



# Licence

## *Environmental Protection Act 1986, Part V*

**Licensee:** Ramelius Resources Limited

**Licence:** L8878/2015/1

**Registered office:** Suite 4  
 148 Greenhill Road  
 PARKSIDE SA 5063

**ACN:** 001 717 540

**Premises address:** Kathleen Valley Project  
 Mining tenements M36/375, M36/376 and M36/441  
 LEINSTER WA 6437  
 as depicted in Schedule 1.

**Issue date:** Thursday, 2 July 2015

**Commencement date:** Monday, 6 July 2015

**Expiry date:** Sunday, 5 July 2020

**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
6	Mine dewatering: premises on which water is extracted and discharged into the environment to allow mining of ore	50 000 tonnes or more per year	470 000 tonnes per annual period
89	Class II or III putrescible landfill site	More than 20 but less than 5 000 tonnes per year	600 tonnes per annual period

**Conditions**

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

.....  
 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 works with the business owners, community, consultants, industry and other representatives to prevent, control and abate pollution and environmental harm to conserve and protect the environment. DER also monitors and audits compliance with works approvals and licence conditions, takes enforcement action as appropriate and develops and implements 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 Environment. You are required to comply with any conditions imposed by the Minister.

#### **Premises description and Licence summary**

The Kathleen Valley Project is located approximately 46 km north of Leinster and 100 km south of Wiluna in the north-eastern Goldfields region of Western Australia. Ramelius Resources Limited (Ramelius) proposed to commence mining at the project in quarter 3, 2015. The majority of mining operation infrastructure, including pits and waste rock dumps, is located on M36/375, with associated dewatering infrastructure and Main Road pit located on M36/376 and M36/441. The project is within the Shire of Leonora and is also located within the Yakabindie Pastoral Station.

The project comprises of three deposits, Mossbecker, Yellow Aster and Nil Desperandum, which will be mined via five small to medium sized open-cut pits. Approximately 300 000 – 400 000 tonnes of ore will be mined per annum over a two year period. Ore will be stockpiled on ROM pads prior to being transported offsite for processing at Ramelius' operating Checkers Treatment Plant, located 370 km west-southwest of the project in Mount Magnet.

To allow for mining of the deposits, dewatering of the Mossbecker Pit will commence in mid-2015. Groundwater will be collected from a number of water bores located at the pit margin or from in-pit sumps and pumped to a turkeys nest transfer dam. One transfer dam will be established at Mossbecker and a second dam at Yellow Aster (which will also service Nil Desperandum Pit).

Surplus water will be pumped to the Main Road Pit via temporary pipelines (1.5 km from Mossbecker and 2.5 km from Nil Desperandum). This pit was previously used for dewatering by the Cosmos Nickel operation which closed in 2012. Existing infrastructure including a bunded ditch and pipeline may be utilised.

A water balance was developed for the dewatering into Main Road Pit, with results indicating the pit can accept a discharge of 9.5 L/s. A maximum pit lake level of 487.9 mAHD was adopted which allows for a minimum freeboard of 4 m below the lowest point along the pit crest, which is sufficient to protect surrounding flora from groundwater level mounding.

Groundwater to be discharged into the Main Road Pit from Mossbecker, Yellow Aster and Nil Desperandum Pits is fresh to brackish. Water quality in the vicinity of the project ranges in total dissolved solids from 471 and 7 842 mg/L.

Small amounts of domestic and inert waste will be produced on site. Solid waste that cannot be reused or recycled will be placed in two onsite landfills. It is expected that inert waste disposal will be less than 500 tonnes per year and putrescible waste disposal is expected to be less than 20 tonnes per year. The proposed landfill sites will be located in the Mossbecker and Yellow Aster waste rock dumps. This Licence is for the operation of a new facility established under works approval W5810/2015/1.

The licences and works approvals issued for the Premises since 02/04/2015 are:



<b>Instrument log</b>		
<b>Instrument</b>	<b>Issued</b>	<b>Description</b>
W5810/2015/1	16 April 2015	Works approval to construct dewatering pipelines and landfill
L8878/2015/1	2 July 2015	New application

**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*;

**'annual period'** means the inclusive period from 1 April until 31 March in the following year;

**'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 5667.11'** 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 or target is measured or a monitoring result is obtained;

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

**'CEO'** for the purpose of correspondence means;  
Manager Licensing Resources (South)  
Department of Environment Regulation  
Locked Bag 33  
Cloisters Square  
PERTH WA 6850  
Telephone: (08) 6467 5000  
Facsimile: (08) 6467 5562  
Email: industry.regulation@der.wa.gov.au;

**'code of practice for the storage and handling of dangerous goods'** means the document titled "Storage and handling of dangerous goods: Code of Practice" published by the Department of Mines and Petroleum, as amended from time to time;

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

**'dangerous goods'** has the meaning defined in the *Dangerous Goods Safety (Storage and Handling of Non-explosives) Regulations 2007*;

**'environmentally hazardous material'** means material (either solid or liquid raw materials, materials in the process of manufacture, manufactured products, products used in the manufacturing process, by-products and waste) which if discharged into the environment from or within the premises may cause pollution or environmental harm. Note: Environmentally hazardous materials include dangerous goods where they are stored in quantities below placard quantities. The storage of dangerous goods above placard quantities is regulated by the Department of Mines and Petroleum;

**'freeboard'** means the distance between the maximum water surface elevations and the top of retaining banks or structures at their lowest point;



**'fugitive emissions'** means all emissions not arising from point sources identified in sections 2.2, 2.3, 2.4 and 2.5;

**'Licence'** means this Licence numbered L8878/2015/1 and issued under the Act;

**'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;

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

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

**'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; 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 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 version of that 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 Nothing in the Licence shall be taken to authorise any emission that is not mentioned in the Licence, where the emission amounts to:

- (a) pollution;
- (b) unreasonable emission;
- (c) discharge of waste in circumstances likely to cause pollution; or
- (d) being contrary to any written law.

1.2.2 The Licensee shall operate and maintain all pollution control and monitoring equipment to the manufacturer's specification or any relevant and effective internal management system.

1.2.3 The Licensee, except where storage is prescribed in section 1.3, shall ensure that environmentally hazardous materials are stored in accordance with the code of practice for the storage and handling of dangerous goods.

