

# **Decision Document**

## Environmental Protection Act 1986, Part V

**Proponent: Atlas Iron Limited** 

Licence: L8788/2013/1

Registered office: Raine Square, Level 18

300 Murray Street PERTH WA 6000

**ACN:** 110 396 168

Premises address: Mt Webber DSO Project

M45/1209-1, L45/280 and Land Administration Act 1997 Section 91 Licence

Area (LIC00200/2013\_A3227408)

**NULLAGINE WA 6758** 

Issue date: Thursday, 27 March 2014

Commencement date: Monday, 31 March 2014

**Expiry date:** Saturday, 30 March 2019

#### Decision:

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

Decision Document prepared by: Christine Pustkuchen

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 New Licence Licence amendment Works Approval amendme	ent
	Category number(s)	Assessed design capacity
Activities that cause the premises to become prescribed premises	5 – Processing or benefication of metallic or non-metallic ore	7,000,000 tonnes per annual period
prescribed premises	12 – Screening etc. of material	260,000 tonnes per annual period
	54 – Sewage Facility	119 cubic metres per day
	89 – Putrescible landfill	500 tonnes per annual period
Application verified	Date:	
Application fee paid	Date:	
Works Approval has been complied with	Yes No No N/A	A
Compliance Certificate received	Yes No No N/A	$A \boxtimes$
Commercial-in-confidence claim	Yes□ No⊠	
Commercial-in-confidence claim outcome		
Is the proposal a Major Resource Project?	Yes⊠ No□	

Was the proposal referred to the Environmental Protection Authority (EPA) under Part IV of the Environmental Protection Act 1986?	Yes□	No⊠	Referral decision No:  Managed under Part V   Assessed under Part IV
Is the proposal subject to Ministerial Conditions?	Yes□	No⊠	Ministerial statement No: 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 No Department of Water consulted Yes No Department			er consulted Yes 🗌 No 🖂
Is the Premises within an Environmental Protection Policy (EPP) Area Yes No If Yes include details of which EPP(s) here.			
Is the Premises subject to any EPP requirements? Yes No⊠  If Yes, include details here, eg Site is subject to SO₂ requirements of Kwinana EPP.			

## 3 Executive summary of proposal and assessment

Atlas Iron Limited (Atlas) operates the Mt Webber Direct Shipping Ore (DSO) Project (the Project), approximately 170 kilometres (km) south-east of Port Hedland. The Project involves the mining of two open pits to extract an iron ore resource of approximately 63.2 million tonnes (Mt) over a mine life of approximately 10 years.

An accommodation camp, to support the construction and operation of the Project, has been constructed and is serviced by a 110 cubic metre per day (m³/day) capacity wastewater treatment plant (WWTP). Treated wastewater (TWW) from the WWTP is reused for dust suppression or disposed of via irrigation to a 1 hectare (ha) spray field. Atlas operates a landfill for the disposal of inert and putrescible waste generated onsite.

Atlas operate an ore processing facility (OPF) (category 5) onsite. The OPF was approved for a production and design capacity of 7,000,000 tonnes per annual period and is located within the run of mine (ROM) area. Ancillary infrastructure required for the operation of the mine includes:

- waste rock dumps;
- ROM area;
- mine operations centre and administration area;
- explosives storage facility;
- mining contractors yard and workshop;
- haulage contractors yard;
- borefields:
- borrow pits;
- access tracks and haul roads; and
- a second WWTP at the Mine Operations Centre (MOC) with the capacity to treat 9m<sup>3</sup>/day.

Amendment date: Thurday, 11 Febuary 2016

This Decision Document assesses an amendment request made by the Licensee to increase the approved throughput for category 89 from 450 tonnes to 500 tonne per annum by the addition of a tyre burial area within a waste rock dump. The following forms the basis of this amendment:

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- The burial of tyres under an active waste rock landform and subsequent increase in design capacity for category 89;
- The removal of category 12 from the licence; and
- Other changes made to reflect Departmental reform as published on DER's website under "Administrative changes implemented within the Department of Environment Regulation".

