.

### Priority flora

The EPA notes that priority flora were assessed in the context of their relative abundance within the survey area (Strategen JBS&G 2020a, 2020b, 2021) and in relation to cumulative impacts across the broader Telfer–Havieron region (refer to 'Cumulative impact assessment' below). Surveys undertaken for the proposal recorded one priority flora species, *Goodenia hartiana* (P2), within the development envelope (Strategen JBS&G 2020a, 2020b, 2021). The species is known to occur widely through the Great Sandy Desert where it is associated with sand dunes and swales which are a common landform in this bioregion (Strategen JBS&G 2020a). The species may be highly responsive to fire and rainfall cycles, with large natural fluctuations in numbers documented across successive surveys (Spectrum Ecology 2022a).

Within the development envelope, the proponent has proposed a maximum clearing limit of 1,852 individuals of *Goodenia hartiana* (P2), representing approximately 2.8% of the locally recorded abundance. Additionally at other projects in the region, *G. hartiana* has been recorded in relatively high numbers (Table 2). Based on this known regional extent, the proposed clearing under this amendment equates to approximately 0.3% of the known records. The actual number can be assumed to be far lower given the lack of ecological surveys throughout the bioregion.

**Table 2: Regional *Goodenia hartiana* records**

Environmental value	Historical Telfer mine site records	Nifty Mine (including areas outside the study area)	Winu Project <sup>1</sup>	Total regional records
<i>Goodenia hartiana</i> records (individuals)	67,000	2,484 <sup>2</sup>	512,311	581,795

1 – Winu project is still under formal assessment and is not yet approved. Information from Western Botanical (2025)  
 2- Information from Western Botanical (2021)

Based on the distribution of the species within the local area and its wider regional extent, the EPA considers that the proposed clearing of *G. hartiana* individuals is unlikely to be inconsistent with the EPA's objective for flora and vegetation, provided the proponent adheres to the recommended clearing limits (A1-1) and flora and vegetation conditions (B1).

Further, the EPA notes that progressive rehabilitation (Condition B7) will assist in returning ecological values over the life of mine, while offsets (Condition B8) will counterbalance significant residual impacts where they occur, including impacts associated with the loss of high-value flora habitat.

#### *Surface or groundwater dependent vegetation*

The RSD identified five vegetation types within the expanded survey area that may be associated with surface or groundwater, namely, 6i, VT2, 6j, 6e, and 6b. Based on the associated survey technical reports (Strategen-JBS&G 2020a; Strategen-JBS&G 2021, Spectrum Ecology 2022a) and information supplied in the RSD The EPA considers that none of these vegetation types meet the criteria to be considered groundwater dependent ecosystems (GDEs).

The detailed flora and vegetation survey of the Havieron mine area concluded that no vegetation types are groundwater dependent, including vegetation containing *Eucalyptus victrix* and fringing communities associated with claypans and salt flats. The study identifies *Eucalyptus victrix* within vegetation type 6i as an opportunistic water user, capable of accessing shallow soil moisture or intermittent surface water rather than groundwater. The proponent has committed to no clearance of 6i. Vegetation type 6e, fringing vegetation associated with claypans, is likely to be reliant on claypan inundation rather than requiring groundwater access. The survey determined that no other vegetation associated with areas of increased water availability, principally vegetation type 6e, contained taxa with known dependence on groundwater (Strategen-JBS&G 2020a).

In addition to these vegetation types, the RSD identified VT2, 6j and 6b as potentially associated with surface or groundwater. VT2 (Banded Mulga) is described as a sheet-flow dependent vegetation association, occurring on gentle slopes where overland flow delivers episodic moisture inputs (Spectrum Ecology 2022a). Vegetation type 6j comprises saltpan vegetation and was considered to be reliant on episodic surface water inundation. Vegetation type 6b was also identified in the RSD

because it may contain scattered *Eucalyptus camaldulensis* in some locations. Although *E. camaldulensis* can access groundwater where present, the baseline surveys confirmed that vegetation type 6b within the survey areas was not groundwater dependent and is more closely associated with surface water flows and shallow soil moisture (Strategen-JBS&G 2021). The proponent acknowledges that vegetation type 6b, whilst not largely environmentally significant, *E. camaldulensis* is culturally significant to Martu and it will be avoided where possible (Greatland, 2025b).

The EPA considers that although several vegetation types within the expanded survey area exhibit relationships with surface water availability, none meet the criteria for groundwater dependence, and none are considered groundwater dependent ecosystems. Potential impacts to vegetation types that rely on sheet flow or episodic inundation, such as VT2, 6j and 6e, are expected to be managed appropriately via recommended condition B1-2, which requires the proponent to avoid, and where unavoidable minimise, adverse impacts arising from changes to hydrological regimes, which includes altered surface water flows.

#### Indirect impacts to flora and vegetation

The EPA has assessed the potential for indirect residual impacts to key flora and vegetation values within and adjacent to the development envelope. The principal indirect impact pathways identified include the introduction and spread of weeds, increased dust emissions and deposition, altered fire regimes, and changes to surface water and groundwater regimes. These pathways have the potential to affect vegetation condition, structure, species composition, and ecological function.

Some indirect impacts, particularly dust generation from cleared areas, erosion risks associated with newly exposed surfaces, and weed establishment in disturbed soils, are expected to be minimised over time through progressive rehabilitation. The EPA notes that these matters are addressed through the rehabilitation outcomes and requirements set out under Condition B7, discussed further in the Rehabilitation and closure section.

#### ***Introduction and spread of weeds -***

There is potential for project activities to introduce or facilitate the spread of weeds within the development envelope, particularly along access tracks, disturbed surfaces, and linear infrastructure.

Three declared pest species were recorded at the existing Telfer operational area: *Tamarix aphylla* (athel pine) and *Parkinsonia aculeata* (parkinsonia), both of which are listed as Weeds of National Significance and are declared pests under the *Biosecurity and Agriculture Management Act 2007* with an 'exempt' management category; and *Cylindropuntia fulgida* (jumping cholla), a declared pest with a 'restricted' management category that is not listed as a Weed of National Significance. No declared pest species or WoNS were recorded within the Havieron development envelope or infrastructure corridor (Greatland 2025b, DAFF 2026).

The EPA notes that the proponent has proposed weed-management measures, including hygiene procedures, vehicle and equipment controls, soil and material management, and ongoing weed monitoring and treatment to limit the spread of weeds. These measures are supported through Condition B1-1, which requires no detectable increase in weed extent from baseline, and are reinforced through Condition B7, which requires progressive rehabilitation to stabilise disturbed areas, reduce the risk of weed colonisation, and enable the re-establishment of native vegetation.

### *Increased dust deposition*

Dust deposition from the significant amendment is expected during vegetation clearing activities and work associated with the operation of the mine. Dust emissions from vegetation clearing, vehicle movements, haulage, and operational activities have the potential to reduce plant health through inhibited photosynthesis, loss of vigour, or impeded recruitment.

The EPA notes that the proponent will implement dust suppression measures, including conditioning haul roads, controlling traffic speeds and the use of dust suppression strategies. These measures are intended to avoid adverse impacts to vegetation consistent with Condition B1-2, which requires avoidance and minimisation of indirect impacts to flora and vegetation values.

### *Altered fire regimes*

Project activities may influence fire regimes by increasing ignition risk, altering fuel distribution, or changing local fire behaviour. The proponent has committed to fire management controls, including hot-works management, fire-fighting capability, and ongoing monitoring of fire conditions to ensure early detection and rapid response.

The EPA notes that these measures are intended to avoid and minimise impacts from altered fire regimes, consistent with the requirement under Condition B1-2 to avoid, and where unavoidable, minimise adverse impacts to flora and vegetation arising from changes to fire behaviour.

Based on the assessment of indirect impacts to flora and vegetation, the EPA has determined that through implementation of Conditions A1-1, B1, B7 and B8, together with the proponent's management measures to address weeds, dust, and fire, the environmental outcome is likely to be consistent with the EPA's objective for flora and vegetation.

## Cumulative impact assessment

The proponent has assessed the cumulative impacts of the proposal by considering the combined effect of this proposal together with the approved Telfer Project, including the mine, power supply, and infrastructure corridor, as well as the Havieron Stage 1 (box cut and decline).

The EPA has had regard to the combined and cumulative effects that surrounding approved and proposed projects may have on flora and vegetation, including whether the environment affected by the proposal holds significant value due to successive,

incremental, and interactive cumulative impacts within the assessment area. In particular, consideration has been given to the approved Telfer Project (including the mine, power supply, and infrastructure corridor), the Nifty Copper Mine and proposed Winu Project due to their relative proximity. The impact of each project on flora and vegetation values consistent with the proposal are shown below in Table 3.

The Great Sandy Desert (GSD) is approximately 39,525,000 ha in size and extends across both Western Australia and the Northern Territory. The significant amendment project area is located within the Mackay subregion (GSD2) which, in the Western Australia portion equates to approximately 17,363,249 ha in size with approximately 17,352,065 ha of remnant vegetation (DWER 2023).

On a bioregional scale, the proposal, when combined with the above projects is likely to contribute to the loss of 12,684 ha of vegetation in 'Excellent' condition from the Great Sandy Desert Bioregion (Table 3). This cumulative impact represents the loss of approximately 0.073% of remnant native vegetation. Cumulatively the native vegetation to be impacted is limited to a relatively small extent in comparison to the native vegetation remaining in the Great Sandy Desert Bioregion.

**Table 3 : Cumulative impacts to vegetation**

Environmental value	Telfer – Havieron significant amendment	Existing Telfer Project	Nifty Mine	Winu Project <sup>1</sup>	Cumulative impact
Native vegetation in 'Excellent' condition	630 ha	6,886 ha <sup>3</sup>	Up to 300 ha <sup>2</sup>	Up to 4,868 ha	12,684 ha

1 – Winu project is still under formal assessment and is not yet approved. Vegetation condition taken from Western Botanical 2025

2 – Vegetation condition ascertained from Western Botanical, 2021

3 – Assumed that pre-mining vegetation condition would constitute "excellent" quality due to absence of human disturbance at that time.

The proponent did not quantify cumulative impact to *Goodenia hartiana* however given the relative abundance of records at other projects in the region and the proposed 0.3% clearing of known individuals, the EPA considers that cumulative impacts on *G. hartiana* are not at a level that would warrant a determination to allow no further clearing of this species.

The EPA considers cumulative impacts on vegetation in 'Excellent' condition, and on priority flora, are not at a level that would warrant a determination to allow no further clearing of these values. However, the EPA is of the view that incremental loss must be managed through recommended conditions.

The EPA considers that, subject to the limits of the proposal (recommended condition A1) and the recommended conditions B1 (flora and vegetation), B7 (rehabilitation), and B8 (offsets), the environmental outcome is likely to be consistent with the EPA's objective for flora and vegetation.

## Rehabilitation and closure

The EPA considers that throughout the operation and closure of both the significant amendment and the approved proposal, there is a clear need to strengthen rehabilitation practices to achieve improved environmental outcomes. The proponent is required to prepare and maintain a Mine Closure Plan (MCP) under the Mining Act, and a preliminary MCP was provided to the EPA for consideration.

Advice received from DMPE regarding mine closure at the Telfer site indicates that further strengthening of closure planning is required to ensure alignment with contemporary regulatory expectations. This includes refining closure outcomes, improving the definition and implementation of monitoring programs, ensuring progressive rehabilitation is integrated into life-of-mine planning and the closure of knowledge gaps. Recommended condition B7 provides an appropriate mechanism to reinforce these expectations by requiring the proponent to implement progressive rehabilitation, demonstrate achievement of defined environmental outcomes, and incorporate these requirements into the Mining Development and Closure Proposal and subsequent MCPs submitted under the Mining Act.

The proponent reports that rehabilitation activities at Telfer have historically occurred across various domains, including tailings storage facilities, waste rock landforms and borrow pits, supported by trials that have informed suitable rehabilitation treatments for different landforms. While some progress has been demonstrated, the EPA considers that improved clarity, consistency and performance of rehabilitation outcomes are necessary. This includes ensuring that rehabilitation outcomes reflect high-quality, self-sustaining vegetation communities, that landforms are stable and geochemically non-polluting, and that post-mining landforms integrate visually with the surrounding landscape.

To support improved outcomes, the EPA recommends the application of condition B7, which requires the proponent to achieve specific environmental outcomes for rehabilitation, including the establishment of self-sustaining native vegetation and fauna habitat, landform stability, and the re-establishment of pre-mining surface water flow regimes. Condition B7 also requires the preferential use of locally sourced seed and propagated material, the integration of progressive rehabilitation throughout operations, and the commencement of rehabilitation within 18 months of areas becoming inactive.

Under condition B7-3, these outcomes and prescriptive requirements must be incorporated into the Mining Development and Closure Proposal and subsequent MCPs required under the Mining Act and submitted to DMPE for approval. The EPA considers this framework appropriate to ensure that rehabilitation and closure planning are aligned with State regulatory requirements and that environmental outcomes are achieved. The EPA emphasises that improved rates and quality of progressive rehabilitation, supported by ongoing monitoring, trials and adaptive management, will be essential to ensure the proposal delivers improved rehabilitation performance over time and reduces long-term environmental risk.

### 2.1.10 Summary of key factor assessment and recommended regulation

The EPA has considered the likely residual impacts of the proposal on flora and vegetation environmental values. In doing so, the EPA has considered whether reasonable conditions could be imposed, or other decision-making processes can ensure consistency with the EPA factor objective. The EPA assessment findings are presented in Table 4.

The EPA has taken into account that the previously issued Ministerial Statements (e.g. MS 606 and MS 605 (as amended by MS 650)), included conditions and proponent commitments requiring the preparation and implementation of environmental management plans. These existing requirements have been considered in the review of conditions outlined in Appendix I of the EPA assessment report, undertaken to contemporise approved conditions.

The EPA has also considered the principles of the *Environmental Protection Act 1986* (see Appendix D) in assessing whether the residual impacts will be consistent with its environmental factor objective and whether reasonable conditions can be imposed (see Appendix A).

**Table 4 : Summary of assessment for flora and vegetation**

Residual impact or risk to environmental value	Assessment finding or Environmental outcome	Recommended conditions and DMA regulation
<p>1. Clearing of up to 630 ha of native vegetation in 'Excellent' condition within the development envelope</p> <p>The combined effect of the approved proposal and the significant amendment is the loss of 6,886 ha of native vegetation within the 36,647 ha development envelope.</p>	<p>The clearing of 'Excellent' condition vegetation within and immediately adjacent to the Great Sandy desert bioregion is significant in the context of biological diversity and ecological integrity, as it provides habitat for conservation significant flora and fauna species.</p> <p>The EPA advises that subject to limitations on clearing, and recommended conditions requiring progressive rehabilitation and offsets, the significant residual impact can be counterbalanced, so that the environmental outcome is likely to be consistent with the EPA objective for flora and vegetation.</p>	<p><b>Condition A1 (Limitations and extent of proposal)</b> Disturbance limits to clearing vegetation in 'Excellent' condition.</p> <p><b>Condition B1</b> Disturbance limits to environmental values.</p> <p><b>Condition B7 (Rehabilitation)</b> Requirement to undertake progressive rehabilitation using seeds and other plant materials of local provenance.</p> <p><b>Condition B8 (Offsets)</b> Implementation of threat abatement actions to ensure net gain for greater bilby and night parrot</p>

Residual impact or risk to environmental value	Assessment finding or Environmental outcome	Recommended conditions and DMA regulation
2. Direct impacts to priority flora species.	<p>The significant amendment will impact one (1) priority flora species, <i>Goodenia hartiana</i> (P2).</p> <p>The EPA determined that specific clearing limits for this priority flora species were unnecessary, as the broader clearing limits applied for other environmental values will effectively constrain impacts to <i>G. hartiana</i>.</p>	<b>N/A</b>
3. Indirect impacts associated with the introduction/spread of weeds, altered hydrological regimes, fragmentation, dust deposition and increased bushfires.	<p>The significant amendment has the potential to result in indirect impacts on significant flora and vegetation.</p> <p>The EPA considers that that through implementation of recommended conditions together with the proponent's management measures to address weeds, dust, and fire, the environmental outcome is likely to be consistent with the EPA's objective for flora and vegetation.</p>	<p><b>Condition B1 (Flora and vegetation)</b></p> <p>Requirement for appropriate mitigation and management measures to address indirect impacts from the introduction/spread of weeds, altered hydrological regimes, fragmentation, dust deposition and increased bushfires.</p>

## 2.2 Terrestrial fauna

### 2.2.1 Environmental objective

The EPA environmental objective for terrestrial fauna is *to protect terrestrial fauna so that biological diversity and ecological integrity are maintained* (EPA 2016b).

### 2.2.2 Investigations and surveys

The EPA advises the following investigations and surveys were used to inform the assessment of potential impacts to terrestrial fauna:

- Havieron Project - Detailed vertebrate and SRE invertebrate fauna survey (appendix L of the revised referral supporting document rev9) (Biologic, 2020a)
- Havieron Project - Infrastructure corridor detailed vertebrate and SRE invertebrate fauna survey (appendix M of the revised referral supporting document rev9) (Biologic, 2021)
- Telfer Operations - Conservation significant species assessment (appendix N of the revised referral supporting document rev9) (Spectrum Ecology, 2021)
- Telfer Operations - Night parrot monitoring memo (appendix O of the revised referral supporting document rev9) (Spectrum Ecology, 2022c)
- Havieron Project - Greater bilby monitoring 2021 (appendix P of the revised referral supporting document rev9) (Biologic 2022a)
- Havieron Project - Greater bilby monitoring 2022 (appendix Q of the revised referral supporting document rev9) (Biologic 2023)
- Telfer Operations - Significant fauna monitoring (appendix R of the revised referral supporting document rev9) (Spectrum Ecology 2023)
- Targeted survey for potential Night Parrot (*Pezoporus occidentalis*) habitat along the Telfer to Havieron development corridor (appendix zll of the revised referral supporting document rev9) (Red Dog 2025)
- Review of Greatland Pty Ltd's Havieron Project Night Parrot Habitat Assessment (appendix zHH of the revised referral supporting document rev9) (Adaptive NRM 2025)

The EPA sought advice from DWER and DBCA in relation to the terrestrial fauna surveys that were considered as part of this assessment.

The surveys were generally consistent with the EPA's Technical Guidance – Sampling of Short-range Endemic Invertebrate Fauna (EPA 2016d) and Technical Guidance – Terrestrial Vertebrate Fauna Surveys for Environmental Impact Assessment (EPA 2020b). However, the submitted technical studies contained several minor limitations, including inconsistent terminology for threatened-species habitat (e.g., night parrot, greater bilby), gaps in survey coverage and mapping, and incomplete consolidation of information across studies.

In response, the proponent provided additional information in the RTS and appendices (Greatland 2025a). The EPA considers that the updated habitat assessments, clarified survey coverage and mapping, and specialist reviews substantially improved the quality and completeness of the fauna assessment. The EPA is satisfied that the available information is adequate to continue the assessment of the proposal.

The EPA advises the following investigations and surveys associated with the approved proposal were considered with regard to the potential cumulative impacts to flora and vegetation (appendix K of the revised referral supporting document rev9):

- Telfer Project Ecological Survey (Hart, Simpson and Associates 2002)
- Telfer Project Power Supply and Infrastructure Corridor Rare and Priority Fauna and Flora Survey (ecologia 2003)
- Telfer Borefield Flora and Fauna Survey (appendix K of the revised referral supporting document rev9) (Syrinx Environmental PL 2007)

The EPA also considered relevant fauna recovery plans and conservation advice where applicable.

### 2.2.3 Assessment context – existing environment

#### Approved proposal (Ministerial Statements 605, 606, and 650)

A total of 6,607 ha of native vegetation clearing has been approved under previously approved proposals under the EP Act, with 1,500 ha approved under MS 605 and 5,107 ha approved under MS 606. Additionally, approximately 279 ha of native vegetation was approved to be cleared under Mining Act approvals for the Havieron Stage 1 project. Terrestrial fauna was considered a relevant environmental factor for the approved proposal under the scope of 'Flora and Fauna'.

The Telfer – Havieron Gold Mining Project significant amendment proposes to disturb an additional 630 ha of terrestrial fauna habitat resulting in a total approved clearing area of up to 7,516 ha and increase the Development Envelope to 36,647 ha.

Known impacts of the approved proposal that are relevant to the significant amendment are considered under cumulative impact assessment (see section 2.2.9). The terrestrial fauna aspects of this significant amendment are assessed below.

#### Fauna habitat

Regional fauna habitat mapping was undertaken via a combination of two-phase Detailed field surveys (Biologic 2020a, 2021) and aerial imagery and desktop analysis (Spectrum Ecology 2021). The mapped area is referred to in the RSD as the Regional Mapping Area (RMA) which will be used in this report. A total of 310,077.7 ha was mapped within the RMA with a total of six broad fauna habitat types defined (Spectrum Ecology 2021). These habitat types and respective areas are detailed in Table 5 and displayed spatially in Figure 4. A total of 4,854.2 ha was recorded as cleared/disturbed. All six broad fauna habitat types are present within

the development envelope while five are present within the indicative disturbance footprint (IDF), with stony hill/breakaway the only one not represented.

The mapped fauna habitats are also well represented outside of the RMA, often occurring as extensive, continuous habitat units that extend across the surrounding region.

**Table 5 : Fauna habitat types and regional extent**

Habitat type	Broad description	Extent within RMA (ha)	Extent within DE (ha) (% of total habitat type)	Extent within IDF (ha) (% of total habitat type)
Sand plain	Consists of flat to low undulating areas, typically between Sand Dune habitat. The dominant vegetation consists of <i>Triodia</i> hummock grasslands with scattered areas of small to medium shrubs ( <i>Acacia</i> and <i>Melaleuca</i> species) on sandy to clay loam soils.	158,833.7	8132.66 (5.12%)	447.28 (0.28%)
Stony plain	Consists of flat to undulating areas dominated by <i>Triodia</i> hummock grasslands with scattered areas of small to medium shrubs ( <i>Acacia</i> and <i>Hakea</i> species) on gravelly loam to clay loam soils.	65,434.2	10325.62 (15.78%)	19.68 (0.03%)
Sand dune	Consists of low to high linear red dunes, frequently separated by Sand Plain habitat. This habitat is dominated by <i>Triodia</i> hummock grasslands and numerous scattered small to medium shrubs (predominantly <i>Acacia</i> species) with scattered eucalypts on upper slopes and crests, on sandy to sandy-loams soils.	41,774.6	1515.45 (3.63%)	13.25 (0.03%)
Stony hill/breakaway	Consists of low to moderate hills and undulating plains with some rocky outcropping, usually confined to more substantial hills. Vegetation cover is generally sparse and dominated by <i>Triodia</i> hummock grasslands with scattered shrubs ( <i>Acacia</i> and <i>Grevillea</i> species) on gravelly clay soils.	26,922.1	2436.53 (9.05%)	0 ha (0%)

Habitat type	Broad description	Extent within RMA (ha)	Extent within DE (ha) (% of total habitat type)	Extent within IDF (ha) (% of total habitat type)
Saltpan	Confined to low lying areas subject to intermittent flooding. It consists of <i>Triodia</i> hummock grasslands with small to medium shrubs ( <i>Acacia</i> , <i>Melaleuca</i> and <i>Tecticornia</i> species), intermittently distributed with areas void of vegetation	10,652.3	83.02 (0.78%)	2.11 (0.02%)
Claypan	Consists of low-lying areas, usually sparsely vegetated or with dead vegetation (e.g. tussock grasses and rushes) from inundation, on hard clay to clay-loam soils. The vegetation structure and condition would likely fluctuate seasonally, especially following rainfall.	1,606.4	754.97 (47%)	0.66 (0.04%)

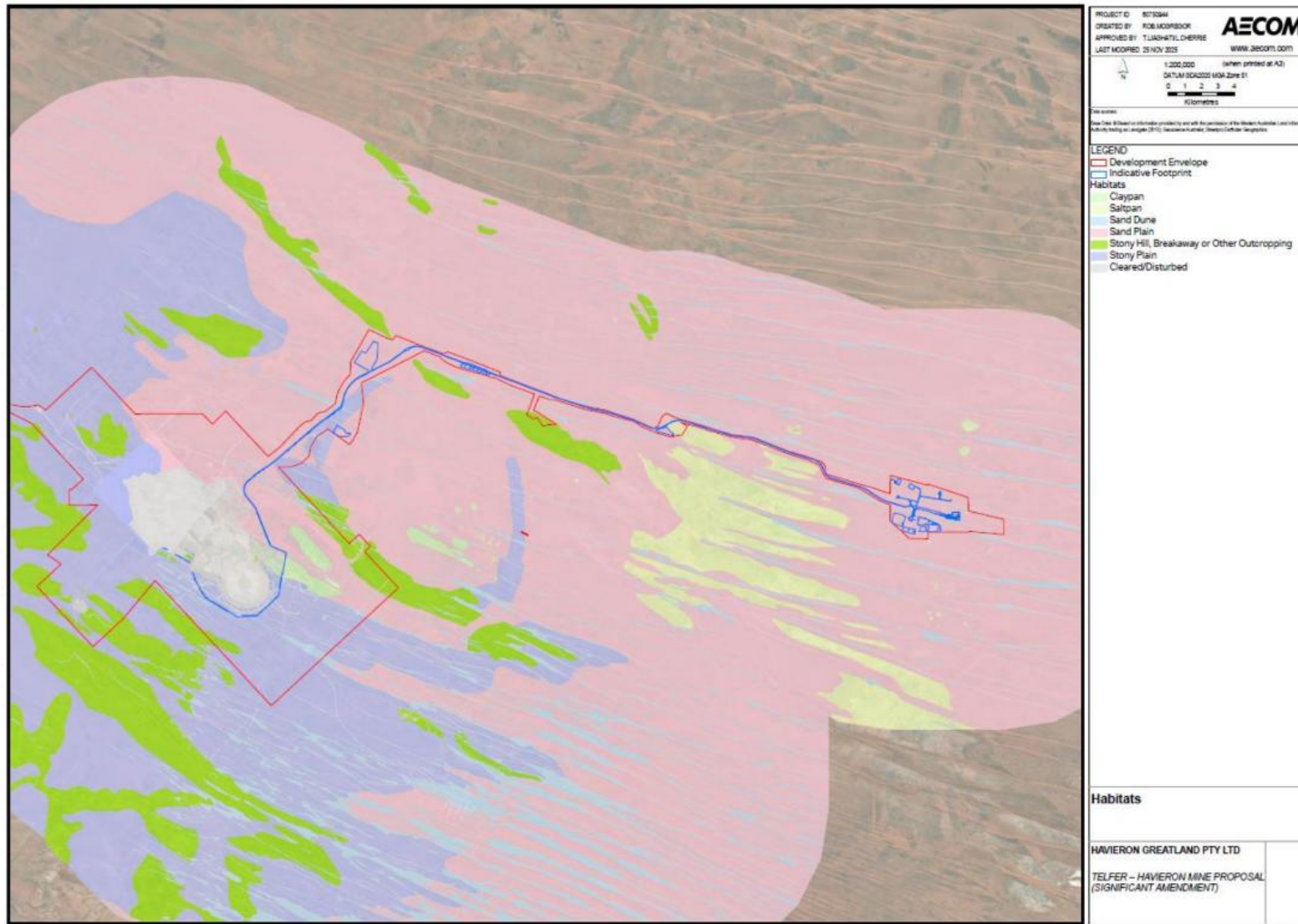


Figure 4 : Terrestrial fauna habitat types

## Significant fauna

### *Vertebrate fauna*

The threatened and priority species that were recorded within the development envelope include:

- night parrot (*Pezoporus occidentalis*) (CR)
- greater bilby (*Macrotis lagotis*) (VU)
- brush-tailed mulgara (*Dasyercus blythi*) (P4)
- northern marsupial mole (*Notorcytes caurinus*) (P4)
- red knot (*Calidris canutus*) (EN)
- gull-billed tern (*Gelocheidon nioltica*) (MI)

The threatened and priority species that were considered likely to occur within the development envelope include:

- great desert skink (*Liopholis kintorei*) (VU)
- western pebble-mound mouse (*Pseudomys chapmani*) (P4)
- wood sandpiper (*Tringa glareola*) (Mi)
- Sharp-tailed Sandpiper (*Calidris acuminata*) (Mi)

### *Invertebrate fauna*

Two surveys were conducted for short-range endemic (SRE) species. No confirmed SRE species were recorded within the development envelope.

Eleven invertebrate taxa were considered potential SRE invertebrate fauna. Potential SRE species were collected from habitat characterised as Sandy/Stony Plain which is a widespread habitat and not the type of isolated, protected refugia that is typically associated with SRE species. Given the widespread nature of the habitats in which the potential SRE specimens were collected, it is unlikely that the species will be restricted to the development envelope. None of these taxa are listed under the BC Act, EPBC Act or as priority species by the DBCA.

## 2.2.4 Consultation

Matters raised during stakeholder consultation and the proponent's responses are provided in the response to submissions document (Greatland 2025a).

Public consultation on the proposal raised concerns about loss, degradation and fragmentation of 'Excellent' condition fauna habitat, potential loss and decline of short range endemic (SRE) species populations, fauna entrapment and risk to migratory birds from evaporation ponds and contaminated water, potential for active bilby burrow removal and indirect impacts to night parrot.

The key issues raised during the public consultation on the proposal and how they have been considered in the assessment are described in sections 2.2.5 to 2.2.9.

## 2.2.5 Potential impacts from the proposal

### Direct impacts

Potential direct impacts to terrestrial fauna from:

- clearing of up to 630 ha of native vegetation comprising fauna habitat
- habitat fragmentation and barriers to fauna movement
- fauna injury or mortality from vehicle strikes

### Indirect impacts

Potential indirect impacts to terrestrial fauna from:

- loss or degradation of fauna habitat from altered fire regimes, dust deposition, altered surface or groundwater regimes, and the introduction and/or spread of weeds/feral animals.
- disturbance or degradation of habitat from noise, light, and vibration.
- disturbance from an increase in feral fauna presence.

## 2.2.6 Avoidance measures

The proponent has committed to the following terrestrial fauna impact avoidance measures (Greatland 2025b):

- No clearing of active greater bilby burrows
- No night-time haulage for two years pending two-year acoustic monitoring survey
- Saline water impacts to fauna habitats to be avoided through the utilisation of lined evaporation ponds in accordance with DWER Licence to Operate L9455/2024/1
- Utilisation of existing tracks where possible
- Via the approval of a s43A application, a widening of the DE to allow for operational and construction flexibility to avoid direct impact to species recorded during pre-clearance surveys

## 2.2.7 Minimisation measures (including regulation by other DMAs)

The proponent has proposed measures to minimise impacts to terrestrial fauna (Greatland 2025b):

- A 100m buffer around active greater bilby burrows, or relocations as per relevant DBCA guidelines
- A 300 m buffer around suitable night parrot nesting sites and development of further targeted survey for the species
- Clearing to be undertaken in accordance with a surface disturbance permit
- Buffer zones to be surveyed and demarcated in accordance with surface disturbance permit

- The keeping of a clearing and relocations register
- Utilisation of a fauna spotter during ground-clearing works
- Clearing to be undertaken during daylight hours.
- Signage employed alerting personnel of potential for conservation significant fauna in the area
- Fencing of all water assets onsite and the inclusion of egress matting and undertaking of regular inspections.
- Fencing or point of egress provided for open excavations and trenches greater than 1m or steep-walled holes when not in active use for operations
- Stop work issued where conservation significant fauna are identified.

### Mining Act 1978

In accordance with the Mining Act the proponent will be required to prepare a Mine Closure Plan consistent with the Guideline for preparing Mine Closure Plans (DMPE 2025) which includes requirements for rehabilitation and revegetation of land and closure objectives and criteria.

