Government of Western Australia
Department of Environment Regulation

LICENCE FOR PRESCRIBED PREMISES
Environmental Protection Act 1986

LICENCE NUMBER: L5278/1973/13 **FILE NUMBER: DER2013/001112**

LICENSEE
Pilbara Iron Pty Ltd
Level 22, Central Park
152-158 St Georges Terrace
PERTH WA 6000

ACN: 107 216 535

PREMISES
Cape Lambert Operations
Cape Lambert Industrial Area
Lot 65 on Plan 241547, Part of Lot 64 on Plan 57724, Part of Lot 63 on Plan 54397, Lot 106 on Plan 54396, Lot 280 on Plan 217843, Section 91 *Land Administration Act 1991* 00338-2008_3_70, Section 91 *Land Administration Act 1991* 00424-2010_2_285, Section 91 *Land Administration Act 1991* 00803-2008_1_78, Lot 404 on Plan 194355, Lot 66 on Plan 241547 and Part of Lot 7900 on Plan 71098 (in Reserve No. 51015)
POINT SAMSON WA 6720
(as depicted in Attachment 1)

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
5	Processing or beneficiation of metallic or non-metallic ore	50,000 tonnes or more per year	235,000,000 tonnes per annual period
58	Bulk material loading or unloading	100 tonnes or more per day	235,000,000 tonnes per annual period
63	Class I inert landfill site	500 tonnes or more per year	50,000 cubic metres per annual period
73	Bulk storage of chemicals, etc	1,000 cubic metres in aggregate	1,650 cubic metres in aggregate

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

Officer delegated under section 20
of the *Environmental Protection Act 1986*

CONDITIONS OF LICENCE

Environmental Protection Act 1986

LICENCE NUMBER: L5278/1973/13 **FILE NUMBER: DER2013/001112**

DEFINITIONS

In these conditions of licence, unless inconsistent with the text or subject matter:

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

'annual period' means the inclusive period from 1 January to 31 December in the same year;

'AS 3580.9.8' means Australian Standard AS 3580.9.8 *Methods for sampling and analysis of ambient air - Determination of suspended particulate matter - PM_{10} continuous direct mass method using a tapered element oscillating microbalance analyser*;

'AS 3580.14' means the Australian Standard AS 3580.14 *Methods for sampling and analysis of ambient air – Meteorological monitoring for ambient air quality monitoring applications;*

'Australian Standard 1940-2004' means the most recent version and the relevant parts of the Australian Standard for the storage and handling of flammable and combustible liquids;

'Australian Standard 5667' means the most recent version and the relevant parts of the Australian and New Zealand series of guidance on Water Quality Sampling;

'CEO' means Chief Executive Officer of the Department of Environment Regulation;

'CEO' for the purpose of correspondence means;
Manager Licensing (Resources North)
Department of Environment Regulation
Locked Bag 33
CLOISTERS SQUARE WA 6850
Telephone: (08) 9333 7510
Facsimile: (08) 9333 7550
Email industry.regulation@der.wa.gov.au;

'Clean Fill' has the meaning defined in Landfill Definitions;

'contaminated stormwater' means stormwater runoff that has come into contact with pollutants such as oil and grease, petroleum hydrocarbons, process wastes or materials, spills, sediment, gross solids/litter etc, and is carrying or potentially carrying such material;

'environmentally hazardous material' means material (either solid or liquid raw materials, materials in the process of manufacture, manufactured products, products used in the manufacturing process, by-products and waste) which if discharged into the environment from or within the premises may cause pollution or environmental harm. Note: Environmentally hazardous materials include dangerous goods where they are stored in quantities below placard quantities. The storage of dangerous goods above placard quantities is regulated by the Department of Mines and Petroleum;

'Inert Waste Type 1' has the meaning defined in Landfill Definitions;

'Inert Waste Type 2' has the meaning defined in Landfill Definitions;

'Landfill Definitions' means the document titled "Landfill Waste Classification and Waste Definitions 1996" published by the Chief Executive Officer of the Department of Environment and Conservation as amended from time to time;

'Licence' means this Licence number L5278/1973/13 and issued under the Act;

'Licensee' means the person or organisation named as the Licensee on page 1 of the Licence;

'mAHD' means metres Australian Height Datum;

'm/s' means metres per second;

'µg/m^3' means micrograms per cubic metre;

'µS/cm' means microSiemens per centimetre;

'mg/L' means milligrams per litre;

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

'PM_{10}' means particles with an aerodynamic diameter of less or equal to 10 micrometres;

'quarterly' means the 4 inclusive periods from 1 January to 31 March, 1 April to 30 June, 1 July to 30 September and 1 October to 31 December in the same year;

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

'Special Waste Type 1' has the meaning defined in Landfill Definitions;

'Standard Methods for Examination of Water and Wastewater' means the most recent edition of the Standard Methods for Examination of Water and Wastewater as published by the American Public Health Association (APHA), the American Water Works Association (AWWA) and the Water Environment Federation (WEF), generally abbreviated to APHA-AWWA-WEF;

'TEOM' means tapered element oscillating microbalance which is an automated continuous particle (dust) monitor that can report ambient dust levels at short intervals and can be fitted with size-selective heads to sample for PM_{10} or $PM_{2.5}$, hence can be used for active dust management;

'TRH' means total recoverable hydrocarbons; and

'TSP' means total suspended particulates.

CONDITIONS

1 The Licensee shall operate, maintain and calibrate all dust control equipment to the manufacturer's specifications or any relevant and effective internal management system.

2 The Licensee shall only operate the Mobile Screening Plant at the locations on the premises depicted in Attachment 2, in accordance with the Iron Ore (WA) Mobile Crushing & Screening Management Plan (RTIO-HSE-0235877).

DUST MANAGEMENT

3 The Licensee shall take measures to prevent the generation of visible dust from materials handling operations, stockpiles, mobile screening plant operations, open areas and transport activities. Such measures may include, but are not limited to:
(a) maintaining stockpiles in a damp condition;
(b) sealing non-working faces to prevent dust lift off;
(c) spraying surfaces with water;
(d) sealing surfaces with chemical dust suppressants; and
(e) rehabilitation of disturbed areas.

4 The Licensee shall maintain installed dust collection and dust control systems including:
(a) coverings on conveyors, transfer points and discharge points;
(b) skirtings; and
(c) dust filters
as measures to prevent the generation of visible dust from the premises.

AIR MONITORING CONDITIONS

5 The Licensee shall conduct ambient air monitoring at the locations listed in column 1 of Table 1 and depicted in Attachment 3, using the corresponding monitoring techniques, sample frequency and methodology in columns 2, 3 and 5 respectively of Table 1, to measure the corresponding parameters in column 4 of Table 1.

Table 1: Ambient air monitoring requirements

Column 1	Column 2	Column 3	Column 4	Column 5
Monitoring Location (Attachment 3)	**Monitoring Technique**	**Frequency**	**Parameter ($\mu g/m^3$)**	**Methodology**
Point Samson	TEOM	10 minutes	PM_{10}	AS 3580.9.8
		24 hours		
Roebourne	TEOM	10 minutes	PM_{10}	AS 3580.9.8
		24 hours		
Wickham	TEOM	10 minutes	PM_{10}	AS 3580.9.8
		24 hours		

6 The Licensee shall, upon becoming aware that the concentration of the parameter stated in column 4 of Table 2 exceeds the target stated in column 5 of Table 2, at the location stated in column 1 of Table 2 when using the monitoring techniques and sample frequency in columns 2 and 3 respectively of Table 2 and is attributable to the Licensee's Cape Lambert Operations, investigate and provide a written exceedance report to the CEO within 5 business days.

Table 2: Ambient air quality target

Column 1	Column 2	Column 3	Column 4	Column 5
Monitoring Location	**Monitoring Technique**	**Frequency**	**Parameter**	**Target (µg/m^3)**
Point Samson	TEOM	24 hours	PM_{10}	50
		10 minute	TSP	200
Wickham	TEOM	24 hours	PM_{10}	50

7 The written exceedance report required by condition 6 shall include, but not be limited to:
(a) The date and time the exceedance was recorded;
(b) The period over which the exceedance occurred;
(c) The cause of the exceedance;
(d) Justification for any conclusions including analysis of real time TEOM data from other monitoring locations in Attachment 3, regional influences and background (Bureau of Meteorology) monitoring locations;
(e) The corrective action taken or planned to reduce the likelihood of a recurrence if appropriate, including a timeline for implementation;
(f) The number of exceedances in that annual period; and
(g) Actions taken to progress towards meeting the target of five (5) or fewer exceedances attributable to Cape Lambert Operations.

8 The Licensee shall undertake the meteorological monitoring at the location listed in column 1 of Table 3 for the parameters and units specified in columns 2 and 3 of Table 3 using the methodology in column 4 of Table 3.

Table 3: Meteorological monitoring

Column 1	Column 2	Column 3	Column 4
Monitoring station (Attachment 3)	**Parameter**	**Units**	**Method**
Weather Station	Wind speed	km/hr	AS 3580.14
	Wind direction	Degrees	
	Air temperature	°C	

LIQUID CHEMICAL STORAGE

9 Subject to condition 11 the Licensee shall store environmentally hazardous material including fuel, oil or other hydrocarbons (where the cumulative volume of each substance stored in separate areas on the premises exceeds 250 litres) within low permeability (10^{-9} m/s or less) compound(s) designed to contain not less than 110% of the volume of the largest storage vessel or inter-connected system, and at least 25% of the total volume of substances stored in the compound.

10 Subject to condition 11 the Licensee shall ensure that the compound(s) described in condition 9 shall:
(a) Be graded or include a sump to allow recovery of liquid;
(b) Be chemically resistant to the substances stored;
(c) Include valves, pumps and meters associated with transfer operations wherever practical. Otherwise the equipment shall be adequately protected (eg. bollards) and contained in an area designed to permit recovery of chemicals released following accidents or vandalism;

(d) Be designed such that jetting from any storage vessel or fitting will be captured within the bunded area [see for example Australian Standard 1940-2004 Section 5.8.3 (h)];
(e) Be designed such that chemicals which may react dangerously if they come into contact, are in separate bunds in the same compound or in different compounds; and
(f) Be controlled such that the capacity of the bund is maintained (eg. Regular inspection and pumping of trapped uncontaminated rainwater).

11 The Licensee shall provide the CEO in the next Annual Environmental Report details of any infrastructure, which does not meet the requirements of conditions 9 and 10 including an update on improvement works to ensure the requirements specified in conditions 9 and 10 are met.

12 The Licensee shall immediately recover, or remove and dispose of, any liquid resulting from spills or leaks of chemicals including fuel, oil or other hydrocarbons, whether inside or outside the low permeability compound(s).

WASTE MANAGEMENT FROM ANCILLARY OPERATIONS

13 The Licensee shall utilise and maintain as appropriate protective bunding, skimmers, silt traps, neutralisation pits, fuel and oil traps, drains and sealed collection sumps around the process plants, maintenance workshops and laboratories to enable recovery of spillages and protection of surrounding soils and groundwater.

IRON ORE SPILLAGE

14 The Licensee shall take practicable measures to prevent the discharge of any material into the marine environment during loading, unloading, cleaning or any other operations occurring within the premises.

STORMWATER MANAGEMENT

15 The Licensee shall ensure that the premises is drained such that contaminated stormwater is retained on the premises to allow treatment for sediment and TRH prior to discharge off the premises.

16 The Licensee shall ensure that sedimentation basins are maintained at each point of discharge from the premises such that there is sufficient retention time within the basin to reduce suspended solids prior to discharge of waters offsite.

SURFACE WATER – DISCHARGE OUTFALL

17 The Licensee shall ensure that the concentration of TRH in waters discharged from the premises does not exceed 15 mg/L.

WATER MONITORING

18 The Licensee shall take representative water samples from the discharge points listed in column 1 of Table 4, at the frequency stated in column 2 of Table 4, and have analysed for the parameter listed in column 3 of Table 4 and present this information in the Annual Environmental Report.

Table 4: Stormwater discharge monitoring schedule

Column 1	Column 2	Column 3
Discharge locations (Attachments 4 and 5)	**Frequency**	**Parameters**
Four (4) stormwater discharge locations	Quarterly when flowing (or from a representative sample location for the relevant discharge monitoring site)	TRH (mg/L)

DISCHARGES TO LAND

19 The Licensee shall ensure that the quality of any wastewater discharged to land at the premises contains a TRH concentration of less than 15 mg/L.

MANAGEMENT OF INERT LANDFILL (ATTACHMENT 5)

20 The Licensee shall bury only the following types of waste within the inert landfill facility:
(a) Clean Fill;
(b) Inert Waste Type 1
(c) Inert Waste Type 2; and
(d) Special Waste Type 1.
as defined in the Landfill Definitions.

21 The Licensee shall ensure that waste in the tipping area of the landfill is covered with a dense (at least 200 millimetres), inert and incombustible material at final landform design.