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

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Amendment date: Thurday, 11 Febuary 2016

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## 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 TAE	BLE		
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
General conditions		Category 12 has been removed from the licence. This was originally granted to allow crushing and screening of gravel for the construction of the Public Road Upgrad (PRU). The construction works are now complete, with no further crushing and screening equired onsite.	N/A.
	L1.2.1 – 1.2.3	Generic changes have been made to the General Conditions as part of DER reform and updates to licence templates. These changes include removing conditions referencing the code of practice for the storage and handling of dangerous goods and referring to environmentally hazardous materials. It is the licensees responsibility to ensure they comply with relevant legislative requirements for the storage and handling of environmentally hazardous materials. Unauthrorised discharges of environmentally hazardous materials maybe subject to the provisions of the <i>Environmental Protection</i> ( <i>Unauthrorised Discharges</i> ) Regulations 2004.	
Premises operation	L1.3.1	The approved design capacity for Category 89 has been increased from 450 tonnes to 500 tonnes per annual period (condition 1.3.1). This is to include the addition of the new tyre disposal area within the Ibanez waste rock landform (separate from the site's current Category 89 landfill location).	Application supporting documentation
	L1.3.3 and L1.3.6 -1.3.7	It is expected that approximately 130 tyres per year over the next 3 to 4 years will be disposed of at the new tyre disposal area. The disposal area will be approximately 25 m x 25 m at the base of the Ibanez waste rock landform. The landform will eventually encapsulate the tyre disposal area. Wastes other than used tyres will be segregated and directed to the sites current landfill facility. Atlas Iron have committed to carrying	



DECISION TAB	LE		
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		out regular inspections and to record the number of tyres disposed of on a monthly basis. The licence currently contains conditions in relation to the covering of tyres with soil material to a depth of 500 mm and landfill management (conditions 1.3.6 and 1.3.7). No additional tyre disposal management conditions are required to be added to the licence.	
	L1.3.10-1.3.12	Condition 1.3.3 has been updated to include the addition of the new tyre disposal area and to ensure that only tyres are disposed of at the new tyre disposal area. A map of the tyre disposal area has also been included in the licence.  Conditions 1.3.10 have been added to the licence to insure that the new tyre disposal area is constructed in accordance with the documentation provided to DER.	
Emissions general	L2.1.1	Generic changes have been made to condition 2.1.1 in line with DER reform and updates to licence templates. This change relates to the removal of the reference to targets.	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 area. No specified conditions relating to point source emissions to air or the monitoring of such emissions are required to be added to the licence as part of this amendment.	Application supporting documentation
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. There are no permanent bodies of water in close proximity to the tyre disposal area. The nearest waterbody is approximately 1 km away to the east (Python Waterhole).	Application supporting documentation
		No specified conditions relating to point source emissions to surface water or the	



DECISION TABL	.E		
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		monitoring of such emissions are required to be added to the licence as part of this amendment.	
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 area. The licensee has stated that the depth to groundwater in the area is greater than 20 metres below ground level (mbgl).  No specified conditions relating to point source emissions to groundwater or the monitoring of such emissions are required to be added to the licence as part of this amendment.	Application supporting documentation
		Assessment of the impact of landfill seepage on groundwater is discussed in the emissions to land section.	
Emissions to land including monitoring	Licence – no conditions	Construction  No emissions to land are expected during the construction of the new tyre disposal area.	Application supporting documentation
		<ul> <li>Operation         Emission Description     </li> <li>Emission: Discharge of leachate from waste onto land, the release of contaminated stormwater (that has been in contact with waste) on to land and windblown waste.</li> <li>Impact: Contamination of the surrounding environment including soil, surface water and groundwater causing potential death of vegetation and fauna.</li> <li>Controls:         <ul> <li>The new tyre disposal area is located in an area where the depth to groundwater is approximately 20mbgl. Tyres will not be disposed of within 10 meters of the boundary or 3 meters of the highest level of the underlying water table;</li> <li>Stormwater will be diverted away from the tyre disposal area;</li> </ul> </li> </ul>	General provisions of the Environmental Protection Act 1986.



Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<ul> <li>Tyres will be buried in batches separated from each other by at least 100 mm of inert material;</li> <li>Tyres will be covered by inert material to a depth of at least 500mm;</li> <li>All other waste will be segregated and directed to the site's current landfill facility; and</li> <li>Regular inspections will occur to assess disposal management.</li> </ul>	
		Risk Assessment Consequence: Insignificant Likelihood: Unlikely Risk Rating: Low	
		Regulatory Controls  It is not expected that significant amounts of leachate or windblown waste will be generated by the disposal of tyres at the waste rock landform. The separation distance to groundwater is large 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.	
		Residual Risk Consequence: Insignificant Likelihood: Unlikely Risk Rating: Low	
	Licence conditions: 1.3.4, 1.3.5, 2.2.1, 2.2.2 and 3.2.1	Targets and limits associated with the WWTP Details of DER's assessment and decision making are included in Appendix B.	
Fugitive emissions	Licence – No conditions	Construction and Operation  Emission: During construction of the new tyre disposal area dust emissions may arise	Application supporting



Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		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.  Impact: dust emissions impacting vegetation and nuisance dust impacting sensitive receptors.  Controls: Dust emissions will be managed via the use of water carts.	documentation  General provisions of the Environmental Protection Act 1986.
		Risk Assessment Consequence: Insignificant Likelihood: Unlikely Risk Rating: Low  Regulatory Controls 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.	Administrative changes implemented within the Department of Environment Regulation, DER public website at www.der.wa.gov
		Residual Risk Consequence: Insignificant Likelihood: Unlikely Risk Rating: Low	au
		<ul> <li>Mt Webber DSO project</li> <li>Existing dust controls that are being implemented across the Mt Webber DSO project include;</li> <li>Dust suppression at the ore processing facility is undertaken with water sprays on the crushing circuit. A mobile truck with a water cannon and/or spray bar will be also utilised to manage dust from the stockpiles as required. Transfer chutes are covered to further reduce dust emissions; and</li> </ul>	



DECISION TAE	BLE		
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		Dust associated with the crushing and screening plant is minimal and temporary. A mobile water cart is utilised to control dust on trafficable areas and stockpiles.	
		Fugitive emissions of dust from the Mt Webber DSO project are considered low risk given the location of the Premises (approximately 170 kilometres (km) south-east of Port Hedland and Hillside Station homestead >20 km away) and the accommodation villages are situated at suitable distances from the mine operations	
		Previous conditions 2.6.1 and 2.6.2 has been removed from the licence as the environmental/health risk of dust emissions associated with the premises is low. This is in accordance with Departmental reform as published on DER's website under "Administrative changes implemented within the Department of Environment Regulation. General provisions of the Environmental Protection Act 1986 and the Environmental Protection (Unauthorised Discharges) Regulations 2004 apply.	
Odour	Licence – no conditions	Construction and Operation  No odour emissions will be generated by the construction or operation of the tyre disposal area.	Application supporting documentation
		<ul> <li>Mt Webber DSO project</li> <li>Existing odour controls that are being implemented across the Mt Webber DSO project include;</li> <li>Regular inspections and maintenance of the WWTPs to ensure efficient operation;</li> <li>The WWTPs has been designed as an enclosed system and includes chlorination disinfection to reduce odour emissions; and</li> <li>Sludge is regularly removed by an approved contractor and disposed offsite at a licensed waste disposal facility; and</li> <li>Some odour may be generated from the sites putrescible landfill however this is not expected to be significant as waste is covered monthly or as soon as</li> </ul>	General provisions of the Environmental Protection Act 1986.  Administrative changes implemented within the Department of



