Government of Western Australia
Department of Water and Environmental Regulation

Licence

Environmental Protection Act 1986, Part V

Licensee: CITIC Pacific Mining Management Pty Ltd

Licence: L8758/2013/1

Registered office: 45 St Georges Terrace
PERTH WA 6000

ACN: 119 578 371

Premises address: Sino Iron Project Desalination Plant and Bulk Loading Facility
General Purpose Lease G08/52
MARDIE WA 6714
as depicted in Schedule 1

Issue date: Thursday, 21 November 2013

Commencement date: Monday, 25 November 2013

Expiry date: Sunday, 24 November 2024

Prescribed premises category
Schedule 1 of the *Environmental Protection Regulations 1987*

Category number	Category description	Category production or design capacity	Approved premises production or design capacity
54A	Water desalination plant: premises at which salt is extracted from water if – (a) waste water is discharged into marine waters; and (b) the discharge waste water has a density greater than the average ambient density of the marine water at the discharge site	10 gigalitres or more per year	44 gigalitres per annual period
58	Bulk material loading or unloading: premises on which clinker, coal, ore, ore concentrate or any other bulk granular material is loaded onto or unloaded from vessels by an open materials loading system	100 tonnes or more per day	252,000 tonnes per day

Conditions
This Licence is subject to the conditions set out in the attached pages.

Date signed 19 December 2017

Danielle Eyre
Senior Manager, Industry Regulation (Resource Industries)
Officer delegated under section 20
of the *Environmental Protection Act 1986*

Contents

Introduction

This Introduction is not part of the Licence conditions.

As of 1 July 2017, the Department of Environment Regulation (DER), the Office of the Environmental Protection Authority (OEPA) and the Department of Water (DoW) amalgamated to form the Department of Water and Environmental Regulation (DWER).

DWER was established under section 35 of the *Public Sector Management Act 1994* and is responsible for the administration of the *Environmental Protection Act 1986* along with other legislation.

DWER's industry licensing role
DWER is a government department for the state of Western Australia in the portfolio of the Minister for Environment. DWER's purpose is to advise on and implement strategies for a healthy environment for the benefit of all current and future Western Australians.

DWER has responsibilities under Part V of the *Environmental Protection Act 1986* (the Act) for the licensing of prescribed premises. Through this process DWER regulates to prevent, control and abate pollution and environmental harm to conserve and protect the environment. DWER also monitors and audits compliance with works approvals and licence conditions, takes enforcement action as appropriate and develops and implements licensing and industry regulation policy.

Licence requirements
This Licence is issued under Part V of the Act. Conditions contained within the Licence relate to the prevention, reduction or control of emissions and discharges to the environment and to the monitoring and reporting of them.

Where other statutory instruments impose obligations on the Premises/Licensee the intention is not to replicate them in the licence conditions. You should therefore ensure that you are aware of all your statutory obligations under the Act and any other statutory instrument. Legislation can be accessed through the State Law Publisher website using the following link:
http://www.slp.wa.gov.au/legislation/statutes.nsf/default.html

For your Premises relevant statutory instruments include but are not limited to obligations under the:

- *Environmental Protection (Unauthorised Discharges) Regulations 2004* – these Regulations make it an offence to discharge certain materials such as contaminated stormwater into the environment other than in the circumstances set out in the Regulations.
- *Environmental Protection (Controlled Waste) Regulations 2004* - these Regulations place obligations on you if you produce, accept, transport or dispose of controlled waste.
- *Environmental Protection (Noise) Regulations 1997* – these Regulations require noise emissions from the Premises to comply with the assigned noise levels set out in the Regulations.

You must comply with your licence. Non-compliance with your licence is an offence and strict penalties exist for those who do not comply.

Licence holders are also reminded of the requirements of section 53 of the Act which places restrictions on making certain changes to prescribed premises unless the changes are in accordance with a works approval, licence, closure notice or environmental protection notice.

Licence fees
If you have a licence that is issued for more than one year, you are required to pay an annual licence fee prior to the anniversary date of issue of your licence. Non payment of annual licence fees will result in your licence ceasing to have effect meaning that it will no longer be valid and you will need to apply for a new licence for your Premises.

Ministerial conditions
If your Premises has been assessed under Part IV of the Act you may have had conditions imposed by the Minister for Environment. You are required to comply with any conditions imposed by the Minister.

Premises description and Licence summary
CITIC Pacific Mining Management Pty Ltd (Licensee) is developing a magnetite mining, processing and export facility near Cape Preston, approximately 80 km south-west of Karratha. The Sino Iron Project is within the Mardie Station pastoral lease, an active pastoral station producing beef cattle, however, the location of the Premises, which includes the Desalination Plant (the Plant), Bulk Loading Facility (BLF) and Dewatering Plant (DWP) is not used for active pastoral activities. The Sino Iron Project has three licences in total for operations:

- Premises (this Licence);
- Transhipment Facility (L8659/2012/2); and
- Mine Site (L8308/2008/2).

The Plant
The Plant is made up of two trains, an east and west train. Each train has a nominal capacity of 22 gigalitres per annum (GL/a), with a combined capacity of 44 GL/a. The Plant's process equipment has been sized to produce 52 GL/a to allow the Plant to recover from breakdowns or other outages. The trains extract seawater from the coastal waters of the Indian Ocean off Cape Preston and utilises Reverse Osmosis (RO) to produce potable water for the Sino Iron Project. Concentrated brine (with a modelled total dissolved solids content of approximately 78,820 mg/L) is discharged back to the ocean.

BLF and DWP
The BLF has a maximum design capacity of 252,000 tonnes per day (t/day), with a nominated throughput of 192,000 t/day of magnetite from stockpiles onto barges, using reclaimers, conveyors and barge loading infrastructure.

The DWP is used to dewater the magnetite slurry, prior to stockpiling and loading of the ore. The wastewater is reused in the process by pumping it back to a process water dam and reusing it within the processing plant.

The licences and works approvals issued for the Premises since 9 November 2009 are listed in the instrument log below.

Instrument log		
Instrument	**Issued**	**Description**
W4482/2008/1	05/11/2009	New application for the Plant and BLF.
W4482/2008/1	22/12/2011	On 3 July 2009 the Minister for Environment approved an application under section (s) 45C of the Act, allowing for an increase in concentrate production from 19.6 million tonnes per annum (Mtpa) to 27.6 Mtpa. This resulted in amendments to the

		works approval. The Plant: • The Licensee requested that the commissioning requirements be removed, considering a s45C to the initial Ministerial Statement resulted in additional commissioning conditions for the Plant under Part IV of the Act. However, as the specific monitoring of parameters falls under Part V of the Act this was declined by DER. BLF: • Maximum capacity increased. • In unsafe weather conditions, the barges and trans-shipment facility will return to anchorage in the Dampier port cyclone moorings until operational conditions prevail. • The two main stormwater settlement ponds were relocated to the north of the stockyards. An updated map was provided. • Concentrate final moisture content was increased to up to approximately 8%. This allows for increased ease of handling and further reduces the potential for dust emissions. Due to the high moisture content in the product additional dust extraction systems were not required. All transfer points are sheltered and enclosed and dust sprays are fitted on reclaimers, stackers and the BLF.
W4482/2008/1	9/5/2013	Amendment to extend the expiry date initially until 20 August 2018. DER allowed the extension for this works approval for an additional 3 years, as per the standard works approval timeframe, to 20 August 2016. The periods of commissioning were modified in line with the Licensee's most recent commissioning schedule.
L8722/2013/1	Withdrawn	New licence application for BLF and DWP. The Licensee originally planned to operate the BLF first so a Licence was drafted for this. This Licence was then withdrawn to apply for a Licence for the Plant first (L8758/2013/1).
L8758/2013/1	21/11/2013	Licence for the east train of the Plant.
L8758/2013/1	31/07/2014	Licence amendment to include the BLF and DWP onto the Plant Licence.
L8758/2013/1	10/12/2015	Amendment to the Licence to rectify administrative errors and update in line with the latest version of the Licence template; premises boundary has been expanded.
L8758/2013/1	18/07/2016	Licence amendment to transfer commissioning conditions for the Plant's West Train from the works approval W4482/2008/1 across to the licence.
L8758/2013/1	19/12/2017	Licence amendment to remove point source emission limits to surface water for nitrate-nitrite and reactive phosphorus; and remove the commissioning conditions associated with the Plant's West Train.

Severance

It is the intent of these Licence conditions that they shall operate so that, if a condition or a part of a condition is beyond the power of this Licence to impose, or is otherwise *ultra vires* or invalid, that condition or part of a condition shall be severed and the remainder of these conditions shall nevertheless be valid to the extent that they are within the power of this Licence to impose and are not otherwise *ultra vires* or invalid.

END OF INTRODUCTION

Licence conditions

1 General

1.1 Interpretation

1.1.1 In the Licence, definitions from the *Environmental Protection Act 1986* apply unless the contrary intention appears.

1.1.2 For the purposes of this Licence, unless the contrary intention appears:

'Act' means the *Environmental Protection Act 1986;*

'Anniversary Date' means 30 June of each year;

'Annual Audit Compliance Report' means a report in a format approved by the CEO as presented by the Licensee or as specified by the CEO from time to time and published on the Department's website;

'Annual Period' means a 12 month period commencing from 1 July until 30 June in the following year;

'AS/NZS 5667.1' means the Australian Standard AS/NZS 5667.1 *Water Quality – Sampling – Guidance of the Design of sampling programs, sampling techniques and the preservation and handling of samples;*

'AS/NZS 5667.9' means the Australian Standard AS/NZS 5667.9 *Water Quality – Sampling – Guidance on sampling from marine waters;*

'averaging period' means the time over which a limit is measured or a monitoring result is obtained;

'CEO' means Chief Executive Officer;

'CEO' for the purposes of notification means:
Chief Executive Officer
Department Administering the Act
Locked Bag 33 Cloisters Square
PERTH WA 6850
info-der@dwer.wa.gov.au;

'Department' means the department established under section 35 of the *Public Sector Management Act 1994* and designated as responsible for the administration of Division 3 Part V of the Act;

'freeboard' means the distance between the maximum water surface elevations and the top of retaining banks or structures at their lowest point;

'GL/a' means gigalitres per annum;

'Licence' means this Licence numbered L8758/2013/1 and issued under the Act*;*

'Licensee' means the person or organisation named as Licensee on page 1 of the Licence;
'mS/cm' means millisiemens per centimetre;

'mV' means millivolts;

'NATA' means the National Association of Testing Authorities, Australia;

'NATA accredited' means in relation to the analysis of a sample that the laboratory is NATA accredited for the specified analysis at the time of the analysis;

'NTU' means Nephelometric Turbidity Units;

'Premises' means the area defined in the Premises Map in Schedule 1 and listed as the Premises address on page 1 of the Licence;

'Schedule 1' means Schedule 1 of this Licence unless otherwise stated;

'Schedule 2' means Schedule 2 of this Licence unless otherwise stated;

'six monthly' means the 2 inclusive periods from 1 July to 31 December and 1 January to 30 June in the following year; and

'spot sample' means a discrete sample representative at the time and place at which the sample is taken.

1.1.3 Any reference to an Australian or other standard in the Licence means the relevant parts of the standard in force from time to time during the term of this Licence.

1.1.4 Any reference to a guideline or code of practice in the Licence means the version of that guideline or code of practice in force from time to time, and shall include any amendments or replacements to that guideline or code of practice made during the term of this Licence.

1.2 Premises operation

1.2.1 The Licensee shall minimise spillages of materials entering the marine environment during barge loading operations.

1.2.2 The Licensee shall ensure that waste material is only stored and/or treated within vessels or compounds provided with the infrastructure detailed in Table 1.2.1.