22 The Licensee shall ensure that there is no waste within:
(i) 100 metres of any surface water body at the site; and
(ii) 3 metres of the highest level of the water table aquifer at the landfill site.

23 The Licensee shall manage stormwater on the landfill site so that water that has come into contact with waste is retained on the site.

GROUNDWATER MONITORING - LANDFILL

24 The Licensee shall take representative groundwater samples from the monitoring sites shown in column 1 of Table 5, at the frequency stated in column 2 of Table 5 and have analysed for the parameters listed in column 3 of Table 5 and present this information in the Annual Environmental Report including a comparison against previous years' data.

Table 5: Landfill groundwater monitoring

Column 1	Column 2	Column 3
Groundwater monitoring sites (Bores) Attachment 5	**Frequency**	**Parameters**
CLB-GW1 E513968, N7715634 CLB-GW2 E513929, N7715587 CLB-GW3 E513877, N7715363	Six monthly	pH (pH units)
		Conductivity (µS/cm)
		Standing Water Level (mAHD)
		(Unit of measure - mg/L) Lead, Mercury, Copper, Chromium (Total), Arsenic, Nickel, Zinc, Cadmium, Molybdenum, Selenium, TRH, Benzene, Toluene, Ethylbenzene, m/p-Xylene, o-Xylene, MtBE

IMPROVEMENT CONDITIONS

25 The Licensee shall complete the improvement detailed in column 1 of Table 6 by the date of completion stated in column 2 of Table 6.

Table 6: Improvement program

Column 1	**Column 2**
Improvement	**Date of completion**
The Licensee shall provide to the CEO an Air Quality Monitoring Plan for the premises. The Air Quality Monitoring Plan shall include, but not be limited to: (a) A clearly labelled map of the premises showing proposed air quality monitoring sites at the premises and two additional ambient monitoring locations (sited in accordance with relevant Australian Standards) at Wickham and Point Samson; (b) Details and justification on the monitoring techniques to be used; (c) An achievable timeframe within which the air quality monitoring can be implemented; (d) Proposed boundary trigger levels and detailed response procedures when boundary triggers are activated, to reduce the likelihood of an ambient impact; (e) Details on the management of the dust monitoring regime including, but not limited to, how the dust monitoring regime will be integrated into the current dust management strategy for the premises; and (f) Procedures for reviewing and reporting trigger levels with monitoring at ambient locations.	30 May 2016
The Licensee shall submit to the CEO an Environmental Improvement Plan that contains an independent assessment of the design, operation and emissions at the premises against current leading industry practice for preventing or abating dust emissions. The Environmental Improvement Plan shall contain an achievable improvement timetable of priorities to be implemented to reduce dust emissions and achieve current leading industry practice, as a result of the independent assessment. Where improvements cannot be implemented, justifications must be provided outlining why these cannot be achieved and any alternate measures which may be able to be implemented.	30 May 2016

REPORTING CONDITIONS

26 The Licensee shall collect all water samples required by conditions 18 and 24, in accordance with the relevant parts of Australian Standard 5667.

27 The Licensee shall ensure that all parameters requiring laboratory analyses are conducted by an organisation with NATA accreditation for the specified parameters in accordance with the current Standard Methods for Examination of Water and Wastewater.

28 The Licensee shall provide to the CEO, by **30 April** each year, a copy of an Annual Environmental Report containing the monitoring results and data collected as a requirement of any condition of this licence during the period beginning **1 January** the previous year and ending on **31 December** in that year.

29 The Licensee shall, by 30 April in each year, prepare and provide to the CEO a Dust and Noise Control Strategy Report. The report should detail the dust and noise control strategies and plans for the prescribed premises, including key performance indicators.

30 The Licensee shall ensure that the report required by condition 29 details, but not be limited to:

(a) The number and location of all dust control equipment on the prescribed premises, including, but not limited to:
  (i) all dust extraction units and bag houses;
  (ii) water sprays on conveyors, transfer points, stackers, reclaimers and ship loaders;
  (iii) belt scrapers and belt wash stations;
  (iv) stockpile sprinklers; and
  (v) covers on conveyors and transfer points.

(b) Details of all dust control procedures on the prescribed premises, including, but not limited to:
  (i) bulk ore moisture control including moisture analysis;
  (ii) removal of spilled material from underneath conveyors, transfer points, screening plants and the wharf area including schedule and dates of work;
  (iii) operation of water trucks on site; and
  (iv) use of chemical suppressants.

(c) Maintenance strategies and records for dust control equipment;

(d) Key performance indicators for the dust control equipment, procedures and showing actual equipment availability;

(e) An update on Improvement Condition 25;

(f) Annualised PM_{10} data including trend analysis;

(g) Annualised TSP data including trend analysis;

(h) A summary of target exceedances and values above target, as per condition 6, over the reporting period;

(i) Comparison of annualised PM_{10} data, and the number of target exceedances, as per condition 7, against the current air quality model;

(j) Details of any community complaints and actions taken;

(k) The number of noise complaints received by the Licensee, detailing the date, time, reported reason and licensee responsive action;

(l) Details of all noise control procedures on the prescribed premises;

(m) Key performance indicators for noise control equipment and procedures; and

(n) An update on the investigation and implementation of new technologies and systems to improve noise emissions from the premises with particular attention to old infrastructure.

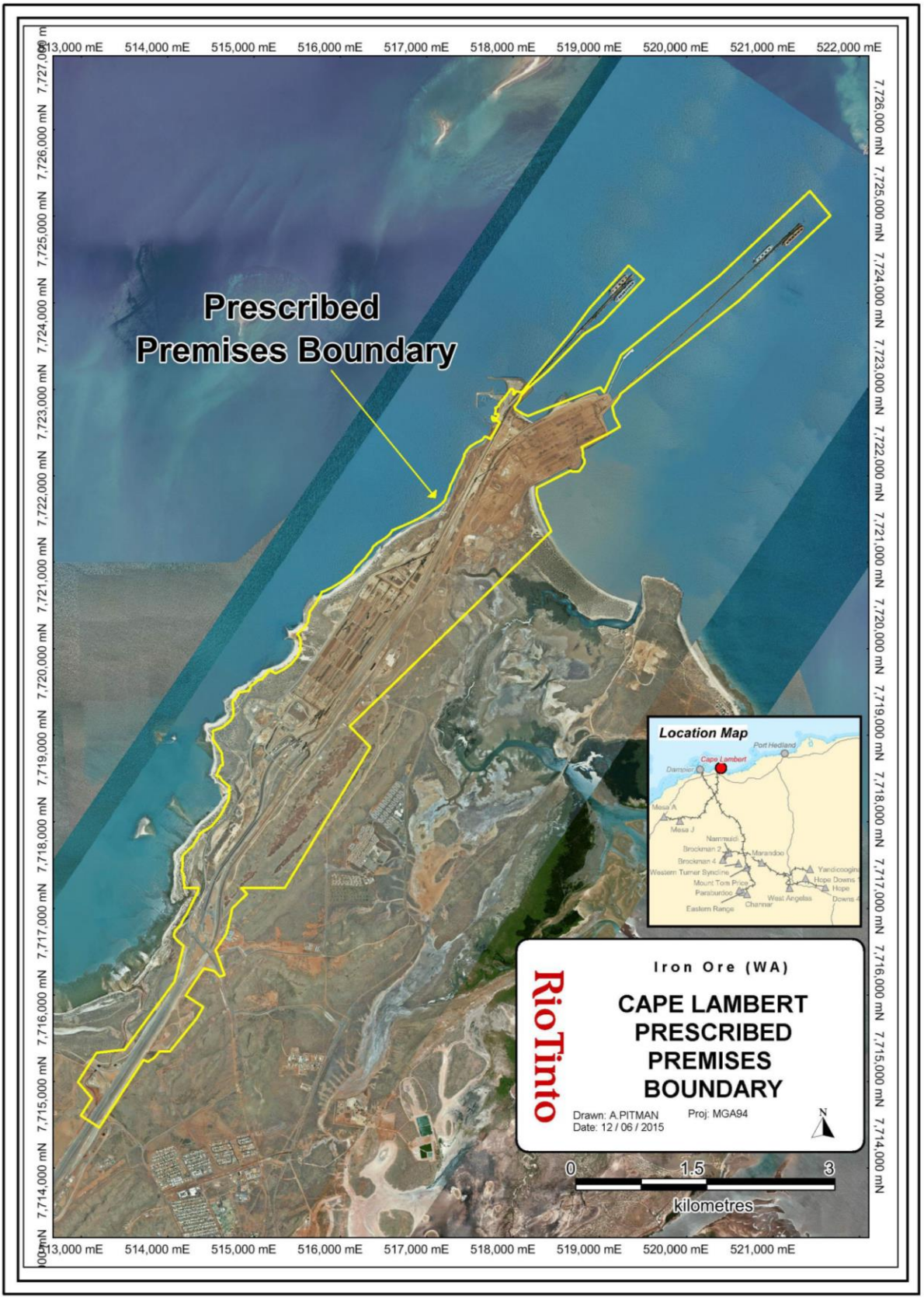
31 The Licensee shall by **30 April** in each year, provide to the CEO an Annual Audit Compliance Report in the form in Attachment 6 to this licence, signed and certified in the manner required by Section C of the form, indicating the extent to which the Licensee has complied with the conditions of this licence, and any previous licence issued under Part V of the Act for the premises, during the period beginning **1 January** the previous year and ending on **31 December** in that year.