1.2.4 The Licensee shall immediately recover, or remove and dispose of spills of environmentally hazardous materials outside an engineered containment system.

1.2.5 The Licensee shall:

- (a) implement all practical measures to prevent stormwater run-off becoming contaminated by the activities on the Premises; and



- (b) treat contaminated or potentially contaminated stormwater as necessary prior to being discharged from the Premises.<sup>1</sup>

Note1: *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 any saline dewatering effluent shall only be managed in the following manner:

- (a) used for dust suppression in a manner that minimises damage to surrounding vegetation; and/or
- (b) discharged to containment infrastructure or the previously mined Mossbecker pit in accordance with the conditions of this Licence.

1.3.2 The Licensee shall ensure that mine water is discharged into Mossbecker and Yellow Aster turkey's nests with the relevant infrastructure requirements and at the locations specified in Table 1.3.1:

Table 1.3.1: Containment Infrastructure		
Containment point reference	Material	Infrastructure requirements
Mossbecker turkey's nest	Mine dewater	Lined with 1mm HDPE liner to achieve a permeability of at least $<10^{-9}$ m/s
Yellow Aster turkey's nest	Mine dewater	Lined with 1mm HDPE liner to achieve a permeability of at least $<10^{-9}$ m/s

1.3.3 The Licensee shall manage the turkey's nests in Table 1.3.1 such that a minimum top of embankment freeboard of 500 mm or a 1 in 100 year/72 hour storm event (whichever is greater) is maintained.

1.3.4 The Licensee shall:

- (a) undertake inspections as detailed in Table 1.3.2;
- (b) 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
- (c) maintain a record of all inspections undertaken.

Table 1.3.2: Inspection of infrastructure		
Scope of inspection	Type of inspection	Frequency of inspection
Dewatering pipelines	Visual integrity	Twice daily
Turkey's nests	Visual integrity	Daily

1.3.5 The Licensee shall ensure that wastes accepted onto the landfill are only subjected to the process set out in Table 1.3.5 and in accordance with any process limits described in that table.

Table 1.3.5: Waste processing		
Waste type	Process(es)	Process limits <sup>1,2</sup>
Putrescible waste	Receipt, handling and disposal of waste by landfilling	All waste types Disposal of waste by landfilling shall only take place within the landfill areas shown on the Map in Schedule 1.
Inert waste Type 1		The separation distance between the base of the landfill and the highest groundwater level shall not be less than 2m.

Note 1: Requirements for landfilling tyres are set out in Part 6 of the Environmental Protection Regulations 1987.

Note 2: 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.



- 1.3.6 The Licensee shall ensure that cover is applied and maintained on landfilled wastes in accordance with Table 1.3.6 and that sufficient stockpiles of cover are maintained on site at all times.

<b>Table 1.3.6: Cover requirements <sup>1</sup></b>			
<b>Waste type</b>	<b>Material</b>	<b>Depth</b>	<b>Timescales</b>
Putrescible wastes	Inert and incombustible material	Sufficient to ensure the waste is completely covered and that no waste is exposed	Cover shall be applied monthly
Inert waste Type 1	No cover required		

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

- 1.3.7 The Licensee shall ensure that wind-blown waste is contained within the boundary of the premises and that wind-blown waste is returned to the tipping area.
- 1.3.8 The Licensee shall construct the landfill in accordance with document detailed in Table 1.3.7.

<b>Table 1.3.7: Construction requirements</b>		
<b>Document</b>	<b>Parts</b>	<b>Date of Document</b>
Works Approval Application, Dewatering of Mossbecker, Yellow Aster and Nil Desperandum Pits – Kathleen Valley Project, M36/375, M36/376 & M36/441, Prepared for Ramelius Resources Limited by Blueprint Environmental Strategies.	All including drawings and appendices	February 2015

- 1.3.9 The Licensee shall submit a compliance certificate following the construction of the landfill.
- 1.3.10 The compliance document shall :
- (a) Certify that the works were constructed in accordance with the document detailed in Table 1.3.7; and
  - (b) Be signed by a person authorised to represent the Licence Holder and contain the printed name and position of that person within the company.



## 2 Emissions

### 2.1 General

2.1.1 The Licensee shall record and investigate the exceedance of any descriptive or numerical limit or target specified in any part of section 2 of this Licence.

### 2.2 Point source emissions to air

There are no specified conditions relating to point source emissions to air in this section.

### 2.3 Point source emissions to surface water

There are no specified conditions relating to point source emissions to surface water in this section.

### 2.4 Point source emissions to groundwater

2.4.1 The Licensee shall ensure that where waste is emitted to groundwater from the emission points in Table 2.4.1 and identified on the map of emission points in Schedule 1 it is done so in accordance with the conditions of this Licence.

**Table 2.4.1: Emission points to groundwater**

Emission point reference	Description	Source including abatement
Main Road pit	Mine dewater from Mossbecker pit, Yellow Aster pit and Nil Desperandum pit.	Mine dewater

2.4.2 The Licensee shall not cause or allow point source emissions to groundwater greater than the limits listed in Table 2.4.2

**Table 2.4.2: Point source emission limits to groundwater**

Emission point reference	Parameter	Limit (including units)	Averaging period
Main Road pit	Standing water level	4 m below crest level	Spot sample

2.4.3 The Licensee shall target point source emissions to groundwater at or below the levels specified in Table 2.4.3

**Table 2.4.3: Point source emission targets to groundwater**

Emission point reference	Parameter	Target (including units)	Averaging period
Main Road pit	Standing water level	6 m below crest level	Spot sample

### 2.5 Emissions to land

There are no specified conditions relating to emissions to land in this section.

### 2.6 Fugitive emissions

There are no specified conditions relating to fugitive emissions in this section.

### 2.7 Odour

There are no specified conditions relating to odour in this section.

### 2.8 Noise

There are no specified conditions relating to noise in this section.



### 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 groundwater sampling is conducted in accordance with AS/NZS 5667.11; and
- (c) all laboratory samples are submitted to and tested by a laboratory with current NATA accreditation for the parameters being measured.

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.

#### 3.2 Monitoring of point source emissions to air

There are no specified conditions relating to monitoring of point source emissions to air in this section.

