



Works Approval

Environmental Protection Act 1986, Part V

Works Approval Holder: Deflector Mining Limited

Works Approval Number: W5188/2012/1

Registered office: Level 3
41-43 Ord Street
WEST PERTH WA 6005

ACN: 101 224 999

Premises address: Gullewa Operations
Mining Tenements M59/49, M59/356, M59/507, M59/522, M59/442,
L59/49, L59/71 and L59/64
Morawa-Yalgoo Road
YALGOO, WA 6635
As depicted in Schedule 1

Issue date: Thursday, 02 August 2012

Commencement date: Monday, 06 August 2012

Expiry date: Saturday, 05 August 2017

The following category/s from the *Environmental Protection Regulations 1987* cause this Premises to be a prescribed premises for the purposes of the *Environmental Protection Act 1986*:

Category number	Category description	Category production or design capacity	Approved premises production or design capacity
05	Processing or beneficiation of metallic or non-metallic ore	50,000 tonnes or more per year	480,000 tonnes per annual period
06	Mine dewatering	50,000 tonnes or more per year	600,000 tonnes per annual period
64	Class II putrescible landfill site	More than 20 but less than 5,000 tonnes per year	175 tonnes per annual period
85	Sewage facility	More than 20 but less than 100 cubic metres per day	50 cubic metres per day

Conditions

This Works Approval is subject to the conditions set out in the attached pages.

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Alana Kidd
Officer delegated under section 20
of the *Environmental Protection Act 1986*



Works Approval Conditions

1 General

1.1 Interpretation

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

1.1.2 In the Works Approval, unless the contrary intention appears:

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

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

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

'CEO' for the purpose of correspondence means;

Manager Licensing (Resource Sector)
At the following address:

Department of Environment Regulation
Locked Bag 33
CLOISTERS SQUARE WA 6850
Telephone: (08) 9333 7510
Facsimile: (08) 9333 7550
Email: industry.regulation@der.wa.gov.au;

'Commissioning' means the process of operation and testing that verifies the works and all relevant systems, plant, machinery and equipment have been installed and are performing in accordance with the design specification set out in the works approval application;

'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;

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

'Schedule 1' means Schedule 1 of this Works Approval unless otherwise stated;

'Works Approval' means this Works Approval numbered W5188/2012/1 and issued under the *Act*;

'Works Approval Holder' means the person or organisation named as the Works Approval Holder on page 1 of the Works Approval; and

'WWTP' means wastewater treatment plant.

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

1.1.4 Any reference to a guideline or code of practice in the Works Approval 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 guidelines or code of practice made during the term of this Works Approval.

1.2 General conditions

1.2.1 The Works Approval Holder shall construct the works in accordance with the documentation detailed in Table 1.2.1:

Table 1.2.1: Construction Requirements¹		
Document	Parts	Date of Document
Gullewa Gold Copper Project: Scoping Report by Woolard Consulting	All	February 2012
Works Approval Application Form	All	22 February 2012
Gullewa Gold: Response to Queries by Kevin Reynolds of Mutiny Gold Limited	All	26 March 2012
Gullewa Gold Copper Project by Kevin Reynolds of Mutiny Gold limited	All	04 April 2012
Deflector Gold Copper Project scoping report to support amendments to Works Approval W5188/2012/1 and Prescribed Premises Licence L7798/1993/06	All	September 2014
Form P4 - relocation of site	All	03 October 2014
Letter titled "Deflector Gold Copper Project: Amendment to Works Approval W5188/2012/1	All	28 November 2014
Form P4 – requested expiry date extension for Works Approval	All	10 December 2014
Letter – requested extension of time for Works Approval	All	10 December 2014
Letter titled "Deflector Gold Project: Licence 7798/1993/05 – Works Approval 5188/2012/1 Amendment application for relocation of the processing plant and construction of WWTP with land discharge	All	10 May 2015
Deflector Gold Project: Scoping report to support amendments to Works Approval 5188/2012/1 and Prescribed Premises Licence 7798/1993/06, Document number: DML-DGP-WASR-0515-Rev1.2	All	Not provided
Form P4 - relocation of processing plant, inclusion of WWTP	All	8 May 2015
Response to queries by Colin Woolard of Woolard Consulting, email, 8 July 2015	All	8 July 2015

Note 1: Where the details and commitments of the documents listed in condition 1.2.1 are inconsistent with any other condition of this works approval, the conditions of this works approval shall prevail.

