

***Environmental Protection Act 1986***

**Section 43A**

**NOTICE OF DECISION TO CONSENT TO AMEND A REFERRED PROPOSAL  
DURING ASSESSMENT**

**PERSON TO WHOM THIS NOTICE IS GIVEN**

(a) Atlas Iron Pty Ltd (ACN/ABN: 110 396 168)  
Level 17, 300 Murray Street  
PERTH WA 6000

**PROPOSAL TO WHICH THIS NOTICE RELATES:**

McPhee Creek Iron Ore Project  
Assessment No. 2285

Pursuant to s. 43A of the *Environmental Protection Act 1986* (EP Act), the Environmental Protection Authority (EPA) gives approval to the assessment of the proposal being completed in respect of the proposal as amended in accordance with the proponent's request:

- A reduction in the maximum groundwater abstraction rate for mine dewatering (from 16 GL/a down to 7.5 GL/a);
- An associated reduction in dewater discharge volumes (from ~ 13 GL/a down to 6.0 GL/a). Approval is being sought for the amended 'Worst Case' scenario.
- An increase of 24.5 ha to the extent of clearing of 'high value' fauna habitat resulting from the inclusion of Spinifex Sandplain habitat as 'high value' habitat (with no change the overall amount of land to be cleared).

The amended proposal content document and figures are attached.

**EFFECT OF THIS NOTICE:**

1. The assessment of the proposal is to be completed in respect of the proposal as amended in accordance with the decision set out in this notice.

2. The proposal as amended in accordance with this notice is taken to have been referred to the EPA under s. 38 of the EP Act.

**RIGHTS OF APPEAL:**

There are no rights of appeal under the EP Act in respect of this decision.

A handwritten signature in blue ink, appearing to read 'Matthew Tonts', with a long horizontal flourish extending to the right.

**Prof. Matthew Tonts**  
**Delegate of the Environmental Protection Authority**  
CHAIR

22 March 2023

## Attachment 1- Amended Proposal Content Document

Proposal element	Location / description	Maximum extent, capacity or range
<b>Physical elements</b>		
Mine elements including: <ul style="list-style-type: none"> <li>- Above and below water table mining of five open cut pits</li> <li>- Waste Rock Dumps</li> <li>- Topsoil stockpiles</li> <li>- Ore Stockpile</li> </ul>	Within Development Envelope and outside of the Significant Fauna Exclusion Zone (Figure 1)	Clearing of up to 1,913 ha within a Development Envelope of 4,465 ha including approximately 694.7 ha of high value fauna habitat.
Infrastructure elements including: <ul style="list-style-type: none"> <li>- Accommodation camp</li> <li>- Energy supply infrastructure</li> <li>- Ancillary buildings (e.g. workshops, communications, offices);</li> <li>- WWTPs;</li> <li>- Landfill;</li> <li>- Hydrocarbon storage;</li> <li>- Explosive mixing and storage facility;</li> <li>- Laydown areas;</li> <li>- Above ground water storage dams to manage supply or disposal of clean or mine water.</li> </ul>		
<b>Operational elements</b>		
Groundwater abstraction	Within Development Envelope (Figure 1)	Abstraction of up to 7.5 GL/a groundwater for mine dewatering
Surplus water management	McPhee Creek, branch of MCPhee Creek and Lionel Creek (Figure 1)	Controlled surface discharge of surplus water to three creek lines within the wetting fronts as shown in Figure 1

<b>Proposal elements with greenhouse gas emissions</b>		
Construction elements: Annual average		
Construction - Vegetation clearing	Scope 1 - 98,688 tonnes of CO2-equivalence (t CO2-e)	
Operational elements: Annual Average Life of Mine		
Operations - Production - Energy production - Wastewater emissions	Scope 1 – 57,095 t CO2-e	
<b>Rehabilitation</b>		
<p>Where practicable, progressive rehabilitation will be undertaken over the life of the mine.</p> <p>Areas disturbed through the implementation of the Proposal will be designed to be safe and non-polluting and will be constructed so the final shape, size, stability, are comparable with the natural landforms in the area.</p>		
<b>Commissioning</b>		
Commissioning of the infrastructure and operational elements will be undertaken subject to the operational limits above.		
<b>Other elements which affect extent of effects on the environment</b>		
Proposal timeframe	Maximum project life	15 years