Table 1.2.1: Containment infrastructure

Containment cell or dam number(s) as depicted in Schedule 1	Material	Infrastructure requirements
Environmental Pond #1 (Dewatering)	Stormwater collected from the Dewatering Plant area	Lined with high density polyethylene liner to meet a permeability of $<1.0 \times 10^{-9}$ metres per second. Maintain an operational freeboard of 0.5 m.
Environmental Pond #2 (Stockyard)	Stormwater collected from the ore stockyards	

2 Emissions

2.1 General

2.1.1 The Licensee shall record and investigate the exceedance of any descriptive or numerical limit specified in any part of section 2 of this Licence.

2.2 Point source emissions to surface water

2.2.1 The Licensee shall ensure that where waste is emitted to surface water from the emission point in Table 2.2.1 and identified on the map of emission points in Schedule 1 it is done so in accordance with the conditions of this Licence.

Table 2.2.1: Emission points to surface water		
Emission point reference and location on Map of emission points	**Description**	**Source including abatement**
Brine outfall	Discharge pipe at north western end of the port breakwater to the marine environment	Brine from the Desalination Plant

2.2.2 The Licensee shall not cause or allow point source emissions to surface water that do not meet the limits in Table 2.2.2.

Table 2.2.2: Point source emission limits to surface water			
Emission point reference and location on Map of emission points	**Parameter**	**Limit (including units)**	**Averaging period**
W1	Brine outflow volume	< 64 GL/a	Annual
	Conductivity	0 – 100 mS/cm	30 minutes
	Temperature	10 – 45^{o}C	
	pH	6 – 9	
	Turbidity	< 40 NTU	
	Dissolved Oxygen	> 4 mg/L	
	Oxygen Reduction Potential	< 800 mV	
	Ammonia	< 43.2 mg/L	Spot sample
	Cadmium	< 0.50 mg/L	
	Chromium	< 0.72 mg/L	
	Cobalt	< 0.50 mg/L	
	Copper	< 0.11 mg/L	
	Lead	< 0.24 mg/L	
	Mercury (inorganic)	< 0.03 mg/L	
	Nickel	< 7.20 mg/L	
	Silver	< 0.06 mg/L	
	Vanadium	< 5.76 mg/L	
	Zinc	< 0.83 mg/L	

3 Monitoring

3.1 General monitoring

3.1.1 The Licensee shall ensure that:
(a) all water samples are collected and preserved in accordance with AS/NZS 5667.1 unless indicated otherwise in the relevant table;
(b) all surface water sampling is conducted in accordance with AS/NZS 5667.9; and
(c) all laboratory samples are submitted to and tested by a laboratory with current NATA accreditation for the parameters being measured unless indicated otherwise in the relevant table.

3.1.2 The Licensee shall ensure that six monthly monitoring is undertaken at least 5 months apart.

3.1.3 The Licensee shall ensure that all monitoring equipment used on the Premises to comply with the conditions of this Licence is calibrated in accordance with the manufacturer's specifications.

3.1.4 The Licensee shall, where the requirements for calibration cannot be practicably met, or a discrepancy exists in the interpretation of the requirements, bring these issues to the attention of the CEO accompanied with a report comprising details of any modifications to the methods.

3.2 Monitoring of point source emissions to surface water

3.2.1 The Licensee shall undertake the monitoring in Table 3.2.1 according to the specifications in that table.

Table 3.2.1: Monitoring of point source emissions to surface water

Emission point reference	Parameter	Units	Frequency
W1	Brine outflow volume[1]	GL/a	Continuous
	Conductivity[1]	mS/cm	
	Temperature[1]	^{o}C	
	pH[1]	-	
	Turbidity[1]	NTU	
	Dissolved Oxygen[1]	mg/L	
	Oxygen Reduction Potential[1]	mV	
	Ammonia	mg/L	six monthly
	Nitrate-Nitrite		
	Reactive phosphorus		
	Cadmium		
	Chromium		
	Cobalt		
	Copper		
	Lead		
	Mercury (inorganic)		
	Nickel		
	Silver		
	Vanadium		
	Zinc		

Note 1: In-field non-NATA accredited analysis permitted

4 Information

4.1 Records

4.1.1 All information and records required by the Licence shall:
- (a) be legible;
- (b) if amended, be amended in such a way that the original and subsequent amendments remain legible or are capable of retrieval;
- (c) except for records listed in 4.1.1(d) be retained for at least 6 years from the date the records were made or until the expiry of the Licence or any subsequent licence; and
- (d) for those following records, be retained until the expiry of the Licence and any subsequent licence:
  - (i) off-site environmental effects; or
  - (ii) matters which affect the condition of the land or waters.

4.1.2 The Licensee must submit to the CEO within 120 calendar days after the Anniversary Date, an Annual Audit Compliance Report indicating the extent to which the Licensee has complied with the Conditions in this Licence for the Annual Period.

4.1.3 The Licensee shall implement a complaints management system that as a minimum records the number and details of complaints received concerning the environmental impact of the activities undertaken at the Premises and any action taken in response to the complaint.

4.2 Reporting

4.2.1 The Licensee shall submit to the CEO an Annual Environmental Report within 120 calendar days after of the end of the Annual Period. The report shall contain the information listed in Table 4.2.1 in the format or form specified in that table.

Table 4.2.1: Annual Environmental Report

Condition or table (if relevant)	Parameter	Format or form[1]
-	Summary of any failure or malfunction of any pollution control equipment and any environmental incidents that have occurred during the annual period and any action taken	None specified
Table 3.2.1	Brine outflow volume, conductivity, temperature, pH, turbidity, dissolved oxygen, oxygen reduction potential, ammonia, nitrate-nitrite, reactive phosphorus, cadmium, chromium, cobalt, copper, lead, mercury (inorganic), nickel, silver, vanadium, zinc	WR1
4.1.2	Compliance	Annual Audit Compliance Report
4.1.3	Complaints summary	None specified

Note 1: Forms are in Schedule 2

4.2.2 The Licensee shall ensure that the Annual Environmental Report also contains an assessment of the information contained within the report against previous monitoring results, Licence limits and any impacts detected as a result of activities on the Premises.

4.2.3 The Licensee shall submit the information in Table 4.2.2 to the CEO according to the specifications in that table.

Table 4.2.2: Non-annual reporting requirements

Condition or table (if relevant)	Parameter	Reporting period	Reporting date (after end of the reporting period)	Format or form
-	Copies of original monitoring reports submitted to the Licensee by third parties	Not Applicable	Within 14 days of the CEOs request	As received by the Licensee from third parties

4.3 Notification

4.3.1 The Licensee shall ensure that the parameters listed in Table 4.3.1 are notified to the CEO in accordance with the notification requirements of the table.

Table 4.3.1: Notification requirements

Condition or table (if relevant)	Parameter	Notification requirement[1]	Format or form[2]
2.1.1 and 2.2.2	Breach of any limit specified in the Licence	Part A: As soon as practicable but no later than 5pm of the next usual working day. Part B: As soon as practicable	N1
3.1.4	Calibration report	As soon as practicable	None specified

Note 1: Notification requirements in the Licence shall not negate the requirement to comply with s72 of the Act
Note 2: Forms are in Schedule 2

Schedule 1: Maps

Premises map, map of containment infrastructure and map of emission points
The Premises is shown in the map below. The black dotted line depicts the Premises boundary. The locations of the containment infrastructure, emission and monitoring point defined in Tables 1.2.1, 2.2.1, 2.2.2 and 3.2.1 are shown below.

Schedule 2: Reporting & notification forms

Licence: L8758/2013/1
Form: WR1
Name: Monitoring of point source emissions to surface water

Licensee: CITIC Pacific Mining Management Pty Ltd
Period:

Form WR1: Monitoring of point source emissions to surface water

Emission point	Parameter	Limit	Result	Averaging period	Method	Sample date & times
W1	Brine outflow volume	< 64 GL/a	GL/a	Annual		
	Conductivity	0 – 100 mS/cm	mS/cm	30 minutes		
	Temperature	10 – 45°C	°C			
	pH	6 – 9				
	Turbidity	< 40 NTU	NTU			
	Dissolved Oxygen	> 4 mg/L	mg/L			
	Oxygen Reduction Potential	< 800 mV	mV			
	Ammonia	< 43.2 mg/L	mg/L	spot sample		
	Nitrate-Nitrite		mg/L			
	Reactive phosphorus		mg/L			
	Cadmium	< 0.50 mg/L	mg/L			
	Chromium	< 0.72 mg/L	mg/L			
	Cobalt	< 0.50 mg/L	mg/L			
	Copper	< 0.11 mg/L	mg/L			
	Lead	< 0.24 mg/L	mg/L			
	Mercury (inorganic)	< 0.03 mg/L	mg/L			
	Nickel	< 7.20 mg/L	mg/L			

	Silver	< 0.06 mg/L	mg/L			
	Vanadium	< 5.76 mg/L	mg/L			
	Zinc	< 0.83 mg/L	mg/L			

Signed on behalf of CITIC Pacific Mining Management Pty Ltd: …….. Date: …….

Licence: L8758/2013/1 Licensee: CITIC Pacific Mining Management Pty Ltd
Form: N1 Date of breach:

Notification of detection of the breach of a limit.

These pages outline the information that the operator must provide.
Units of measurement used in information supplied under Part A and B requirements shall be appropriate to the circumstances of the emission. Where appropriate, a comparison should be made of actual emissions and authorised emission limits.

Part A

Licence Number	
Name of operator	
Location of Premises	
Time and date of the detection	
Notification requirements for the breach of a limit	
Emission point reference/ source	
Parameter(s)	
Limit	
Measured value	
Date and time of monitoring	
Measures taken, or intended to be taken, to stop the emission	

Part B

Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident.	
Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission.	
The dates of any previous N1 notifications for the Premises in the preceding 24 months.	
Name*	
Post	
Signature on behalf of CITIC Pacific Mining Management Pty Ltd	
Date	

Government of Western Australia
Department of Water and Environmental Regulation

Decision Document

Environmental Protection Act 1986, Part V

Proponent: CITIC Pacific Mining Management Pty Ltd

Licence: L8758/2013/1

Registered office:	45 St Georges Terrace PERTH WA 6000
ACN:	119 578 371
Premises address:	Sino Iron Project Desalination Plant and Bulk Loading Facility General Purpose Lease G08/52 MARDIE WA 6714
Issue date:	Thursday, 21 November 2013
Commencement date:	Monday, 25 November 2013
Expiry date:	Sunday, 24 November 2024

Decision

Based on the assessment detailed in this document the Department of Water and Environmental Regulation (DWER), has decided to issue an amended licence. DWER considers that in reaching this decision, it has taken into account all relevant considerations.

Decision Document prepared by:	Sonya Poor Licensing Officer
Decision Document authorised by:	Danielle Eyre Delegated Officer

Contents

1 Purpose of this Document

This decision document explains how DWER has assessed and determined the application and provides a record of DWER's decision-making process and how relevant factors have been taken into account. Stakeholders should note that this document is limited to DWER's assessment and decision making under Part V of the *Environmental Protection Act 1986.* Other approvals may be required for the proposal, and it is the proponent's responsibility to ensure they have all relevant approvals for their Premises.

2 Administrative summary

Administrative Details		
Application Type	Works Approval ☐ New Licence ☐ Licence amendment ☒ Works Approval amendment ☐	
Activities that cause the premises to become prescribed premises	**Category number(s)**	**Assessed design capacity**
	54A: Water desalination plant	44 gigalitres per year
	58: Bulk material loading or unloading	252,000 tonnes per day
Application verified Application fee paid	Date: 30/08/2017 Date: 20/09/2017	
Works Approval has been complied with Compliance Certificate received	Yes ☐ No ☐ N/A ☒ Yes ☒ No ☐ N/A ☐	

Commercial-in-confidence claim	Yes ☐ No ☒	
Commercial-in-confidence claim outcome	N/A	
Is the proposal a Major Resource Project?	Yes ☒ No ☐	
Was the proposal referred to the Environmental Protection Authority (EPA) under Part IV of the *Environmental Protection Act 1986*?	Yes ☒ No ☐	Referral Decision No: Managed under Part V ☐ Assessed under Part IV ☒
Is the proposal subject to Ministerial Conditions?	Yes ☒ No ☐	Ministerial statement No: 635, 822 and 1066 EPA Report No: 1056, 1343 and 1602
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the *Environmental Protection Act 1986*)?	Yes ☐ No ☒ Department of Water consulted Yes ☐ No ☒	
Is the Premises within an Environmental Protection Policy (EPP) Area Yes ☐ No ☒ If Yes include details of which EPP(s) here.		
Is the Premises subject to any EPP requirements? Yes ☐ No ☒ If Yes, include details here, e.g. Site is subject to SO_2 requirements of Kwinana EPP.		

