Government of Western Australia
Department of Water and Environmental Regulation

Licence

Licence number	L6759/1996/12
Licence holder	Pilbara Iron Company (Services) Pty Ltd
CAN	107 210 248
Registered business address	Level 18, Central Park 152 – 158 St Georges Terrace PERTH WA 6000
DWER file number	DER2014/000866-1
Duration	08/06/2015 to 07/06/2036
Date of amendment	20/05/2021
Premises details	Paraburdoo Wastewater Treatment Plant and Liquid Waste Facility Legal description - Lot 34 on Plan 24150 General Lease N104471 As defined by the coordinates and Premises maps in Schedule 1 of the Revised Licence)

Prescribed premises category description (Schedule 1, *Environmental Protection Regulations 1987*)	**Assessed design capacity**
Category 54: Sewage facility	900 cubic metres per day
Category 61: Liquid waste facility	1,825 tonnes per annual period

This amended licence is granted to the licence holder, subject to the attached conditions, on 20 May 2021, by:

Tracey Hassell
Digitally signed by Tracey Hassell
Date: 2021.05.20 09:36:42 +08'00'

Tracey Hassell
MANAGER WASTE INDUSTRIES
an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

Licence history

Date	Reference number	Summary of changes
08/06/2015	L6759/1996/12	Licence commencement
29/04/2016	L6759/1996/12	Notice of Amendment of Licence Expiry Dates
20/05/2021	L6759/1996/12	Licence amendment to include treated wastewater irrigation, consolidate the previous amendment notice and update licence format.

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:

Waste acceptance

1. The licence holder must only accept onto the premises waste of a type that:

(a) does not exceed the rate at which that waste is received; and

(b) meets the relevant acceptance specification,

as set out in Table 1.

Table 1: Waste acceptance criteria

Waste type	Rate at which waste is received	Acceptance specification
Sewage	900 m^3/day	(a) Accepted via sewerage inflow into Pond 1; or (b) Accepted via waste tanker into Pond 1 in the event of upstream sewerage blockages or emergencies only.
Septage	1,400 tonnes per annual period	(a) Accepted via waste tanker; and (b) Must only be accepted into Sludge Pits 1 and 2.
Kitchen grease trap waste	425 tonnes per annual period	(a) Accepted via waste tanker; and (b) Must only be accepted into Grease Pit 2.

Waste processing

2. The licence holder must ensure that the waste types specified in Table 2 are only subjected to the corresponding processes, and subject to the corresponding process specifications as set out in Table 2.

Table 2: Waste processing

Waste type	Processes	Process specifications
Sewage	Biological, chemical and physical treatment prior to disinfection and discharge via irrigation	(a) Disinfection of wastewater via chlorination must have a minimum contact time of 30 minutes; and (b) Disinfection must achieve a thermotolerant coliform concentration less than 1,000 CFU or MPN/100ml.
Grit and screenings	Dewatering and temporary storage prior to offsite disposal	(a) Must be contained within a sealed bin prior to removal from the premises for offsite disposal to an appropriately licensed facility.

Waste type	Processes	Process specifications
Septage	Evaporation and drying prior to offsite disposal	(a) Must be spadeable prior to offsite disposal to an appropriately licensed facility.
Kitchen grease trap waste	Fluid separation, evaporation and drying followed by bioremediation prior to offsite disposal	(a) Must be solidified within Grease Pits 1 and 2 prior to bioremediation in the Tilling Yard; (b) Must be regularly tilled to promote soil aeration and mixing; (c) Moisture content must be maintained for continued biological activity and not cause surface run-off; and (d) Must be spadeable prior to offsite disposal to an appropriately licensed facility.
WWTP sludge	Evaporation and drying prior to offsite disposal	(a) Must be contained and dried within the Tilling Yard when undertaking pond desludging; and (b) Must be spadeable prior to offsite disposal to an appropriately licensed facility.

