



Licence

Environmental Protection Act 1986, Part V

Licensee: Wodgina Lithium Pty Ltd

Licence: L4328/1989/10

Registered office: 1 Sleat Road
APPLECROSS WA 6153

ACN: 611 488 932

Premises address: Wodgina Operations
M45/50, M45/353, M45/381, M45/382, M45/383, M45/886, M45/887,
M45/923 and M45/925
MARBLE BAR WA 6760
As depicted in Schedule 1

Issue date: Thursday, 26 September 2013

Commencement date: Tuesday, 1 October 2013

Expiry date: Friday, 30 September 2033

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 per year	6,800,000 tonnes per annual period
54	Sewage facility	100 cubic metres or more per day	210 cubic metres per day
89	Putrescible landfill site	More than 20 but less than 5,000 tonnes per year	1,850 tonnes per annual period

Conditions of Licence

Subject to the conditions of the licence set out in the attached pages.

Date signed: 7 February 2017

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Alana Kidd
Manager Licensing (Resource Industries)
Officer delegated under section 20
of the *Environmental Protection Act 1986*



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Introduction

This Introduction is not part of the Licence conditions.

DER's industry licensing role

The Department of Environment Regulation (DER) is a government department for the state of Western Australia in the portfolio of the Minister for Environment. DER's purpose is to advise on and implement strategies for a healthy environment for the benefit of all current and future Western Australians.

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

Licence requirements

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

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

<http://www.slp.wa.gov.au/legislation/statutes.nsf/default.html>

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

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



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

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

Licence fees

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

Ministerial conditions

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

Premises description and Licence summary

Tantalum mining of the Wodgina pegmatite ore bodies commenced in 1989. The tantalum mining operations have been in care and maintenance and are planned to commence again in the coming months.

The Wodgina Operations are located approximately 100 kilometres (km) south of Port Hedland in the Pilbara Region of Western Australia. The closest sensitive receptors are the Kangan Homestead and the Yandeyarra Aboriginal Community, located 19 km west north-west and 32 km west south-west, from the mine respectively.

In 2010, Atlas Iron Limited (Atlas) commenced mining of iron ore on tenements at Wodgina, under an agreement to share facilities.

The existing operation comprises of the following infrastructure:

- two mining pits and several waste rock dumps;
- three borefields and water reservoir;
- crushing and screening plant (currently operated by Atlas for the processing of iron ore);
- wastewater treatment plant comprising six facultative treatment ponds and three evaporation ponds;
- putrescible landfill facility;
- power station comprising 11 gas turbines with a maximum operating capacity of 1,400 kilowatts (kW);
- maintenance and vehicle workshops;
- administration offices;
- bioremediation facility; and
- accommodation village.

February 2017

This Licence is the result of a transfer from Global Advanced Metals Wodgina Pty Ltd to Wodgina Lithium Pty Ltd.



The licences and works approvals issued for the Premises prior to the issue of this Licence are:

Instrument log		
Instrument	Issued	Description
L4328/1989/3	13 September 2000	Licence reissue
L4328/1989/4	2 October 2001	Licence reissue
L4328/1989/5	2 October 2002	Licence reissue
L4328/1989/6	30 September 2003	Licence reissue
L4328/1989/7	1 October 2004	Licence reissue
L4328/1989/8	28 September 2006	Licence reissue
L4328/1989/9	18 September 2008	Licence reissue
W4530/2009/1	12 November 2009	New works approval for tailings storage facility
W4594/2009/1	7 January 2010	New works approval for Category 89 landfill
W5036/2011/1	1 December 2011	New works approval for Category 54 sewage facility
W4992/2011/1	28 June 2012	New works approval for new crushing facilities
L4328/1989/10	26 September 2013	Licence reissue
L4328/1989/10	12 December 2013	Licence amendment to amend submission date for Annual Environmental Report
L4328/1989/10	2 June 2016	Licence amendment for tyre disposal areas.
L4328/1989/10	7 February 2017	Licence transferred from Global Advanced Metals Wodgina Pty Ltd to Wodgina Lithium Pty Ltd. <i>Director General's Instructions: Decision Document and Conditioning</i> were implemented.

Severance

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

END OF INTRODUCTION



Licence conditions

1 General

1.1 Interpretation

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

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

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

'Acceptance Criteria' has the meaning defined in Landfill Waste Classification and Waste Definitions 1996 published by the Department of Environment and Conservation and as amended from time to time;

'AHD' means the Australian height datum;

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

'Anniversary Date' means 30 June of each year;

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

'AS/NZS 2031' means the Australian Standard AS/NZS 2031 *Selection of containers and preservation of water samples for microbiological analysis*;

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

'AS/NZS 5667.10' means the Australian Standard AS/NZS 5667.10 *Water Quality – Sampling – Guidance on sampling of waste waters*;

'AS/NZS 5667.11' means the Australian Standard AS/NZS 5667.11 *Water Quality – Sampling – Guidance on sampling of groundwaters*;

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

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

'CEO' for the purposes of notification means:

Chief Executive Officer
Department Div.3 Pt.V EP Act
Locked Bag 33 Cloisters Square
Perth WA 6850
info@der.wa.gov.au



'Clean Fill' has the meaning defined in Landfill Waste Classification and Waste Definitions 1996 published by the Department of Environment and Conservation and as amended from time to time;

'controlled waste' has the definition in Environmental Protection (Controlled Waste) Regulations 2004;

'Department' means the department established under s.35 of the Public Sector Management Act 1994 and designated as responsible for the administration of Division 3 Part V of the *Environmental Protection Act 1986*;

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

'Inert Waste Type 1' has the meaning defined in Landfill Waste Classification and Waste Definitions 1996 published by the CEO and as amended from time to time;

'Inert Waste Type 2' has the meaning defined in Landfill Waste Classification and Waste Definitions 1996 published by DEC and as amended from time to time;

'leachate' means a liquid containing contaminants leached from the waste mass produced as water percolates through a landfill;

'Licence' means this Licence numbered L4328/1989/10 and issued under the *Environmental Protection Act 1986*;

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

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

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

'practicable' is as defined in the *Environmental Protection Act 1986*;

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

'Putrescible Waste' means the organic component of the waste stream which can be decomposed by microbial action and become putrid and likely to cause obnoxious odours and attract (scavenging) birds or animals; putrescible waste includes food wastes or wastes of animal or vegetable origin;

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

'restoration' means the completion of the engineering of a landfill cell and may include capping and/or final cover;

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

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

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



'STP dry' means standard temperature and pressure (0°Celsius and 101.325 kilopascals respectively), dry; and

'usual working day' means 0800 – 1700 hours, Monday to Friday excluding public holidays in Western Australia.

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

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

1.2 General conditions

1.2.1 The Licensee shall:

- (a) implement all practical measures to prevent stormwater run-off becoming contaminated by the activities on the Premises;
- (b) treat contaminated or potentially contaminated stormwater as necessary prior to being discharged from the Premises¹;
- (c) ensure that sediment laden stormwater runoff from operational areas is directed to settling basins which maximise retention time of suspended solids prior to being discharged from the Premises¹; and
- (d) maintain sedimentation basins at all offsite stormwater discharge points such that there is sufficient retention time within the basin to maximise removal of suspended solids prior to being discharged from the Premises¹.

Note 1: *The Environmental Protection (Unauthorised Discharges) Regulations 2004* make it an offence to discharge certain materials into the environment.

1.3 Premises operation

1.3.1 The Licensee shall ensure that where wastes produced on the Premises are not taken offsite for lawful use or disposal, they are managed in accordance with the requirements of Table 1.3.1.