3 Executive summary of proposal

CITIC Limited (formerly named CITIC Pacific Limited) is the ultimate owner of Sino Iron Pty Limited (Sino Iron) and Korean Steel Pty Ltd Limited (Korean Steel). Sino Iron and Korean Steel were acquired from Mineralogy Pty Ltd (Mineralogy) and are both parties to the agreement scheduled to the *Iron Ore Processing (Mineralogy Pty. Ltd.) Agreement Act 2002* (as amended). Sino Iron and Korean Steel each hold mining rights and subleases authorising the extraction of a combined two billion tonnes of magnetite ore, from an orebody known as the George Palmer deposit and contained entirely within mining leases m08/123, M08/124 and M08/125.

In 2006, CITIC Limited established CITIC Pacific Mining Management Pty Ltd (Licensee) to manage development and ongoing operation of its iron ore mine and export facilities at Cape Preston collectively referred to as the Sino Iron Project. The Licensee conducts those activities on behalf of Sino Iron and Korean Steel. While Mineralogy remains the holder of the mining tenements on which the Sino Iron Project is based the Licensee is the valid holder of approvals for the purposes of Part V of the *Environmental Protection Act 1986* (EP Act).

The Sino Iron Project is a magnetite mining, processing and export facility and has three Licences in total for its operations:

- Transhipment Facility (L8659/2012/2);
- Desalination Plant (the Plant), Bulk Loading Facility (BLF) and Dewatering Plant (DWP) (this Licence) as shown in Figure 1 and referred to as the 'Premises'; and
- Mine Site (L8308/2008/2).

Location and siting

The Sino Iron Project is located within the Mardie Station pastoral lease and approximately 80 km south-west of Karratha in the Pilbara region of Western Australia. Mardie Station is an active pastoral station producing beef cattle however, the location of the Premises is not used for active pastoral activities.

Premises description
The Licence is regulated for category 54A and 58 activities as defined in Schedule 1 of the *Environmental Protection Regulations 1987* (EP Regulations) and as described below.

Category 54A – the Plant
The Plant is made up of two trains, an east and west train. Each train has a nominal capacity of 22 gigalitres per annum (GL/a), with a combined capacity of 44 GL/a, which is consistent with Ministerial Statement (MS) 635, which approves up to 44 GL/a of desalinated seawater. The Plant's process equipment has been sized to produce 52 GL/a to allow the Plant to recover from breakdowns or other outages. The Plant extracts seawater from the coastal waters of the Indian Ocean off Cape Preston and utilises Reverse Osmosis (RO) to produce potable water for the Sino Iron Project. Concentrated brine (with a modelled total dissolved solids (TDS) content of approximately 78,820 milligrams per litre (mg/L)) is discharged back to the ocean.

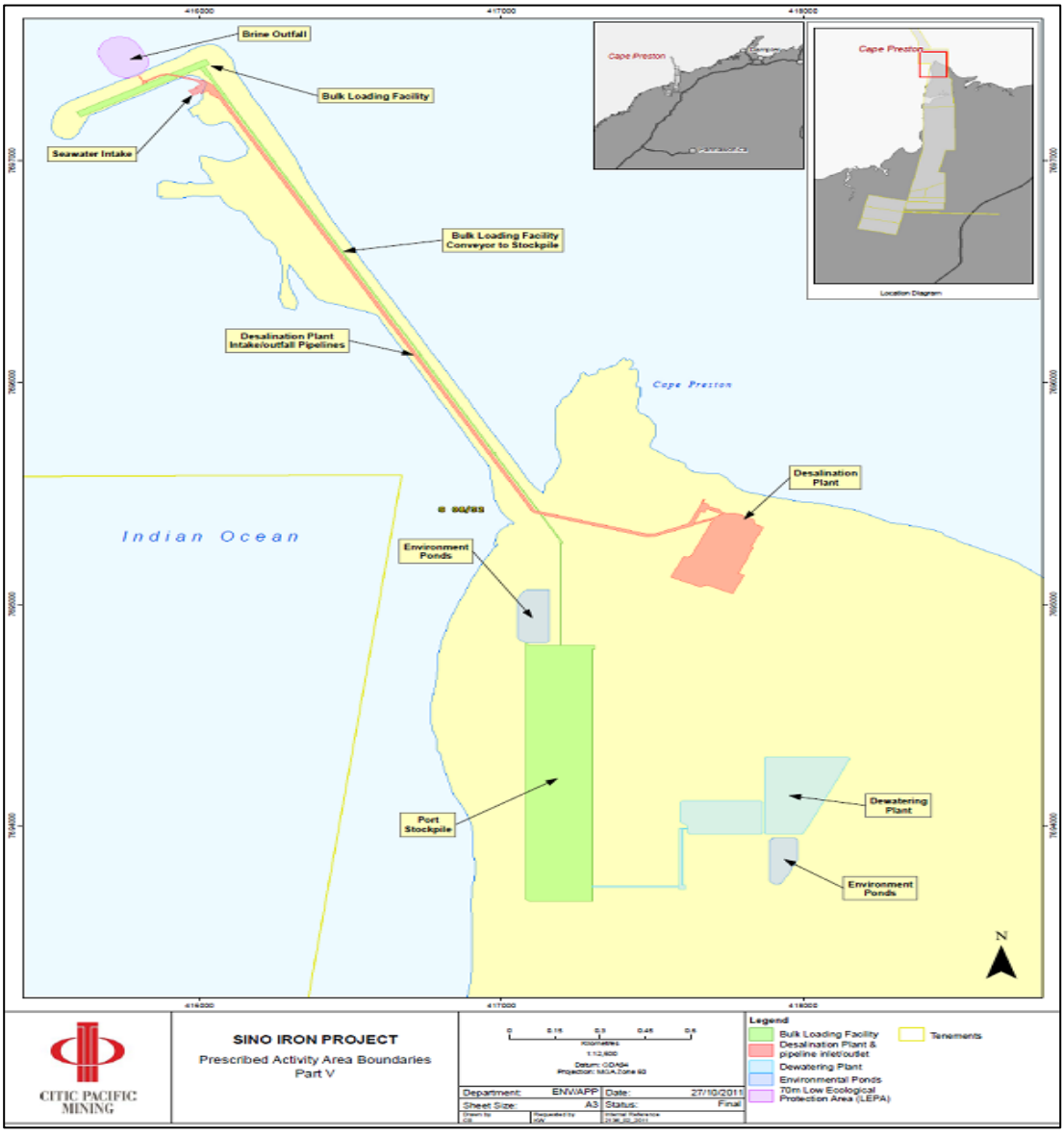

Figure 1: Location of the Premises

Desalination Process Pre-Treatment Process

Seawater is first passed through the pre-treatment filters to remove suspended solids. The pre-treatment process includes: flocculation, lamella settling, and gravity dual media filtration. Flocculation and backwater discharges are routed to the sludge treatment plant for solids removal prior to discharge via the outfall (Figure 2).

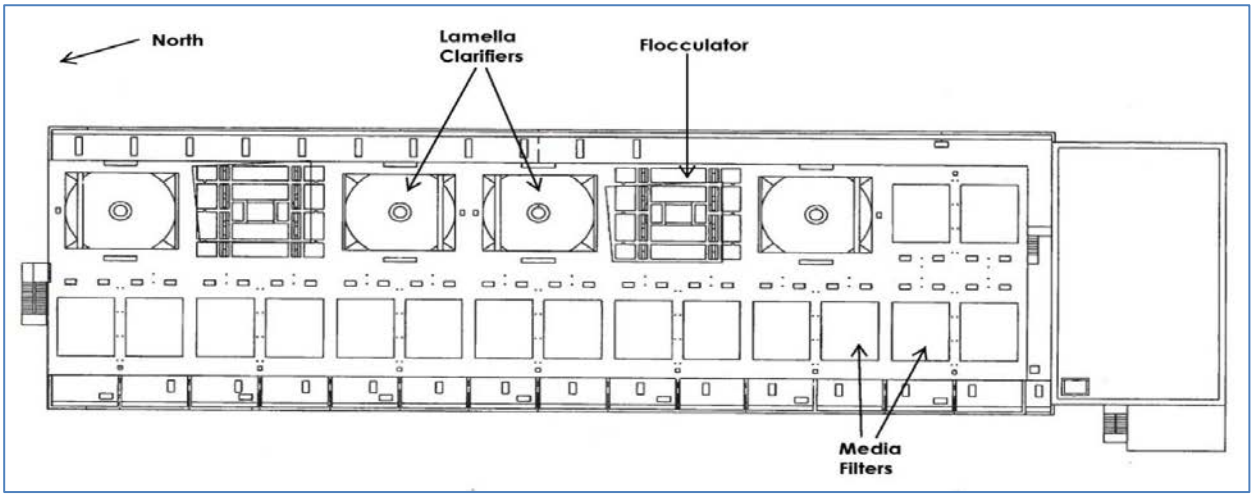

Figure 2: Pre-Treatment Plant Layout

The pre-treatment process includes the following steps:

- Injection of Coagulant – ferric sulfate ($Fe_2[SO_4]_3$) to the seawater feed;
- Flocculation Chambers for the seawater coagulation – flocculation process;
- Lamella Clarifier settlers to remove suspended matter with a specific gravity higher than the raw seawater. This waste is pumped to the sludge treatment system for further treatment and solids removal before being discharged through the outfall diffuser;
- Gravity dual media filters for the filtration of the remaining suspended matter. The backwash from these filters is further treated in the sludge treatment plant and solids removed before being mixed with the RO reject and discharged through the outfall; and
- Cartridge filters for final filtering of the RO system. These vessels protect the RO membranes from the possible passage of sand from the pre-treatment section.

RO Process

The seawater undergoes reverse osmotic separation to produce permeate and concentrated reject. Filtered high pressure seawater is supplied to the RO membrane modules. Fresh water permeates through the membrane for collection and the concentrated reject is discharged to the ocean outfall.

The RO permeate passes to the post treatment system where it is stabilised by adding lime and carbon dioxide. Sodium hypochlorite is added for disinfection and the resulting product passed to a 12 ML storage tank.

Outfall Diffuser Configuration

The outfall diffuser is located in an area of low benthic community species abundance. The area is comprised primarily of barren sandy sediments with small patches of variable density sponge and seawhip garden habitat.

DWP

Following processing through the concentrator (licensed under L8308/2008/2 for the Mine Site), magnetite slurry is pumped via an underground pipeline to the port, approximately 29 kilometres (km)

away, where it is stored in four concentrate storage tanks (capacity of 3,800 cubic metres each). The concentrate is pumped to one of two filtrate thickeners to ensure a solid content of greater than 68% and then to one of seven concentrate filters. The resulting filter cake (concentrate) is transported via overland conveyor to the stockyard. Figure 3 shows a simplified flow diagram of the dewatering process. The wastewater extracted through the DWP is reused in the concentrate process.

