Licence number L5275/1972/12

Licence holder Pilbara Iron Company (Services) Pty Ltd

ACN 107 210 248

Registered business address Level 22, Central Park

152-158 St Georges Terrace

Perth WA 6000

DWER file number DWERDT534936

Duration 28/05/2014 to 27/05/2033

Date of amendment 09/03/2023

Premises details Paraburdoo Iron Ore Mine and Eastern Range

Project

AML70/246, AML70/4, AG70/4, AG70/14 and

L47/326

ROCKLEA WA 6751

As defined by the premises map in Schedule 1

Prescribed premises category description (Schedule 1, Environmental Protection Regulations 1987)	Assessed production / design capacity
Category 5: Processing or beneficiation of metallic or non-metallic ore	30,000,000 tonnes per annual period
Category 6: Mine dewatering	800,000 tonnes per annual period
Category 12: Screening, etc. of material	10,000,000 tonnes or more per annual period
Category 52: Electrical power generation	127.5 MW
Category 64: Class II putrescible landfill site	10,000 tonnes per annual period
Category 73: Bulk storage of chemicals, etc.	5,903 cubic metres in aggregate
Category 85: Sewage facility	24 cubic metres per day

This licence is granted to the licence holder, subject to the attached conditions, on 9 March 2023 2023, by:

Alana Kidd

Manager, Resource Industries

an officer delegated under section 20 of the Environmental Protection Act 1986 (WA)

Licence history

Date	Reference number	Summary of changes	
12/08/2010	L5275/1972/11	Amendment to include:	
		 Removal of collapsed groundwater monitoring bores (MB16 and MB11); and 	
		 Inclusion of dewatering discharge point at Joe's Crossing 	
15/05/2014	L5275/1972/12	Licence re-issue	
29/04/2016	L5275/1972/12	Notice of amendment of Licence expiry dates to 27/05/2033.	
19/05/2016	L5275/1972/12	Amendment to include:	
		 Construction and operation of a new putrescible landfill; 	
		 Operation of a new waste dump landfill; 	
		 Removal of Category 61; 	
		 Addition of Categories 12 and 73; and 	
		Other administrative changes	
15/12/2016	L5275/1972/12	Amendment Notice 1	
		Licence amendment to include:	
		 Conditions relating to construction of the extended TSF 	
		Southern Cell;	
		 Revised groundwater monitoring regime (i.e., sites and parameters); 	
		 Revised sampling frequency for pH at Joe's Crossing; and 	
		Administrative changes	
01/11/2017	L5275/1972/12	Amendment Notice 2	
		DWER initiated amendment included Special Waste Type 2 as a waste type authorised to be accepted and buried at the putrescible landfill in accordance with condition 12 of the Licence.	
09/03/2023	L5275/1972/12	Amendment to include:	
		 Amalgamation of Licence with Notice of amendment of Licence expiry and Amendment Notices 1 and 2; 	
		 Infrastructure that has been subject to commissioning, or no commissioning required under Works Approval W6591/2021/1; 	
		Updated content under condition 30 (now	

Date	Reference number	Summary of changes
		condition 3), Table 3 (now Table 2) that relates to the Tailings Storage Facility (TSF) Southern Cell to expand storage capacity;
		 Provision for the flexibility in the location of proposed additional landfill sites within the prescribed premises boundary that would meet specified design and management requirements; and
		Administrative changes.

Interpretation

In this licence:

- (a) the words 'including', 'includes' and 'include' in conditions mean "including but not limited to", and similar, as appropriate;
- (b) where any word or phrase is given a defined meaning, any other part of speech or other grammatical form of that word or phrase has a corresponding meaning;
- (c) where tables are used in a condition, each row in a table constitutes a separate condition;
- (d) any reference to an Australian or other standard, guideline, or code of practice in this licence:
 - (i) if dated, refers to that particular version; and
 - (ii) if not dated, refers to the latest version and therefore may be subject to change over time;
- (e) unless specified otherwise, any reference to a section of an Act refers to that section of the EP Act; and
- (f) unless specified otherwise, all definitions are in accordance with the EP Act.

NOTE: This licence requires specific conditions to be met but does not provide any implied authorisation for other emissions, discharges, or activities not specified in this licence.

Licence conditions

The licence holder must ensure that the following conditions are complied with:

Infrastructure and equipment

Mobile Crushing and Screening Plant

1. The licence holder shall only operate the Mobile Crushing and Screening Plant(s) in accordance with the Iron Ore (WA) Mobile Crushing and Screening Management Plan (RTIO-HSE-0235877).

Site Infrastructure

- 2. The licence holder must construct and/or install the infrastructure listed in Table 1, in accordance with;
 - (a) the corresponding design and construction requirement / installation requirement; and
 - (b) at the corresponding infrastructure location; and
 - (c) within the corresponding timeframe,

as set out in Table 1.