Table 1.3.1 Management of Waste¹

Facility	Waste type	Process(es)	Requirements
Putrescible Landfill site (as depicted on Premises map in Schedule 1)	Inert Waste Type 1	Receipt, handling and disposal of waste by landfilling	<u>All waste types</u> No more than 1650 tonnes of waste shall be disposed of at the putrescible landfill per annual period
	Putrescible Waste		Disposal of waste by landfilling shall only take place within the landfill area shown on the Premises Map in Schedule 1
	Clean Fill		The separation distance between the base of the landfill and the highest groundwater level shall not be less than 2 m



	Inert Waste Type 2		No more than 200 tonnes of waste tyres shall be disposed of at the tyre disposal areas per annual period.
Hercules Waste rock landform tyre disposal area & Hercules Stage 2 backfill tyre disposal area (As depicted on Tyre disposal area map in Schedule 1).	Inert Waste Type 2 (Tyres only)		Tyres shall only be landfilled: i) in batches separated from each other by at least 100 mm of soil and each consisting of not more than 40 m ³ of tyres reduced to pieces; or ii) in batches separated from each other by at least 100 mm of soil and each consisting of not more than 1000 whole tyres
Wastewater treatment plant	Sewage	Biological and physical treatment.	No more than 210 m ³ /day

Note 1: Additional requirements for the acceptance and landfilling of controlled waste (including asbestos and tyres) are set out in the *Environmental Protection (Controlled Waste) Regulations 2004*.

1.3.2 The Licensee shall manage the landfilling activities to ensure:

- the size of the tipping face is kept to a minimum and not larger than 30 m in length and 2 m above ground level in height;
- waste is levelled and compacted as soon as practicable after it is discharged;
- waste is placed and compacted to ensure all faces are stable and capable of retaining restoration material; and
- restoration of a cell or phase takes place within six months after disposal in that cell or phase has been completed.

1.3.3 The Licensee shall ensure that cover is applied and maintained on landfilled wastes in accordance with Table 1.3.2 and that sufficient stockpiles of cover are maintained on site at all times.

Table 1.3.2: Cover requirements¹

Waste Type	Material	Depth	Timescales
Inert Waste Type 1	Inert and incombustible material	Sufficient to ensure the waste is completely covered and that no waste is exposed	Weekly or as soon as practicable after deposit and prior to compaction
Putrescible Waste			
Inert Waste Type 2 (Tyres only)	Soil	500 mm	As soon as practical following the achievement of final waste levels in the area(s) in which tyres are deposited

Note 1: Additional requirements for the covering of tyres are set out in Part 6 of the *Environmental Protection Regulations 1987*.

1.3.4 The Licensee shall:

- erect and maintain suitable fencing around the putrescible landfill facility and wastewater treatment plant that acts as an effective barrier to unauthorised persons, cattle, horses and other stock; and



- (b) undertake regular inspections of all security measures and repair damage as soon as practicable.

1.3.5 The Licensee shall ensure that wind-blown waste is contained within the putrescible landfill area and that wind-blown waste is returned to the tipping area on at least a monthly basis.

1.3.6 The Licensee shall ensure that waste materials are only stored and/or treated within vessels or compounds provided with the infrastructure detailed in Table 1.3.3.

Table 1.3.3: Containment infrastructure		
Storage vessel or compound	Material	Infrastructure requirements
Facultative Wastewater Treatment Ponds	Wastewater	Lined to achieve a hydraulic conductivity of $<10^{-9}$ m/s A minimum top embankment freeboard of 350 mm is to be maintained at all times.
Treated Wastewater Evaporation Ponds	Treated Wastewater	A minimum top embankment freeboard of 200 mm is to be maintained at all times.
Tailing storage facility	Tailings	A minimum top of embankment freeboard of 300 mm is to be maintained at all times. Sufficient storage capacity to contain a 1 in a 100 year, 72-hour rainfall event shall be maintained at all times.

- 1.3.7 The Licensee shall manage the wastewater treatment and evaporation ponds such that:
- stormwater runoff is prevented from entering the ponds or causing the erosion of outer pond embankments which may affect the integrity of the pond wall or liner;
 - overtopping of the ponds does not occur;
 - there is no visible seepage loss through the wastewater treatment pond embankments;
 - trapped overflows shall be maintained on the outlet of treatment ponds to prevent carry-over of surface floating matter;
 - under normal operations, discharges from treatment ponds are directed to the evaporation ponds;
 - as a result of an extreme rainfall event (greater than 1 in 10 year event of 72 hours duration), discharges from treatment ponds or evaporation ponds may be directed to the environment via spillways or discharge pipes designed for that purpose; and
 - vegetation and floating debris (emergent or otherwise) is prevented from encroaching onto pond surfaces or inner pond embankments (with the exception of duckweed on non-primary treatment ponds).
- 1.3.8 The Licensee shall ensure that all pipelines containing environmentally hazardous materials are either:
- equipped with telemetry system and pressure sensors along pipelines to allow the detection of leaks and failures; or
 - equipped with automatic cut-outs in the event of a pipe failure; or
 - provided with secondary containment sufficient to contain any spill for a period equal to the time between routine inspections.
- 1.3.9 The Licensee shall:
- undertake inspections as detailed in Table 1.3.4;
 - where any inspection identifies that an appropriate level of environmental protection is not being maintained, take corrective action to mitigate adverse environmental consequences as soon as practicable; and
 - maintain a record of all inspections undertaken.



Table 1.3.4: Inspection of infrastructure		
Scope of inspection	Type of inspection	Frequency of inspection
Tailings delivery pipelines	Visual integrity	Daily
Return water lines	Visual integrity	
Embankment freeboards	Visual to confirm required freeboard capacity is available	

- 1.3.10 The Licensee shall ensure that the tyre disposal areas are designed and constructed in accordance with the requirements in Table 1.3.5.
- 1.3.11 The Licensee must not depart from the requirements specified in Table 1.3.5 except:
- (a) where such departure is minor in nature and does not materially change or affect the infrastructure; or
 - (b) where such departure improves the functionality of the infrastructure and does not increase risks to public health, public amenity or the environment;
- and all other conditions in this Licence are still satisfied.

Table 1.3.5: Tyre disposal areas requirements	
Infrastructure	Requirements (design and construction)
Tyre disposal areas	<ul style="list-style-type: none">• Disposed of at the Hercules waste rock landform and buried within the Hercules State 2 backfill;• Disposed of on level and impervious ground; and• Capacity of 200 tonnes per annual period.

2 Emissions

2.1 General

- 2.1.1 The Licensee shall record and investigate the exceedance of any descriptive or numerical limit in this section.

2.2 Emissions to land

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

Table 2.2.1: Emissions to land		
Emission point reference	Description	Source including abatement
L1	Discharge from facultative wastewater treatment ponds to unlined evaporation ponds	Treated wastewater
L2	Stormwater retention ponds in the plant area designed to contain a 1 in 10 year storm event.	Overflow of potentially contaminated stormwater from retention ponds during a heavy rainfall event.



- 2.2.2 The Licensee shall not cause or allow emissions to land greater than the limits listed in Table 2.2.2.

Table 2.2.2: Emission limits to land

Emission point reference	Parameter	Limit	Averaging period
L2	Total Recoverable Hydrocarbons	15 mg/L	Spot sample

3 Monitoring

3.1 General monitoring

- 3.1.1 The Licensee shall ensure that:

- (a) all water samples are collected and preserved in accordance with AS/NZS 5667.1;
- (b) all wastewater sampling is conducted in accordance with AS/NZS 5667.10;
- (c) all groundwater sampling is conducted in accordance with AS/NZS 5667.11; and
- (d) all laboratory samples are submitted to a laboratory with current NATA accreditation for the parameters to be measured unless indicated otherwise in relevant table.