CONDITIONS OF LICENCE

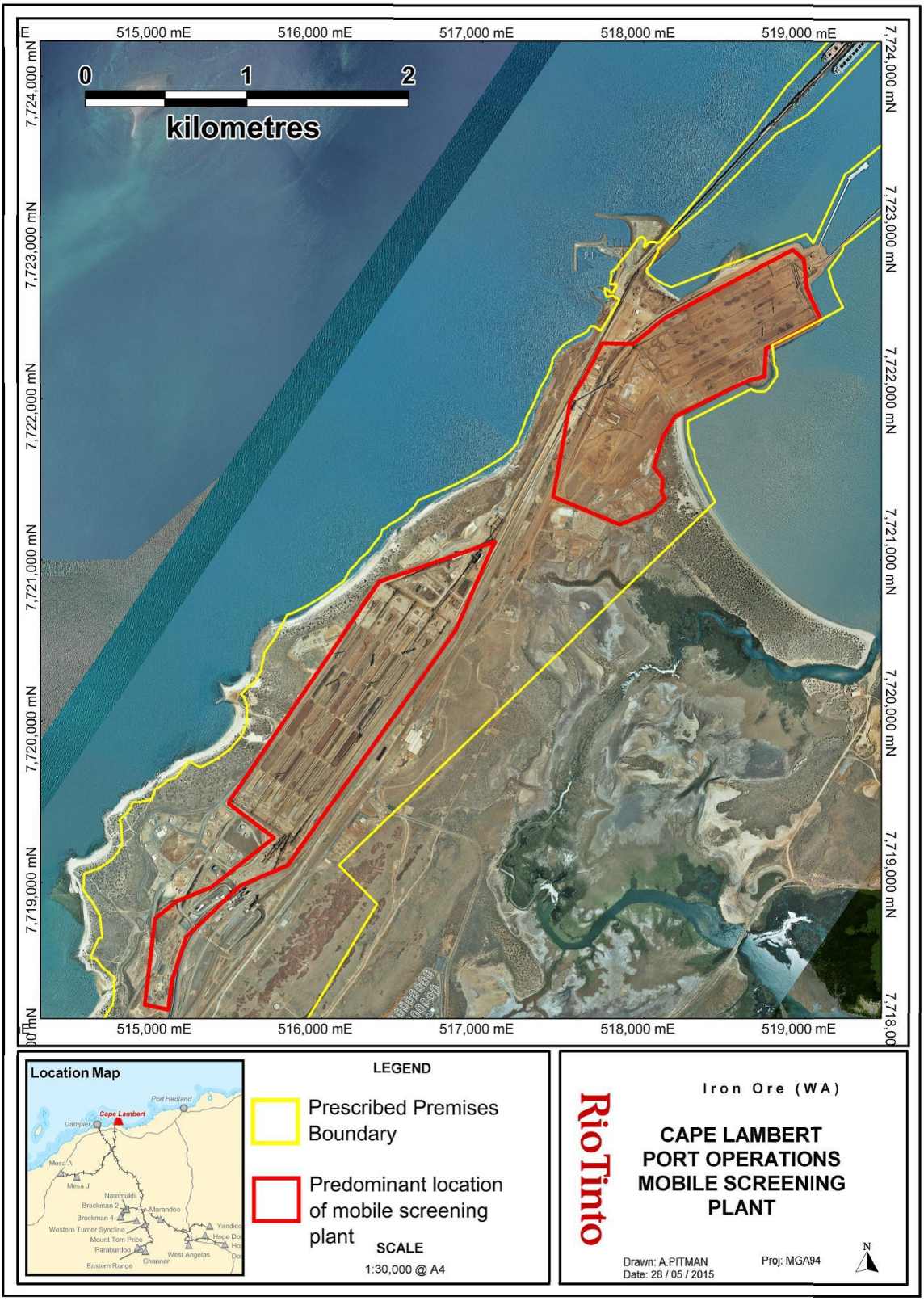
Environmental Protection Act 1986

LICENCE NUMBER: L5278/1973/13 **FILE NUMBER: DER2013/001112**

ATTACHMENT 1 – PLAN OF PREMISES



ATTACHMENT 2 – MOBILE SCREENING PLANT LOCATIONS

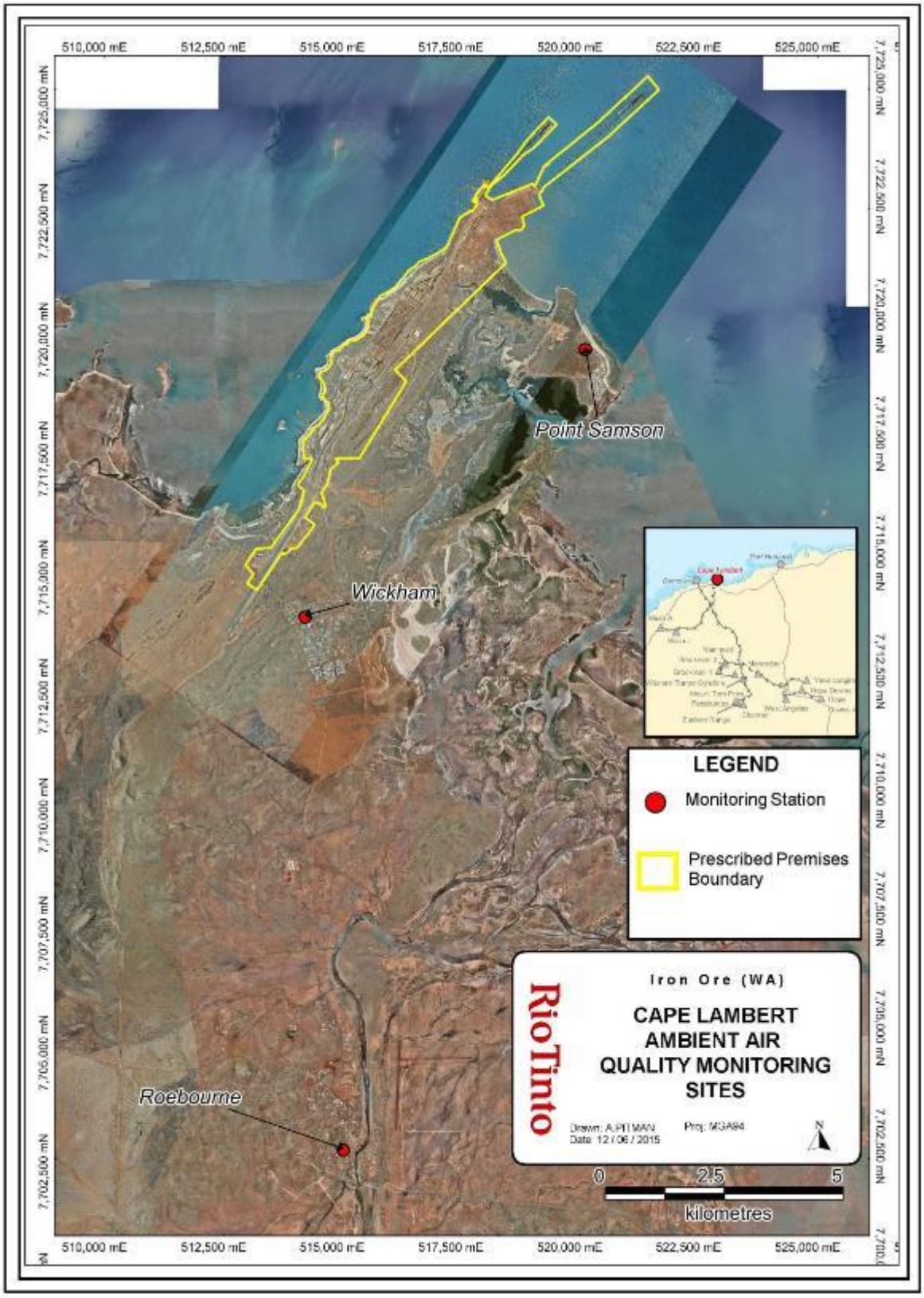


CONDITIONS OF LICENCE

Environmental Protection Act 1986

LICENCE NUMBER: L5278/1973/13 **FILE NUMBER: DER2013/001112**

ATTACHMENT 3 –AMBIENT AIR QUALITY MONITORING SITES

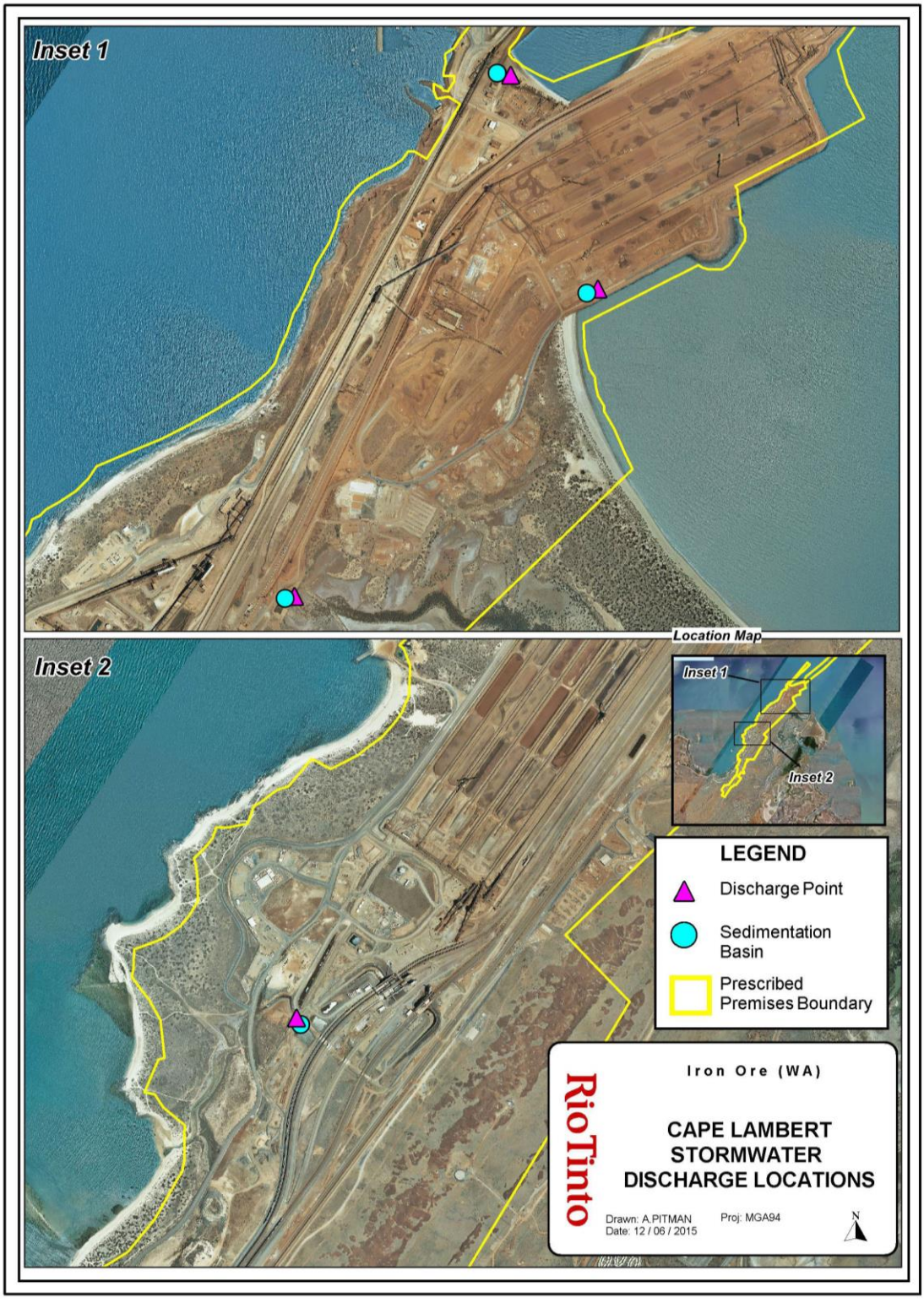


CONDITIONS OF LICENCE

Environmental Protection Act 1986

LICENCE NUMBER: L5278/1973/13 **FILE NUMBER: DER2013/001112**

ATTACHMENT 4 – STORMWATER DISCHARGE LOCATIONS

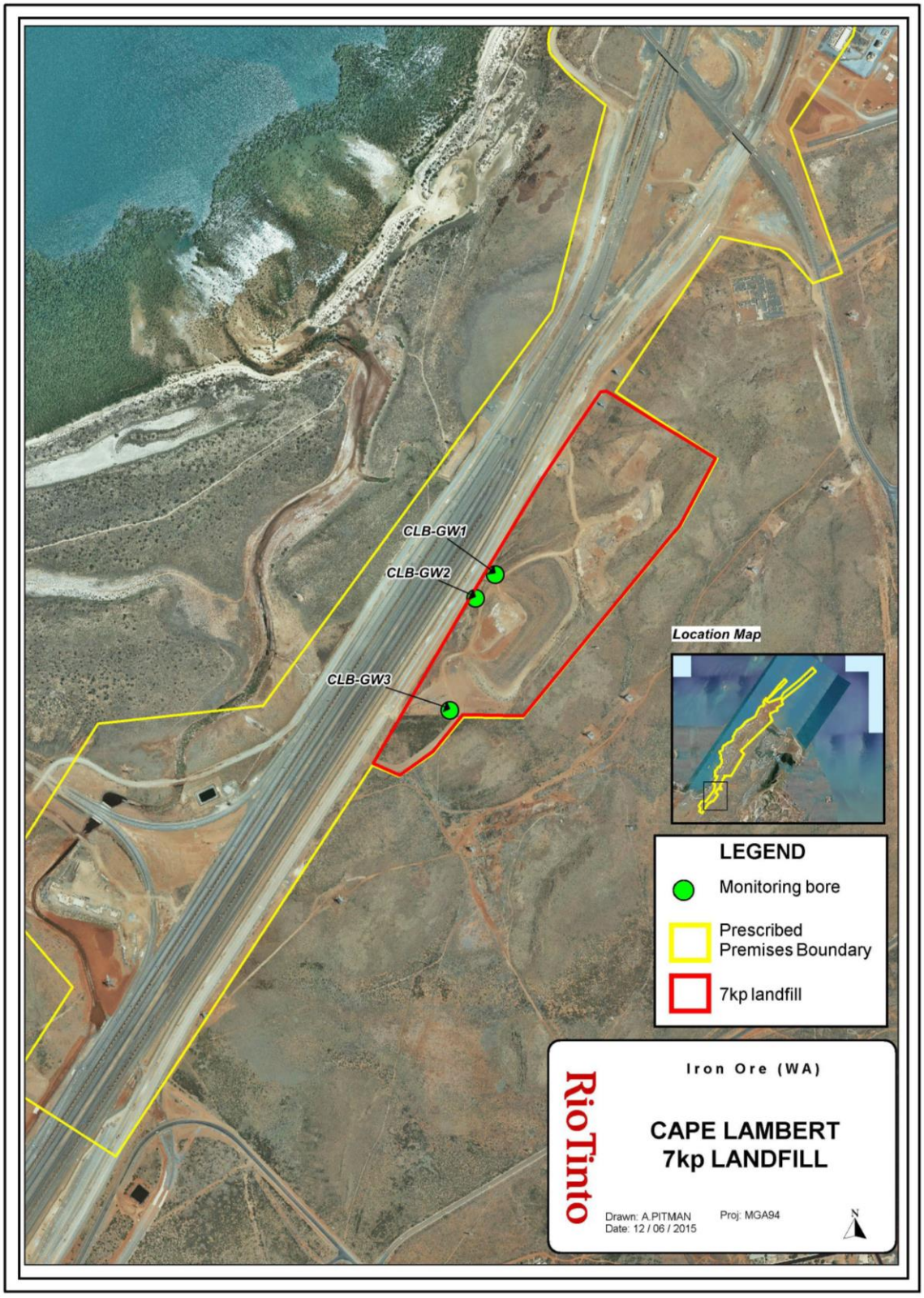


CONDITIONS OF LICENCE

Environmental Protection Act 1986

LICENCE NUMBER: L5278/1973/13 **FILE NUMBER: DER2013/001112**

ATTACHMENT 5 - LANDFILL GROUNDWATER MONITORING SITES



CONDITIONS OF LICENCE

Environmental Protection Act 1986

LICENCE NUMBER: L5278/1973/13 **FILE NUMBER: DER2013/001112**

ATTACHMENT 6 - ANNUAL AUDIT COMPLIANCE REPORT

SECTION A

LICENCE DETAILS

Licence Number:	Licence File Number:
Company Name: Trading as:	ABN:
Reporting period: _____ to _____	

STATEMENT OF COMPLIANCE WITH LICENCE CONDITIONS

1. Were all conditions of the licence complied with within the reporting period? (please tick the appropriate box)

Yes ☐ Please proceed to Section C

No ☐ Please proceed to Section B

Each page must be initialled by the person(s) who signs Section C of this Annual Audit Compliance Report (AACR).