Table 1: Design and construction requirements

Site infrastructure and equipment	Design and construction requirement	Infrastructure location
Proposed/ subsequent landfill facilities	Landfill facilities will have the following location requirements:	Schedule 1, Figure 4, and Figure 5
Tacilities	 Landfill facilities must be located within the prescribed premise boundary; 	rigule 5
	 Located more than 100 m from any permanent or perennial watercourse; 	
	 Landfill facilities will be located so that vertical distance between the waste and the highest seasonal and expected post mining ground water level is no less than 3 m 	
	Landfill facilities will have the following requirements:	
	 Signage erected which clearly defines what waste is accepted; Stormwater management structures (i.e. 	
	bunding) to divert surface water flows away from the landfill;	
	 A sump or bunding within the landfill to collect any surface water that has come into contact with waste; 	
	 Putrescible landfill facilities must be fenced to an appropriate height, gated, and locked to minimise unauthorised access and windblown waste; and 	
	 Landfill facilities must have a firebreak at least 3 m in width around the boundary. 	

3. The licence holder must ensure that the site infrastructure and equipment listed in Table 2 and located at the corresponding infrastructure location is maintained and operated in accordance with the corresponding operational requirement set out in Table 2.

Table 2: Operational requirements

Site infrastructure and equipment	Operational requirement	Infrastructure location
Paraburdoo TSF	 Tailings deposition of up to 30,000,000 tonnes per annual period Freeboard – 0.5 m above stormwater capacity elevation Stormwater capacity – estimated at 1% Annual Exceedance Probability (AEP) (1 in 100-year Annual Recurrence Interval (ARI)), 72 hour rainfall event 	Schedule 1, Figure 6
	 Main Embankment Main Embankment on the Northern Cell Raised to Relative Level (RL) 371 m Australian Height Datum (AHD) 	Schedule 1, Figure 6
	Central Dividing Embankment Central Dividing Embankment (North and South Cells) Raised to RL 373 m AHD	Schedule 1, Figure 6
	Saddle Embankments Western Saddle Embankment Raised to RL 371 m AHD South Eastern Embankment Raised to RL 371 m AHD	Schedule 1, Figure 6
	 Decant Causeways Decant Causeway Northern Cell Raised to RL 373 m AHD Decant Causeway Southern Cell Raised to RL 371 m AHD 	Schedule 1, Figure 6
	Spillway capacity Closure – 1:100-year ARI	Not depicted
	 Tailings deposition pipeline 355 to 400 mm High Density Polyethylene (HDPE) or HDPE steel lined delivery pipeline Spigots spaced at 40 to 80 m intervals Isolation valves located immediately downstream of the waste Fines disposal pumps and additional isolation valves at the entry point of the TSF Star pickets placed either side of the dropper pipes down the dam embankments Pressure monitors at waste fines disposal pumps 	Not depicted
	Return water pipeline Gravity fed HDPE pipe to return sump	Not depicted

Site infrastructure and equipment	Operational requirement	Infrastructure location
BioMAX WWTP	 Record volumes of treated waste produced Operation and maintenance undertaken in accordance with manufacturer's requirements Maintain surface water management structures / bunding to ensure any spills are contained Spill response procedure is in place 	Schedule 1, Figure 4
Irrigation sprayfield	 Irrigation area must be 0.5 ha Irrigation area must be managed to prevent ponding and pooling of effluent in the ground surface of the irrigation discharge area 	Schedule 1, Figure 4
Waste Dump landfill facility	 Landfill facilities to have a combined maximum capacity of 10,000 tonnes per annual period Waste disposed to Waste Dump landfill are to be recorded Waste Dump landfill will accept and bury only the following types of waste: Inert Waste Type 1; and Inert Waste Type 2 (tyres) as defined in the Landfill Definitions. Waste will be covered on an ad-hoc basis when required, to at least 200 mm at final landform design. Tyre Disposal Tyres must be disposed of by burial in batches of no more than 1000 whole tyres separated from each 	Schedule 1, Figure 4
	other by at least 100 mm of soi Tyres must be buried under a final soil cover of not less than 500 mm	
Proposed/ Subsequent landfill facilities	 Landfill facilities to have a combined maximum capacity of 10,000 tonnes per annual period Waste disposed to landfill facilities are to be recorded 	Schedule 1, Figure 4
	 Putrescible landfill facilities Putrescible landfill facilities will accept and bury only the following types of waste: Clean Fill; Inert Waste Type 1; Putrescible Waste; Special Waste Type 1; and Special Waste Type 2 as defined in the Landfill Definitions. Fencing surrounding the perimeter of putrescible landfill facilities must be regularly inspected for damage and cleared of waste Tipping area of putrescible landfill is not to be greater than 30 m in length and 2 m above the ground level height Special Waste Type 1 & 2 are disposed of within a dedicated trench, the location of disposed wastes is recorded, and the waste is immediately covered with a minimum depth of 300 mm of inert and incombustible material Putrescible waste is to be covered weekly, with at least 200 mm so that no waste is left exposed (including at final landform design) 	