- 3.1.2 The Licensee shall ensure that:

- (a) monthly monitoring is undertaken at least 15 days apart; and
- (b) quarterly monitoring is undertaken at least 45 days apart.

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

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

3.2 Monitoring of emissions to land

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

Table 3.2.1: Monitoring of emissions to land

Emission point reference	Parameter	Units	Frequency
L1 (discharge of treated wastewater to onsite evaporation ponds)	Biochemical Oxygen Demand	mg/L	Quarterly
	Total Suspended Solids	mg/L	
	pH		
	Total Nitrogen	mg/L	
	Total Phosphorus	mg/L	
	<i>E.coli</i>	cfu/100 mL	
	Volumetric flow rate	m ³ /day	
L2 (discharge from plant stormwater retention ponds during overflow events only)	Total recoverable hydrocarbons	mg/L	During overflow events only



3.3 Monitoring of inputs and outputs

3.3.1 The Licensee shall undertake the monitoring specified in Table 3.3.1.

Table 3.3.1 Monitoring of inputs and outputs				
Input / Output	Parameter	Units	Averaging Period	Frequency
Waste Inputs into the landfill facility	Inert Waste Type 1, Inert Waste Type 2, Putrescible Waste and Clean Fill	tonnes or (where no weighbridge is present) m ³	N/A	Each load arriving at the landfill
Waste inputs to tyre disposal areas	None specified	Tyres only	N/A	Monthly

3.4 Ambient environmental quality monitoring

3.4.1 The Licensee shall undertake the monitoring in Table 3.4.1 according to the specifications in that table and record the results.

Table 3.4.1: Monitoring of ambient groundwater quality				
Monitoring point reference and location	Parameter	Units	Averaging period	Frequency
Wastewater Treatment Plant Bores (WWTF1-WWTF5)	Standing water level	m(AHD)	Spot sample	Monthly
	pH ¹	-	Spot sample	Quarterly
	Biochemical Oxygen Demand	mg/L		
	Chemical Oxygen Demand	mg/L		
	Total Dissolved Solids	mg/L		
	Total Suspended Solids	mg/L		
	<i>E.coli</i>	cfu/100mL		
	Total nitrogen	mg/L		
	Ammonia			
	Nitrate/Nitrite			
Total Phosphorus				
Tailings storage facility 3 (TSF1-TSF6, RB1, RB4, MB1, MB3, RB3M, RB3, RB2M, RB2, MB2A and MB2B)	Standing water level	m(AHD)	Spot sample	Monthly
	pH ¹		Spot sample	Quarterly
	Electrical Conductivity	mS/cm		
	Total Recoverable Hydrocarbons	mg/L		
	Total Dissolved Solids	mg/L		
	Aluminium	mg/L		
	Arsenic			
	Cadmium			
	Chromium			
	Copper			
	Iron			
	Lead			



	Selenium			
	Mercury			
	Nickel			
	Zinc			
	Manganese			
	Silicon			
	Cobalt			
	Potassium			
	Magnesium			
	Sodium			
	Total Nitrogen			
	Calcium carbonate			
	Calcium			

Note 1: Infield non-Nata accredited analysis permitted.

4 Information

4.1 Records

4.1.1 All information and records required by the Licence shall:

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

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

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

4.2 Reporting

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

Table 4.2.1: Annual Environmental Report

Condition or table (if relevant)	Parameter	Format or form ¹
-	Summary of any failure or malfunction of any pollution control equipment and any environmental incidents that have occurred during the annual period and any action taken	None specified
Table 3.2.1	Monitoring of emissions to land data	None specified



Table 3.3.1	Monitoring of inputs to landfills data	None specified
Table 3.4.1	Monitoring of ambient groundwater quality data	None specified
Condition 4.1.3	Compliance	Annual Audit Compliance Report (AACR)
Condition 4.1.4	Complaints summary	None specified

Note 1: Forms are in Schedule 2

- 4.2.2 The Licensee shall ensure that the Annual Environmental Report also contains:
- an assessment of the information contained within the report against previous monitoring results and Licence limits;
 - an assessment and comparison of the monitoring data from, Tailing Storage Facility 3 bores, required by condition 3.4.1 against the *ANZECC, 2000 – Livestock drinking water quality guidelines*; and
 - a list of any original monitoring reports submitted to the Licensee from third parties for the annual period and make these reports available on request.

4.3 Notification

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

Table 4.3.1: Notification requirements			
Condition or table (if relevant)	Parameter	Notification requirement ¹	Format or form ²
2.1.1	Breach of any limit specified in the Licence	Part A: As soon as practicable but no later than 5pm of the next usual working day. Part B: As soon as practicable	N1
3.1.3	Calibration report	As soon as practicable.	None specified
Table 1.3.5	Construction of the Tyre Disposal Areas	Notify the CEO in writing within 14 days following the completion of the works for the tyre disposal area and prior to operation of the same, as specified in condition 1.3.10. The written notification shall: (a) confirm that the works were constructed in accordance with condition 1.3.10; and (b) be signed by a person authorised to represent the Licensee and contain the printed name and position of that person within the company. Following submission of the written	None specified



		notification, the Licensee shall operate the tyre disposal area in accordance with the conditions of this Licence.	
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Note 1: Notification requirements in the licence shall not negate the requirement to comply with s72 of the Act