#### 3.3 Monitoring of point source emissions to surface water

There are no specified conditions relating to monitoring of point source emissions to surface water in this section.

#### 3.4 Monitoring of point source emissions to groundwater

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

<b>Table 3.4.1: Monitoring of point source emissions to groundwater</b>			
<b>Emission point reference</b>	<b>Parameter</b>	<b>Units</b>	<b>Frequency</b>
Main Road pit	Volumetric flow rate	kL	Monthly
	Standing water level	metres below crest level	Monthly
	pH <sup>1</sup>	-	Quarterly
	Total Dissolved Solids (TDS) <sup>1</sup>	mg/L	Quarterly

Note 1: pH and TDS is permitted to be measured in the field in accordance with Australian Standard 5667.

#### 3.5 Monitoring of emissions to land

There are no specified conditions relating to monitoring of emissions to land in this section.

#### 3.6 Monitoring of inputs and outputs

There are no specified conditions relating to monitoring of inputs and outputs in this section.

#### 3.7 Process monitoring

There are no specified conditions relating to process monitoring in this section.

#### 3.8 Ambient environmental quality monitoring

There are no specified conditions relating to ambient environmental quality monitoring in this section.

#### 3.9 Meteorological monitoring

There are no specified conditions relating to meteorological monitoring in this section.



## 4 Improvements

There are no specified improvement conditions in this section.

## 5 Information

### 5.1 Records

- 5.1.1 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 5.1.1(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.
- 5.1.2 The Licensee shall ensure that:
- (a) any person left in charge of the Premises is aware of the conditions of the Licence and has access at all times to the Licence or copies thereof; and
  - (b) any person who performs tasks on the Premises is informed of all of the conditions of the Licence that relate to the tasks which that person is performing.
- 5.1.3 The Licensee shall complete an Annual Audit Compliance Report indicating the extent to which the Licensee has complied with the conditions of the Licence, and any previous licence issued under Part V of the Act for the Premises for the previous annual period.
- 5.1.4 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.

### 5.2 Reporting

- 5.2.1 The Licensee shall submit to the CEO an Annual Environmental Report within 61 calendar days after the end of the annual period. The report shall contain the information listed in Table 5.2.1 in the format or form specified in that table.

<b>Table 5.2.1: Annual Environmental Report</b>		
<b>Condition or table (if relevant)</b>	<b>Parameter</b>	<b>Format or form<sup>1</sup></b>
-	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 3.4.1	Monitoring of emissions to groundwater	None specified
5.1.3	Compliance	Annual Audit Compliance Report (AACR)
5.1.4	Complaints summary	None specified

Note 1: Forms are in Schedule 2



5.2.2 The Licensee shall submit the information in Table 5.2.2 to the CEO according to the specifications in that table.

<b>Table 5.2.2: Non-annual reporting requirements</b>				
<b>Condition or table (if relevant)</b>	<b>Parameter</b>	<b>Reporting period</b>	<b>Reporting date (after end of the reporting period)</b>	<b>Format or form<sup>1</sup></b>
-	Copies of original monitoring reports submitted to the Licensee by third parties	Not Applicable	Within 14 days of the CEOs request	As received by the Licensee from third parties
Table 2.4.3	Target exceedances	Quarterly	28 calendar days	None specified

Note 1: Forms are in Schedule 2

### 5.3 Notification

5.3.1 The Licensee shall ensure that the parameters listed in Table 5.3.1 are notified to the CEO in accordance with the notification requirements of the table.

<b>Table 5.3.1: Notification requirements</b>			
<b>Condition or table (if relevant)</b>	<b>Parameter</b>	<b>Notification requirement<sup>1</sup></b>	<b>Format or form<sup>2</sup></b>
2.2.3	Limit exceedance where management action taken	As soon as practicable but no later than 5pm of the next usual working day.	N1
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.	N1
-	Any failure or malfunction of any pollution control equipment or any incident, which has caused, is causing or may cause pollution	Part B: As soon as practicable	
-	Notification of care and maintenance status	Within seven days of the decision to enter care and maintenance status	-
-	Intention to resume normal operations from care and maintenance status	At least 30 days before operations recommence.	-