Site infrastructure and equipment	Operational requirement	Infrastructure location
	Inert landfill facilities Inert landfill facilities will accept and bury only the following types of waste: Inert Waste Type 1; Inert Waste Type 2; and Putrescible Waste (wooden pallets and wooden packaging only) as defined in the Landfill Definitions. Waste in inert landfill facilities will be covered on an ad-hoc basis when required, to at least 200mm at final landform design Waste Dump Back-filled landfill facilities accept both inert and putrescible waste	

- **4.** The licence holder must not depart from the requirements specified in Table 1 except:
 - (a) where such departures are minor in nature and do not materially change or affect the infrastructure; or
 - (b) where such departure improves the functionality of the infrastructure and does not increase the risks to public health, public amenity, or the environment.

If condition 4(b) applies, then the licence holder must provide the CEO with a list of departures which are certified as complying with condition 2.

Waste Management from Ancillary Operations

- **5.** The licence holder shall utilise and maintain, protective bunding, skimmers, silt traps, neutralisation pits, fuel, and oil traps, drains and sealed collection sumps around the process plant, maintenance workshops, laboratory, and power generation areas to enable recovery of spillages and protection of surrounding soils and groundwater.
- **6.** The licence holder shall utilise measures or agents such as quick break detergents, to prevent oil-water emulsions from passing through the separator systems.
- 7. The licence holder shall as soon as practicable recover, or remove and dispose of, any liquid resulting from spills or leaks of chemicals including fuel, oil, or other hydrocarbons, from inside or outside the low permeability compound(s).

Tailings Storage Facility

- **8.** The licence holder shall maintain the interception drain immediately downstream of the main storage dam embankment, which shall be used to collect and recover any liquid matter resulting from seepage of the main embankments.
- **9.** The licence holder shall ensure that at least 300 mm of freeboard (embankment crest to tailings level) is maintained at the main embankment at all times.
- **10.** The licence holder shall submit a compliance document to the CEO, following the construction of the Paraburdoo putrescible landfill proposed / subsequent as per condition 2, Table 1 and prior to operation of the same.
- 11. The compliance document shall: (i) Certify that the works were constructed in accordance with the conditions of the licence; and (ii) Be signed by a person authorised to represent the licence holder and contain the printed name and position of that person within the company.

Emissions and discharges

Stormwater Management

- **12.** The licence holder shall install and maintain mechanisms to ensure that stormwater from the following areas, is diverted to facilities for treatment prior to disposal, reuse, or discharge:
 - (a) Process plants;
 - (b) Washdown bays;
 - (c) Refuelling areas; and
 - (d) Mechanical workshops.

Surface Water - Discharge Outfall

13. The licence holder shall ensure that the concentration of total recoverable hydrocarbons in waters discharged from the premises does not exceed 30 mg/L.

Air Emissions

- **14.** The licence holder shall ensure that where waste from power stations is emitted to air it is only done so from the following emission points:
 - (a) GTG-1;
 - (b) GTG-2; and
 - (c) GTG-3, as depicted in Attachment 5.

Authorised discharge point

15. During operations, the licence holder must ensure that the emission specified in Table 3, are discharged only from the corresponding discharge point and only at the corresponding discharged point location.

Table 3: Authorised discharged point

	Emission	Discharge point	Discharge point location
1.	BioMAX WWTP treated effluent	Irrigation sprayfield	Schedule 1, Figure 4
2.	Landfill waste	Waste Dump Landfill facility (inert) Waste Dump Back-filled Landfill facility (inert and putrescible) Putrescible Landfill facilities (including proposed)	Schedule 1, Figure 4

Monitoring

Water - Monitoring

- **16.** The licence holder shall, on a monthly basis, measure and record in cubic meters, the cumulative volumes of waters discharged from the following discharge points:
 - (a) Flow meter to irrigation spray;
 - (b) Joe's Crossing;

- (c) Primary plant; and
- (d) Light vehicle washdown.

These results shall be provided in the Annual Environmental Report.

17. The licence holder shall take representative water samples from the monitoring sites shown in column 1 of Table 4, at the frequencies stated in column 2 of Table 4 and have analysed for the parameters listed in column 3 of Table 4, at locations listed in column 4 of Table 4, and present this information in the Annual Environmental Report, including a comparison against previous years' data.

