



Preston  
Consulting

# MARDIE PROJECT

## IMPACT RECONCILIATION PROCEDURE

3 NOVEMBER 2020  
DOCUMENT NUMBER: BCI-MAR-IRP-01\_REV A

PREPARED FOR MARDIE MINERALS PTY LTD  
BY PRESTON CONSULTING PTY LTD

Document prepared for:

## MARDIE MINERALS PTY LTD

**Contact Person:** Michael Klvac –General Manager Corporate Affairs  
**Email:** [michael.klvac@bciminerals.com.au](mailto:michael.klvac@bciminerals.com.au)  
**Phone:** (08) 6311 3400  
**Street Address:** Level 2, 1 Altona Street, West Perth WA 6005  
**Postal Address:** GPO Box 2811, Perth WA 6872

Document developed by:

## PRESTON CONSULTING PTY LTD

**Contact Person** Gavin Edwards – Director  
**Email:** [gedwards@prestonconsulting.com.au](mailto:gedwards@prestonconsulting.com.au)  
**Website:** [www.prestonconsulting.com.au](http://www.prestonconsulting.com.au)  
**Phone:** +61 8 9221 0011  
**Fax:** +61 8 9221 4783  
**Street Address:** Level 3, 201 Adelaide Terrace, East Perth WA 6004  
**Postal Address:** PO Box 3093, East Perth WA 6892

Disclaimer:

This Report has been prepared on behalf of and for the exclusive use of Mardie Minerals Pty Ltd and is subject to and issued in accordance with the agreement between Preston Consulting Pty Ltd and Mardie Minerals Pty Ltd.

Preston Consulting Pty Ltd accepts no liability or responsibility whatsoever for or in respect of any use of or reliance upon this Report by any third party.

Copying of any part of this Report without the express permission of Preston Consulting Pty Ltd and Mardie Minerals Pty Ltd is not permitted.



## DOCUMENT CONTROL

<b>Document Title</b>	Impact Reconciliation Procedure - Mardie Project		
<b>Document Number</b>	BCI-MAR-IRP-01		
<b>Revision Number</b>	A		22/06/2020
<b>Status</b>	DRAFT		
<b>Author</b>	Harry Jockel – Preston Consulting	Signature	22/06/2020
<b>Checked</b>	Gavin Edwards – Director, Preston Consulting	Signature	22/06/2020
<b>Authorisation</b>	Michael Klvac – General Manager Corporate Affairs, BCI Minerals Pty Ltd	Signature	22/06/2020



CONTENTSDOCUMENT CONTROL .....	III
CONTENTS.....	IV
LIST OF TABLES .....	IV
LIST OF FIGURES.....	IV
.....	INTRODUCTION
.....	ERROR! BOOKMARK NOT DEFINED.
1.....	5
2 THE PROPOSAL AND CONDITION REQUIREMENTS.....	5
2.1 <i>The Proposal</i> .....	5
2.2 <i>Conditional Requirements</i> .....	5
3 PROCEDURE.....	6
3.1 <i>Identification of the biodiversity values requiring offsets</i> .....	6
3.2 <i>Methodology to determine clearing</i> .....	7
3.2.1 <i>Direct impacts</i> .....	7
3.2.2 <i>Other impacts</i> .....	7
4 REPORTING.....	8
4.1 <i>Frequency and timing</i> .....	8
4.2 <i>Clearing and Reconciliation</i> .....	8
GLOSSARY .....	10

---

## LIST OF TABLES

---

Table 1: Key characteristics of the Proposal.....	<b>Error! Bookmark not defined.</b>
Table 2: Location and proposed extent of physical and operational elements.....	<b>Error! Bookmark not defined.</b>
Table 3: Biodiversity values from the Proposal’s Ministerial Statement that require offsets .....	6
Table 4: Reporting period and frequency of the Impact Reconciliation Procedure.....	8

---

## LIST OF FIGURES

---

Figure 1: Regional location of the Proposal .....	<b>Error! Bookmark not defined.</b>
Figure 2: Proposal Development Envelopes and indicative disturbance footprint .....	<b>Error! Bookmark not defined.</b>
Figure 3: Indicative location of ponds and infrastructure .....	<b>Error! Bookmark not defined.</b>
Figure 4: Conservation reserves and management areas.....	<b>Error! Bookmark not defined.</b>



---

# 1 INTRODUCTION

---

The primary purpose of the Impact Reconciliation Procedure (IRP) is to advise the Chief Executive Officer (CEO) of the Department of Water and Environmental Regulation (DWER) on the methodology that will be used to calculate the area of vegetation cleared (or the area of clearance of any other environmental values listed in the Implementation conditions).