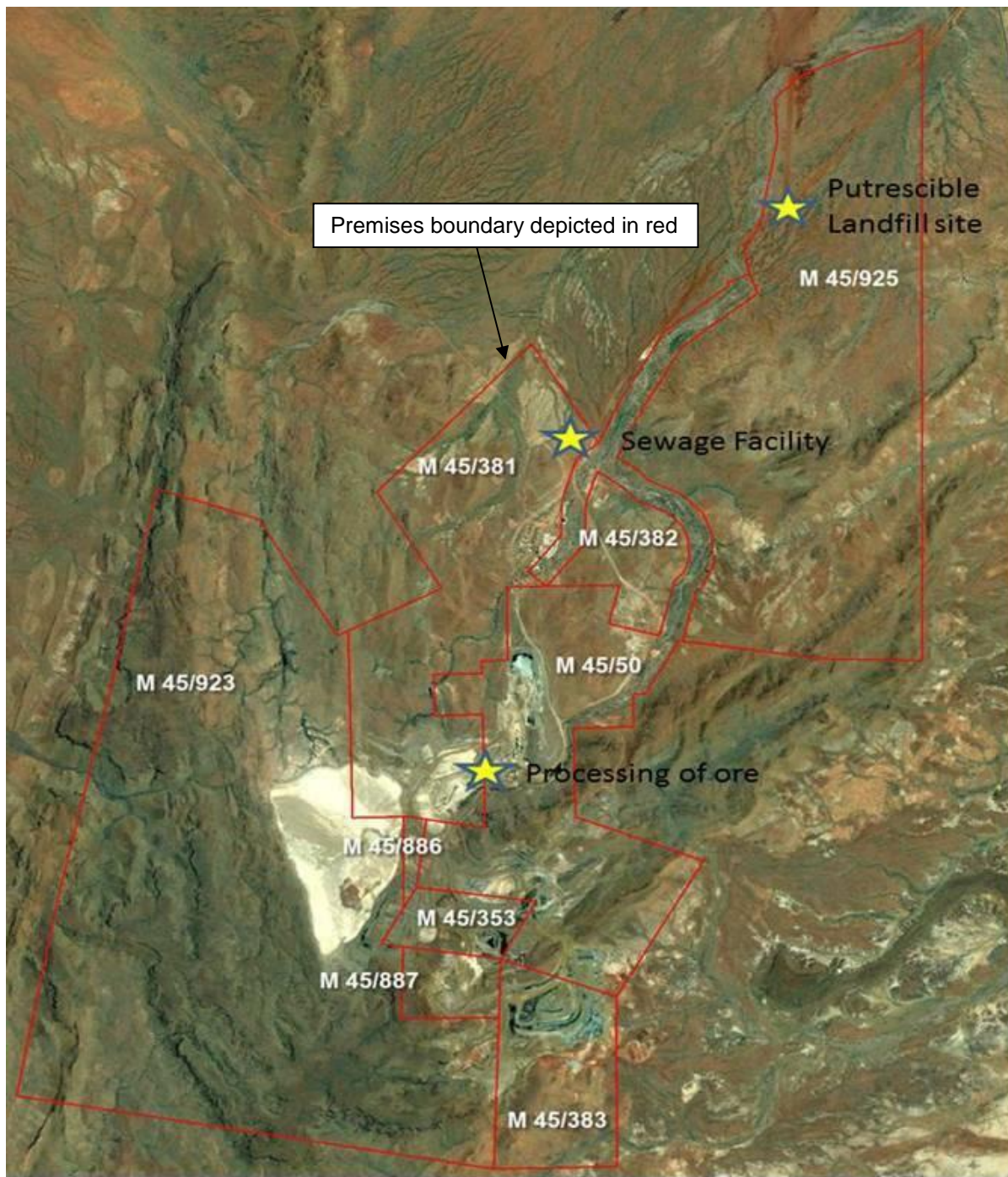
Note 2: Forms are in Schedule 2



Schedule 1: Maps

Premises map

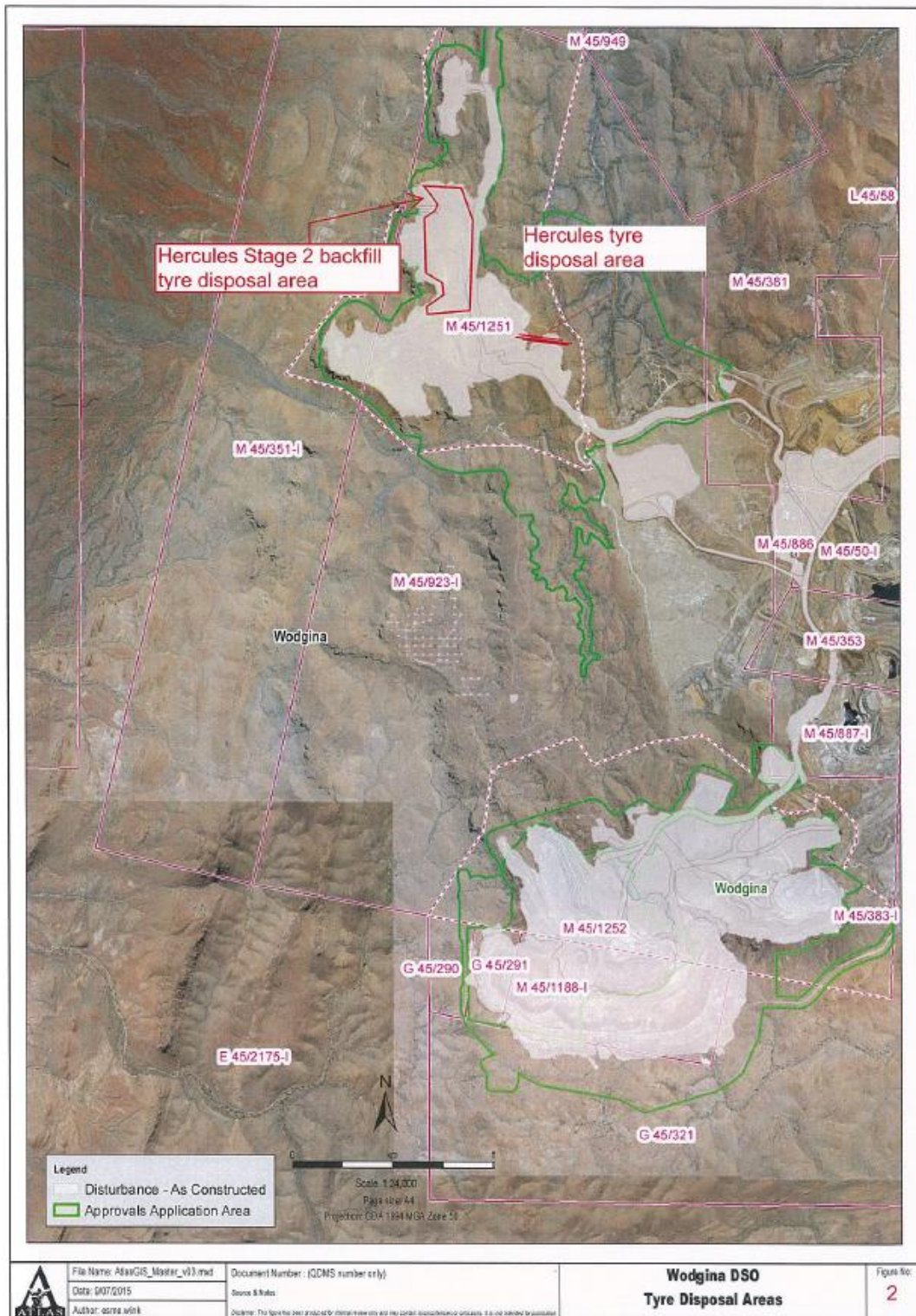
The Premises is shown in the map below. The red line depicts the Premises boundary.