Table 4: Water monitoring schedule

Column 1	Column 2	Column 3	Column 4
Monitoring sites	Sampling frequency	Parameters to be measured	Monitoring location
Surface Water Discha	rge Sites		
Primary plant discharge; andLight vehicle washdown	Quarterly when discharging	pH (pH units) ¹ Total Dissolved Solids (mg/L) Total Suspended Solids (mg/L) Total Recoverable Hydrocarbons (mg/L) Chemical Oxygen Demand (mg/L) Surfactants mg/L) Metals (mg/L) - Pb, Cu, Fe, Mn, Mo, Zn, As, Hg, Cd; Cr	Schedule 1, Figure 2
Groundwater Sites			
Bioremediation area MB10, MB13, MB15	Annually	pH (pH units) ¹ Total Dissolved Solids (mg/L) Total Recoverable Hydrocarbons (mg/L) Metals and metalloids (mg/L) - Pb, Cu, Fe, Mn, Mo, Zn, As, Hg, Cd; Cr	Schedule 1, Figure 3
Tailings Area PTD04D, PTD05D, PTD06D, PTD07D, PTD08D, PTD09D, PTD10, PTD11, PTD12, PTD21, PTD26, MB18TSF0001, and MB18TSF0002		pH (pH units) ¹ Electrical conductivity ¹ Total Dissolved Solids (mg/L) Major ions (mg/L) – Na, K, Ca, Mg, Cl, CO3 HCO3, SO4, NO3. Elements (mg/L) – Pb, Cu, Fe, Mn, Mo, Zn, As, Hg, Cd, Cr, Al, B, Ag, Cd, Ni, Se, Co, Tl	Schedule 1, Figure 3
New Landfill Area MB3, MB15PAFL001, MB15PAFL002, MB15PAFL003, MB15PAFL004. MB16PAFL001, MB16PAFL002, and MB16PAFL003		pH (pH units) ¹ Total Dissolved Solids (mg/L) Total Suspended Solids (mg/L) Total Recoverable Hydrocarbons (mg/L) Chemical Oxygen Demand (mg/L) Surfactants (mg/L) Metals and metalloids (mg/L) – Pb, Cu, Fe, Mn, Mo, Zn, As, Hg, Cd, Cr	Schedule 1, Figure 3
Old Landfill Area MB7, MB8, MB9		pH (pH units) ¹ Total Dissolved Solids (mg/L) Total Suspended Solids (mg/L)	Schedule 1, Figure 3

Column 1	Column 2	Column 3	Column 4
		Total Recoverable Hydrocarbons (mg/L) Chemical Oxygen Demand (mg/L) Surfactants (mg/L) Metals and metalloids (mg/L) – Pb, Cu, Fe, Mn, Mo, Zn, As, Hg, Cd, Cr	
4 East Pit Dewatering			
Discharge Point Joe's Crossing (Seven Mile Creek)	Quarterly when discharging	pH (pH units) ¹ Total Dissolved Solids (mg/L) Total Suspended Solids (mg/L) Total Recoverable Hydrocarbons (mg/L) Chemical Oxygen Demand (mg/L) Major ions (mg/L) – Na, K, Ca, Mg, Cl, CO ₃ , HCO ₃ , SO ₄ , NO ₃ Metals and metalloids (mg/L) - Al, B, Fe, Cu, Zn, Ag, As, Cr, Pb, Cd, Hg, Ni, Sn, Mn, Mo	Schedule 1, Figure 2
BioMAX WWTP and Ir	rigation Spray	field	
Flow meter to irrigation spray	Daily or continuous line	Cumulative volumetric flow rate (m³/day)	Schedule 1, Figure 4
WWTP outlet	Quarterly (Spot sample)	pH (pH units) ¹ Total Dissolved Solids (mg/L) Total Suspended Solids (mg/L) Biochemical Oxygen Demand (BOD) Total Nitrogen Total Phosphorus <i>E. coli</i> (cfu/100mL) Residual Free Chlorine	Schedule 1, Figure 4

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

- 18. The licence holder shall compare the results from the monitoring of discharge water required by condition 17 for Joe's Crossing (Seven Mile Creek) against the appropriate ANZECC 2000 water quality trigger values and present this information, in the Annual Environmental Report.
- **19.** The licence holder must undertake monitoring of the water balance for Paraburdoo TSF each monthly period, and (as a minimum) record the following information:
 - (a) site rainfall;
 - (b) evaporation rate;
 - (c) decant water recovery volumes;
 - (d) volume of tailings deposited; and
 - (e) estimate of seepage losses.

Records and reporting

Reporting Conditions

- **20.** The licence holder shall collect all water samples required by condition 17 in accordance with the relevant parts of Australian Standard AS/NZS 5667.1 and AS/NZS 5667.11.
- 21. The licence holder shall ensure that all parameters requiring laboratory analyses pursuant to condition 17 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 APHA-AWWA-WEF.
- 22. The licence holder 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 and set out in Table 5 of this licence during the period 1 January and ending on 31 December in that year.

Table 5: Annual Environmental Report

Conditions	Requirement	
2, 16, 17, 18, 19, 20, 21	 a) Monthly cumulative volumes (in m³ or kL) of treated wastewater applied to the irrigation sprayfield presented in table format; 	
	all monitoring data in tabulated and graphical form including the sampling date;	
	 c) an assessment and interpretation of the data, including comparison to historical trends, loading limits, exceeded levels in parameters; 	
	d) copies of laboratory sample analysis reports;	
	 e) landfill facility figures to be updated when subsequent landfill facilities have been constructed (including previous locations); and 	
	f) record of the total volumes of waste disposed of in all landfill facilities.	