Initial:

SECTION B

DETAILS OF NON-COMPLIANCE WITH LICENCE CONDITION

Please use a separate page for each licence condition that was not complied with.

a) Licence condition not complied with:	
b) Date(s) when the non compliance occurred, if applicable:	
c) Was this non compliance reported to DER?:	
☐ Yes ☐ Reported to DER verbally Date _____ ☐ Reported to DER in writing Date _____	☐ No
d) Has DER taken, or finalised any action in relation to the non compliance?:	
e) Summary of particulars of the non compliance, and what was the environmental impact:	
f) If relevant, the precise location where the non compliance occurred (attach map or diagram):	
g) Cause of non compliance:	
h) Action taken, or that will be taken to mitigate any adverse effects of the non compliance:	
i) Action taken or that will be taken to prevent recurrence of the non compliance:	

Each page must be initialled by the person(s) who signs Section C of this AACR

Initial:

SECTION C

SIGNATURE AND CERTIFICATION

This Annual Audit Compliance Report (AACR) must only be signed by a person(s) with legal authority to sign it. The ways in which the AACR must be signed and certified, and the people who may sign the statement, are set out below.

Please tick the box next to the category that describes how this AACR is being signed. If you are uncertain about who is entitled to sign or which category to tick, please contact the licensing officer for your premises.

If the licence holder is		The Annual Audit Compliance Report must be signed and certified:
An individual	□	by the individual licence holder, or
	□	by a person approved in writing by the Chief Executive Officer of the Department of Environment Regulation to sign on the licensee's behalf.
A firm or other unincorporated company	□	by the principal executive officer of the licensee; or
	□	by a person with authority to sign on the licensee's behalf who is approved in writing by the Chief Executive Officer of the Department of Environment Regulation.
A corporation	□	by affixing the common seal of the licensee in accordance with the *Corporations Act 2001*; or
	□	by two directors of the licensee; or
	□	by a director and a company secretary of the licensee, or
	□	if the licensee is a proprietary company that has a sole director who is also the sole company secretary – by that director, or
	□	by the principal executive officer of the licensee; or
	□	by a person with authority to sign on the licensee's behalf who is approved in writing by the Chief Executive Officer of the Department of Environment Regulation.
A public authority (other than a local government)	□	by the principal executive officer of the licensee; or
	□	by a person with authority to sign on the licensee's behalf who is approved in writing by the Chief Executive Officer of the Department of Environment Regulation.
a local government	□	by the chief executive officer of the licensee; or
	□	by affixing the seal of the local government.

It is an offence under section 112 of the *Environmental Protection Act 1986* for a person to give information on this form that to their knowledge is false or misleading in a material particular. There is a maximum penalty of $50,000 for an individual or body corporate.

I/We declare that the information in this Annual Audit Compliance Report is correct and not false or misleading in a material particular.

SIGNATURE: _____
NAME:
(printed) _____

POSITION: _____

DATE: _____/_____/_____
SEAL (if signing under seal)

SIGNATURE: _____
NAME:
(printed) _____

POSITION: _____

DATE: _____/_____/_____

Government of Western Australia
Department of Environment Regulation

Decision Document

Environmental Protection Act 1986, Part V

Proponent: Pilbara Iron Pty Ltd

Licence: L5278/1973/13

Registered office: Level 22, Central Park
152-158 St Georges Terrace
PERTH WA 6000

ACN: 107 216 535

Premises address: Cape Lambert Operations
Cape Lambert Industrial Area
Lot 65 on Plan 241547, Part of Lot 64 on Plan 57724, Part of Lot 63 on Plan 54397, Lot 106 on Plan 54396, Lot 280 on Plan 217843, Section 91 *Land Administration Act 1991* 00338-2008_3_70, Section 91 *Land Administration Act 1991* 00424-2010_2_285, Section 91 *Land Administration Act 1991* 00803-2008_1_78, Lot 404 on Plan 194355, Lot 66 on Plan 241547 and Part of Lot 7900 on Plan 71098 (in Reserve No. 51015)
POINT SAMSON WA 6720

Issue date: Thursday, 25 June 2015

Commencement date: Monday, 29 June 2015

Expiry date: Sunday, 28 June 2020

Decision

Based on the assessment detailed in this document the Department of Environment Regulation (DER), has decided to issue a licence. DER considers that in reaching this decision, it has taken into account all relevant considerations and legal requirements and that the Licence and its conditions will ensure that an appropriate level of environmental protection is provided.

Decision Document prepared by: Sonya Poor
Licensing Officer

Decision Document authorised by: Danielle Eyre
Senior Manager

Contents

1 Purpose of this Document

This decision document explains how DER has assessed and determined the application for a works approval or licence, and provides a record of DER's decision-making process and how relevant factors have been taken into account. Stakeholders should note that this document is limited to DER'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.

Works approval and licence conditions
DER has three types of conditions that may be imposed on works approvals and licences. They are as follows;

Standard conditions (SC)

DER has standard conditions that are imposed on all works approvals and licences regardless of the activities undertaken on the Premises and the information provided in the application. These are included as the following conditions on works approvals and licences:

Works approval conditions: 1.1.1-1.1.4, 1.2.1, 1.2.2, 5.1.1 and 5.1.2.

Licence conditions: 1.1.1-1.1.4, 1.2.1-1.2.4, 5.1.1-5.1.4 and 5.2.1.

For such conditions, justification within the Decision Document is not provided.

Optional standard conditions (OSC)

In the interests of regulatory consistency DER has a set of optional standard conditions that can be imposed on works approvals and licences. DER will include optional standard conditions as necessary, and are likely to constitute the majority of conditions in any licence. The inclusion of any optional standard conditions is justified in Section 4 of this document.

Non standard conditions (NSC)

Where the proposed activities require conditions outside the standard conditions suite DER will impose one or more non-standard conditions. These include both premises and sector specific conditions, and are likely to occur within few licences. Where used, justification for the application of these conditions will be included in Section 4.

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**
	5	235,000,000 tonnes per year
	58	235,000,000 tonnes per year
	63	50,000 cubic metres per year
	73	1,650 cubic metres in aggregate
Application verified Application fee paid	Date: 24/04/2015 Date: 1/05/2015	
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: 741, 743, 840 and 876 EPA Report No: 924, 1246, 1357 and 1412
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, eg Site is subject to SO_2 requirements of Kwinana EPP.		

3 Executive summary of proposal and assessment

Pilbara Iron Pty Ltd (the Licensee) currently operate the Cape Lambert Operations under *Environmental Protection Act 1986* licence L5278/1973/12 for category 5, 58, 63, 64, 73 and 85 activities. The Licensee has constructed Cape Lambert Port B (CLB) in two phases A and B under W4800/2010/1. Construction and commissioning of CLB Phase A and Phase B is complete. Compliance and commissioning documentation for CLB Phase A was received on the 11 June 2013 and 4 April 2014. Compliance documentation for CLB Phase B was received on the 23 May 2014, 3 September 2014 and 2 February 2015. During this renewal, CLB Phases A and B has been incorporated onto the licence.

The Cape Lambert Operations is located on the Cape Lambert peninsula, 7 kilometres (km) north of the town of Wickham and 3.5 km west of the town of Point Samson in the Pilbara region of Western Australia.

The Cape Lambert Operations comprises of Cape Lambert Port A (CLA) and CLB (Phases A and B). These two ports operate independently of each other. The Cape Lambert Operations receive ore from various Pilbara mines operated by Rio Tinto Iron Ore (RTIO) and its partners. The bulk of this ore is processed inland however some processing (crushing and screening) does occur at the Cape Lambert Operations for Robe Valley ores (Mesa J). This ore is stockpiled and then loaded onto ships for export.

The Licensee operates a Class I inert landfill at the Cape Lambert Operations, where non contaminated inert wastes are disposed, which has a capacity of 50,000 cubic metres (m^3) per year. A total of 1,650 m^3 of fuel is also stored at the Cape Lambert Operations and is contained in 15,110 kilolitres (kL) storage tanks.

CLA
The main infrastructure on site for CLA includes:
- Rail car dumping facilities;
- Crushing and screening plants;
- Stockpiles;
- Conveyors, stackers and reclaimers; and
- Wharf and ship loading facilities.

CLB Phase A
CLB Phase A comprises of the following infrastructure:
- One car dumper;
- Stockyard comprising 12 stockpiles;
- Two stackers;
- Two reclaimers;
- One screen house; and
- One shiploader.

CLB Phase B
CLB Phase B comprises of the following infrastructure:
- Two car dumpers;
- 12 stockpiles;
- Two stackers;
- One reclaimer;
- One shiploader;
- One screen house; and
- Conveyor link to CLA.

This licence is the successor to licence L5278/1973/12 and includes the following changes:

- Administrative changes;
- Premises boundary has been updated;
- 'Approved premises production or design capacity' has been added for each licensed category;
- Category 5 and 58 have increased from 85 million tonnes per annum (mtpa) for CLA only to 235 mtpa for both CLA and CLB. Ministerial Statement 741 for CLA has been approved for a port capacity of 105 mtpa and Ministerial Statement 840 for CLB has an approved iron ore throughput capacity of 130 mtpa;
- Category 64 has been removed;
- Category 85 has been removed;
- Additional definitions have been added;
- Inclusion of condition 2 for a mobile screening plant;
- Inclusion of conditions 3 and 4 for dust management;
- Inclusion to condition 6 of a total suspended particulate (TSP) target at Point Samson of 200 micrograms per cubic metre ($\mu g/m^3$) over a 10 minute and a particulate matter less than 10 (PM_{10}) target of 50 $\mu g/m^3$ measured at Wickham over a 24 hour period;
- Condition 8 has been added for meteorological monitoring;
- Condition 13 has been added for waste management from ancillary operations;
- Previous condition 13 has been updated and is now condition 14;
- Conditions 15 to 18 have been added for stormwater management including stormwater discharge points associated with the CLB development and a total recoverable hydrocarbon (TRH) limit of 15 mg/L for waters discharged from the premises;
- Previous condition 14 has been removed as the Licensee has stated that no wastewater is discharged to the marine environment;
- Previous conditions 16 and 17 have been removed as they are covered under conditions 17 and 19;
- Putrescible and contaminated waste have been removed from condition 20 as the landfill now only accepts inert (Class I) wastes;
- Inert waste type 2 has been added to condition 20, so that products made of rubber are able to be disposed of in the Class I inert landfill in accordance with the Department of Environment and Conservation *Landfill Waste Classification and Waste Definitions, 1996* (As amended December 2009);
- Conditions 21 and 23 have been added for the inert landfill;
- Previous conditions 19, 20, 22, 23 to 27 have been removed, as these conditions were associated with the putrescible (Class II) landfill;
- Previous condition 29 has been removed as it is now covered under condition 24;
- Previous conditions 30 and 31 have been removed and are now covered under conditions 26 and 27;
- Previous condition 32 has been removed as it is now covered under condition 24;
- Previous conditions 33 to 38 have been removed as they were associated with the operation of the Engineering, Procurement and Construction Management (EPCM) office wastewater treatment plant (WWTP) at CLB;
- An Environmental Improvement condition has been added to the licence under condition 25;
- Previous condition 40 has been removed as it is covered under the Dust and Noise Control Strategy Report;
- Previous condition 2 has been moved under "reporting conditions" and is now condition 29;
- Previous conditions 3, 4 and 8 have been moved and are now covered under condition 30; and
- Attachments have been updated.

Where conditions have been added or removed from the existing licence these have been justified in Section 4.

4 Decision table

All applications are assessed in line with the *Environmental Protection Act 1986*, the *Environmental Protection Regulations 1987* and DER's Operational Procedure on Assessing Emissions and Discharges from Prescribed Premises. Where other references have been used in making the decision they are detailed in the Decision Document.