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

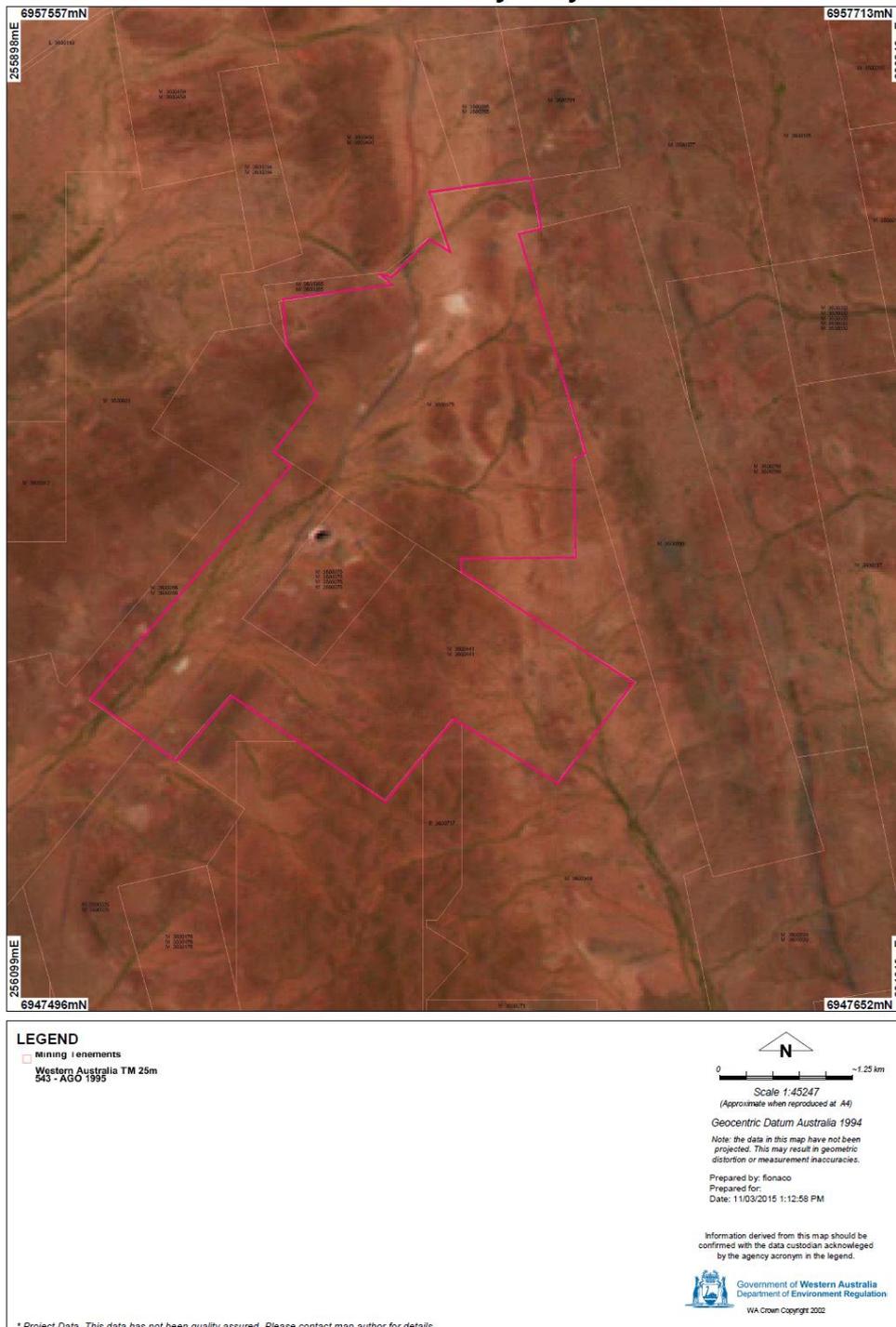


# Schedule 1: Maps

## Premises map

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

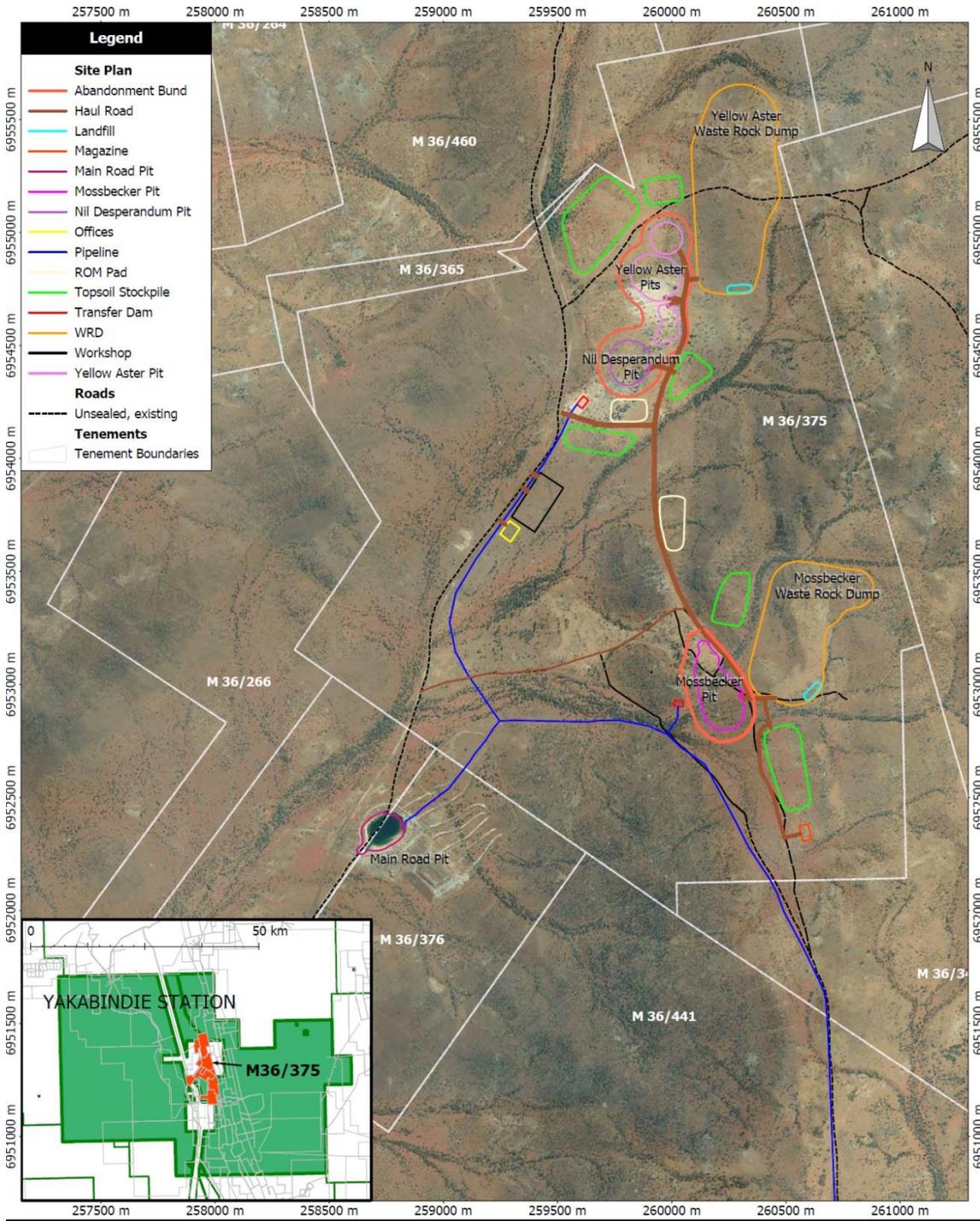
### Kathleen Valley Project





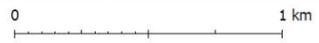
### Map of emission points

The locations of the emission points defined in Tables 1.3.5 and 2.4.1 are shown below.



Scale: 1:20000 Grid: Australia MGA94 (51)  
GIS Source: Kathleen Valley w Aerial map F2 - Site Layout and Tenure Layout

Figure 2: Site Layout and Tenure





## 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.

### ANNUAL AUDIT COMPLIANCE REPORT PROFORMA

#### SECTION A LICENCE DETAILS

Licence Number:	Licence File Number:
Company Name:	ABN:
Trading as:	
Reporting period: _____ to _____	

#### STATEMENT OF COMPLIANCE WITH LICENCE CONDITIONS

1. Were all conditions of the Licence complied with within the reporting period? (please tick the appropriate box)

Yes  Please proceed to Section C

No  Please proceed to Section B

Each page must be initialled by the person(s) who signs Section C of this Annual Audit Compliance Report (AACR).