23. The licence holder must:

- (a) undertake an audit of their compliance with the conditions of this licence during the preceding annual period; and
- (b) prepare and submit to the CEO by 30 April each year an Annual Audit Compliance Report in the approved form.
- 24. The licence holder must record the following information in relation to complaints received by the licence holder (whether received directly from a complainant or forwarded to them by the Department or another party) about any alleged emissions from the premises:
 - (a) the name and contact details of the complainant, (if provided);
 - (b) the time and date of the complaint;
 - (c) the complete details of the complaint and any other concerns or other issues raised; and
 - (d) the complete details and dates of any action taken by the licence holder to investigate or respond to any complaint.

- **25.** The licence holder must maintain accurate and auditable books including the following records, information, reports, and data required by this licence:
 - (a) the calculation of fees payable in respect of this licence;
 - (b) the works conducted in accordance with condition 3 of this licence;
 - (c) any maintenance of infrastructure that is performed in the course of complying with condition 3 of this licence; and
 - (d) complaints received under condition 24 of this licence.
- **26.** The books specified under condition 25 must:
 - (a) be legible;
 - (b) if amended, be amended in such a way that the original version(s) and any subsequent amendments remain legible and are capable of retrieval;
 - (c) be retained by the licence holder for the duration of the licence; and
 - (d) be available to be produced to an inspector or the CEO as required.

Definitions

In this licence, the terms in Table 6 have the meanings defined.

Table 6: Definitions

Term	Definition
ACN	Australian Company Number.
Act	means the Environmental Protection Act 1986.
Annual Audit Compliance Report (AACR)	means a report in a format approved by the CEO as presented by the licence holder or as specified by the CEO from time to time and published on the Department's website.
annual period	means the inclusive period from 1 January until 31 December in the same year.
ANZECC 2000	means the most recent version and relevant parts of the Australian and New Zealand Environment Conservation Council guidelines for fresh and marine water quality.
AS/NZS 5667.1	means the Australian Standard AS/NS 5667.1 Water Quality – Sampling – Guidance of the Design of sampling programs, sampling techniques and the preservation and handling of samplings.
AS/NZS 5667.11	means the Australian Standard AS/NS 5667.11 Water Quality – Sampling – Guidance on sampling of groundwaters.
books	has the same meaning given to that term under the EP Act.
CEO	means Chief Executive Officer of the Department.
	"submit to / notify the CEO" (or similar), means either:
	Director General Department administering the Environmental Protection Act 1986 Locked Bag 10 Joondalup DC WA 6919
	or:
	info@dwer.wa.gov.au
cfu/100mL	means colony forming units per 100 millilitres.
Department	means the department established under section 35 of the Public Sector Management Act 1994 (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 3.
discharge	has the same meaning given to that term under the EP Act.
emission	has the same meaning given to that term under the EP Act.
EP Act	Environmental Protection Act 1986 (WA).
freeboard	means the distance between the maximum water surface elevations and the top of retaining banks or structures at their lowest point.

Term	Definition
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 numbered L5275/1972/12 and issued under the Act.
licence holder	refers to the occupier of the premises, being the person specified on the front of the licence as the person to whom this licence has been granted.
m	means metres.
mg/L	means milligrams per litre.
mm	means millimetres.
NATA	means National Association of Testing Authorities.
NATA accredited	means in relation to the analysis of a sample that the laboratory is NATA accredited for the specified analysis at the time of the analysis.
Putrescible	has the meaning defined in Landfill Definitions.
Special Waste Type 1	has the meaning defined in Landfill Definitions.
Special Waste Type 2	has the meaning defined in Landfill Definitions.
Standard Methods for Examination of Water and Wastewater- APHA-AWWA- WEF	means the best current practice of American water analysts developed by the American Public Health Association (APHA), the American Water Works Association (AWWA), and the Water Environment Federation (WEF).
premises	refers to the premises to which this licence applies, as specified at the front of this licence and as shown on the premises map(s) in Schedule 1 to this licence.
prescribed premises	has the same meaning given to that term under the EP Act.
waste	has the same meaning given to that term under the EP Act.

END OF CONDITIONS

Schedule 1: Maps

Premises map

The boundary of the prescribed premises is shown in the map below (Figure 1).



Figure 1: Map of the boundary of the prescribed premises

Paraburdoo Surface Water Monitoring Points.