### 2.2.8 Rehabilitation measures

The proponent has proposed the following rehabilitation measures (Greatland 2025b):

- Progressively rehabilitate disused cleared areas throughout the life of mine
- Final rehabilitation and closure of disturbed areas to return the disturbance footprint to a standard at or approaching pre-clearance habitat quality.

### 2.2.9 Assessment of impacts to environmental values

The EPA considered that the key environmental values for terrestrial fauna likely to be impacted by the proposal are fauna habitat, conservation significant species, and priority species.

In assessing this proposal, the EPA has had regard to the combined and cumulative effect that surrounding approved and proposed projects may have on terrestrial fauna, particularly the Winu and Nifty Copper projects.

### Significant fauna habitat

The EPA has assessed the potential impacts to fauna habitat from implementation of the proposal. The proposed indicative clearing of habitat types is presented in Table 5. The maximum extent of fauna habitat to be cleared is 630 ha.

Sand plain and sand dune habitats provide suitable habitat for night parrot, greater bilby, great desert skink, brush-tailed mulgara and northern marsupial mole. Saltpan habitat is considered highly significant for night parrot where mature spinifex occurs adjacent to chenopod shrubland, providing important nesting, roosting and foraging habitat, and although limited in extent within the development envelope, comprising just 83.02 ha, it forms part of a much larger contiguous habitat to the southeast,

extending more than 40 km toward the northern extremity of the Percival Lakes system (Adaptive NRM 2025).

Claypan (754.97 ha within the development envelope) habitat was considered significant, offering potential seasonal value for migratory shorebirds and waterbirds following high rainfall events that may occur from time to time. Occurrence of these species within this area is likely to remain intermittent given the presence of larger areas of more suitable habitat to the south of the development envelope. The EPA notes however that based on the indicative disturbance footprint, only 0.66 ha of this habitat is proposed to be cleared.

**Table 6 : Fauna habitat types within indicative disturbance footprint**

Habitat type	Likely habitat value	Potential use by significant species likely to occur within development envelope	Mapped extent (ha)	Extent within IDF
Claypan	Critical habitat	N/A	1,606.40	0.66 ha (0.04%)
	Supporting habitat	Migratory shorebirds (secondary roosting, foraging and dispersal)		
Saltpan	Critical habitat	7.7 ha Night parrot (nesting and foraging) Greater bilby (secondary feeding, foraging and dispersal)	10652.3	2.11 ha (0.02%)
	Supporting habitat	Night parrot (nesting and foraging) Migratory birds (seasonal secondary foraging habitat)		
Sand Dune	Critical habitat	Greater bilby (foraging and dispersal). Great desert skink (primary breeding and dispersal) Brush-tailed mulgara (primary breeding, foraging and dispersal) Northern marsupial mole (primary breeding, foraging and dispersal)	41,774.6	13.25 ha (0.03%)
	Supporting habitat	Night parrot (foraging and dispersal)		
Sand Plain	Critical habitat	Greater bilby (primary breeding, foraging and dispersal) Great desert skink (primary breeding and dispersal) Brush-tailed mulgara (primary breeding, foraging and dispersal)	158,833.7	447.28 ha (0.28%)
	Supporting habitat	Night parrot (nesting and foraging) Northern marsupial mole (secondary breeding, foraging and dispersal)		
Stony Hill, Breakaway or	Critical habitat	Western pebble-mound mouse (breeding and foraging)	26,922.1	0 ha (0%)
	Supporting habitat	N/A		

Habitat type	Likely habitat value	Potential use by significant species likely to occur within development envelope	Mapped extent (ha)	Extent within IDF
Other Outcropping				
Stony Plain	Critical habitat	N/A	65,434.2	19.68 ha (0.03%)
	Supporting habitat	Western pebble-mound mouse (secondary breeding, foraging and dispersal) Brush-tailed mulgara (secondary breeding, foraging and dispersal)		

*IDF = Indicative disturbance footprint.*

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## Threatened and priority fauna

### *Night parrot*

The night parrot (*Pezoporus occidentalis*) is listed as Critically Endangered under the BC Act and EPBC Act. The species was recorded on three occasions via acoustic recorders, with two confirmed calls at one location, and one unconfirmed call at a different location (Biologic 2021). Both locations were within the boundaries of the development envelope suggesting that the species utilises habitat within the development envelope.

Despite the limited number of records not strongly indicating a resident population within the development envelope, the EPA is of the view that additional work is necessary to adequately determine the risks associated with night parrot occurrence and potential vehicle strike.

Breeding and roosting habitat for the night parrot consists primarily of low, dense vegetation on flat, open terrain. This is typically long-unburnt (>20 years) mature spinifex, but may also include lignum thickets, dense shrubby samphire, and chenopod communities (DCCEEW 2025). Permanent and ephemeral water sources, floodplains, claypans, rocky breakaways, and salt lake margins are also considered critical habitat.

Due to the broad classification of night parrot foraging habitat, all habitat types recorded within the development envelope are likely to provide potential foraging habitat. Therefore, the proposed clearing of 630 ha is considered to constitute a direct loss of potential foraging habitat for the species

Within the surveyed area, sand plain, sand dune and saltpan landforms were identified as suitable roosting and foraging habitats (Biologic 2020a). Sand plain and dune habitats were only considered suitable where long-unburnt *Triodia* hummocks were present. As the species favours open areas with minimal trees or shrubs, only open hummock grassland was classified as suitable roosting habitat. Of the 327 sites assessed, 27 were hummock grassland, and only five had fire ages greater than six years. All five were located outside the development envelope.

Additional habitat mapping using satellite imagery identified 7.7 ha of potentially suitable roosting habitat within the development envelope. This area contains scattered, large, long-unburnt *Triodia* hummocks and forms the northern edge of a major saltpan and paleodrainage system extending over 40 km toward the northern Percival Lakes, where night parrots are known to occur (Adaptive NRM 2025).

The recorded night parrot locations are situated approximately 21 km west of mapped roosting habitat. While current evidence indicates that the species is capable of travelling large distances within a single night (DCCEEW 2025a), there remains uncertainty regarding the location of roosting sites used by the recorded individuals or the direction of their movements.

The EPA notes that the proponent has committed to undertaking two years of acoustic monitoring to improve understanding of night parrot use of the project area

and, during this period, to restrict clearing and haul road operations to daytime hours. Given the remaining uncertainties, and to ensure that risks to night parrots are reduced to an acceptable level, the EPA recommends that Condition B2-5 (prohibiting night-time haul road operations) be applied until the risk to night parrots is better understood and can be demonstrated to be low. The EPA advises that the conditions may be reconsidered should additional survey data provide sufficient confidence that risks to the species are appropriately minimised.

Further, the EPA considers that significant residual impacts to the night parrot are likely and has recommended a cautionary approach to minimise potential impacts. This includes, recommended conditions A1-1 (limits and extents), B2-1, (fauna habitat disturbance limits), B2-2 (pre-clearance surveys), B2-5(4) (adherence to fauna exclusion buffers), B8 (Rehabilitation of fauna habitat) and B8 (offset implementation) to ensure the EPA's environmental objective is met.

### *Greater bilby*

The greater bilby (*Macrotis lagotis*) is listed as Vulnerable under the BC Act and EPBC Act. The species was recorded 288 times during 2020 and 2021 (Biologic 2020a, Biologic 2021), and subsequent population monitoring in 2022 recorded a further 600 occurrences, including 23 burrows (11 active), 506 diggings, 36 scats and 35 track records (Biologic 2023).

Greater bilby can occur across all mapped habitats within the development envelope; however, it is most strongly associated with sand plain and sand dune habitats where suitable burrowing substrates occur and vegetation provides protective cover. These habitats also support the mosaic of unburnt and post-fire regenerating vegetation known to facilitate bilby foraging, and the species' high mobility enables it to utilise a wide range of habitat types opportunistically in response to changing resource availability.

Under current conservation advice, all habitat where the species is known or likely to occur is considered critical (DCCEEW 2023). Accordingly, the proponent has proposed a range of mitigation measures to minimise impacts during land-disturbing activities, including limits on clearing (up to 630 ha) and buffers to avoid disturbance to active burrows. In addition, the proponent has committed to incorporating the full extent of proposed clearing into offset calculations.

Where habitat is unavoidably affected, habitat management should be implemented to increase the chances of long-term persistence at the site. Studies have shown that wildlife corridors, including fauna crossings, help direct animal movements and increase connectivity between habitats. While specific studies on bilbies using fauna crossings are limited, there is evidence that similar structures aid movement and habitat connectivity (Dziminski et al. 2021). The EPA has formed the view that fauna friendly crossings should be implemented to facilitate dispersal and maintain habitat connectivity.

The EPA considers that significant residual impacts to greater bilby can be minimised through recommended conditions A1-1 (limits and extents), B2-1, (fauna

habitat disturbance limits), B2-2 (fauna crossings), B2-3 (adherence to fauna exclusion buffers), B7 (rehabilitation of fauna habitat) and B8 (offset implementation).

### *Great desert skink*

Great desert skink (*Liopholis kintorei*) is listed as Vulnerable under the BC Act and EPBC Act. The species was not recorded during baseline surveys undertaken by the proponent. It has however been recorded approximately 23 km south southeast of the proposal and is known to inhabit sand plain and sand dune habitats which have been mapped within the development envelope (Biologic 2021). The species often occurs in habitats comprising a mosaic of different aged post-fire vegetation regeneration.

Based on the habitats present within the development envelope, the EPA considers that the great desert skink may occur as a resident within or near the proposal where it is likely to utilise both unburnt and recently burnt areas, with unburnt areas providing shelter and regenerating burnt areas providing a food resource. Should the great desert skink occur at the proposal, it would represent the western limit of the species' known range and as such, would represent an important population for the species.

The EPA considers that significant residual impacts to great desert skink habitat can be minimised through recommended conditions A1-1 (limits and extents), B2-2 (pre-clearance surveys), B2-3 (fauna exclusion buffers) and B7 (Rehabilitation of fauna habitat). Recommended condition B8; which mandates the implementation of offsets to address significant residual impacts on night parrot and greater bilby habitat; is also anticipated to benefit great desert skink populations. The offset program incorporates landscape-scale habitat protection, predator control, and coordinated fire management measures, thereby mitigating key threats common to all three arid-zone species and supporting positive conservation outcomes.

### *Priority fauna*

Clearing associated with the proposal is not expected to have a significant residual impact on priority fauna species, as listed by DBCA. The priority species recorded during surveys were the Brush-tailed mulgara (*Dasycercus blythi*, P4) and the Northern marsupial mole (*Notorcytes caurinus*, P4). The western pebble-mound mouse (*Pseudomys chapmani*, P4) was not recorded but is considered likely to occur.

The above priority fauna species all have relatively broad distributions and are associated with habitats that extend well beyond the development envelope. Given the local and regional prevalence of these habitats it is unlikely that the disturbance footprint provides critical habitat on which the species rely. Subject to the recommended conditions (A1-1, B2-1 and B8), the EPA considers that the clearing of habitat is unlikely to represent a significant residual impact for the above priority fauna species.

### *Red knot and other migratory birds*

The migratory red knot (*Calidris canutus*, EN – BC Act) and the gull-billed tern (*Gelochelidon nilotica*, MI – BC Act) were recorded during baseline and monitoring surveys (Biologic 2021 & Spectrum Ecology 2021). Migratory birds are highly mobile species with broad foraging ranges, often visiting wetland areas after favourable rainfall events. A total of 11 migratory bird species are considered to possibly occur within the development envelope. Given the ecological similarities and shared habitat preferences, the species are discussed here together.

The red knot was recorded on motion sensing cameras deployed on a treatment pond at the Telfer Mine during significant species monitoring. The EPA considers this to be a rare and somewhat unusual record as Red Knot are rarely recorded inland (Spectrum, 2021). Artificial habitat has been created at the Telfer Mine with the addition of several open water bodies such as the water treatment facility and drainage ponds. Red knot do not breed in Australia (Spectrum, 2021), and the EPA considers that the species is unlikely to occur at the Proposal on a regular basis.

The gull-billed tern primarily occurs in coastal habitats of Australia and when recorded inland it is often associated with salt-lake, saltpan and watercourse habitats, particularly following cyclonic activity and the subsequent inundation of low-lying areas (Biologic 2021). The gull-billed tern was recorded on one occasion during baseline surveys via acoustic recorder from a single call sequence (Biologic 2021). The habitat in which it was recorded, sand plain, is uncommon for the species and is likely to be representative of an individual flying over the area. The EPA considers the presence of the species to be transient, infrequent and not considered to be a resident of the area with mapped habitats unlikely to support a population of the species.

The other nine migratory species, though considered to possibly occur, are unlikely to rely on habitats within the development envelope. Following irregular seasonal inundation, the claypan habitat may provide suitable temporary habitat for migratory shorebirds and waterbirds, however any utilisation of these habitats is expected to be opportunistic and limited to transient individuals. As such, the EPA considers that there is unlikely to be significant residual impacts to migratory bird species.

### *Invertebrate fauna*

Desktop and field assessments identified several invertebrate taxa known to contain Short Range Endemic (SRE) species. The desktop assessment recorded 41 historical records, including 17 potential SRE taxa that could potentially occur. Across the two field survey programs (Biologic 2020a; Biologic 2021), a total of 144 invertebrate specimens were collected from SRE-relevant groups, of which eleven morphospecies were classified as potential SRE taxa. No confirmed SRE species were recorded across either survey program.

All potential SRE specimens were collected from sandy/stony plain habitat, which is widespread across the region and does not represent the isolated, topographically protected refugia typically associated with short-range endemism. Although some taxa (e.g., *Lychas* 'telfer', *Urodacus* sp. 1., *Buddelundia* spp.) are currently only

known from the Telfer-Havieron region, the widespread nature of the habitat in which they were collected indicates they are unlikely to be restricted to the development envelope.

Given the regionally widespread habitats in which the specimens were collected and subject to the recommended conditions (A1-1, B2-1 and B8), clearing associated with the proposal is not expected to result in a significant residual impact on SRE invertebrate fauna and the EPA considers that the environmental outcome for invertebrate fauna species is likely to be consistent with the EPA objective for terrestrial fauna.

### Direct impacts

During construction and operation, terrestrial fauna may be injured or killed through clearing, vehicle collision, or entrapment in infrastructure such as ponds, sumps, excavations, and trenches.

Project traffic is modelled at 76 vehicle trips per 24 hours (3.3 passes per hour) (Greatland 2025b). While the proponent has proposed driver behaviour monitoring and penalties for speeding, the EPA considers additional controls necessary to reduce the risk of vehicle strike to the Critically Endangered, primarily nocturnal night parrot. The EPA therefore recommends prohibiting haul road operations at night (Condition B2-5(3)). The EPA also recommends maximum speed limits of 80 km/h on sealed roads and 60 km/h on unsealed roads within the development envelope during daylight construction and operations, excluding active mining areas and emergency vehicles (Condition B2-5(2)). These controls are also expected to reduce impacts to the greater bilby and great desert skink.

Clearing of suitable habitat poses a risk of injury or mortality to conservation significant fauna, including greater bilby, great desert skink and night parrot. The EPA recommends pre-clearance surveys for critical habitat (Condition B2-2). The proponent has proposed buffers of 100 m around active bilby burrows and 300 m around night parrot roosts. The EPA further recommends significant fauna exclusion zones that also include a 150 m buffer around occupied great desert skink burrows, with no disturbance or vehicle movement permitted (Condition B2-3(4)).

To reduce the risk of entrapment or drowning, the proponent will fence all water infrastructure, install fauna egress matting, and provide fencing or escape points for unattended excavations and trenches.

The EPA considers that these measures, combined with recommended conditions A1-1 (limits and extents), B2-1 (prescriptive requirements), B2-2 (pre-clearance surveys) and B2-5(3) (speed limits, nighttime restrictions, exclusion zones), will minimise direct impacts to terrestrial fauna.

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## Indirect impacts

### *Habitat degradation*

Implementation of the proposal has the potential to impact habitat beyond that which is being cleared through dust deposition, introduction and spread of weeds, altered fire regimes, and altered hydrological regimes.

These indirect processes may degrade vegetation structure and soil conditions that are critical for the night parrot, greater bilby and great desert skink. Increased dust and changes to soil moisture can reduce the condition and maturity of spinifex required by the night parrot for roosting and foraging, while hydrological alteration and vegetation decline may reduce the suitability of greater bilby and great desert skink burrows. Weed invasion can also increase fuel loads and alter fire behaviour, contributing to more frequent or intense fires and outcompete native species that are critical to the survival of significant fauna.

The proponent has proposed measures such as dust suppression, surface water and groundwater management to maintain natural flow regimes, weed hygiene protocols, and fire-risk reduction measures (Greatland, 2025b).

The EPA considers that conditions requiring the maintenance of hydrological regimes (B4-1, B4-2) and the avoidance of adverse impacts to vegetation (conditions B1-1 and B1-2) will minimise habitat decline arising from dust, altered water regimes and changes in fire behaviour. Requirements for weed management, monitoring and adaptive management as recommended in the draft conditions to ensure early detection of habitat stress and enable responsive management actions.

### *Noise, vibration and light pollution*

Construction and operational activities have the potential to expose fauna to elevated and prolonged noise, light and vibration. These sensory disturbances can alter fauna behaviour, with nocturnal species such as night parrot and greater bilby particularly vulnerable to displacement from preferred habitat, reduced foraging efficiency, disturbance of roosting or nesting sites, and altered movement patterns.

The proponent has proposed measures to minimise sensory disturbance, including restricting clearing to daylight hours, directional lighting to reduce light spill, and general noise-management practices. The proponent also proposes exclusion buffers around identified significant fauna locations, which provide additional protection from vibration and noise near roosts or burrows (Greatland 2025b).

The EPA considers that the conditions requiring no disturbance of conservation significant fauna from artificial light (condition B2-1) and the restriction on night-time haul road operations (recommended condition B2-5(3)) provide necessary controls to reduce behavioural disturbance, particularly for nocturnal species. Speed limits and daytime-only clearing requirements (condition B2-5(2) and B2-5(1)) further reduce noise and vibration generated by vehicle activity. These combined conditions ensure indirect disturbance effects from noise, light and vibration are appropriately mitigated.

### *Feral fauna*

Indirect impacts may occur where the proposal inadvertently increases the presence or activity of feral animals - including cats, dogs and camels - through improved access, attractants, water sources, or reduced effectiveness of natural predator-prey relationships. Increased predation pressure or competition can significantly affect local populations of threatened species such as the greater bilby, night parrot and great desert skink.

The proponent has proposed feral animal control measures, including targeted management programs, attraction-minimisation strategies, fencing of water infrastructure where required, and regular monitoring of feral animal activity. These measures are intended to limit attraction and suppress population increases within the development envelope.

The EPA considers conditions requiring no detectable increase in feral animal abundance relative to baseline (condition B2-1) and active feral animal management aligned with relevant recovery and threat abatement plans (condition B2-3) to be essential for managing this impact pathway. Monitoring and adaptive management requirements in the draft conditions to ensure that feral animal activity is tracked, and management actions are escalated if thresholds or trends indicate increased risk to conservation significant fauna. The EPA is of the view that these recommended conditions ensure that indirect impacts arising from feral fauna presence are minimised and closely managed throughout the proposal's life.

### Cumulative impact assessment

The proponent has assessed the cumulative impacts of the proposal by considering the combined effect of this proposal together with the approved Telfer Project, including the mine, power supply, and infrastructure corridor, as well as the Havieron Stage 1 (box cut and decline).

The EPA's cumulative impact assessment considered cumulative impacts from the above and nearby regional projects; namely the Winu and Nifty Copper projects including ancillary projects in the region such as the Telfer to Nifty Gas Pipeline. These projects all occur within the Great Sandy Desert bioregion and share similar fauna assemblages, habitat types and ecological processes. The EPA gave consideration to:

- whether similar conservation significant fauna (night parrot, greater bilby, great desert skink) occur across these projects;
- the cumulative loss or degradation of habitat used by these species; and
- whether recommended conditions and offsets appropriately manage cumulative impacts.

Surveys for the Winu Project identified fauna habitats dominated by *Triodia* sandplains, linear dunes and interdunal corridors, supporting species assemblages typical of the Great Sandy Desert (Rio Tinto Winu Pty Ltd 2023). These are the same broad habitats used by night parrot, greater bilby, and potentially by the great desert skink within the Telfer–Havieron area. During field surveys, greater bilby, northern marsupial mole, brush-tailed mulgara and western pebble-mound mouse were recorded in the area with night parrot considered to have the potential to occur.

Similarly, a field survey undertaken for the Nifty Copper project recorded greater bilby evidence within sand dune and sandplain habitats (Cyprium Metals 2024) that are well represented both within the Nifty mining lease and also in the surrounding areas.

The proposal results in clearing of 630 ha of supporting habitat for night parrot, critical habitat for the greater bilby, and habitat suitable for great desert skink. The loss equates to approximately 0.004% of remnant vegetation from the Great Sandy Desert bioregion Lake Mackay Subregion in Western Australia. When combined with the disturbance footprints of the Telfer mine, existing infrastructure corridor, the proposed Winu Project (conceptual footprint up to 4,868 ha), and Nifty Copper Project, the cumulative effect (12,684 ha of vegetation clearing or 0.073% of remaining native vegetation extent (DWER 2023) is an incremental, regionally dispersed loss of similar habitats. However, specific cumulative risks remain for species with specific habitat requirements such as the night parrot's dependence on long-unburnt mature *Triodia* as an example.

The EPA considers that, with the recommended conditions limiting clearing and protecting night parrot critical habitat (A1-1), requiring pre-clearance surveys and fauna exclusion buffers (B2-2 and B2-3), restricting night-time haul operations and vehicle speeds (B2-5(3) and B2-5(2)), and ensuring adaptive management and feral animal control (B2-4 and B2-3), the proposal's contribution to cumulative impacts on night parrot, greater bilby and great desert skink can be appropriately minimised. Offsets recommended under Part B8 (see Section 4 Offsets) will further counterbalance residual cumulative impacts by improving regional habitat values within the Great Sandy Desert.

#### 2.2.10 Summary of key factor assessment and recommended regulation

The EPA has considered the likely residual impacts of the proposal on terrestrial fauna environmental values. In doing so, the EPA has considered whether reasonable conditions could be imposed, or other decision-making processes can ensure consistency with the EPA factor objective. The EPA assessment findings are presented in Table 7.

The EPA has also considered the principles of the *Environmental Protection Act 1986* (see Appendix D) in assessing whether the residual impacts will be consistent with its environmental factor objective and whether reasonable conditions can be imposed (see Appendix A).

The EPA also notes that the proponent would be required to obtain ministerial authorisation to take or disturb threatened fauna in accordance with the BC Act.

**Table 7 : Summary of assessment for terrestrial fauna**

Residual impact or risk to environmental value	Assessment finding or Environmental outcome	Recommended conditions and DMA regulation
<p>1. Clearing of up to 630 ha of terrestrial fauna habitat, including supporting habitat for night parrot, critical habitat for greater bilby and habitat suitable for great desert skink within the development envelope.</p>	<p>The EPA considers that clearing will result in a significant residual impact on habitat for conservation significant fauna. The EPA notes that mapped potentially suitable night parrot roosting habitat (7.7 ha) within the development envelope can be avoided through limits on the disturbance footprint.</p> <p>The EPA considers that, with limits on clearing, protection of mapped critical night parrot habitat, progressive rehabilitation of fauna habitat, and implementation of offsets, the environmental outcome is likely to be consistent with the EPA's objective for terrestrial fauna.</p>	<p><b>Condition A1 (Limitations and extent of proposal)</b> Limits on total clearing and no direct disturbance to mapped night parrot critical habitat.</p> <p><b>Condition B2 (Terrestrial fauna)</b> Sets strict limits on disturbance to critical and supporting habitat for night parrot, greater bilby and great desert skink, including complete avoidance of mapped night parrot critical habitat Requires exclusion zones of 300 m around night parrot roosts, 100 m around active greater bilby burrows, and 150 m around great desert skink burrows, with no disturbance activities permitted within these zones</p> <p><b>Condition B7 (Rehabilitation and Closure)</b> Requires rehabilitation of fauna habitat to be self-sustaining and rehabilitate the project in a progressive manner</p> <p><b>Condition B8 (Environmental Offsets)</b> Implementation of offsets for significant residual impacts to night parrot and greater bilby habitat.</p>

Residual impact or risk to environmental value	Assessment finding or Environmental outcome	Recommended conditions and DMA regulation
		<p><b>DMA legislation</b> DMPE can regulate rehabilitation and closure through Mining Development and Closure Proposals and Mine Closure Plans under the Mining Act 1978, consistent with Condition B7.</p>
<p>2. Direct mortality or injury to fauna from clearing and construction activities, vehicle strikes on haul and access roads, and entrapment or drowning in infrastructure such as evaporation ponds, trenches and sumps.</p>	<p>The proposal has the potential to kill or injure conservation significant fauna, including night parrot, greater bilby and great desert skink, during clearing and from collisions with operational vehicles or entrapment in project infrastructure.</p> <p>The EPA considers that the risk of direct mortality can be substantially reduced through prescribed speed limits, installation of fauna crossings, prohibition of night-time haul road operations, pre-clearance surveys, use of fauna spotters, exclusion buffers around active burrows and roosts, and fencing/egress measures for water bodies and excavations.</p> <p>Subject to the recommended conditions, the EPA considers the environmental outcome is likely to be consistent with the EPA's objective for terrestrial fauna.</p>	<p><b>Condition A1 (Limitations and extent of proposal)</b> Sets limits on the location and extent of disturbance infrastructure.</p> <p><b>Condition B2 (Terrestrial fauna)</b> Requirement for pre-clearance surveys for night parrot, greater bilby and great desert skink including the use of fauna spotters during clearing; Sets significant fauna exclusion buffers to prevent direct impacts to critical habitat features for night parrot, greater bilby and great desert skink. Sets speed limits on sealed and unsealed roads and a requirement for no haul road operations during night-time hours. Requirement to install fauna crossings</p> <p><b>Condition B7 (Rehabilitation and Closure)</b> Requires rehabilitation of fauna habitat to be self-sustaining and rehabilitate the project in a progressive manner</p>

Residual impact or risk to environmental value	Assessment finding or Environmental outcome	Recommended conditions and DMA regulation
		<p><b>Condition B8 (Environmental Offsets)</b> Implementation of offsets for significant residual impacts to night parrot and greater bilby habitat.</p> <p><b>DMA legislation</b> DMPE can regulate rehabilitation and closure through Mining Development and Closure Proposals and Mine Closure Plans under the Mining Act 1978, consistent with Condition B7.</p>
<p>3. Disturbance or degradation of habitat from noise, light and vibration associated with construction and operations</p>	<p>The EPA considers that noise, light and vibration from the proposal may result in residual impacts to night parrot, greater bilby and great desert skink, including displacement from preferred habitat, reduced foraging efficiency, disturbance of roosting sites and potential abandonment of burrow systems.</p> <p>The EPA notes the proponent's commitments to daylight-only clearing, directional lighting, and exclusion buffers around significant fauna locations.</p> <p>The EPA considers that, with conditions to avoid disturbance of conservation significant fauna from artificial light, restrict night-time haul operations, and require adaptive management where proposal-related disturbance is detected, indirect sensory disturbance can be appropriately managed and the environmental outcome is likely to be consistent with the EPA's objective for terrestrial fauna.</p>	<p><b>Condition A1 (Limitations and extent of proposal)</b></p> <p><b>Condition B2 (Terrestrial fauna)</b> Requires no disturbance of conservation significant fauna from proposal-related artificial light,</p> <p>Requires no haul road operations during night-time hours; speed limits and daylight-only clearing</p> <p>Requirement to cease works and implement alternative management if monitoring identifies proposal-related disturbance to night parrot, greater bilby or great desert skink.</p> <p><b>Condition B7 (Rehabilitation and Closure)</b></p>

Residual impact or risk to environmental value	Assessment finding or Environmental outcome	Recommended conditions and DMA regulation
		<p>Requires rehabilitation of fauna habitat to be self-sustaining and rehabilitate the project in a progressive manner</p> <p><b>Condition B8 (Environmental Offsets)</b></p> <p>Implementation of offsets for significant residual impacts to night parrot and greater bilby habitat.</p> <p><b>DMA legislation</b></p> <p>DMPE can regulate rehabilitation and closure through Mining Development and Closure Proposals and Mine Closure Plans under the Mining Act 1978, consistent with Condition B7.</p>
<p>Indirect degradation of fauna habitat from dust deposition, altered fire regimes, altered surface and groundwater regimes, and weed invasion; and indirect impacts from increased presence or activity of feral fauna.</p>	<p>The EPA considers that implementation of the proposal may result in residual indirect impacts through changes in vegetation structure, soil moisture, fire behaviour and weeds, as well as increased feral predator activity.</p> <p>Subject to limits on clearing, maintenance of hydrological regimes, installation of fauna crossings, weed management, and conditions requiring no detectable increase in feral fauna abundance, the EPA considers these impacts can be appropriately minimised.</p> <p>With monitoring and adaptive management, the EPA considers the environmental outcome is likely to be consistent with its objective for terrestrial fauna.</p>	<p><b>Condition A1 (Limitations and extent)</b></p> <p>Sets limits clearing to approved extents.</p> <p><b>Condition B4 (Inland Waters)</b></p> <p>Requirement to maintain hydrological regimes to avoid habitat decline.</p> <p><b>Condition B1 (Flora &amp; vegetation)</b></p> <p>To avoid and minimise adverse impacts from dust, weeds, and fire.</p> <p><b>Condition B2 (Terrestrial fauna)</b></p> <p>Requires no detectable increase in feral fauna abundance.</p> <p>Installation of fauna crossings</p>

Residual impact or risk to environmental value	Assessment finding or Environmental outcome	Recommended conditions and DMA regulation
		<p><b>Condition B7 (Rehabilitation and Closure)</b>                      Requirement to rehabilitate fauna habitat to be stable, self-sustaining and of local provenance.</p>

## 2.3 Inland waters and subterranean fauna

### 2.3.1 Environmental objective

The EPA environmental objective for inland waters is *to maintain the hydrological regimes and quality of groundwater and surface water so that environmental values are protected* (EPA 2018).

The EPA environmental objective for subterranean fauna is *to protect subterranean fauna so that biological diversity and ecological integrity are maintained* (EPA 2016e).

There is a high level of connectivity between the environmental factors of inland waters and subterranean fauna. Groundwater provides potential habitat for subterranean fauna within the proposal area. For the purposes of this assessment, the EPA has considered impacts to these factors in a single assessment.

### 2.3.2 Investigations and surveys

The EPA advises the following investigations and surveys were used to inform the assessment of the potential impacts to inland waters and subterranean fauna:

- Havieron Project Surface Water Assessment (appendix X of the revised referral supporting document rev9) (Rockwater Hydrogeological and Environmental Consultants 2020)
- Service Road Corridor Havieron Project Surface Water Assessment (appendix X of the revised referral supporting document rev9) (Rockwater Hydrogeological and Environmental Consultants 2021a)
- H3-Level Hydrogeological assessment of the Havieron Project (appendix Y of the referral supporting document) (Rockwater Hydrogeological and Environmental Consultants 2021b)
- Havieron Project Subterranean Fauna Survey (appendix V of the revised referral supporting document rev9) (Biologic, 2020b)
- Havieron Project Stage 2: Stygofauna Survey and Risk Assessment (appendix W of the referral supporting document rev9) (Biologic, 2022b)

The EPA considered that the relevant studies were appropriate to inform the assessment of potential impacts to inland waters and subterranean fauna from the proposal.

The EPA sought advice from DWER in relation to the surface and groundwater modelling that was considered as part of this assessment.

### 2.3.3 Assessment context: existing environment

#### Climate and rainfall

The proposal area has an arid climate with average evaporation exceeding average precipitation during every month of the year. Rainfall is seasonal with approximately

85% of the annual rainfall received from November to April. Rainfall events are episodic with highly variable amounts resulting from low-pressure cells and cyclonic disturbances, with frequent thunderstorm activity (Rockwater 2021a). These high-intensity rainfall events can result in short-lived inundation of local landforms, including claypans and interdunal corridors, as described in the following sections.