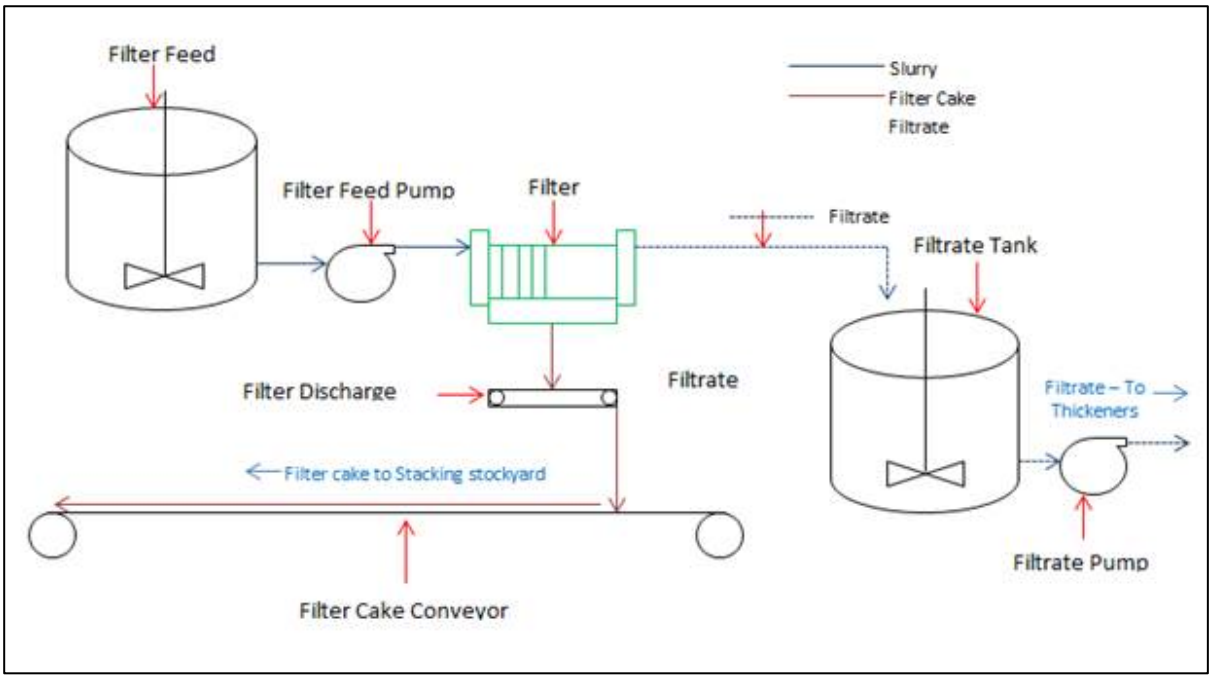

Figure 3: Flow diagram of dewatering process

Category 58 - BLF

The BLF has a maximum design capacity of 252,000 tonnes per day (t/day), with a nominated throughput of 192,000 t/day, of magnetite from stockpiles onto barges, using reclaimers, conveyors and barge loading infrastructure. Figure 4 shows the production process for the Premises.

Ore stockyard

Ore passes as a slurry from the concentrator through to the DWP and is then stored at the stockyard. Further processing produces around 6 million tonnes per annum (Mtpa) of ore pellets with the remainder being stored as ore concentrate.

Ore is deposited on the stockpiles using rail mounted rocker stackers that can be used for concentrate or pellets. Ore is then transferred by a rail mounted bucket wheel reclaimer onto the conveyor which transports the ore to the BLF.

Conveyors and associated infrastructure

The conveyor system of 1,200 metres (m) transfers pellets and concentrate to stackers which stockpile the ore in the stockyard. The concentrate or pellet is then picked up by a reclaimer and transported via a 1,500 m conveyor which runs from the stockyard to a conveyor transfer point. Ore is then transferred onto a second 2,500 m conveyor which runs to the barge loading facility situated at the port. From this point a 450 m wharf conveyor extends along the breakwater to the barge loading facility.

Barge Loading Facility
A rail mounted non-slewing barge loader is installed on the breakwater. The fixed transfer boom of the barge loader conveyor is sized to cover the barge design width from the side of the loading berth. Two barges are able to berth at once and the barge loader is able to travel the full length of the berth.

Barges
The barges are capable of transporting 16,000 tonnes of ore between Cape Preston and the transhipment facility. The transhipment facility (licensed under L8659/2012/2) is located 20 km offshore and within State waters. In the event of unsafe weather conditions, the barges and transhipment facility will return to anchorage in the Dampier port cyclone moorings until operational conditions prevail.

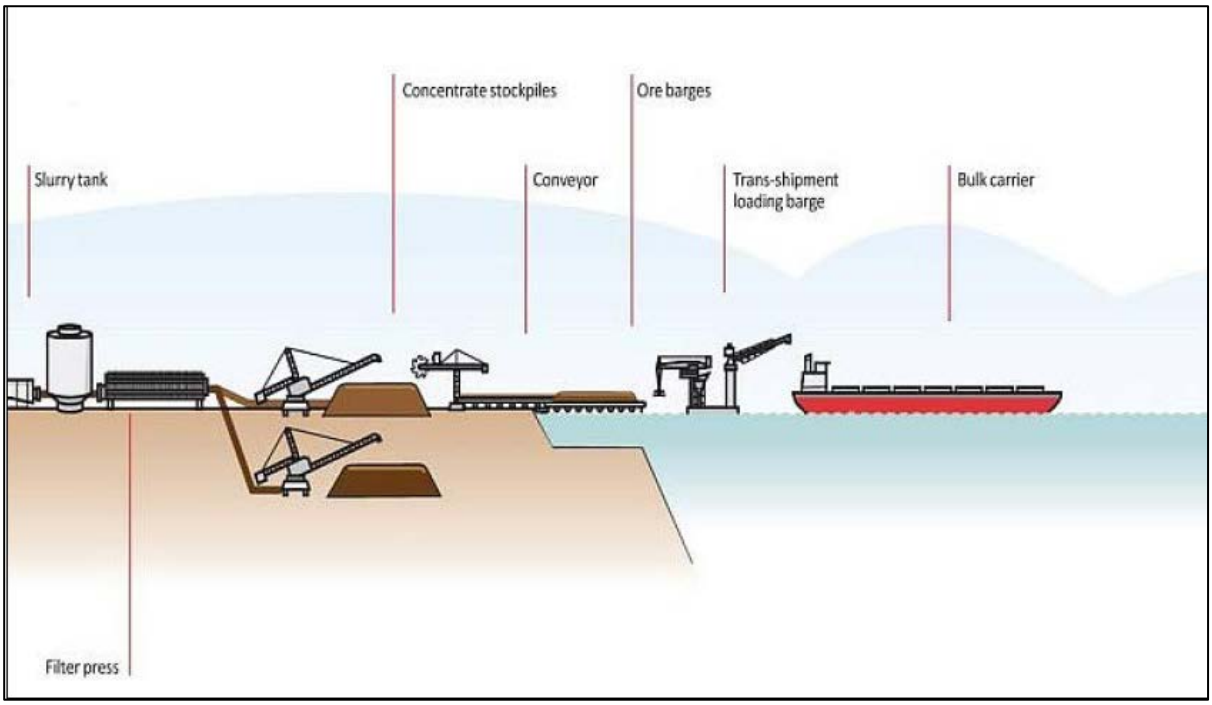

Figure 4: Production process for the Premises

Sensitive land uses
There are no residential premises within the immediate vicinity of the Premises. The workforce for the Sino Iron Project is accommodated at the Eramurra Village and Fortescue Roadhouse Village which are approximately 27 km and 50 km south respectively of the Premises. As these accommodations are operated by the Licensee, they will not be considered a sensitive land use or receptor.

Gnoorea Point (40 Mile) camping area operated by the City of Karratha is located approximately 15 km east of the Premises. The Fortescue River Mouth recreational area (informal campsite not registered by the City of Karratha) is approximately 20 km south-west of the Premises. The Devil Creek Accommodation Village operated by Quadrant Northwest Pty Ltd is located 25 km south-east of the Premises and the Mardie Station homestead is approximately 45 km south-west of the Premises.

Specified Ecosystems

The *Guidance Statement: Environmental Siting* describes specified ecosystems as areas of high conservation value and special significance that may be impacted as a result of activities upon or emissions and discharges from prescribed premises. The specified ecosystems relevant to the Premises are identified below in Table 1.

Table 1: Specified ecosystems

Specified ecosystems	Distance from the Premises*
Department of Biodiversity, Conservation and Attractions – Managed Lands and Waters	The Great Sandy Island Nature Reserve includes Preston Island, which is the location of the BLF. In accordance with condition 15-2 of MS 635, the Licensee has developed a conservation estate management plan to address the effect of the port facility on the conservation values of the Great Sandy Nature Reserve
RAMSAR wetland	No RAMSAR wetlands are located within or in a 30 km radius of the Premises
Geomorphic Wetlands	No geomorphic wetlands are located within or in a 30 km radius of the Premises
Threatened Ecological Communities and Priority Ecological Communities	There are no Threatened Ecological Communities within or in a 30 km radius of the Premises The Priority 3 Horseflat Land System of the Roebourne Plains is approximately 3 km from the boundary of the Premises
Declared Rare Flora	No Declared Rare Flora is located within or in a 20 km radius of the Premises
Biological component	**Distance from the Premises**
Specially Protected under the *Wildlife Conservation Act 1950*	The following are found within the Premises: • Schedule 3 Vulnerable Fauna (reptile); • Schedule 2 Endangered Fauna (mammal) is located within the vicinity of the BLF on Preston Island; and • Schedule 5 Migratory birds protected under an international agreement
Other relevant ecosystem values	**Distance from the Premises**
Cape Preston marine habitats	Coral-supporting habitat of low to moderate percentage cover occurs as a wide belt along the western side of the Cape Preston platform and gradually thins to a narrow band along the west and north side of Preston Island proximity to the breakwater (refer to Figure 5). This band continues along the slope that passes to the west and north of SW Regnard Island. Most of the habitats in the shallows adjacent to Cape Preston are relatively barren intertidal sand flats or shallow algae dominated pavements Offshore from Cape Preston, the seabed shelves rapidly descend to depths of greater than 10 m and then to a large basin extending to 17 m depth. The substrate in this area (Fortescue Roads) is a relatively barren silty sand substrate with little macrobiota evident on the surface. In the deeper parts of this basin scattered and, at times, dense patches of *Halophila* sp. seagrass occur. Sparse patches of this species of seagrass were also recorded in small areas west of SW Regnard Island and west of Fortescue Island

	Further offshore in waters greater than 22 m depth, the substrate is gravely sand which supports scattered sea whips and fans and the occasional large barrel sponge in low abundance (CPM, 2017b)
Marine Fauna (turtles and dugongs)	Four sea turtle species, the Green, Hawksbill, Flatback and Loggerhead Turtle nest or potentially nest on the beaches at Cape Preston within the period from July to April depending on seasonal environmental conditions Marine fauna, appearing in Schedule 1 of the *Wildlife Conservation Act 1950,* listed under the *Environment Protection and Biodiversity Conservation Act 1999* are known to occur in near coastal waters or have been recorded locally In the Dampier Archipelago/Cape Preston region, small numbers of dugongs (*Dugong dugon*) have been sighted in the shallow, warm waters in bays and between islands, including at East Lewis Island, Cape Preston, Regnard Bay, Nickol Bay and west of Keast Island (W4482 EAR) The seagrass population is found predominantly on the western side of South-West Regnard Island and is situated more than 3.2 km from the BLF (CPM, 2008)

*DWER's GIS dataset

Groundwater and water sources
The distances to groundwater and water sources are shown in Table 2.