Map of tyre disposal areas

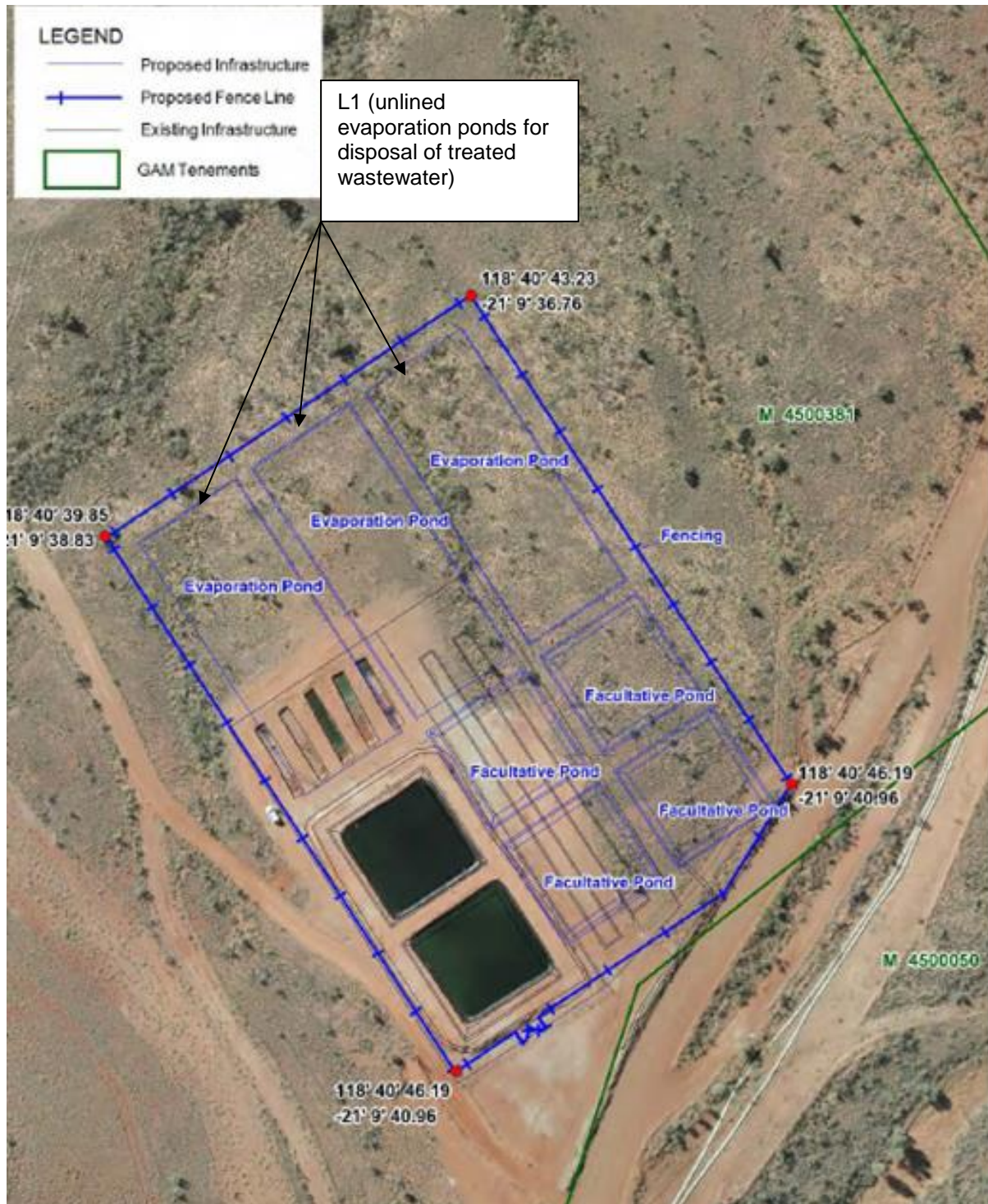
The location of the tyre disposal areas defined in Table 1.3.1 is shown below.

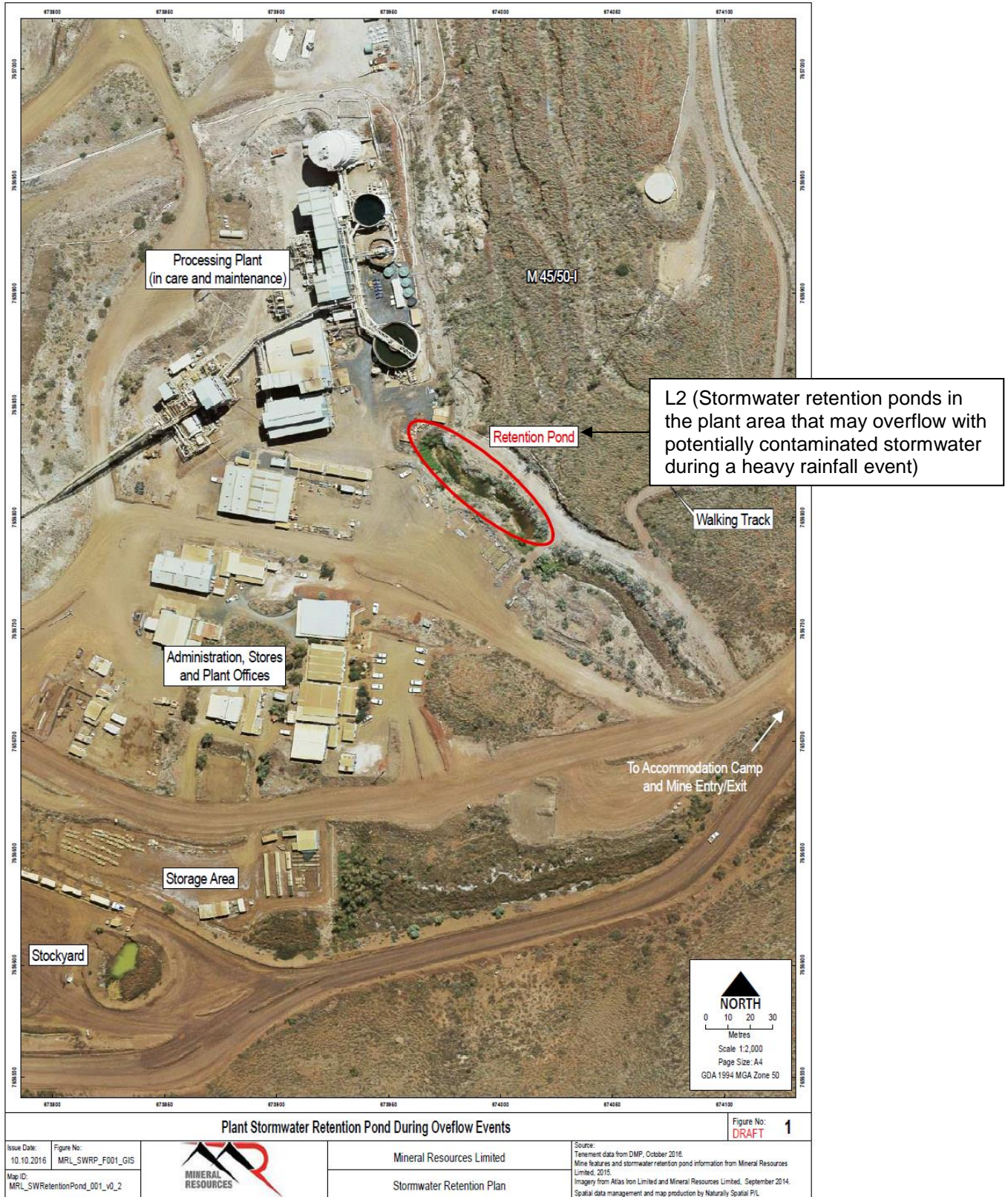




Map of emission points

The location of the emission point defined in Table 2.2.1 is shown below.