### Surface water drainage

The proposal lies within the Sandy Desert River Basin, which is part of the Western Plateau drainage division. This internally draining basin spans over a catchment area of approximately 43,752,400 ha and is characterised by ephemeral lakes and claypans and intermittent surface water features. A key landform within the basin is Lake Dora, a major inland salt lake and Nationally Important Wetland (Environment Australia 2001), located approximately 40 km southeast of the proposal development envelope. As the lowest point in the local catchment, Lake Dora periodically receives freshwater inflows from the Rudall River to the southwest and a series of lakes to the southeast. These systems comprise short, ephemeral creeks and rivers that only flow after heavy rainfall events (Rockwater 2021a).

Within the development envelope, modelling undertaken for the proposal indicates that water accumulates as wide sheet-flow within the dune systems (Rockwater 2021b) and flow paths are generally separated as flood flows will not overtop the sand dunes. (Rockwater, 2021a). Due to the flat nature of the land, velocities are negligible, and water is predicted to pond in localised depressions until it infiltrates or evaporates. Some mapped vegetation types may depend on such sheet flow and these are discussed in more detail in Section 2.1 of this report.

### Groundwater

The proposal is situated within the Permian Paterson Formation of the Canning Basin, where a complex sequence of glacial tillite, palaeochannel sands, siltstone and mudstone forms a multi-layered and compartmentalised groundwater system. These units overlie the fractured but largely impermeable Proterozoic basement, which hosts the Havieron orebody approximately 430 to 1,185 m below ground level. (Rockwater 2021b).

The Havieron deposit occurs within a multi-layered aquifer system comprising:

- A perched / unconfined saprolite aquifer that is thin (<10 m), discontinuous and largely controlled by localised weathering and the presence or absence of the Upper Mudstone aquitard.
- The Upper Confined Aquifer, the primary water-bearing system at Havieron, comprising glacial tillite and locally more conductive palaeochannel sands with a defined east-to-west hydraulic gradient discharging into calcrete within the Percival Palaeovalley.
- A deeper Lower Confined Aquifer, hydraulically isolated from the Upper Confined Aquifer by a substantial siltstone sequence, exhibiting south-to-north regional flow and hypersaline groundwater.
- Proterozoic aquifer – low permeability fractured basement; no direct recharge within the development envelope.

The most significant regional geomorphological feature is the Percival Palaeovalley, a NW to SE trending palaeodrainage system located approximately 4 to 5 km west of Havieron and forming a groundwater discharge pathway towards Lake Dora, a Nationally Important Wetland (Environment Australia 2001). Discharge into calcrete within this palaeovalley represents the primary groundwater outflow for the Upper Confined Aquifer.

### *Groundwater quality*

Groundwater quality across the Havieron hydrogeological system is uniformly poor, with salinity increasing markedly with depth. Sampling undertaken for the H3-level hydrogeological assessment indicates that groundwater ranges from brackish to hypersaline (approximately 3,000–55,000 mg/L TDS, depending on aquifer) (Rockwater 2021b).

The Upper Confined Aquifer contains the freshest groundwater within the system (approximately 3,460 - 19,600 mg/L TDS), particularly in western areas where the aquifer is shallower and locally influenced by episodic recharge. In contrast, the Unconfined/Perched Aquifer is saline (18,800 - 39,100 mg/L TDS), reflecting evaporative concentration under arid climatic conditions and the slow rate of through-flow. The Lower Confined Aquifer is hypersaline (approximately 53,000 mg/L TDS), while salinity in the Proterozoic fractured basement is inferred to exceed 55,000 mg/L TDS, though has not been directly measured (Rockwater, 2021b).

The high salinity means groundwater within the development envelope is unlikely to support potable use, stock use or irrigation, and has limited relevance for other groundwater users. From an environmental perspective, the elevated salinity and depth to groundwater (>10 m bgl) are likely correlated with the lack of groundwater-dependent vegetation recorded (refer Section 2.1).

The calcrete system of the Percival Palaeovalley represents the primary discharge zone for the Upper Confined Aquifer and corresponds with the location of potential stygofauna habitat (Rockwater 2021b).

### *Groundwater Dependent Ecosystems*

One potential GDE-dependent species, *Eucalyptus victrix*, typically associated with areas of increased water availability, was identified within the development envelope. However, noting the location of the vegetation community within an area of localised water collection, and the absence of any other known groundwater dependent taxa within the vegetation type, the proponent considered it unlikely to represent a GDE.

For discussion on GDE in more detail refer to section 2.1 of this report.

## Subterranean fauna

### *Troglofauna*

Subterranean biodiversity in the Great Sandy Desert is poorly documented, although troglobitic fauna are known to occur in association with calcrete systems developed

along palaeodrainage features elsewhere in arid Western Australia (Humphreys, 1999). However, no troglofauna were recorded within the proposal development envelope, which is likely attributable to the local geology, characterised by young, unconsolidated dune systems that lack the voids, fractures and cave structures required to support troglobitic species (Biologic 2020b). Given the absence of habitat-forming geology and the absence of detections despite appropriate survey effort, troglofauna are unlikely to occur within, or be impacted by, the proposal.

### *Stygofauna*

Hydrogeological investigations indicate that the upper unconfined/perched aquifer represents the most prospective stygofauna habitat. This shallow, weathered saprolite unit provides relatively greater permeability compared to deeper confined aquifers (Biologic, 2020b). Surveys also identified that localised patches of shallow alluvium and calcareous cement (calcrete), particularly towards the palaeovalley margin, may provide small, isolated microhabitats capable of supporting stygofauna. The Upper Confined Aquifer may also support stygofauna where palaeochannel sands approach the surface in areas west of the deposit, consistent with the regional hydrogeological model (Biologic, 2020b). In contrast, the Lower Confined Aquifer and Proterozoic basement are deeply buried, highly saline and low in permeability, and no stygofauna were recorded from these units (Biologic, 2020b).

Targeted surveys recorded very low stygofauna richness within the Havieron Project area, with true stygofauna (stygobites) detected only in boreholes intersecting alluvials and calcareous cement associated with shallow claypan environments west of the development envelope. Surveys identified that while most aquifers in the significant amendment area are not prospective for stygofauna, there are small, localised patches of higher-quality habitat associated with alluvium, calcareous cement and claypans, where shallow perched groundwater, episodic recharge and distinctive salinity regimes provide suitable microhabitats (Biologic, 2020b).

None of the recorded taxa are listed as Threatened or Priority under the *Biodiversity Conservation Act 2016* (BC Act), or the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

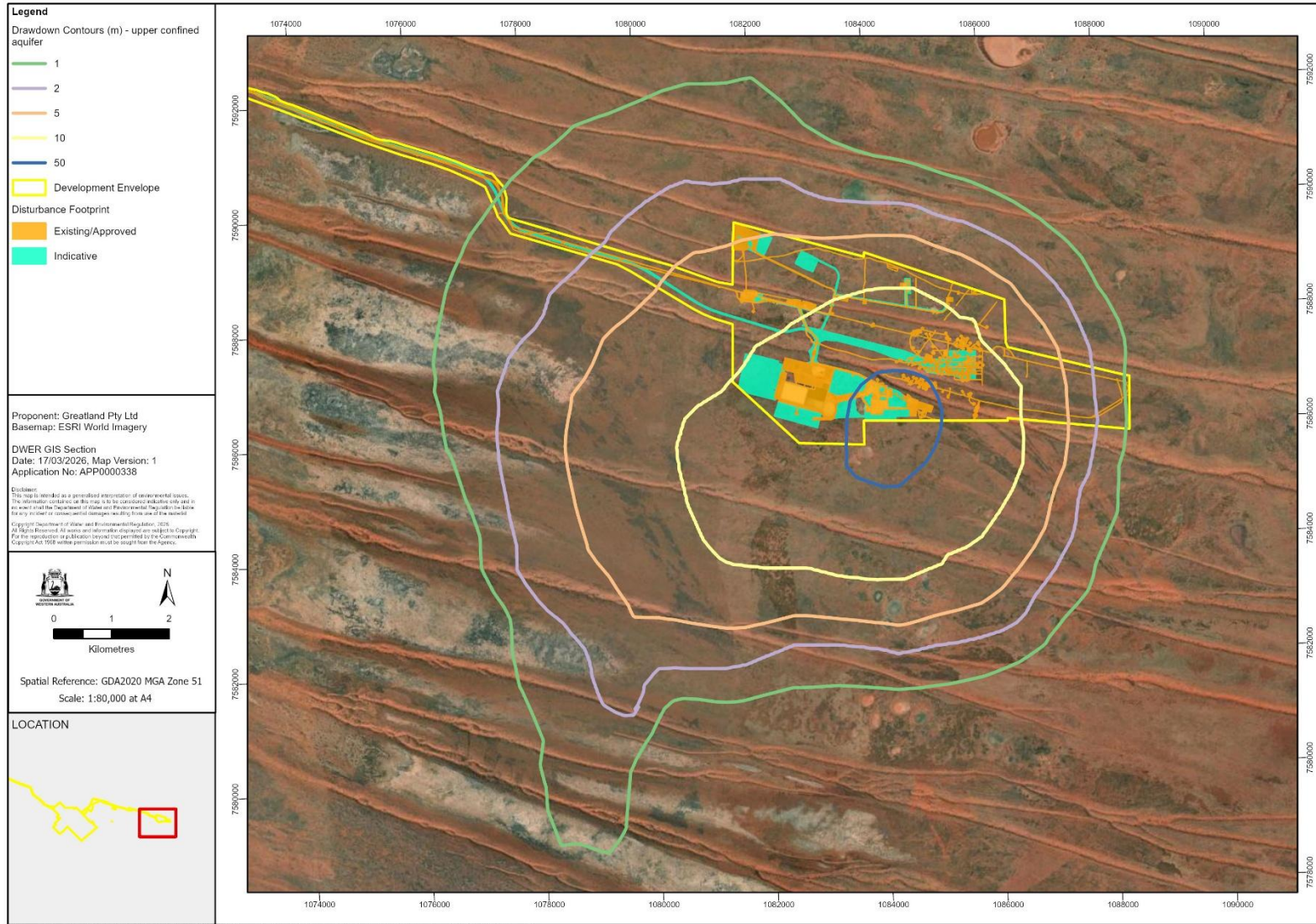


Figure 5 : Drawdown extent upper confined aquifer

### 2.3.4 Consultation

Matters raised during stakeholder consultation and the proponent's response are provided in the proponent's response to submissions document (Greatland 2025a).

Public consultation on the proposal raised concerns about the adequacy of drawdown modelling, and potential impacts to stygofauna and stygofauna habitat abstraction and contamination.

The key issues raised and how they have been considered in the assessments are described in the following sections. are

### 2.3.5 Potential impacts from the proposal

The proposal has the potential to impact inland waters values from:

- localised groundwater level reduction resulting from mine dewatering and/or abstraction from production bores, potentially affecting GDEs, nearby users, and natural discharge processes
- alteration of natural surface water flow regimes due to vegetation clearing, landform changes, construction of mine infrastructure and roads, potentially leading to changes in runoff patterns, flow connectivity, and water availability downstream
- degradation of surface water quality through potential releases of sediment-laden runoff, hydrocarbons, chemicals, effluent, saline water, or leachate generated from waste rock landforms or waste materials
- degradation of groundwater quality from uncontained hydrocarbons, chemical, effluent, saline water, or leachate from waste rock landforms or waste materials
- potential interconnection and cross-contamination between aquifers arising from underground mining, drilling activities, and water supply bores that could unintentionally create pathways between previously isolated groundwater systems
- reduction of available subterranean fauna habitat due to continued groundwater drawdown from mine dewatering and production bore abstraction, potentially leading to the drying of saturated zones used by subterranean species
- degradation of subterranean fauna habitat through potential contamination by hydrocarbons, chemicals, or saline water, including risks of inter-aquifer leakage created by drilling and bore infrastructure
- indirect subterranean fauna habitat impacts arising from siltation, altered hydrological conditions, or changes to nutrient inputs associated with waste rock landforms and surface disturbance.

### 2.3.6 Avoidance measures

The proponent has designed the proposal to avoid impacts to inland waters through the following measures:

- locate key mine infrastructure (e.g. evaporation ponds, waste rock landforms, box cut) outside the mapped 1-in-100-year flood extent
- avoid new disturbance to claypans and maintain associated micro-catchments
- use lined hypersaline evaporation cells with sufficient freeboard to prevent overtopping from rainfall, salt accumulation, or wave action
- store hazardous materials including hydrocarbons and chemicals in accordance with regulatory specifications to avoid releases
- divert surface water from mining areas to avoid potential for contamination of surface water flows to downstream environments
- mine scheduling such that the abstraction of water for operational purposes is avoided (i.e. utilisation of mine dewater)
- avoid mining of geological units with higher sulfur levels, and hence reducing the risk of water quality impacts associated with acid mine drainage
- avoid potential stygofauna habitat by ensuring production wells are at least 100 m away from claypans

### 2.3.7 Minimisation measures (including regulation by other DMAs)

The proponent has proposed the following measures to minimise impacts to inland waters:

- optimise underground and mine planning to reduce the extent of mine dewatering and maximise re-use of abstracted water
- design and construction of waste rock landforms including encapsulation of potential acid forming material and seepage and leachate control structures
- contain dispersive waste rock within engineered WRL cells and manage surface flows to prevent sediment transport.
- install sediment and erosion controls around construction areas, operational areas, and stockpiles.
- limit clearing in sandy soils and areas with greater than 40% vegetation cover.
- implement spill response training and maintain spill response equipment on site.
- include surface-water management structures (culverts, floodways) along infrastructure corridors to maintain flow pathways.
- construct production and monitoring bores in accordance with DWER Water Standards and CAW requirements
- hydro-test dewatering pipelines and install them in accordance with DWER approvals, using protection (e.g., burial, culverting) where necessary.
- operate under the groundwater abstraction licence, GWOS, and Inland Waters Management Plan, including water quality and level monitoring requirements.
- monitor groundwater abstraction rates and adjacent monitoring bores, including through flow-meter installation.
- prepare and submit annual groundwater monitoring reports.

- develop and implement a claypan monitoring program in partnership with Martu
- use saline water for dust suppression in accordance with operating licence conditions.
- seal the decline at identified aquitards during closure to prevent inter-aquifer connectivity
- implement mine closure plan

#### Rights in Water and Irrigation Act 1914 (RiWI Act)

The proposal is located within a proclaimed groundwater area under the RiWI Act. Accordingly, the proponent holds groundwater licences (GWL) (150758 and 202749) to take water under section 5C of the RiWI Act for the approved proposal. The licences authorise the abstraction of up to 200 ML/year associated with MS 605, 29,700 ML/year associated with MS 606, and 1,550 ML/year associated with the Havieron Stage 1, (total approved abstraction of up to 31,450 ML/year).

An additional 450 ML/year will be required for dewatering to access the Havieron deposit. To increase approved groundwater abstraction rates the proponent would be required to obtain or amend their approvals under the RiWI Act. In accordance with the RiWI Act, a Groundwater Operating Strategy (GWOS) is required as part of the licence. The GWOS outlines monitoring, reporting, and management requirements, and requires the proponent to validate monitoring results against the hydrogeological model to ensure observed impacts are consistent with predictions.

If the monitoring indicates that the proposal is causing unintended impacts on the aquifer, the environment, or other water users, or that the impacts of groundwater abstraction differ significantly from those originally predicted, the DWER may require the GWOS to be reviewed and amended (DWER 2020).

#### Part V, Division 3 of the EP Act

The proponent has existing licenses L6079/1988/13 associated with Telfer and a number of works approvals associated with Havieron under Part V of the EP Act required to regulate emissions and discharges associated with the construction and operation of the approved proposal.

Licence L6079/1988/13 (Telfer) includes the following categories as listed in Schedule 1 of the EP Regulations:

- Category 5: Processing or beneficiation of metallic or non-metallic ore
- Category 6: Mine dewatering
- Category 7: Vat or in situ leaching of metal
- Category 12: Screening etc. of material
- Category 52: Electrical power generation
- Category 54: Sewage facility
- Category 57: Used tyre facility

- Category 63: Class I inert landfill site
- Category 64: Class II putrescible landfill site
- Category 73: Bulk storage of chemicals

Works approvals associated with Havieron Stage 1 include the following:

- W6691/2022/1 for construction of a category 89 putrescible landfill site
- W6435/202/1 for construction of a category 85 sewage facility
- W6468/2020/1 for construction of category 6 mine dewatering (evaporation ponds) – Expired
- R2532/2022/1 registration of wastewater treatment plant

A works approval and licence amendment under Part V of the EP Act will be required to support proposed additional mining activities. The proposal includes the potential backfilling of the Havieron underground workings using paste fill produced in a paste fill plant at Havieron using mine tailings sourced from Telfer's tailings storage facilities. As this involves the reprocessing of tailings, it meets the definition of a Category 5 prescribed premises operation under Schedule 1 of the Environmental Protection Regulations 1987 and therefore requires assessment and approval under Part V of the EP Act prior to commencement. Any other proposed activities that trigger prescribed premises categories under Schedule 1 will likewise be subject to Part V assessment and approval before commencement.

All works approvals and licences are issued with conditions consistent with the purposes of the EP Act: to prevent, control, abate or mitigate pollution or environmental harm (DER 2015).

A works approval would authorise the construction, commissioning and time-limited operations associated with the proposal. The works approval, and any subsequent licence, may include risk-based conditions requiring the mitigation and monitoring of emissions and discharges where such impacts are not otherwise managed under conditions of a Ministerial Statement.

### Mining Act 1978

The proposed activities are located on tenure granted under the Mining Act and therefore the activities will be required to be included in a Mining Development and Closure Proposal (MDCP) that must be approved under section 103AO of the Mining Act and recorded on an Approvals Statement. The geotechnical design and stability as well as rehabilitation of waste rock landforms and pits would be reviewed by DMPE as part of the MDCP process. DMPE will verify the proposed design and appropriateness of the management methodology to achieve consistency with DMPE's guidelines as part of the assessment process (DMPE 2025a).

### Dangerous Goods Safety Act 2004

The proponent is required to have the necessary approvals and procedures in place to ensure compliance with all subsidiary regulations relating to the handling, transport, storage, and use of hazardous and dangerous goods, so that no significant or unreasonable harm to the environment occurs.

#### 2.3.8 Rehabilitation measures

. The proponent has proposed the following progressive rehabilitation measures:

- stabilise and re-vegetate landforms to minimise sediment runoff
- removal of infrastructure at closure, to a depth of 0.5 m, and reestablish natural surface water flow regimes by returning surface to pre-mining contours
- underground decline sealed at aquitards upon closure
- removal of contamination sources

#### 2.3.9 Assessment of impacts to environmental values

The EPA considered that the key environmental values for inland waters and subterranean fauna likely to be impacted by the proposal are the:

- groundwater drawdown,
- altered surface water flow regimes, and
- decrease in subterranean fauna habitat.

The EPA advises that the assessment of residual risks to inland waters and subterranean fauna have been based on the proponent's investigations and DWER's advice.

### Approved proposal (ministerial statements 605, 606, 650)

During its assessment of the Expansion of the Telfer Gold Mine (approved under MS 606), the EPA identified dewatering and bore field operations, including associated potential impacts to subterranean fauna, as key environmental factors. In report 1059, the EPA determined that the predicted groundwater drawdown would remain limited to the local area and would be unlikely to result in significant impacts to other groundwater users or groundwater-dependent ecosystems. Potential impacts to subterranean fauna were also assessed as localised and not significant. The EPA's confidence in this assessment was supported by the proponent's commitment to implement a stygofauna monitoring program to improve the scientific understanding of subterranean fauna values and to support their ongoing protection.

Abstraction of up 200 ML/year was approved under MS 605 and 29,700 ML/year under MS 606. Drawdown effects on groundwater resources and stygofauna associated with dewatering and bore field operations were considered by the EPA in Bulletin 1059 for the approved proposal (MS 606). Known impacts of the approved proposal that are relevant to the significant amendment are considered under cumulative impact assessment below.

1,550 ML/year was approved under the Rights in Water and Irrigation Act 1914 for Havieron stage 1 project with a further 450 ML/yr proposed in this proposal. The potential impacts to inland waters and subterranean fauna associated with this proposal are assessed below.

The EPA has determined that the key environmental values for inland waters and subterranean fauna are likely to be impacted by:

- groundwater drawdown
- decline in groundwater quality
- modification of surface water regimes
- decline in surface water quality

The EPA considered that subterranean fauna taxa which were identified by the proponent as widespread and occurring beyond the development envelope or from multiple sites, were unlikely to be significantly impacted by the significant amendment.

#### Groundwater drawdown

Dewatering will be required throughout the life of the Havieron Project to enable development of the underground mine. The orebody extends from approximately 430 m below ground level (mbgl) at its upper extent to approximately 1,185 mbgl at its lowest levels, requiring progressive dewatering as mining advances to deeper, higher-pressure aquifers (Rockwater, 2021b).

Hydrogeological modelling undertaken for the proposal predicts that groundwater drawdown will occur primarily within the Upper Confined Aquifer and the Lower Confined Aquifer, which are the major groundwater-bearing units intersected by the decline and underground workings. The extent of drawdown taken as a 2 m drawdown contour is predicted to be about 10 km x 8 km in the upper confined aquifer and 16 km x 17 km in the lower confined aquifer (Rockwater, 2021b). These aquifers have a regional extent beyond this predicted zone of impact. The water balance indicates that the water discharge to the west of the model extent (where there are Calcrete aquifers) is unaffected by the proposed extraction.

The EPA considers, while changes in minor surface water expressions may occur, no broader regional impacts or significant effects on regional environmental values are likely, provided abstraction remains within the proposed limits and monitoring commitments are implemented.

The EPA advises that the proposal impacts to groundwater can be regulated through reasonable conditions (recommended condition A1 and B4) so that the environmental outcome is consistent with the EPA's objective for the inland waters factor.

#### Subterranean fauna

Hydrogeological investigations and biological survey results indicate that most aquifers within the Havieron Project area are not prospective for stygofauna. The upper unconfined/perched aquifer provides the most suitable habitat, owing to its

shallow, weathered saprolite and comparatively greater permeability. Localised patches of alluvium and calcareous cement (calcrete), particularly around claypans towards the palaeovalley margin, were identified as the only areas that support true stygofauna (stygobites), with all confirmed specimens occurring in these shallow geological units rather than deeper confined aquifers (Biologic 2020b).

Under current groundwater drawdown modelling, a total of four stygofauna taxa were considered as potentially restricted within impact areas. These were Paramelitidae `sp. Biologic-AMPH027`, Microcerberidae `sp. Biologic-ISOP034`, *Mesocyclops* `sp. Biologic-CYCL021` and *Humphreyscandonini* sp. Indet. The predicted groundwater drawdown within potential stygofauna habitat is considered to be of low impact, with modelling indicating reductions of approximately 1 to 2 m (Biologic, 2021). Based on survey findings, stygofauna species in the area were assessed as being at low risk from the anticipated drawdown within the upper unconfined aquifer (Biologic, 2021). It is also considered likely that their distribution extends beyond the predicted impact area as suitable continuous habitat is expected to remain outside of and below the proposed extent of groundwater drawdown (Biologic, 2021).

The combination of low species richness, the high degree of habitat connectivity, and the modest magnitude of predicted drawdown within the upper unconfined aquifer indicates that significant impacts to stygofauna are unlikely. Overall impacts to the broader extent of subterranean fauna habitat and any assemblages that may occur within it are considered negligible (Biologic 2020b, 2022b). While some limitations were noted in the level of geological and hydrogeological information available at the time of the assessment, the findings were considered sufficient to support a preliminary, high-level conclusion that impacts to stygofauna are expected to be low (Biologic 2022b).

Although significant impacts to stygofauna are not expected, the EPA recommends Conditions A1 (groundwater abstraction limits) and B4-1(1) (no exceedance of predicted drawdown extent, and maintenance of groundwater levels and quality beyond the predicted drawdown extent) to provide additional assurance that groundwater drawdown remains within predicted limits and that stygofauna diversity is likely maintained.

### Groundwater dependent ecosystems

The EPA has given consideration to groundwater dependent ecosystems in section 2.1. For further discussion please refer to that section.

### Surface water flow and quality

Claypans and playa lakes function as important refugia within arid landscapes. Even during dry phases, claypans support vegetation communities that differ distinctly from those of the surrounding sandplains (Rockwater, 2021a). Within the development envelope, approximately 12,258.70 ha of claypan/salt lake habitat has been mapped, of which approximately 837.99 ha occurs within the indicative disturbance footprint.

The proposal has the potential to impact surface water flow and quality through alteration of landforms, increased sediment loading, leaks and spills of fuels and chemicals, overtopping of evaporation ponds and acid and metalliferous drainage. The key environmental values at risk from these sources include ephemeral drainage lines, playa lakes and claypans, which rely on natural hydrological patterns for episodic inundation, ecological functioning, and maintenance of cultural values. The EPA recognises claypans and salt lake landforms as features of high ecological importance, functioning as both terrestrial and episodic aquatic habitat, and as places of significant cultural value for the relevant Traditional Owners.

To minimise impacts, the proponent has designed the indicative disturbance footprint to avoid all mapped claypans and to maintain natural surface water pathways to key landforms, avoiding obstruction of drainage and preserving episodic recharge. Measures to prevent contamination from leaks or spills include the use of standard best-practice containment and spill-response systems for hazardous chemicals and hydrocarbons, and the construction of fully contained evaporation ponds engineered to account for direct rainfall inputs, salt accumulation and wave action. All potentially acid-forming (PAF) material will be encapsulated within waste rock dumps to prevent the generation and mobilisation of acidic or metalliferous drainage, further reducing the risk of contamination reaching surface water features

In addition, the proponent has committed to develop and implement a monitoring program for the excluded claypans within the development envelope, in partnership with the Martu people, to ensure both cultural and environmental values associated with these landforms are maintained (Greatland 2025b).

The EPA considers that potential impacts to surface water flow and quality can be appropriately avoided or mitigated through the recommended conditions for the Inland Waters factor (B4 – Inland Waters), along with regulation under other statutory decision-making processes. With the implementation of these measures, the EPA considers that the environmental outcome for Inland Waters is likely to be consistent with the EPA's objective for this environmental factor.

### Cumulative impact assessment

Having regard to the remote location of the proposal, the hydrological isolation of the aquifer systems, the absence of other significant water-using projects in the vicinity, and the relative lack of major environmentally sensitive surface water features, the EPA considers that cumulative impacts from this proposal within the Great Sandy Desert bioregion are likely to meet the environmental outcomes and be consistent with the EPA objective for flora and vegetation. The combination of limited hydrological connectivity, minimal third-party water use and the absence of persistent surface water systems means the proposal is unlikely to contribute materially to broader cumulative pressures on surface water or groundwater resources within the Great Sandy Desert.

From a subterranean fauna perspective, hydrogeological investigations and biological surveys indicate that most aquifers within the Havieron Project area are not prospective for stygofauna, with suitable habitat confined to localised zones of shallow alluvium and calcareous cement associated with claypans and the upper

unconfined/perched aquifer (Biologic 2020b, 2022b). Stygofauna richness is low, none of the recorded taxa are listed as Threatened or Priority, and suitable habitat is expected to extend beyond the predicted drawdown footprint (Biologic 2020b, 2022b). In the context of the limited extent of development in the region, the regional scale of the aquifers, and the modest magnitude of predicted drawdown, the EPA considers that the proposal, in combination with existing dewatering and abstraction associated with the approved Telfer operations, is unlikely to result in significant cumulative impacts to stygofauna habitat or diversity.

No troglofauna were recorded within the development envelope, and the local geology, dominated by young, unconsolidated dune systems lacking voids and fractures, provides little potential to support troglobitic fauna (Biologic 2020a). Given the absence of suitable habitat and survey detections, the EPA considers that the proposal is unlikely to contribute to cumulative impacts on troglofauna at either a local or regional scale.

The combination of limited hydrological connectivity, minimal third-party water use and the absence of persistent surface water systems means the proposal is unlikely to contribute to broader cumulative pressures on water resources within the Great Sandy Desert.

### 2.3.10 Summary of key factor assessment and recommended regulation

The EPA has considered the likely residual impacts of the proposal on inland waters environmental values. In doing so, the EPA has considered whether reasonable conditions could be imposed, or other decision-making processes can ensure consistency with the EPA factor objective. The EPA's assessment findings are presented in Table 8.

Noting that other regulatory processes can minimise impacts to inland waters and subterranean fauna (see section 2.3.7), the EPA considers that the direct impacts can be further minimised through reasonable conditions. Subject to recommended conditions A1-1 (limits and extents), B4-1(1) (groundwater drawdown does not exceed predicted extents), B4-1(2) (groundwater quality and levels maintained to support stygofauna), B4-2 (avoid and minimise adverse impacts to claypans and fauna habitat), and B7-1 (rehabilitation and closure), the direct impacts to inland waters and subterranean fauna are unlikely to be significant impacts.

The EPA has also considered the principles of the EP Act (see Appendix D) in assessing whether the residual impacts will be consistent with its environmental factor objective and whether reasonable conditions can be imposed (see Appendix A).

**Table 8 : Summary of assessment for inland waters and subterranean fauna**

Residual impact or risk to environmental value		Assessment finding or Environmental outcome	Recommended conditions and DMA regulation
1.	Impacts associated with groundwater drawdown	The drawdown associated with groundwater abstraction for underground mine dewatering is not expected to impact significant environmental values.	<p><b>Condition A1 (Limitations and extent of proposal)</b></p> <p>Limit on groundwater abstraction volume.</p> <p><b>Condition B4 (inland waters and subterranean fauna)</b></p> <p>Groundwater drawdown does not exceed the predicted drawdown extent.</p> <p>No detectable decrease in stygofauna diversity.</p> <p><b>DMA regulation</b></p> <p>DWER can regulate the abstraction of groundwater under the RIWI Act.</p> <p>DMPE can regulate progressive rehabilitation, through mine development and closure plan (MDCP), required under the <i>Mining Act 1978</i> as supported by recommended condition B7.</p>
2.	Impacts associated with altered surface water hydrology	The proposal has the potential to alter existing hydrological regimes, including changes to surface water drainage. To minimise impacts, the proponent has designed the indicative disturbance footprint to avoid all mapped claypans, ensuring that no direct disturbance occurs to these features. Infrastructure layout has been designed to ensure surface water pathways are not obstructed, maintaining natural drainage patterns essential for episodic recharge.	<p><b>Condition B4 (Inland waters and subterranean fauna)</b></p> <p>Minimise adverse impacts to claypans</p> <p><b>Condition B7 (Rehabilitation)</b></p> <p>Rehabilitation outcome requiring pre-mining surface water flow regimes are re-established</p> <p><b>DMA legislation</b></p>

Residual impact or risk to environmental value	Assessment finding or Environmental outcome	Recommended conditions and DMA regulation
	<p>The EPA considers that potential impacts to surface water flow and quality can be appropriately avoided or mitigated through the recommended conditions along with regulation under other statutory decision-making processes. With the implementation of these measures, the EPA considers that the environmental outcome for Inland Waters is likely to be consistent with the EPA's objective for this environmental factor.</p>	<p>DMPE can regulate rehabilitation, including progressive rehabilitation, through mine development and closure plan (MDCP), required under the <i>Mining Act 1978</i> as supported by recommended condition B7.</p>
<p>3. Impacts resulting from groundwater and/or surface water quality degradation.</p>	<p>Surface water quality may be impacted through sediment loading, leaks and spills of fuels and chemicals, AMD and the use and handling of saline water.</p>	<p><b>Condition B7 (Rehabilitation)</b>                      Rehabilitation outcome requiring rehabilitated landforms to be stable and not cause pollution or environmental harm.</p> <p><b>DMA regulation</b>                      DWER can regulate emissions and discharges under Part V of the EP Act.</p> <p>DMPE can regulate rehabilitation, including progressive rehabilitation, through mine development and closure plan (MDCP), required under the <i>Mining Act 1978</i> as supported by recommended condition B7.</p> <p>LGIRS can regulate storage and handling of dangerous goods under the <i>Dangerous Goods and Safety Act 2004</i>.</p>

Residual impact or risk to environmental value	Assessment finding or Environmental outcome	Recommended conditions and DMA regulation
<p>4 Potential impacts to subterranean fauna from groundwater abstraction/quality changes</p>	<p>Hydrogeological investigations and biological survey recorded no troglofauna taxa. Troglofauna are not expected to be impacted by the proposal.</p> <p>A total of four stygofauna taxa were considered as potentially restricted within impact areas. The combination of low species richness, habitat connectivity and the modest magnitude of predicted drawdown within the upper unconfined aquifer indicates that significant impacts to stygofauna are unlikely.</p> <p>While some limitations were noted in the level of geological and hydrogeological information available at the time of the assessment, the findings were considered sufficient to support a preliminary, high-level conclusion that impacts to stygofauna are expected to be low.</p> <p>Subject to recommended conditions the objective for Subterranean Fauna is likely to be met.</p>	<p><b>Condition A1 (Limitations and extent of proposal)</b></p> <p>Limit on groundwater abstraction volume.</p> <p><b>Condition B4 (Inland waters and subterranean fauna)</b></p> <p>No exceedance of predicted drawdown extent and no detectable decrease in stygofauna diversity.</p>

## 2.4 Greenhouse gas emissions

### 2.4.1 Environmental objective

The EPA environmental objective for greenhouse gas emissions is *to minimise the risk of environmental harm associated with climate change by reducing greenhouse gas emissions as far as practicable* (EPA 2024a).