Initial:



## SECTION B

### DETAILS OF NON-COMPLIANCE WITH LICENCE CONDITION.

Please use a separate page for each Licence condition that was not complied with.

a) Licence condition not complied with:	
b) Date(s) when the non compliance occurred, if applicable:	
c) Was this non compliance reported to DER?:	
<input type="checkbox"/> Yes <input type="checkbox"/> Reported to DER verbally Date _____ <input type="checkbox"/> Reported to DER in writing Date _____	<input type="checkbox"/> No
d) Has DER taken, or finalised any action in relation to the non compliance?:	
e) Summary of particulars of the non compliance, and what was the environmental impact:	
f) If relevant, the precise location where the non compliance occurred (attach map or diagram):	
g) Cause of non compliance:	
h) Action taken, or that will be taken to mitigate any adverse effects of the non compliance:	
i) Action taken or that will be taken to prevent recurrence of the non compliance:	

Each page must be initialled by the person(s) who signs Section C of this AACR

Initial:



## SECTION C

### SIGNATURE AND CERTIFICATION

This Annual Audit Compliance Report (AACR) may only be signed by a person(s) with legal authority to sign it. The ways in which the AACR must be signed and certified, and the people who may sign the statement, are set out below.

Please tick the box next to the category that describes how this AACR is being signed. If you are uncertain about who is entitled to sign or which category to tick, please contact the licensing officer for your premises.

If the licence holder is		The Annual Audit Compliance Report must be signed and certified:
An individual	<input type="checkbox"/> <input type="checkbox"/>	by the individual licence holder, or by a person approved in writing by the Chief Executive Officer of the Department of Environment Regulation to sign on the licensee's behalf.
A firm or other unincorporated company	<input type="checkbox"/> <input type="checkbox"/>	by the principal executive officer of the licensee; or by a person with authority to sign on the licensee's behalf who is approved in writing by the Chief Executive Officer of the Department of Environment Regulation.
A corporation	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	by affixing the common seal of the licensee in accordance with the <i>Corporations Act 2001</i> ; or by two directors of the licensee; or by a director and a company secretary of the licensee, or if the licensee is a proprietary company that has a sole director who is also the sole company secretary – by that director, or by the principal executive officer of the licensee; or by a person with authority to sign on the licensee's behalf who is approved in writing by the Chief Executive Officer of the Department of Environment Regulation.
A public authority (other than a local government)	<input type="checkbox"/> <input type="checkbox"/>	by the principal executive officer of the licensee; or by a person with authority to sign on the licensee's behalf who is approved in writing by the Chief Executive Officer of the Department of Environment Regulation.
a local government	<input type="checkbox"/> <input type="checkbox"/>	by the chief executive officer of the licensee; or by affixing the seal of the local government.

It is an offence under section 112 of the *Environmental Protection Act 1986* for a person to give information on this form that to their knowledge is false or misleading in a material particular. There is a maximum penalty of \$50,000 for an individual or body corporate.

I/We declare that the information in this annual audit compliance report is correct and not false or misleading in a material particular.

SIGNATURE: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_

NAME:  
(printed) \_\_\_\_\_

NAME:  
(printed) \_\_\_\_\_

POSITION: \_\_\_\_\_

POSITION: \_\_\_\_\_

DATE: \_\_\_\_/\_\_\_\_/\_\_\_\_

DATE: \_\_\_\_/\_\_\_\_/\_\_\_\_

SEAL (if signing under seal)



Licence: L8878/2015/1  
Form: N1

Licensee: Ramelius Resources Limited  
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	

<b>Notification requirements for the breach of a limit</b>	
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	

<b>Notification requirements for any failure or malfunction of any pollution control equipment or any incident which has caused, is causing or may cause pollution</b>	
Date and time of event	
Reference or description of the location of the event	
Description of where any release into the environment took place	
Substances potentially released	
Best estimate of the quantity or rate of release of substances	
Measures taken , or intended to be taken, to stop any emission	
Description of the failure or accident	



## 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 Ramelius Resources Limited	
Date	



# Decision Document

## *Environmental Protection Act 1986, Part V*

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**Proponent:** **Ramelius Resources Limited**

**Licence:** **L8878/2015/1**

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**Registered office:** Suite 4  
148 Greenhill Road  
PARKSIDE SA 5063

**ACN:** 001 717 540

**Premises address:** Kathleen Valley Project  
Mining tenements M36/375, M36/376 and M36/441  
LEINSTER WA 6437

**Issue date:** Thursday, 2 July 2015

**Commencement date:** Monday, 6 July 2015

**Expiry date:** Sunday, 5 July 2020

### **Decision**

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

Decision Document prepared by:

Fiona Sharpe  
Licensing Officer

Decision Document authorised by:

Danielle Eyre  
Senior Manager, Resource Industries



## Contents

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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.

### **Works approval and licence conditions**

DER has three types of conditions that may be imposed on works approvals and licences. They are as follows;

#### **Standard conditions (SC)**

DER has standard conditions that are imposed on all works approvals and licences regardless of the activities undertaken on the Premises and the information provided in the application. These are included as the following conditions on works approvals and licences:

Works approval conditions: 1.1.1-1.1.4, 1.2.1, 1.2.2, 5.1.1 and 5.1.2.

Licence conditions: 1.1.1-1.1.4, 1.2.1-1.2.4, 5.1.1-5.1.4 and 5.2.1.

For such conditions, justification within the Decision Document is not provided.

#### **Optional standard conditions (OSC)**

In the interests of regulatory consistency DER has a set of optional standard conditions that can be imposed on works approvals and licences. DER will include optional standard conditions as necessary, and are likely to constitute the majority of conditions in any licence. The inclusion of any optional standard conditions is justified in Section 4 of this document.

#### **Non standard conditions (NSC)**

Where the proposed activities require conditions outside the standard conditions suite DER will impose one or more non-standard conditions. These include both premises and sector specific conditions, and are likely to occur within few licences. Where used, justification for the application of these conditions will be included in Section 4.