DECISION TABLE				
Works Approval / Licence section	**Condition number W = Works Approval L= Licence**	**OSC or NSC**	**Justification (including risk description & decision methodology where relevant)**	**Reference documents**
General conditions	Licence conditions 9, 10 and 15 – 18.	N/A.	<u>Emission Description</u> *Emission:* Stormwater possibly contaminated with ore and hydrocarbons from operations and hydrocarbon spills to the surrounding environment. *Impact:* Contamination of surrounding land and surface water drainage systems. Potential impacts on the ecology of land and surface water from the addition of nutrients, heavy metals and hydrocarbons. *Controls:* • A comprehensive suite of infrastructure has been installed to manage surface water and contaminated water within both CLA and CLB developments. The design includes the capture of water from plant areas, which are prone to hydrocarbon contamination. The contaminated water systems are separate from the general stormwater systems. Surface water and contaminated water is collected, contained, treated and reused for process water; and • Stormwater drainage has been designed to provide protection and immunity to infrastructure to the following levels: - Stockyard drainage – 100 year annual recurrence interval (ARI) immunity plus 300 millimetres (mm) freeboard; - Local plant (minor catchments) – five year ARI immunity plus 300 mm freeboard; and - Local plant (major catchments) – 20 year ARI immunity plus 300 mm freeboard.	General provisions of the *Environmental Protection Act 1986.* *Environmental Protection (Unauthorised Discharges) Regulations 2004.*

DECISION TABLE				
Works Approval / Licence section	**Condition number W = Works Approval L= Licence**	**OSC or NSC**	**Justification (including risk description & decision methodology where relevant)**	**Reference documents**
			The Licensee will comply with the following Standards: • AS 1940-2004 The storage and handling of flammable and combustible liquids; • AS/NZS 4452-1997 The storage and handling of toxic substances; and • AS/NZS 3780-2008 The storage and handling of corrosive substances. Risk Assessment *Consequence*: Insignificant *Likelihood:* Unlikely *Risk Rating:* Low Regulatory Controls The existing licence has conditions relating to liquid chemical storage. Conditions 15 to 18 have been added to the licence relating to stormwater management. The inclusion of these conditions should ensure the risk rating of low is maintained and that the installed infrastructure is operated to the standard that resulted in this assessment of risk. Residual Risk *Consequence:* Insignificant *Likelihood:* Rare *Risk Rating:* Low	
Premises operation	Licence conditions 2, 14, 20 – 23.	N//A.	Category 5 and 58 have increased from 85 mtpa for CLA only to 235 mtpa for both CLA and CLB. Further information on dust emissions is detailed in Appendix A. Condition 2 has been added to the licence for a mobile screening plant. The plant screens recovered material from conveyor spills and removes any foreign objects from saleable ore. It is used on an ad hoc basis and has a design capacity of 3.5 mtpa. The plant will not increase the Cape Lambert	General provisions of the *Environmental Protection Act 1986. Environmental Protection (Unauthorised Discharges)*

DECISION TABLE				
Works Approval / Licence section	**Condition number W = Works Approval L= Licence**	**OSC or NSC**	**Justification (including risk description & decision methodology where relevant)**	**Reference documents**
			Operations category 5 design capacity. The screening plant is managed in accordance with the *Iron Ore (WA) Mobile Crushing and Screening Management Plan*, Rio Tinto, 2015 (RTIO-HSE-0235877). At Cape Lambert Operations, all crushing and screening activities are covered under category 5. Previous condition 17 has been removed as it is covered under conditions 13 and 16. The Licensee previously operated a Class II landfill at the Cape Lambert Operations where contaminated soils and materials were disposed. Contaminated soils disposed here were treated using chemical immobilisation or solidification to reclassify the waste from Class III to Class II waste. The Class II cell where this waste was disposed of was lined with a high density polyethylene (HDPE) liner. Currently all potentially contaminated materials found on site are removed by a licensed controlled waste operator and disposed of at an appropriately licensed facility. Category 64 for the Class II landfill has been removed. The Licensee now only operates a category 63 inert landfill, which accepts Class I wastes including clean fill, inert waste type 1, inert waste type 2 and special waste type 1 as per the Department of Environment and Conservation *Landfill Waste Classification and Waste Definitions, 1996* (As amended December 2009). The cells that the Class I material is disposed of in, is not HDPE lined. Condition 20 has been updated to include clean fill and inert waste type 2 and remove putrescible wastes and contaminated waste meeting waste acceptance criteria for Class II landfills. Conditions 21 and 23 have been included to ensure that waste is covered with at least 200 mm of inert incombustible material at final landform design	*Regulations 2004.* Iron Ore (WA) Mobile Crushing and Screening Management Plan, Rio Tinto, 2015 (RTIO-HSE-0235877). Landfill Waste Classification and Waste Definitions, 1996 (As amended December 2009).

DECISION TABLE				
Works Approval / Licence section	**Condition number W = Works Approval L= Licence**	**OSC or NSC**	**Justification (including risk description & decision methodology where relevant)**	**Reference documents**
			and that the landfill is managed so that stormwater that has come into contact with waste is to be retained on the site. Previous conditions 19, 20 and 22 to 27 have been removed as they were associated with the Class II landfill. Category 85 has been removed. The EPCM office WWTP has been replaced with a Biomax WWTP, which will treat a maximum of 14.4 m^3 per day (m^3/day) and treated effluent will be stored in a lined evaporation pond. This new facility does not trigger a category under the *Environmental Protection Regulations 1987* (EP Regs). The treated effluent will not be used for any beneficial use onsite. <u>Emission Description</u> *Emission:* Discharge of iron ore to the marine environment. *Impact:* Deterioration of marine water quality through increased turbidity. *Controls:* The Licensee has a fleet of recovery equipment including skid-steer loaders and front-end loaders with specially designed low profile attachments able to reach the material underneath the conveyors. Clean up is undertaken at regular intervals according to a planned schedule. <u>Risk Assessment</u> *Consequence*: Minor *Likelihood:* Possible *Risk Rating:* Moderate <u>Regulatory Controls</u> Condition 14 has been retained from the previous licence, though has been amended for clarification.	

DECISION TABLE				
Works Approval / Licence section	**Condition number W = Works Approval L= Licence**	**OSC or NSC**	**Justification (including risk description & decision methodology where relevant)**	**Reference documents**
			Residual Risk *Consequence:* Minor *Likelihood:* Unlikely *Risk Rating:* Moderate	
Emissions general	N/A.	N/A.	No specified conditions relating to general emissions.	N/A.
Point source emissions to air including monitoring	N/A.	N/A.	There are no point source air emissions from the Cape Lambert Operations. No specified conditions relating to point source emissions to air or the monitoring of these emissions are required to be added to the licence.	General provisions of the *Environmental Protection Act 1986.*
Point source emissions to surface water including monitoring	N/A.	N/A.	Emission Description *Emission:* Uncontaminated stormwater discharged to the marine environment from the following four locations: • At the southern end of the site via an unnamed creek; • At the northern end of the stockyard via Sam's Creek; • At the northern end near the abutment; and • Near the jetty, water exits over the northern seawall into the ocean. *Impact:* Increased water turbidity and the water quality potentially having an detrimental impact on the marine environment. *Controls:* Uncontaminated stormwater from across the site, including natural surfaces, stockyards, roads and conveyor areas and wharf access area/abutment are directed to one of the four retention ponds, which are situated directly prior to the four stormwater discharge locations. The retention ponds have been: • Designed to collect and control the transfer of sediments prior to discharge into natural water courses or marine environments; • Designed to provide storage of stormwater and protection of surrounding plant and infrastructure; and	General provisions of the *Environmental Protection Act 1986.* *Environmental Protection (Unauthorised Discharges) Regulations 2004.*

DECISION TABLE				
Works Approval / Licence section	**Condition number W = Works Approval L= Licence**	**OSC or NSC**	**Justification (including risk description & decision methodology where relevant)**	**Reference documents**
			• Sized to retain stormwater for a period of six hours from a 10 year ARI for the purpose of sediment control. <u>Risk Assessment</u> *Consequence:* Minor *Likelihood*: Unlikely *Risk Rating:* Moderate <u>Regulatory Controls</u> The inclusion of conditions 15 to 18 have been justified under the general conditions section. Previous condition 14 has been removed as the Licensee has stated that no wastewater is discharged to the marine environment. <u>Residual Risk</u> *Consequence*: Minor *Likelihood:* Rare *Risk Rating:* Low	
Point source emissions to groundwater including monitoring	N/A.	N/A.	There will be no point source emissions to groundwater from the Cape Lambert Operations. Depth to groundwater varies from 2 metres (m) to 9 m below ground level (mBGL). No specified conditions relating to point source emissions to groundwater or the monitoring of these emissions are required to be added to the licence.	General provisions of the *Environmental Protection Act 1986.* *Environmental Protection (Unauthorised Discharges) Regulations 2004.*
Emissions to land including	Licence conditions 13 and 19.	N/A.	<u>Emission Description</u> *Emission:* Contaminated wastewater discharged to land.	General provisions of the *Environmental*

DECISION TABLE				
Works Approval / Licence section	**Condition number W = Works Approval L= Licence**	**OSC or NSC**	**Justification (including risk description & decision methodology where relevant)**	**Reference documents**
monitoring			*Impact:* Contamination of surrounding land and potential impacts on the ecology of land and surface water from the addition of nutrients, heavy metals and hydrocarbons. *Controls:* Contaminated wastewater is treated by an oily water separator prior to disposal. The oily water treatment systems have the following characteristics: • A sump to allow sediment to settle prior to oil removal treatment; • A sampling point in the post treatment discharge line to allow regular sampling of the treated water to ensure compliance with licence conditions; • Screens to prevent general waste from entering the oily water treatment system; • Above ground piping; and • TRH discharge concentration of less than 15 mg/L. <u>Risk Assessment</u> *Consequence:* Insignificant *Likelihood*: Unlikely *Risk Rating:* Low <u>Regulatory Controls</u> The existing licence has a condition ensuring that the quality of any wastewater discharged to land at the premises has a TRH concentration of less than 15 mg/L. Condition 13 has been added to the licence for the waste management of ancillary operations. <u>Residual Risk</u> *Consequence:* Insignificant	*Protection Act 1986.* *Environmental Protection (Unauthorised Discharges) Regulations 2004.* *Environmental Protection (Controlled Waste) Regulations 2004.*

DECISION TABLE				
Works Approval / Licence section	**Condition number W = Works Approval L= Licence**	**OSC or NSC**	**Justification (including risk description & decision methodology where relevant)**	**Reference documents**
			Likelihood: Rare *Risk Rating:* Low	
Fugitive emissions	Licence conditions 3, 4, 29 and 30.	N/A.	DER's assessment and decision making are detailed in Appendix A.	General provisions of the *Environmental Protection Act 1986.* *Environmental Protection (Unauthorised Discharges) Regulations 2004.*
Odour	N/A.	N/A.	<u>Emission Description</u> *Emission:* Odour emissions generated from the Cape Lambert Operations. *Impact:* Nuisance odour and loss of amenity, which may be uncomfortable for people. *Controls:* The following controls should reduce odour emissions at the Cape Lambert Operations: • The new 14.4 m^3/day Biomax WWTP is located approximately 150 m from offices so odour emissions should not be significant or impact on personnel in these areas; • Effluent quality conforms to the Department of Health (DoH) and Australian Guidelines, which also minimises odour emissions; and • The landfill is now used for inert wastes only. <u>Risk Assessment</u> *Consequence:* Insignificant *Likelihood*: Rare *Risk Rating:* Low	General provisions of the *Environmental Protection Act 1986.*

DECISION TABLE				
Works Approval / Licence section	**Condition number W = Works Approval L= Licence**	**OSC or NSC**	**Justification (including risk description & decision methodology where relevant)**	**Reference documents**
			Regulatory Controls No specified conditions relating to odour emissions are required to be added to the licence. Residual Risk *Consequence*: Insignificant *Likelihood:* Rare *Risk Rating:* Low	
Noise	Licence conditions 29 and 30.	N/A.	DER's assessment and decision making are detailed in Appendix B.	General provisions of the *Environmental Protection Act 1986.* *Environmental Protection (Noise) Regulations 1997.*
Monitoring general	Licence conditions 1, 26 and 27.	N/A.	Conditions on existing licence relating to ensuring all dust control equipment is operated, maintained and calibrated to manufacturer's specifications or any relevant and effective internal management system, sampling is conducted in accordance with Australian Standard 5667 and submitted to a laboratory with National Association of Testing Authorities (NATA) accreditation (if applicable). No conditions are required to be added to the licence.	General provisions of the *Environmental Protection Act 1986.* Australian Standard 5667.
Monitoring of inputs and outputs	N/A.	N/A.	Previous condition 34 for the measuring of the cumulative volume of all effluent discharged from the WWTP has been removed. The EPCM WWTP has been replaced with a 14.4 m^3/day Biomax WWTP, which does not trigger a category under the EP Regs. The treated effluent will not be used for any beneficial use onsite.	N/A.
Process	N/A.	N/A.	Previous conditions 33 and 35 to 38 have been removed. The EPCM WWTP	N/A.