The IRP has been developed as per the “Instructions on how to prepare Environmental Protection Act 1986 Part IV Impact Reconciliation Procedures and Impact Reconciliation Reports (DWER, 2018).

---

## 2 THE PROPOSAL AND CONDITIONAL REQUIREMENTS

---

### 2.1 THE PROPOSAL

Mardie Minerals Pty Ltd (Mardie Minerals) seeks to develop a greenfields high quality salt and SoP project and associated export facility at Mardie, approximately 80 km south west of Karratha, in the Pilbara region of WA. The proposal will produce a high purity salt product, SoP and other products that can be derived from sea water.

The Proposal includes the development of seawater intakes, concentrator and crystalliser ponds, processing plants, bitterns disposal pipeline and outfall diffuser, trestle jetty export facility, dredge channel, causeway, drainage channels, access / haul roads, desalination (reverse osmosis) facilities, borrow pits, pipelines, and associated infrastructure including: power supply, communications equipment, offices, workshops, accommodation village, laydown areas, sewage treatment plant, landfill facility.

The Proposal was referred to the EPA on 17 April 2018. The level of assessment was set as Public Environmental Review (s.40(2)(b) and s.40(4)) on 18 June 2018. A proponent-prepared ESD was then submitted to the EPA and formally approved on 28 November 2018.

Ministerial Statement xx was issued on xx.

### 2.2 CONDITIONAL REQUIREMENTS

Conditional requirements will be added from the Ministerial Statement once issued.





## 3 PROCEDURE

### 3.1 IDENTIFICATION OF THE BIODIVERSITY VALUES REQUIRING OFFSETS

The Australian Bioregions, Interim Biogeographic Regionalisation (IBRA), divides the Australian continent into 89 bioregions and 419 sub regions. IBRA regions represent a landscape-based approach to classifying the land surface, including attributes of climate, geomorphology, landform, lithology and characteristic flora and fauna. The IBRA is a key tool in identifying land for conservation.

The Western Australian Environmental Protection Authority (EPA) has identified an increase in project applications and the clearing of native vegetation within the Pilbara IBRA Region. To address the cumulative impacts which could significantly impact biodiversity and environmental values in the region, the EPA have recommended that offset conditions are established for any new proposals involving the clearing of native vegetation in IBRA subregions where extensive clearing has occurred.

The Proposal is located within the Roebourne subregion which has not yet been allocated a contribution amount per hectare. Mardie Minerals will liaise with the (DWER to negotiate a contribution amount.

In view of the significant residual impacts and risks because of the Proposal, Mardie Minerals are required to contribute funds for the clearing of the items identified in Table 1. This procedure outlines the process for determining the area of vegetation disturbed within the Proposal's footprint and subsequent payment of the offset to the DWER.

**Table 1: Biodiversity values from the Proposal's Ministerial Statement that require offsets**

Condition	Clearing matter	IBRA subregion	Offset rate documented in Statement (\$/ha)
To be determined	Good to Excellent native vegetation in the development envelopes	Roebourne	To be determined
"	Direct and indirect impacts to Pilbara olive python <i>Liasus olivaceus barronu</i> habitat	Roebourne	"
"	Direct and indirect impacts to Northern quoll <i>Dasyurus hallucatus</i>	Roebourne	"
"	Direct and indirect impacts to Pilbara leaf-nosed Bat <i>Rhinioncteris aurantia</i>	Roebourne	"
"	Direct and indirect impacts to migratory bird habitat	Roebourne	"
"	Direct impact to short-range endemic invertebrates	Roebourne	"
"	Direct and indirect impacts to filter feeder, microalgae and seagrass habitat, including potential dugong habitat	Mardie Minerals proposes to contribute \$500,000 of funding to DBCA for the ongoing management of sub-tidal BCH within the Great Sandy Islands Nature Reserves, which contain similar but higher-value BCH than will be impacted by the Proposal. This offset has	
"	Direct and indirect impacts to coral and macroalgae habitat		



“	Direct impact to marine fauna habitat in the intertidal zone	been developed to be cost-effective for potential significant residual impacts in the surrounding marine waters, and is relevant and proportionate to the Proposal’s potential significant residual impacts
---	--	---

## 3.2 METHODOLOGY TO DETERMINE CLEARING

### 3.2.1 DIRECT IMPACTS

Direct impacts resulting from the Project (as approved under MSXXX) will be reconciled against baseline environmental studies used to support the Environmental Review Documentation (ERD). Offset contributions are calculated by multiplying reconciled disturbed areas for each clearing matter by the off set rates (\$/ha) provided in Table 1.