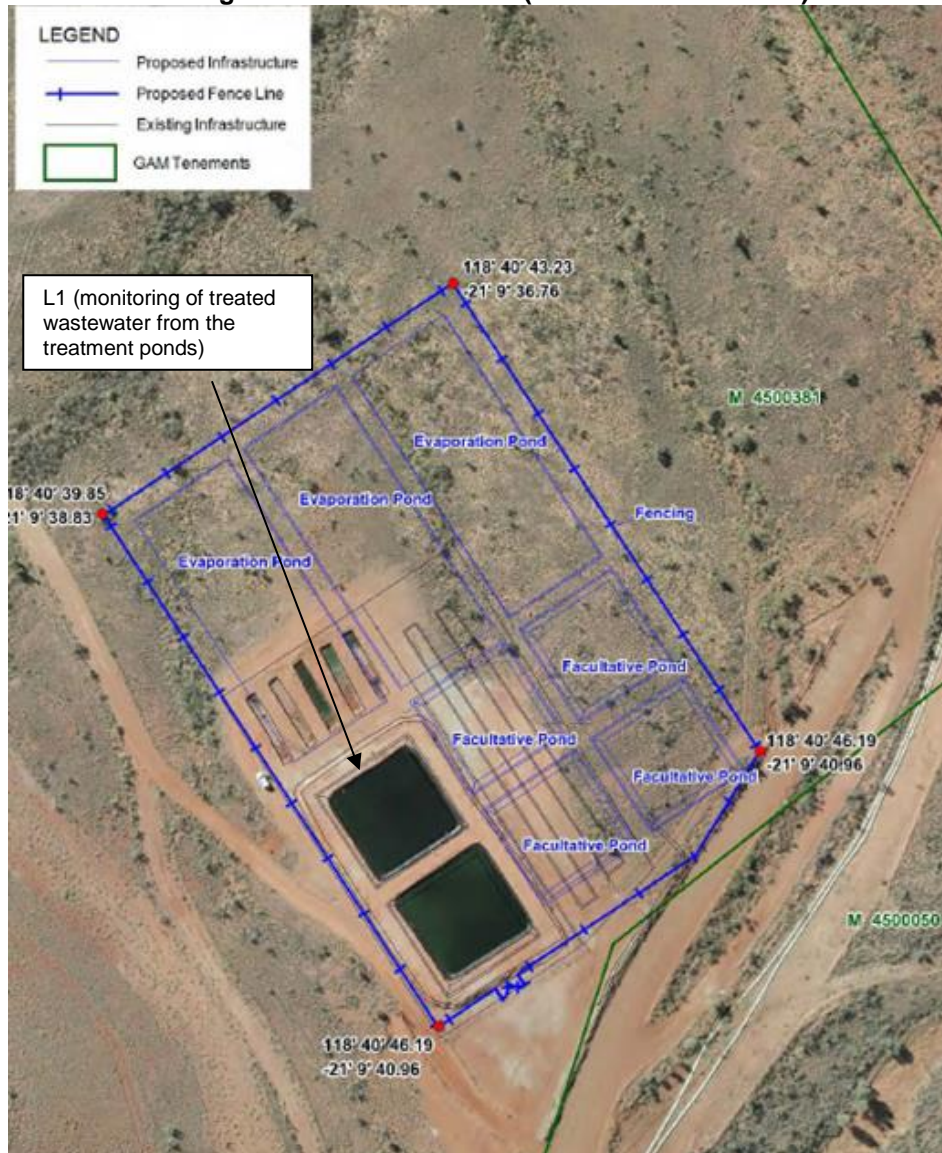




Map of monitoring locations

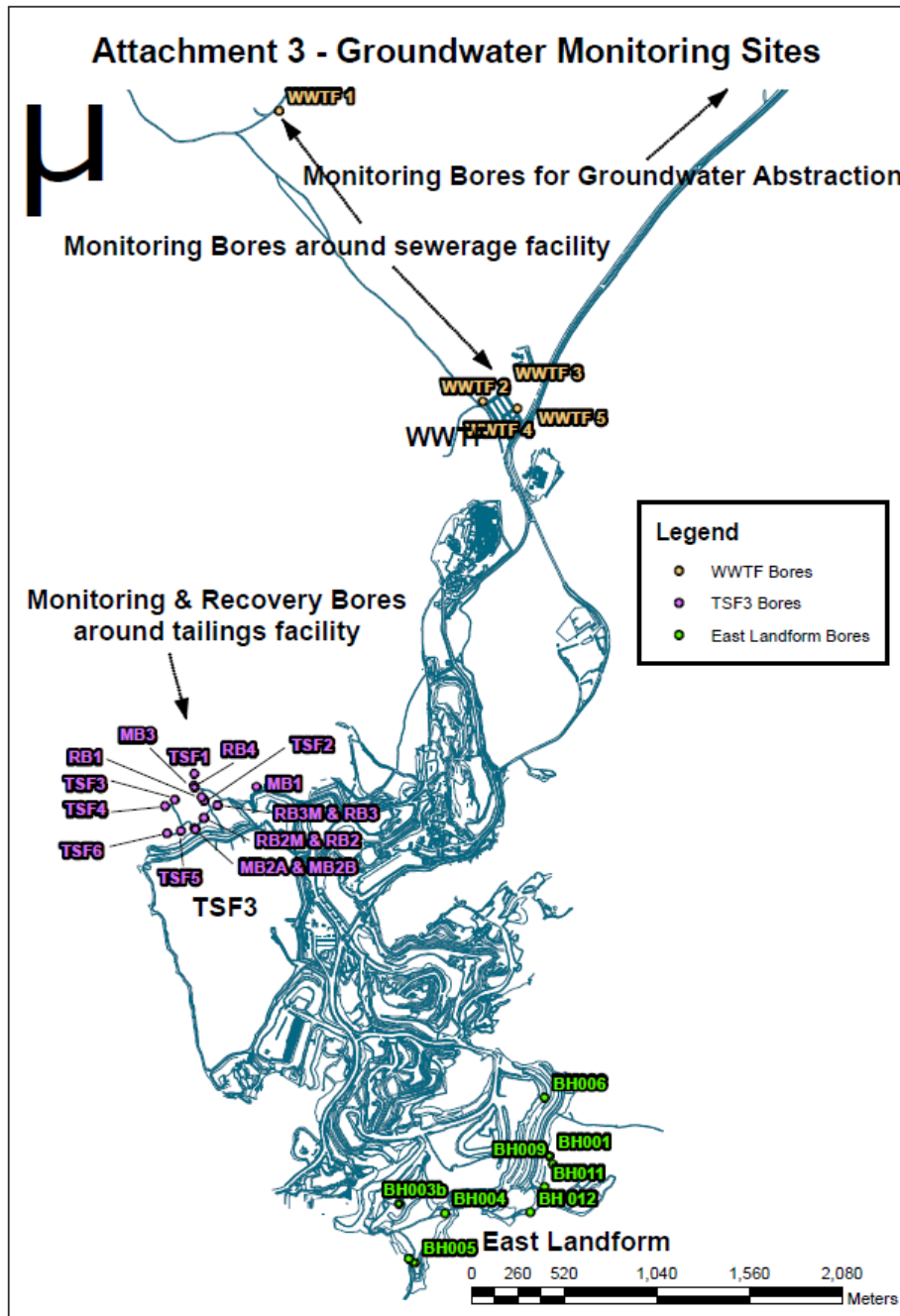
The locations of the monitoring points defined in Table 3.2.1 and Table 3.4.1 are shown in the figures below.

WWTP monitoring of treated wastewater (defined in Table 3.2.1)





Groundwater monitoring bores (defined in Table 3.4.1)





Schedule 2: Reporting & notification forms

These forms are provided for the proponent to report monitoring and other data required by the Licence. They can be requested in an electronic format.



Licence: L4328/1989/10
Form: N1

Licensee: Wodgina Lithium Pty Ltd
Date of breach:

Notification of detection of the breach of a limit or any failure or malfunction of any pollution control equipment or any incident which has caused, is causing or may cause pollution.

These pages outline the information that the operator must provide.

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

Part A

Licence Number	
Name of operator	
Location of Premises	
Time and date of the detection	

Notification requirements for the breach of a limit	
Emission point reference/ source	
Parameter(s)	
Limit	
Measured value	
Date and time of monitoring	
Measures taken, or intended to be taken, to stop the emission	

Part B

Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident.	
Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission.	
The dates of any previous N1 notifications for the Premises in the preceding 24 months.	

Name	
Post	
Signature on behalf of Wodgina Lithium Pty Ltd	
Date	



Environmental Protection Act 1986, Part V

Licence: L4328/1989/10

Expiry date: Friday, 30 September 2033

Decision Document authorised by: Alana Kidd
Delegated Officer



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1 Purpose of this Document

This decision document explains how DER has assessed and determined the application 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.