DECISION TABLE				
Works Approval / Licence section	**Condition number W = Works Approval L= Licence**	**OSC or NSC**	**Justification (including risk description & decision methodology where relevant)**	**Reference documents**
monitoring			has been replaced with a Biomax WWTP and treated effluent will be stored in a lined evaporation pond. The treated effluent will not be used for any beneficial use onsite. No specified conditions relating to process monitoring are required to be added to the licence.	
Ambient quality monitoring	Licence conditions 5, 6 and 24.	N/A.	The *Cape Lambert Port Operations, Dust Management Plan, Rio Tinto, May 2014*, states that the monitoring of PM_{10} at off-site locations is undertaken using real time samplers (TEOMs) at Point Samson, Roebourne and Wickham at 10 minute and 24 hour periods. This plan is currently being updated and is being reviewed by the OEPA and DER. DER's assessment and decision making for fugitive dust emissions (Appendix A) also references ambient air quality monitoring and targets. An ambient air quality target of 200 µg/m^3 for TSP at Point Samson over a 10 minute period and a PM_{10} target of 50 µg/m^3 for Wickham over a 24 hour period has been added to condition 6. Existing conditions on the licence for the reporting of exceedances attributable to the Cape Lambert Operations to be reported to DER within five business days. The existing licence has conditions relating to the six monthly monitoring of groundwater at the three bores (one upstream and two downstream) at the landfill for heavy metals and hydrocarbons. The Licensee has requested that this monitoring be removed from the licence based on the landfill now only accepting inert wastes. This condition will be retained to monitor the quality of the groundwater at the landfill, as prior to only accepting inert wastes, contaminated soils and materials were buried at this location. No additional specified conditions relating to ambient groundwater quality monitoring are required to be added to the licence at this time.	General provisions of the *Environmental Protection Act 1986.*

DECISION TABLE				
Works Approval / Licence section	**Condition number W = Works Approval L= Licence**	**OSC or NSC**	**Justification (including risk description & decision methodology where relevant)**	**Reference documents**
Meteorological monitoring	Licence condition 8.	N/A.	The Cape Lambert Operations has an onsite weather station. Condition 8 has been added to the licence for the monitoring of wind speed, wind direction and air temperature to ensure the meteorological data is compliant with AS 3580.14.	AS 3580.14.
Improvements	Licence condition 25.	N/A.	As referenced in DER's assessment and decision making for fugitive dust emissions (Appendix A), an Improvement condition has been added to the licence requiring the Licensee to submit the following: • An Air Quality Monitoring Plan; and • An EIP, which requires an independent assessment of the design, operation and emissions at the Cape Lambert Operations against current leading industry practice for preventing or abating dust emissions, with an achievable timeframe to implement improvements with priorities. Where improvements cannot be implemented, justification for those improvements not able to be progressed with other measures to be implemented will need to be provided. The submission date for the Air Quality Monitoring Plan and EIP is 30 May 2016. An update is also required as part of the annual report.	N/A.
Information	Licence conditions 7, 11 and 28 – 31.	N/A.	The existing licence has conditions relating to the submission by the 30 April each year of the following: • Annual Environmental Report (AER) including: - A Dust and Noise Control Strategy Report detailing the dust and noise control strategies and plans for the premises including key performance indicators; - Details of any infrastructure, which does not meet the liquid chemical storage conditions including an update on improvement works; and • Annual Audit Compliance Report. Previous conditions 16 and 40 have been removed as they are covered under condition 19 for the TRH limit and condition 29 for the Dust and Noise	General provisions of the *Environmental Protection Act 1986.*

DECISION TABLE				
Works Approval / Licence section	**Condition number W = Works Approval L= Licence**	**OSC or NSC**	**Justification (including risk description & decision methodology where relevant)**	**Reference documents**
			Control Strategy Report respectively. The Licensee is also required to investigate and provide a written exceedance report within five business days if the following are found to be attributable to Cape Lambert Operations: • PM_{10} at Point Samson over a 24 hour period exceeds the target of 50 $\mu g/m^3$; and • TSP at Point Samson over a 10 minute period exceeds the target of 200 $\mu g/m^3$; and • PM_{10} at Wickham over a 24 hour period exceeds the target of 50 $\mu g/m^3$. Previous licence conditions 3, 4 and 8 have been amalgamated into condition 30.	
Licence duration	N/A.	N/A.	This licence will be reissued for a five year period. The Licensee is aware of their obligation to notify DER if there are any changes to the operation of the Cape Lambert Operations.	N/A.

5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
11/05/2015	Application advertised in The West Australian newspaper	No comments received	N/A
8/06/2015	Draft copy provided to the Licensee	Refer to Appendix C – Licensee comments	Refer to Appendix C
18/06/2015	Draft documents referred to the Point Samson Community Association	Refer to Appendix C – Stakeholder consultation	Refer to Appendix C

6 Risk Assessment

Note: This matrix is taken from the DER Corporate Policy Statement No. 07 - Operational Risk Management

Table 1: Emissions Risk Matrix

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

Appendix A

Fugitive emissions

Dust emissions

Ore handling and storage at the Cape Lambert Operations can generate dust and together with regional dust levels, operational activities have the potential to impact on the local environment and surrounding communities. The Cape Lambert Operations is located 7 km north of the town of Wickham and 3.5 km west of the residential areas of the nearby township of Point Samson. Some Point Samson residents have indicated that they are concerned about the dust emissions from the Cape Lambert Operation.

A study of the air quality in the Pilbara was conducted in 2004 partially due to community concerns about dust emissions. The "Pilbara Air Quality Study" was conducted by the former Department of Environment and Conservation (DEC) Air Quality Management Branch (AQMB) and concluded that iron ore handling activities at Dampier and Port Hedland significantly contributed to ambient PM_{10} dust levels. This portion of dust can travel some distance, and cause health and amenity impacts. The study did not, however, include monitoring of dust levels at Point Samson or define specific Pilbara air quality standards. Studies conducted by the World Health Organisation (WHO 2013) and United States Environmental Protection Agency (USEPA 2013) drew the conclusion that there is an independent effect to coarse particles, concluding that adverse health impacts are evident as a result of exposure to all size fractions, including the coarser particles (PM_{10} and $PM_{2.5}$). A recent study on the health impacts of particulate dust in Port Hedland (Pilbara bulk loading operator of iron ore) has also been undertaken by the Western Australian Government with outcomes due later in 2015.

In the absence of a regional air quality standard, the National Environmental Protection (Ambient Air Quality) Measures (NEPM) has been used as a standard for ambient particulate (dust) levels in the Pilbara for some time, however their limitations as a regulatory standard are acknowledged. The NEPM was developed for monitoring pollutants including particulates (PM_{10} and $PM_{2.5}$) in population centres, and have been applied in Western Australia to the Environmental Protection (Goldfields Residential Areas) (Sulfur Dioxide) Policy 1992 and Environmental Protection (Kwinana) (Atmospheric Wastes) Policy 1999.

The Licensee currently uses the NEPM PM_{10} ambient air quality values as emission targets for their Cape Lambert Operations as required by Ministerial Statement 741. It should be noted that the NEPM standard allows for five (5) exceedances a year of the designated ambient air quality value, to account for natural events (not including emissions from industrial sources). The Licensee has committed to objectives outlined in the *Cape Lambert Port Operations, Dust Management Plan*, *Rio Tinto, May 2014 (*Cape Lambert DMP), including a performance target of five (5) or fewer PM_{10} exceedances of 50 µg/m^3 over a 24 hour period as measured at the Point Samson, Tapered Element Oscillating Microbalance (TEOM) monitoring stations. For evaluating compliance with the performance target the Licensee calculates the percentage of the total dust load for the relevant 24 hour period that was recorded when the wind direction was from within the operation's nominated arc of influence (CLA 290° - 020° + CLB 260° - 289°) (Figure 1). If the percentage of total PM_{10} dust load from the arc of influence (CLA 290° - 020° + CLB 260° - 289°) exceeds 50%, then it is recorded that the operations potentially contributed to the 24 hour averaged exceedance, unless it can be demonstrated that other sources, such as wildfires (and associated smoke) or high regional background dust levels contributed to the elevated dust levels recorded. The Pilbara experiences high regional dust levels where the PM_{10} dust concentration averaged over 24 hours approaches or exceeds the NEPM 24 hour PM_{10} standard. Dust exceedances are therefore not considered attributable to the Cape Lambert Operations, when the regional dust levels as measured at Wickham or Roebourne demonstrate high background dust levels beyond the NEPM standard. This is independent of predominant wind direction.

For evaluating compliance with regards to short term TSP impacts the Cape Lambert Operation's contribution to the 10 minute average for TSP at the Point Samson dust monitoring station is considered to be 100% if the recorded average wind direction during the 10 minute interval is from within the nominated arc of influence (CLA 290° - 020° + CLB 260° - 289°).

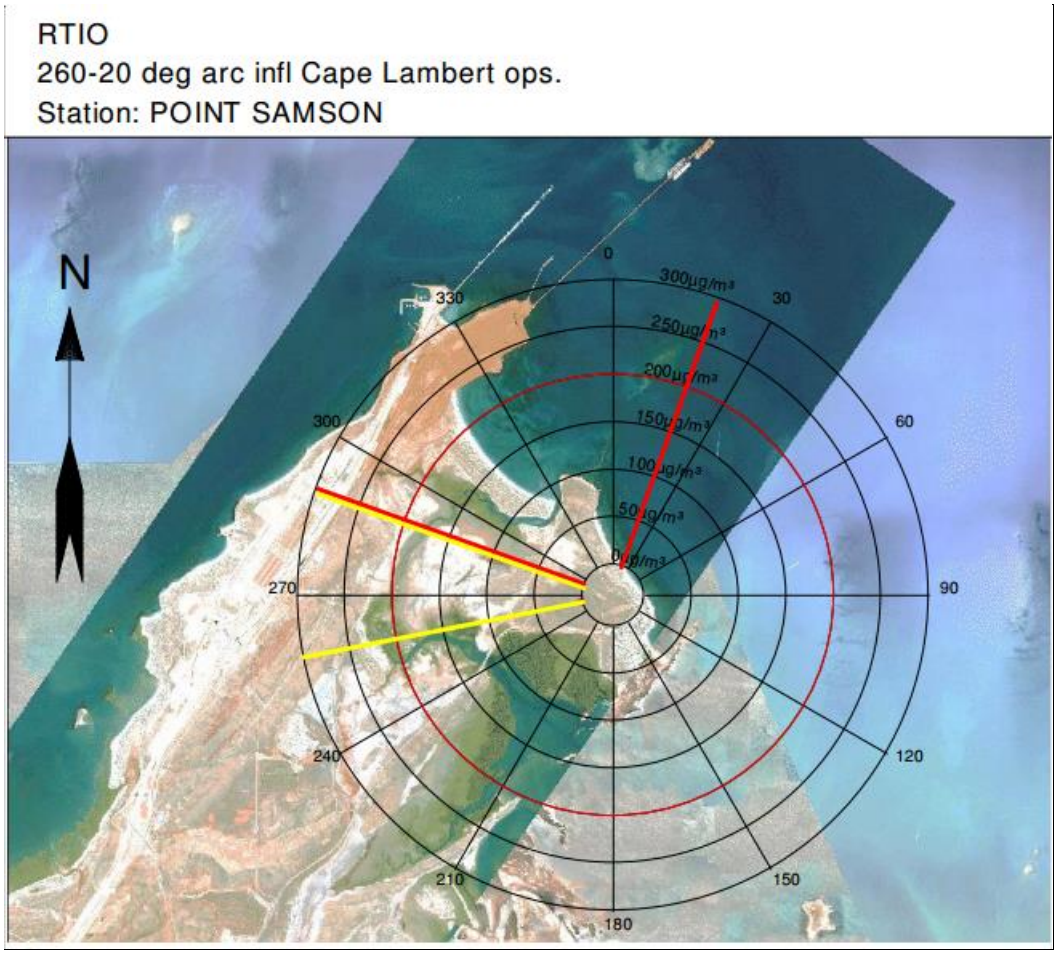


Figure 1: Cape Lambert Operations arcs of influence

Current dust management

Over the past decade, the Licensee has taken significant steps in reducing dust emissions from the Cape Lambert Operations through the installation of dust mitigating infrastructure and the implementation of dust management procedures. With the expansion of CLB the internal dust network is again being upgraded, which has been adapted for the new site layout.

TSP and PM_{10}

The objectives of the dust monitoring program, as defined by the Licensee's Cape Lambert Ministerial Statement 741 are to:

- Establish the proposal's contribution to PM_{10} and TSP dust levels on the town of Point Samson; and
- Identify the number of short term TSP dust impacts on the town of Point Samson attributable to the proposal.

TSP is monitored at Point Samson. The measurement of TSP is directed towards defining nuisance dust impacts that enter these areas as a result of the Cape Lambert Operations. When elevated

readings occur, measured levels of TSP at Point Samson are compared against the target level of 200 µg/m^3 over a 10 minute period.

PM_{10} is monitored at off-site locations using real time samplers (TEOMs) at Point Samson, Roebourne and Wickham. The monitoring of PM_{10} is directed towards defining the potential for health impacts and for comparison against the target level of 50 µg/m^3 over a 24 hour period as measured at Point Samson.

E-samplers (nephelometers) are used to measure PM_{10} at ten (10) locations onsite, with the aim of providing real time feedback when elevated dust levels occur at site boundaries. This in turn prompts the implementation of dust control strategies, including the targeted use of dust control equipment.