1.2.2 The Works Approval Holder shall commission the WWTP for a period not exceeding three months.

1.3 Premises operation

1.3.1 The Works Approval Holder shall ensure that all pipelines containing or intended to contain environmentally hazardous substances are either:

- equipped with telemetry systems and pressure sensors along pipelines to allow for the detection of leaks and failures;
- 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.

2 Monitoring

2.1.1 The Works Approval Holder shall ensure that:

- all wastewater sampling is conducted in accordance with AS/NZS 5667.10;



- (b) all laboratory samples are submitted to and tested by a laboratory with current NATA accreditation for the parameters being measured [unless indicated otherwise in relevant table].

2.1.2 The Works Approval Holder shall undertake the monitoring specified in Table 2.1.1 during the commissioning period.

Table 2.1.1: Commissioning monitoring				
Monitoring point reference	Parameter	Units	Averaging period	Frequency
EIA # 1 final effluent outfall	Biochemical Oxygen Demand	mg/L	Spot sample	Weekly
	pH ¹	pH units		
	<i>E.coli</i>	cfu/100ml		
	Total Nitrogen	mg/L		
	Total Phosphorus	mg/L		
	Residual Free Chlorine ¹	mg/L		
	Effluent flow rate	kL/day	24 hours	Continuous

Note 1: In-situ, non-NATA accredited analysis permitted.

3 Information

3.1 Reporting

3.1.1 The Works Approval Holder shall submit a compliance document to the CEO, following the construction of the works and prior to commissioning of the same.

3.1.2 The compliance document shall:

- (a) certify that the works were constructed in accordance with the conditions of the Works Approval; and
- (b) be signed by a person authorised to represent the Works Approval Holder and contain the printed name and position of that person within the company.

3.1.3 The Works Approval Holder shall submit a commissioning report for the WWTP to the CEO within one month of the completion of commissioning.

3.1.4 The Works Approval Holder shall ensure the report required by Condition 3.1.3 includes a summary of the monitoring results recorded under condition 2.1.2 and an assessment against the design specifications set out in the Works Approval application.

3.2 Notification

3.2.1 The Works Approval Holder shall ensure that the parameters listed in Table 3.2.1 are notified to the CEO and are in accordance with the notification requirements of the table.