Table 2: Groundwater and water sources

Groundwater and water sources	Distance from Premises*	Environmental value
Public Drinking Water Source Area (PDWSA)	No PDWSAs are located within a 30 km radius of the Premises	N/A
Rights in Water and Irrigation Act 1914 (RIWI Act)	The Premises is located within the Proclaimed Pilbara Groundwater and Surface Water Areas	N/A
Groundwater and groundwater salinity	Depth to the watertable over the Sino Iron Project is generally between 4 - 12 m below ground level (mbgl). At the Plant location (16.0 m Australian Height Datum (AHD)), groundwater levels are at an elevation of 3.0 m AHD, or approximately 13 m below the surface (W4482 EAR)	Groundwater salinity (TDS) is 1,000 to 3,000 mg/L which is considered brackish (Salinity status classifications) Groundwater salinity at the Premises is expected to be higher due to the close proximity to the ocean. There is no known environmental value for groundwater at the Premises

*DWER's GIS dataset

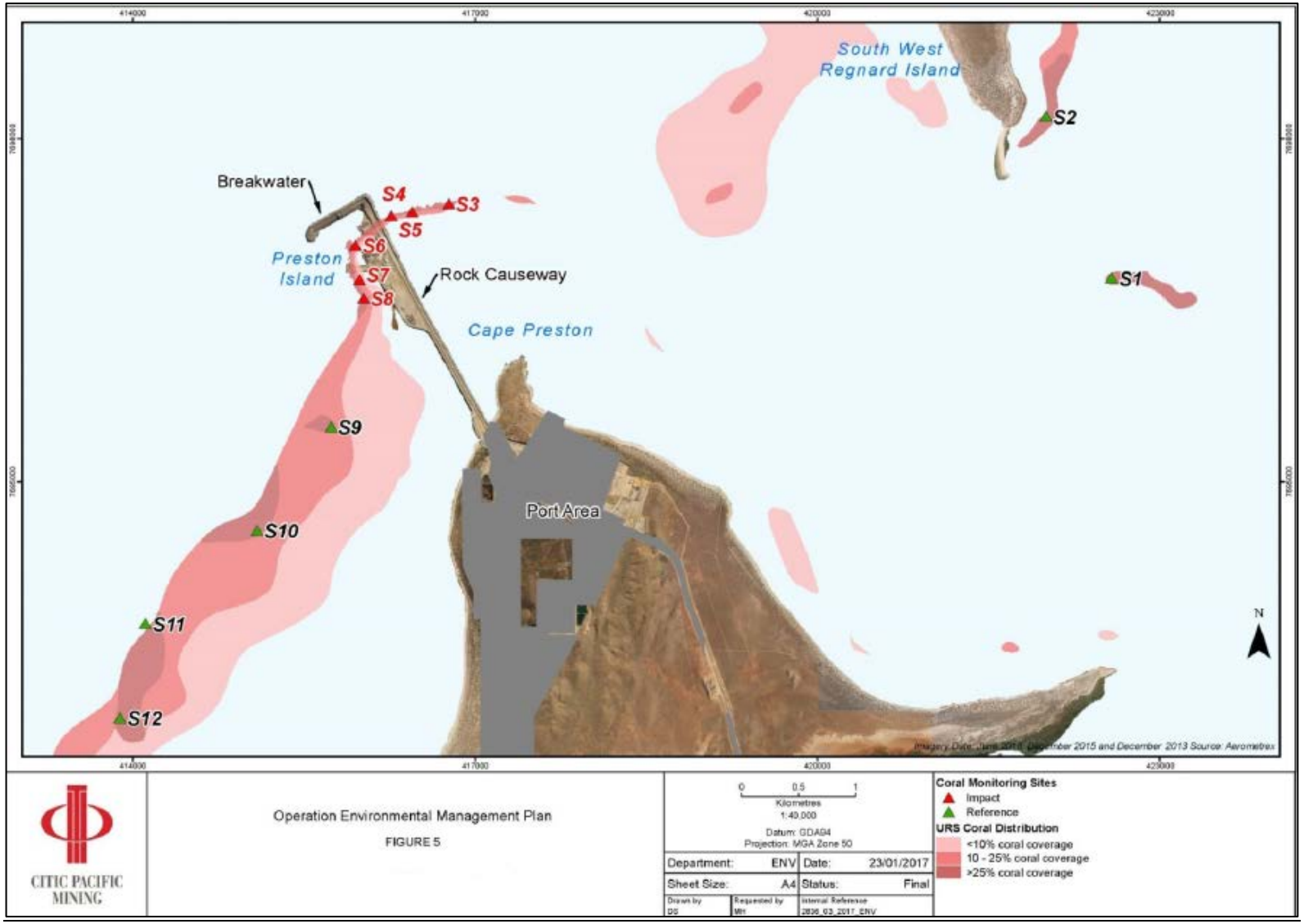

Figure 5: Cape Preston Marine Habitat Map

Part IV of the EP Act
Austeel Pty Ltd submitted a proposal to the Environmental Protection Authority (EPA) to mine iron ore from the George Palmer Orebody and process the ore to create direct-reduced and hot-briquetted iron, build a power station and ship the product from a port to be built at Cape Preston, which developed the Report and Recommendations of the EPA - Bulletin 1056.

Bulletin 1056
The following environmental factors were found to be relevant to the proposal:
- Vegetation communities including declared rare and priority flora; introduced species;
- Terrestrial fauna including specially protected (threatened) fauna and stygofauna;
- Coastal features: mangroves, foreshore, dunes, island shores and seabed;
- Marine fauna including turtles, corals and benthic organisms, and introduced marine organisms;
- Marine water and sediment quality including turbidity;
- Rivers, watercourses, ephemeral streams and flooding;
- Groundwater;
- Oil from spill incidents;
- Gaseous and particulate emissions including greenhouse gases;
- Heritage issues; and
- Recreational values including fishing.

MS 635
MS 635 for the construction and operation of a 95 Mtpa iron ore mine, power station, desalination plant, processing plant (producing pelletised, direct-reduced iron and hot-briquetted iron) and accommodation and port facilities in the Cape Preston area was authorised by the Minister for Environment (Minister) under Part IV of the EP Act on 23 October 2003. Post issuing of MS 635, five changes to the proposal have been approved in accordance with section 45C of the EP Act as outlined in MS 635 Schedule 1, Attachments 1-5.

MS 635 has conditions relating to the following:
- Surface Waters;
- Pit Dewatering and Vegetation Monitoring Plan;
- Marine Management Plan;
- Marine Wastewater Outfall;
- Port Environmental Management Plan;
- Air Emissions;
- Greenhouse Gas Emissions;
- Noise Management Plan;
- Recreational Use Management Plan;
- Compliance Audit and Performance Review;
- Conservation Estate; and
- Decommissioning and Closure Plans.

Report 1343
A subsequent proposal to change condition 8 of MS 635 relating to the Marine Wastewater Outfall was informed by an EPA assessment (Assessment Number 1814), which produced EPA Report 1343.

The EPA considered it appropriate to amend condition 8 of MS 635 to reflect current State and Commonwealth policy. MS 822 was signed by the Minister on 23 December 2009.

MS 822
Condition 8 was amended to specify a Low Ecological Protection Area (LEPA) within 70 m of the wastewater outfall diffuser, located in the port area. A Moderate Ecological Protection Area (MEPA) applies within 250 m of the port infrastructure and a high level of ecological protection beyond that. Condition 7-1 5 was also deleted.

Key finding: Although the above approvals were granted to Mineralogy, proponent title was subsequently transferred to Sino Iron and Korean Steel in 2016, in accordance with WA Supreme Court ruling ([2014] WASC 444).

Report 1602
A proposal to deepen and extend the existing iron ore mine at Cape Preston, with increases in the extent of the tailings storage facilities, waste rock dumps and groundwater discharge from mine dewatering developed the Report and Recommendations of the EPA – Report 1602.

The EPA identified the following key environmental factors:
- Hydrological processes;
- Inland waters environmental quality;
- Marine environmental quality;
- Flora and vegetation;
- Terrestrial fauna;
- Air quality; and
- Terrestrial environmental quality.

The EPA concluded that the proposal may be implemented if carried out in accordance with the conditions and procedures specified in MS 635 and 822 and the additional conditions under MS 1066, which was signed by the Minister on 20 October 2017.

MS 1066
MS 1066 includes the following:
- Condition 16 (Decommissioning and Closure Plans) of MS 635 was replaced with a condition relating to Rehabilitation and decommissioning – mine and borefield. This is to address fibrous materials and management of waste rock and tailings during the rehabilitation and decommissioning of the mine; and
- Inclusion of condition 17 - Amendment of plans, reports, systems or programs. To ensure approved versions of plans, reports, systems or programs required by MS 635 and applicable to the Sino Iron Mine Continuation Proposal are revised, to be consistent with contemporary standards, policies, guidelines and procedures.

Clearing
Clearing is not authorised under L8758/2013/1. MS 1066 authorises a total disturbance area of 10,100 hectares (ha) in development envelope of 22,737 ha for the Sino Iron Project.

Other approvals
Iron Ore Processing (Mineralogy Pty. Ltd.) Agreement Act 2002
The Premises is regulated by the *Iron Ore Processing (Mineralogy Pty. Ltd.) Agreement Act 2002* (Sino Iron and Balmoral Iron are co-proponents whilst Mineralogy is the Principal proponent), which is administered by the Department of Jobs, Tourism, Science and Innovation.

This amendment – November 2017
A licence amendment application was submitted by the Licensee on 21 August 2017 to amend Table 2.2.2 to have no defined limits associated with nitrate-nitrite and reactive phosphorus and to remove conditions 4.2.4 – 4.2.7 associated with the commissioning of the Plant's west train.

During this amendment the following changes have also been made to the Licence:

- Design capacity for category 54A has been changed from 52 GL/a to 44 GL/a to align with MS 635;
- Administrative changes;
- Definitions updated;
- Removal of previous condition 1.2.2 and inclusion of a new condition 1.2.2 relating to containment infrastructure for the two Environmental Ponds;
- Removal of limits for nitrate-nitrite and reactive phosphorus in condition 2.2.2;
- Removal of condition 3.3.1 for process monitoring;
- Update to condition 4.1.2 for the Annual Audit Compliance Report;
- Update to condition 4.2.1 in line with changes made to the Licence during this amendment;
- Removal of previous conditions 4.2.4, 4.2.5, 4.2.6 and 4.2.7 relating to the Plant's west train commissioning reports;
- Removal of the Annual Audit Compliance Report Proforma in Schedule 2;
- Form WR1 updated; and
- Form PR1 removed.

DWER's assessment and decision making are described in section 4 of this document.

4 Decision table

All applications are assessed in line with the EP Act, the EP Regulations and *Guidance Statements: Decision Making* and *Risk Assessments*. Where other references have been used in making the decision they are detailed in the Decision Document.

DECISION TABLE			
Licence section	**Condition number**	**Justification (including risk description & decision methodology where relevant)**	**Reference documents**
Definitions	N/A.	During the November 2017 amendment the definitions for 'Anniversary Date', 'Annual Audit Compliance Report' and 'Department' have been included. The definitions for 'Annual Period', 'CEO' and 'CEO for the purposes of notification' have been updated and other definitions removed as applicable.	N/A.
General conditions	N/A.	DWER's assessment and decision making for stormwater management and hydrocarbons and chemicals at the Premises are detailed in Appendix A.	*Dangerous Goods Safety (Storage and Handling of Non-Explosives) Regulations 2007*. Australian Standard 1940-2004 the Storage and Handling of Flammable and Combustible Liquids. Code of Practice for the Storage and handling of dangerous goods. Port EMP. MS 635.
Premises operations	1.2.1 and 1.2.2.	DWER's assessment and decision making for Premises operations are detailed in Appendix B.	Port EMP. MS 635.

