



# Attachment 3B: Works Approval Application Information

Miralga Creek DSO Project

23/12/2020

180-LAH-EN-RPT-0004 v 1.0



# Works Approval Application Information

Miralga Creek DSO Project



## Authorisation

Version	Reason for Issue	Prepared	Checked	Authorised	Date
1.0	Submission to DWER	S. Springer D. Morley	B. Pola	N. Bell	23/12/2020



# Works Approval Application Information

Miralga Creek DSO Project

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## Works Approval Application Information

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### Abbreviations

ASIC	Australian Securities and Investments Commission
ASX	Australian Securities Exchange
DAWE	Department of Agriculture, Water and the Environment
DMIRS	Department of Mines, Industry Regulation and Safety
DPLH	Department of Planning, Lands and Heritage
DWER	Department of Water and Environmental Regulation
EP Act	Environmental Protection Act 1986
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
km	Kilometre
kVA	Kilovolt-amperes
ML	Megalitre
MOC	Mining Operations Centre
Mtpa	Million tonnes per annum
RIWI Act	<i>Rights in Water and Irrigation Act 1914</i>
ROM	Run of mine
WA	Western Australia
WWTP	Wastewater Treatment Plant



## Works Approval Application Information

### Miralga Creek DSO Project

## 1 Introduction

### 1.1 Project Description

Atlas Iron Pty Ltd (Atlas) is currently seeking approvals to develop the Miralga Creek Direct Shipping Ore Project (the Project). The Project is an iron ore mine located in the Pilbara region of Western Australia (WA), approximately 100 km south-east of Port Hedland, along the Marble Bar Road (Figure 1-1).

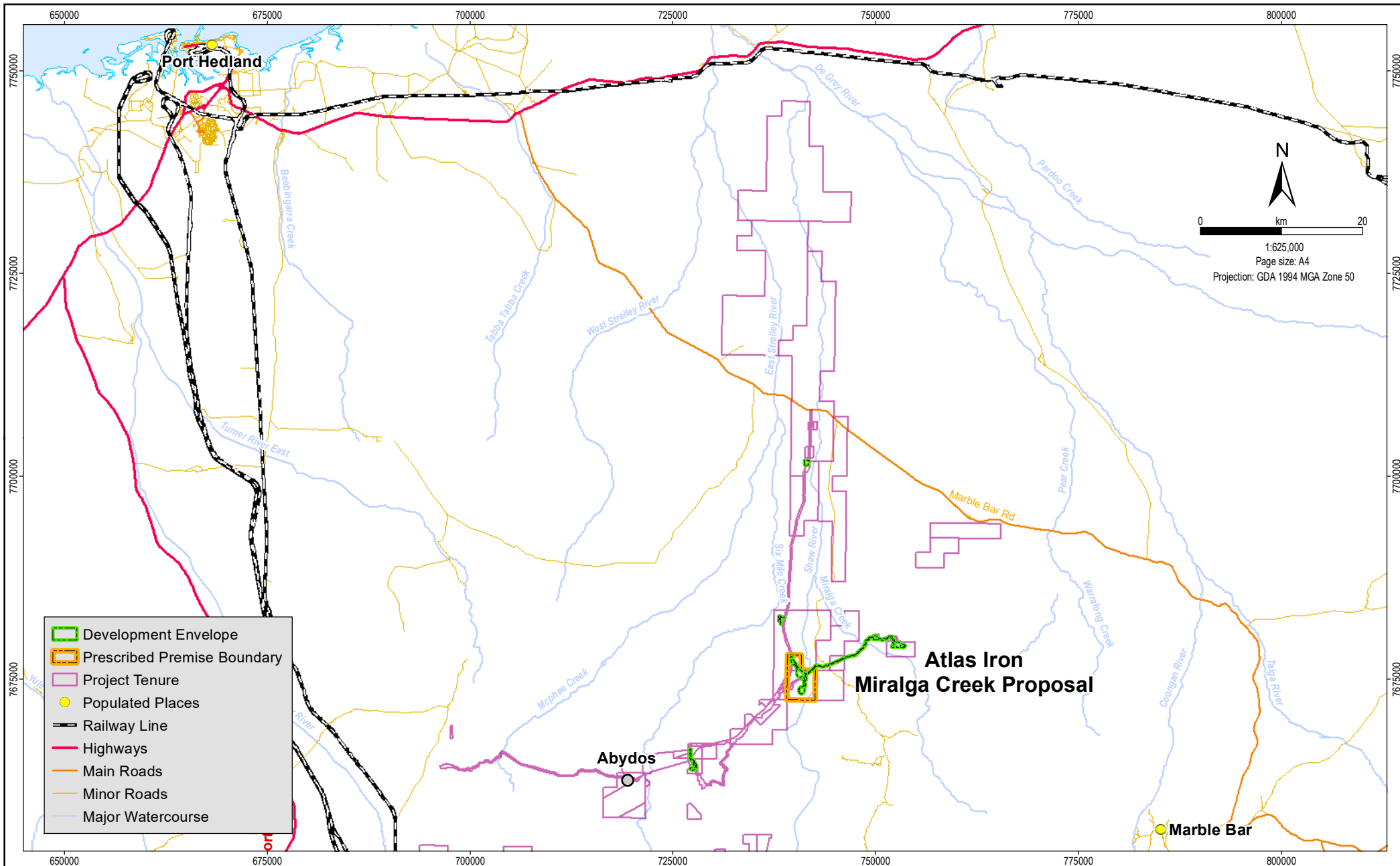
The Project comprises above water table mining of iron ore from five satellite pits within three discrete mining areas, spread over 30 km. The pits will be mined in a staged manner by a small, mobile mining fleet using conventional drill and blast, load and haul methods. The Project will involve mining iron ore at a rate of approximately 2 Mtpa on a day shift only basis for seven days a week over a four to five-year period. Ore will be trucked to the run-of-mine (ROM) pad at Miralga West for crushing and screening (Attachment 2). The plant will produce two products, lump (40 mm – 6.3 mm) and fines (<6.3 mm) for 100% recovery. No tails or waste product will be produced. The final product will be hauled to Utah Point in Port Hedland for export overseas. Personnel will be accommodated at the existing Abydos camp.