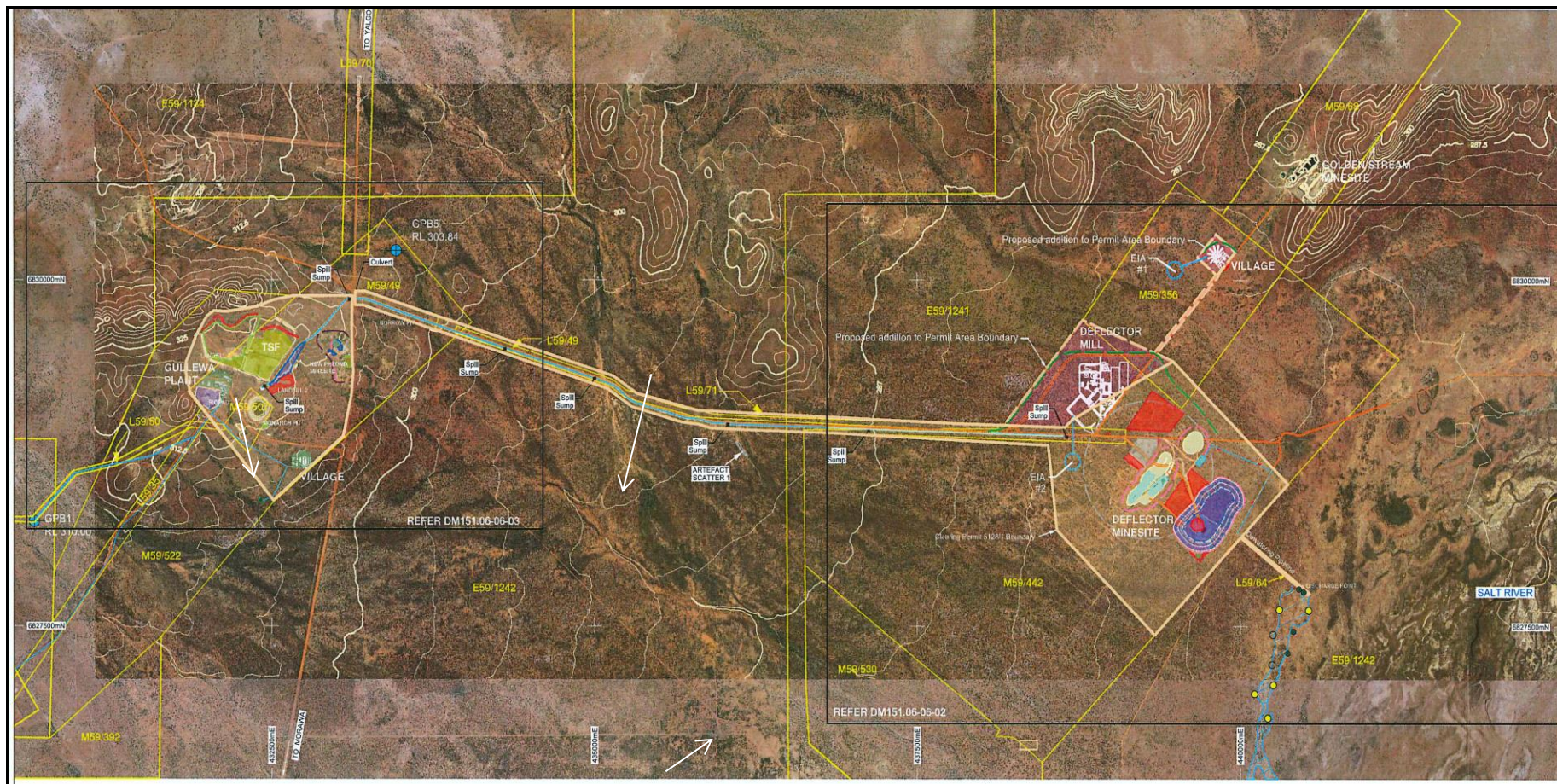
Table 3.2.1: Notification requirements			
Condition or table (if relevant)	Parameter	Notification requirement	Format or form
2.1.2	Commencement of commissioning	7 days prior to start	None specified
	Completion of commissioning	7 days after completion	



Schedule 1: Maps

Premises map

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





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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 type="checkbox"/>	
	Works Approval amendment <input checked="" type="checkbox"/>	
Activities that cause the premises to become prescribed premises	Category number(s)	Assessed design capacity
	5	480,000 tonnes per annual period
	6	600,000 tonnes per annual period
	64 85	175 tonnes per year 50 cubic metres per day
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 type="checkbox"/>
Commercial-in-confidence claim	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Commercial-in-confidence claim outcome		
Is the proposal a Major Resource Project?	Yes <input checked="" type="checkbox"/>	No <input 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"/>
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, e.g. Site is subject to SO ₂ requirements of Kwinana EPP.	



3 Executive summary of proposal and assessment

Mutiny Gold Limited (Mutiny) was a Perth based resource company holding gold, copper and nickel tenements in Western Australia. Doray Minerals Limited acquired Mutiny in March 2015 and is now trading under the name Deflector Mining Limited (DML) but remains the same legal entity and retains the same ACN.

The company's project is the Gullewa Operations (Project) and operates under *Environmental Protection Act 1986* Licence L7798/1993/6. The Project is located within the Gullewa tenements in the South Murchison region of WA. The Project is located 370 kilometres (km) north of Perth and 55km south of Yalgoo on Barnong Station. The Project has been on managed care and maintenance since January 2003.

The Project was initially licensed to process 300,000 tonnes per annum through the Gullewa processing plant and to dewater the Deflector mine and discharge the dewatering effluent water to a nearby salt lake system. The Gullewa processing plant and tailings storage facility (TSF), and the Deflector Mine are both covered by Licence L7798/1993/6. In 2012 Mutiny was granted Works Approval W5188/2012/1 to make modifications to the Gullewa process plant to increase the throughput up to 480,000 tonnes per annum and construct lifts of the embankments at the Gullewa tailings storage facility.