DECISION TABLE			
Licence section	**Condition number**	**Justification (including risk description & decision methodology where relevant)**	**Reference documents**
Emissions general	2.1.1.	Condition on Licence requiring the Licensee to record and investigate the exceedance of any descriptive or numerical limit.	N/A.
Point source emissions to air including monitoring	N/A.	No point source air emissions are expected from the operation of the Premises.	N/A.
Point source emissions to surface water including monitoring	2.2.1, 2.2.2 and 3.2.1.	No point source emissions to surface water are expected from the BLF and DWP. DWER's assessment and decision making with respect to point source emissions to surface water from the Plant is detailed in Appendix C.	General provisions of the *Environmental Protection Act 1986*. MS 635. MS 822.
Emissions to land including monitoring	N/A.	No emissions to land are generated by the operations at the Premises.	*Environmental Protection (Unauthorised Discharges) Regulations 2004.*
Point source emissions to groundwater including monitoring	N/A.	No point source emissions to groundwater are generated by the operations at the Premises.	General provisions of the *Environmental Protection Act 1986*.
Fugitive emissions	N/A.	No fugitive emissions should be generated from the Plant. DWER's assessment and decision making for fugitive emissions from the BLF are detailed in Appendix D.	General provisions of the *Environmental Protection Act 1986*. MS 635.
Odour	N/A.	No odour emissions are expected to be generated from the operations at the Premises.	General provisions of the *Environmental Protection Act 1986*.
Noise	N/A.	DWER's assessment and decision making for noise emissions are detailed	General provisions of

DECISION TABLE			
Licence section	**Condition number**	**Justification (including risk description & decision methodology where relevant)**	**Reference documents**
		in Appendix E.	the *Environmental Protection Act 1986*. MS 635.
Monitoring general	3.1.1 – 3.1.4.	Conditions on Licence to ensure monitoring is carried out in accordance with the relevant standards, at appropriate intervals, submitted to and tested by a National Association of Testing Authorities (NATA) accredited laboratory for analysis and the monitoring equipment is appropriately maintained and calibrated.	AS/NZS 5567.1 and AS/NZS 5667.9
Monitoring of inputs and outputs	N/A.	No specified conditions relating to the monitoring of inputs and outputs are included in this Licence.	N/A.
Process monitoring	N/A.	DWER's assessment and decision making for process monitoring is detailed in Appendix F.	General provisions of the *Environmental Protection Act 1986*. *Environmental Protection (Unauthorised Discharges) Regulations 2004.*
Ambient quality monitoring	N/A.	No specified conditions relating to ambient quality monitoring are included in this Licence. The monitoring of ambient air quality is sufficiently regulated by the EPA in accordance with MS 635 and the associated Operational EMP and Dust MP (refer also to Appendix D). The Dust MP includes ambient dust monitoring requirements including operational dust objectives and targets. The Licensee undertakes a complaints based monitoring program in accordance with MS 635 and associated the Noise MP (refer also to Appendix E).	MS 635. Operational EMP. Dust MP. Noise MP. Port EMP.

<table>
<tr><th colspan="4">DECISION TABLE</th></tr>
<tr><th>Licence section</th><th>Condition number</th><th>Justification (including risk description & decision methodology where relevant)</th><th>Reference documents</th></tr>
<tr><td></td><td></td><td>Ongoing monitoring of the marine environment is undertaken in accordance with MS 635 and associated Port EMP. Environmental monitoring includes: sediment quality; coral health; light spill; and invasive marine pests.</td><td></td></tr>
<tr><td>Meteorological monitoring</td><td>N/A.</td><td>No specified conditions relating to meteorological monitoring are included in this Licence.</td><td>N/A.</td></tr>
<tr><td>Improvements</td><td>N/A.</td><td>No improvement conditions are included in this Licence.</td><td>N/A.</td></tr>
<tr><td>Information</td><td>4.1.1 – 4.1.3, 4.2.1 - 4.2.3 and 4.3.1.</td><td>Conditions on Licence requiring the provision of an Annual Audit Compliance Report and Annual Environmental Report, including monitoring and reporting requirements.

Conditions 4.2.3 and 4.3.1 on the Licence for non-annual reporting requirements and notification requirements.

During this amendment - November 2017
Previous conditions 4.2.4 – 4.2.7 associated with commissioning of the Plant's west train have been removed. The West train final commissioning report was received by the former Department of Environment Regulation on 21 December 2016, satisfying previous conditions 4.2.4 to 4.2.7.

Previous condition 4.2.4 specified:
The Licensee shall provide the CEO the West Train Desalination Plant quarterly commissioning reports as outlined in Table 4.2.3.

<table>
<tr><th colspan="3">Table 4.2.3: Reporting periods for commissioning reports</th></tr>
<tr><th>Report</th><th>Period of report</th><th>Date due</th></tr>
<tr><td>First quarter report</td><td>First to third month of commissioning (inclusive)</td><td>Last Monday of the fourth month of Commissioning Period</td></tr>
<tr><td>Second quarter report</td><td>Fourth to sixth month of commissioning (inclusive)</td><td>Last Monday of the seventh month of Commissioning Period</td></tr>
<tr><td>Third quarter</td><td>Seventh to ninth month of</td><td>Last Monday of the</td></tr>
</table>
</td><td>West train final commissioning report.

CPM, 2017a</td></tr>
</table>

<table>
<tr><th colspan="4">DECISION TABLE</th></tr>
<tr><th>Licence section</th><th>Condition number</th><th>Justification (including risk description & decision methodology where relevant)</th><th>Reference documents</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><td>report</td><td>commissioning (inclusive)</td><td>tenth month of Commissioning Period</td></tr>
<tr><td>Final quarter</td><td>Tenth to twelfth month of commissioning (inclusive)</td><td>Last Monday of the month directly following Commissioning Period</td></tr>
</table>

Previous condition 4.2.5 specified:
The Licensee shall submit a commissioning report for the Desalination Plant to the CEO within three months of the completion of commissioning or as approved by the CEO. The report shall include the water quality characteristics of the effluent.

Previous condition 4.2.6 specified:
The Licensee shall, at the completion of commissioning of the Desalination Plant, provide the CEO a noise validation report which includes details of any noise complaints received during construction and commissioning.

Previous condition 4.2.7 specified:
The Licensee shall operate the West Train Desalination Plant in accordance with the conditions of this Licence, following submission of the commissioning report required under condition 4.2.5.</td><td></td></tr>
<tr><td>Licence duration</td><td>N/A.</td><td>The Licence expires on Sunday, 24 November 2024.</td><td>Guidance Statement: Licence Duration.

Notice of Amendment of Licence Expiry Dates, 29 April 2016.</td></tr>
</table>

5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
29/11/2017	Licensee provided with draft licence and decision document for comment	The Licensee provided comments (Appendix G) on the decision document on 14/12/2017	Refer to Appendix G

6 Risk Assessment

Note: This matrix is taken from the Guidance Statement: Risk Assessments

Table 3: Risk Rating Matrix

Likelihood	Consequence				
	Slight	Minor	Moderate	Major	Severe
Almost Certain	Medium	High	High	Extreme	Extreme
Likely	Medium	Medium	High	High	Extreme
Possible	Low	Medium	Medium	High	Extreme
Unlikely	Low	Medium	Medium	Medium	High
Rare	Low	Low	Medium	Medium	High

Appendix A

General conditions

Stormwater management

Emission Description

Emission: Potentially contaminated and sediment laden stormwater from operational areas (the Plant, DWP and BLF).

Impact: Contamination of surrounding land and surface water drainage systems. Potential impacts on the marine ecosystem from turbidity, sedimentation and from the addition of nutrients, heavy metals and/or hydrocarbons.

Controls: The following controls have been implemented at the Premises*:*

- Stormwater drainage designed for full site containment of a 1:10 year rainfall event;
- Stockyard area designed with a 1% slope to drain surface water towards collection V drains;
- Subsurface drains within the stockyard and V drains direct stormwater from the ore stockyard to Environmental Pond #2;
- Stormwater from the DWP is directed to Environmental Pond #1;
- Environmental ponds have a combined capacity of 60,000 cubic metres;
- All wharf decks, roadways and parking areas are contained to ensure minimal direct discharge of spills to the sea;
- Drainage areas are fitted with containment sumps/interceptors to traps product spills; and
- In the event of cyclonic rainfall or storm driven waves swamping the wharf decks, the sumps are closed off to prevent overflows.

Risk Assessment

Consequence: The impact from discharges of contaminated and/or sediment laden stormwater could result in minimal on-site impacts. Therefore, the consequence is slight.

Likelihood: Based on the Licensee controls, an environmental impact from the discharge of contaminated and/or sediment laden stormwater will probably not occur in most circumstances. Therefore, the likelihood of the consequence is unlikely.

Overall Risk Rating: Comparison of the consequence and likelihood ratings described above with the Risk Rating Matrix (Table 3) determines the overall rating of risk for discharges of contaminated and/or sediment laden stormwater to the environment to be **low**.

Regulatory Controls

Runoff including sediment/stormwater runoff is managed by the Licensee in accordance with the *Port Environmental Management Plan* (Port EMP) and *Operational EMP*, implemented under conditions 2-1 and 9-1 3 of MS 635.

Conditions relating to the management of stormwater are not imposed as potential impacts are addressed and managed under the Ministerial approvals issued under Part IV of the EP Act.

The general provisions of the EP Act with respect to the causing of pollution and environmental harm apply, as will the provisions of relevant subsidiary legislation, including the *Environmental Protection (Unauthorised Discharges) Regulations 2004*.

Hydrocarbon and chemicals

Emission Description

Emission: Infiltration of hydrocarbons to soil from hydrocarbon/chemical spills and leaks outside of containment infrastructure.

Impact: Contamination of soil and/or marine environment and potential loss of habitat adjacent to where the spillage occurred.

Controls: The Licensee has implemented the following controls*:*

- Hydrocarbons and chemicals bunded in accordance with Australian Standard 1940:2004 *The storage and handling of flammable and combustible liquids*;
- Critical level alarms on hydrocarbon tank;
- Chemical storage area not located on seasonally inundated land;
- Chemical storage area located outside 1 in 20 year flood plain;
- Spill response material available; and
- Material Safety Data Sheets for all chemicals and hydrocarbons maintained in the central control room.

Risk Assessment

Consequence: The impact from spills and leaks of hydrocarbons at the Premises could result in mid level on-site impacts and low level off-site impacts on a local scale. Therefore, the consequence is moderate.

Likelihood: Based on the Licensee controls and frequent use, an environmental impact from spills and leaks of hydrocarbons/chemicals could occur at some time. Therefore, the likelihood of the consequence is possible.

Overall Risk Rating: Comparison of the consequence and likelihood ratings described above with the Risk Rating Matrix (Table 3) determines the overall rating of risk for leaks and spills of hydrocarbons/chemicals at the Premises to be **medium**.

Regulatory Controls

Spills including hydrocarbon spills are managed by the Licensee in accordance with the *Port EMP* which includes an Oil Spill Contingency Plan and the *Operational EMP* implemented under conditions 2-1 and 9-1 3 of MS 635.

Specified conditions for the management of hydrocarbons are not imposed, as sufficient regulatory control is currently imposed through approvals issued pursuant to Part IV of the EP Act, as well as the *Dangerous Goods Safety Act 2004* administered by the Department of Mines, Industry Regulation and Safety (DMIRS).

The general provisions of the EP Act with respect to the causing of pollution and environmental harm apply, and discharges of hydrocarbons may be subject to the *Environmental Protection (Unauthorised Discharges) Regulations 2004.*

Appendix B

Premises operation

Spillages of ore
Emission Description
Emission: Spillage of magnetite to land and the marine environment.

Impact: Contamination of surrounding land and deterioration of marine water quality through increased turbidity.

Controls: The BLF has the following controls:

- Weigh points to prevent overloading and spillage;
- Alarms for belt misalignment, slippage and hopper blockages;
- Enclosed overland conveyors (where practical) and ore transfer points;
- Loading boom has a flexible and luffing loading chute fitted with a rubber skirt; and
- Loading boom will not be swung over marine water without a barge being moored in place.

Risk Rating
Consequence: The impact of spillages of ore could result in low level on-site impacts and minimal off-site impacts on a local scale. Therefore, the Delegated considers the consequence to be minor.

Likelihood: Based on the Licensee controls, the spillages of ore could occur at some time. Therefore, the likelihood of the consequence is possible.

Overall Risk Rating: Comparison of the consequence and likelihood ratings described above with the Risk Rating Matrix (Table 3) determines the overall rating of risk for spillages of ore at the Premises to be **medium**.

Regulatory Controls
Spills including product spills are managed by the Licensee in accordance with the *Port EMP*, currently implemented under condition 9-1 3 of MS 635.

The desalination inlet is also very close to the barge loading area, therefore spillage to the marine environment should be carefully managed to ensure no adverse impacts to the Plant and water quality occur. Condition 1.2.1 of the Licence ensures spillage to the marine environment from ore is minimised.