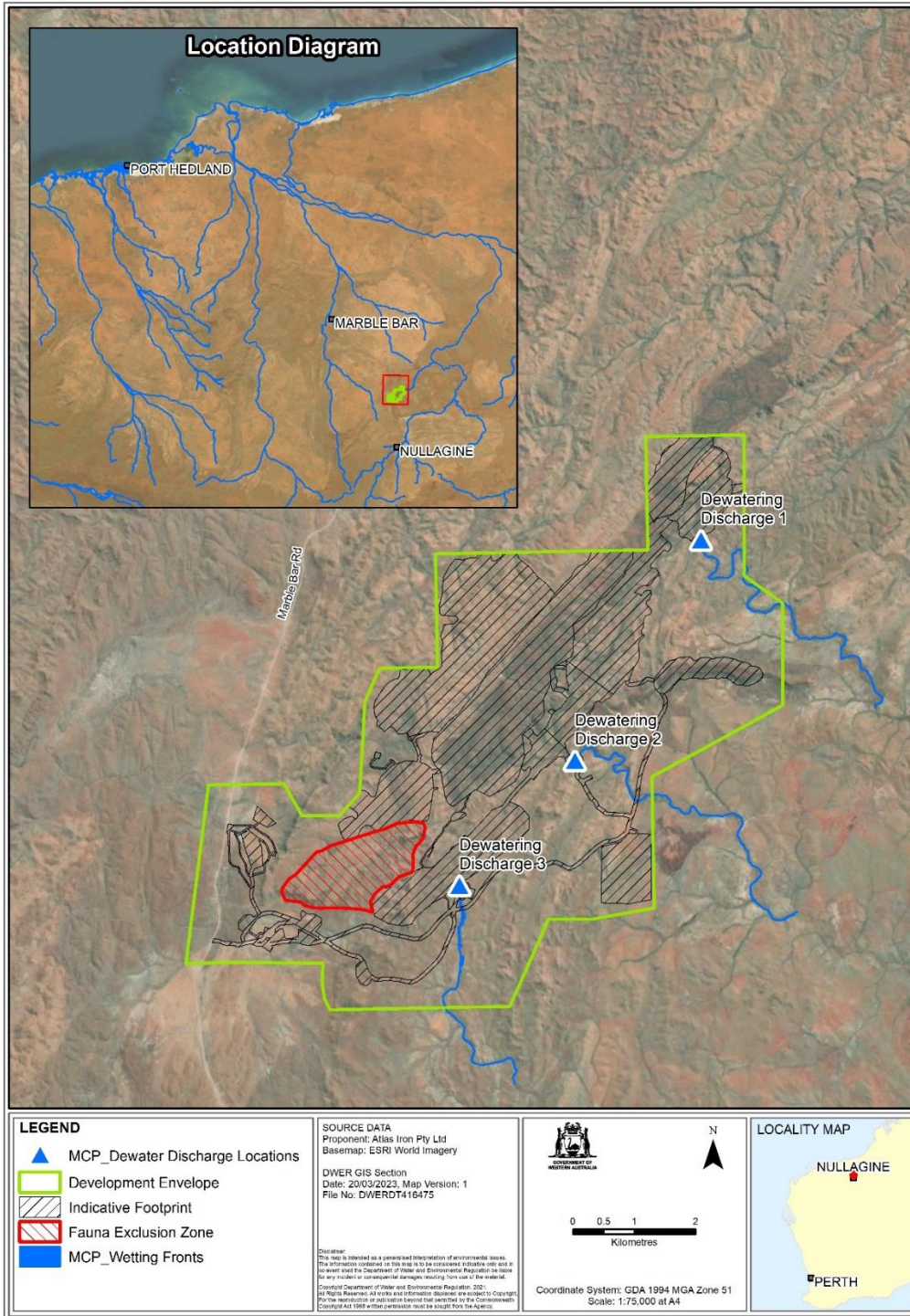


Figure 1: Location of McPhee Creek Iron Ore project, the proposals indicative footprint and amended wetting fronts associated with the amended proposal



# Environmental Protection Authority

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**Summary of reasons for decision – request to amend a referred proposal during assessment under s. 43A of the *Environmental Protection Act 1986***

**Proposal title:** McPhee Creek Iron Ore Project

**Environment Online Reference Number:** Not Applicable

**Date request to amend referred proposal under s. 43A received:** 14-12-2022

**Proponent:** Atlas Iron Pty Ltd

**Proposal referral date:** 18-02-2021

**Level of assessment:** Public Environmental Review

**Existing referred proposal:**

The McPhee Creek Iron Ore Project is located approximately 30 km north of Nullagine (Figure 1). The Proposal is for mining from five open-cut pits including above-the-water table (AWT) mining from the Crescent Moon pit and below-the-water table (BWT) mining from the Nicholson, Ord, Murray and Avon pits (Figure 1).