### 1.2 Purpose of This Document

As part of the approvals for this Project, Atlas is seeking to construct and operate the following prescribed premises as defined under Schedule 1 of the Environmental Protection Regulations 1987:

- Crushing and screening facility (category 5 – processing or beneficiation of metallic or non-metallic ore).

This report (Attachment 3B) supports Atlas's submission of the 'Application form: works approval / licence' as required by the Department of Water and Environmental Regulation (DWER) to assess the Project.



	File Name: GIS_3153.mxd	Source & Notes:
	Date: 21/12/2020	
	Author: Chris.Maude	

<b>Regional Location</b>	Figure No: <b>1-1</b>
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## Works Approval Application Information

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## 2 Applicant Details

Atlas Iron Pty Ltd (ACN 110 396 168) is the Applicant of this Proposal. Atlas was acquired by Hancock Prospecting Pty Ltd in 2018, at which time it was de-listed from the Australian Securities Exchange (ASX). Atlas is an Australian and Securities and Investment Commission (ASIC) listed company, as demonstrated in Attachments 1A and 1B.

## 3 Premises Details

The prescribed premise is located entirely within mining tenement M 45/1282 (Table 3-1), which is currently in the final stages of being granted to Atlas. Atlas will provide confirmation of the granting of M 45/1282 when available. Atlas currently holds exploration tenement E 45/4987 covering a similar area.

The indicative location of the crushing and screening facility is shown in the premises map (Attachment 2).

Table 3-1: Premises Legal Description

Prescribed Premise Category	Premises Legal Description
Category 5 – Processing or beneficiation of metallic or non-metallic ore	M 45/1282

## 4 Proposed Activities

This chapter provides a description of the Project's prescribed activities. Clearing has been approved under Ministerial Statement No. 1154 dated 23 November 2020 and is not included in this application (see also Section 6).

Subject to the receipt of key approvals, construction of this Project is anticipated to commence in April 2021, with mining commencing in January 2022. The project has a mine life of four to five years with expected completion in 2026.

### 4.1 Category 5 – Crushing and Screening

A crushing and screening plant (also referred to as an ore handling plant or OHP) is required to process ROM ore to the target product sizes prior to road transport to the port at Utah Point.

The crushing and screening plant will be brought to site and assembled after key environmental controls are in place. For construction, the key controls are stormwater diversion structures and a downstream sediment control area that will be built prior to the plant being constructed, to enable dirty stormwater and or spilt chemicals (e.g. diesel) to be controlled within the prescribed premise boundary.

A summary of the crushing and screening facility details is provided in Table 4-1. An indicative schematic of the crushing and screening plant layout and its location within the ROM pad is provided in Figure 4-1 and Figure 4-2.





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### Miralga Creek DSO Project