Infrastructure and equipment

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

Table 3: Infrastructure and equipment requirements

	Site infrastructure and equipment	Operational requirement	Infrastructure location
1.	Inlet works	(a) A flow meter must be maintained to record the volume of sewage entering the premises.	As specified in Figure 2
2.	Pond 1; Pond 2; and Pond 3	(a) Must be maintained to achieve a minimum freeboard level of 300 mm; (b) The integrity of the clay-lined containment infrastructure must be maintained; (c) Overtopping of the ponds must not occur except as a result of an extreme rainfall event; and (d) Vegetation and floating debris (emergent or otherwise) must be prevented from encroaching onto pond surfaces or inner pond embankments.	As specified in Figure 2

	Site infrastructure and equipment	Operational requirement	Infrastructure location
3.	Pond 4	(a) Must only be operated to contain wastewater during potential overflow, maintenance and emergency events; (b) Must be maintained to achieve a minimum freeboard level of 300 mm; and (c) Vegetation and floating debris (emergent or otherwise) must be prevented from encroaching onto pond surfaces or inner pond embankments.	As specified in Figure 2
4.	Sludge Pit 1; and Sludge Pit 2	(a) Must be maintained to achieve a permeability less than 1 x 10^{-9} m/s; (b) Stormwater runoff must be prevented from entering the pits; and (c) Pipeline connections must be maintained to direct excess fluids and overflows to Pond 1.	As specified in Figure 2
5.	Grease Pit 1; and Grease Pit 2	(a) Must be maintained to achieve a permeability less than 1 x 10^{-9} m/s; (b) A balance pipe must be maintained capable of draining fluid from Pit 2 to Pit 1 to increase drying efficiency; and (c) Pipeline connections must be maintained to direct excess fluids and overflows to Pond 1.	As specified in Figure 2
6.	Tilling Yard	(a) 3-sided perimeter bunding must be maintained around the tilling beds; (b) Any surface runoff from the tilling beds must be directed back to Pond 1; and (c) A suitable soil thickness and compaction must be maintained at the base of the tilling beds.	As specified in Figure 2
7.	Irrigation holding tank, chlorinator, pump station and discharge chamber	(a) The standby irrigation pump must be automatically operated in the event of a duty pump failure and during peak flow periods; (b) A high level audio-visual alarm must be maintained on the irrigation holding tank and connected through telemetry to allow diversion of flow to Pond 4 when triggered; (c) A flow meter must be maintained to record the volume of treated wastewater being discharged; and (d) Automatically actuated valves, pumps, alarms and telemetry systems must be regularly tested at the frequency recommended by the manufacturer to ensure they remain functional.	Pump and tank area as specified in Figure 2

	Site infrastructure and equipment	Operational requirement	Infrastructure location
8.	Irrigation Area 1; and Irrigation Area 2	(a) A telemetry system must be maintained that is capable of opening additional spray lines in the event of a blockage or malfunction in the discharge infrastructure; (b) Perimeter bunding must be maintained around the irrigation area to prevent runoff and stormwater ingress; (c) 1.8 m high fencing must be maintained around the irrigation areas to prevent public access; and (d) Weekly visual inspections of the irrigation area must be undertaken to identify any maintenance requirements.	As specified in Figure 2

Emissions and discharges

Treated wastewater irrigation

4. The licence holder must ensure that the emission specified in Table 4 is discharged only from the corresponding discharge point, at the corresponding discharge point location and in accordance with the corresponding discharge requirements as set out in Table 4.

Table 4: Authorised discharge point and requirements

Emission	Discharge point	Discharge point location	Discharge requirements - irrigation
Treated wastewater	Irrigation Area 1; and Irrigation Area 2	As specified in Figure 2	(a) Spray lines must be operated sequentially to allow for the drying of soil; (b) No irrigation generated runoff, spray drift or discharge occurs beyond the boundary of the irrigation areas; (c) Irrigation does not occur on land that is waterlogged; (d) Irrigation is not undertaken immediately prior to, during or immediately after a rainfall event; (e) Wastewater is evenly distributed over the irrigation area so that no ponding or pooling occurs; (f) No soil erosion occurs; and (g) Vegetation cover is maintained over the irrigation area.

5. The licence holder must ensure that emissions from the discharge point listed in Table 5 for the corresponding parameter do not exceed the corresponding concentration or loading limit when monitored in accordance with condition 9.