The Proposal includes the development of mine pits and associated infrastructure including but not limited to crushing and screening facilities, waste landforms, run of mine pad, access roads, solar field, administration, accommodation camp, stockpile, and laydown areas, borrow pits, groundwater bores and transfer infrastructure, explosives magazine, fuel storage and landfill.

Management of excess dewater is proposed via surface water discharge to three creeks. Ore will be transported by truck to the existing Roy Hill Iron Ore Project, or other third parties for processing, or maybe on sold as direct shipping ore.

**Short description of amendments sought**

The amendments to the original Proposal are:

- A reduction in the maximum groundwater abstraction rate for mine dewatering (from 16 GL/a down to 7.5 GL/a) and an associated reduction in dewater discharge volumes (from ~ 13 GL/a down to 6.0 GL/a) (Table 1, Figure 2). Approval is being sought for the amended 'Worst Case' scenario.
- An increase of 24.5 ha to the extent of clearing of 'high value' fauna habitat resulting from the inclusion of Spinifex Sandplain habitat as 'high value' habitat.

The proponent has not proposed any alternative options or additional management measures, due to the expectation that the amendments to the McPhee Creek proposal are not likely to increase environmental risks and impacts when compared to the current proposal.



Table 1: Proposed amendments to proposal elements

Element	Referred Proposal	Proposed Amendment	Amended Proposal Extent
<b>Physical Elements</b>			
<p>Mine elements including:</p> <ul style="list-style-type: none"> <li>- Above and below water table mining of five open cut pits</li> <li>- Waste Rock Dumps</li> <li>- Topsoil stockpiles</li> <li>- Ore Stockpile</li> <li>- Infrastructure elements including: <ul style="list-style-type: none"> <li>- Accommodation camp</li> <li>- Energy supply infrastructure</li> <li>- Ancillary buildings (e.g. workshops, communications, offices);</li> <li>- WWTPs;</li> <li>- Landfill;</li> <li>- Hydrocarbon storage;</li> <li>- Explosive mixing and storage facility;</li> <li>- Laydown areas;</li> <li>- Above ground water storage dams to manage supply or disposal of clean or mine water.</li> </ul> </li> </ul>	<p>Clearing of up to 1,913 ha within a Development Envelope of 4,465 ha including approximately 670.2 ha of high value fauna habitat.</p>	<p>An increase of 24.5 ha to the extent of clearing of 'high value' fauna habitat resulting from the inclusion of Spinifex Sandplain habitat as 'high value' habitat.</p>	<p>Clearing of up to 1,913 ha within a Development Envelope of 4,465 ha <b>including approximately 694.7 ha of high value fauna habitat.</b></p>
<b>Operational Elements</b>			
<p>Groundwater abstraction</p>	<p>Abstraction of up to 16 GL/a groundwater for mine dewatering</p>	<p>Reduction in the maximum groundwater abstraction rate for mine dewatering by 8.5 GL/a)</p>	<p><b>Abstraction of up to 7.5 GL/a groundwater for mine dewatering (see Figure )</b></p>



Surplus water management	Controlled surface discharge of surplus water to three creek lines (to a peak of ~ 13 GL) within the wetting fronts (as shown as 'original case' in Figure 4)	Reduction in the controlled surface discharge of surplus water to three creeklines by 7 GL/a.	<b>Controlled surface discharge of surplus water to three creek lines (up to 6.0 GL/a) within the wetting fronts (see Error! Reference source not found.)</b>
<b>Proposal elements with greenhouse gas emissions</b>			
<b>Construction elements: Annual average</b>			
Construction Vegetation clearing	Scope 1 - 98,688 tonnes of CO2-equivalence (t CO2-e)	No change	No change
<b>Operational elements: Annual Average Life of Mine</b>			
Operations - Production - Energy production - Wastewater emissions	Scope 1 – 57,095 t CO2-e	No change	No change
<b>Rehabilitation</b>			
Where practicable, progressive rehabilitation will be undertaken over the life of the mine.	Areas disturbed through the implementation of the Proposal will be designed to be safe and non-polluting and will be constructed so the final shape, size, stability, are comparable with the natural landforms in the area.	No change	No change
<b>Commissioning</b>			
	Commissioning of the infrastructure and operational elements will be undertaken subject to the operational limits above.	No change	No change
<b>Other elements which affect extent of effects on the environment</b>			