Table 4-1: Summary of the Crushing and Screening Plant

Component	Overview														
Scope, size and scale, including details as to frequency, production and design capacity	<p>Crushing and screening plant, operating on dayshift only, 7 days per week, with a design capacity and expected production rate of 2 Mtpa.</p> <p>Pending the receipt of necessary approvals, key dates are as follows:</p> <table border="1" data-bbox="520 465 1433 808"> <thead> <tr> <th data-bbox="520 465 1054 539">Development Stage</th> <th data-bbox="1054 465 1433 539">Indicative Timing (Calendar Year)</th> </tr> </thead> <tbody> <tr> <td data-bbox="520 539 1054 584">Obtain key environmental approvals</td> <td data-bbox="1054 539 1433 584">Q1 2021</td> </tr> <tr> <td data-bbox="520 584 1054 629">Commence site construction</td> <td data-bbox="1054 584 1433 629">Q2 2021</td> </tr> <tr> <td data-bbox="520 629 1054 674">Commence mining</td> <td data-bbox="1054 629 1433 674">Q4 2021</td> </tr> <tr> <td data-bbox="520 674 1054 719">Commence shipping</td> <td data-bbox="1054 674 1433 719">Q2 2022</td> </tr> <tr> <td data-bbox="520 719 1054 763">Mining ceases</td> <td data-bbox="1054 719 1433 763">Q3 2026</td> </tr> <tr> <td data-bbox="520 763 1054 808">Decommissioning and closure</td> <td data-bbox="1054 763 1433 808">Q3 2027</td> </tr> </tbody> </table>	Development Stage	Indicative Timing (Calendar Year)	Obtain key environmental approvals	Q1 2021	Commence site construction	Q2 2021	Commence mining	Q4 2021	Commence shipping	Q2 2022	Mining ceases	Q3 2026	Decommissioning and closure	Q3 2027
Development Stage	Indicative Timing (Calendar Year)														
Obtain key environmental approvals	Q1 2021														
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Commence mining	Q4 2021														
Commence shipping	Q2 2022														
Mining ceases	Q3 2026														
Decommissioning and closure	Q3 2027														
Key infrastructure and equipment	<p>The crushing and screening plant will include the following:</p> <ul style="list-style-type: none"> <li>• 1x feeder and grizzly.</li> <li>• 1x jaw (primary crusher).</li> <li>• 1x (secondary) cone crusher.</li> <li>• 1x triple deck sizing screen.</li> <li>• 2x radial stackers.</li> <li>• 2x cross belt samplers.</li> <li>• Weightometers.</li> <li>• Metal detection units.</li> </ul>														
Unique or non-standard processes or operations	<p>None.</p>														
Emissions and emission discharge points (Emissions are discussed further in Section 9)	<p>Emission discharge points at the crushing and screening plant include transfer chutes and stacker discharge as shown in the crushing and screening process flow diagram (Figure 4-1). Potential emissions from the crushing and screening facility and associated discharge points are:</p> <ul style="list-style-type: none"> <li>• Noise               <ul style="list-style-type: none"> <li>• Crushing and screening plant.</li> <li>• Associated vehicle movements and equipment and machinery operation (e.g., rock breaker and diesel generators).</li> </ul> </li> <li>• Dust:               <ul style="list-style-type: none"> <li>• ROM stockpile (feeds the crushing and screening plant).</li> <li>• Crushing screening plant, specifically primary feed hopper, conveyor transfer points and stackers</li> <li>• Product stockpiles</li> <li>• Associated vehicle movements and equipment and machinery operation.</li> </ul> </li> <li>• Light:               <ul style="list-style-type: none"> <li>• The plant will operate on day shift only. Occasional maintenance activities may occur at night which will require lighting.</li> </ul> </li> <li>• Contaminated stormwater from the ROM pad collected at the downstream sediment control area.</li> </ul>														

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## Miralga Creek DSO Project