Mutiny submitted an amendment application to DER on 3 October 2014 for Works Approval W5188/2012/1. The amendment related to relocating the Gullewa processing operations to a site adjacent to the Deflector mining site, install a new tailings pipeline within a bunded corridor to utilise the existing Gullewa TSF, install a new landfill facility at the Deflector mine site and extend the expiry date of the Works Approval. All operations are within the same boundary area of the Premises. The processing plant was identical to that approved under the current Works Approval and no change to the type, nature or scale of activity or emissions was proposed. The amendment was approved and issued on 18 December 2014.

DML has submitted an application to DER on 12 May 2015 for a further amendment to Works Approval W5188/2012/1. The application for an amendment to Works Approval W5188/2012/1 relates to:

- relocation of the processing plant and the associated infrastructure approximately 250 metres north of its currently approved location at the Deflector mine site;
- the installation of a wastewater treatment plant (WWTP) at the Deflector mine site (instead of Gullewa) which is rated at up to 50 cubic metres a day; and
- increasing the throughput at the landfill from 110 to 175 tonnes per annum.

The Deflector mine site is located more than 10km from the nearest sensitive receptor which is the Barnong Station homestead. The depth to groundwater is consistent across the Deflector mine site being 20 metres Below Ground Level (mbgl). The groundwater salinity downstream of the Deflector mine site is recorded at 200,000 mg/L. The nearest surface water is a salt lake system which is 2 km away.

With the above considerations, DER believes there is no increased risk to the environment by shifting the Deflector processing plant 250 metres from its approved current location. Therefore only an updated location map of the Deflector processing plant will be required on the amended Works Approval.

The WWTP will consist of a stand-alone package facility with a design capacity of 50 cubic metres (m³) a day, and will discharge via irrigation to a one hectare (ha) fenced area. The WWTP will be used to service a 130 person accommodation village for the first 10 months (construction) which will then drop to 110 person village during operation. Soils in the irrigation area are typically deep loamy alkaline red earths or shallow loams overlying hardpan.

Increasing the throughput of the landfill from 110 to 175 tonnes is considered insignificant because the landfill is isolated with the nearest sensitive premises about two km away (village), only a small landfill (about 3 tonnes per week) and groundwater is 20 mbgl. The current Licence for the Project has landfill conditions however no landfill category is stated on the Licence. The current Works Approval W5188/2012/1 includes Category 89 (Registered premises) however this will be amended to the correct category description of Category 64.