Proposal timeframe	Maximum project life 15 years	No change	No change
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**Decision:**

Amendments to proposal as set out in Appendix 1 is approved.

**Environmental factors relevant to amendments:**

The following environmental factors are relevant to the proposed amendments:

- Inland Waters
- Flora and Vegetation
- Subterranean Fauna
- Terrestrial Fauna

**Summary of likely changes to environmental impacts from proposed amendments**

The amendments to the original Proposal are primarily focused on a reduction in the maximum groundwater abstraction rate for mine dewatering and an associated reduction in dewater discharge volumes. Additionally, an increase in the extent of clearing is being sought. Details of the changes to environmental impacts are outlined in Table 2.

Table 2: Summary of changes to environmental impacts from proposed amendments

Amendment sought	Changes to environmental impacts
Clearing of an additional 24.5 ha of high-value fauna habitat following the inclusion Spinifex Sandplain as 'high-value' habitat, resulting in a total clearing of 694.7 ha of high-value fauna habitat (~3.5% increase).	<p>Likely increased impacts to:</p> <ul style="list-style-type: none"> <li>- <b>Terrestrial Fauna:</b> The inclusion of Spinifex Sandplain habitat as part of the proposed habitat disturbance, increases the amount of impacted 'high value' habitat. The inclusion is not likely to represent a significant increase in the project's overall level of impact as it does not change the overall amount of land to be cleared. The clearing of Spinifex Sandplain habitat has been included in the proposed environmental offsets associated with the project.</li> </ul> <p>The amendment is not likely to increase the potential significant impacts from the proposal or increase the inconsistency of the proposal with the EPA environmental factor objectives.</p>
Reduction of groundwater abstraction from 16	<p>Likely decreased impacts to:</p> <ul style="list-style-type: none"> <li>- <b>Inland Waters</b></li> </ul>

Amendment sought	Changes to environmental impacts
<p>GL/a to up to 7.5 GL/a for mine dewatering (see Figure 3).</p>	<p>The amendment is likely to result in a reduction in the distance of the wetting fronts downstream, in particular for McPhee Creek and Lionel Creek. The maximum 'worst case' wetting fronts for each of the creeks (Figure 1) are:</p> <ul style="list-style-type: none"> <li>• 6.9 km (54% reduction from the original 15 km) in McPhee Creek</li> <li>• 6.8 km (~3% reduction from the original 7 km) in Branch of McPhee Creek</li> <li>• 4.4 km (63% reduction from the original 12 km) in Lionel Creek</li> </ul> <p>Long-term discharge has the potential to create mounding in the alluvial aquifer but is not expected to have a significant impact on the broader alluvial aquifer. The modelled wetting fronts are likely to be less than that proposed in this amendment and are predicted to remain within the Development Envelope (Figure 1) and dewater discharge water quality is expected to remain high. The groundwater flow and surface water modelling is considered to be in accordance with industry standards.</p> <p>A reduction in the distance downstream of the wetting fronts is likely to decrease the risk of impact on aquatic fauna within the downstream pools. Noting dewater discharge during natural dry season no-flow conditions has predicted discharge water to be received by the temporary/seasonal pool VMPC-77 on Branch of McPhee Creek.</p> <p>- <b>Subterranean Fauna</b> Proposed shallower mining pits, and a proposed reduction in the extent of mining (e.g. Murray Pit as detailed in the amended mine plan), is predicted to lower (~26% reduction) the total volume of dewatering required (63 GL worst case compared to the original 85 GL). A slightly reduced impact on stygofauna habitat is likely as the vertical and in some areas horizontal extent of dewatering, and therefore habitat loss is predicted to be reduced.</p> <p>Likely increased impacts to:</p> <p>- <b>Flora and Vegetation</b> Under the proposed amendment ( i.e., a lower amount, longer-term abstraction regime (Figure 2)); a total of 58.7 ha (50.0 ha within the Development Envelope) of groundwater-dependant vegetation (GDV) could experience a drawdown of</p>