## 2 Administrative summary

Administrative details							
Application type	Works Approval <input type="checkbox"/> New Licence <input checked="" type="checkbox"/> Licence amendment <input type="checkbox"/> Works Approval amendment <input type="checkbox"/>						
Activities that cause the premises to become prescribed premises	<table border="1"> <thead> <tr> <th>Category number(s)</th> <th>Assessed design capacity</th> </tr> </thead> <tbody> <tr> <td>6</td> <td>470 000 tonnes per year</td> </tr> <tr> <td>89</td> <td>600 tonnes per year</td> </tr> </tbody> </table>	Category number(s)	Assessed design capacity	6	470 000 tonnes per year	89	600 tonnes per year
	Category number(s)	Assessed design capacity					
	6	470 000 tonnes per year					
89	600 tonnes per year						
Application verified	Date: 23/02/2015						
Application fee paid	Date: 02/03/2015						
Works Approval has been complied with	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>						
Compliance Certificate received	Yes <input checked="" 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> ?	<table border="1"> <tr> <td>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></td> <td>           Referral decision No:            Managed under Part V <input type="checkbox"/>            Assessed under Part IV <input type="checkbox"/> </td> </tr> </table>	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"/>				
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?	<table border="1"> <tr> <td>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></td> <td>           Ministerial statement No:            EPA Report No:         </td> </tr> </table>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Ministerial statement No: EPA Report No:				
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 checked="" type="checkbox"/> No <input type="checkbox"/> Department of Water consulted Yes <input checked="" type="checkbox"/> No <input 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 <sub>2</sub> requirements of Kwinana EPP.						



### 3 Executive summary of proposal and assessment

The Kathleen Valley Project is located approximately 46 km north of Leinster and 100 km south of Wiluna in the north-eastern Goldfields region of Western Australia. Ramelius Resources Limited (Ramelius) proposed to commence mining at the project in quarter 3, 2015. The majority of mining operation infrastructure, including pits and waste rock dumps, is located on M36/375, with associated dewatering infrastructure and Main Road pit located on M36/376 and M36/441. The project is within the Shire of Leonora and is also located within the Yakabindie Pastoral Station.

The project comprises of three deposits, Mossbecker, Yellow Aster and Nil Desperandum, which will be mined via five small to medium sized open-cut pits. Approximately 300 000 – 400 000 tonnes of ore will be mined per annum over a two year period. Ore will be stockpiled on ROM pads prior to being transported offsite for processing at Ramelius' operating Checkers Treatment Plant, located 370 km west-southwest of the project in Mount Magnet.

To allow for mining of the deposits, dewatering of the Mossbecker Pit will commence in mid-2015. Groundwater will be collected from a number of water bores located at the pit margin or from in-pit sumps and pumped to a turkeys nest transfer dam. One transfer dam will be established at Mossbecker and a second dam at Yellow Aster (which will also service Nil Desperandum Pit).

Surplus water will be pumped to the Main Road Pit via temporary pipelines (1.5 km from Mossbecker and 2.5 km from Nil Desperandum). This pit was previously used for dewatering by the Cosmos Nickel operation which closed in 2012. Existing infrastructure including a bunded ditch and pipeline may be utilised.

A water balance was developed for the dewatering into Main Road Pit, with results indicating the pit can accept a discharge of 9.5 L/s. A maximum pit lake level of 487.9 mAHD was adopted which allows for a minimum freeboard of 4 m below the lowest point along the pit crest, which is sufficient to protect surrounding flora from groundwater level mounding.

Groundwater to be discharged into the Main Road Pit from Mossbecker, Yellow Aster and Nil Desperandum Pits is fresh to brackish. Water quality in the vicinity of the project ranges in total dissolved solids from 471 and 7 842 mg/L.

Small amounts of domestic and inert waste will be produced on site. Solid waste that cannot be reused or recycled will be placed in two onsite landfills. It is expected that inert waste disposal will be less than 500 tonnes per year and putrescible waste disposal is expected to be less than 20 tonnes per year. The proposed landfill sites will be located in the Mossbecker and Yellow Aster waste rock dumps.



## 4 Decision table

All applications are assessed in line with the *Environmental Protection Act 1986*, the *Environmental Protection Regulations 1987*, DEC's Policy Statement - Limits and targets for prescribed premises (2006), 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	OSC or NSC	Justification (including risk description & decision methodology where relevant)	Reference documents
General conditions	L1.2.1 – 1.2.5	N/A	Standard general conditions have been applied to the Licence.	General provisions of the <i>Environmental Protection Act 1986</i> .
Premises operation	L1.3.1 – 1.3.7	OSC	<b>Operation</b> DER's assessment and decision making are detailed in Appendix A.	Applicant supporting documentation
	L1.3.8 – 1.3.10	OSC	L1.3.7 – 1.3.10 was included in the Licence to allow for the compliance certificate for the landfill to be submitted after the issue of the Licence. Once the compliance certificate has been approved, the conditions will allow for operation to commence without a further Licence amendment.	General provisions of the <i>Environmental Protection Act 1986</i> .
Emissions general	L2.1.1	OSC	<b>Operation</b> OSC will be included in the Licence to ensure any exceedance of any descriptive or numerical limit or target is recorded and investigated.	Applicant supporting documentation  General provisions of the <i>Environmental Protection Act 1986</i> .
Point source	N/A	N/A	<b>Operation</b>	General