2 Administrative summary

Administrative details		
Application type	Works Approval <input type="checkbox"/> New Licence <input type="checkbox"/> Licence amendment <input checked="" type="checkbox"/> Works Approval amendment <input type="checkbox"/>	
Activities that cause the premises to become prescribed premises	Category number(s)	Assessed design capacity
	5	6,800,000 tonnes per year
	54	210 cubic metres per day
	89	1,850 tonnes per year
Application verified	Date: N/A	
Application fee paid	Date: N/A	
Works Approval has been complied with	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	
Compliance Certificate received	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	
Commercial-in-confidence claim	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Commercial-in-confidence claim outcome	N/A	
Is the proposal a Major Resource Project?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Was the proposal referred to the Environmental Protection Authority (EPA) under Part IV of the <i>Environmental Protection Act 1986</i> ?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Referral decision No: Managed under Part V <input type="checkbox"/> Assessed under Part IV <input type="checkbox"/>
Is the proposal subject to Ministerial Conditions?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Ministerial statement No: EPA Report No:



Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the <i>Environmental Protection Act 1986</i>)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Department of Water consulted Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Is the Premises within an Environmental Protection Policy (EPP) Area Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If Yes include details of which EPP(s) here.	
Is the Premises subject to any EPP requirements? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If Yes, include details here, eg Site is subject to SO ₂ requirements of Kwinana EPP.	

3 Executive summary of proposal and assessment

This assessment is for the transfer of the Wodgina Operations from Global Advanced Metals Wodgina Pty Ltd to Wodgina Lithium Pty Ltd. During this transfer the licence conditions have not been modified aside from standard updates and a modification to the construction requirements condition (L1.3.10 – L1.3.11) for the tyre disposal areas to capture the construction requirements and not refer to supporting documentation. A map for emission point L2 was also added on the licence as this was previously not included.

The Decision Document assesses the new Applicant to be competent as the new operator and also justifies each condition of the licence. No other changes or assessment of emissions or discharges were made to the licence.

Wodgina Lithium Pty Ltd is listed on the Australian Securities & Investments Commission and was originally listed as A.C.N. 611 488 932 Pty Ltd. This is a newly initiated company; however, the Buyer Guarantor is Mineral Resources Limited who operates the Iron Valley Mine Site (L8859/2014/1) and Phil's Creek Project (L8654/2012/1). According to DER's Incidents and Complaints Management System there are a small number of minor incidents and compliance issues that have occurred at these sites that have been appropriately remediated.

The Wodgina Operation (tantalum mine) is located approximately 100 kilometres (km) south of Port Hedland in the Pilbara Region of Western Australia. The closest sensitive receptors are the Kangan Homestead and the Yandeyarra Aboriginal Community, located 19 km west north-west and 32 km west south-west, from the mine respectively.

The tantalum operations have been suspended and in care and maintenance since February 2012 and are planned to commence again in the coming months.

In 2010, Atlas Iron Limited (Atlas) commenced mining of iron ore on the tenements at Wodgina, under an agreement to share facilities. Atlas is currently mining at the Avro and Dragon pits until April 2017. Atlas plan standard mining and crushing activities for the next 12 months. Drill and blast activities are expected to cease by April 2017. Crushing is currently planned at up to 6 million tonnes per annum for the next 12 months although this may change.

The existing operations comprise the following infrastructure:

- two mining pits and several waste rock dumps;
- three bore fields and water reservoir;
- crushing and screening plant (currently operated by Atlas for the processing of iron ore);
- wastewater treatment facility (WWTF) comprising six facultative treatment ponds and three evaporation ponds;
- putrescible landfill facility;



- power station comprising 11 gas turbines with a maximum operating capacity of 1,400 kilowatts (kW);
- maintenance and vehicle workshops;
- administration offices;
- bioremediation facility; and
- Accommodation village.

June 2016 Amendment

This Decision Document was amended in June 2016, to allow the burial of heavy vehicle tyres at two locations, other than the existing landfill. The approved design for Category 89 – Putrescible landfill was increased from 1650 tonnes per annual period to 1850 tonnes per annual period. Approximately 200 tyres over 3-4 years will be landfilled at the two proposed tyre disposal areas. The increase by 200 tonnes to the design capacity of Category 89 was to capture this disposal. The tyre disposal areas are yet to be constructed and will require compliance documentation to be submitted to DER demonstrating these have been constructed in accordance with the licence conditions.

The following formed the basis of the amendment from June 2016:

- The burial of tyres to demarcate the waste and waste mineralised waste components within the Hercules waste rock landform and buried within the Hercules State 2 backfill;
- Increase the premises design capacity for Category 89 (Putrescible landfill) as the burial of tyres increased the approved design capacity from 1,650 tonnes per annual period to 1,850 tonnes per annual period;
- Reduction in parameters monitored for groundwater monitoring bores surrounding the WWTF
- Other changes made to reflect Departmental reform as published on DER's website under "*Administrative changes implemented within the Department of Environment Regulation*"; and
- The expiry date on the licence was also extended to 30 September 2033.

There are expansions proposed for this site, along with a modification to mine lithium in the near future. At this time, a full assessment of this licence would be required to assess the new process and review existing licence conditions.



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	Justification (including risk description & decision methodology where relevant)	Reference documents
General conditions	L1.1.3 – L1.1.4	These conditions ensure that relevant standards, guidelines and code of practices are used.	<i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i>
	L1.2.1	This condition ensures that sediment laden stormwater is settled within settlement ponds prior to discharge occurring.	
Premises operation	L1.3.1 – L1.3.5	These conditions ensure that the landfill and WWTF are only operated at the assessed capacities, waste acceptance criteria is maintained, relevant cover requirements are maintained at the landfill, maintain fencing, conducted regular inspections and conduct regular windblown waste clean-ups.	Application supporting documentation <i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i> <i>Guidance statement: Licensing and works approvals process (DER, September 2015).</i>
	L1.3.6 – L1.3.9	Condition 1.3.1 was updated during the June 2016 amendment to include the two new tyre disposal areas onsite (Hercules waste rock landform tyre disposal area and Hercules stage 2 backfill tyre disposal area).	
	L1.3.10 – L1.3.11	These conditions ensure that containment infrastructure meets particular requirements to prevent emissions and discharges to the environment, ponds are managed effectively to minimise overtopping or seepage and regular inspections are conducted. Condition 1.3.10 was added to the licence during the June 2016 amendment to allow for the construction of the two new tyre disposal areas under the licence amendment in accordance with the application documentation. This has been modified during the transfer (and is now two conditions) to capture the construction requirements rather than refer to supporting documentation. DER has not yet received compliance	



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		documentation for the tyre disposal areas.	
Emissions general	L2.1.1	This condition ensures that any limit in the licence that is exceeded shall be recorded and investigated.	DER public website at: www.der.wa.gov.au
Point source emissions to air including monitoring	Licence – no conditions	Construction and Operation No point source air emissions are expected during construction or operation of the new tyre disposal areas.	N/A.
Point source emissions to surface water including monitoring	Licence – no conditions	Construction and Operation No point source emissions to surface water are expected during construction or operation of the new tyre disposal area. The nearest creek is approximately 200 m away from the site's WWTF.	N/A.
Point source emissions to groundwater including monitoring	Licence – no conditions	Construction and Operation No point source emissions to groundwater are expected during construction or operation of the new tyre disposal areas. Depth to groundwater is approximately 16 to 21 metres (m) below ground level (bgl), as measured at several monitoring bores across the site. Groundwater resources are limited in extent and are generally in confined, fractured rock aquifers and contain fresh to brackish water. Assessment of the impact of landfill seepage on groundwater is discussed in the emissions to land section.	N/A.
Emissions to land including monitoring	Licence – no conditions	Construction No emissions to land are expected during the construction of the new tyre disposal areas. Operation <u>Emission Description</u>	Application supporting documentation General provisions of the



