



Decision Document

Environmental Protection Act 1986, Part V

Proponent: **Wodgina Lithium Pty Ltd**

Licence: **L4328/1989/10**

Registered office: 1 Sleaf 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

Issue date: Thursday, 26 September 2013

Commencement date: Tuesday, 1 October 2013

Expiry date: Friday, 30 September 2033

Decision

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

Decision Document prepared by: Christine Pustkuchen and Suzy Roworth
Licensing Officer

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). 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.	
	L1.3.10 – L1.3.11	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	



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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



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		<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. <i>Impact:</i> Contamination of the surrounding environment including soil, surface water and groundwater causing potential death of vegetation and fauna. <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>	<p><i>Environmental Protection Act 1986.</i></p>



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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>



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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:</i> www.der.wa.gov.au</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>



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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>



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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: Insignificant</i> <i>Likelihood: Rare</i> <i>Risk Rating: Low</i>	
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