# POONDANO IRON ORE MINE

# ENVIRONMENTAL LICENCE APPLICATION ATTACHMENT 3B PROPOSED ACTIVITIES

PREPARED FOR:

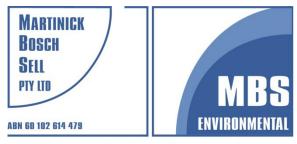
**HEDLAND MINING PTY LTD** 



AUGUST 2024







environmental and geoscience consultants

# POONDANO IRON ORE MINE ATTACHMENT 3B - PROJECT ACTIVITIES



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## 1. Introduction

#### 1.1 BACKGROUND

Hedland Mining Pty Ltd (Hedland Mining) operates the Poondano Iron Ore (Poondano, the Project) which is located within the Town of Port Hedland (ToPH), approximately 30 km southeast of Port Hedland and 10 km south of the Great Northern Highway in the Pilbara region of Western Australia (Figure 1, Attachment 2). Access to the Project is from the Great Northern Highway.

Development of the Poondano Project commenced in 2011 and continued under various ownership until 2014 when operations were placed in care and maintenance by then project operator Process Minerals International Pty Ltd (PMI), and tenement owners Polaris Metals Pty Ltd (Polaris), both subsidiaries of Mineral Resources Ltd.

Poondano Mining Company Pty Ltd (Infinity Metals) took ownership of the Project from PMI and Polaris in 2022. Hedland Mining and Poondano Mining Company are associated companies and, from January 2023, have an arrangement for Hedland Mining to be the operator of the Project.

Historically the Project has consisted of three separate mining areas: Poondano Southwest, Poondano Central and Poondano West (Figure 2, Attachment 2). Mining at Poondano Southwest involved the excavation of open pits, while mining at Poondano Central occurred along the tops of a series of mesas. Mining commenced in 2011 Poondano Southwest and in 2012 at Poondano Central with the Project entering a period of care and maintenance in mid-2014. No mining campaigns have occurred at Poondano West to date.

A processing plant was previously constructed at the Project on M45/1189 and comprised of a crushing area and screen plant, stockpile area, a workshop, laboratory, and offices and a putrescible landfill area.

An accommodation village was constructed at the Project on L45/219 however, the camp was never occupied and has since been removed from site and the area rehabilitated.

Decommissioning and rehabilitation activities have been conducted since the cessation of mining at Poondano Central in 2014 including blocking of access roads, decommissioning of the accommodation village, removal of all buildings, burying of concrete foundations, as well as the rehabilitation of the site and accompanying access track on L45/356. In addition, all exploration disturbances on M45/1189 and E45/2723 have been remediated, including secure plugging and backfilling of drill holes, removal of rubbish and backfilling of sumps and costeans.

The Project currently includes the following infrastructure:

- A mobile crushing and screening plant
- 280-kVA generator for power supply.
- Double-skinned fuel tank.
- Portable workshop
- Portable Offices
- Portable assay laboratory.
- Sea containers (storage).
- Ablution and Coerco Flatbed Leach Drain System (<20 m³ per day)
- Stormwater management infrastructure

The project activities occur within M45/1189 and the site layout is shown in Figure 3 of Attachment 2. No clearing was required for the activities as infrastructure placement was within existing disturbance areas.



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The current life-of-mine (LOM) for the Project is expected to be one year; however, the LOM may be subject to change once operations recommence and operational lifespan is better understood.

#### 1.2 PURPOSE

This Environmental Licence (EL) application is submitted to the Department of Water and Environmental Regulation (DWER) to obtain approval for operation of key components of the Poondano Iron Ore Mine for the mining and physical processing of ore.

Works Approval (W6853/2023/1) was granted for construction and commissioning of a mobile crushing and screening plant. Therefore, this EL application seeks approval to operate the following:

Mobile crushing and screening plant — processing of 50,000 t or more of ore per year (Category 5).

Information presented in this document aims to assist DWER in assessing the adequacy of proposed pollution prevention and control measures to ensure adverse environmental impacts are prevented or minimised to levels where appropriate environmental standards can be complied with.

#### 1.3 PROJECT SUMMARY

The Poondano Iron Ore Project involves the collection of ore (as boulder scree) from the Project where it is loaded into haul trucks via excavators and delivered to a temporary Run-of-Mine (ROM) storage stockpile where it is fed into a 3-stage mobile crushing and screening plant (mobile crusher), comprising a jaw crusher (primary), cone crusher (secondary crusher) and screen set up. Following the crushing and screening process, ore is segregated into lump and fines product and stored as stockpiles for transportation to Port Hedland by truck for direct shipping export. Ore treatment on site is physical in nature and do not include chemical beneficiation methods.