Table 5: Emission and discharge limits

Discharge point	Parameter	Concentration limit	Loading limit
Irrigation Area 1; and Irrigation Area 2	Total Nitrogen	-	480 kg/ha/yr
	Total Phosphorus		120 kg/ha/yr
	Biological Oxygen Demand		30 kg/ha/day
	E. coli	1,000 CFU or MPN /100ml	-
	Discharge volume	-	62.5 kL/ha/day

General

6. The licence holder shall immediately recover, or remove and dispose of:

(a) spills of environmentally hazardous materials including treatment chemicals, oil or other hydrocarbons; and

(b) spills of waste,

located outside of an engineered containment system.

7. The licence holder shall ensure that all material used for recovery, removal, and/or disposal in accordance with condition 6 is stored in an impermeable container prior to disposal at an appropriately authorised facility.

Monitoring

Waste acceptance and removal

8. The licence holder must record the total amount of waste accepted onto and removed from the premises, for each waste type listed in Table 6, in the corresponding unit, and for the corresponding averaging period, as set out in Table 6.

Table 6: Waste accepted and removed from the premises

Accepted/Removed[1]	Waste type	Unit	Averaging period
Waste accepted	Sewage	m^3/day	Monthly
	Septage	tonnes	
	Kitchen grease trap waste		
Waste removed	Septage	tonnes	Yearly
	Kitchen grease trap waste		
	WWTP sludge		

Note 1: Additional requirements under the Environmental Protection (Controlled Waste) Regulation 2004 may apply

Treated wastewater discharge

9. The licence holder must monitor emissions in accordance with the requirements specified in Table 7.

Table 7: Emissions and discharge monitoring

Discharge point	Monitoring location	Parameter	Unit	Frequency	Averaging Period	Method
Irrigation Area 1; and Irrigation Area 2	DP95TWT9001: Irrigation holding tank outlet	pH[1]	-	Quarterly	Spot sample	AS/NZS 5667.10
		BOD_5	mg/L			
		Oil and grease				
		Total Dissolved Solids (TDS)				
		Total Suspended Solids (TSS)				
		Total Phosphorus (TP)				
		Total Nitrogen (TN)				
		Nitrate as nitrogen (NO_3-N)				
		Nitrite as nitrogen (NO_2-N)				
		Ammonium as nitrogen (NH_4-N)				
		E. coli	CFU or MPN /100 mL			
		Arsenic (As)	mg/L	Six monthly	Spot sample	AS/NZS 5667.10
		Copper (Cu)				
		Lead (Pb)				
		Mercury (Hg)				
		Zinc (Zn)				
	Final discharge flowmeter	Volumetric flow rate (cumulative)[1]	m^3/day	Continuous	Monthly	Flow meter

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

10. The licence holder must ensure that all sampling analysis undertaken pursuant to condition 9 is completed by a holder of a current accreditation from NATA for the methods of analysis relevant to the corresponding parameter, unless indicated otherwise in Table 7.

11. The licence holder must ensure that:

(a) monitoring is undertaken in each quarterly period such that there are at least 45 days in between the date on which samples are taken in successive quarters; and

(b) monitoring is undertaken in each six-monthly period such that there are at least 5 months in between the date on which samples are taken in successive periods of six months.

Records and reporting

12. 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.

13. 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 no later than 1 April after the end of each annual period an Annual Audit Compliance Report in the approved form.

14. The licence holder must submit to the CEO by no later than 1 April after the end of each annual period, an Annual Environmental Report for that annual period for the conditions listed in Table 8, and which provides information in accordance with the corresponding requirements set out in Table 8.

Table 8: Annual Environmental Report

Conditions	Requirements
3 and 4	(a) A summary of inspections and maintenance performed to address the operational requirements of Table 3 and discharge requirements of Table 4.
8	(a) A summary of the waste acceptance and removal at the premises presented in table format.