### 2.4.2 Policy context and technical assessment

The EPA advises the following technical assessments were used to inform the assessment of the proposal's greenhouse gas emissions:

- Telfer Life of Mine Extension and Havieron Stage 2 – Scenario 1 & 2 Greenhouse Gas Assessment Technical Report (appendix S of the revised referral supporting document rev9) (Greenbase 2023a)
- Telfer Life of Mine Extension and Havieron Stage 2 Scope 3 Greenhouse Gas Assessment Technical Report (appendix T of the revised referral supporting document rev9) (Greenbase 2023b)
- Telfer Havieron Greenhouse Gas Environmental Management Plan External Peer Review (appendix F of the Referral Supporting Document V6) (Evolveable 2024)
- Telfer – Havieron Greenhouse Gas Environmental Management Plan (appendix F of the Referral Supporting Document V6) (Talis 2024)

The EPA recognises that the proponent has prepared this information in accordance with the 2020 version of the Environmental Factor Guideline – Greenhouse Gas Emissions (GHG EFG) (EPA 2020a). The EPA considers it has adequate information to have due regard to it updated GHG EFG (EPA 2024a) in its assessment of the proposal's greenhouse gas emissions.

### 2.4.3 Assessment context

GHG emissions from a cumulative range of sources have an impact on WA's environment, even if the specific impact of a particular proposal's emissions may not be known with certainty. This is because there is an established link between GHG emissions and the risk of climate change. The EPA recognises that climate change will have an impact on WA's environment and environmental values. For example, climate change has already caused a significant drying of the State's south-west, which in turn places significant additional pressures on water resources, flora and fauna, marine environmental quality and social surroundings. The EPA therefore considers GHG emissions to be a key environmental factor in the assessment of the proposal.

There is also an established correlation between global temperature rise and GHG emissions. The EPA advises that for every 1,000 billion tonnes (t) of CO<sub>2</sub>-e emitted by human activity, global surface temperature rises by 0.45°C, as a best estimate, with a likely range from 0.27°C to 0.63°C (IPCC 2023). The EPA's guidance on GHG emissions (EPA 2024a) provides that GHG emissions from a proposal will be considered where they are reasonably likely to exceed 100,000 tonnes (t) of carbon

dioxide equivalents (CO<sub>2</sub>-e) of scope 1 or scope 2 emissions in any year. This is the same as the (scope 1) threshold criteria for designation of a large facility under the Australian Government's Commonwealth Safeguard Mechanism. The annual average scope 1 emissions estimates provided by the proponent exceed this threshold. Scope 3 emissions for the proposal are also expected to exceed 100,000 t CO<sub>2</sub>-e per annum.

#### 2.4.4 Potential emissions from the proposal

##### *Construction GHG emission sources*

The proposal will generate Scope 1 GHG emissions from construction activities, primarily due to diesel consumption and vegetation clearing. There will be no Scope 2 emissions, as electricity will be supplied through onsite generation from the Telfer Power Station. Emissions associated with electricity generation have therefore been included within scope 1 for this assessment. Scope 3 emissions associated with construction will arise from purchased goods and services.

##### *Operation GHG emission sources*

Scope 1 emissions associated with operations will be generated from onsite electricity generation, non-transport heavy vehicles, light vehicles and heavy haulage activities. As noted above, there will be no Scope 2 emissions due to onsite electricity generation supplied by the Telfer Power Station. Scope 3 emissions sources will include purchased goods and services, capital goods, fuel and energy related activities, upstream and downstream transportation and distribution, as well as emissions associated with the processing of sold products.

##### GHG emissions - Approved Proposal

- Scope 1 emissions: annual average of 127,356 t CO<sub>2</sub>-e and estimated emissions intensity of 0.0302 t CO<sub>2</sub>-e / tonne ore
- Scope 3 emissions: annual average of 185,000 t CO<sub>2</sub>-e

Ministerial Statements 605 and 606 associated with the approved proposal included conditions related to preparation of a Greenhouse Gas Emissions Management Plan prior to commencement of construction.

The proponent's estimates of construction and operational (2023 - 2035) annual average GHG emissions are as follows:

##### GHG emissions - Combined Proposal

##### *Construction*

- Scope 1 emissions: predicted total of less than 77,132 t CO<sub>2</sub>-e
- Scope 3 emissions: predicted total of 311,000 t CO<sub>2</sub>-e

### *Operational*

- Scope 1 emissions: annual average of 250,866 t CO<sub>2</sub>-e with a maximum (peak) of 475,000 t CO<sub>2</sub>-e (in the first year) and estimated emissions intensity of 0.0421 t CO<sub>2</sub>-e / tonne ore
- Scope 3 emissions: annual average of 185,000 t CO<sub>2</sub>-e /t CO<sub>2</sub>-e
- total scope 1 GHG emissions of 3,261,251 t CO<sub>2</sub>-e over the 13 year life of the proposal.

The EPA acknowledges that the emissions estimates calculated by the proponent were accurate and applicable at the time of preparation, reflecting the 2020-21 financial year.

### Cumulative effects

WA's yearly scope 1 emissions based on 2022 levels were 82.5 million tonnes (Mt) CO<sub>2</sub>-e (DCCEEW 2024a) and national emissions for 2022 were 432.9 Mt CO<sub>2</sub>-e (DCCEEW 2025b). Overall, scope 1 GHG emissions from the proposal are estimated to contribute 0.304% of WA's annual emissions and 0.058% to Australia's annual GHG emissions.

The proponent commissioned Greenbase to undertake Greenhouse Gas Assessments for the Telfer life of mine extension and the Havieron Stage 2 development (scenarios 1 and 2) and Scope 3 GHG emissions (Greenbase 2023a and 2023b). These assessments outline the methodologies applied to quantify potential GHG emissions associated with the existing approved operations, the proposed Havieron mine and infrastructure corridor and the combined proposal.

The EPA considers that the proponent's estimated GHG emission quantities are a reasonable basis for the assessment.

### 2.4.5 Consultation

Matters raised during stakeholder consultation and the proponent's responses are provided in the response to submissions document (Greatland 2025).

Public consultation on the proposal raised concerns regarding the proposal's GHG emissions over the project's lifetime and the potential environmental harm associated with climate change.

The key issues raised during the public consultation on the proposal and how they have been considered in the assessment are described in the following sections.

### 2.4.6 Avoidance and minimisation measures

The proponent has identified the following measures to avoid and minimise GHG emissions:

- maintain and monitor fuel use efficiency by regularly servicing vehicles and equipment and progressively incorporating energy-efficient plant to minimise fuel consumption and exhaust emissions

- reduce fossil fuel use by progressively replacing diesel-powered vehicles, equipment, and generators with alternative energy sources, including gas, electric, hybrid systems, and renewable energy integration such as solar and wind power
- optimise site layout to minimise haulage distances, reducing vehicle travel time, fuel consumption, and associated emissions
- minimise vegetation clearing and land disturbance by optimising site layout, and utilising existing road and rail infrastructure to reduce the need for additional clearing, construction activities, and associated emissions
- implement continuous improvement and efficient technologies by monitoring plant and operational performance, addressing non-conformances, adopting cleaner production initiatives, and progressively integrating technological advance and research to reduce greenhouse gas emissions

The EPA notes that, until emissions are under 100,000 CO<sub>2</sub>-e per annum, the proponent will be subject to reporting requirements of the Clean Energy Regulator to comply with the *National Greenhouse and Energy Reporting Act 2007* (NGER Act), and subject to the NGER Emissions Reduction Fund Safeguard which requires facilities whose net emissions exceed the safeguard threshold to keep emissions at or below baseline.

### Best practice

To understand whether the proposal's GHG EMP is consistent with relevant legislation's policy and guidelines and best practice measures, the proponent engaged Evolveable Consulting to undertake a technical review of the Telfer – Havieron Greenhouse Gas Environmental Management Plan (Evolvable Consulting 2024). The review comprised an assessment of the emissions data and associated assumptions underpinning the GHG EMP, and an assessment of the proposed emissions reduction measures against industry best practice.

The review noted potential areas for the proponent to explore further, such as low-carbon fuel or a grid connection to reduce emissions associated with electricity generation; however, these were identified as supplementary considerations rather than deficiencies. Overall, the review found that the methodologies and data used to develop the emissions estimates align with typical best industry practice, and that the emission reduction opportunities identified in the GHG EMP are consistent with typical industry best practices.

### Benchmarking

The proponent has benchmarked the proposal against similar gold mining facilities and identified that the estimated emissions intensity of 0.0421 t CO<sub>2</sub>-e per tonne of ore is higher than average emissions intensities of comparable operations (0.0340 t CO<sub>2</sub>-e per tonne of ore). The review notes that the emissions intensity profile of the proposal is expected to change over time as operational conditions evolve.

The EPA notes that the approved proposal's (Telfer mine and power supply) emissions intensity is comparatively low relative to other industry facilities. However,

this performance is expected to decline as the Telfer resource approaches depletion in 2027. Reduced throughput at Telfer will result in the Havieron operation assuming a progressively larger proportion of total emissions.

Havieron's small ore body combined with the similar energy requirements needed to sustain processing and supporting infrastructure, results in a higher emissions intensity relative to Telfer. The anticipated increase in emissions intensity over the life of the combined proposal is primarily associated with the processing plant operating at approximately 25% of total capacity once the Telfer resource has been depleted.

Overall, the proponent concludes that declining throughput at Telfer and the ongoing reliance on the smaller-scale Havieron ore body will lead to an increased emissions intensity for the remaining operations, despite historically low emissions intensity at Telfer.

#### 2.4.7 Scope 3 GHG emissions

Scope 3 emissions associated with this proposal predominantly arise from the downstream processing of mined ore and are estimated to be 185,000 t CO<sub>2</sub>-e per annum. The EPA recognises the proponent's consideration and implementation of scope 3 emissions reduction opportunities and encourages the proponent to continue to take all reasonable measures to reduce scope 3 emissions. The EPA further notes that, while scope 3 emissions are not subject to direct regulatory control in WA, the emissions associated with the proposal would be considered scope 1 emissions for other facilities that may have established emissions reductions targets.

#### 2.4.8 Commonwealth Safeguard Mechanism

The approved proposal is classified as a designated large facility under the *Commonwealth National Greenhouse and Energy Reporting Act 2007* (NGER Act). Accordingly, the proposal will be subject to regulation as a Safeguard Facility under the Australian Government's Safeguard Mechanism. Facilities regulated under the Safeguard Mechanism are required to take actions to reduce emissions to achieve Australian emission reduction targets of 43% below 2005 levels by 2030 and net zero by 2050.

As the proposal relates to an existing facility, the proponent has applied for facility-specific emissions intensity values for the prescribed production variables: run of mine metal ore (0.0072 t CO<sub>2</sub>-e /tonne) and electricity generation (0.5765 t CO<sub>2</sub>-e / MWh). These facility-specific intensities are proposed to be used in place of baseline emissions intensity values and would form the basis for a gradual transition to the relevant industry benchmark emissions intensities through to 2030.

Following 2030, the Safeguard Mechanism will require the proponent to apply an annual decline rate of 4.9% for financial years commencing 1 July 2023 to 1 July 2029. From 1 July 2030, the annual decline rate has been notionally set at 3.285%, which represents a linear trajectory to net zero by 2050.

The EPA is of the view that emissions reduction required under the Safeguard Mechanism represents as far as practicable for the reduction of GHG emissions from

the proposal. The EPA has recommended a condition that requires the proponent to notify the State of a substantial change to its obligations under Safeguard Mechanism (recommended condition B5).

#### 2.4.9 Summary of key factor assessment and recommended regulation

The EPA considers that the emissions avoidance, minimisation and offsets proposed by the proponent are generally consistent with the EPA's factor objective to minimise the risk of environmental harm associated with climate change by reducing greenhouse gas emissions as far as practicable.

The EPA recognises that the significantly strengthened Commonwealth Safeguard Mechanism requires the proponent to take actions to reduce GHG emissions, including imposing annual baseline decline rates to ensure Australian emission reduction targets of 43% below 2005 levels by 2030 and net zero by 2050 are achieved. The EPA is of the view that emissions reductions required under the Safeguard Mechanism represents as far as practicable for the reduction of GHG emissions from the combined proposal. The EPA has recommended a condition that requires the proponent to notify the State of a substantial change to its obligations under the Safeguard Mechanism (recommended condition B5).

Scope 3 emissions form a large proportion of the total GHG emissions over the life of the proposal and are estimated to be, on average, 185,000 t CO<sub>2</sub>-e per annum. The EPA encourages the proponent to take further reasonable opportunities to reduce scope 3 emissions as they arise through the life of the proposal.

**Table 9 : Summary of assessment for greenhouse gas emissions**

Residual emissions		Assessment finding	Recommended conditions and DMA regulation
1.	<p>Scope 1 emissions are expected on average to be 250,866 t CO<sub>2</sub>-e per annum (up to a maximum of 475,000 t CO<sub>2</sub>-e per annum) and reduce to net zero by 2050.</p> <p>There are no scope 2 emissions associated with this proposal.</p> <p>Scope 3 emissions are estimated to be up to 185,000 t CO<sub>2</sub>-e per annum</p>	<p>Scope 1 emissions from the proposal are covered under the Commonwealth Safeguard Mechanism. The EPA notes that the Commonwealth Safeguard Mechanism requires proponents to take actions to reduce GHG emissions, including imposing annual baseline decline rates to ensure Australia emissions reductions targets of 43% below 2005 levels by 2030 and net zero by 2050 are achieved.</p> <p>The EPA encourages the proponent to take all reasonable measures to reduce scope 3 emissions.</p>	<p><b>Condition B5 (Greenhouse gas emissions)</b></p> <p>Report on implications for the proposal if obligations change under the National Greenhouse and Energy Reporting Act 2007 (NGER Act) and Safeguard Mechanism.</p> <p><b>DMA regulation</b></p> <p>The proponent's scope 1 greenhouse gas emissions are subject to regulation under the Commonwealth Safeguard Mechanism.</p>

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Residual emissions	Assessment finding	Recommended conditions and DMA regulation
	The EPA has recommended a condition requiring the proponent to notify the State if there are any changes to its obligations under the Safeguard Mechanism.	

## 2.5 Social surroundings

### 2.5.1 Environmental objective

The EPA environmental objective for social surroundings is *to protect social surroundings from significant harm*. (EPA 2023)

The proponent's assessment of potential impacts to Aboriginal cultural heritage considered the application of the *Aboriginal Heritage Act 1972* (AH Act).

### 2.5.2 Investigations and surveys

The EPA advises the following investigations and surveys were used to inform the assessment of the potential impacts to social surroundings:

- Havieron Project Aboriginal Cultural Heritage Management Plan (appendix U of the revised referral supporting document rev9) (Eco logical Australia 2021a)
- Havieron Project Social Studies Aboriginal Cultural Heritage Risk Assessment (appendix U of the revised referral supporting document rev9) (Eco logical Australia 2021b)
- Havieron Project Social Studies: Social Risk Assessment (appendix U of the revised referral supporting document) (Tetra Tech Coffey July 2021)
- Visual Amenity (appendix U of the revised referral supporting document) (Ecoscape 2021)
- Newmont's ongoing commitment to consultation with Jamukurnu Yapalikurnu Aboriginal Corporation (JYAC) and Martu, letter to EPA Services, DWER (Newmont Mining Limited 2024) (CONFIDENTIAL)

The proponent has an ongoing relationship with the Martu Traditional Owners, formalised through a Comprehensive Agreement and associated registered Indigenous Land Use Agreement (ILUA). The Jamukurnu-Yapalikurnu Aboriginal Corporation (JYAC), as the representative body for the Martu, administers the ILUA, which governs all development on Martu land within a 60 km radius of the approved Telfer Project mine.

The proponent has committed to ongoing consultation and meaningful engagement between the proponent and the Martu, the EPA considers that sufficient information is available to assess potential impacts on social surroundings.

### 2.5.3 Assessment context: existing environment

#### Land use and tenure

The proposal is located on unallocated crown land within the Great Sandy Desert. The area is remote and sparsely populated with the nearest regional town, Marble Bar, approximately 265 km to the northwest. The Punmu Aboriginal community is located approximately 127 km southeast, and the Parnngurr community is approximately 257 km to the south within the Karlamilyi National Park.

Karlamilyi National Park lies approximately 26 km to the southeast of the proposal, and supports significant cultural, environmental, and tourism values.

#### Aboriginal cultural heritage

The proposal sits within the Native Title Determination Areas of the Martu and Ngurrara Peoples (WCD1996/078, WCD2002/002, and WCD2013/002), represented by JYAC.

An Indigenous Land Use Agreement (ILUA) was established between Newcrest Mining Limited, now Greatland, and the Western Desert Lands Aboriginal Corporation (WDLAC), now JYAC, on behalf of the Martu people in December 2015 (Newmont Mining Ltd 2024). Under section 17 of the ILUA, Greatland must not undertake any project activity unless it has complied with its obligations under the ILUA Heritage Protocol (Newmont Mining Ltd 2024).

Approximately 25 archaeological and ethnographic surveys have been undertaken across the proposal development envelope in consultation with Martu cultural advisors. No registered Aboriginal heritage sites occur within the development envelope; however, 15 registered sites and two lodged sites are located within 20 km of the proposal. Despite the absence of registered sites, several cultural heritage sites and values are present within the development envelope. These include culturally sensitive landforms, such as sand dunes, and to a lesser extent claypans, due to their potential to contain archaeological material associated with ancestral campsites or to hold ethnographic significance. Additionally, sites with defined spatial boundaries representing archaeological or ethnographic places have also been identified (Greatland 2025).

Cultural heritage management is carried out in partnership with JYAC, including the notification of proposed work programs, the facilitation of cultural heritage surveys and monitoring, and joint review under the ILUA Relationship Committee. Through this process, JYAC and Newmont work collaboratively to identify and agree on any additional mitigation measures required to safeguard Martu cultural heritage (Newmont Mining Ltd 2024).

#### 2.5.4 Consultation

Matters raised during stakeholder consultation and the proponent's responses are provided in the response to submissions document (Greatland 2025).

Public consultation on the proposal raised concerns that potential indirect impacts on Aboriginal heritage must be considered in addition to direct impacts.

This matter raised during the public consultation on the proposal and how it has been considered in the assessment is described in the following sections.

#### 2.5.5 Potential impacts from the proposal

The proponent has identified that the proposal has the potential to impacts on social surroundings through:

- direct and indirect disturbance of Aboriginal heritage and cultural values from clearing and ground disturbance, including the removal of ethnobotanically significant flora, vegetation and fauna habitat of cultural importance, as well as disturbance to sand dunes and claypans
- constraints on access to country including for traditional customary use
- reduced amenity from proposal related traffic on public roads

### 2.5.6 Avoidance measures

The proponent has proposed the following avoidance measures:

- design the proposal development envelope to avoid registered heritage sites
- design the proposal indicative footprint to avoid defined areas of cultural heritage significance as defined by Martu
- establish heritage exclusion zones around cultural heritage sites of significance (with defined boundaries representing archaeological or ethnographic places)
- pre-clearance survey with Martu monitors

### 2.5.7 Minimisation measures (including regulation by other DMAs)

The proponent outlined the following minimisation measures to reduce both direct and indirect impacts to social surroundings:

- ongoing consultation with Martu, ensuring continuous meaningful engagement and incorporation of Martu knowledge throughout the life of the proposal
- formalising of ongoing access to country through a Land Access Procedure developed collaboratively with Martu
- ongoing consultation with the Punmu community and the Shire of East Pilbara in relation to the Punmu road crossing and safety for existing and future road users
- cultural heritage induction and awareness training for all personnel to promote understanding and respectful behaviour in culturally sensitive places
- maintenance of a cultural heritage register to record and manage known cultural heritage places and values
- implementation of a chance finds procedure to ensure any previously unidentified cultural materials discovered during works are appropriately managed
- management of cultural landscape values, including those identified through ongoing surveys, in accordance with a landscape management plan jointly developed with Martu

In addition, the Indigenous Land Use Agreement (ILUA) between the Martu and the proponent provides a framework to ensure that proposal activities are undertaken in a manner that protects Aboriginal sites and Aboriginal Objects to the greatest extent possible. The EPA notes that this agreement (signed in 2015 and registered in 2016), will be updated as the project progresses, in consultation with the representative body corporate, JYAC.

### Aboriginal Heritage Act 1972

Approval under the *Aboriginal Heritage Act 1972* (AH Act) is required prior to impacting registered heritage sites. This approval process requires consultation with relevant traditional owners, in this case being the Martu People represented by JYAC. The EPA notes that the AH Act does not apply to sites outside the development envelope, or to indirect impacts within the development envelope.

### Part V of the EP Act and the Mining Act

Approval processes under Part V of the EP Act and the Mining Act are required for the construction, operation, and closure of waste rock landforms to ensure these landforms are safe, stable, and non-polluting. The EPA considers that these regulatory processes can assist in minimising potential impacts, including ensuring safe access to country post-closure.

## 2.5.8 Rehabilitation measures

The proponent has proposed the following rehabilitation measures (Greatland 2025):

- undertake progressive rehabilitation upon completion or redundancy of features throughout the life of mine
- remove all infrastructure and rehabilitate associated disturbance
- rehabilitate features so they are safe, stable, and functional, consistent with the surrounding landscape and broader environmental values
- use local provenance seed in rehabilitation to establish a functioning native ecosystem, with particular regard for the protection of biodiversity and cultural heritage
- remove or remediate any identified contaminated material in accordance with the *Contaminated Sites Act 2003*
- reinstate access to all cultural heritage sites of significance, where safe access can be provided

The issues raised during the public consultation have been partially addressed through the proposed minimisation measures, including progressive rehabilitation.

## 2.5.9 Assessment of impacts to environmental values

The EPA considered that the key social surroundings values likely to be impacted by the proposal are Aboriginal cultural heritage. It is noted that impacts to Aboriginal cultural heritage values may occur through impacts to flora and vegetation, and terrestrial fauna (see sections 2.1 and 2.2 respectively).

The Telfer Mine approved under MS 606 and the Telfer Power Supply and Infrastructure Corridor, approved under MS 605 (as amended by MS 650), were assessed and approved prior to the introduction of the Social Surroundings Environmental Factor Guideline 2016.

The proponent has provided information relating to previous heritage surveys undertaken for the approved proposal. These surveys identified archaeological and

ethnographic sites within and surrounding the development envelope. However, no registered Aboriginal heritage sites were disturbed as a result of the approved proposal.

#### Direct impacts to Aboriginal heritage sites

While no registered Aboriginal heritage sites will be disturbed as a result of the proposal, several cultural heritage sites of significance as defined by Martu will be disturbed. These sites are understood to be primarily associated with specific landforms (see section 2.5.3), including the expansion of 11 existing sand dune crossings, the establishment of 13 new sand dune crossings, and 1 claypan crossing.

The EPA notes that consultation will be undertaken with the Martu traditional owners in relation to the final design, crossing locations and rehabilitation requirements, with outcomes to be implemented in accordance with Martu cultural and land management requirements. In addition, the heritage management provisions of the ILUA enable JYAC to formally object to any proposed and notified works. The EPA is of the view that the proponent has taken reasonable steps to consult with the Martu traditional owners about these impacts, and the EPA has used this information to inform its assessment.

Noting that other regulatory processes can minimise impacts to values of Aboriginal cultural heritage (see section 2.5.7), the EPA considers that the direct impacts can be further minimised through reasonable conditions. Subject to recommended conditions A1-1 (limits and extents), B6-1 (no disturbance to sites without consent), B6-2 (avoid and minimise adverse impacts), and B6-3 (ongoing consultation), the direct impacts to Aboriginal cultural heritage are unlikely to be significant impacts.

#### Culturally significant flora and fauna

Implementation of the proposal is likely to result in direct and indirect impacts to flora and fauna of cultural significance.

The EPA notes that recommended conditions as discussed under the flora and vegetation, and terrestrial fauna factors are likely to assist in minimising impacts to culturally significant flora and fauna (see sections 2.1, and 2.2).

Subject to the recommended conditions, A1-1 (limits and extents), B1-2 (avoid and minimise impacts to vegetation), B2-2 (avoid and minimise impacts to fauna), B7 (rehabilitation including local species), and B6-3 (ongoing consultation), the EPA considers that the direct and indirect impacts to culturally significant flora and fauna are unlikely to be significant residual impacts.

#### Noise, dust and vibration

There is potential for noise, dust and vibration from implementation of the proposal to impact amenity of cultural heritage sites within and outside the development envelope. The proponent has committed to noise, dust and vibration reduction measures, with respect to values of flora and vegetation, terrestrial fauna, and social surroundings.

The EPA expects that the heritage management provisions within the ILUA is likely to address impacts from noise, dust and vibration on sensitive receptors, however, it does not have visibility on the ILUA as it is confidential.

The EPA has recommended condition B6-2 (avoid and minimise adverse impacts to Aboriginal cultural heritage) to ensure the proponent avoids and minimises adverse impacts to Aboriginal cultural heritage, including from noise, dust, and vibration. The Martu Traditional Owners will also be required to be consulted on the achievement of this objective, through recommended condition B6-3.

#### Loss or restriction of access to country

The EPA has considered the potential for the proposal to restrict access to land for cultural purposes by the Martu Traditional Owners. The proponent has advised that, for safety reasons, access to the proposed development envelope will be restricted during construction and operational phases of the mine. Notwithstanding these restrictions, the proponent has committed to enabling controlled access for Martu Traditional Owners in accordance with a Land Access Procedure, to be developed in consultation with JYAC. The EPA notes, due to ongoing safety considerations, mine pits are likely to remain inaccessible post-closure.

Subject to the EPA's recommended conditions A1-1 (limits and extents of proposal), B7 (progressive rehabilitation), B6-1 (no interruption of access to country), and B6-3 (consultation on achievement of outcomes and objectives), there is unlikely to be significant residual impacts from the loss of access to land used for cultural or traditional purposes.

#### Amenity – Punmu road

The EPA has considered the potential impact of the proposal on other Punmu public road users.

Community stakeholders have raised concerns regarding the potential risks to road safety arising from increased proposal related traffic on Punmu Road associated with the haul road alignment. The proponent has committed to ongoing consultation with the Punmu community and Shire of East Pilbara to determine and implement appropriate traffic control measures to manage these risks.

The EPA considers that the *Road Traffic Code 2000*, regulations under the *Road Traffic Act 1974*, which regulates road rules and the installation and meaning of traffic signs, together with the powers of Main Roads WA and the *Local Government Act 1995* in relation to changes to road layout, can appropriately manage certain aspects of haul road alignment and traffic management.

#### Visual and landscape amenity

Implementation of the proposal will result in temporary and permanent changes to the landscape which will impact on the visual amenity of the environment.

A visual impact assessment undertaken at identified potentially sensitive receptors assessment concluded that the highest feature of permanent remaining infrastructure, a waste rock landform, would have a maximum height of 25 m, which

is lower than the surroundings sand dunes and therefore unlikely to result in a significant visual impact (Ecoscape Australia 2021).

The EPA considers it appropriate to recommend condition B6-3 requiring the proponent to provide the Martu traditional owners with the opportunity to be consulted on the rehabilitation and final closure design of the constructed landforms.

#### Cumulative impacts

The EPA has considered the potential cumulative impacts of the proposal by considering the combined effect of this proposal together with the existing approved proposal, noting that no other major operations occur within a 60 km radius.

In undertaking this assessment, the EPA has also considered the proponent's commitment to undertake ongoing consultation with the Martu, formalised through an Indigenous Land Use Agreement (ILUA).

In addition to the proposed environmental offsets developed in partnership with the Martu which will contribute to the preservation of culturally significant fauna and fauna habitat within a Martu Indigenous Protected Area.

Having regard to the remoteness of the proposal, the limited extent of additional disturbance, the proponent's commitment to ongoing consultation and the proposed environmental offsets, the EPA considers cumulative impacts from the proposal are unlikely to result in a significant impact on social surroundings values, including Aboriginal cultural heritage at a cumulative scale.

Subject to the implementation of recommended condition B6, the EPA considers that the proposal is likely to achieve an environmental outcome consistent with the EPA's objective for the social surroundings factor.

#### Rehabilitation and closure

The EPA advises that rehabilitation and closure of the proposal should include timely consideration of environmental outcomes. For long-lived mines, there is a specific need to ensure they are closure ready well in advance of decommissioning through appropriate research, field trials and progressive rehabilitation.

The EPA considers that the regulatory framework under the Mining Act is appropriate to consider some aspects of mine closure, such as landform stability. However, certain environmental outcomes are required to ensure that rehabilitation and closure of the proposal minimise impacts to values of social surroundings. The EPA has recommended condition B7 to include specific environmental outcomes relating to rehabilitation, including progressive rehabilitation, and recommended condition B6-3 to ensure the Traditional Owners are consulted on the achievement of these outcomes.