Internal exceedance analysis and reporting
Automatic daily dust reports of the previous 24 hour monitoring results from dust monitoring stations are sent to relevant personnel. If an exceedance of either the TSP or PM_{10} internal or external target levels is recorded at Point Samson, an exceedance analysis is conducted.

A short term dust alarm (via SMS text and/or email) is sent to key Port Operations personnel when the 10 minute PM_{10} data point exceeds 175 µg/m^3. The external trigger is 200 µg/m^3. The alarm provides an early warning of potential impacts on Point Samson from Cape Lambert Operations. This alarm allows operational personnel to undertake corrective actions if required when short term elevated dust levels are recorded at the TEOM station. The short term alarm is only triggered when the wind is from the Cape Lambert Operation's arc of influence.

A long term dust alarm is also sent to key Port Operations personnel (via SMS and/or email) when the 24 hour rolling average for PM_{10} exceeds 50 µg/m^3 at Point Samson. The long term alarm is triggered independently of the wind direction and the respective arcs of influence, however it does provide operations personnel with an early warning of a potential long term dust impact.

Internet
A publicly accessible internet site has been developed for the communication of real-time dust monitoring results (TSP and PM_{10}) from the Dampier Primary School (Dampier Central), Dampier East, Dampier West, Dampier North, Karratha, Point Samson, Wickham and Roebourne monitoring stations. This information can be accessed at http://www.pilbarairon.com/dustmonitoring/.

Coastal Community Environmental Forum (CCEF)
The CCEF was developed by the Licensee to establish a regular communication forum with local communities. The forum was initially established in December 2000 as the Dampier/Point Samson Dust Working Group. The CCEF is chaired by the General Manager or their delegate and is held every six months.

The CCEF has proved very valuable in highlighting community concerns, communicating the Licensee's improvement actions and fostering a transparent, cooperative approach to coastal environmental management. The main issue dealt with at the forum is dust, although the forum does allow any environmental issue to be raised. DER uses the forum as an opportunity to work with both the Licensee and community and drive continuous improvement in dust management.

Community hotline
A hotline (1800 992 777) has been established , which is operated 24 hours per day. In addition a dedicated email address communityfeedback@riotinto.com has been established to capture community feedback on dust.

Emission Description

Emission: Dust emissions occur from the Cape Lambert Operations including various stages of inloading, processing, stockpiling and outloading of iron ore.

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 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.

Table 2 shows the number of exceedances of the target level of 50 µg/m^3 over a 24 hour period at Point Samson for the period 2010 to 2014. Target exceedances of PM_{10} attributable to the Cape Lambert Operations have also been reported in the 2010-2011, 2011-2012, 2012 and 2013 Annual Environmental Reports and Annual Trend Analysis Reports as per existing licence requirements. Table 3 shows the number of dust complaints received about the Cape Lambert Operations for the period 2012 to 2014. The Licensee is required as per condition 30 of L5278/1973/13 to report this information to DER in the Annual Trend Analysis Report. For the period 1 January to 19 June 2015, DER has received 119 dust complaints about the Cape Lambert Operations.

Table 2: Number of exceedances of the 24 hour standard at Point Samson 2010 – 2014

Reporting period	No. exceedances of NEPM standard (50µg/m^3) at Point Samson	No. potentially attributable to Cape Lambert Operations
2014	22	0
2013	9	2
2012	17	3
2011-2012*	5	2
2010-2011*	7	1

**Reporting period was previously 1 May to 30 April*

Table 3: Number of complaints relating to dust emissions from the Cape Lambert Operations for the period 2012 - 2015

Reporting period	Number of dust related community complaints
2015[1]	119
2014	85
2013	2
2012	1

Note 1: 1 January to 19 June 2015.

The Point Samson Community Association (PSCA) has recently funded an analysis by Microanalysis Australia (a commercial materials characterisation consulting laboratory with comprehensive analytical science techniques) to support their complaints made regarding the unreasonable amount

of iron ore associated dust that is emitted from the Cape Lambert Operations during westward winds. The results of the Microanalysis Australia report determined that iron ore dust, in particular hematite and goethite were high concentration constituents in the dust sample. The high ratio of hematite to goethite indicate that there is a high likelihood that the dust in the sample emanated from the stockpile at Cape Lambert. The only possible source for such a wind borne dust would be an export stockpile of high grade ore.

Controls: The Licensee has various methods of dust control at the Cape Lambert Operations including:

Stockyard cannons:

- Water cannons on stockpiles, which are arranged in parallel lines alongside the stockpiles; and
- The operating mode can be switched between the Operations Centre (OC) and also at the discretion of the Operations staff allowing for an adaptive and quick response to changing conditions.

Baghouse dust collectors:

- Baghouse dust collection systems installed on all car dumpers and screen houses and on the secondary and tertiary crushers, and sinter fines buildings at CLA; and
- The dust collected by the bags is discharged to an agglomerator where it is mixed with water before being discharged to a main conveyor.

Belt washers/belt sprays/belt scrapers:

- Water sprays are fitted to transfer points and at various locations along conveyors throughout the Cape Lambert Operations;
- The operation of the water sprays is controlled either automatically or manually through the Human Machine Interface (HMI);
- The cycle times can vary depending on the type of product being carried on the belt;
- Belt washers are found along various conveyors throughout the inloading and outloading facilities;
- All major conveyors at CLB are fitted with High Pressure Low Volume Belt Washers (HPLVs) and an upgrade program to install HPLVs at CLA is currently being implemented; and
- Belt scrapers on all major conveyors.

Other dust control strategies include:

- Water sprays on stackers, reclaimers, shiploaders, conveyors, transfer stations, tertiary crushing and screening activities;
- Wet scrubber at the Lump Rescreening Plant 2;
- Dust collectors on sample stations;
- Dust covers on all car dumpers, crushers and screen houses;
- Street sweepers;
- Water trucks on roads and other exposed areas;
- Chemical dust suppressants on unsealed roads;
- Bulk ore moisture – Ore moisture levels are controlled by mine operations ensuring that ore of appropriate moisture content travels through the supply chain to the ports where the moisture level is maintained throughout the storing and handling process. Moisture analysis takes place at the inloading and outloading of ore stream. There are moisture analysers installed at three major inload conveyors. Their main function is to activate the spray bars, should the moisture level be below a pre-determined set-point. At sample stations, samples are taken from the outloading ore stream and analysed for a number of parameters including moisture content; and
- Mechanical removal of ore from beneath conveyors.

Risk Assessment
Consequence: Moderate
Likelihood: Likely
Risk Rating: High

Regulatory Controls

The Licensee has requirements under Part IV of the *Environmental Protection Act 1986* (EP Act), Ministerial Statement 741 and 840 conditions 7.2 and 10.2 respectively, to operate the Cape Lambert Operations in accordance with the Cape Lambert DMP, which includes the reporting of ambient target exceedances to the Office of the Environmental Protection Authority (OEPA).

Under the provisions of the EP Act, DER is responsible for ensuring the protection of the environment and the prevention, control and abatement of pollution. Section 4A (5) of the EP Act states the Principle of waste minimisation: "all reasonable and practicable measures should be taken to minimise the generation of waste and its discharge into the environment". The precautionary principle is also applicable (s4A (1) of the EP Act). DER under Part V regulates emissions and discharges from prescribed premises; including the measures used to prevent or minimise these.

Conditions 3 and 4 have been added to the licence for the management of dust emissions at the Cape Lambert Operations. Existing conditions 5 to 7 ensure that ambient air quality data, including target exceedances are reported to DER as well as the EPA to allow DER to determine if control measures being undertaken onsite are adequate.

Given the Licensee is contributing to exceedances of ambient PM_{10}, and has over recent years, DER is requiring various measures to be implemented with the aim of protecting the ambient environment in line with relevant and applicable standards; these being predominantly the NEPM. The NEPM standard allows for five (5) exceedances a year of the designated ambient air quality value, to account for natural events. Wickham has previously been used as a regional background site to compare dust levels with Point Samson. High dust levels in the past were associated with high regional levels and with temporary infrastructure work (Wickham expansion). The township of Wickham is located 7 km south of the Cape Lambert Operations and is outside the Operations arc of influence which has been defined relative to Point Sampson. As the Wickham expansion works are now complete, a requirement for the exceedance of a PM_{10} target at Wickham of 50 µg/m^3 over 24 hours and a TSP target at Point Samson (200 µg/m^3 over a 10 minute period) to be reported to DER has also been included in condition 6. These commitments are outlined in the Licensee's Dust Management Plan (as required by Ministerial Statement 741 and 840). DER requires prescriptive information and Part V licence requirements allow DER to be specific in what monitoring is required. As such, DER has imposed Improvement condition 25, which requires the development of an Air Quality Monitoring Plan with integrated boundary monitoring, and an Environmental Improvement Plan (EIP) to be progressed by 30 May 2016.

Condition 25 requires the Licensee to have an independent assessment conducted on the design, operation and emissions at the premises, against current leading industry practice for the prevention or abatement of dust emissions. The EIP requires an achievable timetable of priorities, which can be implemented. Justifications for improvements not able to be actioned will need to be provided, with alternate measures for dust reduction where possible. DER needs to ensure that where prescribed premises are not able to meet current leading industry practice, actions are taken to have this addressed.

Existing conditions 29 and 30 requires the Licensee to prepare and provide a Dust and Noise Control Strategy Report, for all dust control equipment onsite, which includes:

- The number and location of all dust control equipment on the premises;
- Details of all dust control procedures on the premises;
- Maintenance strategies and records for dust control equipment;
- Key performance indicators for the dust control equipment;
- An update on the Improvement Condition 25 progress;
- Annualised PM_{10} data including trend analysis;
- Annualised TSP data including trend analysis;
- A summary of target exceedances; and

- Details of any community complaints and actions taken.

Conditions imposed under Part V require more specific information on actual emissions from those required under Part IV of the EP Act. With the increase in the design capacity for category 5 and 58 from 85 mtpa to 235 mtpa, additional air quality monitoring including boundary monitoring is relevant and appropriate.

In Western Australia, the State Government has adopted the Port Hedland Air Quality and Noise Management Plan, March 2010 to manage planning conflict between industrial growth and adjacent residential areas in Port Hedland. This plan was developed by the Port Hedland Dust Management Taskforce (the Taskforce), which is led by the Department of State Development (DSD). The plan sets goals and allocates responsibilities for managing the impact of dust and noise on the local community of Port Hedland, and for monitoring and managing dust and noise levels. One of the roles of the Taskforce is to observe and report against these goals.

The Taskforce is currently working on a Health Risk Assessment (HRA) and new air quality model, both are due for completion in 2015, which will assist in developing air quality and noise management plans that balance community, industry and environmental needs in Port Hedland. The HRA is being finalised and outcomes from this will also have relevance to other regional iron ore bulk loading operations. DER is also developing its own Guideline – Environmental Standard for bulk loading, which may results in further improvements and licence conditions where further improvements are required.

Residual Risk
Consequence: Moderate
Likelihood: Possible
Risk Rating: Moderate

Light emissions
There are two known turtle nesting sites adjacent to the Cape Lambert Operations; Bells Beach and Cooling Water Beach. The Licensee in partnership with the Department of Parks and Wildlife (Parks and Wildlife) fund volunteers at Wickham, Point Samson and Dampier to carry out turtle monitoring activities.

Emission Description
Emission: Light emissions from the wharves, jetty and elevated lights associated with conveyors, screen houses, stockyards and non-process infrastructure.

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

Controls: Lighting at the Cape Lambert Operations has been designed to:
- Ensure no direct light spills where turtles nest on Bell's Beach;
- Provide automatic control systems to ensure lights are turned off when not needed;
- Mount lights low;
- Select the lowest intensity for the purpose;
- Shield lights near Bell's Beach and Cooling Water Beach to minimise light escaping upwards and outwards; and
- Use long wavelength lighting on jetties, wharves and areas near the ocean.

Risk Assessment
Consequence: Moderate
Likelihood: Possible
Risk Rating: Moderate

Regulatory Controls
Ministerial Statement 743 and 840 have conditions on Turtle Management including:

- Light spill to Bell's Beach be maintained in the shade at ground level and not subject to direct light from port infrastructure or activities during the turtle nesting and hatching seasons;
- Implementation of the Cape Lambert Port B Development Marine Turtle Management Plan and subsequent plans;
- Establish protocols to detect, rescue and release adult and hatchling turtles that are or have been mis-orientated or disorientated by light spill; and
- Report any mortality of marine turtles or other threatened or specially protected fauna to Parks and Wildlife within 24 hours following detection.

No specified conditions relating light emissions are required to be added to the licence.