Conditions	Requirements
5 and 9	(a) The volume (in m^3 or kL) of treated wastewater applied daily to the irrigation area and monthly cumulative volumes presented in table format; (b) Tabulated monitoring data results and time-series graphs in Microsoft Excel format for each monitoring location showing concentrations of all parameters over a minimum three year period (where sufficient data allows); (c) Tabulated monthly and annual loadings of nitrogen, phosphorus and BOD applied to the irrigation area, including an explanation of the basis for determining loading rates; (d) An assessment and interpretation of the data, including comparison to historical trends and the limits contained in Table 5; and (e) Copies of laboratory sample analysis reports.
12	(a) A summary of complaints received, and any action taken to investigate or respond to any complaint.
N/A	(a) A summary of any failure or malfunction of any pollution control equipment and any environmental incidents that have occurred during the annual period, including any actions taken.

15. 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) any maintenance of infrastructure that is performed in the course of complying with conditions 3 and 4 of this licence;

(c) monitoring programs undertaken in accordance with conditions 8 and 9 of this licence; and

(d) complaints received under condition 12 of this licence.

16. The books specified under condition 15 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.

Construction activities

Infrastructure and equipment

17. Prior to the commencement of works specified in condition 18, the licence holder must:

(a) cease the acceptance of septage and kitchen grease trap waste at the premises; and

(b) only resume the acceptance of septage and kitchen grease trap waste after the Environmental Compliance Report required by condition 19 has been submitted to the CEO.

18. The licence holder must:

(a) construct and install the infrastructure and equipment;

(b) in accordance with the corresponding construction and installation requirements; and

(c) at the corresponding infrastructure location;

as set out in Table 9.

Table 9: Construction and installation requirements

	Infrastructure and equipment	Construction and installation requirements	Infrastructure location
1.	Pond 1	(a) The pond aerators must be installed so that integrity of the existing containment infrastructure is maintained.	As specified in Figure 2
2.	Sludge Pits 1 and 2	(a) Must be emptied of waste and cleaned prior to the commencement of works; (b) The floor and walls must be replaced with concrete to provide a permeability of less than 1 x 10^{-9} m/s; (c) Modifications to the drive-in ramps must prevent the ingress of stormwater into the pits; and (d) Leak testing and commissioning of infrastructure, including existing drainage pipelines, must be undertaken with potable water prior to use.	As specified in Figure 2
3.	Grease Pits 1 and 2	(a) Must be emptied of waste and cleaned prior to the commencement of works; (b) The Pit 2 drive-in ramp must be installed so that stormwater ingress is prevented and the integrity of the existing containment infrastructure is maintained; (c) A balance pipe must be fitted at an appropriate invert level so that fluid can be separated from grease and drained from Pit 2 to Pit 1;	As specified in Figure 2

	Infrastructure and equipment	Construction and installation requirements	Infrastructure location
		(d) Pit 1 must be fitted with a pipeline that returns excess fluid to Pond 1; and (e) Leak testing and commissioning of infrastructure, including existing drainage pipelines, must be undertaken with potable water prior to use.	
4.	Tilling Yard	(a) Must have perimeter bunding installed on three sides to prevent surface runoff and ingress of stormwater. The open side must be faced towards the WWTP; (b) Must be levelled so that surface runoff is directed back to the WWTP; and (c) In-situ clays must be compacted to produce an appropriately low permeability hardstand.	As specified in Figure 2
5.	Irrigation holding tank, chlorinator, pump station and discharge chamber	(a) Discharge from Pond 3 must be diverted to Pond 4 when connecting infrastructure located after the chlorine contact chamber; (b) An alarm system must be provided that activates when chlorine is unavailable for disinfection. Activation of the alarm must prevent the supply of unchlorinated wastewater for irrigation; (c) The irrigation holding tank must have a capacity of at least 40 kL; (d) The irrigation holding tank must be fitted with two minimum 30 m^3/hr flow rate pumps that allow for a duty and standby operation. The standby pump must be capable of automatic operation in the event of a duty pump failure and during peak flow periods; (e) A continuous flow meter must be installed capable of measuring the volume of treated wastewater supplied for irrigation; (f) The holding tank must be fitted with a high level audio-visual alarm connected through telemetry to allow diversion of flow to Pond 4 when triggered; and (g) Leak testing and commissioning of infrastructure must be undertaken with potable water prior to use.	Pump and tank area as specified in Figure 2
6.	Irrigation Area 1 and 2	(a) Must provide at least 4.8 ha of irrigation area in total; (b) Perimeter bunding must be installed around the irrigation areas;	As specified in Figure 2

	Infrastructure and equipment	Construction and installation requirements	Infrastructure location
		(c) 1.8 m high fencing must be installed around the irrigation areas to prevent public access; (d) Irrigation pipelines and valves must be installed so that sprinkler operation can occur sequentially; (e) Sprinkler nozzles must provide a coarse droplet with an even spray radius and distribution and have rubber expansion fittings to mitigate potential blockages; (f) Leak testing and commissioning of infrastructure must be undertaken with potable water prior to use.	