### 2.5.10 Summary of key factor assessment and recommended regulation

**Table 10 : Summary of assessment for social surroundings**

Residual impact		Assessment finding	Recommended conditions and DMA regulation
1.	Direct impacts to Aboriginal cultural heritage values	<p>The EPA considers that there is a risk of residual impacts to Aboriginal cultural heritage values associated with the clearing for the proposal. This includes disturbance of ethnographic or archaeological sites.</p> <p>It is noted that the proponent is required to seek approval to directly disturb Aboriginal cultural heritage sites.</p> <p>The EPA advises that the proposal should be subject to recommended condition B6 to ensure there is no disturbance to heritage sites unless consent is granted under the AH Act and has involved consultation with the Traditional Owners.</p> <p>Subject to the recommended conditions and DMA regulation, the environmental outcome is likely to be consistent with the EPA's objective for social surroundings.</p>	<p><b>Condition A1 (Limitations and extent of proposal)</b></p> <p><b>Condition B7 (Rehabilitation)</b></p> <p>Rehabilitated areas are stable, self-sustaining, and consistent of diverse species of local provenance.</p> <p><b>Condition B6 (Aboriginal cultural heritage)</b></p> <p>No direct disturbance of sites unless consent is granted under the ACH Act.</p> <p>Requirement to consult with the Traditional Owners on management and monitoring of direct impacts.</p> <p>Avoid and minimise adverse impacts to Aboriginal cultural heritage.</p> <p><b>DMA legislation</b></p> <p>The Department of Planning, Lands and Heritage can regulate disturbance of cultural heritage sites under the AH Act.</p>
2.	Indirect impacts Aboriginal cultural heritage values	<p>The EPA considers that there is a risk of residual indirect impacts on Aboriginal heritage sites. This includes potential disturbance from noise, dust and vibration sensitive receptors.</p> <p>The EPA considers that the proponent should implement measures to reduce the risk of indirect impacts.</p> <p>Subject to the recommended conditions, the environmental outcome is likely to be consistent with the EPA's objective for social surroundings.</p>	<p><b>Condition A1 (Limitations and extent of proposal)</b></p> <p><b>Condition B1 (Flora and vegetation)</b></p> <p><b>Condition B6 (Aboriginal cultural heritage)</b></p> <p>Requirement to consult with the Traditional Owners on management and monitoring of direct impacts.</p> <p>Avoid and minimise adverse impacts to Aboriginal cultural heritage.</p>
3.	Loss or restriction of access to land	<p>The EPA considers that there is a residual impact to Aboriginal cultural heritage through the loss or</p>	<p><b>Condition A1 (Limitations and extent of proposal)</b></p>

Residual impact		Assessment finding	Recommended conditions and DMA regulation
	for traditional customary practices	<p>restriction of access to land used for traditional customary practices.</p> <p>The EPA recommends condition B6-1(2) to ensure access to land is maintained.</p> <p>Subject to the recommended conditions, the environmental outcome is likely to be consistent with the EPA's objective for social surroundings.</p>	<p><b>Condition B6 (Aboriginal cultural heritage)</b></p> <p>No interruption of ongoing access to land utilised for traditional use or custom by the relevant Traditional Owners.</p>
4.	Visual and landscape impacts.	<p>The EPA advises that there is a residual impact to visual and landscape amenity from implementation of the proposal.</p> <p>The EPA considers that the Traditional Owners should be engaged in ongoing consultation on the end land use post-closure.</p> <p>Subject to the recommended conditions and regulation under the Mining Act, the environmental outcome is likely to be consistent with the EPA's objective for social surroundings.</p>	<p><b>Condition A1 (Limitations and extent of proposal)</b></p> <p><b>Condition B7 (Rehabilitation)</b></p> <p>Rehabilitated areas are stable, self-sustaining, and consistent of diverse species of local provenance.</p> <p><b>Condition B6 (Aboriginal cultural heritage)</b></p> <p>Ongoing consultation with the relevant traditional owners on rehabilitation and closure (B7).</p> <p><b>DMA legislation</b></p> <p>DMPE can regulate rehabilitation, including progressive rehabilitation, through mining development and closure plan, required under the Mining Act as supported by recommended condition B8.</p>

### 3 Holistic assessment

While the EPA assessed the impacts of the proposal against the key environmental factors and environmental values individually in the key factor assessments above, given the link between inland waters, flora and vegetation, terrestrial fauna, subterranean fauna, social surroundings, and greenhouse gas emissions the EPA also considered connections and interactions between them to inform a holistic view of impacts to the whole environment.

#### Flora and vegetation – terrestrial fauna – inland waters – subterranean fauna

There is a high-level of connectivity between flora and vegetation, terrestrial fauna, inland waters, and subterranean fauna. Flora and vegetation, terrestrial fauna, and subterranean fauna have an integral reliance on inland waters to sustain and maintain growth. The surface water catchments and groundwater aquifers support groundwater-dependent ecosystems such as vegetation and fauna habitat. Surface water pools and the river systems provide a source of water for flora and vegetation and terrestrial fauna species and supports habitat for conservation significant and short-range endemic species. Minimising impacts to values of inland waters will also minimise impacts to conservation significant flora and fauna species, vegetation, subterranean fauna, and fauna habitat.

Flora and vegetation provide shelter, dispersal, foraging, breeding, and/or roosting habitat for significant fauna, such as the greater bilby and night parrot. Minimising impacts to flora and vegetation will minimise impacts to terrestrial fauna.

The EPA considers that the proposed mitigation and management measures and recommended conditions for managing impacts to inland waters will also mean the interrelated impacts to the health of other factors, including the values associated with flora and vegetation, terrestrial fauna, and subterranean fauna, are likely to be consistent with the EPA environmental factor objectives. In addition, the EPA considers that the recommended conditions and proposed mitigation and management measures for impacts to flora and vegetation will also mean the interrelated impacts to values of terrestrial fauna are likely to be consistent with the EPA environmental factor objective.

#### Greenhouse Gas Emissions

There is an established link between GHG emissions and the risk of climate change. The EPA recognises that climate change will impact on Western Australia's environment and environmental values.

The EPA considers that the Safeguard Mechanism and the proposed conditions relating to GHG emissions will ensure that the impacts to other factors and values of the environmental are likely to be consistent with the EPA environmental factor objectives.

### Social Surroundings

There is a direct link between Aboriginal culture and the physical or biological aspects of the environment. Access to land, ability to carry out traditional Aboriginal customs and areas of cultural importance may be impacted through impacts to environmental factors of flora and vegetation, terrestrial fauna and inland waters. The Martu country (Western Desert region of WA) is important to the Martu Traditional Owners, and the EPA recognises the strong cultural links between the Martu People and values of inland waters, flora and vegetation, and terrestrial fauna.

The EPA considers that the proposed mitigation and management measures, recommended conditions and management via other regulatory processes for impacts to flora and vegetation, terrestrial fauna and inland waters will also mean the interrelated impacts to the values of social surroundings will likely be consistent with the EPA environmental factor objectives.

### Summary of holistic assessment

When the separate environmental factors and values affected by the proposal were considered together in a holistic assessment, the EPA formed the view that the impacts from the proposal would not alter the EPA's views about consistency with the EPA's factor objectives as assessed in section 2.

## 4 Offsets

Environmental offsets are actions that provide environmental benefits which counterbalance the significant residual impacts of a proposal.

Consistent with the WA Environmental Offsets Guidelines (Government of Western Australia 2014), the EPA may consider the application of environmental offsets to a proposal where it determines that the residual impacts of a proposal are significant, after avoidance, minimisation and rehabilitation have been pursued.

In the case of this proposal, likely (and potential) significant residual impacts are to two listed threatened species under the BC Act:

- night parrot (Endangered, Critically Endangered) direct loss of:
  - 630 ha of supporting habitat including claypan, saltpan, sand dune, sandplain, stony hill/breakaway and stony plain.
- greater bilby (Vulnerable) direct loss of:
  - 630 ha of critical habitat including claypan, saltpan, sand dune, sandplain, stony hill/breakaway and stony plain.

Indirect impacts on these species through habitat fragmentation, increased competition and predation from feral animals, changes to fire regimes, injury, and disturbance are also likely from the proposal and will add to the significant residual impacts.

Environmental offsets are not appropriate in all cases. In this case the EPA considers offsets are appropriate given:

- the proponent's application of the mitigation hierarchy to reduce potential impacts to environmental values (principle 1 of the WA Environmental Offsets Policy)
- the scale of the environmental impacts (principle 2 of the WA Environmental Offsets Policy)
- EPA public advice (EPA 2024b) (considering environmental offsets at a regional scale) – principle 2 – regional scale management – consistent with:
  - Recovery Plan for the greater bilby (*Macrotis lagotis*) (Department of Climate Change, Energy, the Environment and Water 2023)
  - threat abatement plan for predation by feral cats 2024 (DCCEEW 2024)
  - the Threatened Species Action Plan 2022-2032 (Department of Climate Change, Energy, the Environment and Water 2022)
- The residual impacts can be counterbalanced by the provision of substantial offsets that are likely to have a long-term strategic benefit and demonstrated environmental benefit (principle 6 of the WA Environmental Offsets Policy).

For this proposal, the EPA advises the approach combines on-ground habitat protection and threat abatement actions, such as feral animal control and fire

management, and establishing a monitoring program. This plan aims to deliver a net environmental benefit for the night parrot and greater bilby over short-, medium-, and long-term time scales.

### Proposed offset

The proponent's offset plan dated June 2023 was advertised during the public review period. A revision to the offset plan dated November 2025 was submitted with the RTS in response to matters raised during the assessment.

The Havieron Gold Mining Project will result in the clearing of approximately 630 ha of native vegetation within the Great Sandy Desert, including areas identified as providing supporting habitat for the night parrot (*Pezoporus occidentalis*, Critically Endangered) and critical habitat for the greater bilby (*Macrotis lagotis*, Vulnerable). Although the project design has incorporated avoidance and minimisation measures to reduce the scale and severity of impacts, the EPA's assessment has determined that significant residual impacts are likely to remain for both species. The EPA considers that tangibly improving the resilience of the species in the region will be required to reduce the scientific uncertainty and satisfy the EPA the proposal can be consistent with the viability of these threatened species in the region. A biodiversity offset is therefore recommended. The proponent's revised offset plan provided this satisfaction through committing to targeted conservation actions to contribute to the overall recovery and protection of populations and net environmental benefit.

In partnership with the Jamukurnu-Yapalikurnu Aboriginal Corporation (JYAC), Greatland proposes to implement a direct, landscape-scale biodiversity offset within the Warla-Warrarn Martu Indigenous Protected Area (Martu IPA), centred on the Lake Waukarlicarly region. This area contains habitat values suitable for both species, is ecologically connected to known regional populations and forms part of a nationally significant cultural landscape (Greatland 2025c). Approximately 3,200 hectares will be actively managed within a broader 5,100-hectare offset envelope, representing a proportional offset ratio of approximately 5:1 relative to the project's likely residual impacts. The offset will be secured and managed for the life of the mine, with long-term protection supported through proponents proposed acquisition of tenure within the Martu IPA and the intended establishment of a Section 19 exemption under the Mining Act.

The objective of the offset is to achieve measurable conservation gain for both the night parrot and the greater bilby by improving habitat condition, reducing key threatening processes and supporting long-term species persistence in the region.

The proposed offset activities will focus on targeted feral predator management, control of feral herbivores, suppression and prevention of invasive weed species, and the implementation of culturally informed fire management practices that reduce the prevalence of extensive wildfires and promote structurally diverse habitat suitable for threatened fauna (Greatland 2025c).

The offset is underpinned by a comprehensive monitoring program, including a two-year landscape-scale acoustic survey for Night Parrot detection, repeated surveys for Greater Bilby occupancy, and ongoing habitat condition assessments.

Outcomes will be evaluated annually through an adaptive management framework to ensure that actions remain effective, evidence-based and responsive to emerging pressures or new ecological information.

The offset is designed and delivered in partnership with Martu Traditional Owners, who will play a central role in planning, implementing and monitoring land management actions through Martu Ranger programs. This approach ensures that Traditional Ecological Knowledge informs management decisions, strengthens cultural connection to country and contributes to broader social, cultural and economic outcomes for Martu communities. All ecological data collected through the offset will be submitted to the WA Index of Biodiversity Surveys for Assessments, contributing to national scientific understanding and supporting recovery efforts for both target species.

Overall, the proposed biodiversity offset provides a transparent, enforceable and scientifically robust mechanism to counterbalance the project's residual impacts. It aligns with State and Commonwealth offset policies and current conservation advice, secures long-term protection of ecologically significant habitat and supports the cultural and environmental aspirations of the Martu people. Through these combined measures, the offset is expected to deliver enduring conservation benefits that improve the viability of both the night parrot and greater bilby at a regional scale while ensuring the environmental outcomes required for approval of the Telfer-Havieron Project are achieved.

### Night parrot

The night parrot is listed as critically endangered at the state level, endangered at the Commonwealth level, and is listed on the IUCN list as critically endangered. It is considered to be at very high risk of extinction. Key threats to the night parrot include; loss of habitat as a result of altered fire regimes, with larger and hotter fires resulting in a loss of critical habitat; predation by feral animals; competition for water and food; and habitat destruction from feral herbivores.

DCCEEW's consultation paper on changing the listing for the night parrot from endangered to critically endangered (DCCEEW 2024b) discusses the eligibility of the night parrot for inclusion in the critically endangered category, which is based on criteria such as population size, rate of decline and geographic distribution. The paper outlines conservation actions to protect and recover the night parrot population. These included fire management to avoid large fires, targeted feral animal control and managing grazing to prevent habitat degradation. Consistent with DCCEEW's consultation paper, the offset plan's emphasis on targeted conservation actions, such as fire and feral animal management, thereby contribute to the overall recovery and protection of the night parrot population and likely net environmental benefit for the night parrot.

Offset projects for the night parrot include:

- feral animal control at the regional, habitat or targeted population scale, to manage existing key threats to the species

- implement traditional burning techniques and fire management practices to reduce fuel loads and prevent hot fires within critical night parrot habitat.

It is noted that there is a paucity of information on night parrots and research gaps contributing to significant uncertainties in the evaluation and management of environmental impacts. Consistent with the Offset Guidelines (Government of Western Australia 2014) the EPA advises that the research offsets are a valuable component of the offset plan that will inform conservation efforts for the species and contribute to long-term strategic outcomes in terms of understanding threats, pressures and habitat requirements.

### Greater bilby

The greater bilby is listed as vulnerable at both the state and federal level. Key threats to the species include altered fire regimes and feral predators, and the management of fire and feral animals are identified as key priorities in the species's recovery plan.

Offset projects for the greater bilby include:

- feral animal control at the regional, habitat or targeted population scale, to manage existing key threats to the species
- implement traditional burning techniques and fire management practices to reduce fuel loads and achieve conservation outcomes.

Offset projects that target feral predators will be:

- strategic (i.e., landscape scale, collaborative planning and implementation) implemented long term
- implemented at a scale that demonstrates a conservation gain for the greater bilby (landscape-based level).

### EPA public advice: Considering environmental offsets at a regional scale

The EPA published advice on considering environmental offsets at a regional scale (March 2024). The public advice aims to assist proponents and others to identify the guiding values and priorities which should be considered to enable environmental offsets to contribute to environmental protection and enhancement outcomes at regional scales. The EPA requested the proponent to update the offset plan to be consistent with the guiding values described in the public advice given the important role of offsets in the EPA's consideration of the threat of serious and irreversible harm to night parrots and other threatened species.

The EPA considered the proposed offsets are consistent with the guiding values described in the public advice. The proponent has proposed offsets that are consistent with the values set out in the EPA's public advice. In particular, the proponent has had regard for recovery plans and proposes a self-managed offset fund to pay for on-ground threat abatement management actions. This aims to manage threatening processes and complements management of lands outside of the boundary of the environmental offset, thereby providing a degree of regional scale management. The regional scale feral predator control and fire management

aims to provide medium to long-term benefits, enhancing the resilience and persistence of the night parrot and greater bilby.

The proposed offsets demonstrate connectedness to both the physical and ecological function values of those being impacted, given they are located adjacent to the areas being impacted. The proposed offsets are also likely to provide co-benefits for Traditional Owners, ranger groups and the community by building on the conservation and research efforts already underway in the Martu IPA.

## Outcome

In considering whether the offsets are likely to counterbalance the significant residual impacts, the EPA has had regard for principles 3 and 4 of the WA Environmental Offsets Policy. Given proposals for environmental offsets should be underpinned by sound information and knowledge and should be relevant and proportionate to the significance of the environmental values being impacted, the EPA advises that the offsets proposed are likely to benefit the values being impacted, but also likely to have complimentary benefits to several other values, including other threatened species (such as the great desert skink) utilising the same habitats as the night parrot and greater bilby.

Consistent with principle 6, the proposed environmental offsets have been designed to be enduring, enforceable and deliver long-term strategic environmental outcomes that result in a net gain for the greater bilby and night parrot over the 13-year life of the project (plus 5 years of rehabilitation). The offset plan includes provisions for management, monitoring, and auditing to ensure that the expected environmental outcomes are realised. The EPA has recommended conditions which require offsets to be consistent with long term, post proposal viability of the species in the area and sustainable, funded habitat conservation and improvement models which are likely to be maintained beyond the life of the proposal.

The EPA notes that the proposal will likely result in significant residual impacts due to the clearing of critical habitat (for greater bilby) and supporting habitat (for the night parrot), the project does however have the potential to reduce the resilience of these species' populations through habitat fragmentation, increased competition and predation from feral animals, changes to fire regimes, injury, and disturbance. Consequently, while like-for-like offsets are not possible for this project, it is considered unlikely that the acquisition of additional land would provide a significant benefit to the species to be impacted. Rather, the focus of environmental offsets should be the long-term recovery and preservation of the greater bilby and night parrot through on ground management. Rather than setting a monetary value for contribution to the delivery of the offsets package, the EPA recommends condition B8 be imposed that defines expected outcomes for the offsets package to ensure the proposed offsets counterbalance the likely significant residual impacts. In addition, condition B8-2 sets out the requirements for offsets, including:

- the counterbalance the significant residual impacts to the night parrot and greater bilby;
- contribution to the preservation of the night parrot and greater bilby species;

- ensure on-ground management offsets include threat abatement, revegetation and/or rehabilitation activities to achieve positive environmental outcomes for night parrot and greater bilby;
- ensure revegetation provides self-sustaining habitat for night parrot and greater bilby;
- deliver a net-gain in the quality of critical habitat for the night parrot, and greater bilby in the Great Sandy Desert bioregion, through alignment with key recovery actions including predator and feral pest control and fire management;
- ensure on-ground management takes place within the Proposed Offset Management Area as described in the Havieron Gold Mining Project: Biodiversity Offset Management plan (Offset Environmental Management Plan) (November 2025);
- threat abatement actions commencing, and adequate baseline monitoring being completed before construction commences;
- contributes to the long-term post proposal viability of the species in the area; and
- consistency with sustainable funded habitat and improvement models which are likely to be maintained beyond the life of the proposal.

The EPA has considered whether the proposed offsets are likely to counterbalance the likely significant residual impacts. It is the EPA's view that implementation of on ground fire and feral animal management programs, to be undertaken in partnership with Traditional Owner groups on the Martu IPA, are appropriate to counterbalance the significant residual impacts of the proposal. In addition, the on-ground management (feral animal control and fire management) are likely to provide short, medium, and long-term benefits, enhancing the resilience and persistence of the night parrot and greater bilby.

The EPA notes the proposed offsets are consistent with the guiding values described in the EPA's public advice and species recovery plan advice. In addition, the offset plan aligns with relevant Recovery and Threat Abatement Plans and published research priorities for threatened species. The EPA therefore considers the proposed offsets would likely counterbalance the significant residual impacts of the proposal, thereby achieving a net environmental benefit for these species.

It is the EPA's view that while the proposed offset measures and projects are broadly appropriate, a revision of the offset plan would be required in consultation with DBCA and DCCEE (recommended condition B8-3) to ensure their expertise is utilised and to ensure the EPA's additional recommended matters are incorporated. In addition, the EPA recommended condition B6 requiring the proponent to make reasonable efforts to consult with relevant Traditional Owners on the offset plan. The EPA has also recommended condition C1 to prevent ground disturbing activities from occurring until the CEO has confirmed that the environmental offset plan meets all requirements of the recommended offset conditions (recommended conditions B8), including the specific environmental objectives and outcomes in condition B8-2. Subject to these conditions, the EPA advises that the offsets are likely to counterbalance the significant residual impacts of the proposal, and the outcome is likely to be consistent with the EPA's objective for terrestrial fauna.

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## 5 Recommendations

The EPA has taken the following into account in its assessment of the proposal:

- environmental values which may be significantly affected by the proposal
- assessment of key environmental factors, separately and holistically (this has included considering cumulative impacts of the proposal where relevant)
- likely environmental outcomes which can be achieved with the imposition of conditions
- consistency of environmental outcomes with the EPA's objectives for the key environmental factors
- EPA's confidence in the proponent's proposed mitigation measures
- whether other statutory decision-making processes can mitigate the potential impacts of the proposal on the environment
- principles of the EP Act.

The EPA recommends that the proposal may be implemented subject to the conditions recommended in Appendix A.

## 6 Other advice

The EPA may, if it sees fit, include other information, advice or recommendations relevant to the environment in its assessment reports, even if that information has not been taken into account by the EPA in its assessment of a proposal.

The EPA provides the following information for consideration by the Minister.

The EPA notes that the approved proposal (under MS 606) required the proponent to prepare and implement a Waste Rock Management Plan to ensure best-practice prediction, management, and long-term stability of waste rock, particularly materials with potential to generate acid and metalliferous drainage (AMD). This requirement included mechanisms to predict and schedule the handling of potentially acid-forming (PAF) waste rock, supported by appropriate AMD test work and ongoing modelling refinement, to enable early identification and control of geochemical risks.

The EPA understands that the plan was also intended to describe management and encapsulation methods for materials with AMD potential, consistent with current industry practice, to minimise exposure pathways and ensure effective long-term isolation of reactive materials. In addition, the plan was to address the long-term stability of waste rock dumps and the integration of final landforms with the surrounding landscape to support closure objectives.

The EPA considers that the intent of this requirement; to manage geochemical risks and ensure the long-term physical and chemical stability of waste rock; can be appropriately regulated by the Department of Mines, Petroleum and Exploration (DMPE) under the *Mining Act 1978*. The DMPE's Mine Development and Closure Plan framework applies a risk-based approach to waste rock management, encapsulation, and closure measures where AMD risks have been identified.

## Appendix A: Recommended conditions

Section 44(2)(b) of *Environmental Protection Act 1986* specifies that the EPA's report must set out (if it recommends that implementation be allowed) the conditions and procedures, if any, to which implementation should be subject. This appendix contains the EPA's recommended conditions and procedures.

### Recommended Environmental Conditions

#### STATEMENT THAT A PROPOSAL MAY BE IMPLEMENTED (*Environmental Protection Act 1986*)

##### TELFER-HAVIERON GOLD MINING PROJECT

**Proposal:** Greatland Pty Ltd has approval for the recommencement and expansion of mining at the Telfer Gold mine to include the mining and processing of 400 million tonnes of gold ore at a rate of up to 23 million tonnes per annum, and the transport of copper concentrate to Port Hedland by road. The Telfer project also includes a power supply of up to 160 megawatts to the Telfer Gold mine using a 440 km long power supply and infrastructure corridor from Port Hedland.

The Telfer-Havieron Gold Mining Project proposal is for the expansion of the Telfer Gold mine to include the Havieron underground mine, within a development envelope encompassing both the Telfer-Havieron operations and inclusive of haul road for trucking ore from Havieron to Telfer for processing, waste rock landforms, evaporation ponds and expanded ground water abstraction, for a combined total of 32 million tonnes of ore production. The proposal is located about 400 km south-east of Port Hedland in the Great Sandy Desert region of Western Australia, with the Telfer Mine site located 55 km to the west of the Havieron Gold mine.

**Proponent:** Greatland Pty Ltd  
Australian Company Number 108 498 997

**Proponent address:** Level 2, 502 Hay Street, Subiaco, WA, 6008

**Assessment number:** 2446

**Report of the Environmental Protection Authority:** 1806

**Introduction:** The Proposal is a significant amendment to the existing Telfer Gold Mining approved proposal which was agreed to be implemented under Ministerial

Statements 605, 606, and 650. The EPA's Reports for the existing Telfer Gold Mining proposal are Report 1058, 1059, and 1127, EPA Assessment Numbers 1444, 1445, and 1518.

Pursuant to section 45 of the *Environmental Protection Act 1986*, it is now agreed that:

1. the significant amendment proposal described and documented in the proponent's Proposal Content Document (5 December 2025), may be implemented;
2. the following Ministerial Statements (MS) for the existing proposal are superseded under section 40AA (6) (b) of the *Environmental Protection Act 1986*:
  - a. MS 605 – Telfer Project, Power Supply and Infrastructure Corridor Port Hedland to Telfer Gold Mine, Great Sandy Desert,
  - b. MS 606 – Telfer Project, Expansion of Telfer Gold Mine, Great Sandy Desert,
  - c. MS 650 – Telfer Project Power Supply and Infrastructure Corridor Port Hedland to Telfer Gold Mine, Great Sandy Desert; and
3. the implementation of the significantly amended proposal (being the existing approved proposal as amended by the significant amendment proposal) is subject to the following implementation conditions and procedures.

## **Conditions and procedures**

### **Part A: Proposal extent**

### **Part B: Environmental outcomes, prescriptions and objectives**

### **Part C: Environmental management plans and monitoring**

### **Part D: Compliance and other conditions**

## PART A: PROPOSAL EXTENT

### A1 Limitations and Extent of Proposal

A1-1 The proponent must ensure that the proposal is implemented in such a manner that the following limitations or maximum extents / capacities / ranges are not exceeded:

Proposal element	Location	Maximum extent
Physical elements		
<b>Development envelope</b>	Figure 1	No more than 36,647 ha
Disturbance footprint	Within the <b>development envelope</b> shown in Figure 2	<b>Disturbance</b> of no more than 7,516 ha within a 36,647 ha development envelope
Direct <b>disturbance</b> of native vegetation		<b>Clearing</b> of no more than 630 ha of <b>'Excellent' condition native vegetation</b> for the <b>significant amendment</b> within a 36,647 ha <b>development envelope</b>
<b>Critical habitat</b> for the greater bilby ( <i>Macrotis lagotis</i> )		<b>Clearing</b> of no more than 630 ha of <b>critical habitat</b> for the greater bilby ( <i>Macrotis lagotis</i> )
<b>Supporting habitat</b> for the night parrot ( <i>Pezoporus occidentalis</i> )		<b>Clearing</b> of no more than 630 ha of <b>supporting habitat</b> for the night parrot ( <i>Pezoporus occidentalis</i> )
Operational elements		
<b>Groundwater abstraction</b>	N/A	<b>Groundwater abstraction</b> of up to 31.9 GL per annum
Timing elements		
Mine life	N/A	Up to 15 years from issue of this statement

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## PART B – ENVIRONMENTAL OUTCOMES, PRESCRIPTIONS AND OBJECTIVES

### B1 Flora and Vegetation

B1-1 The proponent must ensure the implementation of the **proposal** achieves the following environmental **outcomes**:

- (1) no **detectable** increase in the population of **environmental weeds** within the **flora survey study area** compared to **baseline**.

B1-2 The proponent must implement the **proposal** to meet the following environmental **objective**:

- (1) avoid, and where unavoidable, minimise **adverse impacts** to flora and vegetation within and surrounding the **proposal** development envelope from changes to hydrological regimes, sediment deposition, dust, and altered fire regimes compared to **baseline**.

### B2 Terrestrial Fauna

B2-1 The proponent must ensure the implementation of the **proposal** achieves the following environmental **outcomes**:

- (1) no **disturbance** to **critical habitat** for the night parrot (*Pezoporus occidentalis*) including roosting sites;
- (2) no mortality, injury or **disturbance** of **conservation significant fauna** due to **construction activities** and **operations**;
- (3) no **detectable** decrease in the **abundance** of greater bilby in the **greater bilby survey study area** from **baseline** levels, that is sustained for three consecutive years, over the life of the **proposal**; and
- (4) no **detectable** increase in feral animal abundance in the **greater bilby survey study area** from **baseline** levels over the life of the **proposal** relative to an established **baseline**.

B2-2 The proponent must ensure implementation of the **proposal** achieves the environmental objective of avoiding, and where unavoidable, minimising **adverse impacts** to **conservation significant fauna** from **proposal** related to artificial light.

B2-3 The proponent must:

- (1) install **fauna crossings** that:
  - (a) align with **ecological linkages**;
  - (b) connect areas of '**Excellent**' **condition native vegetation**; and/or

- (c) connect areas with high environmental values as described and recorded in the environmental management plan as required by condition B3;
- (2) ensure the fauna crossings required by condition B2-3(1):
  - (a) provide protection from feral predators to achieve the outcomes in B2-1; and,
  - (b) are able to be utilised by a variety of native fauna; and,
- (3) consult with **DBCA** on the proposed design and location of the **fauna crossings** to achieve the requirements of condition B2-3(1);
- (4) are installed during construction activities, with installation completed before works proceed beyond the construction phase; and,
- (5) maintain the **fauna crossings** required by condition B2-3(1) for the life of the **proposal**.

B2-4 Prior to **ground disturbing activities**, the proponent must undertake the following actions:

- (1) within two weeks prior to **clearing** activities, using a licensed **fauna spotter**, undertake **pre-clearance surveys** to detect the presence of night parrot (*Pezoporus occidentalis*), greater bilby (*Macrotis lagotis*) or **conservation significant fauna** within **clearing** areas; and
- (2) where night parrot (*Pezoporus occidentalis*), and greater bilby (*Macrotis lagotis*) or **conservation significant fauna** are identified, **ground disturbing activities** shall not commence in that location until:
  - (a) the finding has been notified to the **CEO** and **DBCA**; and
  - (b) either:
    - (i) the individual (with the exception of the night parrot (*Pezoporus occidentalis*)) has been relocated by a **fauna handler** to **critical habitat**; or
    - (ii) the individual has been observed by the **fauna spotter** to have moved on from the area to adjoining **critical habitat**; or
    - (iii) the **fauna spotter** considers that the individual no longer occurs in the area to be cleared.

B2-5 The proponent must implement the following measures:

- (1) **clearing** activities to be undertaken in **daylight hours**;

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- (2) vehicle and machinery speed limits on the **Havieron to Telfer haul road**, excluding **emergency response vehicles**, must not exceed;
    - (a) 80 **km/hr** on sealed roads or 60 **km/hr** on unsealed roads during **daylight hours**; and
    - (b) 40 **km/hr** during **night-time** hours for vehicles other than those undertaking **haulage operations**;
  - (3) no **haulage operations** via **Havieron to Telfer haul road** during **night-time hours**;
  - (4) no **disturbance**, vehicle movement or **construction activities** within the exclusion buffers specified below, applied to fauna habitat features recorded during **pre-clearance surveys**:
    - (a) 300 **m** around **night parrot roosting sites**;
    - (b) 100 **m** around **greater bilby occupied burrows**;
    - (c) 150 **m** around **great desert skink occupied burrows**; and
    - (d) 300 **m** around permanent and **prominent ephemeral water sources** located within 1.5 **km** of night parrot nesting sites.
  - (5) access to significant fauna buffer zones required by condition B2-5(4) is restricted to authorised personnel only; and

B2-6 The proponent must implement an adaptive management approach to address uncertainty in the potential significance of **proposal**-related impacts to the night parrot, greater bilby and great desert skink and the efficacy of proposed management approaches (including significant fauna avoidance buffers) in mitigating impacts, including:

- (1) all active night parrot roost sites, greater bilby burrows and great desert skink burrows identified during **pre-clearance surveys** within the infrastructure corridor development envelope must be monitored during and post **clearing** for a minimum of two weeks to determine the efficacy of the **conservation significant fauna** buffer size and other management approaches; and
- (2) if monitoring indicates there has been any instance of **proposal** related **disturbance** to either night parrots, greater bilby or great desert skink, all work on the infrastructure corridor development envelope must stop until such a time as proposed alternative management measures have been approved by the **CEO**.

### B3 Environmental Management Plan

- B3-1 The proponent must review and update the *Significant Species Management Plan* (Revision 2, 30 September 2025) that satisfies the requirements of condition C4 and C5 and demonstrates how achievement of the **outcomes** in condition B2-1, the **objective** in condition B1-2, condition B2-2 and condition B4-2, and the prescriptive requirements in condition B2-3, condition B2-4, condition B2-5, and condition B2-6 will be monitored and substantiated and submit it to the **CEO**.
- B3-2 The environmental management plan as required by condition B3-1 must contain adaptive management measures for the night parrot (*Pezoporus occidentalis*), and **conservation significant species** in the event they are identified in the **pre-clearance surveys** as required under condition B2-4.