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p><i>Emission:</i> Discharge of leachate from waste onto land, the release of contaminated stormwater (that has been in contact with waste) onto land and windblown waste.</p> <p><i>Impact:</i> Contamination of the surrounding environment including soil, surface water and groundwater causing potential death of vegetation and fauna.</p> <p><i>Controls:</i></p> <ul style="list-style-type: none">• The depth to groundwater within the tyre disposal areas is approximately 16-21mbgl. Tyres will not be disposed of within 3 metres of the highest level of the underlying water table;• Tyres will be buried in batches separated from each other by at least 100 mm of inert material;• Tyres will be covered with inert material (at least 500mm deep) as soon as practicable to avoid deterioration;• Regular inspections will be conducted to assess disposal management;• Stormwater will be diverted away from the tyre disposal areas;• Wastes other than tyres will be diverted to the site's putrescible landfill; and• No windblown waste is expected to be generated. <p><u>Risk Assessment</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Unlikely <i>Risk Rating:</i> Low</p> <p><u>Regulatory Controls</u> It is not expected that significant amounts of leachate will be generated due to the amount and type (approximately 200 tyres over the next 3 to 4 years) of waste disposed. The separation distance to groundwater is large (16-21mbgl) so it is not expected that an environmental impact will occur to groundwater. No conditions associated with emissions to land are required to be added to the licence as a result of this amendment.</p>	<i>Environmental Protection Act 1986.</i>



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
	L2.2.1, 2.2.2 & 3.2.1	<p><u>Residual Risk</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Unlikely <i>Risk Rating:</i> Low</p> <p>These conditions specify the discharge locations from the WWTF and the Stormwater retention ponds and set a limit for Total Recoverable Hydrocarbons of 15 mg/L. Monitoring of particular parameters is also required.</p> <p>An emission point – L2 was added to the licence during the June 2016 amendment as it was not clearly documented previously, and a map of this emission point was included on the licence during the February 2017 transfer.</p>	
Fugitive emissions	Licence – No conditions	<p>Construction and Operation <i>Emission:</i> During construction of the new tyre disposal areas dust emissions may arise due to earthmoving activities and site levelling. During operation fugitive dust emissions may arise from vehicle movement on unsealed roads, earthmoving activities and from cleared areas and stockpiles. <i>Impact:</i> Dust emissions impacting vegetation and nuisance dust impacting sensitive receptors. <i>Controls:</i> The Licensee has stated within their application that dust emissions will be managed by the use of water carts when necessary. There are no nearby sensitive receptors.</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Unlikely <i>Risk Rating:</i> Low</p> <p><u>Regulatory Controls</u></p>	<p>Application supporting documentation</p> <p>General provisions of the <i>Environmental Protection Act 1986</i>.</p> <p><i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i></p> <p><i>Administrative</i></p>



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p>It is not expected that dust will have a significant impact on the off-site environment. No conditions associated with dust are required to be added to the licence as a result of this amendment.</p> <p><u>Residual Risk</u> Consequence: Insignificant Likelihood: Unlikely Risk Rating: Low</p> <p><u>Wodgina mine site</u> Existing dust controls that are being implemented across the Wodgina mine site include:</p> <ul style="list-style-type: none"> • The use of cannons/sprays and water carts at the crushing plant, ROM skyway and stockyards; and • Water carts are also used on haul roads and LV roads to minimise dust lift off. <p>Fugitive emissions of dust from the Wodgina mine site as a result of the current activities are considered low risk given the location of the Premises (approximately 100 kilometres (km) south of Port Hedland and 19 km west north-west of the Kangan homestead which is the nearest sensitive receptor).</p>	<p><i>changes implemented within the Department of Environment Regulation, DER public website at: www.der.wa.gov.au</i></p>
Odour	Licence – no conditions	<p>Construction and Operation No odour emissions will be generated by the construction or operation of the tyre disposal area.</p> <p><u>Wodgina mine site</u> Existing odour controls that are being implemented across the Wodgina mine site include:</p> <ul style="list-style-type: none"> • Regular inspections and maintenance of the WWTFs to ensure efficient 	<p>Application supporting documentation</p> <p>General provisions of the <i>Environmental Protection Act</i></p>



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L = Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p>operation;</p> <ul style="list-style-type: none"> Sludge is regularly removed by an approved contractor and disposed offsite at a licensed waste disposal facility; and Some odour may be generated from the sites putrescible landfill however this is not expected to be significant as waste is covered typically every day. <p>Fugitive emissions of odour from the Wodgina Mine site are considered low risk given the location of the Premises (approximately 100 kilometres (km) south of Port Hedland and 19 km west north-west of the Kangan homestead which is the nearest sensitive receptor).</p>	<p>1986.</p> <p><i>Administrative changes implemented within the Department of Environment Regulation, DER public website at: www.der.wa.gov.au</i></p>
Noise	N/A	<p>Construction and Operation</p> <p><u>Emission Description</u> <i>Emission:</i> Noise emissions from vehicle movement and earthmoving equipment during construction and operation of the tyre disposal areas. <i>Impact:</i> Nuisance noise emissions impacting nearby sensitive receptors (distance to nearest receptor is 19km west north-west – Kangan homestead). <i>Controls:</i> The licensee is required to comply with the <i>Environmental Protection (Noise) Regulations 1997</i> at all times. Noise levels are not expected to be significant.</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Rare <i>Risk Rating:</i> Low</p> <p>Due to the large distance to the nearest sensitive receptor (Kangan homestead 19 km away) it is unlikely that noise emissions will have a significant impact on the offsite environment.</p> <p><u>Regulatory Controls</u></p>	<p>Application supportant documentation.</p> <p><i>Environnemental Protection (Noise) Regulations 1997</i></p>



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		No specified conditions are required to be added to the licence. <i>Residual Risk</i> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Rare <i>Risk Rating:</i> Low	
Monitoring general	L3.1.1	The existing licence has conditions relating to monitoring of emissions to land at discharge points located at the sewage treatment plants.	N/A.
Monitoring of inputs and outputs	L3.3.1	The existing licence has conditions relating to the monitoring of inputs at the current landfill. This condition was updated during the June 2016 amendment to include the monitoring of inputs into the two tyre disposal areas.	N/A.
Process monitoring	N/A.	No process monitoring conditions are present on the licence.	N/A.
Ambient quality monitoring	L3.4.1	The monitoring of groundwater in the vicinity of the TSF3 and WWTF is carried out on a quarterly basis to determine if the operation of these facilities is impacting on groundwater levels and quality.	N/A.
Meteorological monitoring	N/A.	No specified conditions relating to meteorological monitoring are present on the licence.	N/A.
Improvements	N/A.	No specified conditions relating to improvements are present on the licence.	N/A.
Information	L4.2.2 and 4.3.1	Condition 4.3.1 was updated during the June 2016 amendment to include a requirement for the Licensee to notify DER within 14 days of the completion of the works involved in the construction of the tyre disposal areas. The notification will confirm that the works have been constructed in accordance with conditions L1.3.10 -	N/A.



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		L1.3.11.	
Licence Duration	N/A.	The expiry of the licence was extended to the 30 September 2033 (originally 30 September 2018) during the June 2016 amendment. This has been done in accordance with DERs <i>Guidance Statement: Licence duration</i> .	Guidance statement: Licence duration (DER, November 2014, amended May 2015).



5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
26/04/2016	Proponent sent a copy of draft instrument	No comments received.	Not applicable.
02/06/2016	Proponent resent copy of draft	Agreed with changes.	An update to the list of parameters monitored for groundwater monitoring around the WWTF was made.
22/12/2016	Proponent sent 21 day draft documents for transfer and amendments	Agreed with changes and advised that the tantalum mining operations have been in care in maintenance and are planned to commence again in the coming months.	Documents modified to reflect plans to commence operating.



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