#### 1.3.1 **Tenure**

The Project is located on one tenement (Mining Lease M45/1189) which is solely held by Poondano Mining Company Pty Ltd M45/1189 was previously held by Polaris Metals Pty Ltd who acquired the tenement on 06 May 2010.

As of 18 October 2023, Poondano Mining Company Pty Ltd. became the holder of M45/1189 (Attachment 1A). Hedland Mining and Poondano Mining Company are associated companies and from January 2023, have an arrangement for Hedland Mining to be the operator of the Project.

Current project activities will occur solely within the M45/1189. A summary of all Mining Act tenure associated with the Project is provided in Figure 2 of Attachment 2 and shown in Table 1.

Table 1: Project Tenement Details

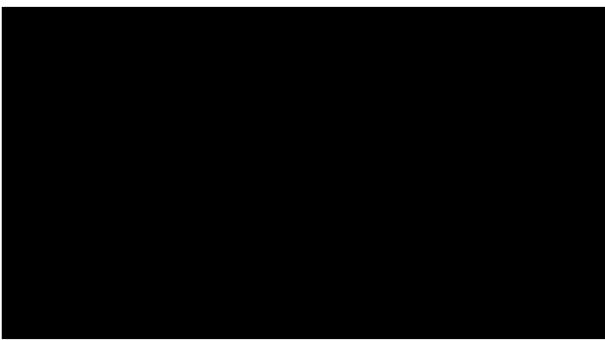
Tenement	Area (Ha)	Holder	Granted	Expiry
M45/1189	1,008.0	Poondano Mining Company Pty Ltd	06/05/2010	05/05/2031
L45/219	98.4	Poondano Mining Company Pty Ltd	02/03/2012	01/03/2033
L45/247	110.014	Poondano Mining Company Pty Ltd	02/04/2012	01/04/2033
L45/356	13.36	Poondano Mining Company Pty Ltd	08/01/2014	07/01/2035
L45/357	2.16250	Poondano Mining Company Pty Ltd	05/02/2014	04/02/2035



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## 1.3.2 Licensee and Occupier Status

Poondano Mining Company Pty Ltd is the holder of the tenements associated with the Poondano Iron Ore Project. The proponent and key contact details are shown in Table 2.



1.3.

The Schedule 1 Prescribed Premises Category applicable to the Poondano Iron Ore Project is shown in Table 3. A previous Environmental Licence Environmental Licence (L8697/2012/1) had been held for the Project, this expired in November 2017.

Category	Description of Category	Production or Design	Relevant Project
Number		Capacity Threshold	Infrastructure
5	Processing or beneficiation of metallic or non-metallic ore; premises on which:  a) Metallic or non-metallic ore is crushed, ground, milled or otherwise processed. b) Tailings from metallic or non-metallic ore are reprocessed. c) Tailings or residue from metallic or non-metallic ore are discharged into a containment cell or dam.	50,000 t or more per year	Mobile crushing and screening plant (mobile crusher)

Table 3: Prescribed Premise Categories

It is noted the following Schedule 1 Categories under Part V of the *Environmental Protection Act 1986* (EP Act) have been undertaken for the Project, but have not been included in this application, as they do not trigger category thresholds:

- Schedule 1 Category 73: Bulk chemical storage. Hydrocarbons and other chemicals are stored on site, however bulk storage of chemicals will not exceed 1,000 m³ in aggregate.
- Schedule 1 Category 85: Sewage Facility. The Project has installed a small leach drain system to manage wastewater generated by employees and contractors and is exempt from the Schedule 1, Part 2 trigger levels (<20 m³ per day) and, therefore, are not included in this Environmental Licence application.



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• Schedule 1 Category 52: The Project will use diesel-powered generators to provide power for the project. This will be below the 10-MW per annum trigger and therefore is not included in this licence application.

## 1.3.4 Category 5 — Timeline for Development

A timeline for development/installation of the mobile crushing and screening plant is provided in Table 4.