DECISION TABLE				
Works Approval / Licence section	Condition number W = Works Approval L= Licence	OSC or NSC	Justification (including risk description & decision methodology where relevant)	Reference documents
emissions to air including monitoring			No significant point source emissions to air are expected from operation of the dewatering infrastructure and landfills. No conditions are required for the Licence.	provisions of the <i>Environmental Protection Act 1986</i> .
Point source emissions to surface water including monitoring	N/A	N/A	<b>Operation</b> No significant point source emissions to surface water are expected from the operation of the dewatering infrastructure and landfills. Lake Miranda is the nearest surface water body located approximately 10 km south of the project. No conditions are required for the Licence.	General provisions of the <i>Environmental Protection Act 1986</i> .
Point source emissions to groundwater including monitoring	L2.4.1 – 2.4.3 L3.4.1	OSC	<b>Normal operation</b> <u>Emission Description</u> <i>Emission:</i> Groundwater is transported in pipelines from the Mossbecker pit and discharged to the Main Road pit. The quality of water from Mossbecker is fresh to brackish. <i>Impact:</i> Potential contamination of groundwater and possible mounding of the water table in the vicinity of the pit. The water quality from the Mossbecker pit is better than that currently in the Main Road pit. The latest results for total dissolved solids (TDS) for Main Road pit is approximately 160 000 mg/L. Mossbecker pit has TDS of approximately 670 mg/L. The lake in Main Road pit is hypersaline as a result of previous discharges from the Cosmos operation. Discharge to Main Road pit will result in formation of a temporary pit lake and associated groundwater mound within the vicinity of the pit. The biggest impact of concern would be rising groundwater levels, as hypersaline water can be detrimental to surrounding vegetation. <i>Controls:</i> Whilst it is expected that the water level in the pit and the surrounding groundwater table will rise, over time, the water will decrease through evaporation and seepage with residual water comprising rain water and surface runoff, as currently occurs. The quality of the water being discharged to Main Road pit meets the ANZECC (2000) Livestock Drinking Water guideline values except for TDS and is not considered to pose a threat to ecological receptors.	Applicant supporting documentation  General provisions of the <i>Environmental Protection Act 1986</i> .



DECISION TABLE				
Works Approval / Licence section	Condition number W = Works Approval L= Licence	OSC or NSC	Justification (including risk description & decision methodology where relevant)	Reference documents
			<p>The discharged water will dilute the hypersaline water currently in the receiving pit. The closest pastoral bore is located 7.7. km from the project. At this distance, dewatering will not have any effect on the bore or on any groundwater user in the area.</p> <p>A water balance developed for the project adopted a maximum pit lake level of 487.9 m AHD which allows for a minimum freeboard of 4 m below the lowest point along the pit crest, which was determined sufficient to prevent any unacceptable risks to surrounding flora from groundwater level mounding. Ramelius have committed to monitoring in accordance with DER licensing conditions.</p> <p><u>Risk Assessment</u>  <i>Consequence:</i> Moderate  <i>Likelihood:</i> Possible  <i>Risk Rating:</i> Moderate</p> <p><u>Regulatory Controls</u>            Licence conditions will allow the discharge to occur and to ensure pit level monitoring, along with volumetric flow, pH and TDS is undertaken. The Licence will have a target of 6 mbgl and a limit of 4 mbgl for standing water level within the pit.</p> <p><u>Residual Risk</u>  <i>Consequence:</i> Moderate  <i>Likelihood:</i> Unlikely  <i>Risk Rating:</i> Moderate</p>	
<b>Emissions to land including</b>	N/A	N/A	<p><b>Operation</b>            No emissions to land are expected to occur during operation of the dewatering</p>	Application supporting



DECISION TABLE				
Works Approval / Licence section	Condition number W = Works Approval L= Licence	OSC or NSC	Justification (including risk description & decision methodology where relevant)	Reference documents
monitoring			pipelines and landfills.	documentation  General provisions of the <i>Environmental Protection Act 1986</i> .
Fugitive emissions	N/A	N/A	<p><b>Operation</b>  <u>Emission Description</u>  <i>Emission:</i> Dust may be generated from movement of vehicles during landfill operation.  <i>Impact:</i> Dust emissions can be harmful to human health and the environment. Elevated total suspended particles (TSP) impacts ambient environmental quality which can result in amenity impacts and can smother vegetation.  <i>Controls:</i> The proponent has proposed the following controls for dust generation;                      -regular watering of unsealed surfaces;                      -vehicle and mining equipment to be kept to the designated roads; and                      -vehicle speed limits will be applied to reduce dust generation from vehicle movements.</p> <p><u>Risk Assessment</u>  <i>Consequence:</i> Minor  <i>Likelihood:</i> Rare  <i>Risk Rating:</i> Low</p> <p><u>Regulatory Controls</u>                      Due to the low risk, no regulatory controls are required for the Licence.</p>	Application supporting documentation  General provisions of the <i>Environmental Protection Act 1986</i> .
Odour	N/A	N/A	<p><b>Operation</b>                      No significant odour emissions are expected for the operation of the dewatering infrastructure and landfills. Landfills will be managed in accordance with OSCs</p>	Application supporting documentation



DECISION TABLE				
Works Approval / Licence section	Condition number W = Works Approval L= Licence	OSC or NSC	Justification (including risk description & decision methodology where relevant)	Reference documents
			under 'premises operation' section of Licence.	General provisions of the <i>Environmental Protection Act 1986</i> .
Noise	N/A	N/A	<b>Operation</b> No significant noise emissions will be generated from the operation of the dewatering pipeline or landfills. No conditions are required for the Licence.	General provisions of the <i>Environmental Protection Act 1986</i> .  <i>Environmental Protection (Noise) Regulations 1997</i>
Monitoring general	L3.1.1 – 3.1.2	OSC	<b>Operation</b> Monitoring will be included in the Licence, therefore general monitoring conditions will be included to specify that monitoring is carried out in accordance with relevant guidelines and standards, and monthly and quarterly monitoring is specified.	Australian Standard AS/NZS 5667.1 – Water Quality – Sampling – Guidance on the Design of sampling programs, sampling techniques and the preservation and handling of sample.