Amendment sought	Changes to environmental impacts
	<p>&gt;2 m, this represents an additional 7.3 ha of GDV which could potentially experience drawdown. Of note is that only 2.5 ha of the GDV is located within the Development Envelope, and 4.8 ha outside the Development Envelope.</p> <p>The amendment is not likely to increase the potential significant impacts from the proposal or increase the the inconsistency of the proposal with the EPA environmental factor objectives.</p>
<p>Reduction in the wetting fronts associated with the controlled surface discharge of surplus water to three creek lines (see <b>Error! Reference source not found.</b>)</p>	<p>Likely decreased impacts to:</p> <ul style="list-style-type: none"> <li>- <b>Inland Waters</b> The amendment is likely to result in a reduction in the distance downstream of the expected wetting fronts, especially for McPhee Creek and Lionel Creek. The maximum 'worst case' wetting fronts for each of the creeks (refer Figure 1 and 2) are: <ul style="list-style-type: none"> <li>• 6.9 km (54% reduction from the original 15 km) in McPhee Creek</li> <li>• 6.8 km (~3% reduction from the original 7 km) in Branch of McPhee Creek</li> <li>• 4.4 km (63% reduction from the original 12 km) in Lionel Creek</li> </ul> </li> </ul> <p>Long-term discharge has the potential to create localised mounding in the alluvial aquifer but is not expected to have a significant impact on the broader alluvial aquifer. The modelled wetting fronts are likely to be less than that proposed in this amendment and are predicted to remain within the Development Envelope (Figure 1) and dewater discharge water quality is expected to remain high. The groundwater flow and surface water modelling is considered to be in accordance with industry standards.</p> <ul style="list-style-type: none"> <li>- <b>Flora and Vegetation</b> A likely reduction in risk of significant impacts to riparian and GDV is expected due to the reduced wetting front distance. The potential mounding in the alluvial aquifer (from long-term discharge) could cause waterlogging for deep-rooted vegetation and an associated change to vegetation types, however, this is expected to be mitigated by a revised mine plan and Water Management Plan, and by varying the rate and location of discharge across the creek lines.</li> </ul> <p>The amendment is not likely to increase the potential significant impacts from the proposal or increase the the</p>

Amendment sought	Changes to environmental impacts
	inconsistency of the proposal with the EPA environmental factor objectives.

### Summary of consultation

EPA services has sought comment from branches within the Department of Water and Environmental Management (DWER), as part of the review of the s. 43A amendment application.

The proposed s. 43A amendments are not likely to change the overall proposal's environmental risk and impacts, as such, a public review of the proposed amendments has not been undertaken.

### Summary of consideration of amendment

The EPA has considered whether, if the proposal were already approved, the amendment would be a significant amendment. This has included considering the likely significance of:

- Effects of the proposed amendment on its own
- Effects of the proposed amendment in the context of the existing referred proposal
- Cumulative environmental impacts
- Holistic impacts

The EPA has considered whether it has sufficient information about the proposed amendment to be able to reasonably proceed with the assessment of the amended proposal with or without performing any additional functions at this stage.

The EPA has considered whether the amended proposal will still be substantially the same character as the existing referred proposal.

### ***Approval – not a significant amendment***

The EPA considers the amended proposal to be substantially the same character as the existing referred proposal and does not consider that the amendment would be significant amendment if the proposal were already approved. The EPA considers it has enough information to reasonably proceed with the assessment of the amended proposal without performing any additional functions at this stage.

### Attachments

- Figure 1: Location of McPhee Creek Iron Ore project, development envelope, indicative footprint, and predicted wetting front ('Worse Case') of the proposed amendment
- Figure 2: Comparison of proposed amended water discharge volumes.
- Appendix 1: Amended Proposal Content Document

**Appeals:** Decision not appealable.

A handwritten signature in blue ink, appearing to read 'Matt Tonts', with a stylized flourish extending to the right.