Table 4: Timeline for Development

Development Milestone	Date
Construction completion	30 October 2023
Submission of Environmental Compliance Report	05 August 2024 <sup>1</sup>
Commencement of Time Limited Operation Phase	05 August 2024 <sup>2</sup>
Submission of Environmental Licence application (this document)	16 August 2024
Completion of Time Limited Operations Phase	01 February 2025
Submission of Time Limited Operations Report	05 August 2024

<sup>&</sup>lt;sup>1</sup> Late submission - refer to ECR submitted 05 August 2024



<sup>&</sup>lt;sup>2</sup> As determined by DWER - refer to letter received 16 August 2024 (Your ref: DER2023/000564)

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# 2. EXISTING ENVIRONMENT

A description of the existing environment at the Project is provided in Attachment 7 of the EL application and is not repeated here.



#### 3. SCHEDULE 1 CATEGORIES

#### 3.1 CATEGORY 5: MOBILE CRUSHING AND SCREENING PLANT

The key characteristics of the Mobile Crushing and Screening Plant at the Prescribed Premise are presented in Table 5 and its location is shown in Figure 3 of Attachment 2.

A process flow chart and detailed general arrangement drawing is presented in Figures 10 and 11 of Attachment 2, respectively.

Table 5: Key Characteristics of the Mobile Crushing and Screening Plant

Operating hours (24 hours per day, 1 year)		
Flow sheet	w sheet Primary and secondary crushing and screening.	
Type of mobile crusher	Three stage (jaw, cone, screen) diesel hydraulic unit.	
Ore processing rate	e processing rate Maximum throughput 200 t/h.	
Ore production rate	re production rate Annual throughput — more than 500,000 but less than 5,000,000 t	
Supporting equipment	Articulated Haul Trucks	
	50-t Excavator	
	Front End Loaders	
	Water Cart	
	Service Truck	

Ore is fed into a 3-stage mobile crushing and screening plant comprising a jaw crusher (primary), cone crusher (secondary crusher) and horizontal screening plant, before being delivered to the lump and fines stockpiles. The mobile crushing and screening plant is a track mounted portable facility and operates 24 hours a day to crush, screen and separate ore. All stages are physical in nature and do not include chemical beneficiation methods. The plant has been fitted with a dust suppression system and is equipped with spray bars.

Specifications for the mobile crushing and screening plant are outlined in Table 6.

Table 6: Mobile Crushing and Screening Plant and Specifications

Options and Supplier	Metso
Primary (Jaw) Crusher	LT120 Jaw Crusher
Feed opening (mm)	1,200 x 870
Feeder Capacity (m³)	7
Capacity (up to; t/day)	4,000
Engine power (kW)	356
Transport length (mm)	16,650
Transport width (mm)	3,000
Transport Height (mm)	3,900
Dust Management Option	Fitted with hose, spray bars and discharge hood
Secondary (Cone) Crusher	HP300 Cone Crusher
Feed opening (mm)	230
Feeder Capacity (m³)	7
Performance Capacity (up to; t/day)	4,000



Options and Supplier	Metso
Engine power (kW)	442
Transport length (mm)	17,000
Transport width (mm)	3,500
Transport height (mm)	3,800
Dust Management Options	Piped for dust suppression with spray bars
Options and Supplier	Terex Finlay
Screening Plant	984 Horizontal Screener
Screen size (mm)	6100 x 1930
Capacity (up to; m³)	8
Number of products (up to)	4
Dust Management Options	Hydraulically driven water pump for dust suppression.

#### 3.1.1 Run-Of-Mine (ROM) Pad and Stockpiles

Ore (as boulder scree) is loaded into haul trucks via excavators and delivered to the ROM Pad (Figure 3 of Attachment 2), where it is stockpiled to be reclaimed for the adjacent crushing and screening circuit. The ROM Pad supports storage of at least two weeks of mobile crusher feed to allow for any operational disruptions.

## 3.1.2 Crushing and Screening Process

The processing plant (crushing and screening) is a track mounted, three stage mobile unit (jaw, cone, screen) with associated radial stackers for stockpiling two material product types. Stockpiled ore is reclaimed from the ROM stockpile using a front-end loader and loaded into the dump hopper of the jaw crusher (primary). The front-end loader accesses the back and sides of the ROM stockpile, whilst the haul trucks dump to the front of the ROM stockpile. Ore is treated by the process described below:

- The level of crushed ore in the primary crusher chamber is controlled by a grizzly feeder that moves ore onto the pre-screens.
- Fine sand sized material (waste) is screened off onto the bypass conveyor into a stockpile and the remaining ore continues to the jaw chamber.
- The jaw crusher discharge conveyor transfers ore to the horizontal screener.
- The screener separates the crushed ore into fines (<25-mm), lump (<8-mm and >8-40-mm), and oversized (+40 mm).
- Fines and lump feed onto separate conveyers into radial stackers to form fine and lump product stockpiles.
- Oversized is fed into the cone crusher (secondary).
- The cone crusher discharges ore back onto the horizontal screener to form a closed-loop crushing circuit.
- Fine and lump stockpiles are loaded into covered road-trains using a front-end loader and transported via road to Port Headland where it is exported as direct shipping ore (DSO).