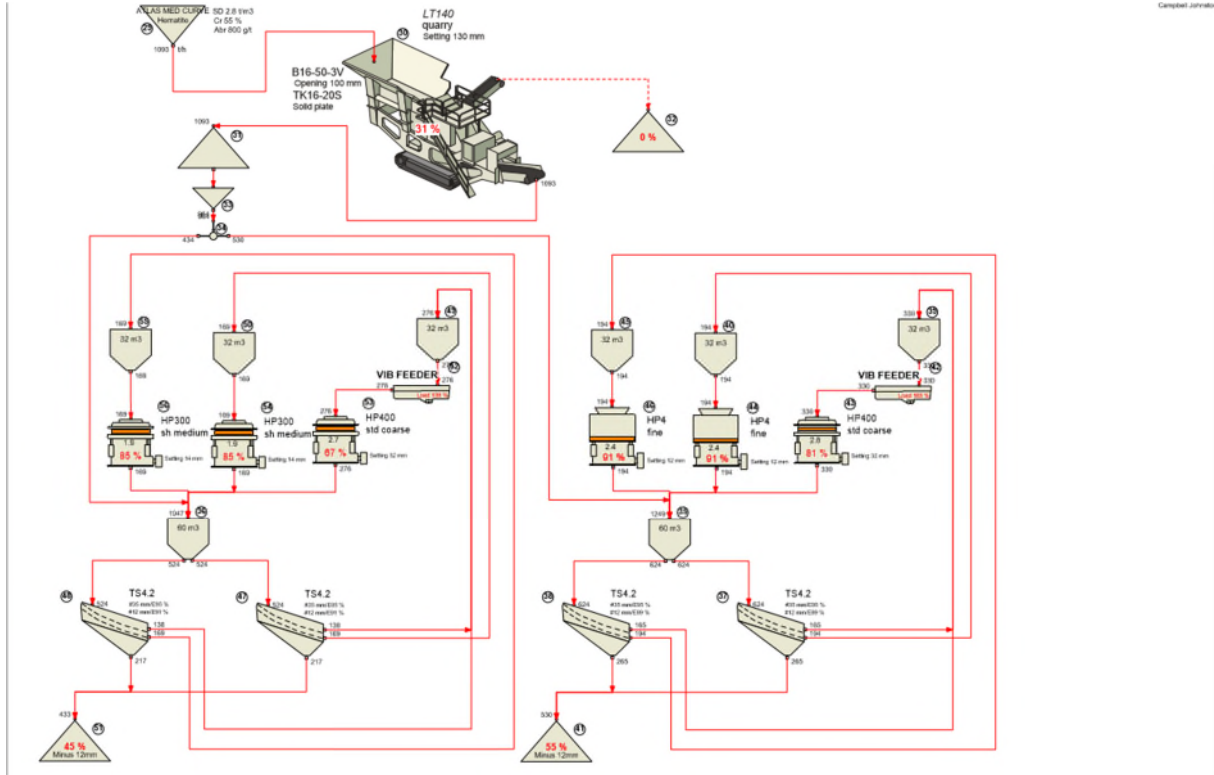
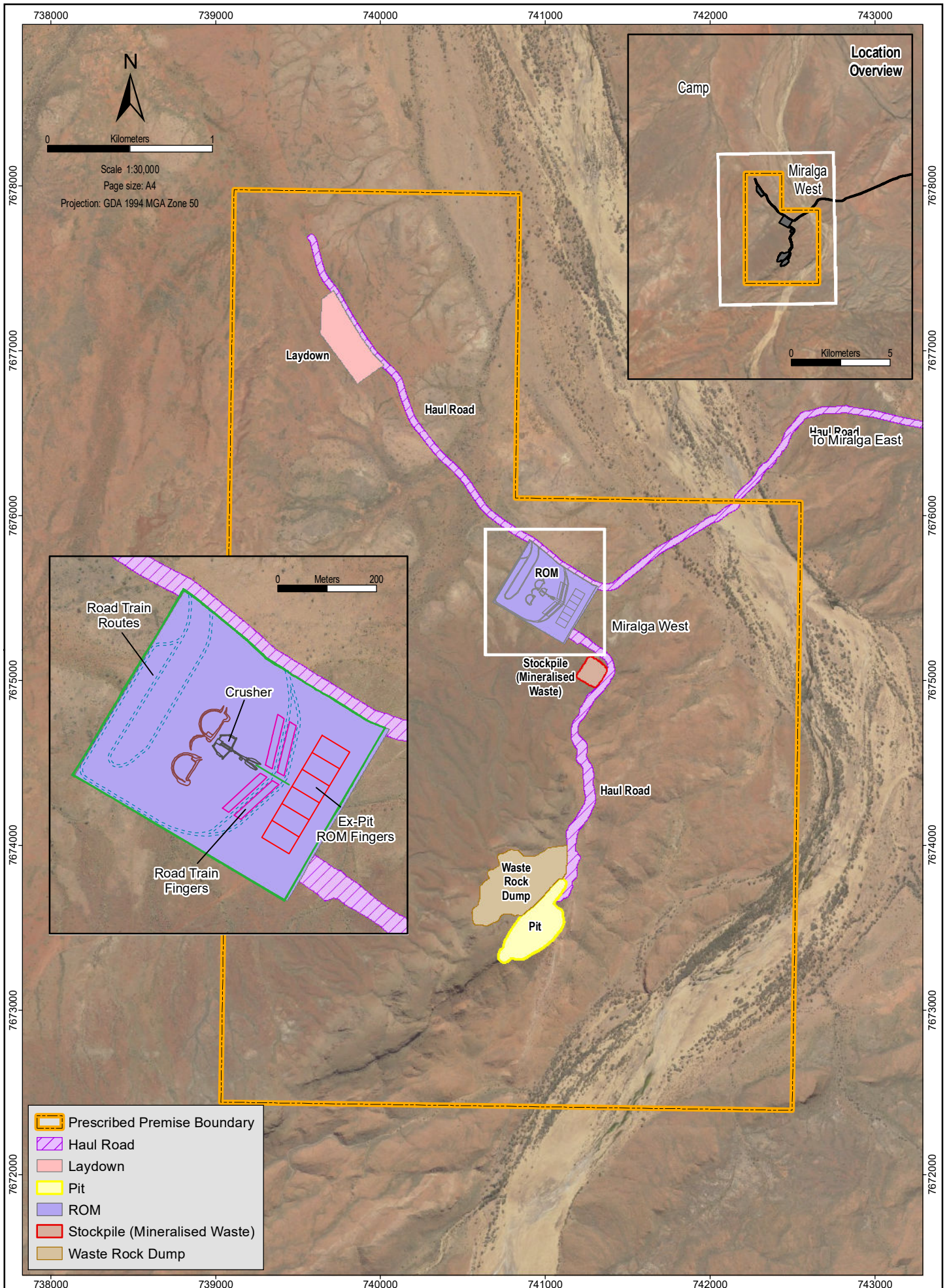