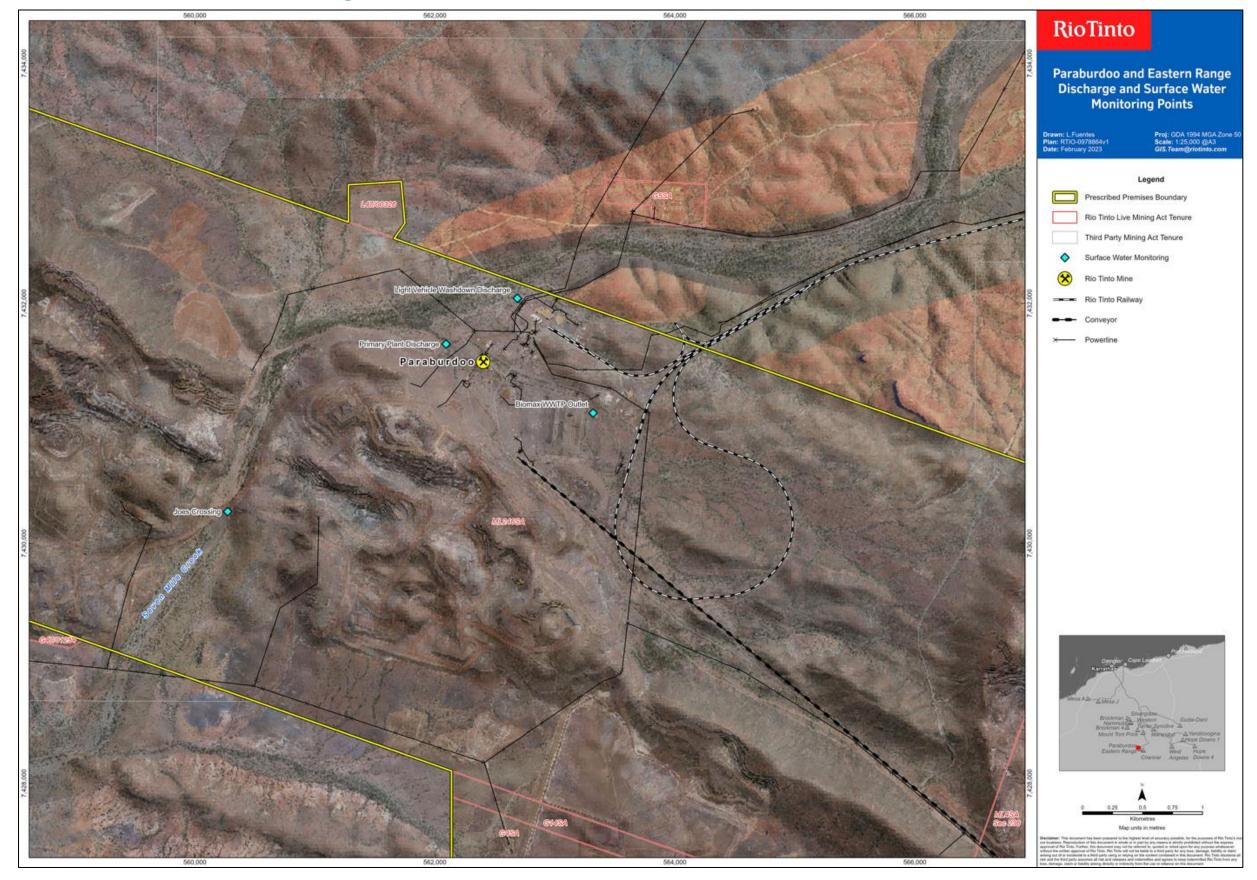


Figure 2: Map of the Discharge and Surface Water Monitoring Points

Location of Monitoring Bores Around Paraburdoo Landfill, Bioremediation Facility and Tailings Storage Facility