DECISION TAR	BLE		
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		practicable after deposit.  Fugitive emissions of odour from the Mt Webber DSO project are considered low risk given the location of the Premises (approximately 170 kilometres (km) south-east of Port Hedland and Hillside Station homestead >20 km away) and the accommodation villages are situated at suitable distances from the WWTPs.  Previous condition 2.4.1 has been removed from the licence as the	Environment Regulation, DER public website at: www.der.wa.gov. au
		environmental/health risk of odour emissions associated with the premises is low. This is in accordance with Departmental reform as published on DER's website under "Administrative changes implemented within the Department of Environment Regulation". General provisions of the Environmental Protection Act 1986 and the Environmental Protection (Unauthorised Discharges) Regulations 2004 apply.	
Noise	N/A	Construction and Operation  Emission Description  Emission: Noise emissions from vehicle movement and earthmoving equipment during construction and operation of the tyre disposal area.  Impact: Nuisance noise emissions impacting nearby sensitive receptors (Hillside Station homestead >20 km away).  Controls: Atlas has stated that noise levels will comply with the Environmental Protection (Noise) Regulations 1997 at all times. Noise levels are not expected to be significant.	Application supportant documentation.  Environnemental Protection (Noise) Regulations 1997.
		Risk Assessment Consequence: Insignificant Likelihood: Rare Risk Rating: Low  Due to the large distance to the nearest sensitive receptor (Hillside Station homestead >20 km away) it is unlikely that noise emissions will have a significant impact on the	



DECISION TABLE			
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		offsite environment.	
		Regulatory Controls  No specified conditions are required to be added to the licence.	
		Residual Risk Consequence: Insignificant Likelihood: Rare Risk Rating: Low	
Monitoring general	L3.2.1	The existing licence has conditions relating to monitoring of emissions to land at discharge points located at the sewage treatment plants. No additional conditions relating to monitoring general are required to be added to the licence as a result of this amendment.	N/A.
Monitoring of inputs and outputs	L3.3.1	The existing licence has conditions relating to the monitoring of inputs and outputs at the current landfill. No additional conditions relating to inputs and outputs are required to be added to the licence as a result of this amendment.	N/A.
Process monitoring	N/A.	No specified conditions relating to process monitoring are required to be added to the licence as a result of this amendment.	N/A.
Ambient quality monitoring	N/A.	No specified conditions relating to ambient quality monitoring are required to be added to the licence as a result of this amendment.	N/A.
Meteorological monitoring	N/A.	No specified conditions relating to meteorological monitoring are required to be added to the licence as a result of this amendment.	N/A.
Improvements	N/A.	No specified conditions relating to improvements are required to be added to the licence as a result of this amendment	N/A.
Information	L4.2.2 and 4.3.1	Condition 4.2.2 has been updated to ensure the Licensee provides an assessment and comparison of the emissions to land monitoring data against the National Water Quality Management Strategy, Australian Guidelines for Sewerage Systems - Effluent Management, Agriculture and Resource Management Council of Australia and New	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
		Zealand and Australian and New Zealand Environment and Conservation Council, 1997 (NWQMS 1997) and all previous monitoring data.	
		Condition 4.3.1 has been updated to include a requirement for Atlas Iron to notify DER within 14 days of the completion of the works involved in the construction of the tyre disposal area. The notification will confirm that the works have been constructed in accordance with condition 1.3.10.	
		No additional conditions relating to information are required to be added to the licence as a result of this amendment.	
Licence Duration	N/A.	The licence is due to expire in March 2019. No change to the licence duration has occurred as a result of this amendment.	N/A.



# 5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
28/01/2016	Proponent sent a copy of draft instrument	<ul> <li>Request to remove Category 12 from licence as it is no longer required; and</li> <li>Request to make a minor change to wording within frequency column in Table 3.3.1</li> </ul>	All changes requested by the proponent have neen made to the licence.