**Prof. Matthew Tonts**  
CHAIR  
Delegate of the Environmental Protection Authority

**Date:** 22 March 2023

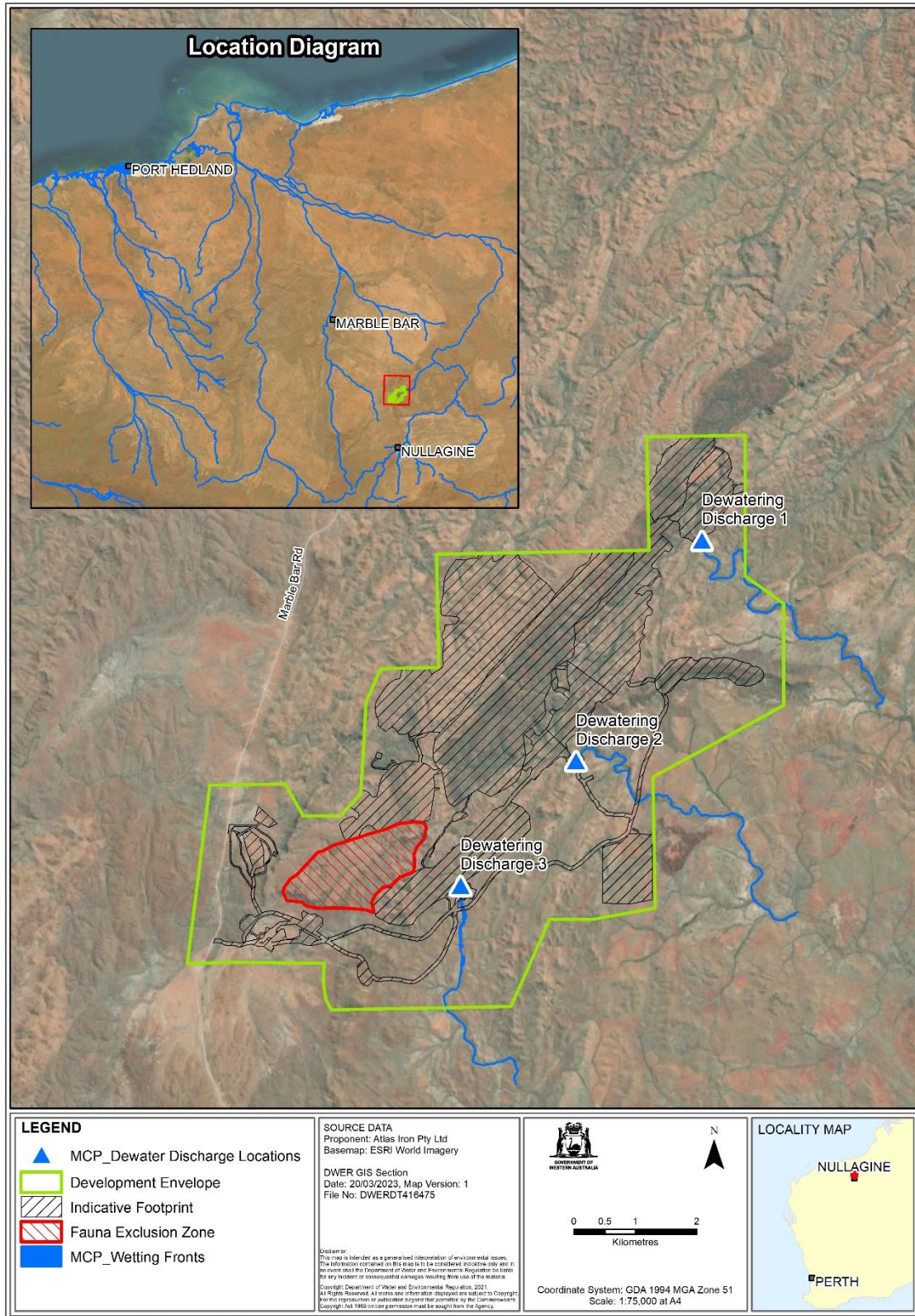


Figure 1: Location of McPhee Creek Iron Ore project, the proposals indicative footprint and amended wetting fronts associated with the amended proposal.