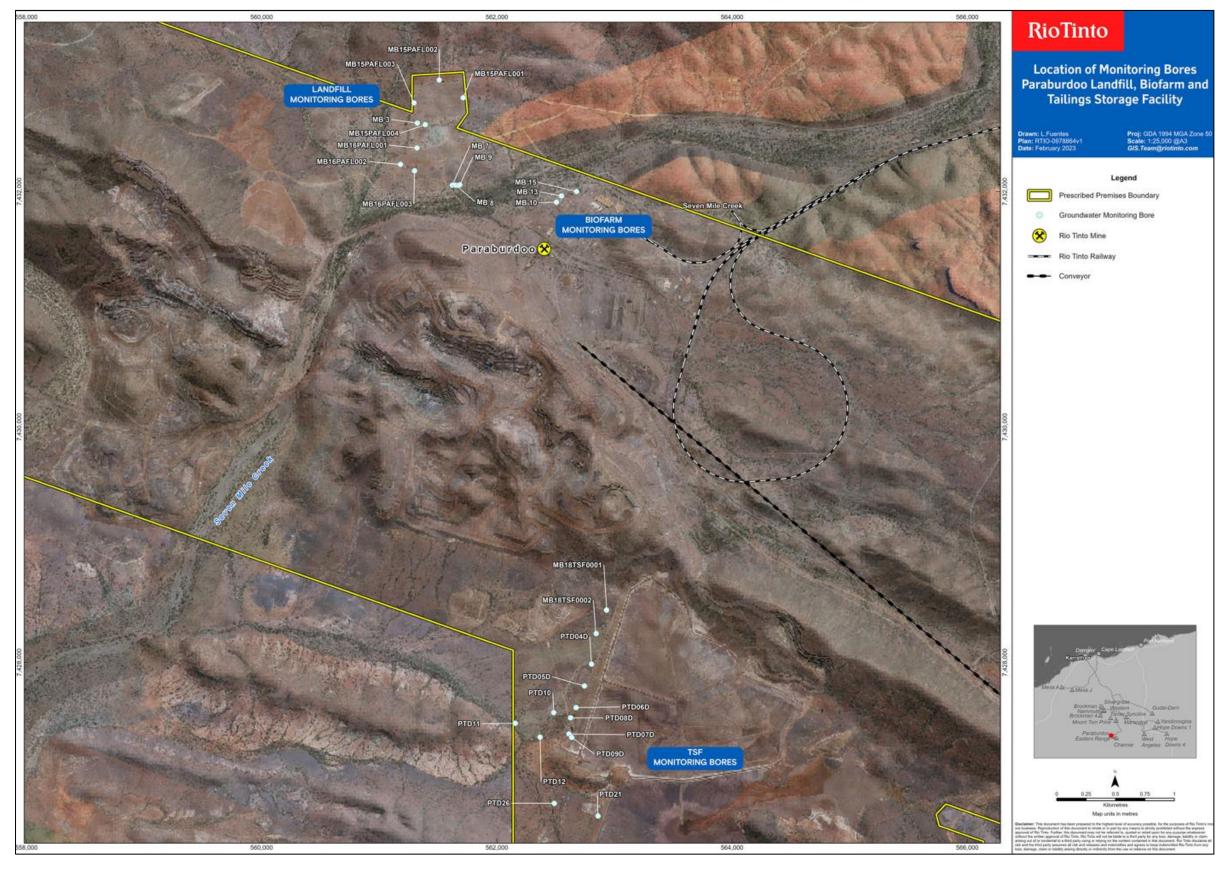


Figure 3: Map of the Groundwater Monitoring Points

Paraburdoo Landfill Areas and BioMAX WWTP and Irrigation Sprayfield

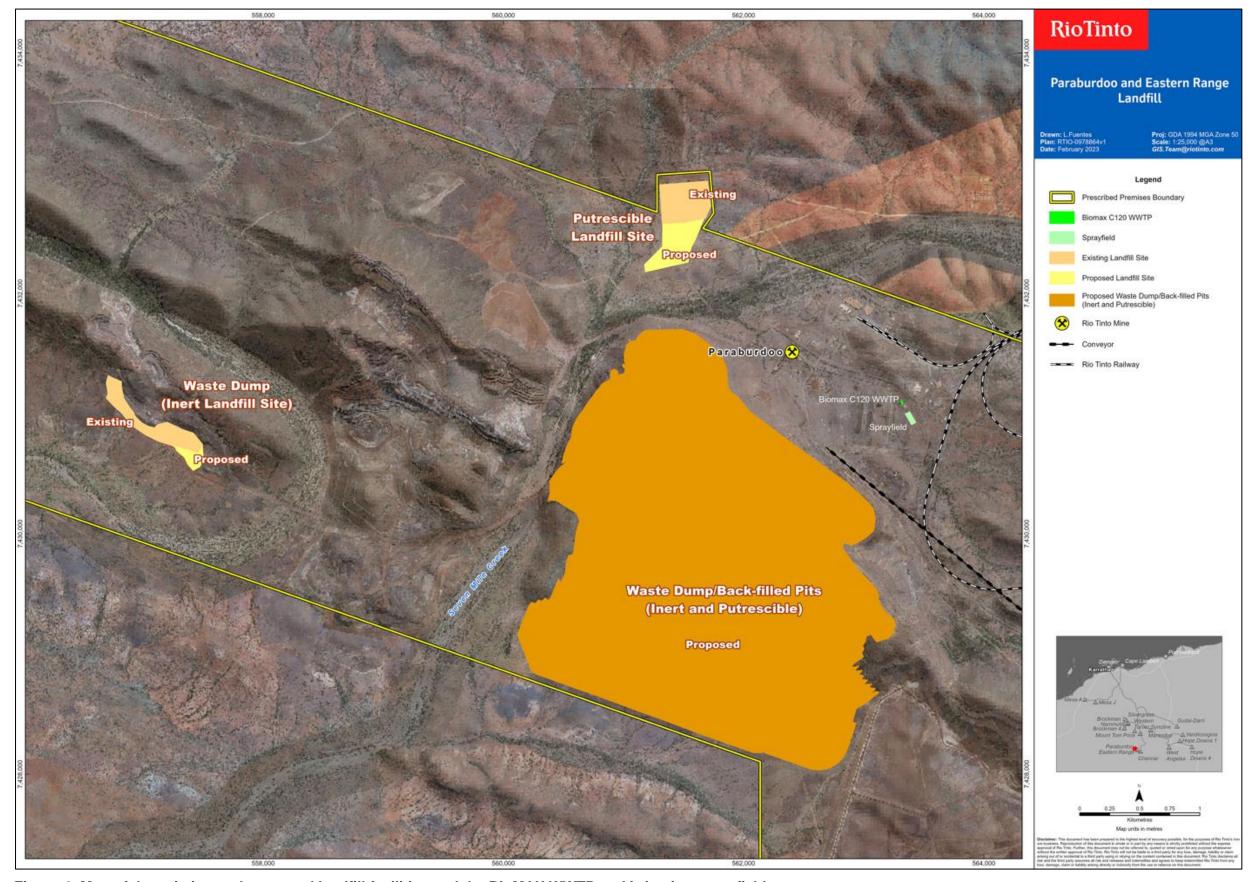


Figure 4: Map of the existing and proposed landfill facilities and the BioMAX WWTP and irrigation sprayfield