Figure 4-1: Indicative Schematic of Crushing and Screening Plant Layout





- Prescribed Premise Boundary
- Haul Road
- Laydown
- Pit
- ROM
- Stockpile (Mineralised Waste)
- Waste Rock Dump



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#### 4.1.1 Inputs

Once operational (and during commissioning) the key inputs to the crushing and screening plant are:

- Power (diesel generators).
- Water for dust suppression and conditioning of the ore.
- Mined ore.

#### 4.1.2 Process

Ore mined from the open pits will be hauled via haul trucks to the ROM pad, where it will be stockpiled prior to processing. The ROM area will include a ROM stockpile (capacity of approximately 20,000 t), an oversize ore stockpile, rock breaker, crushing and screening plant, product stockpiling area, load-out loop, weighbridge, contractor workshop and parking area for heavy mining equipment.

Front end loaders will feed the stockpiled ore into the crushing and screening plant, where it will undergo two crushing stages and two screening stages before the ore is fed out onto the product stockyard (with an approximate total capacity of 40,000 t) via two radial stackers (one for lump product and one for fines product). The capacity of the live product stockpiles (below the radial stackers) will be approximately 20,000 t.

Oversized ore (too large for the crusher feed) will be separated into an oversize ore stockpile which will be periodically processed using a rock breaker before being re-fed into the crushing and screening plant.

The plant is expected to have an average throughput of 600 tonnes per hour (tph). Instantaneous plant throughput rates may be up to 800 tph. The plant will be operated during day shift only and is expected to operate approximately 3,300 hours per annum. Based on the maximum instantaneous throughput, the crusher would have the capacity to process approximately 7 Mtpa.

The in-situ moisture content of the ore prior to processing is expected to range from 1 to 2%. A target moisture content of 5% for fines and 3% for lump during processing will be achieved by application of water sprays, which will also limit dust emissions. Water sprays will be installed on the feed bin, strategic conveyor transfer points and stacker head chutes. In addition, a mobile truck with a water cannon and/or spray bar will be utilised to manage dust emissions on the ROM pad.

The plant will be powered by diesel fuelled generators and controlled by a centralised control room.

Stormwater diversion structures will be constructed to divert uncontaminated stormwater around the ROM pad, while water collected within the ROM pad will be directed to a sedimentation basin to allow for sediment removal prior to discharge. Sedimentation basins will be designed to a 1 in 20 year annual recurrence interval (ARI) rainfall event and incorporate a rock armoured spillway to encourage settlement of sediment and prevent erosion.

The mobilisation and construction of the crushing and screening facility is anticipated to commence from April 2021, following which validation and commissioning will be undertaken in accordance with plant supplier specifications in December 2021, with time limited operations commencing at approximately the same time.

#### 4.1.3 Outputs

The Project is anticipated to process approximately 2 Mtpa of iron ore over four to five years. Outputs/emissions include:





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- Dust.
- Noise.
- Runoff water from rain or dust suppression.

## 4.2 Time Limited Operations

Atlas is seeking approval for time limited operations for 90 to 180 days to allow transition from the Works Approval up until the grant of the licence.

## 4.3 Other Activities

A number of other activities will be undertaken within the prescribed premise boundary which may generate emissions that pose a risk to public health and/or the environment, including:

- Clearing/ground disturbance. This activity has been considered and approved separately in accordance with the requirements of the *Environmental Protection Act 1986 (MS 1154)*.
- Mining (including drilling, blasting and excavation) from open pits.
- Construction of waste rock dumps.
- Electricity generation. Diesel generators operating at a maximum capacity of 4.48 MW will be used. This is below the 10 MW threshold for a category 52 prescribed premise.
- Construction of additional infrastructure and supporting facilities including offices, workshops and roads.
- Crib facilities and ablutions at the Mining Operations Centre (MOC), with potential for discharge of treated sewage, grey water or wash water (below 20 m<sup>3</sup>/day threshold for category 89)
- Storage and use of chemicals, explosives and hydrocarbons including diesel, ammonium nitrate and chlorine. These amounts will be less than the 1,000 m<sup>3</sup> threshold level above which a licence is required to register bulk storage of chemicals (category 73).
- Abstraction of groundwater from the existing borefield in accordance with existing licence (GWL168045(7)) as regulated under the *Rights in Water and Irrigation Act 1914 (RiWI Act)*. It therefore does not form part of this assessment.
- Vehicle and equipment maintenance and washdown.