# 6 Risk Assessment

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

#### **Table 1: Emissions Risk Matrix**

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

## Appendix A

#### **Emissions to land including monitoring**

#### **Emission Description**

*Emission:* Effluent from each of the Mt Webber DSO project wastewater treatment plants (Camp WWTP and MOC WWTP), which discharges to land via irrigation spray fields (Camp WWTP – 1.0 hectares (ha) and MOC WWTP 0.22 ha).

*Impact:* Effluent discharged as irrigation to land has the potential to result in degraded or waterlogged land, with soil or groundwater contamination arising where the effluent is either saline, turbid, nutrient enriched, and/or contaminated with metals.

#### Controls:

The following management measures are currently being implemented by Atlas Iron;

- The irrigation spray field areas are fenced and signed to restrict personnel from accessing the area:
- Irrigation fields are regularly inspected and undergo weed management;
- WWTPs are regularly serviced and maintained according to manufactures specifications;
- Treated wastewater is not applied during heavy rain events or if heavy rain is forecasted
  within two hours of application. Pooling of irrigated treated wastewater and surface runoff is
  unlikely due to vegetation uptake and the high evaporation rate experienced in the region
  (approximately 3 metres (m) per year);
- Treated wastewater quality is monitored on a quarterly basis as per condition 3.2.1; and
- Conditions 1.3.4 and 1.3.5 require Atlas Iron to manage the irrigation fields and WWTP treatment vessels appropriately to ensure environmental impact is minimised.

# Risk Assessment Consequence: Minor Likelihood: Rare Risk Rating: Low

Risk of a significant impact to the environment as a result of irrigation of wastewater has been determined as low. This has been determined based on the following information;

- The management measures (outlined above under Controls) undertaken by Atlas Iron to ensure that the WWTPs are operating efficiently and according to manufactures specifications;
- The project area is not located within a public drinking water source area (although it is located within the Pilbara Groundwater Management Area, proclaimed under the *Rights in Water and Irrigation Act 1914*, and the Pilbara Groundwater Province);
- Standing water levels from bores drilled northeast of the WWTPs show a groundwater gradient towards the Shaw River in the east. Bore depths in the vicinity of the WWTPs show that the static water levels range from 9.25 to 14.62 metres below ground level (mbgl). Therefore the likelihood of an impact to groundwater is low;
- There are no permanent surface water bodies located nearby to the irrigation areas: and
- The Licensee is required to monitor wastewater quality on a quarterly basis and to report the results along with a comparison against previous results in the Annual Environmental Report.

The Licensee's Annual Environmental Report for the 2015 reporting period noted that there were a number of exceedances of the water quality targets (for Total Nitrogen, Total Phosphorus, *E. coli* and Total Suspended Solids) during the reporting period. Each exceedance was followed up and management actions taken to address these exceedances.

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#### **Regulatory Controls**

Previous condition 2.5.3 (wastewater quality targets) has been removed from the licence as the risk to the environment from the irrigation of treated wastewater is low. This is in accordance with Departmental reform as published on DER's website under "Administrative changes implemented within the Department of Environment Regulation" www.der.wa.gov.au.

Condition 4.2.2 has been updated to ensure the Licensee provides an assessment and comparison against the *National Water Quality Management Strategy, Australian Guidelines for Sewerage Systems - Effluent Management*, Agriculture and Resource Management Council of Australia and New Zealand and Australian and New Zealand Environment and Conservation Council, 1997 (NWQMS 1997) and all recorded monitoring data.

Previous condition 2.5.2 (now 2.2.2) has been modified to remove reference to Total Nitrogen and Total Phosphorus loading limits. These have been removed as;

- the risk to the environment from the irrigation of treated wastewater is low (see above); and
- the Department of Water's, Water Quality Protection Note 22, which the loading rate limits are based on, refers to industrial and agricultural wastewater not treated effluent and therefore do not apply.

Amendment date: Thurday, 11 Febuary 2016

Residual Risk

Consequence: Minor Likelihood: Rare Risk Rating: Low

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