19. The licence holder must within 60 calendar days of all items of infrastructure and equipment required by condition 18 being constructed and installed:

(a) undertake an audit of their compliance with the requirements of condition 18; and

(b) prepare and submit to the CEO an Environmental Compliance Report on that compliance.

20. The Environmental Compliance Report required by condition 19, must include as a minimum the following:

(a) certification by a suitably qualified civil engineer that the items of infrastructure and equipment, as specified in condition 18, have been constructed in accordance with the relevant requirements specified in condition 18;

(b) as constructed plans and a detailed site plan for each item of infrastructure and equipment specified in condition 18;

(c) labelled photographic evidence of the installation of the infrastructure and equipment specified in condition 18;

(d) a summary of the environmental performance of each item of infrastructure and equipment as constructed or installed, which at minimum includes records detailing the:

(i) leak and functional testing of pipelines, fittings and pumps; and

(ii) testing of any installed high-level alarms, pump failure alarms and associated telemetry systems.

(e) a review of the licence holder's performance and compliance against the requirements of condition 18; and

(f) be signed by a person authorised to represent the licence holder and contains the printed name and position of that person.

Definitions

In this licence, the terms in Table 10 have the meanings defined.

Table 10: Definitions

Term	Definition
ACN	Australian Company Number
AEP	annual exceedance probability
Annual Audit Compliance Report (AACR)	means a report submitted in a format approved by the CEO (relevant guidelines and templates may be available on the Department's website).
annual period	a 12 month period commencing from 1 January until 31 December in the same year.
As	arsenic
AS/NZS 5667.10	means the Australian Standard *AS/NZS 5667.10 Water quality – Sampling Guidance on sampling of waste waters*.
BOD_5	biochemical oxygen demand
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	colony forming units
Cu	copper
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.
E. coli	*Escherichia coli*
emission	has the same meaning given to that term under the EP Act.
Environmental Compliance Report	means a report to satisfy the CEO that the conditioned infrastructure has been constructed and installed in accordance with the licence.

Term	Definition
EP Act	*Environmental Protection Act 1986* (WA)
EP Regulations	*Environmental Protection Regulations 1987* (WA)
extreme rainfall event	means a greater than 1% AEP event of 72 hours duration
Hg	mercury
Landfill Definitions	*Landfill Waste Classification and Waste Definitions 1996* (as amended from time to time).
licence	refers to this document, which evidences the grant of a licence by the CEO under section 57 of the EP Act, subject to the specified conditions contained within.
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.
MPN	most probable number
NATA	National Association of Testing Authorities
NH_4-N	ammonium as nitrogen
NO_2-N	nitrite as nitrogen
NO_3-N	nitrate as nitrogen
Pb	lead
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 (Figure 1) in Schedule 1 to this licence and in the coordinates table (Table 11) in Schedule 2 to this licence.
prescribed premises	has the same meaning given to that term under the EP Act.
spadeable	has the meaning defined in Landfill Definitions.
suitably qualified civil engineer	means a person who: (a) holds a Bachelor of Engineering recognised by Engineers Australia; (b) has a minimum of five years of experience working in a supervisory area of civil engineering; and (c) is an independent third party external to the licence holder; or: is otherwise approved in writing by the CEO to act in this capacity.
TDS	total dissolved solids

Term	Definition
TN	total nitrogen
TP	total phosphorus
TSS	total suspended solids
waste	has the same meaning given to that term under the EP Act.
WWTP	wastewater treatment plant
Zn	zinc