Project activities are being considered and assessed via the approval pathways discussed in Sections 6 and 7.

## 5 Index of Biodiversity Surveys for Assessment

Atlas understands that DWER requires the submission of relevant biological data prior to the issuing of approvals under the EP Act. IBSA data will be submitted to DWER as part of the *Environmental Protection Act 1986 Part IV* process.

## 6 Other DWER Approvals

The following DWER-managed approvals are required and are in progress for the Project:

- A section 38 referral was submitted on 7 April 2020 and the EPA decided to assess the Project. The Project received approval under Part IV of the EP Act on 23 November 2020 (Ministerial Statement No. 1154).
- Water licensing is managed by DWER under the RIWI Act. The Project will use bores managed under existing groundwater licences GWL 176408(4) and GWL 168045(7). These bores have previously been used for mining water supply and will provide more allocation than is required for the Project.



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More detail on other approvals is provided in Attachment 5.

## 7 Other Approvals and Consultation

This project does not constitute a Major Project, nor is it subject to a state agreement act. Attachment 5 details the environment approvals that will be required for the Project.

As the Project has developed, Atlas has had on-going consultation with relevant stakeholders (Table 7-1). The principal objectives of the stakeholder consultation program have been to:

- Identify interested and potentially affected individuals and groups and to understand the nature of stakeholders' interest in the Project.
- Ensure that stakeholders are properly informed about the Project and that there are adequate and timely opportunities for stakeholders to provide input and raise issues.
- Ensure that any stakeholder issues or concerns are managed with respect, are given due consideration and are responded to in a timely manner.
- Meet the relevant regulatory requirements with regard to appropriate stakeholder input to the impact assessment and approvals process.

Atlas is committed to continuing consultation with stakeholders through the approval, construction and operational phases of the Project to ensure stakeholders are regularly informed of Project developments and address any concerns raised efficiently.

Consultation regarding the Project is ongoing and will continue with key stakeholders throughout the life of the Project.

Table 7-1: Project Stakeholders

<b>Pastoral stations</b>	Strelley Station (Strelley Pastoral Co Pty Ltd)
	Hillside-Panorama Station (Hillside Station (WA) Pty Ltd)
	Coongan Station (Coongan Aboriginal Corporation)
<b>Mining tenure holders</b>	Whim Creek Mining Pty Ltd
	Fastfield Pty Ltd
	Venturex Sulphur Springs Pty Ltd
	Le Aussie
<b>Native title groups</b>	Nyamal People #1 and Nyamal People #10 Native Title Groups
	Nyamal Aboriginal Corporation (Registered Native Title Body Corporate)
<b>Shire and local governments</b>	Shire of East Pilbara
	Town of Port Hedland
<b>State government agencies</b>	Department of Mines, Industry Regulation and Safety
	Department of Water and Environmental Regulation
	Department of Biodiversity, Conservation and Attractions
	Pilbara Ports Authority
	Main Roads Western Australia
	Department of Planning, Lands and Heritage
	Department of Primary Industries and Regional Development
<b>Australian government agencies</b>	Department of Agriculture, Water and the Environment



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<b>Local and regional groups</b>	Marble Bar and Nullagine Community Resource Centre
	Marble Bar Progress Association

## 8 Applicant History

Atlas holds or has held several instruments under Part V (Division 2) of the EP Act, as summarised in Table 8-1.

Table 8-1: Atlas's Prescribed Premises Instruments

Project	Instrument	Status
Abydos DSO Project	L8733/2013/1	Active
	W5253/2012/1*	Inactive
	W5743/2014/1*	Inactive
Corunna Downs DSO Project	W6043/2017/1	Active
Mt Dove DSO Project	L8678/2012/1	Active
	W5181/2012/1*	Inactive
Mt Webber DSO Project	L8788/2013/1	Active
	W5312/2012/1*	Inactive
	W5373/2013/1*	Inactive
	W5667/2014/1*	Inactive
Pardoo DSO Project	L8276/2008/2*	Inactive
	W4434/2008/1*	Inactive
	W5191/2012/1*	Inactive

## 9 Emissions, Discharges and Waste

This section describes potential emissions and discharges that may be generated during the operation of the crushing and screening facility. Mitigation and/or management measures that will be implemented to reduce environmental impacts associated with these potential emissions and discharges are also outlined in this section. A summary table of emission types and impacts can be found in Attachment 6A.

### 9.1 Crushing and Screening

The following emissions will result from the construction and/or operation of the crushing and screening plant (day shift only):

- Emissions to air:
  - Noise will be generated during construction, and also throughout operations.
  - Dust emissions will be generated during ground disturbance activities for construction and during operations.
  - Light will be emitted from the crushing and screening plant at night, on occasion, for maintenance purposes (the plant will ordinarily operate on day-shift only).