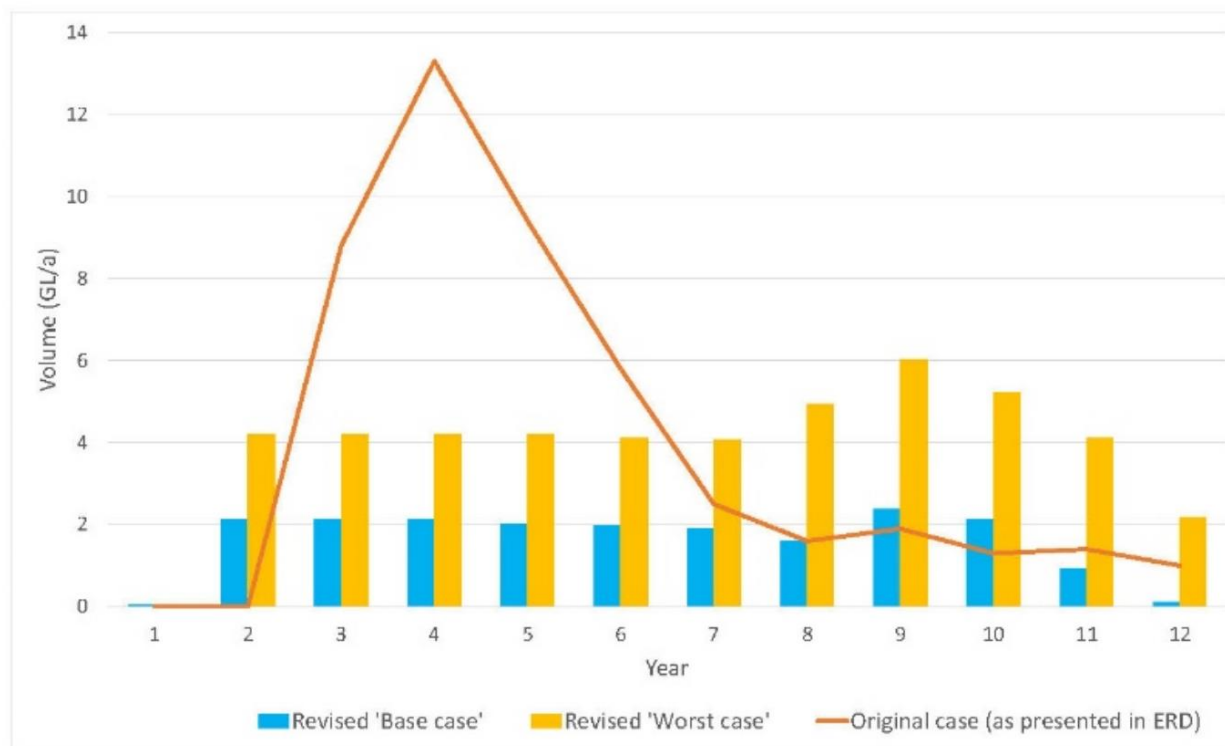


Figure 2: Comparison of proposed amended water discharge volumes ('Worse Case') to the original proposal submission (figure extracted from S43A supporting information)

## Appendix 1: Amended Proposal Content Document

Proposal element	Location / description	Maximum extent, capacity or range
<b>Physical elements</b>		
Mine elements including: <ul style="list-style-type: none"> <li>- Above and below water table mining of five open cut pits</li> <li>- Waste Rock Dumps</li> <li>- Topsoil stockpiles</li> <li>- Ore Stockpile</li> </ul>	Within Development Envelope and outside of the Significant Fauna Exclusion Zone (Figure 1)	Clearing of up to 1,913 ha within a Development Envelope of 4,465 ha including approximately 694.7 ha of high value fauna habitat.
Infrastructure elements including: <ul style="list-style-type: none"> <li>- Accommodation camp</li> <li>- Energy supply infrastructure</li> <li>- Ancillary buildings (e.g. workshops, communications, offices);</li> <li>- WWTPs;</li> <li>- Landfill;</li> <li>- Hydrocarbon storage;</li> <li>- Explosive mixing and storage facility;</li> <li>- Laydown areas;</li> <li>- Above ground water storage dams to manage supply or disposal of clean or mine water.</li> </ul>		
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<b>Proposal elements with greenhouse gas emissions</b>		
Construction elements: Annual average		

Construction - Vegetation clearing	Scope 1 - 98,688 tonnes of CO2-equivalence (t CO2-e)	
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<b>Commissioning</b>		
Commissioning of the infrastructure and operational elements will be undertaken subject to the operational limits above.		
<b>Other elements which affect extent of effects on the environment</b>		
Proposal timeframe	Maximum project life	15 years