Environmental Ponds
Emission Description
Emission: Overtopping of the Environmental Ponds.

Impact: Water inundation of area adjacent to the Environmental Ponds.

Controls: The Environmental Ponds have the following controls:

- Lined with high density polyethylene (HDPE) and
- Combined capacity of 60,000 cubic metres.

Risk Assessment
Consequence: The impact of overflows from the Environmental Ponds would result in minimal on-site impacts. Therefore, the consequence is slight.

Likelihood: Based on the Licensee controls overflows from the Environmental Pond will probably not occur in most circumstances. Therefore, the likelihood of the consequence is unlikely.

Overall Risk Rating: Comparison of the consequence and likelihood ratings described above with the Risk Rating Matrix (Table 3) determines the overall rating of risk of overflows from the Environmental Ponds to be **low**.

During this amendment - November 2017
Regulatory Controls
Previous condition 1.2.2 has been removed and replaced with a containment infrastructure condition for the Environmental Ponds. Infrastructure requirements for the Environmental Ponds include maintaining the HDPE liner and maintaining a freeboard of 0.5 m.

Previous condition 1.2.2 specified:
The Licensee shall ensure a freeboard of at least 0.5 metres is maintained on the Environmental Ponds at all times.

Appendix C

Point source emissions to surface water including monitoring
The Licensee operates the Plant, which is made up of two trains. Concentrated brine is discharged back to the ocean at the north-western end of the port breakwater via a 50 m diffuser at the ocean outfall.

Emission Description
Emission: Discharge of concentrated brine from the Plant to the Indian Ocean.

Impact: Discharges to the ocean from the Plant has the potential to impact the water quality, amenities and biodiversity values of the waters immediately surrounding Cape Preston. The recreational area at the Fortescue River mouth is 26 km away. This is considered distant, however, the area surrounding Cape Preston is a recreational fishing area and scatterings of coral growth occur in the area. The primary discharges are brine (elevated salinity), additives to the Plant and background levels of toxicants (metals) and nutrients that have been concentrated in the brine discharge from the seawater during the RO procedure.

Controls:
- Chemical additives are used to clean the RO membranes and these are collected in a holding tank where they can be neutralised (pH 6 – 8). The composition of the chemicals are analysed, and if proven to be free of pollutants and within the brine composition range, are mixed and discharged with the brine;
- The Licensee does not monitor chemical parameters, however, dosing of chemicals is recorded for process control purposes and discharges are reported to the National Pollutant Inventory;
- Whole Effluent Toxicity (WET) testing is also conducted to determine the toxicity of the brine to marine organisms; and
- The diffuser promotes mixing and dilution of the concentrated brine within the LEPA and MEPA.

Risk Assessment
Consequence: The environmental impact from the discharge of brine to the marine environment would result in low level off-site impacts on a local scale. Therefore, the consequence is moderate.

Likelihood: Based on the location of the ocean outfall to marine habitats, marine fauna, Licensee controls and existing regulation under Part IV of the EP Act, an impact to these specified ecosystems could occur at some time. Therefore, the likelihood of the consequence is possible.

Overall Risk Rating: Comparison of the consequence and likelihood ratings described above with the Risk Rating Matrix (Table 3) determines the overall rating of risk of discharges of brine to the marine environment to be **medium**.

Regulatory Controls
No additional conditions are imposed on the Licence as sufficient regulatory controls already apply including:
- Condition 2.2.1 which allows brine from the Plant to be discharged to the marine environment via a discharge pipe at the north-western end of the port breakwater;
- Condition 2.2.2 for point source emission limits to ensure that the brine outfall, which has the potential to pose a risk to public health and/or the environment, is closely monitored; and
- Condition 3.2.1 for the continuous monitoring (in-pipe) of brine outflow volume, conductivity, temperature, pH, turbidity, dissolved oxygen and oxygen reduction potential. These

parameters are analysed in-field with probes located at site W1 depicted in Schedule 1 of the Licence and the results are monitored at the Plant control room. Condition 3.2.1 also requires metals and nutrients of ammonia, nitrate-nitrite, reactive phosphorous, cadmium, chromium, cobalt, copper, lead, mercury (inorganic), nickel, silver, vanadium and zinc to be monitored six monthly.

The results of the above monitoring is to be reported in the Annual Environmental Report in accordance with condition 4.2.1 including a comparison against previous monitoring results, Licence limits and any impacts detected as a result of activities on the Premises (condition 4.2.2).

MS 822 condition 8-1 and 8-2 requires the Licensee to maintain MEPA within 250 m from all points of the port structures and a LEPA no greater than 70 m from all points of the diffuser structure. These conditions set limits in relation to the Plant for salinity, toxicant concentrations, dilution (via WET testing), ambient dissolved oxygen, and seasonal temperature at the edge of the LEPA and MEPA, with a comparison against the *ANZECC/ARMCANZ 2000*.

During this amendment – November 2017
The Licensee has requested that condition 2.2.2 is updated to remove the limits associated with nitrate-nitrite and reactive phosphorus.

The Licensee has stated (CPM, 2017a) that nutrient monitoring data collected to date has not exhibited any significant excursions from anticipated brine concentrations (i.e. approximately double ambient) as shown in Table 4.

Table 4: Summary of Nutrient Monitoring Concentrations

	Nitrate + Nitrite		Reactive Phosphorus	
	Outfall	Intake	Outfall	Intake
AVE	0.055 mg/L	0.028 mg/L	<0.01*	<0.01*
MEDIAN	0.05 mg/L	0.02 mg/L	<0.01*	<0.01*

*Laboratory limit of reporting 0.01 mg/L

In accordance with MS 822 (condition 8-4) the Licensee is required to ensure that the following conditions are met at the boundary between the LEPA and the MEPA:

1. *The median salinity resulting from discharge at the wastewater diffuser either, (1) does not exceed the 95th percentile of the natural salinity range over the same period; or, (2) does not exceed the median salinity at a suitable reference site by more than 1.2 parts per thousand.*
2. *The 95th percentile of toxicant concentrations meets the 90% species protection levels specified in ANZECC/ARMCANZ 2000.*
3. *The results of WET testing undertaken using a minimum of five species as per ANZECC/ARMCANZ 2000 protocols demonstrate that sufficient dilution is occurring such that a moderate level of ecological protection (90% species protection) is met for at least 95% of wastewater flow and oceanographic conditions.*
4. *The ambient dissolved oxygen in bottom water samples is not below 80% saturation for more than six weeks and never below 60% saturation.*
5. *The median temperature in any season does not exceed the 95th percentile of the natural temperature range over the same period.*

Considering the Licensee's existing obligations under Part IV of the EP Act (MS 635 and 822), it is reasonable to remove the emission limits (background concentrations) for nitrate-nitrite and reactive phosphorus. The removal of these emission limits is not inconsistent with MS 822 condition 8 and will result in clarity and enforceability for the Licence. The Licensee is required to provide a discussion on nutrient concentrations relevant to ambient concentrations within the Annual Environmental Report in accordance with conditions 4.2.1 and 4.2.2.

Appendix D

Fugitive emissions

Dust emissions

Emission Description

Emission: Dust emissions from the BLF, predominantly the magnetite stockpiles, reclaimers, conveyors and barge loading infrastructure.

Impact: Deterioration of local air shed, including potential health impacts to nearby residents. Dust emissions can be harmful to human health and the environment. Elevated total suspended particulates (TSP) can impact ambient environmental quality resulting in amenity impacts and can smother vegetation. Particulate matter that is less than 10 (PM_{10}) or 2.5 ($PM_{2.5}$) micrometres in diameter can be drawn deep into the lungs causing human health impacts. The chemical and physical properties of the particles, the size of the particles and the duration of exposure are all factors, which have been linked to human health impacts. Those most at risk are the elderly, children and those with existing ailments.

The distance to the nearest public recreational area is 15 km from the Premises, based on this, fugitive dust emissions should not impact human health. Dust emission however have the potential to impact on surrounding vegetation and possibly sediment loads in marine waters.

Asbestos is naturally occurring in the soil and underlying geology of the Premises and presents a significant risk to the health of people both onsite and off-site if the fibres are disturbed and allowed to contaminate materials or areas where the public may be exposed to them. Onsite occupational health and safety is regulated by DMIRS and WorkSafe WA. Asbestos has previously been encountered at the areas associated with the mining and processing of ore (including the product and tailings).

Controls: The Licensee has implemented the following to manage dust emissions:

- Stockpile orientation north-south perpendicular to prevailing westerly wind;
- Minimising the height and volumes of the stockpiles;
- Stacking and reclaiming predominantly on the downwind side of the stockpile;
- Reduce disturbance on stockpiles by preferentially leaving the first two stockpiles (coated) and stacking and reclaiming the two downwind stockpiles;
- Water suppression on stackers and reclaimers;
- Enclosed conveyors at transfer points;
- Primary and secondary scrapers and return belt V plough on stackers and reclaimers;
- Crusting agent applied to the stockpiles;
- Good housekeeping practices, e.g. cleaning up spilt concentrate as soon as possible;
- Regular cleaning and maintenance of belt scrapers and water suppression;
- Alarms for belt misalignment, slippage and hopper blockage;
- An enclosed headbox, dust curtain at entrance and rubber skirt on the barge loading facility; and
- Mechanical luffing capability on the barge loader.

Fibrous minerals are managed on the Premises in line with the *Fibrous Minerals Management Procedure* and *Fibrous Minerals Management Plan*.

Risk Assessment

Dust emissions

Consequence: There is the potential for dust emissions to the marine environment from the BLF during loading. The fugitive emissions of dust from the BLF during loading would result in minimal off-site impacts on a local scale. Therefore, the consequence is minor.

Likelihood: Based on the Licensee controls and proximity to the marine environment, fugitive dust emission to the marine environment during loading could occur at some time. Therefore, the likelihood of the consequence is possible.

Overall Risk Rating: Comparison of the consequence and likelihood ratings described above with the Risk Rating Matrix (Table 3) determines the overall rating of risk for fugitive dust emissions from the BLF to the marine environment to be **medium**.

Airborne asbestos
Consequence: The impact of airborne asbestos to public health will result in adverse health effects at a high level. Therefore, the consequence of asbestos to public health is severe.

Likelihood: Based on the distance to the nearest public recreational area (15 km from the Premises), the Licensee's controls and that onsite occupational health and safety is regulated by DMIRS and WorkSafe WA, asbestos impacts to public health from dust emissions from the stockyard will only occur in exceptional circumstances. Therefore, the likelihood of the consequence occurring is rare.

Overall Risk Rating: Comparison of the consequence and likelihood ratings described above with the Risk Rating Matrix (Table 3) determines the overall rating for the risk on public health associated with asbestos dust to be **high**, but the Licensee's existing *Fibrous Minerals Management Procedure* and *Fibrous Minerals Management Plan* are adequate to regulate the risk associated with fibrous minerals.

Regulatory Controls
No specified conditions relating to fugitive dust emissions (including airborne asbestos) are imposed.

The Licensee has requirements under Part IV of the EP Act (MS 635) for the monitoring of ambient air quality, Department of Health and DMIRS legislation and are required to comply with the following:

- *Guideline on the Management of fibrous minerals in Western Australian mining operations*; and
- *Guidance Note on Public Health Risk Management of Asbestiform Minerals Associated with Mining*.

The following Plans have been developed by the Licensee to meet obligations under MS 635 for dust management and fibrous minerals:

- *Operational EMP* section 6.9; and
- *Dust Operational Management Plan* (Dust MP);
- *Fibrous Minerals Management Procedure*; and
- *Fibrous Minerals Management Plan*.

The Sino Iron Project is currently regulated by DMIRS from a *Mines Safety and Inspection Regulations 1995* perspective due to asbestiform material onsite.

Light emissions

Emission Description

Emission: Light emissions from the Premises including elevated lights from the BLF, stockyards and conveyors.

Impact: Light emissions can attract turtles causing interaction with barges or disorientation of hatchlings during breeding season.