Paraburdoo Power Stations and Air Emission Points

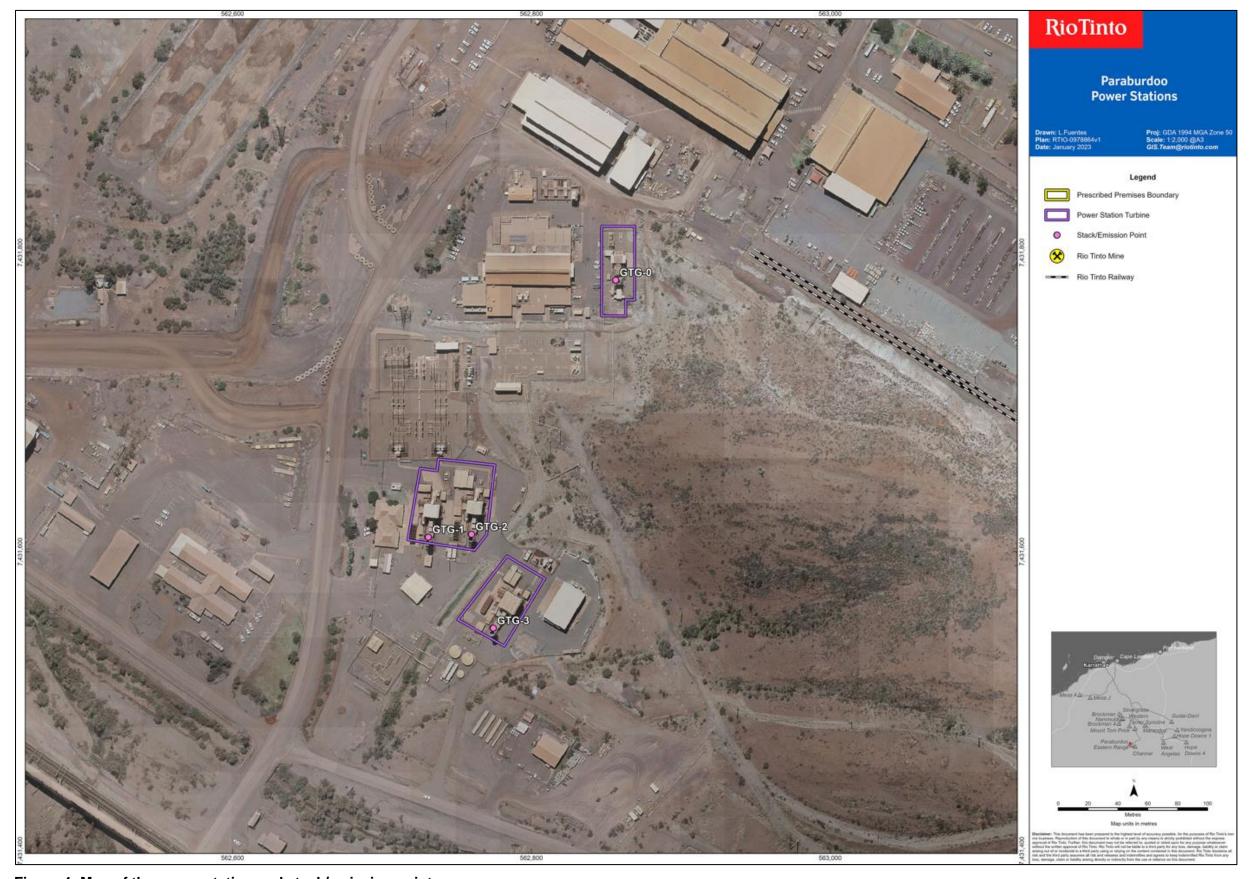


Figure 4: Map of the power station and stack/emission points

Paraburdoo Tailings Storage Facility Embankments



Figure 5: Map of the Paraburdoo Tailings Storage Facility