All direct disturbances are managed in line with the Mardie Ground Disturbance Procedure. The procedure stipulates the mandatory use of an internal Ground Disturbance Permit (GDP) to mitigate the risk of unapproved clearing and to prompt the accurate collection of disturbance data. Disturbance areas proposed under the GDP can commence once the GDP has been signed by all required parties. Once the approved disturbance activities have been conducted, the Responsible Manager must provide the GDP Coordinator an accurate survey of the disturbed area. This data will be uploaded to the Mardie Disturbance Database and maintained for all disturbance reporting requirements.

An annual reconciliation of disturbance activities will be conducted using an aerial survey to verify the disturbance activities maintained within the disturbance database. The timing of survey will coincide with the submission of annual environmental reporting requirements to the Department of Mines, Industry Regulation and Safety (DMIRS). The verification involves a visual comparison of the spatial data within the disturbance database and the aerial image. Inaccuracies identified within the disturbance database will be rectified prior to calculating the final area of direct disturbance. This reconciled data will be supplied as part of the Impact Reconciliation Report (IRR) refer to Section 4.

The Disturbance Database includes the following information:

- Method of clearing;
- Reason / justifications;
- Amount required;
- Timing; and
- Baseline ecological value.

### 3.2.2 OTHER IMPACTS

Other impacts will be determined in accordance with? the Ministerial Statement.



## 4 REPORTING

### 4.1 FREQUENCY AND TIMING

The reporting schedule is provided in Table 2. For each IRR, the amount of clearing will be provided for each financial year of the biennial reporting period. In the case of the 'first biennial reporting period', the amount of clearing will be reported for each financial year, or part thereof, between 1 April 2021 and 30 June 2022.

Table 2: Reporting period and frequency of the Impact Reconciliation Procedure

Biennial Period	Action	Timing
	Ministerial Statement issued	April 2021
	Clearing commenced	June 2021
Period 1*	First biennial reporting period	April 2021 – June 2022.
	Aerial survey/ground truthing	July 2022 / Ongoing
	Impact Reconciliation Report submitted to DWER	30 October 2022
Period 2	Second biennial reporting period	July 2022 – June 2024.
	Aerial survey/ground truthing	July 2024 / Ongoing
	Impact Reconciliation Report submitted to DWER	30 October 2024
Period 3	Third biennial reporting period	July 2024 to June 2026
	Aerial survey/ground truthing	July 2026 / Ongoing
	Impact Reconciliation Report submitted to DWER	30 October 2026

The first offset payment will be due by the end of the financial year two years after ground disturbance commences (expected January 2021). An IRR will be compiled detailing the clearing undertaken during the biennial time period and will be submitted by 31 March biennially to DWER.

The IRR will confirm the area and the significance of the vegetation cleared in order to determine the value of the biennial offset payment. Dollar/hectare rates will be as specified in Table 1. Upon DWER acceptance of the IRR Mardie Minerals shall authorise payment, by the end of the relevant financial year. The real value of contributions will be maintained through indexation to the Perth Consumer Price Index (CPI) with the first adjustment to be applied to the first contribution.

### 4.2 CLEARING AND RECONCILIATION

Each IRR shall be structured in the manner prescribed in the DWER 'Instructions on How to Prepare *Environmental Protection Act 1986 Part IV Impact Reconciliation Procedures and Impact Reconciliation Reports*, January 2018', and use the template provided in the below link:

<http://www.epa.wa.gov.au/forms-templates/instructions-preparing-impact-reconciliation-procedures-and-impact-reconciliation>.





Each IRR shall include the following information:

- Project background;
- Summary of Ministerial Statement reporting requirements;
- Summary of the environmental values covered by the IRP;
- Purpose for clearing undertaken within the reporting period;
- Clearing proposed for the future biennial reporting period, including Ha and purpose;
- A table showing the current extent of clearing (Ha), the rate/Ha for each clearing matter and an estimate of the total amount due - DWER to calculate the final amount payable for the reporting period; and
- A figure showing the current extent of clearing.



---

## GLOSSARY

---

Term	Meaning
CPI	Perth Consumer Price Index
DBCA	Department of Biodiversity, Conservation and Attractions
DWER	Department of Water and Environmental Regulation
EPA	Environmental Protection Authority
Ha	Hectare
IBRA	Interim Biogeographic Regionalisation for Australia
IRR	Impact Reconciliation Report
Ktpa	Kilotonnes per annum
Mardie Minerals	Mardie Minerals Pty Ltd
Mtpa	Million tonnes per annum
SDA	Site Disturbance Application Form
SoP	Sulphate of Potash
The Proposal	Mardie Minerals Mardie Project