<b>DECISION TABLE</b>				
<b>Works Approval / Licence section</b>	<b>Condition number W = Works Approval L= Licence</b>	<b>OSC or NSC</b>	<b>Justification (including risk description &amp; decision methodology where relevant)</b>	<b>Reference documents</b>
<b>Monitoring of inputs and outputs</b>	N/A	N/A	No monitoring of inputs and outputs is required for the Licence.	General provisions of the <i>Environmental Protection Act 1986</i> .
<b>Process monitoring</b>	N/A	N/A	No process monitoring is required for the Licence.	General provisions of the <i>Environmental Protection Act 1986</i> .
<b>Ambient quality monitoring</b>	N/A	N/A	No ambient monitoring is required for the Licence for the dewatering activities. See the emissions to groundwater section of this table for monitoring requirements.	General provisions of the <i>Environmental Protection Act 1986</i> .
<b>Meteorological monitoring</b>	N/A	N/A	No meteorological monitoring is required for the Licence.	General provisions of the <i>Environmental Protection Act 1986</i> .
<b>Improvements</b>	N/A	N/A	No significant emissions are expected from the operation of the dewatering activities or landfills. No specified conditions relating to improvements are required to be added to the Licence.	N/A
<b>Information</b>	L5.1.1 – 5.3.1	OSC	The Licence will include standard conditions to ensure that records are retained, staff are aware of conditions via an accessible licence copy at all times and the Annual Audit Compliance Report is completed annually.  Standard conditions include a table which identifies the components and forms required for the Annual Environmental Report. Non-annual reporting	N/A



<b>DECISION TABLE</b>				
<b>Works Approval / Licence section</b>	<b>Condition number W = Works Approval L= Licence</b>	<b>OSC or NSC</b>	<b>Justification (including risk description &amp; decision methodology where relevant)</b>	<b>Reference documents</b>
			<p>requirements, including the reporting of target exceedances and copies of monitoring reports submitted to the Licensee by third parties, will also be included.</p> <p>Standard conditions require the Licensee to report any breach of limits specified in the Licence. The table identifies the form to be used and notification requirement parameters. Notification of care and maintenance status will also be required.</p>	
<b>Licence Duration</b>	N/A	N/A	Due to the low risk of the project, the Licence will be issued for a duration of five years.	N/A



## 5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
09/03/2015	Application advertised in West Australian (or other relevant newspaper)	No comments received.	N/A
09/03/2015	Application referred to interested parties listed Shire of Leonora	No comments received.	N/A
12/05/2015	Proponent sent a copy of draft instrument	No comments received.	N/A



## 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

### Premises Operation

#### *Emission Risk Assessment – Operations*

##### **Normal Operation**

###### Emission Description

*Emission:* Putrescible and inert (construction) wastes deposited into landfill.

*Impact:* Contamination of groundwater through leachate generated from the decomposition of putrescible waste combined with infiltrating rainfall and contamination of stormwater run-off.

*Controls:* Adequate design of the landfill facilities and located within the elevated waste rock dump where wastes are covered monthly with waste rock to ensure contaminated stormwater is contained. The proponent has committed to ensuring stormwater will be diverted away from the landfill. Groundwater in the area is typically lower than 20 mbgl.

###### Risk Assessment

*Consequence:* Minor

*Likelihood:* Unlikely

*Risk Rating:* Moderate

###### Regulatory Controls

An OSC will be included to ensure that uncontaminated stormwater is kept separate from contaminated or potentially contaminated stormwater and that if stormwater has come into contact with a possible source of contamination it is then treated as contaminated.

###### Residual Risk

*Consequence:* Minor

*Likelihood:* Rare

*Risk Rating:* Low

##### **Normal Operation**

###### Emission Description

*Emission:* Putrescible and inert (construction) wastes may become wind-blown.

*Impact:* Wind-blown waste can exist in the environment for a long period of time before decomposing and is hazardous to the environment. Wildlife can also ingest wind-blown waste as they may mistake it for food, which can cause serious harm and even death. Wind-blown waste may also be transported into waterways or even the ocean, where it can cause water pollution and algal blooms consequently negatively impacting on aquatic fauna.

*Controls:* The proponent has committed to ensure any waste that has been washed or blown outside the landfill area will be collected and returned to the tipping area. Waste in the landfill will be covered with at least 150 mm of cover material on a monthly basis. Relevant signage will be put in place listing the type of waste facility and materials to be deposited.

###### Risk Assessment

*Consequence:* Moderate

*Likelihood:* Possible

*Risk Rating:* Moderate

###### Regulatory Controls



OSCs 1.3.6 – 1.3.8 will be included in the Licence to ensure the landfills are managed appropriately, including cover requirements and the collection of wind-blown waste.

Residual Risk

*Consequence:* Moderate

*Likelihood:* Unlikely

*Risk Rating:* Moderate

**Abnormal Operation**

Emission Description

*Emission:* Brackish water is transported in pipelines through areas of native vegetation. Emissions may occur if the pipeline were to rupture or leak.

*Impact:* Contamination of surrounding soils with dissolved solids can affect groundwater quality and cause vegetation stress or even death if exposure is for a prolonged period. However, the water quality is fresh – brackish, not hypersaline, which is typical in the Goldfields region.

*Controls:* The proponent has committed to the following controls:

-flow meters will be fitted to the dewatering system to enable monitoring of extraction volumes; and  
-when pumping commences, the end of each line will be checked to ensure water is flowing and inspections of pipelines will be undertaken daily for the duration of pumping.

The proponent has stated that water from the Mossbecker pit will travel via a short length (approximately 150 m) of unbanded pipeline across a creek feature, and then travel in the previously established banded pipeline to the Main Road pit. The pipeline will be welded poly pipeline with a simple diesel pump system.

Risk Assessment

*Consequence:* Minor

*Likelihood:* Possible

*Risk Rating:* Moderate

Regulatory Controls

OSC's relating to pipelines will be included in the Licence. These conditions will ensure corrective action is taken in the event that pipelines leak or rupture, and will ensure daily inspections are carried out for pipeline integrity. Given the high quality of the water to be transported, it is determined that these conditions will be sufficient for management.

Residual Risk

*Consequence:* Minor

*Likelihood:* Unlikely

*Risk Rating:* Moderate

**Abnormal Operation**

Emission Description

*Emission:* Brackish water from Mossbecker pit pumped into turkey's nest.

*Impact:* Brackish water could contaminate surrounding soils and ecosystems if the turkey's nest was to leak, rupture or overtop.

*Controls:* The turkey's nest will be lined with a high density polyethylene (HDPE) liner, with a permeability of  $<10^{-9}$  m/s. The turkey's nest will be designed with a 0.5 m freeboard.

Risk Assessment

*Consequence:* Minor

*Likelihood:* Possible

*Risk Rating:* Moderate



Regulatory Controls

OSCs will be imposed on the Licence to ensure the turkey's nest is lined as specified, a freeboard of 500 mm to be maintained and for daily visual inspections occur.

Residual Risk

*Consequence:* Minor

*Likelihood:* Unlikely

*Risk Rating:* Moderate