### B4 Inland Waters and Subterranean Fauna

- B4-1 The proponent must ensure the implementation of the **significant amendment** achieves the following environmental **outcomes**:
- (1) groundwater drawdown does not exceed the **predicted drawdown extent** defined in Figure 5; and
  - (2) maintain groundwater levels and quality to support stygofauna habitat beyond the **predicted drawdown extent**;
- B4-2 The proponent must implement the **proposal** to achieve the following environmental **objective**:
- (1) avoid, and where unavoidable, minimise **adverse impacts** to claypans, and fauna habitat from changes to surface water hydrology

### B5 Greenhouse Gas Emissions

- B5-1 The proponent must notify the **CEO** in writing within one (1) month of it becoming aware that implementation of the **proposal** will not be or is not expected to be regulated under the **Safeguard Legislation** as a designated large facility (the notifiable event) and such notice must briefly describe the reasons for and expected duration of the notifiable event.
- B5-2 The proponent must, if requested in writing by the **CEO**, provide the **CEO** with a report on the implications for the **proposal** of any amendment or proposed amendment to the **Safeguard Legislation**, or a decision or proposed decision made under the **Safeguard Legislation** that is specified in the **CEO's** request.
- B5-3 The report required by condition B5-2 must:

- (1) be submitted to the **CEO** within three (3) months of the date of the **CEO's** request or such longer period as the **CEO** agrees in writing; and
- (2) explain the implications that the specified amendment or decision has had or is expected to have on:
  - (a) the obligation to reduce net **Scope 1 greenhouse gas emissions** from implementation of the **proposal** under Safeguard Legislation; and
  - (b) the quantity of actual and net **Scope1 greenhouse gas emissions** likely to result from the future implementation of the **proposal**.

## **B6 Aboriginal Cultural Heritage**

B6-1 The proponent must implement the **proposal** to meet the following environmental **outcomes**:

- (1) no **disturbance** of the **Aboriginal sites** or to **Aboriginal cultural heritage** in the **proposal disturbance footprint** other than where consent is granted for the use of the land under the *Aboriginal heritage Act 1972*; and
- (2) subject to reasonable health and safety requirements, no interruption of ongoing access to land utilised for traditional use or custom by the **native title party/ies**.

B6-2 The proponent must implement the **proposal** to meet the following environmental **objective**:

- (1) avoid, and where unavoidable, minimise **adverse impacts** to **Aboriginal cultural heritage** within and surrounding the **proposal development envelope**.

B6-3 The proponent must undertake ongoing consultation and engagement with the **native title party/ies** about the achievement of the **outcomes** in condition B1-1, condition B6-1(2), and condition B7-1, and **objectives** in condition B1-2, condition B4-2, and condition B6-2, and prescriptive requirements in condition B7-2, condition B3, and condition B8 (**Offset Environmental Management Plan**) for the life of the **proposal**.

## **B7 Rehabilitation and Closure**

B7-1 The proponent must ensure the implementation of the **proposal** achieves the following environmental **outcomes**:

- (1) rehabilitated vegetation and fauna habitat are **self-sustaining**, including not **adversely impacted** by **environmental weeds**;
- (2) rehabilitated areas are consistent with the species diversity and **abundance** of native vegetation relevant to **baseline** conditions;
- (3) rehabilitated landforms are stable and do not cause **pollution** or **environmental harm**;
- (4) the post-mining profile, including rehabilitated landforms, is designed in consideration of visually integrating into the surrounding undisturbed landscape; and
- (5) pre-mining surface water flow regimes are re-established.

B7-2 The proponent must ensure:

- (1) **rehabilitation** includes the preferential use of seeds and propagated material collected from native vegetation within the **proposal disturbance footprint**; and
- (2) closure planning and **rehabilitation** are undertaken in a **progressive manner** consistent with achievement of the **outcomes** in condition B7-1 and prescriptive requirements in condition B7-2(1) and condition B7-2(2) during **operations**; and
- (3) **rehabilitation** of areas cleared commences within eighteen (18) months of that area no longer being required.

B7-3 The proponent must include the environmental **outcomes** of condition B7-1 and prescriptive requirements of condition B7-2 in the Mine Development and Closure Proposal and subsequent Mine Closure Plans required under the *Mining Act 1978* and submit for approval to **DMPE**.

## **B8 Environmental Offsets**

B8-1 The proponent must implement offsets to counterbalance the significant residual impacts of the **significant amendment** on the following environmental values:

- (1) **supporting habitat** for night parrot (*Pezoporus occidentalis*); and
- (2) **critical habitat** for greater bilby (*Macrotis lagotis*).

B8-2 The proponent must ensure the implementation of offsets achieves the following environmental **outcomes** and **objectives**:

- (1) counterbalance the significant residual impacts to the environmental values identified in condition B8-1;

- 
- (2) contribute to the preservation of the species listed in condition B8-1;
  - (3) ensure **on-ground management** offsets include **revegetation** and/or **rehabilitation** activities, and incorporate threat abatement measures consistent with the relevant **Recovery and Threat Abatement Plans** to achieve positive environmental outcomes for night parrot and greater bilby;
  - (4) ensure **revegetation** provides **self-sustaining habitat** for night parrot and greater bilby;
  - (5) deliver a **net-gain** in the quality of **critical habitat** for the night parrot, and greater bilby in the Great Sandy Desert bioregion, through alignment with key recovery actions including:
    - (a) predator and feral pest control;
    - (b) regional surveys which contribute to the understanding of distribution and population structure and patterns of habitat usage; and
    - (c) fire management;
  - (6) ensure **on-ground management** takes place within the **Proposed Offset Management Area** as described in the Offset Environmental Management Plan required by condition B8-3;
  - (7) threat abatement actions commencing, and adequate baseline monitoring being completed before construction commences;
  - (8) contributes to the long-term post **proposal** viability of the species in the area; and
  - (9) consistency with sustainable funded habitat and improvement models which are likely to be maintained beyond the life of the **proposal**.
- B8-3** The proponent must, in consultation with **DBCA** and **DCCEEW**, review and revise the Havieron Gold Mining Project: Biodiversity Offset Management Strategy (**Offset Environmental Management Plan**) (V3 November 2025) to satisfy the requirements of condition C4 and demonstrate how the environmental **outcomes** and **objectives** in condition B8-2 will be achieved, and how this achievement will be substantiated, and submit it to the **CEO**. The Havieron Gold Mining Project: Biodiversity Offset Management Strategy (Environmental Management Plan) must:
- (1) demonstrate that the environmental **outcomes** and **objectives** in condition B8-2 will be met;

- 
- (2) identify an area, or areas, (the **Proposed Offset Management Area**) for on-ground management that contains environmental values identified in condition B8-1;
  - (3) demonstrate how the environmental values within the **Proposed Offset Management Area** will be maintained, improved and managed in order to counterbalance the significant residual impact to the environmental values in condition B8-1 and achieve the environmental **outcomes** and **objectives** in condition B8-2;
  - (4) demonstrate application of the principles of the WA Environmental Offsets Policy, the WA Environmental Offsets Metric and the WA Offsets Template, as described in the WA Environmental Offsets Guidelines, and the *Environment Protection and Biodiversity Conservation Act 1999* Environmental Offsets Policy Assessment Guide, or any subsequent revisions of these documents;
  - (5) identify the proportion of resources allocated for each specific offset addressed by the Havieron Gold Mining Project: Biodiversity Offset Management Strategy (Environmental Management Plan);
  - (6) identify how the performance of the offset measures, and whether they are achieving the **outcomes** and **objectives** in condition B8-2, will periodically be made publicly available;
  - (7) identify how the **Proposed Offset Management Area** will be protected, being either the sites are ceded to the Crown for the purpose of management or conservation, or the sites are managed under other suitable mechanism for the purpose of conservation as agreed by the **CEO** by notice in writing;
  - (8) where **on-ground management** is proposed:
    - (a) state the targets for each environmental value to be achieved by the **on-ground management**, including completion criteria, which will result in a **tangible improvement** to the environmental values listed in condition B8-1.
    - (b) demonstrate the consistency of the targets with the environmental **outcomes** and **objectives** in condition B8-2 and the **objectives** of any relevant guidance, including but not limited to, recovery plans or area management plans;
    - (c) detail the **on-ground management** actions, with associated timeframes for implementation and completion, to achieve the targets identified in condition B8-3(8)(a);

- (d) detail the monitoring, reporting and evaluation mechanisms for the targets and actions identified under condition B8-3(8)(a) and condition B8-3(8)(c).

#### *Contingency Offset*

- B8-4 If, after receiving the performance review of the offset measures, reporting and evaluation required by condition B8-3(8)(d), the CEO determines that the **proposal** has not met the environmental **outcomes** and **objectives** in condition B8-2, and after notifying the proponent in writing, the proponent must undertake additional offsets to counterbalance the significant residual impact from the additional impact to night parrot and greater bilby.
- B8-5 Within twelve (12) months of receiving notice in writing from the CEO that an additional offset is required under condition B8-4 the proponent must update the **Offset Management Plan Strategy** required by condition B8-3 to include additional offsets to counterbalance the significant residual impacts to night parrot and greater bilby.

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## PART C – ENVIRONMENTAL MANAGEMENT PLANS AND MONITORING

### C1 Environmental Management Plans: Conditions Related to Commencement of Implementation of the Proposal

C1-1 The proponent must not undertake:

- (1) **ground disturbing activities** associated with the **significant amendment** until the **CEO**, has confirmed in writing that the environmental management plan required by condition B3-1 meets the requirements of that condition, condition B3-2, conditions C4 and C5.
- (2) **ground disturbing activities** associated with the **significant amendment** until the **CEO**, has confirmed in writing that the Havieron Gold Mining Project: Biodiversity Offset Management Strategy (Offset Environmental Management Plan) required by condition B8-3 meets the requirements of that condition, condition B8-1, condition B8-2, conditions C4 and C5.

### C2 Environmental Management Plans: Conditions Relating to Approval, Implementation, Review and Publication

C2-1 Upon being required to implement an environmental management plan under Part B, or after receiving notice in writing from the **CEO** under condition C1-1 that the environmental management plan(s) required in Part B satisfies the relevant requirements, the proponent must:

- (1) implement the most recent version of the **confirmed** environmental management plan; and
- (2) continue to implement the **confirmed** environmental management plan referred to in condition C2-1(1), other than for any period which the **CEO** confirms by notice in writing that it has been demonstrated that the relevant requirements for the environmental management plan have been met, or are able to be met under another statutory decision-making process, in which case the implementation of the environmental management plan is no longer required for that period.

C2-2 The proponent:

- (1) may review and revise a **confirmed** environmental management plan provided it meets the relevant requirements of that environmental management plan, including any consultation that may be required when preparing the environmental management plan;
- (2) must review and revise a **confirmed** environmental management plan and ensure it meets the relevant requirements of that environmental management plan, including any consultation that may be required when

preparing the environmental management plan, as and when directed by the **CEO**; and

- (3) must revise and submit to the **CEO** the **confirmed** Environmental Management Plan if there is a material risk that the outcomes or **objectives** it is required to achieve will not be complied with, including but not limited to as a result of a change to the **proposal**.

C2-3 Despite condition C2-1, but subject to conditions C2-4 and C2-5, the proponent may implement minor revisions to an environmental management plan if the revisions will not result in new or increased **adverse impacts** to the environment or result in a risk to the achievement of the limits, outcomes or objectives which the environmental management plan is required to achieve.

C2-4 If the proponent is to implement minor revisions to an environmental management plan under condition C2-3, the proponent must provide the **CEO** with the following at least twenty (20) business days before it implements the revisions:

- (1) the revised environmental management plan clearly showing the minor revisions;
- (2) an explanation of and justification for the minor revisions; and
- (3) an explanation of why the minor revisions will not result in new or increased **adverse impacts** to the environment or result in a risk to the achievement of the limits, **outcomes** or **objectives** which the environmental management plan is required to achieve.

C2-5 The proponent must cease to implement any revisions which the **CEO** notifies the proponent (at any time) in writing may not be implemented.

C2-6 **Confirmed** environmental management plans, and any revised environmental management plans under condition C2-4(1), must be published on the proponent's website and provided to the **CEO** in electronic form suitable for on-line publication by the Department of Water and Environmental Regulation within twenty (20) business days of being implemented, or being required to be implemented (whichever is earlier).

### **C3 Conditions Related to Monitoring**

C3-1 The proponent must undertake monitoring capable of:

- (1) substantiating whether the **proposal** limitations and extents in Part A are exceeded; and
- (2) **detecting** and substantiating whether the environmental **outcomes** identified in Part B are achieved (excluding any environmental **outcomes**

in Part B where an environmental management plan is expressly required to monitor achievement of that **outcome**).

C3-2 The proponent must submit as part of the Compliance Assessment Report required by condition D2, a compliance monitoring report that:

- (1) outlines the monitoring that was undertaken during the implementation of the **proposal**;
- (2) identifies why the monitoring was capable of substantiating whether the **proposal** limitation and extents in Part A are exceeded;
- (3) for any environmental **outcomes** to which condition C3-1(2) applies, identifies why the monitoring was scientifically robust and capable of **detecting** whether the environmental **outcomes** in Part B are met;
- (4) the results of the monitoring;
- (5) reports whether the **proposal** limitations and extents in Part A were exceeded and (for any environmental **outcomes** to which condition C3-1 (2) applies) whether the environmental **outcomes** in Part B were achieved, based on analysis of the results of the monitoring; and
- (6) reports any actions taken by the proponent to remediate any potential non-compliance.

#### **C4 Environmental Management Plans: Conditions Relating to Monitoring and Adaptive Management for Outcomes Based Conditions**

C4-1 The environmental management plans required under condition B3-1 must contain provisions which enable the substantiation of whether the relevant outcomes of those conditions are met, and must include:

- (1) **threshold criteria** that provide a limit beyond which the environmental outcomes are not achieved;
- (2) **trigger criteria** that will provide an early warning that the environmental outcomes are not likely to be met;
- (3) monitoring parameters, sites, control/reference sites, methodology, timing and frequencies which will be used to measure **threshold criteria** and **trigger criteria**. Include methodology for determining alternate monitoring sites as a contingency if proposed sites are not suitable in the future;
- (4) baseline data;
- (5) data collection and analysis methodologies;

- (6) adaptive management methodology;
- (7) **contingency measures** which will be implemented if **threshold criteria** or **trigger criteria** are not met; and
- (8) reporting requirements.

C4-2 Without limiting condition C3-1, failure to achieve an environmental outcome, or the exceedance of a **threshold criteria**, regardless of whether threshold **contingency measures** have been or are being implemented, represents a non-compliance with these conditions.

#### **C5 Environmental Management Plans: Conditions Related to Management Actions and Targets for Objective Based Conditions**

C5-1 The environmental management plans required under condition B3-1 must contain provisions which enable the achievement of the relevant objectives of those conditions and substantiation of whether the objectives are reasonably likely to be met, and must include:

- (1) **management actions**;
- (2) **management targets**;
- (3) **contingency measures** if **management targets** are not met; and
- (4) reporting requirements.

C5-2 Without limiting condition C2-1, the failure to achieve an environmental objective, or implement a **management action**, regardless of whether **contingency measures** have been or are being implemented, represents a non-compliance with these conditions.

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## PART D – COMPLIANCE, TIME LIMITS, AUDITS AND OTHER CONDITIONS

### D1 Non-compliance Reporting

**D1-1** If the proponent becomes aware of a potential non-compliance, the proponent must:

- (1) report this to the **CEO** within seven (7) days;
- (2) implement **contingency measures**;
- (3) investigate the cause;
- (4) investigate environmental impacts;
- (5) advise rectification measures to be implemented;
- (6) advise any other measures to be implemented to ensure no further impact;
- (7) advise timeframe in which contingency, rectification and other measures have and/or will be implemented; and
- (8) provide a report to the **CEO** within twenty-one (21) days of being aware of the potential non-compliance, detailing the measures required in conditions D1-1(1) to D1-1(7) above.

**D1-2** Failure to comply with the requirements of a condition, or with the content of an environmental management plan required under a condition, constitutes a non-compliance with these conditions, regardless of whether the **contingency measures**, rectification or other measures in condition D1-1 above have been or are being implemented.

### D2 Compliance Reporting

**D2-1** The proponent must provide an annual Compliance Assessment Report to the **CEO** for the purpose of determining whether the implementation conditions are being complied with.

**D2-2** Unless a different date or frequency is approved by the **CEO**, the first annual Compliance Assessment Report must be submitted within fifteen (15) months of the date of this Statement, and subsequent reports must be submitted annually from that date.

**D2-3** Each annual Compliance Assessment Report must be endorsed by the proponent's Chief Executive Officer, or a person approved by proponent's Chief Executive Officer to be delegated to sign on the Chief Executive Officer's behalf.

**D2-4** Each annual Compliance Assessment Report must:

- (1) state whether each condition of this Statement has been complied with, including:
  - (a) exceedance of any **proposal** limits and extents;
  - (b) achievement of environmental **outcomes**;
  - (c) achievement of environmental **objectives**;
  - (d) requirements to implement the content of environmental management plans;
  - (e) monitoring requirements;
  - (f) implement **contingency measures**;
  - (g) requirements to implement adaptive management; and
  - (h) reporting requirements;
- (2) include the results of any monitoring (inclusive of any raw data) that has been required under Part C in order to demonstrate that the limits in Part A, and any **outcomes** or any **objectives** are being met;
- (3) provide evidence to substantiate statements of compliance, or details of where there has been a non-compliance;
- (4) include the corrective, remedial and preventative actions taken in response to any potential non-compliance;
- (5) be provided in a form suitable for publication on the proponent's website and online by the Department of Water and Environmental Regulation; and
- (6) be prepared and published consistent with the latest version of the Compliance Assessment Plan required by condition D2-5 which the **CEO** has confirmed by notice in writing satisfies the relevant requirements of Part C and Part D.

D2-5 The proponent must prepare a Compliance Assessment Plan which is submitted to the **CEO** at least six (6) months prior to the first Compliance Assessment Report required by condition D2-2, or prior to implementation of the **proposal**, whichever is sooner.

D2-6 The Compliance Assessment Plan must include:

- (1) what, when and how information will be collected and recorded to assess compliance;
- (2) the methods which will be used to assess compliance;

- (3) the methods which will be used to validate the adequacy of the compliance assessment to determine whether the implementation conditions are being complied with;
- (4) the retention of compliance assessments;
- (5) the table of contents of Compliance Assessment Reports, including audit tables; and
- (6) how and when Compliance Assessment Reports will be made publicly available, including being published on the proponent's website within sixty (60) days of being provided to the **CEO**.

### **D3 Contact Details**

D3-1 The proponent must notify the **CEO** of any change of its name, physical address or postal address for the serving of notices or other correspondence within twenty-eight (28) days of such change. Where the proponent is a corporation or an association of persons, whether incorporated or not, the postal address is that of the principal place of business or of the principal office in the State.

### **D4 Time Limit for Proposal Implementation**

D4-1 The **proposal** must be substantially commenced within five (5) years from the date of this Statement.

D4-2 The proponent must provide to the **CEO** documentary evidence demonstrating that they have complied with condition D4-1 no later than thirty (30) days after substantial commencement.

D4-3 If the **proposal** has not been substantially commenced within the period specified in condition D4-1, implementation of the **proposal** must not be commenced or continued after the expiration of that period.

### **D5 Public Availability of Data**

D5-1 Subject to condition D5-2, within a reasonable time period approved by the **CEO** upon the issue of this Statement and for the remainder of the life of the **proposal**, the proponent must make publicly available, in a manner approved by the **CEO**, all validated environmental data collected before and after the date of this Statement relevant to the **proposal** (including sampling design, sampling methodologies, monitoring and other empirical data and derived information products (e.g. maps)), environmental management plans and reports relevant to the assessment of this **proposal** and implementation of this Statement.

D5-2 If:

- (1) any data referred to in condition D5-1 contains trade secrets; or

- (2) any data referred to in condition D5-1 contains particulars of confidential information (other than trade secrets) that has commercial value to a person that would be, or could reasonably be expected to be, destroyed or diminished if the confidential information were published,

the proponent may submit a request for approval from the **CEO** to not make this data publicly available and the **CEO** may agree to such a request if the **CEO** is satisfied that the data meets the above criteria.

- D5-3 In making such a request the proponent must provide the **CEO** with an explanation and reasons why the data should not be made publicly available.

## **D6 Independent audit**

- D6-1 The proponent must arrange for an independent audit of compliance with the conditions of this statement, including achievement of the environmental **outcomes** and/or the environmental **objectives** and/ or environmental performance with the conditions of this statement, as and when directed by the **CEO**.
- D6-2 The independent audit must be carried out by a person with appropriate qualifications who is nominated or approved by the **CEO** to undertake the audit under condition D6-1.
- D6-3 The proponent must submit the independent audit report with the Compliance Assessment Report required by condition D2, or at any time as and when directed in writing by the **CEO**. The audit report is to be supported by credible evidence to substantiate its findings.
- D6-4 The independent audit report required by condition D6-1 is to be made publicly available in the same timeframe, manner and form as a Compliance Assessment Report, or as otherwise directed by the **CEO**.

Table 1: Abbreviations and definitions

Acronym or abbreviation	Definition or term
<b>Aboriginal cultural heritage</b>	Means the tangible and intangible elements that are important to the Aboriginal people of the State, and are recognised through social, spiritual, historical, scientific or aesthetic values, as part of Aboriginal tradition to the extent they directly affect or are affected by physical or biological surroundings. This includes but is not limited to sand dunes, vegetation type 6i containing <i>Eucalyptus victrix</i> , and vegetation type 6b containing <i>Eucalyptus camaldulensis</i> .
<b>Aboriginal site(s)</b>	As defined in section 4 and 5 under the <i>Aboriginal Heritage Act 1972</i> .
<b>Abundance</b>	The total number of individuals of a particular species or group of species in a defined area measuring how common or numerous that species or group of species is.
<b>Active mining area</b>	Areas within the <b>development envelope</b> used for operational purposes, including open pits and <b>waste rock landforms</b> . Does not include rehabilitated areas, access roads, pipeline corridors, and borefield infrastructure.
<b>Adverse impact / adversely impacted</b>	<p>Negative change that is neither trivial nor negligible that could result in a reduction in health, diversity or abundance of the receptor/s being impacted, or a reduction in <b>environmental value</b>. Adverse impacts can arise from direct or indirect impacts, or other impacts from the <b>proposal</b>.</p> <p>In relation to flora and vegetation, includes but is not limited to, a definable change in spatial coverage or a change in the health, species diversity, structure and plant density of vegetation, vegetation and flora mortality, spread or introduction of <b>environmental weeds</b>, introduction or spread of disease, and edge effects.</p> <p>In relation to terrestrial fauna, includes but is not limited to, habitat fragmentation, vehicle strike, collision with fencing, artificial light and vibration, noise emissions, and predation.</p> <p>In relation to <b>Aboriginal cultural heritage</b>, includes but is not limited to, hydrological change, structural damage, introduction or spread of non-indigenous flora and/or fauna, alteration of fauna behaviour, dust, light, and noise emissions.</p>
<b>Authorised offsets</b>	<p>Units representing <b>greenhouse gas emissions</b> issued under one of the following schemes and cancelled or retired in accordance with any rules applicable at the relevant time governing the cancellation or retiring of units of that kind:</p> <p>(a) Australian Carbon Credit Units issued under the Carbon Credits (Carbon Farming Initiative) Act 2011 (Cth);</p>

	<p>(b) Verified Emission Reductions issued under the Gold Standard program;</p> <p>(c) Verified Carbon Units issued under the Verified Carbon Standard program; or</p> <p>(d) other offset units that the Minister has notified the proponent in writing meet integrity principles and are based on clear, enforceable and accountable methods.</p>
<b>Baseline</b>	Initial conditions measured before <b>disturbance</b> associated with the <b>proposal</b> , as captured in the environmental management plan required by condition B3-1, which is used for comparison with data collected during and after <b>disturbance</b> to identify and measure changes in conditions.
<b>Best practice</b>	The most effective combination of technologies and design, construction, maintenance, operation, and decommissioning to minimise environmental impacts.
<b>CEO</b>	The Chief Executive Officer of the Department of the Public Service of the State responsible for the administration of section 48 of the <i>Environmental Protection Act 1986</i> , or the <b>CEO's</b> delegate.
<b>Cleared / Clearing</b>	Has the same meaning as in section 51A of the <i>Environmental Protection Act 1986</i> .
<b>CO<sub>2</sub>-e</b>	Carbon dioxide equivalent
<b>Confirmed</b>	<p>In relation to a plan required to be made and submitted to the <b>CEO</b>, means, at the relevant time, the plan that the <b>CEO</b> confirmed, by notice in writing, meets the requirements of the relevant condition.</p> <p>In relation to a plan required to be implemented without the need to be first submitted to the <b>CEO</b>, means that plan until it is revised, and then means, at the relevant time, the plan that the <b>CEO</b> confirmed, by notice in writing, meets the requirements of the relevant condition.</p>
<b>Conservation significant fauna</b>	Threatened fauna species listed under the <i>Environment Protection and Biodiversity Conservation Act 1999</i> and <i>Biodiversity Conservation Act 2016</i> , and Priority fauna listed by the <b>DFCA</b> .
<b>Construction activities</b>	Activities that are associated with the substantial implementation of a <b>proposal</b> including but not limited to, earthmoving, vegetation <b>clearing</b> , grading or construction of right of way. Construction activities do not include Geotechnical investigations (including potholing for services and the installation of piezometers) and other preconstruction activities where no <b>clearing</b> of vegetation is required.
<b>Contaminated</b>	Having a substance present at above background concentrations that presents, or has the potential to present, a risk or harm to human health, the environment or any <b>environmental value</b> .

<b>Contingency measures</b>	Planned actions for implementation if it is identified that an environmental <b>outcome</b> , environmental <b>objective</b> , <b>threshold criteria</b> , <b>environmental quality standard</b> or <b>management target</b> are likely to be, or are being, exceeded. Contingency measures include changes to operations or reductions in <b>disturbance</b> or <b>adverse impacts</b> to reduce impacts and must be decisive actions that will quickly bring the impact to below any relevant threshold, <b>management target</b> and to ensure that the environmental <b>outcome</b> and/or <b>objective</b> can be met.
<b>CPI</b>	The All Groups Consumer Price Index numbers for Perth compiled and published by the Australian Bureau of Statistics.
<b>Critical habitat for greater bilby</b>	As recorded in Greatland's Revised Referral Supporting Document (rev9 December 2025) (claypan, saltpan, sand dune, sandplain, stony hill/breakaway and stony plain).
<b>Critical habitat for night parrot</b>	As recorded and described in NRM Adaptive's Review of Greatland Pty Ltd's Havieron Project Night Parrot Habitat Assessment (NRM Adaptive October 2025) (Appendix zHH of the revised referral supporting document rev9). Spatial data held as identified in Schedule 1.
<b>Daylight hours</b>	The period between sunrise and sunset, as specified on the Australian Government Bureau of Meteorology weather station at Telfer (station number SITE 13030).
<b>DBCA</b>	The government agency responsible for the administration of the <i>Biodiversity Conservation Act 2016</i> , which at the time of publication of this Ministerial Statement is the Department of Biodiversity, Conservation and Attractions.
<b>DCCEEW</b>	Department of Climate Change, Energy, the Environment and Water
<b>Detecting/ Detectable</b>	The smallest statistically discernible effect size that can be achieved with a monitoring strategy designed to achieve a statistical power value of at least 0.8 or an alternative value as determined by the <b>CEO</b> .
<b>Development envelope</b>	The maximum area within which the <b>proposal</b> will be located, and consistent with the Proposal Content Document for the <b>proposal</b> as referred to in the Introduction of this Statement, as depicted in Figure 1, and as defined by geographic coordinates in Schedule 1.
<b>Disturbance footprint</b>	The location within which the physical <b>proposal</b> elements will occur.
<b>Disturb / Disturbance</b>	Means directly has or materially contributes to the disturbance effect on health, diversity or <b>abundance</b> of the receptor/s being impacted or on an <b>environmental value</b> . In relation to flora, vegetation or fauna habitat, includes to result in the death, destruction, removal, severing or doing substantial damage to its detriment.

	<p>In relation to fauna, includes to have the effect of altering the natural behaviour of fauna to its detriment.</p> <p>In relation to inland waters, includes to have the effect of altering hydrological regimes or water quality to the detriment of the <b>environmental values</b> supported by or dependent on surface water and/or groundwater.</p> <p>In relation to <b>Aboriginal cultural heritage</b>, includes direct physical or biological effects on the tangible and intangible elements that are important to Aboriginal people, and are recognised through social, spiritual, historical, scientific or aesthetic values, as part of Aboriginal tradition.</p>
<b>DMPE</b>	The Department of Mines, Petroleum and Exploration
<b>DWER</b>	The Department of Water and Environmental Regulation
<b>Ecological linkages</b>	Ecological linkages are a series (both contiguous and non-contiguous) of patches of native vegetation which, by virtue of their proximity to each other, act as habitat stepping stones that help maintain ecological processes. Ecological linkages support the movement of organisms within and across a landscape and enable them to access refugia during seasonal and climatic variability.
<b>Emergency response vehicles</b>	Vehicles responding to an emergency, as defined by section 5 of the <i>Emergency Management Act 2005</i> .
<b>Environmental harm</b>	Has the meaning provided by section 3A(2) of the <i>Environmental Protection Act 1986</i> .
<b>Environmental value(s)</b>	A beneficial use, or ecosystem health condition.
<b>Environmental weeds</b>	Any plant species that: <ul style="list-style-type: none"> <li>(a) is declared under section 22(2) of the <i>Biosecurity and Agriculture Management Act 2007</i>; or</li> <li>(b) is a non-native plant species that has actual or potential ecological impacts in Western Australia, including the ability to invade or modify native vegetation, displace native species, or alter ecological processes.</li> </ul>
<b>'Excellent' condition native vegetation</b>	Means the condition of native vegetation rated in accordance with the <i>Technical guidance – Flora and vegetation surveys for environmental impact assessment, Environmental Protection Authority, December 2016</i> including any revision to this technical guidance.
<b>Fauna crossing</b>	Infrastructure to reduce fauna vehicle strike and facilitate fauna movement including, but not be limited to, fauna overpasses, fauna underpasses (which must contain furniture for ground-dwelling fauna), dual-use culverts (that is for fauna and drainage) and fencing to facilitate access to the fauna crossing structure.

<b>Fauna handler</b>	A person who is qualified and has attained the appropriate licence/s and authorisation/s under section 40 of the <i>Biodiversity Conservation Act 2016</i> and the Biodiversity Conservation Regulations 2018.
<b>Fauna spotter</b>	A person who is suitably trained in species identification, who does not perform any handling of animals where a licence to do so is required.
<b>Flora survey study area</b>	As depicted in Figure 3, and as defined by geographic coordinates in Schedule 1.
<b>GL/a</b>	Gigalitres(s) per annum
<b>Greater bilby occupied burrows</b>	As outlined in the conservation and management of the bilby ( <i>Macrotis lagotis</i> ) in the Pilbara (Department of Biodiversity, Conservation and Attractions, 2018) or any subsequent revisions.
<b>Greater bilby survey study area</b>	As depicted in Figure 4, and as defined by geographic coordinates in Schedule 1.
<b>Great desert skink occupied burrows</b>	As identified and recorded during <b>pre-clearance surveys</b> .
<b>Greenhouse gas or GHG</b>	Has the meaning given by Section 7A of the National Greenhouse and Energy Reporting Act 2007 (Cth) or, if that definition is amended or repealed, the meaning set out in an Act, regulation or instrument concerning greenhouse gases as specified by the Minister.
<b>Greenhouse gas emissions</b>	<b>Greenhouse gas</b> emissions expressed in tonnes of carbon dioxide equivalent ( <b>CO<sub>2</sub>-e</b> ) as calculated in accordance with the definition of 'carbon dioxide equivalence' in Section 7 of the <i>National Greenhouse and Energy Reporting Act 2007</i> (Cth), or, if that definition is amended or repealed, the meaning set out in an Act, regulation or instrument concerning greenhouse gases as specified by the Minister.
<b>Ground disturbing activities</b>	Any activity or activities undertaken in the implementation of the <b>proposal</b> , including any <b>clearing</b> , civil works or construction from the issue of this Ministerial Statement.
<b>Groundwater abstraction</b>	The process of taking water from a ground source.
<b>ha</b>	Hectare(s).
<b>Haulage operations</b>	The operation of haul trucks and other trucks on the <b>Havieron to Telfer haul road</b> , including loaded and unloaded movements directly associated with the proposal.
<b>Havieron to Telfer haul road</b>	The ~55 km haul road (and infrastructure corridor) between the Havieron and Telfer sites, as depicted in Figure 2 and defined by geographic coordinates in Schedule 1.
<b>IBRA</b>	Interim Biogeographic Regionalisation for Australia.