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	W1.1.2, W1.2.3 Licence conditions proposed	<p>Construction</p> <p>Conditions have been included to ensure the WWTP is constructed and commissioned in accordance with works approval application and supporting documents.</p> <p>Commissioning condition has been included to ensure the commissioning of the WWTP does not exceed 3 months.</p> <p>The change in location of the processing plant by 250 metres is not expected to increase the risk to the environment therefore no additional conditions are required.</p> <p>Definitions for 'Commissioning' and 'WWTP' have been included in the interpretation section.</p> <p>'Code of practise' and 'dangerous goods' definitions have been removed from the Works Approval. The CEO correspondence address has also been updated.</p> <p>Operation</p> <p>Conditions requiring the Licensee to prevent stormwater becoming contaminated and to treat contaminated stormwater prior to it being discharged to the environment are already included in the existing Licence. The requirements of this condition will be included in the updated licence template for the Project once the Licence is amended following the completion of the works under Works Approval W5188/2012/1.</p>	<p>Application supporting documentation</p> <p>General provisions of the <i>Environmental Protection Act 1986</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
Premises operation	W1.3.1 Licence conditions proposed	<p>Construction A condition for pipelines containing environmentally hazardous substances has already been included in the Works Approval. No alteration to this condition or any additional conditions are required in this section.</p> <p>Operation WWTP operation conditions will be included in the updated licence template for the Project once the Licence is amended following the completion of the works under Works Approval W5188/2012/1.</p> <p>Conditions for the operation of the landfill facility, pipelines, chemical storage and waste management from ancillary operations are already included in the existing Licence. The requirements of these conditions will be included in the updated licence template for the Project once the Licence is amended following the completion of the works under Works Approval W5188/2012/1.</p> <p>Increasing the throughput of the landfill from 110 to 175 tonnes is considered insignificant because the landfill is isolated with the nearest sensitive premises about two km away (village), only a small landfill (about 3 tonnes per week) and groundwater is 20 mbgl. The current Licence for the Project has landfill conditions however no landfill category is stated on the Licence. The current Works Approval W5188/2012/1 includes Category 89 (Registered premises) however this will be amended to the correct licence category description of Category 64.</p>	<p>Application supporting documentation</p> <p>General provisions of the <i>Environmental Protection Act 1986</i>.</p>
Emissions to land including monitoring	W2.1.2 Licence conditions proposed	<p>Construction A condition for monitoring treated effluent disposed during the commissioning of the WWTP has been included in the Works Approval. DML has committed to weekly monitoring of the irrigated treated wastewater. Limits have not been applied at the commissioning stage because the risk to the environment for the small batch WWTP (23m³ per day) are considered low.</p> <p>Operation <u>Emission Description</u></p>	<p>Application supporting documentation</p> <p>General provisions of the <i>Environmental Protection Act 1986</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><i>Emission:</i> Treated wastewater discharged to the irrigation area during operation. <i>Impact:</i> Contamination of surrounding land and eutrophication of nearby surface waters. <i>Controls:</i> The maximum design capacity of 50 m³/day of irrigated treated wastewater applied to the proposed one hectare area would result in approximately 219 kg of phosphorus and 547.5 kg of nitrogen being applied each year. The soil type is loam which has a high Phosphorus Retention Index and the proposed maximum throughput is only 23m³ per day which would equate to 100kg/ha/yr for phosphorus and 251.8kg/ha/yr for nitrogen.</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Insignificant. <i>Likelihood:</i> Rare. <i>Risk Rating:</i> Low</p> <p><u>Regulatory Controls</u> Proposed Licence conditions:</p> <ul style="list-style-type: none"> • Allow discharge of treated wastewater from WWTP to the on-site irrigation area; • Monitoring of the discharged treated wastewater. Parameters to be monitored include volume, faecal coliforms, and total phosphorus and total nitrogen. • Management conditions to ensure irrigation area is managed appropriately. • Reporting conditions. <p>The risk of irrigating treated wastewater to land has been assessed as low.</p> <p><u>Residual Risk</u> <i>Consequence:</i> Insignificant. <i>Likelihood:</i> Rare <i>Risk Rating:</i> Low</p>	<p><i>Environmental Protection (Unauthorised Discharges) Regulations 2004.</i></p>
Monitoring general	W2.1.1 Licence conditions proposed	<p>Operation Conditions have been included which requires the Works Approval Holder to ensure all water samples are collected in accordance with Australian/New Zealand Standard <i>Water Quality – Sampling, Part 10 Guidance on sampling of wastewaters</i>, and are submitted to</p>	Application supporting documentation



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L = Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p>a NATA accredited laboratory for analysis.</p> <p>Construction Conditions have been included which requires the Works Approval Holder to ensure all water samples are collected in accordance with Australian/New Zealand Standard <i>Water Quality – Sampling, Part 10 Guidance on sampling of wastewaters</i>, and are submitted to a NATA accredited laboratory for analysis.</p>	
Information	W3 Licence conditions proposed	<p>Construction A condition has been included in the Works Approval requiring the Works Approval Holder to submit to the CEO a commissioning report within one month from the completion of commissioning.</p> <p>A condition has been included in the Works Approval requiring the Works Approval Holder to notify the CEO 7 days prior to the commencement of commissioning the WWTP, and to notify the CEO 7 days after the completion of commissioning the WWTP.</p> <p>Operation Recording and reporting conditions are already included in the existing Licence. The requirements of these conditions will be included in the updated licence template for the Project once the Licence is amended following the completion of the works under Works Approval W5188/2012/1.</p>	Application supporting documentation
Duration	N/A	The duration of the works approval has already been extended until August 2017 at the last amendment on 18 December 2014. There are no factors that warrant amending the duration of the works approval.	N/A



5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
24/7/2015	Proponent sent a copy of draft instrument (21 day letter package)	Waiver form received 4/8/2015. No comments	N/A
10/08/2015	Application advertised in West Australian (or other relevant newspaper)		



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