Dust generated from this activity is minimised through the application of the dust suppression practices detailed in Table 6. Water sprays are used at the head of the conveyor for dust suppression prior to discharging onto the ore stockpiles. The mobile crusher is piped for dust suppression and equipped with spray bars.



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## 3.1.3 Fines and Lump Ore Stockpiles

Post crushing and screening, ore is segregated into lump and fines product and stored as stockpiles (Figure 11, Attachment 2) for loading and transportation approximately 30 km to Port Headland by truck for direct shipping export. Scalped waste is to be stockpiled for use in future site rehabilitation works.

# 3.1.4 Flood Diversion Drains, Bunds and Basins

Stormwater diversion bunds have been installed around key infrastructure to intercept potentially contaminated runoff (sediment, hydrocarbons) from the processing area, ROM pad and ore stockpile areas (Figure 3 of Attachment 2). Runoff from bund diversion drains is directed into two catchment sumps and left to evaporate naturally.

Inspection of the stormwater diversion drains, and other surface water management infrastructure will be undertaken regularly and after significant rainfall events to assess the level of sediment build-up within the structures.

Construction of surface water management infrastructure installed in the Prescribed Premise, in accordance with the Works Approval has been provided in the Environmental Compliance Report submitted in conjunction with this application.



#### 4. COMPLIANCE

#### 4.1 CONTEXT

The mobile crushing and screening plant is a track mounted, three stage mobile unit (jaw, cone, screen) with associated radial stackers for stockpiling two material product types. The products include iron ore fines (<8-mm fines), iron ore lump (>8 to 40-mm). All machine components of the processing plant are diesel powered and hydraulic operated. The components of the system were delivered by truck and tracked into required operating positions upon delivery to site.

The mobile crushing and screening plant was mobilised to site and was subsequently certificated by an Engineer on 30 October 2023.

#### 4.2 SUBMISSION OF AN ENVIRONMENTAL COMPLIANCE REPORT

In accordance with Condition 2 of W6853/2023/1 the Licence holder must, must within 30 calendar days of an item of infrastructure or equipment required by Condition 1 being constructed and/ or installed:

- a) undertake an audit of their compliance with the requirements of Condition 1; and
- b) prepare and submit to the CEO an Environmental Compliance Report on that compliance

Due to factors associated with management changes the audit was overlooked and not undertaken until 12 May 2024. The resulting Environmental Compliance Report was submitted to DWER on 05 August 2024 (Table 4), for the following items of infrastructure or equipment:

#### Mobile crushing and screening plant

- Mobile crushing and screening plant (processing plant) comprising a three-stage diesel hydraulic unit and associated equipment comprising:
  - Dust suppression sprays and water sprays throughout the plant, at entry and material discharge points.
  - Covered Transferred chutes tail of crushers to be encapsulated

#### Stormwater management infrastructure

- Stormwater management infrastructure comprising:
  - Stormwater drains/bunds to direct clean stormwater around crushing and screening processing infrastructure
  - Stormwater drains/bunds to direct contaminated/potentially contaminated stormwater from within the processing area to catchments sumps to prevent release of contaminated stormwater to the environment

This report demonstrates partial compliance with Condition 1 of W6853/2023/1. Refer to Section 4 and Tables 2 and 3 of the Environmental Compliance Report.

#### 4.3 SUBMISSION OF A TIME LIMITED OPERATIONS REPORT

Following submission of the Environmental Compliance Report, DWER issued approval for Hedland to commence Time Limited Operations (TLO). TLO commenced on 05 August 2024 (Table 4) for 180 calendar days and is scheduled to be completed on 01 February 2025.



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In accordance with Condition 7 of W6853/2023/1, a TLO compliance report will be submitted within 30 days of completion of the TLO period (03 March 2025).

## 4.4 STAGED INFRASTRUCTURE

Construction and/or installation of project infrastructure approved by W6853/2023/1 is staged and a separate Environmental Compliance Report (Version 2) will be submitted within 30 calendar days of construction/installation completion of the following items of infrastructure:

• Category 89: Putrescible Landfill Site.