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- Emissions to land:
  - Stormwater carrying contaminants (e.g. potential diesel spill or loss of hydraulic fluid event may be spilt to ground during construction and operations).
  - Stormwater carrying sediment (e.g. fines or undersized products of crushing).
- Emissions to water:
  - Stormwater carrying contaminants (e.g. potential diesel spill or loss of hydraulic fluid event may be spilt to ground during construction and operations). The water may travel downstream to the Shaw River (approximately 450 m away).
  - Stormwater carrying sediment (e.g. fines or undersized products of crushing). The water may travel downstream to the Shaw River (approximately 450 m away).

## 9.2 Waste Management

All waste generated within the prescribed premise boundary shall be managed appropriately:

- Putrescible and inert waste will be disposed of at the licenced onsite landfill (L8733/2013/1).
- Hydrocarbon contaminated soil will be taken to the onsite bioremediation farm or disposed of offsite at a licenced facility.
- All other waste streams will be segregated and stored appropriately, with recyclables returned to the supplier (or recycling facility) and controlled wastes managed and transported offsite in accordance with the Environmental Protection (Controlled Waste) Regulations 2004.

Tyres will be disposed of in the Miralga West waste rock dump (see Attachment 2) as follows:

- In batches separated from each other by at least 100 mm of soil and each consisting of not more than 40 m<sup>3</sup> of tyres reduced to pieces; or
- In batches separated from each other by at least 100 mm of soil and each consisting of not more than 1,000 whole tyres.
- As soon as practicable following completion of the final waste levels in the area of tyre disposal a 500 mm cover of soil will be applied.

## 9.3 Controls

Atlas's business as usual pollution control measures include:

- Hydrocarbons and dangerous goods and hazardous substances (including wastes) will be stored and handled in accordance with the Dangerous Goods (Storage and Handling of Non-explosives) Safety Regulations 2007, relevant Australian Standards including the design specifications of AS 1940 – Storage and Handling of Flammable and Combustible Liquids and relevant MSDS.
- Adherence to the Atlas Hydrocarbon Management Procedure and Hydrocarbon (and Chemical) Spill Management Procedure at all times.
- Transport of dangerous goods to the project area will be undertaken in accordance with the Dangerous Goods Safety (Road and Rail Transport of Non-explosives) Regulations 2007, and the Australian Dangerous Goods Code.
- A dangerous goods and hazardous substances register will be maintained onsite and inventory audits will be regularly undertaken.
- Controlled wastes will be managed and transported offsite in accordance with the Environmental Protection (Controlled Waste) Regulations 2004. Offsite transport and disposal will be undertaken by a licensed waste contractor.





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- Spill recovery and clean up materials will be maintained at all hydrocarbon/hazardous material storage areas. Relevant employees and contractors will be trained in the use of this equipment.
- Storage facilities for hydrocarbons/hazardous substances will be contained with impervious bunds and regularly inspected for evidence of leaks or spills.
- Contamination will be reported and managed in accordance with the *Contaminated Sites Act 2003*.
- Equipment will be regularly maintained in accordance with the manufacturer's recommendations.
- All clearing and ground disturbance will be undertaken in accordance with Atlas Ground Disturbance Permit Procedure (950-EN-PRO-0006) and Clearing and Grubbing Procedure (950-EN-PRO-0002).
- Clearing will be restricted under certain weather conditions where excessive dust is likely to be generated.
- Implementation of the Dust Management Procedure (950-EN-PRO-0003), including conventional dust suppression techniques (i.e., water carts).
- Vehicle speeds limits will be imposed and enforced on all Project roads.
- All site employees must complete a site induction prior to work.

The Project will also implement the following management measures at the crushing and screening facility to mitigate potential emissions:

- Water will be added to the ore during processing to achieve the required dust extinction moisture (DEM) content.
- Installation and operation of water sprayers on the feed bin, strategic conveyor transfer points and stacker head chutes.
- Dust suppression (via sprinkler) on the product stockpiles.
- Dust suppression (via water cart) on access roads and work areas within the crushing and screening plant to minimise dust from vehicles and equipment (e.g., bobcats, loaders).
- Regular inspections of the crushing and screening plant to assess the effectiveness of the water sprayers.
- Covered transfer chutes.
- Inhalable particulate monitoring (CONTAM monitoring) on personnel as required.
- Planned preventative maintenance to ensure the crushing and screening plant is operating as designed.
- Lighting, where required, directed towards the work area.
- Stormwater diversion around the ROM pad.
- Stormwater collected within the ROM pad will be directed to a sedimentation basin to allow for sediment removal prior to discharge. Sedimentation basins will be designed to 1 in 20 year annual recurrence interval (ARI) rainfall event and incorporate a rock armoured spillway to encourage settlement of sediment and prevent erosion.
- Provision of suitable waste management facilities. Siting and Location