<b>km</b>	Kilometre(s).
<b>km/hr</b>	Kilometre(s) per hour.
<b>Local area</b>	Within 10 <b>km</b> of the <b>development envelope</b> .
<b>m</b>	Metre(s).
<b>Management action(s)</b>	The identified actions implemented with the intent of achieving the environmental <b>objective</b> .
<b>Management target(s)</b>	A type of indicator to evaluate whether an environmental <b>objective</b> is being achieved.
<b>Mt</b>	Million tonne(s).
<b>Mtpa</b>	Million tonne(s) per annum.
<b>Native title party/ies</b>	As defined in section 18(1AA) under the <i>Aboriginal Heritage Act 1972</i> .
<b>Net-gain</b>	The extent of the environmental benefit associated with the offset must exceed the extent of the significant residual impact, allowing for natural background variation, seasonal changes, or other factors outside the control of the proponent and as agreed to by the <b>CEO</b> in writing.
<b>Night parrot roosting sites</b>	As described in Guidelines for determining the likely presence and habitat usage of night parrot ( <i>Pezoporus occidentalis</i> ) in Western Australia (Department of Conservation and Attractions 2018) or any subsequent revisions, and identified and recorded during <b>pre-clearance surveys</b> .
<b>Night-time hours</b>	Means any time between 30 minutes prior to sunset and 30 minutes after sunrise, as specified on the Australian Government Bureau of Meteorology weather station at Telfer (station number SITE 13030).
<b>Objective(s)</b>	An objective is the proposal-specific desired state for an environmental factor/s to be achieved from the implementation of <b>management actions</b> .
<b>Occupied greater bilby burrow</b>	As outlined in <i>the conservation and management of the bilby (Macrotis lagotis) in the Pilbara</i> (Department of Biodiversity, Conservation and Attractions, 2018) or any subsequent revisions.
<b>Offset Environmental Management Plan</b>	Biodiversity Offset Management Plan: Havieron Gold Mine (V3, November 2025) or any subsequent revisions.
<b>Offset Management Area</b>	As described in Biodiversity Offset Management Plan: Havieron Gold Mine (V3, November 2025) or any subsequent revisions.
<b>On-ground management</b>	This includes threat abatement actions such as feral animal control and fire management, revegetation (re-establishment of native vegetation in degraded areas) and <b>rehabilitation</b> (repair of

	ecosystem processes and management of weeds, disease, or feral animals) with the <b>objective</b> to achieve a <b>tangible improvement</b> to the environmental values in the <b>Proposed Offset Management Area</b> .
<b>Operations</b>	Operation of the plant infrastructure for the <b>proposal</b> and includes pre-commissioning, commissioning, start-up and operation of the plant infrastructure for the <b>proposal</b> .
<b>Outcome(s)</b>	A proposal-specific result to be achieved when implementing the <b>Proposal</b> .
<b>Pollution</b>	Has the meaning provided by section 3A(1) of the <i>Environmental Protection Act 1986</i> .
<b>Pre-clearance survey(s)</b>	Surveys designed to identify the presence or evidence of threatened fauna listed under the <i>Biodiversity Conservation Act 2016</i> prior to <b>ground disturbing activities</b> , undertaken by a suitably qualified specialist, in alignment with relevant <b>EPA technical guidance</b> , Commonwealth guidance and/or <b>DBCA</b> guidance. OR in alignment with relevant <b>EPA technical guidance</b> , and <b>DBCA</b> guidelines for surveys for threatened fauna, including but not limited to night parrot ( <b>DBCA 2024</b> ) and bilby ( <b>DBCA 2017</b> ) or any subsequent revisions of these guidance and guidelines.
<b>Predicted drawdown extent</b>	The modelled groundwater drawdown extent, as defined by the 2 m contour after 12 years of mining and, as depicted in Figure 5 and defined by the geographic coordinates in Schedule 1.
<b>Progressive manner</b>	In relation to <b>rehabilitation</b> , the staged treatment of <b>disturbed</b> areas during exploration, <b>construction</b> , development and <b>operations</b> as soon as these areas become available.
<b>Prominent ephemeral water sources</b>	Well-defined landscape features, such as ephemeral watercourses, drainage lines, or depressions, that intermittently hold or convey surface water following rainfall
<b>Proposal</b>	The proposal is the entire <b>proposal</b> , which includes the existing approved proposal (Telfer mine, Telfer power supply and Infrastructure corridor), plus the expansion (Havieron Stage 1 and Stage2).
<b>Proposal GHG emissions</b>	Scope 1 <b>GHG emissions</b> expressed in tonnes of carbon dioxide equivalent ( <b>CO<sub>2-e</sub></b> ) released to the atmosphere as a direct result of an activity or series of activities that comprise/s or form/s part of the <b>proposal</b> , calculated in accordance with: (a) the National Greenhouse and Energy Reporting Act 2007 (Cth) and its subsidiary legislation; or (b) if that Act or the relevant subsidiary legislation is amended or repealed such that it does not provide a mechanism for calculating the Proposal Emissions, any other Act, regulation or instrument concerning greenhouse gases as specified by the <b>CEO</b> .

<b>Recovery and Threat Abatement Plans</b>	Recovery Plan for the Greater Bilby ( <i>Macrotis lagotis</i> ) (Department of Climate Change, Energy, the Environment and Water 2023), Threat abatement plan for predation by the European red fox (Department of Climate Change, Energy, the Environment and Water 2008), Threat abatement plan for predation by feral cats (Department of Climate Change, Energy, the Environment and Water 2024), Threat abatement plan to reduce the impacts on northern Australia's biodiversity by the five listed grasses (Department of Climate Change, Energy, the Environment and Water 2012), The Threatened Species Action Plan 2022-2032 (Department of Climate Change, Energy, the Environment and Water 2022) or any subsequent revisions of these plans.
<b>Rehabilitate / Rehabilitation</b>	A process of ecosystem repair which aims to maximise the return of biodiversity to disturbed land by reinstating <b>self-sustaining</b> and functional ecosystems based on local species and management of weeds, disease and feral animals.
<b>Relevant Traditional Owner(s)</b>	In relation to the land subject to the <b>proposal</b> , means one or more of the following: <ul style="list-style-type: none"> <li>- a registered native title body corporate for the land; or</li> <li>- a registered native title claimant for the land; or</li> <li>- a group of persons with Aboriginal traditional and cultural associations with the land; or</li> <li>- a body prescribed in the <i>Aboriginal Heritage Regulations 1974</i>.</li> </ul>
<b>Revegetate / Revegetated</b>	Re-establishment of native vegetation/habitat in degraded areas.
<b>Safeguard Legislation</b>	The Commonwealth <i>National Greenhouse and Energy Reporting Act 2007</i> and associated <i>National Greenhouse and Energy Reporting (Safeguard Mechanism) Rule 2015</i> .
<b>Scope 1 emissions / Scope 1</b>	Scope 1 emissions of <b>greenhouse gas</b> , in relation to a facility, means the release of <b>greenhouse gas</b> into the atmosphere as a direct result of one or more activities, which are part of the significant amendment proposal, that generate <b>greenhouse gas emissions</b> .
<b>Self-sustaining</b>	Refers to vegetation or fauna habitat that can survive (continue indefinitely) without ongoing <b>management actions</b> such as watering, weed control or infill planting.
<b>Significant amendment</b>	Is the expansion of the approved proposal as described and documented in Table 2 of the proponents Proposal Content Document dated 5 December 2025.
<b>Significant Species Management Plan</b>	Significant Species Management Plan (SSMP): Havieron Gold Mine (rev2 September 2025)

<b>Supporting habitat for the night parrot</b>	As recorded in Greatland's Revised Referral Supporting Document (rev9 December 2025) (claypan, saltpan, sand dune, sandplain, stony hill/breakaway and stony plain).
<b>Tangible improvement</b>	A perceptible, measurable and definable improvement that provides additional ecological benefit and/or value.
<b>Threshold criteria</b>	The indicators that have been selected to represent limits of impact beyond which the environmental <b>outcome</b> is not being met.
<b>Trigger criteria</b>	Indicators that have been selected for monitoring to provide a warning that, if exceeded, the environmental outcome may not be achieved. They are intended to forewarn of the approach of the <b>threshold criteria</b> and trigger response actions.
<b>Vegetation condition</b>	The condition of native vegetation rated in accordance with the <i>Technical Guidance – Flora and vegetation surveys for environmental impact assessment (EPA 2016)</i> including any revision to this technical guidance.
<b>Waste rock landforms</b>	Landform that consists of rocks removed in the mining process to provide access to the ore.

### Figures (attached)

- Figure 1 Telfer – Havieron Gold Mining Project development envelope (This map is a representation of the co-ordinates referenced in Schedule 1)
- Figure 2 Telfer – Havieron Gold Mining Project development envelope and disturbance footprint (This map is a representation of the co-ordinates referenced in Schedule 1)
- Figure 3 Telfer – Havieron Gold Mining Project Flora survey study area (This map is a representation of the co-ordinates referenced in Schedule 1)
- Figure 4 Telfer – Havieron Gold Mining Project Greater bilby survey study area (This map is a representation of the co-ordinates referenced in Schedule 1)
- Figure 5 Telfer – Havieron Gold Mining Project Predicted drawdown extent (This map is a representation of the co-ordinates referenced in Schedule 1)

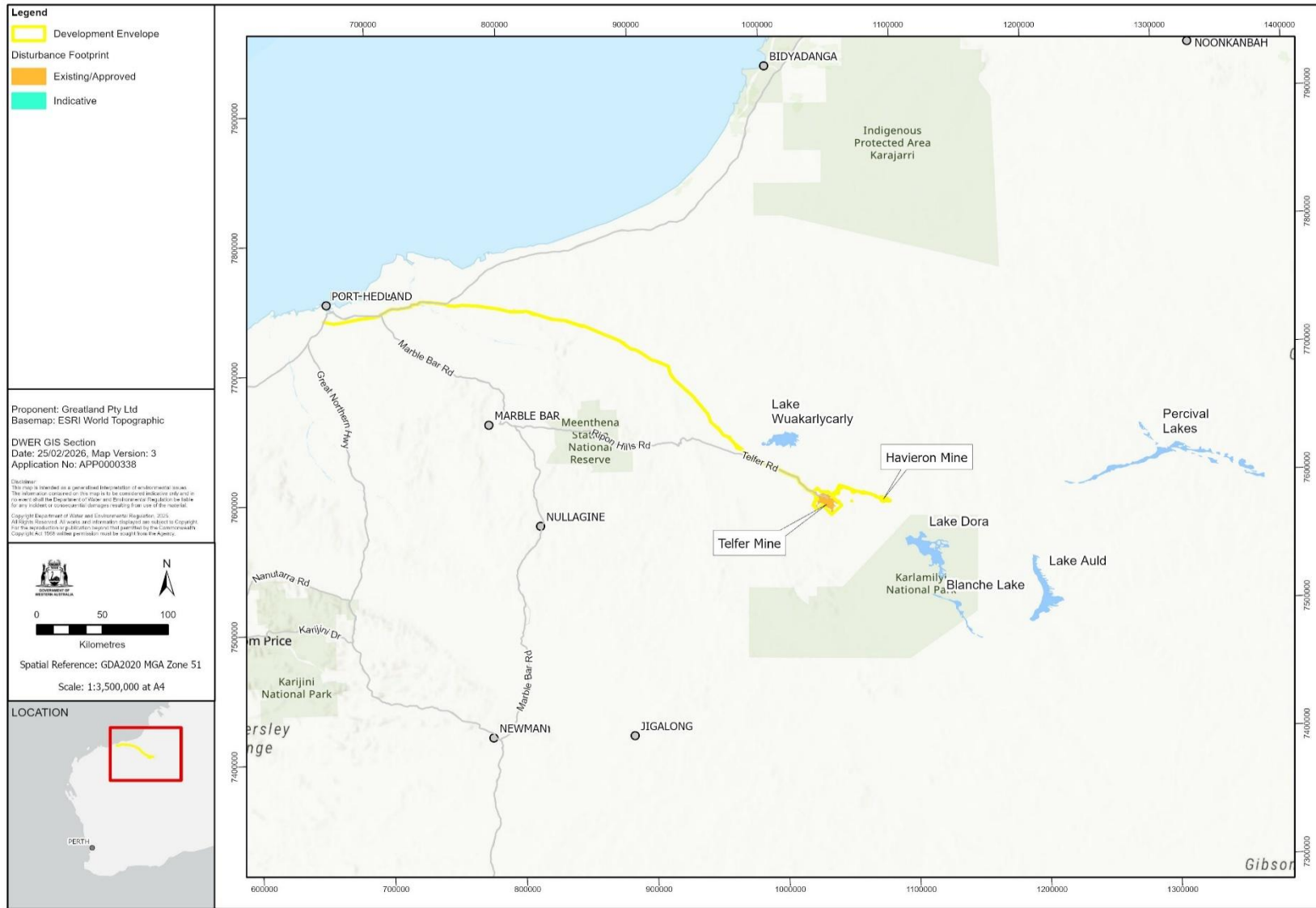


Figure 1 : Telfer – Havieron Gold Mining Project - development envelope

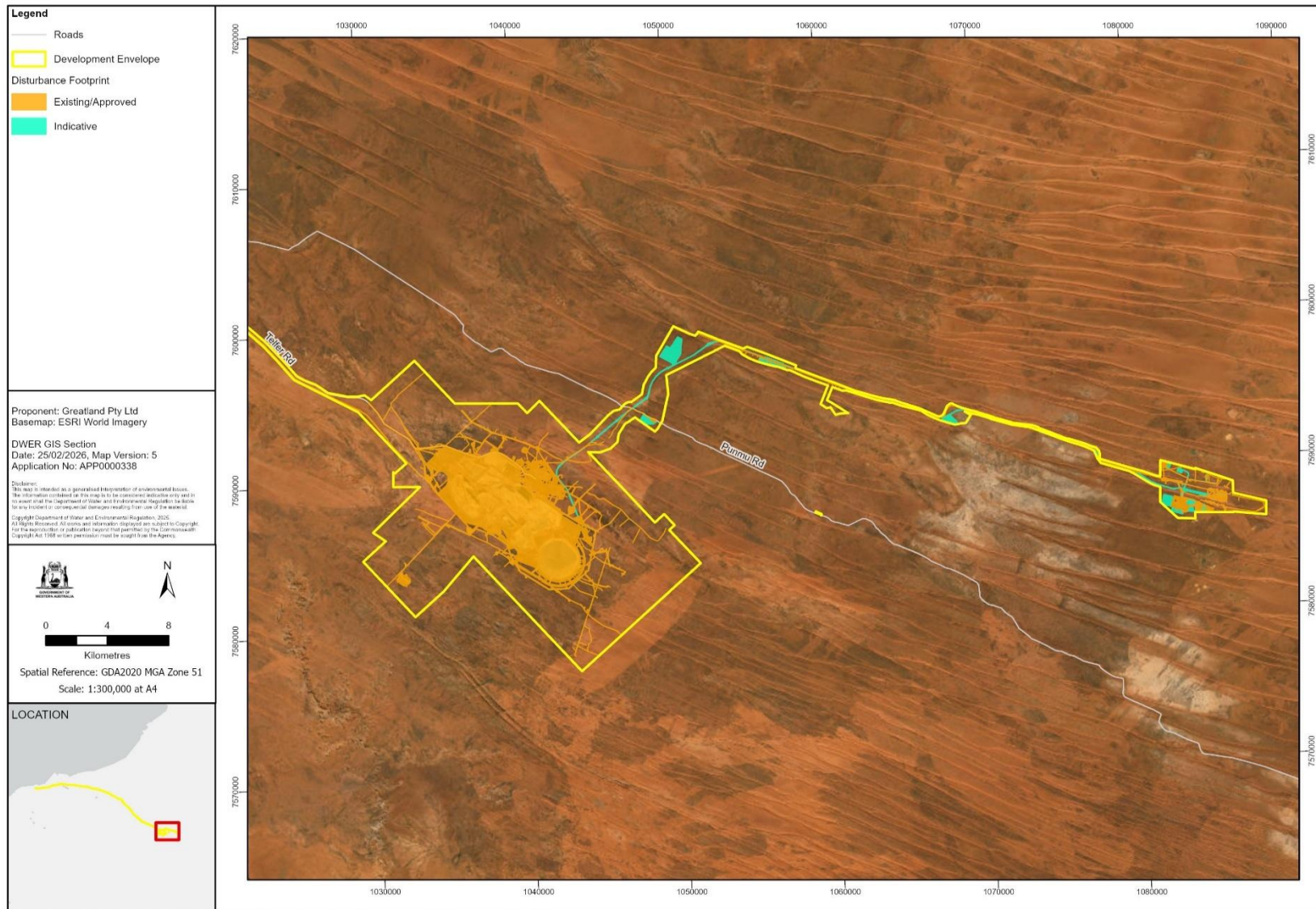


Figure 2 : Telfer – Havieron Gold Mining Project - development envelope and disturbance footprint

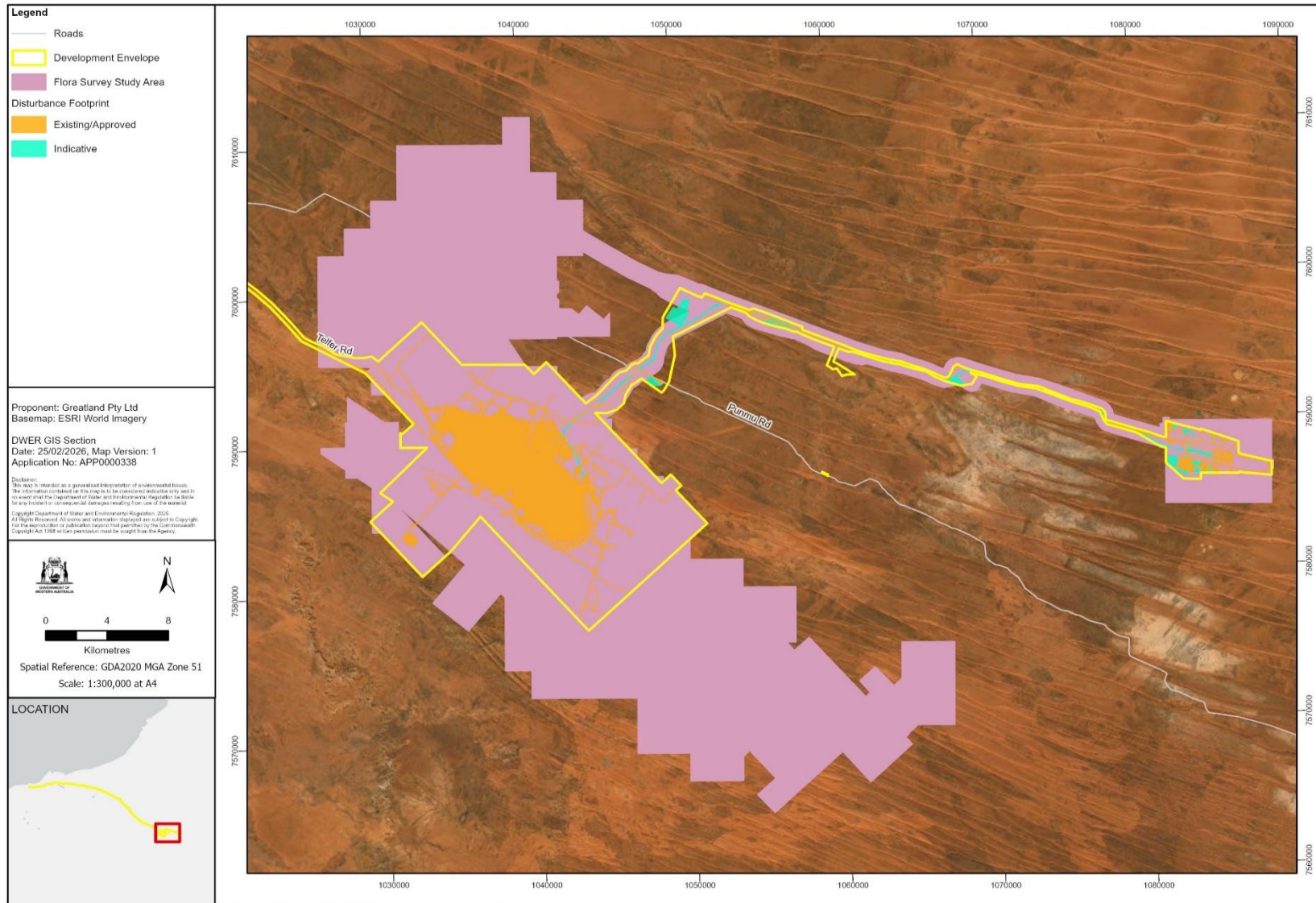




Figure 4 : Telfer – Havieron Gold Mining Project – Greater bilby survey study area

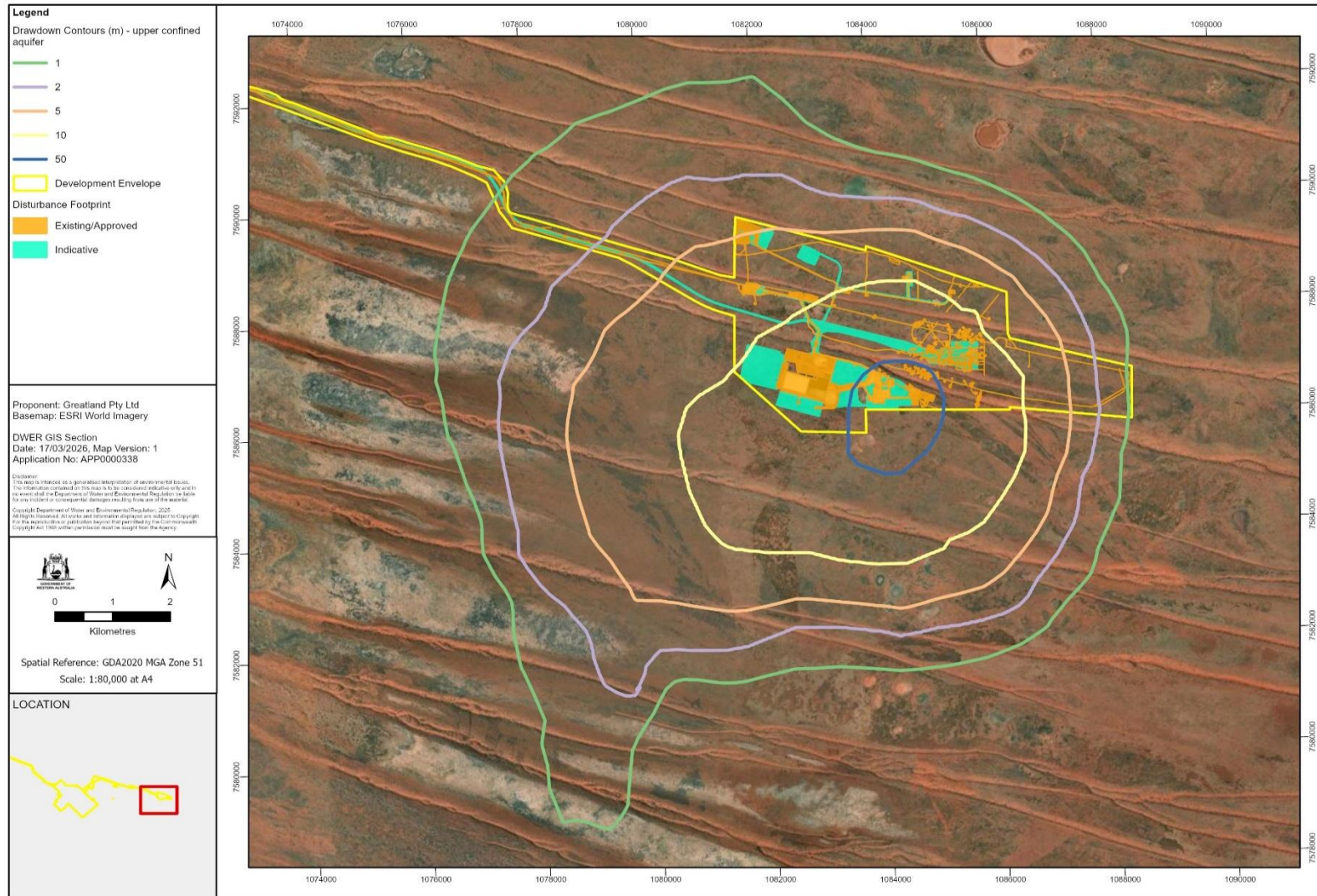


Figure 5 : Havieron Predicted drawdown extent – upper confined aquifer

**Schedule 1**

All co-ordinates are in metres, listed in Map Grid of Australia Zone 51 (MGA Zone 51), datum of Geocentric Datum of Australia 2020 (GDA20).

Spatial data depicting the figures are held by the Department of Water and Environmental regulation. Record no. APP-0000338.

## Appendix B: Decision-making authorities

**Table B1 - Relevant decision-making authorities for the proposal**

Decision-Making Authority	Legislation (and approval)
1. Minister for Aboriginal Affairs	<i>Aboriginal Heritage Act 1972</i> - section 18 consent to impact a registered Aboriginal heritage site
2. Minister for Environment	<i>Biodiversity Conservation Act 2016</i> - section 40 authority to take or disturb threatened species
3. Minister for Mines and Petroleum	<i>Mining Act 1978</i> - granting of a mining lease/general purpose lease/retention licence
4. Minister for Water	<i>Rights in Water and Irrigation Act 1914</i> - section 5C licence to take water, such as groundwater abstraction and/or dewatering - section 26D licence to construct or alter a well (bore)
5. Chief Executive Officer, Department of Biodiversity, Conservation and Attractions	<i>Biodiversity Conservation Act 2016</i> - authority to take flora and fauna (other than threatened species)
6. Chief Health Officer, Department of Health	<i>Health Act 1911</i> Health (Treatment of Sewage and Disposal of Effluent and Liquid Waste) Regulation 1974
7. Deputy Worksafe Commissioner, Department of Local Government and Industry Regulation	<i>Dangerous Goods Safety Act 2004</i> - storage and handling of dangerous goods <i>Mines Safety and Inspection Act 1994</i> - mine safety - approval to commence mining operations
8. Executive Director Resource and Environmental Compliance, Department of Mines, Petroleum and Exploration	<i>Mining Act 1978</i> - mine development and closure plan
9. Mining Registrar, Department of Mines, Industry Regulation and Safety	<i>Mining Act 1978</i> - miscellaneous license
10. Chief Executive Officer, Department of Water and Environmental Regulation	<i>Environmental Protection Act 1986</i> - part V works approval and licence - part IV compliance (Ministerial statements)
11. Chief Executive Officer, Shire of East Pilbara	<i>Local Government Act 1995</i> - development approval and scheme amendment <i>Health Act 1911</i>

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Decision-Making Authority	Legislation (and approval)
	<ul style="list-style-type: none"><li>- permit for treatment of sewage <i>Health Act 1911</i> and Health (Treatment of Sewage and Disposal of Effluent and Liquid Waste) Regulation 1974</li><li><i>Building Act 2011</i></li><li>- permit for worker accommodation</li></ul>

## Appendix C: Regulation under other statutory processes

**Table C1 - Relevant other statutory processes for the proposal**

Statutory decision-making process	Environmental outcome
<i>Aboriginal Heritage Act 1972</i>	No disturbance to Aboriginal cultural heritage, unless consent is granted to disturb that site under the <i>Aboriginal Heritage Act 1972</i> and has involved reasonable steps to consult with relevant Traditional Owners.
<i>Biodiversity Conservation Act 2016</i>	The taking of threatened flora, fauna and ecological communities does not result in any species or community being listed under a higher conservation status.
<i>Dangerous Goods Safety Act 2004</i>	Regulation and licencing of the safe storage, handling, and transport of dangerous goods.
<i>Environmental Protection Act 1986</i> Part V – Industry Regulation – Division 3: Works Approvals and Licences	Regulate emissions and discharges from construction and operations to achieve the following outcomes:  - no adverse impacts to soil, surface water and groundwater quality
<i>Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)</i>	The EPA has recommended conditions in relation to impacts on listed threatened species and communities protected by the EPBC Act. The Department of Climate Change, Energy, the Environment and Water may impose additional conditions under the EPBC Act.
<i>Health Act 1911</i> Health (Treatment of Sewage and Disposal of Effluent and Liquid Waste) Regulation 1974	Sewage management for the proposal will be undertaken in accordance with the Health (Miscellaneous Provisions) Act 1911 and the Health (Treatment of Sewage and Disposal of Effluent and Liquid Waste) Regulations 1974, which regulate the construction, operation and approval of sewage treatment and disposal systems in Western Australia.
<i>Mining Act 1978</i>	Mining activities and associated closure and rehabilitation to be managed via a Mine Development and Closure Plan under the Mining Act and achieve the following outcomes: <ul style="list-style-type: none"> <li>rehabilitated landforms are stable and do not cause pollution or environmental harm</li> <li>rehabilitated vegetation is self-sustaining</li> <li>rehabilitated areas are consistent with the species diversity and abundance of native vegetation within comparative analogue or reference sites</li> </ul>

	<ul style="list-style-type: none"> <li>• rehabilitation includes the use of native seeds collected from native vegetation within the proposal</li> <li>• rehabilitated drainage lines are stable, not prone to erosion, and support ecological processes</li> <li>• closure planning and rehabilitation are undertaken in a progressive manner consistent with achievement of the above outcomes during operations, where practicable.</li> </ul>
<p><i>National Greenhouse and Energy Reporting Act 2007 (Commonwealth)</i></p>	<p>The reduction of scope 1 GHG emissions to meet Australian emission targets of 43% below 2005 levels by 2030 and net zero by 2050. The potential environmental effects of the proposal associated with the emissions of scope 1 GHG emissions are likely to be mitigated to achieve consistency with the environmental factor objective for GHG emissions through the obligations required under the <i>National Greenhouse and Energy Reporting Act 2007</i> and the Commonwealth Safeguard Mechanism.</p>
<p><i>Rights in Water and Irrigation Act 1914</i></p>	<p>No adverse impacts to groundwater or surface water.</p>