Residual Risk
Consequence: Moderate
Likelihood: Possible
Risk Rating: Moderate

Appendix B

Noise

Prior to the commencement of CLB Phase A commissioning activities, the Licensee commissioned SVT Engineering Consultants (SVT) to implement a monitoring program to determine noise levels produced by CLA infrastructure from nearby sensitive receptors, including Boat Beach, Wickham and Point Samson. This program was then supplemented with additional monitoring activities undertaken during commissioning of CLB Phase A infrastructure and a model was then produced to determine indicative noise levels produced by both CLA and CLB Phase A infrastructure. This noise model identified that the new CLB Phase A facility operated in compliance with the *Environmental Protection (Noise) Regulations 1997* (EP Noise Regs). The noise model also identified, however, that when worst case operational and weather conditions coincide with the existing CLA facility this may produce noise levels which exceed some of the assigned criteria stipulated within the EP Noise Regs within the town of Port Samson.

This modelling was referred to DER's Noise Regulation Branch (NRB), who held a meeting with the Licensee's personnel and SVT. The outcome of the meeting identified that previous attended measurements within Point Samson undertaken by the former DEC in 2009, found that the CLA operations complied with the EP Noise Regs and given this, it was agreed between NRB and the Licensee that the modelled numbers for CLB were overly conservative. The Licensee has committed to undertaking additional noise assessments within Point Samson to confirm compliance with the EP Noise Regs during CLB Phase B commissioning activities.

NRB indicated that there was no solid evidence to show that the cumulative noise emissions from both CLA and CLB Phase A operations did not comply with the assigned noise levels at the town of Point Samson. As such, NRB stated that the Licensee can manage the cumulative noise emissions from the Cape Lambert Operations to comply with the EP Noise Regs.

Emission Description

Emission: Noise emissions generated at the Cape Lambert Operations by the following:

- Brake cars;
- Car dumpers;
- Conveyors and drives;
- Transfer stations;
- Stackers;
- Reclaimers;
- Screen houses; and
- Ship loaders.

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

Controls: Noise control measures implemented at CLB include:

Conveyors:

- Low noise idlers installed and a standard for all conveyors;
- Low noise conveyor drives; and
- Larger diameter idlers to reduce the rotational speed of the idlers and hence noise generation while maximising belt capacity in selected locations.

Screen house:

- Orientation to direct the main noise generation away from nearby receptors at Point Samson and Wickham;
- Acoustic panelling on the rear of the screen house;

- Acoustic lagging to screen covers; and
- Rubbadex liners within the product chute to reduce noise generation from falling ore.

Car dumpers:

- Are enclosed and silencers have been fitted as standard to all dust collection systems.

Risk Assessment
Consequence: Moderate
Likelihood: Possible
Risk Rating: Moderate

Regulatory Controls
Conditions on existing licence relating to the reporting of noise control strategies, noise complaints, noise control procedures, key performance indicators and an update on investigation and implementation of new technologies and systems to improve noise emissions.

Residual Risk
Consequence: Moderate
Likelihood: Possible
Risk Rating: Moderate

Appendix C

Submission/s

Licensee comments

Condition 3

The Licensee requested this condition be reworded to include *reasonable and practicable.*

Following legal advice, DER has not updated this condition.

Condition 5: Air monitoring conditions

The Licensee expressed concern and requested that these conditions be removed, based on the ambient monitoring in the Part V licence being a duplication of that required by Part IV of the Act (Ministerial Statement 741 and 840). The Licensee proposed that condition 5 could be reworded to read *The Licensee shall submit a summary of the dust monitoring results (annual dust trend analysis) requirement by Ministerial Statements 741 and 840 as part of the Annual Environmental Report*. The Licensee acknowledges that these are existing conditions (some with additional requirements), however, given the duplication with Part IV approvals and extra targets proposed, the Licensee is requesting they be removed.

This condition allows DER to be specific in what monitoring is required. DER has found that receiving an annual summary of the dust monitoring results is inadequate and does not allow thorough assessment of dust emissions and management actions from the site. DER also requires more information on dust monitoring in order to respond to complaints, which have been received from the community with increasing frequency. While the conditions duplicate to an extent Part IV approvals, DER requires the monitoring in order to address specifically emissions and discharges from the premises, which may be having an impact on ambient air quality at receptors.

Condition 6: Ambient air quality target

The Licensee expressed concern and requested that this condition be removed based on duplication of the Ministerial Statement 741 reporting requirement. The Licensee also stated that the 10 minute TSP target of 200 µg/m^3 is a new requirement in this licence, that 10 minute dust exceedances are not appropriate measures of dust impact, that they often reflect localised dust sources and therefore lead to over reporting where the actual impact to the sensitive receptor is low, and that short term spikes or elevated dust readings can also be caused by high humidity. This is recognised in the relevant Australian Standard. The Licensee does not consider Wickham as a location impacted by dust from the Cape Lambert Operations, and states that this target should therefore be removed.

DER has not changed the 10 minute TSP target of 200 µg/m^3 at Point Samson. DER does not agree that 10 minute dust exceedances are not appropriate measures of dust impact. 10 minute TSP monitoring has been included in the Licensee's approved Cape Lambert DMP. If measured according to the relevant Australian Standard and reported according to the conditions of the Licence, measurements of short term peak particulate loadings at the location of sensitive receptors give an indication of acute impacts to amenity and environmental value.

While the Licensee does not consider Wickham as a location impacted by dust from the Cape Lambert Operations, the township of Wickham is located 7.5 km from the Cape Lambert Operations and is at times downwind of the Cape Lambert Operations. Monitoring at Wickham will allow it to be used as a background level when the wind direction is towards other receptors and at Wickham when the wind direction is directed towards the township.

Condition 8: Meteorological monitoring

The Licensee has requested that this condition be removed based on duplication of Ministerial Statement 741 and subsequent dust management plan.

This condition is associated with conditions 5 and 6 to ensure that the meteorological data is compliant with AS 3580.14.

Condition 14: Iron ore spillage
The Licensee requested that *iron ore spillage* replace *any material* for this condition.

The title of the condition states Iron Ore Spillage. “Any material” has been retained to ensure consistency between this licence and other licences.

Condition 17: Surface water – discharge outfall
The Licensee requested that this condition refer to waters discharged from the premises, rather than at the premises.

DER has removed *at or* from this condition. Previous licence condition 15 (now condition 19) has been retained, which relates to discharges to land at the premises.

Condition 20: Management of inert landfill
The Licensee has requested that inert waste type 2 be added for products made of rubber, allowable under a Class I inert landfill.

DER has accepted this inclusion. No additional conditions are required to manage risks associated with disposal of rubber products to the landfill.

Condition 24: Groundwater monitoring – landfill
The Licensee has requested that chromium (total) be analysed as a Tier 1 indicator of contamination, rather than a species of chromium. The Licensee has requested molybdenum and selenium be removed as they are not considered appropriate contaminants of concern based on the waste stream for this landfill.

DER has removed requirement for speciation of chromium. Molybdenum and selenium have not been removed as they are there to detect groundwater contamination of material previously disposed of at the landfill.

Condition 25: Improvement condition
The Licensee requested that this condition be removed, since the setting of any new condition specific to a boundary network will unnecessarily duplicate the requirements of existing Part IV conditions under Ministerial Statements 741 and 840 and will remove the Licensee’s flexibility to manage its own internal dust continuous improvement program as considered appropriate from time to time. The Licensee commented that other considerations for why boundary monitoring should not be specified in a Part V licence are: boundary monitoring network may be influenced by sources other than operations; whilst a useful tool is not covered by an Australian Standard and no NEPM target criteria is relevant; and the boundary monitoring network must be flexible to facilitate continuous improvement.

The Licensee has requested that the requirement to complete an independent assessment of the design, operation and emissions at the premises be removed. The Licensee has stated that the Cape Lambert Operations currently comply with their Part IV Ministerial Statement limits and hence do not have an unacceptable environmental (dust) impact on the nearest sensitive receptor (Point Samson). The Licensee has also commented that the infrastructure at CLB is brand new and has met the compliance requirements for W4800/2012/1. Brand new infrastructure that has been approved should not be subject to another review against current leading practice.

The Licensee advised that boundary monitoring is not considered by the proponent as being best practice in regards to dust management.

Under the provisions of the Act, DER is responsible for ensuring the protection of the environment and the prevention, control and abatement of pollution. Section 4A5 of the Act states the Principles of waste minimisation: "all reasonable and practicable measures should be taken to minimise the generation of waste and its discharge to the environment". The precautionary principle also applies (section 4A1 of the Act).

The requirements of existing Part IV Ministerial Statements 741 and 840 do not include extensive air quality monitoring requirements and the resulting Cape Lambert DMP are broad. DER does not consider the Ministerial Statement conditions and the Cape Lambert DMP in its existing format are currently being effective at managing dust and preventing impacts at nearby communities. This condition requires the development of an Air Quality Monitoring Plan and is not a requirement to implement a fixed boundary monitoring network. If the Licensee wishes to retain flexibility in any boundary monitoring that forms part of the Air Quality Monitoring Plan then the Licensee needs to include these provisions in the Air Quality Monitoring Plan. The Air Quality Monitoring Plan should include methodology, which allows the Licensee to determine when a boundary monitoring result is attributable to onsite operations and implement appropriate actions to prevent an ambient impact. The intent of this condition is for ambient monitoring at Wickham and Point Samson to be sited in accordance with relevant Australian Standards. DER acknowledges that boundary monitoring should be flexible in location. DER has changed the wording of this condition for clarity. DER has proposed the Licensee establish their own trigger levels given that the NEPM is an ambient target. This Improvement Condition is not a prescriptive licence condition that stipulates inflexible monitoring requirements. There are no ambient air quality limits as a result of the Cape Lambert Operations, DER considers that there is an environmental impact. During the period 1 January 2015 to the 19 June 2015, DER has already received 119 complaints from the community of Point Samson relating to unacceptable dust emissions. Appendix A demonstrates the Licensee is contributing to exceedances of ambient PM_{10}, and has over recent years, and as a consequence DER is requiring various measures to be implemented with the aim of protecting the ambient environment in line with relevant and applicable standards; these being predominantly the NEPM. DER considers the risk of these emissions is high.

The intent of the boundary monitoring is to detect issues (via triggers) and then for this to evoke a response to reduce the likelihood of an ambient impact. It is not intended for every monitor used onsite to be part of the boundary monitoring, and the Licensee may choose to have additional mobile monitors to locate at problematic areas as an additional tool. The design capacity for category 5 and 58 are increasing from 85 mtpa for CLA only to 235 mtpa for both CLA and CLB. DER as a regulatory agency must ensure that reductions in dust levels at Point Samson occur over time. Boundary monitoring should ensure that high levels of dust are detected and measures taken to minimise emissions at Point Samson. With consideration of ambient dust exceedances in Point Samson, attributable to the Cape Lambert Operations, DER has also imposed an Environmental Improvement Condition, requiring the Licensee to have an independent assessment conducted on the design, operation and emissions at the premises against current leading industry practice for preventing or abating emissions. The aim of this being to allow an assessment of the existing facility and improvements implemented over time to further reduce dust emissions from the premises.
DER acknowledges that the new infrastructure at CLB is likely to compare favourably with current leading practice. The review required by the Environmental Improvement Plan should focus on the design of older elements of the premises while the review of the operations of the premises should cover the entire premises. The review should ensure that the operational commitments and predictions of emissions are consistent with the information provided against the works approval assessment. The inclusion of the Improvement Condition is further justified from studies conducted relating to dust and PM_{10} particles (both overseas and recently in Australia (Port Hedland Dust – Health Risk Assessment), for the latter outcomes are due later in 2015). It is apparent that dust

particles, regardless of size have a direct health impact. With likely reductions in acceptable ambient levels a possibility. DER needs to ensure that where prescribed premises are not meeting current leading industry practice, this is addressed.

Condition 29 and 30 Dust and Noise Control Strategy Report
The Licensee considers this a duplication of what is required under Ministerial Statement 741 for both dust and noise management. It is also suggested that the requirement for this report is too prescriptive and administrative for little to no improved environmental outcome.
The Licensee proposed that the annual report required under Part IV be supplied to DER instead (as proposed for condition 5).

As outlined above in reference to other comments, DER requires specific information in order to assess and manage impacts resulting from emissions and discharges from the premises. As per the PSCA comments below – noise and vibration within the town have been an issue and as such should require ongoing monitoring and reporting.

Email received from the Licensee (18/06/2015)
The Licensee requested that the design capacity for category 5 and 58 be increased to 235 mtpa to include CLB Phases A and B.

DER has made the requested changes.

Stakeholder comments
The PSCA stated that the following:

- The inclusion of the Improvement Condition provides some very welcome change proposals, which hopefully will provide long awaited accountability for excessive emissions through an independent assessment of dust management.
- Although the accepted standard, the use of the NEPM standard with its 24 hour/ 10 minute averaging does not provide adequate protection against the effects of short term spikes in emissions from Cape Lambert.
- A worthwhile inclusion in the licence conditions reporting requirements would be the monitor in the vicinity of Boat Beach, which is within the Licensee's premises boundary. The area comes under heavy impact from the Cape Lambert Operations during eastward winds and the environmental impacts are a cause for concern.
- Noise and vibration have also been an issue within the town and as such should require ongoing monitoring and reporting.

DER has noted these concerns.