## 9.4 Environmental Setting

### 9.4.1 Climate

The Project is located 100 km south-east of Port Hedland, along the Marble Bar Road and approximately 40 km (at its nearest point) from Marble Bar. The region has a semi-desert to tropical climate with highly variable, mostly summer rainfall (McKenzie, 2002; Leighton, 2004). The Pilbara climate is significantly influenced by tropical cyclones that develop over the Indian Ocean in Australia's north (Leighton, 2004), with typical average annual rainfall occurring predominantly from



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January to March. The closest official Bureau of Meteorology weather station in operation is located at Marble Bar, located approximately 40 km south-east of the Premise. The average monthly maximum temperature ranges from 27°C to 42°C, while the average monthly minimum temperature ranges from 12.2°C to 26.5°C. Average monthly rainfall ranges from 0.4 mm to 114.7 mm, while the average annual rainfall is 392.7 mm (BOM, 2020).

#### 9.4.2 Surface Hydrology

The prescribed premise boundary is encompassed within the Pilbara Surface Water Area, regulated under the RIWI Act.

Drainage from the Miralga West ridge flows both to the south, directly to the Shaw River, and along some minor drainage lines which flow to the north and north-west before intersecting a minor tributary of the Shaw River some 1.5 km to the north of the mining area (Atlas, 2020). Several waterholes were identified near Miralga East, approximately 8 km from the prescribed premise boundary and in a different sub-catchment.

#### 9.4.3 Biodiversity

Twelve vegetation types (VTs) were mapped by Woodman (2019), with 80% of vegetation being considered to be in Excellent condition. The VTs present within the prescribed premise boundary include VTs 2, 6 and 9. None of the VTs are considered to represent Threatened or Priority Ecological Communities. Clearing impacts to these VTs have been assessed under the Part IV process and are not considered within this application.

Six terrestrial fauna habitat types mapped were mapped by Biologic (2020a), being Hillcrest/Hillslope, Low Stony Hills, Major Drainage Line, Sand Plain, Stony Plain and Gorge/Gully. Sixteen caves known to support the Ghost Bat and/or Pilbara Leaf-nosed Bat were identified, including potential Ghost Bat maternity roost CMRC-15. Seven conservation significant fauna were confirmed present including the Northern Quoll, Ghost Bat, Pilbara Leaf-nosed Bat, Peregrine Falcon, Northern Brush-tailed Possum, Grey Falcon and Peregrine Falcon. The prescribed activities will be located in fixed locations away from significant biodiversity values. Potential impacts from the Project as a whole (not simply from the prescribed premise) are being assessed and managed under the Part IV and EPBC Act processes.

### 9.5 Key Receptors

The siting and location of the premise to a 10 km radius is provided in Attachment 7. In relation to the proposed prescribed premise location (proximity):

- The nearest town is Marble Bar located approximately 50 km southeast.
- The nearest river is the Shaw River, situated within the prescribed premise boundary approximately 1 km from the ROM pad.
- There are no permanent or non-permanent water holes within the prescribed premises.
- The Project is located almost entirely within the native title determined area 'Nyamal People #10' (WCD2019/011).
- The prescribed premise is located within the Proclaimed Pilbara Groundwater Management Area and the Proclaimed Pilbara Surface Water Area.
- The nearest environmentally sensitive area is the De Grey River, approximately 60 km north.
- The nearest Threatened Ecological Community (TEC) or Priority Ecological Community (PEC) is over 150 km away, based on a search of DBCA's database.
- The nearest recorded threatened flora is approximately 7.4 km away.



## Works Approval Application Information

### Miralga Creek DSO Project

- A number of Priority flora records exist within or adjacent to the prescribed premise boundary, including *Euphorbia inappendiculata* var. *inappendiculata* (Priority 2), *Acacia glaucocaesia* (Priority 3), *Eragrostis crateriformis* (Priority 3) and *Euphorbia clementii* (Priority 3). Impacts to these species have been considered via the Part IV process under the *Environmental Protection Act 1986*.
- The nearest registered Aboriginal Heritage Site is Sulphur Springs (ID 6046) located approximately 14 km southwest of the prescribed premise boundary.
- The nearest Public Drinking Water Source Area is located approximately 100 km west of the Project.
- Acid sulfate soils (ASS) are located in the southeast portion of the boundary, including a high to moderate risk and moderate to low risk area. The ASS risk mapping is coincident with an upstream part of the Shaw River approximately 2 km from the ROM pad.

The most significant environmental constraint identified focuses on flora and vegetation and threatened fauna. These are focused on in the Part IV approval and under the EPBC Act referral to protect Northern Quoll and Ghost Bat.

## 10 Submission of Other Relevant Information

The fee is calculated in Part 12 of the form. Further details are provided in Attachment 9.

There is no commercially sensitive or confidential information.