## Appendix D: Environmental Protection Act principles

**Table D1 - Consideration of principles of the Environmental Protection Act 1986**

EP Act principle	Consideration
<p><b>1. The precautionary principle</b></p> <p><i>Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.</i></p> <p><i>In application of this precautionary principle, decisions should be guided by –</i></p> <p><i>(a) careful evaluation to avoid, where practicable, serious or irreversible damage to the environment; and</i></p> <p><i>(b) an assessment of the risk-weighted consequences of various options.</i></p>	<p>The EPA has considered the precautionary principle in its assessment, with particular regard to flora and vegetation, terrestrial fauna, inland waters, subterranean fauna, greenhouse gas emissions, and social surroundings.</p> <p>The proponent has undertaken appropriate studies and investigations to provide the scientific information necessary to identify environmental values and to understand potential risks to the environment and human health.</p> <p>The EPA considers there to be a risk of significant residual impacts on the night parrot and greater bilby due to their conservation status, expected habitat loss, and potential nighttime use of the haul road. There is also uncertainty regarding the effectiveness of contingency measures under an adaptive management approach.</p> <p>In considering the precautionary principle, the EPA:</p> <ul style="list-style-type: none"> <li>evaluated options to avoid serious or irreversible harm, including whether the proposal should proceed, whether proportionate mitigation and contingency measures are available, and whether offsets could deliver a net benefit for the species.</li> <li>concluded that no additional management or contingency measures are likely to provide sufficient assurance that serious risks can be avoided.</li> <li>determined that an offsets program aligned with relevant species recovery plans, and focused on addressing key threats, would provide a regional net benefit for both species. Such offsets are expected to enhance habitat quality outside the proposal area and improve resilience within the proposal area should significant impacts occur.</li> </ul> <p>The EPA notes that some residual impacts on critical and supporting habitat will remain, even with additional mitigation. However, given that unmanaged fire and feral animals represent the primary threats to both species, the EPA is satisfied that an offsets plan targeting fire and feral pest management will deliver a net benefit for the species and provide broader ecological benefits, including for other fauna such as the great desert skink.</p>

EP Act principle	Consideration
	<p>The EPA is therefore satisfied that, with these additional measures in place, the proposal is not likely to be inconsistent with the EPA's objectives and that this approach aligns with the considerations required under the precautionary principle.</p> <p>The EPA considers that recommending the proposal be implemented with conditions reflecting these measures constitutes a proportionate response to prevent irreversible or serious harm to the night parrot and greater bilby, without imposing requirements beyond what is necessary to meet the EPA's objectives.</p> <p><u>Greenhouse gas emissions</u></p> <p>The EPA notes that climate change as a result of cumulative GHG emissions has the potential to cause serious damage to WA's environment. The specific impacts of any single proposal's GHG emissions are not able to be known with certainty at this time. However, the EPA has not used this as a reason for postponing assessment of the proposal's contribution to the State's GHG emissions or recommending practicable conditions to reduce emissions in order to minimise the risk of environmental harm associated with climate change.</p> <p>The EPA notes that as a result of implementation residual scope 1 GHG emissions will be emitted prior to the proponent reaching net zero. The EPA considers the Commonwealth's Safeguard Mechanism represents an as far as practicable reduction of the proposal's emissions. The EPA has recommended condition B5 that requires the proponent to notify the State of a substantial change to its obligations under the Safeguard Mechanism.</p>
<p><b>2. The principle of intergenerational equity</b></p> <p><i>The present generation should ensure that the health, diversity and productivity of the environment is maintained and enhanced for the benefit of future generations.</i></p>	<p>The EPA has considered the principle of intergenerational equity in its assessment and has had particular regard to this principle in its assessment of inland waters, flora and vegetation, terrestrial fauna, social surroundings, and greenhouse gas emissions.</p> <p>The EPA notes that the proponent has considered this principle by:</p> <ul style="list-style-type: none"> <li>• Committing to decarbonise to reduce emissions over the life of the proposal</li> <li>• consulting with the Traditional Owners of the potential impacts to the social and cultural values and to ensure values and traditional knowledge of the land is not compromised</li> </ul>

EP Act principle	Consideration
	<ul style="list-style-type: none"> <li>• commitments to rehabilitate in a progressive manner and at the cessation of mining to a state suitable for future land use, as identified by the pastoral, traditional, or other land users.</li> </ul> <p>The EPA considers consistency with this principle could be achieved with the implementation of its recommended conditions, which require the proponent to:</p> <ul style="list-style-type: none"> <li>• maintain levels of ecological protection within the terrestrial environment such as limits on the extent of disturbance to flora and vegetation, and terrestrial fauna habitat</li> <li>• ensure ongoing access to land used for traditional use or custom by the Traditional Owners</li> <li>• consult with the Traditional Owners on</li> <li>• rehabilitate landforms, vegetation, and fauna habitat to an appropriate state, including consideration of species diversity and abundance.</li> </ul> <p>The EPA has concluded that the environmental values will be protected, and the health, diversity and productivity of the environment will be maintained for the benefit of future generations.</p> <p><u>Greenhouse gas emissions</u></p> <p>The EPA has noted that GHG emissions pose a risk to future generations, however, also notes that the proponent's obligations under the Commonwealth's Safeguard Mechanism to net zero emissions by 2050 consistent with the Paris Agreement and IPCC 1.5 report, and to use offsets should these targets not be met by continuous improvement. The EPA has recommended condition B5 which requires the proponent to report to the CEO of DWER if obligations change under the <i>National Greenhouse and Energy Reporting Act 2007</i> (NGER Act) and Safeguard Mechanism.</p>
<p><b>3. The principles of the conservation of biological diversity and ecological integrity</b></p> <p><i>Conservation of biological diversity and ecological integrity should be a fundamental consideration.</i></p>	<p>The EPA has considered the principle of conservation of biological diversity and ecological integrity in its assessment and has had particular regard to this principle in its assessment of flora and vegetation, terrestrial fauna and subterranean fauna. To ensure biodiversity and ecological integrity of environmental values within the development envelope, the EPA has recommended conditions including disturbance limits for terrestrial fauna habitat and priority flora specie and ensuring vegetation and fauna habitat are appropriately considered in rehabilitation planning. The EPA has also set limits on the maximum disturbance of stygofauna habitat types to ensure species are able to persist beyond the boundaries of the</p>

EP Act principle	Consideration
	<p>development envelope. The EPA has concluded that the actions to avoid and minimise impacts to environmental values, which are also recommended as conditions, would likely ensure that environmental outcomes are achieved. The application of limits on disturbance and any associated conditions are to ensure there is no significant residual impact on the biodiversity diversity and ecological integrity of these values.</p>
<p><b>4. Principles relating to improved valuation, pricing and incentive mechanisms</b></p> <p><i>(1) Environmental factors should be included in the valuation of assets and services.</i></p> <p><i>(2) The polluter pays principle — those who generate pollution and waste should bear the cost of containment, avoidance or abatement.</i></p> <p><i>(3) The users of goods and services should pay prices based on the full life cycle costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any wastes.</i></p> <p><i>(4) Environmental goals, having been established, should be pursued in the most cost effective way, by establishing incentive structures, including market mechanisms, which enable those best placed to maximise benefits and/or minimise costs to develop their own solutions and responses to environmental problems.</i></p>	<p>In considering this principle, the EPA notes that the proponent will bear the costs relating to implementing the proposal to achieve environmental outcomes, and management and monitoring of environmental impacts during construction, operation and decommissioning of the proposal. The EPA has had particular regard to this principle in considering flora and vegetation, terrestrial fauna, subterranean fauna, social surroundings, and greenhouse gas emissions. The EPA notes that the proponent has pursued these principles by:</p> <ul style="list-style-type: none"> <li>• funding the cost of environmental avoidance and management measures and ongoing monitoring as detailed in the referral, together with the provision of biodiversity offsets</li> <li>• incorporating costs of environmental management in project planning</li> <li>• minimising clearing to the extent required</li> <li>• progressively rehabilitating to restore natural ecosystems throughout the life of the proposal.</li> </ul> <p><u>Greenhouse gas emissions</u></p> <p>The proponent will be responsible for bearing the costs of implementing measures to reduce and offset GHG emissions, including the costs of adopting advances in process management and other measures in the future to further reduce and offset GHG emissions to achieve net zero along a linear trajectory to net zero by 2050.</p>
<p><b>5. The principle of waste minimisation</b></p> <p><i>All reasonable and practicable measures should be taken to minimise the generation of waste and its discharge into the environment.</i></p>	<p>The EPA has considered the principle of waste minimisation in its assessment and has had particular regard to this principle in its assessment of inland waters, flora and vegetation, terrestrial fauna, social surroundings, and greenhouse gas emissions.</p> <p>The proponent has considered the principle of waste minimisation in designing the proposal, such as:</p> <ul style="list-style-type: none"> <li>• utilising existing roads</li> </ul>

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EP Act principle	Consideration
	<ul style="list-style-type: none"><li>• Mine waste (tailings) deposited at Telfer will be reclaimed for production of paste backfill for underground workings at Havieron</li><li>• utilising excess dewater in mineral processing, dust suppression, and domestic water use.</li></ul>

## Appendix E: Other environmental factors

**Table E1 - Consideration of other environmental factors**

Environmental factor	Description of the proposal's likely impacts on the environmental factor	Government agency and public comments	Evaluation of why the factor is not a key environmental factor
<b>Land</b>			
Landforms	<p>The proposal does not occur within or impact upon unique or uncommon natural landforms.</p> <p>Sand dunes have been addressed under the social surroundings environmental factor associated with Aboriginal cultural heritage.</p>	<p><u>Public comments</u></p> <ul style="list-style-type: none"> <li>No public comments were received for this factor.</li> </ul> <p><u>Agency comments</u></p> <ul style="list-style-type: none"> <li>No agency comments were received for this factor.</li> </ul>	<p>Landforms was not identified as a preliminary key environmental factor when the EPA decided to assess the proposal. Having regard to:</p> <ul style="list-style-type: none"> <li>the siting of the indicative footprint to avoid direct disturbance to key habitats and features</li> <li>limited height and scale of temporary infrastructure, such as the processing plant</li> <li>the distance of permanent landforms from sensitive receptors</li> <li>waste structures including the WRLs and TSF's will be designed to ensure they will be physically safe, geotechnically stable, and geochemically non-polluting and non-contaminating, consistent with the Guideline for preparing Mine Closure Plans (DEMIRS 2025)</li> <li>recommended condition B7 to progressively rehabilitate and to ensure rehabilitated landforms are stable and do not cause pollution or environmental harm</li> <li>recommended condition B6-3 for the proponent to consult with Traditional Owners on rehabilitation and closure.</li> </ul>

Environmental factor	Description of the proposal's likely impacts on the environmental factor	Government agency and public comments	Evaluation of why the factor is not a key environmental factor
			<p>The EPA considers that it is unlikely that the proposal would have a significant impact on landforms. Accordingly, the EPA did not consider landforms to be a key environmental factor at the conclusion of its assessment.</p>
<p>Terrestrial environmental quality</p>	<p>The proposal has the potential to impact soil quality due to soil acidification, contamination from chemical and hydrocarbon spills and metalliferous drainage.</p>	<p><u>Public comments</u></p> <ul style="list-style-type: none"> <li>No public comments were received for this factor.</li> </ul> <p><u>Agency comments</u></p> <ul style="list-style-type: none"> <li>DMPE noted that knowledge gaps relating to materials characterisation would be required to be addressed during the Mining Act 1978 approvals process</li> </ul>	<p>Terrestrial environmental quality was identified as a preliminary key environmental factor when the EPA decided to assess the proposal. However, having regard to:</p> <ul style="list-style-type: none"> <li>the low potential for tailings to be acid-forming, with only 30% likely to be PAF, with the dominate dolomite lithology expected to neutralise any acid generation in the tailings</li> <li>emissions from prescribed premises can be adequately assessed, managed, and regulated under Part V of the EP Act</li> <li>waste structures including the WRLs and TSF will be designed to ensure they will be physically safe, geotechnically stable, and geochemically nonpolluting and non-contaminating, consistent with the Guideline for preparing Mine Closure Plans (DEMIRS 2025)</li> <li>recommended condition B7 to progressively rehabilitate and to ensure rehabilitated landforms are stable and do not cause pollution or environmental harm</li> </ul> <p>Accordingly, the EPA did not consider terrestrial environmental quality to be a key environmental factor at the conclusion of its assessment.</p>

Environmental factor	Description of the proposal's likely impacts on the environmental factor	Government agency and public comments	Evaluation of why the factor is not a key environmental factor
<b>Air</b>			
Air quality	<ul style="list-style-type: none"> <li>Point source air emissions from the gas-fired power station.</li> <li>Fugitive dust from construction, operations and vehicle movement.</li> </ul>	<p><u>Public comments</u></p> <ul style="list-style-type: none"> <li>No public comments were received for this factor.</li> </ul> <p><u>Agency comments</u></p> <ul style="list-style-type: none"> <li>No agency comments were received for this factor</li> </ul>	<p>Air quality was not identified as a preliminary key environmental factor when the EPA decided to assess the proposal. In forming this view, the EPA considered:</p> <ul style="list-style-type: none"> <li>The substantial separation distances between the proposal and the nearest sensitive receptors, including approximately 100 km to the closest cattle station or mining operation, and about 127 km to the nearest Aboriginal community at Punmu.</li> <li>The dust management measures proposed by the proponent, which can be appropriately regulated under the Mining Act.</li> <li>That emissions from prescribed premises can be adequately assessed, managed, and regulated under Part V of the EP Act.</li> </ul> <p>Based on these considerations, the EPA concluded that the proposal is unlikely to result in a significant impact on air quality. Accordingly, air quality was not identified as a key environmental factor at the conclusion of the EPA's assessment.</p>
<b>People</b>			
Human health		No comments were received during consultation for this factor.	<p>The EPA did not identify human health as a preliminary key environmental factor when the decision to assess the proposal was made.</p> <p>Having regard to:</p> <ul style="list-style-type: none"> <li>the proposed dust suppression measures</li> <li>impacts to human health from asbestiform material can be adequately assessed, managed,</li> </ul>

Environmental factor	Description of the proposal's likely impacts on the environmental factor	Government agency and public comments	Evaluation of why the factor is not a key environmental factor
			<p>and regulated under the Mining Act and the <i>Work Health and Safety Act 2020</i>, and,</p> <ul style="list-style-type: none"> <li>• Analysis has shown that the ore is free of Naturally Occurring Radioactive Materials (NORM).</li> </ul> <p>Accordingly, the EPA did not consider human health to be a key environmental factor at the conclusion of its assessment.</p>

## Appendix F: List of submitters

### 7-day comment on referral

Six (6) submissions were received from the public during the 7-day public comment period.

### Public review of proponent information

#### Organisations and public

- Two (2) submissions were received from the public during the 3-week public review period.

#### Government agencies

- Department of Biodiversity, Conservation and Attractions
- Department of Energy, Mines, Industry Regulation, and Safety
- Department of Health
- Department of Water and Environmental Regulation

## Appendix G: Assessment timeline

Date	Progress stages	Time (weeks)
23 May 2024	EPA decided to assess – level of assessment set	
21 June 2024	EPA requested additional information	4
13 September 2024	EPA received additional information	12
23 October 2024	EPA accepted additional information	6
13 November 2024	EPA released additional information for public review	3
4 December 2024	Public review period for additional information closed	3
19 December 2025	EPA accepted proponent's Response to Submissions	52
19 February 2026	EPA completed its assessment	9
1 April 2026	EPA provided report to the Minister for Environment	6
8 April 2026	EPA report published	3 days
29 April 2026	Appeals period closed	3

Timelines for an assessment may vary according to the complexity of the proposal and are usually agreed with the proponent soon after the EPA decides to assess the proposal and records the level of assessment.

In this case and taking into consideration the occurrence of public holidays, the Christmas close-down period<sup>2</sup>, and no EPA board meeting in January 2026, the EPA did not meet its timeline objective to complete its assessment and provide a report to the Minister

<sup>2</sup> Consistent with section 36 of the *Interpretations Act 1901*

## Appendix H: Relevant policy, guidance, procedures and references

The EPA had particular regard to the policies, guidelines and procedures listed below in the assessment of the proposal.

Adaptive NRM, 2025, *Review of Greatland Pty Ltd's Havieron Project Night Parrot Habitat Assessment*. report prepared for Greatland Pty Ltd, 14 October 2025. Appendix zzH of Greatland RSD

Biologic 2020a, *Detailed vertebrate and SRE invertebrate fauna survey: Havieron Project*, report prepared for Newcrest Mining Ltd. Appendix L of the Referral Supporting Document Revision 9.

Biologic 2020b, *Subterranean fauna survey: Havieron Project*, report prepared for Newcrest Mining Ltd. Appendix V of the Referral Supporting Document Revision 9.

Biologic 2021, *Infrastructure corridor detailed vertebrate and SRE invertebrate fauna survey: Havieron Project*, report prepared for Newcrest Mining Ltd. Appendix M of the Referral Supporting Document Revision 9.

Biologic 2022a, *Havieron Project bilby monitoring*, report prepared for Newcrest Mining Ltd. Appendix P of the Referral Supporting Document Revision 9.

Biologic 2022b, *Stage 2 stygofauna survey and risk assessment: Havieron Project*, report prepared for Newcrest Mining Ltd. Appendix W of the Referral Supporting Document Revision 9.

Biologic 2023, *Havieron Project: Greater Bilby Monitoring 2022*. Report to Newcrest Mining. Appendix Q of the RSD

Cyprium Metals Limited 2024, *Nifty Copper Project: Nifty Restart Mining Proposal*, Revision 1C, 11 July 2024

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DCCEEW 2023a, *Australian national greenhouse accounts factors workbook 2023*, Department of Climate Change, Energy, the Environment and Water.

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DCCEEW 2023b, *Recovery Plan for the Greater Bilby (Macrotis lagotis)*, Department of Climate Change, Energy, the Environment and Water.

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DCCEEW 2024b, *State and territory greenhouse gas inventories: annual emissions*, Department of Climate Change, Energy, the Environment and Water, Canberra, ACT.

DCCEEW 2024c, *Threat abatement plan for predation by feral cats 2024*, Department of Climate Change, Energy, the Environment and Water, Canberra. CC BY 4.0

DCCEEW 2024d, Consultation on Species Listing Eligibility and Conservation Actions *Pezoporus occidentalis* (night parrot). Department of Climate Change, Energy, the Environment and Water, Canberra, ACT.

DCCEEW 2025a, *Conservation Advice for Pezoporus occidentalis (night parrot)*. Canberra: Department of Climate Change, Energy, the Environment and Water.

DCCEEW 2025b, *National Inventory Report 2023 - The Australian Government Submission to the United Nations Framework Convention on Climate Change*, May 2025, Canberra: Department of Climate Change, Energy, the Environment and Water.

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Dziminski et al., 2021. Monitoring, mapping and safeguarding Kimberley bilbies. Northern Australia Environmental Resources Hub.

Eco logical Australia 2021a, *Havieron Project Draft Aboriginal Cultural Heritage Management Plan*, report prepared for Newcrest Mining Ltd. Appendix U of the Referral Supporting Document Revision 9.

Eco logical Australia 2021b, *Havieron Project Social Studies: Aboriginal Heritage Risk Assessment*, report prepared for Newcrest Mining Ltd. Appendix U of the Referral Supporting Document Revision 9.

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Ecologia 2003, *Telfer Project Power Supply and Infrastructure Corridor rare and priority fauna and flora survey*, report prepared for Newcrest Mining Ltd. Appendix K of the Referral Supporting Document Revision 9.

Ecoscope 2021, *Havieron Visual Amenity Assessment*, prepared for Newcrest Mining Ltd. Appendix U of the Referral Supporting Document Revision 9.

Ecoscope 2024, *Havieron mine and service corridor targeted flora survey*, report prepared for Newcrest Mining Ltd. Appendix H of the Referral Supporting Document Revision 9.

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EPA 2016c, *Technical guidance – Flora and vegetation surveys for environmental impact assessment*, Environmental Protection Authority, Perth, WA.

EPA 2016d, *Technical guidance – Sampling of short-range endemic invertebrate fauna*, Environmental Protection Authority, Perth, WA.

EPA 2016e, *Environmental factor guideline – Subterranean fauna*, Environmental Protection Authority, Perth, WA.

EPA 2018, *Environmental factor guideline – Inland waters*, Environmental Protection Authority, Perth, WA.

EPA 2020, *Technical guidance – Terrestrial vertebrate fauna surveys for environmental impact assessment*, Environmental Protection Authority, Perth, WA.

EPA 2023, *Environmental factor guideline – Social surroundings*, Environmental Protection Authority, Perth, WA.

EPA 2024a, *Environmental factor guideline – Greenhouse gas emissions*, Environmental Protection Authority, Perth, WA.

EPA 2024b, *Public Advice: Considering environmental offsets at a regional scale*. Environmental Protection Authority, Perth, WA.

Evolveable 2024, *Telfer Havieron Greenhouse Gas Environmental Management Plan External Peer Review*, report prepared for Greatland Pty Ltd. Appendix F of the Referral Supporting Document Revision 6.

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Greatland Pty Ltd 2025b, *Telfer–Havieron Gold Mining Project: Referral Supporting Document, Section 38 Environmental Protection Act 1986 (Inclusive of Ministerial Statements 605, 606 and 650 – Significant Amendment)*. Revision 9, 1 December 2025. Document No. 702-8000-EN-PLA-0019.

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Kendrick 2001b, *Little Sandy Desert 1 (LSD1 – Rudall subregion)*, Peter Kendrick, Department of Conservation and Land Management

Newcrest Operations Limited 2023, *Telfer Project: Gold Mine, Power Supply, and Infrastructure Corridor – Ministerial Statements 605, 606 and 650 Significant Amendment*, Referral Supporting Document, Revision 1.1, 30 March 2023.

Newmont Mining Limited 2024, *Newmont’s ongoing commitment to consultation with Jamukurnu Yapalikurnu Aboriginal Corporation (JYAC) and Martu*, letter to EPA Services, Department of Water and Environmental Regulation, 2 May 2024.

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## Appendix I: Contemporising of Ministerial Statements 605, 606, and 650

**Table I1 - Contemporising Ministerial Statements 605, 606, and 650**

Ministerial Condition	Environmental factor	Proposed changes	Assessment and evaluation of proposed changes: will the change ensure the combined proposal can be implemented consistently with EPA objectives
MS 605 and 606			
1. Implementation and Changes	N/A	Delete condition and replace with consolidated contemporary style condition A1.	Recommended condition A1. EPA recommends that condition 1 is replaced with a new condition, setting the maximum limits on proposal characteristics which will ensure the implementation of the proposal is consistent with EPA objectives. This condition reflects a contemporary condition setting approach recommended by the EPA.
2. Proponent Commitments	N/A	Delete condition and replace with consolidated contemporary style condition set.	Recommended conditions and procedures of Part A: Proposal extent, Part B: Environmental outcomes, prescriptions and objectives, Part C: Environmental management plans and monitoring, and Part D: Compliance and other conditions. EPA recommends that condition 2 is replaced with contemporary condition setting approach which if implemented, will ensure the implementation of the proposal is consistent with EPA objectives.
3. Proponent Nomination and Contact Details	N/A	Delete condition and replace with consolidated contemporary style condition D3.	Recommended condition D3. EPA recommends that condition 3 is replaced with contemporary condition setting approach which if implemented, will ensure the implementation of the proposal is consistent with EPA objectives.
4. Time Limit on Approval	N/A	Delete condition and replace with consolidated contemporary style condition D4.	Recommended condition D4. EPA recommends that condition 4 is replaced with a new condition setting the maximum limits on proposal characteristics which will ensure the implementation of the proposal is consistent with EPA objectives. This

			condition reflects a contemporary condition setting approach recommended by the EPA.
5. Compliance Audit and Performance Review	N/A	Delete condition and replace with consolidated contemporary style conditions D1, D2, D5, and D6.	Recommended conditions D1, D2, D5, and D6. EPA recommends that condition 5 is replaced with a contemporary condition setting approach which if implemented, will ensure the implementation of the proposal is consistent with EPA objectives.
MS 605			
6. Greenhouse Gas Emissions	GHG emissions	Delete condition and replace with consolidated contemporary style condition B5.	Recommended condition B5. EPA recommends that condition 6 is replaced with a contemporary condition setting approach which if implemented, will ensure the implementation of the proposal is consistent with EPA objectives.
7. Closure Plans	Rehabilitation and Closure	Delete condition and replace with consolidated contemporary style condition B7.	Recommended condition B7. EPA recommends that condition 7 is replaced with a contemporary condition setting approach which if implemented, will ensure the implementation of the proposal is consistent with EPA objectives.
8. Procedures	N/A	Delete condition and replace with consolidated contemporary style condition set.	Recommended conditions and procedures of Part A: Proposal extent, Part B: Environmental outcomes, prescriptions and objectives, Part C: Environmental management plans and monitoring, and Part D: Compliance and other conditions.
Environmental Management Plan – Commitments in MS 605			
1. Environmental Management	N/A	Delete commitment and replace with consolidated contemporary style condition set.	Recommended conditions and procedures of Part A: Proposal extent, Part B: Environmental outcomes, prescriptions and objectives, Part C: Environmental management plans and monitoring, and Part D: Compliance and other conditions.

			EPA recommends that commitment 1 is replaced with contemporary condition setting approach which if implemented, will ensure the implementation of the proposal is consistent with EPA objectives.
2. Flora and Fauna	Flora and Vegetation, and Terrestrial Fauna	Delete commitment as it is no longer applicable.	Commitment 2 relates to flora and fauna management during construction of the MS 605 proposal. The EPA considers it is no longer applicable and recommends it be deleted.
3. Soil Conservation	Flora and Vegetation, and Rehabilitation and Closure	Delete commitment as it is no longer applicable.	Commitment relates to soil conservation management during the construction of the MS 605 project. The EPA considers commitment 3 is no longer applicable and recommends its deletion.
4. Erosion and Sedimentation Control	Flora and Vegetation, Inland Waters, and Rehabilitation and Closure	Delete commitment as it is no longer applicable.	Commitment 4 relates to erosion and sedimentation control during construction of the MS 605 project. The EPA considers it no longer applicable and recommends its deletion.
5. Noise and Dust	Flora and Vegetation, Air Quality; Human health, Social Surroundings	Delete commitment as it is no longer applicable.	Commitment 5 relates to noise and dust management during construction of the MS 605 project. The EPA considers commitment 5 no longer applicable and recommends it be deleted.
6. Waste	Flora and Vegetation, Terrestrial Fauna, Inland Waters, Subterranean Fauna, Social	Delete commitment, as it duplicates requirements already covered under the proponent's Part V licence.	EPA recommends that commitment 6 is deleted given proponents' licence under Part V of the EP Act requires them to adhere to both the Environmental Protection (Unauthorised Discharges) Regulations 2004 and Environmental Protection (Controlled Waste) Regulations 2004.

	Surroundings, and Rehabilitation and Closure		
7. Aboriginal Heritage	Social Surroundings – Aboriginal heritage	Delete commitment, no longer applicable.	Commitment 7 relates to the Aboriginal Heritage management during the construction of the MS 605 project. The EPA considers commitment 7 is no longer applicable and recommends it be deleted.
8. Rehabilitation	Rehabilitation and Closure	Delete commitment and replace with consolidated contemporary style condition B7.	Recommended condition B7. EPA recommends that commitment 8 is replaced with a contemporary condition setting approach which if implemented, will ensure the implementation of the proposal is consistent with EPA objectives.
9. Bushfire protection	N/A	Delete commitment, no longer applicable.	Commitment 9 relates to the bushfire management during the construction of the MS 605 project. The EPA considers it no longer applicable and recommends its deletion.
MS 606			
6. Subterranean Fauna Sampling	Subterranean Fauna	Delete condition, as compliance has been demonstrated and the objective has been achieved.	Condition 6 of Ministerial Statement 606 required the proponent to develop and implement a subterranean fauna sampling plan with the objective of increasing scientific knowledge of subterranean fauna to support their conservation. In 2015, the Office of the EPA advised that compliance with this condition had been clearly demonstrated and that the objective of the plan had been achieved. The EPA therefore considers condition 6 is no longer applicable and recommends that it be deleted.
7. Greenhouse Gas Emissions	Greenhouse Gas Emissions	Delete condition and replace with consolidated contemporary style condition B5.	Recommended condition B5. EPA recommends that condition 7 is replaced with a contemporary condition setting approach which if implemented, will ensure the implementation of the proposal is consistent with EPA objectives.
8. Procedures	N/A	Delete condition and replace with	Recommended conditions and procedures of Part A: Proposal extent, Part B: Environmental outcomes, prescriptions and objectives, Part C: Environmental

		consolidated contemporary style condition set.	management plans and monitoring, and Part D: Compliance and other conditions. EPA recommends that condition 8 is replaced with contemporary condition setting approach which if implemented, will ensure the implementation of the proposal is consistent with EPA objectives.
Environmental Management Plan – Commitments in MS 606			
1. Environmental Management System	N/A	Delete commitment and replace with consolidated contemporary style condition set.	Recommended conditions and procedures of Part A: Proposal extent, Part B: Environmental outcomes, prescriptions and objectives, Part C: Environmental management plans and monitoring, and Part D: Compliance and other conditions. EPA recommends that commitment 1 is replaced with contemporary condition setting approach which if implemented, will ensure the implementation of the proposal is consistent with EPA objectives.
2. Environmental Management Plan	N/A	Delete commitment and replace with consolidated contemporary style condition set.	Recommended conditions and procedures of Part A: Proposal extent, Part B: Environmental outcomes, prescriptions and objectives, Part C: Environmental management plans and monitoring, and Part D: Compliance and other conditions. EPA recommends that commitment 2 is replaced with contemporary condition setting approach which if implemented, will ensure the implementation of the proposal is consistent with EPA objectives.
3. Groundwater management and final void study	Inland Waters	Delete commitment	This commitment relates to the requirement for a groundwater and final void study to be undertaken during the first three years of operation of the MS 606 project. The EPA considers that commitment 7 is no longer applicable and therefore recommends that it be deleted.
4. Flora and Fauna	Flora and Vegetation and Terrestrial Fauna	Delete commitment and replace with consolidated contemporary style condition B1, B2, and B7.	Recommended condition B1, B2, and B7. EPA recommends that commitment 4 is replaced with a contemporary condition setting approach which if implemented, will ensure the implementation of the proposal is consistent with EPA objectives.

5. Cyanide Monitoring	Flora and Vegetation, Terrestrial Fauna, Inland Waters, Subterranean Fauna, Social Surroundings, and Rehabilitation and Closure	Delete commitment, as it duplicates requirements already covered under the proponent's Part V licence.	The EPA recommends that commitment 5 is deleted. Regulation of cyanide concentrations in deposited tailings is already addressed through the proponent's existing licence (6079/1988/14) issued under Part V of the EP Act.
6. Waste	Flora and Vegetation, Terrestrial Fauna, Inland Waters, Subterranean Fauna, Social Surroundings, and Rehabilitation and Closure	Delete commitment, as it duplicates requirements already covered under the proponent's Part V licence.	EPA recommends that commitment 6 is deleted given proponents' licence under Part V of the EP Act requires them to adhere to both the Environmental Protection (Unauthorised Discharges) Regulations 2004 and Environmental Protection (Controlled Waste) Regulations 2004.
7. Aboriginal heritage	Social Surroundings	Delete commitment as it is no longer applicable.	This commitment relates to the environmental management of the MS 606 project construction, specifically Aboriginal Heritage. The EPA considers that commitment 7 is no longer applicable and therefore recommends that it be deleted.
8. Waste Rock	Rehabilitation and Closure	Delete commitment, as it duplicates requirements already covered under the proponent's Mining Act approvals.	The EPA recommends that commitment 8 is deleted. This commitment relates to the requirement for a waste rock management plan to address best practice prediction, management and long term stability of waste rock materials, particularly those with the potential to generate acid metalliferous drainage (AMD).

			The EPA considers the that the intent of this requirement can be appropriately regulated by DMPE under the Mining Act through its Mine Development and Closure Plan regulatory framework.
9. Mine Closure	Rehabilitation and Closure	Delete commitment and replace with consolidated contemporary style condition B7.	Recommended condition B7. EPA recommends that commitment 4 is replaced with a contemporary condition setting approach which if implemented, will ensure the implementation of the proposal is consistent with EPA objectives.
MS 650 Conditions			
8. Fauna management (open trench)	Terrestrial Fauna	Delete condition as it is no longer applicable.	This condition relates to the management of impacts to fauna during construction of the proposal approved under Ministerial Statements 605 and 650, specifically in relation to the presence of significant lengths of open trench. The EPA considers that condition 8 is no longer applicable and therefore recommends that it be deleted.