Controls: Lighting at the Premises includes the following controls:

- Lighting shielded/redirected/lowered/recessed to avoid or minimise light spill towards the southern and eastern beaches; and
- Low disruptive colour (yellow and red) and long wavelength (low pressure sodium vapour lights).

Risk Assessment

Consequence: The fugitive light emissions from the Premises could result in low level off-site impacts on a local scale. Therefore, the consequence is moderate.

Likelihood: Based on the Licensee controls including regulation under Part IV of the EP Act, fugitive light emission resulting in an impact to turtles and their nesting beach habitat will probably not occur in most circumstances. Therefore, the likelihood of the consequence is unlikely.

Overall Risk Rating: Comparison of the consequence and likelihood ratings described above with the Risk Rating Matrix (Table 3) determines the overall rating of risk for fugitive light emissions from the Premises impacting on turtles and their nesting beach habitat to be **medium**.

Regulatory Controls

No specified conditions are imposed relating to fugitive light emissions.

Light spill and the management of light emissions is managed by the Licensee in accordance with the *Port EMP* and *Fauna Management Plan*, implemented under conditions 2-1 and 9-1 3 of MS 635.

Appendix E

Noise

Emission Description

Emission: Noise emissions and vibration generated at the Premises from activities including stockpiling, reclamation, desalination and the bulk loading export phases of operation.

Impact: Noise may impact on fauna and people and can potentially include emotional stress, sleep deprivation, general disruption and hearing being affected.

Controls: Noise attenuation measures have been incorporated at the Premises and include:

- Enclosed conveyors at ore transfer points;
- Routine maintenance on conveyor systems and ore transfer points;
- Enclosed head box on the barge loading facility; and
- Limiting horn blasts and sirens.

Risk Rating:

Consequence: The closest sensitive human receptor to the Premises is Gnoorea Point (40 Mile) camping area located approximately 15 km away. There should be minimal impacts to the amenity of this receptor from noise and vibration.

Mid level on-site impacts and low level off-site impacts at a local scale to fauna could occur from noise and vibrations. Therefore, the consequence is moderate.

Likelihood: Based on the size of the Premises and duration of operation (24 hours per day), an impact to specified ecosystems (Specially Protected and marine fauna) from noise and vibration could occur at some time. Therefore, the likelihood of the consequence is possible.

Overall Risk Rating: Comparison of the consequence and likelihood ratings described above with the Risk Rating Matrix (Table 3) determines the overall rating of risk for noise emissions and vibrations to specified ecosystems to be **medium**.

Regulatory Controls:

No specified conditions are imposed relating to noise emissions.

The following Management Plans have been developed by the Licensee to meet obligations under MS 635 for noise management:

- *Operational EMP* section 6.10; and
- *Operational Noise Management Plan* (Noise MP).

Noise is also regulated via the *Environmental Protection (Noise) Regulations 1997* as well as the general provisions of the EP Act with respect to the causing of pollution and environmental harm.

Appendix F

Process monitoring
Two ponds store stormwater collected from the DWP area (Environmental Pond #1) and ore stockyards (Environmental Pond #2) Refer also to Appendix B – Environmental Ponds. CPM, 2017b states that "*during normal operations, stormwater within the ponds is not utilised for dust suppression*".

During this amendment – November 2017
Previous condition 3.3.1 has been removed. Stormwater management has been addressed in Appendix A and the environmental risk deemed as low.

A containment condition specifying that a freeboard of 0.5 m be maintained on the Environmental Ponds has been added to the Licence under condition 1.2.2 (refer to Appendix B – Environmental Ponds).

Previous condition 3.3.1 specified:
The Licensee shall undertake the monitoring in Table 3.3.1 according to the specifications in that table.

Table 3.3.1: Process monitoring					
Monitoring point reference and location as depicted in Schedule 1	***Process description***	***Parameter***	***Units***	***Frequency***	***Method***
Environmental Pond #1 (Dewatering)	*Stormwater collected from the Dewatering Plant area used for dust suppression*	*Total Recoverable Hydrocarbons*	*mg/L*	*Quarterly where wastewater available*	*None specified*
Environmental Pond #2 (Stockyard)	*Stormwater collected from the ore stockyards used for dust suppression*	*Total Recoverable Hydrocarbons*	*mg/L*	*Quarterly where wastewater available*	*None specified*

Appendix G

Licensee comments on the draft Decision Document (CPM, 2017b) and DWER's response

Section 3, page 3, paragraph 1
The Licensee requested that:
The Decision Document is updated with revised wording to better reflect the organisational structure and approved history.

DWER response:
Section 3, page 3, paragraph 1 has been updated accordingly.

Section 3, page 5, paragraphs 1, 2, 3 and 4
The Licensee requested that:
The Decision Document for the "Desalination Process Pre-Treatment Process" and "RO Process" is updated to better reflect operations.

The Licensee has stated (CPM, 2017b) the following:

- The sulfuric acid has been de-commissioned from the plant.
- The dissolved air flotation system has been de-commissioned from the plant due to marginal contribution to the quality of pre-treatment water.
- The sludge treatment plant removes solids from the lamella sludge and backwash water prior to discharge via the outfall.

DWER response:
Section 3, page 5, paragraphs 1, 2, 3 and 4 has been updated accordingly.

Section 3, page 6, paragraph 3 (now paragraph 1)
The Licensee requested that:
Reference to filter cake moisture content be omitted from the Decision Document as moisture content analysis is primarily conducted for the purpose of ensuring vessel stability during transfer. Moisture content will vary depending on operational factors. Current average moisture content range is 8.5-9%.

DWER response:
Reference to the filter cake moisture content has been removed from section 3, page 6, paragraph 1.

Figure 4
The Licensee provided:
A new Figure 4 to better reflect operations.

DWER response:
Figure 4 of the Decision Document has been replaced with the provided process flow diagram.

Section 3, page 7, paragraph 5 (now paragraph 3)
The Licensee requested that:
This paragraph is updated as personnel have not been housed at the 123 Construction Village since August 2013.

DWER response:
Section 3, page 7, paragraph 3 has been updated accordingly.

Section 3, Table 1, Row 1
The Licensee requested that:

An additional paragraph is included to reflect the former Office of the EPA assessment of the Sino Iron Project impacts on the Great Sandy Island Nature Reserve.

DWER response:
Decision Document updated as per Licensee request.

Section 3, Table 1 under Cape Preston marine habitats
The Licensee requested that:
This section is updated for the benthic habitat based on results from the ongoing coral monitoring programme required under Part IV of the EP Act.

DWER response:
This section has been updated as per Licensee request.

Figure 5
The Licensee provided:
A new Figure 5 detailing the broad scale coral distribution in proximity of Cape Preston.

DWER response:
Figure 5 of the Decision Document has been replaced with the new figure.

Section 3, page 11, paragraph 2 (now paragraph 3)
The Licensee requested that:
This paragraph is updated to reflect MS 635, Schedule 1, Attachments 1 – 5.

DWER response:
Section 3, page 11, paragraph 3 has been updated accordingly.

Section 3, page 12 within the key findings box
The Licensee requested that:
This is updated to reflect the transfer of proponency.

DWER response:
The key findings have been updated as per Licensee request.

Appendix A, page 21, under stormwater management controls
The Licensee has stated that:
During normal operations, stormwater within the ponds is not utilised for dust suppression.

DWER response:
Reference to “used for dust suppression onsite” has been removed from the controls section in Appendix A for stormwater management.

References

	Document title	In text ref	Availability
1	Application for DEC Works Approval – Bulk Loading Facility, CITIC Pacific Mining Management Pty Ltd, August 2008	CPM, 2008	DWER records (A131187)
2	Environmental Assessment Report, W4482/2008/1 Sino Iron Project – Desalination Plant and Bulk Loading Facility, Department of Environment and Conservation, Amendment 9 May 2013	W4482 EAR	DWER records (A629289)
3	*Guidance Statement: Decision Making*, Department of Environment Regulation, February 2017	*Guidance Statement: Decision Making*	accessed at www.dwer.wa.gov.au
4	*Guidance Statement: Setting Conditions,* Department of Environment Regulation, October 2015	*Guidance Statement: Setting Conditions*	
5	*Guidance Statement: Environmental Siting*, Department of Environment Regulation, November 2016	*Guidance Statement: Environmental Siting*	
6	*Guidance Statement: Risk Assessments*, Department of Environment Regulation, February 2017	*Guidance Statement: Risk Assessments*	
7	Iron Ore Mine, Downstream Processing (Direct-reduced and Hot-briquetted Iron) and Port, Cape Preston, WA, Austeel Pty Ltd, Report and recommendations of the Environmental Protection Authority, Bulletin 1056, July 2002	Bulletin 1056	accessed at http://www.epa.wa.gov.au
8	Iron Ore Mine, Downstream Processing (Direct-reduced and Hot-briquetted Iron) and Port Construction, Cape Preston, Pilbara – Proposal under s46 of the EP Act to amend the Marine Wastewater Outfall Condition, EPA R&R No: 1343, 29 October 2009	Report 1343	
9	Ministerial Statement 635	MS 635	
10	Ministerial Statement 822	MS 822	
11	Ministerial Statement 1066	MS 1066	
12	National Water Quality	ANZECC/ARMCANZ	accessed at

	Document title	In text ref	Availability
	Management Strategy, Australian and New Zealand Guidelines for Fresh and Marine Water Quality, Australian and New Zealand and Conservation Council and Agriculture and Resources Management Council of Australia and New Zealand, 2000	2000	www.environment.gov.au
13	Salinity status classification. Understanding-salinity – Salinity status classifications, by total salt concentration table, Department of Water	Salinity status classifications	accessed at http://www.dwer.wa.gov.au
14	Sino Iron, Fibrous Minerals Management Plan, CITIC Pacific Mining (DR030318 Revision No. 3), 24 May 2016	Fibrous Minerals Management Plan	DWER records (A1490533)
15	Sino Iron Project, Fibrous Minerals Management Procedure, CITIC Pacific Mining (DR012984), January 2013	Fibrous Minerals Management Procedure	DWER records (A1010040)
16	Sino Iron Mine Continuation, Report and recommendations of the Environmental Protection Authority, Report 1602, August 2017	Report 1602	accessed at http://www.epa.wa.gov.au
17	Sino Iron Project Cape Preston - Port Environmental Management Plan, Stage 1 Port Operational Activities, CITIC Pacific Mining Management Pty Ltd, November 2011 (Version 15)	Port EMP	DWER records (A1560555)
18	Sino Iron Project Desalination Plant and Bulk Loading Facility - Point Source Emission Limits to Water – Application to Amend L8758/2013/1, CITIC Pacific Mining, CPM Ref: DR045096, 12 December 2017	CPM, 2017b	DWER records (A1580676)
19	Sino Iron Project Desalination Plant – Point Source Emission Limits to Water – Application to Amend L8758/2013/1, CITIC Pacific Mining, CPM Ref: DR044434, 21 August 2017	CPM, 2017a	DWER records (A1508679)
20	Sino Iron Project – Desalination Plant West Train Final Commissioning Report – L8758/2013/1, CITIC Pacific Mining, CPM Ref: DR042898, 20 December 2016	West train final commissioning report	DWER records (A1347939)
21	Sino Iron Project Dust	Dust MP	DWER records (A1561196)

	Document title	In text ref	Availability
	Operational Management Plan, CITIC Pacific Mining, Document No: DR027769, 20 November 2015		
22	Sino Iron Project Fauna Management Plan, prepared for CITIC Pacific Mining Management Pty Ltd by Strategen, March 2009	Fauna Management Plan	DWER records (A1560555)
23	Sino Iron Project Operational Environmental Management Plan, CITIC Pacific Mining, Document No: DR-029968, 10 April 2013	Operational EMP	DWER records (A1561195)
24	Sino Iron Project Operational Noise Management Plan, CITIC Pacific Mining, Document No: DR028097, 20 November 2012	Noise MP	DWER records (A1561197)