END OF CONDITIONS

Schedule 1: Maps

Premises map

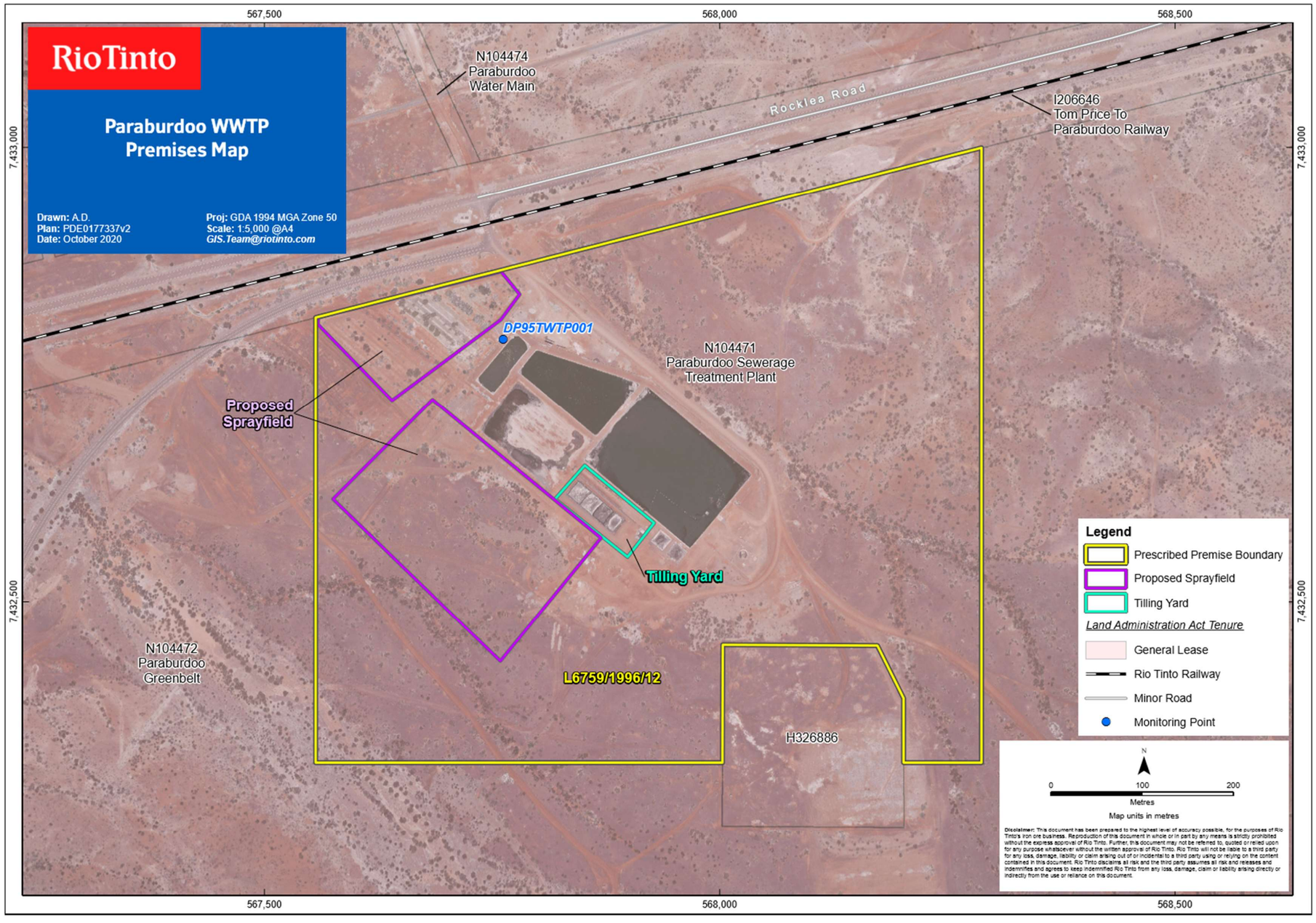

Figure 1: Map of the boundary of the prescribed premises

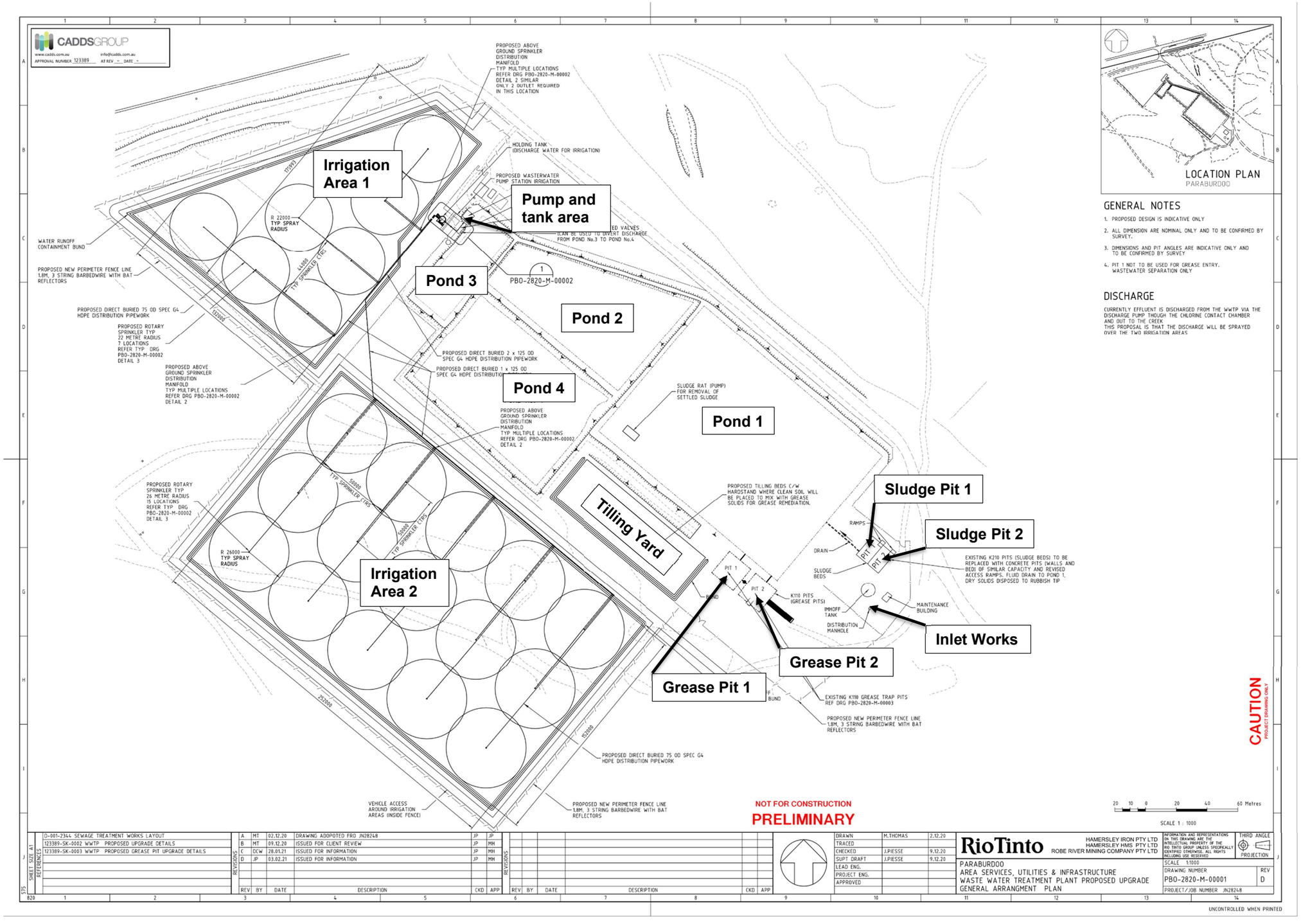

Figure 2: Site plan and detail of the works in condition 18

Schedule 2: Premises boundary

The premises boundary is defined by the coordinates in Table 11.

Table 11: Premises boundary coordinates (GDA94 MGA Zone 50)

Point no.	Eastings	Northings
1	567556.34	7432812.45
2	568287.69	7432999.67
3	568287.55	7432322.52
4	568202.14	7432322.54
5	568201.91	7432393.13
6	568173.23	7432451.39
7	568003.57	7432452.05
8	568003.00	7432322.57
9	567556.27	7432322.65