



Licence

Environmental Protection Act 1986, Part V

Licensee: Shire of Leonora

Licence: L8815/2014/1

Registered office: 16 Tower Street
LEONORA WA 6438

ACN: 15 961 454 076

Premises address: Shire of Leonora Refuse Site
Reserve 31924 Lot 521
LEONORA WA 6438
As depicted in Schedule 1.

Issue date: Thursday, 21 August 2014

Commencement date: Monday, 25 August 2014

Expiry date: Thursday, 24 August 2030

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
61	Liquid waste facility: premises on which liquid waste produced on other premises (other than sewerage waste) is stored, reprocessed, treated or irrigated.	More than 100 tonnes	2000 tonnes per annual period

Conditions

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

Date signed: 10 November 2016

.....

Steve Checker
MANAGER LICENSING (WASTE INDUSTRIES)

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



Contents

Contents	2
Introduction	2
Licence conditions	5
1 General	5
2 Monitoring	10
3 Information	11
Schedule 1: Maps	13

Introduction

This introduction is not part of the Licence conditions.

DER's industry licensing role

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

DER has responsibilities under Part V of the *Environmental Protection Act 1986* (the Act) for the licensing of prescribed premises. Through this process DER regulates to prevent, control and abate pollution and environmental harm to conserve and protect the environment. DER also 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 Shire of Leonora (the Shire) is a local government area in the Goldfields-Esperance region of Western Australia, about 240 kilometres north of the city of Kalgoorlie and about 830 kilometres northeast of Perth. The Shire covers an area of 32,189 square kilometres.

The Shire has a population of approximately 2,500 (Australian Bureau of Statistics, 2011 Census) whilst the town of Leonora has a population of around 1,500. Metal ore mining and other mining support services are the largest employment type in the Shire.

The Shire operates liquid waste ponds located to the southeast of the town, adjacent to where the Shire also operates a Category 89 landfill on Registration R1724/2005/1. The site is unmanned with twice-weekly inspections. The nearest two residences are located 1km from the site, with the closest town residences over 2km away. The source of the waste received includes from town septic tanks, mine camps in the region and from water corporation in tanker trucks during breakdowns at the pump stations. The pond system is currently unlined and operated primarily by separation of solids in a primary pond with overflow to evaporation ponds. Treated sludge is disposed of at the landfill once the pond has been dried, with the majority of the liquid being lost to evaporation. Public access to the landfill is restricted during sludge disposal.

This licence is the result of an application to amend licence L8815/2014/1 to authorise the construction and operation of works at the premises. The following works are proposed under the amendment application:

- construction of two reinforced primary concrete ponds for the acceptance of liquid waste from tankers;
- construction of a secondary evaporation pond with composite liner; and
- installation of perimeter fence.

The proposed ponds which will be situated at the northeastern corner of Reserve 31924 will . The pond area is fenced and the site will be graded so that stormwater drains away from the ponds.

Following the construction and operation of the new waste ponds the existing ponds will be decommissioned and rehabilitated.

The storage volume for each pond will be as follows:

Primary concrete pond 1: 1035m³
Primary concrete pond 2: 1035m³
Secondary pond 1: 2573m³

The new ponds will not increase the currently approved acceptance volume. Information provided with the application states that the facility proposes to accept approximately 2,000 kilolitres of liquid waste per annum.

The main emission from the facility will be dust and odour. It is anticipated that these emissions can be adequately managed under the provisions of the *Environmental Protection Act 1986* and



mitigation measures put in place by the Licensee. The Licence has also been converted into DER's new licence template and during this process a Decision Document has been developed that assesses in detail all risks associated with the Premises. A number of DER initiated amendments have also been made in line with DER's current licensing practices.

The licences and works approvals issued for the Premises since 7 August 2014 are:

Instrument log		
Instrument	Issued	Description
L8815/2014/1	21 August 2014	New licence for category 61.
L8815/2014/1	10 November 2016	Licence amended to allow for the construction of two concrete sumps, lining of the existing liquid waste ponds with composite liner and installation of perimeter fence.

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*;

'bund or bunding' means an impervious structure surrounding an area ensuring containment of all materials within and has a hydraulic conductivity of less than 1×10^{-9} metres (m/s) per second;

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

'annual period' means a 12 month period commencing from 1 January until 31 December in the same year;

'CEO' means CEO of the Department of Environment Regulation;

'CEO' for the purpose of correspondence or notification means:

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

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

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

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

'hardstand' means a surface with a permeability of 10^{-9} metres/second or less;

'Licence' means this Licence numbered L8815/2014/1 and issued under the Act;

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

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

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

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



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

'Waste Code' means the Waste Code assigned to a type of controlled waste for purposes of waste tracking and reporting as specified in the Department of Environment Regulation "Controlled Waste Category List" (July 2014), as amended from time to time;

'Works' means:

- the construction of two reinforced concrete ponds;
- the construction of a secondary evaporation pond with composite liner; and
- the installation of perimeter fence.

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

1.1.4 Any reference to a guideline or code of practice in the Licence means the 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 The Licensee shall immediately recover, or remove and dispose of spills of liquid waste (as defined in Table 1.3.1) outside an engineered containment system.

1.2.2 The Licensee must ensure that the proposed works specified in Column 1 of Table 1.2.1 meets or exceeds the specifications in Column 2 of Table 1.2.1 for the infrastructure in each row of Table 1.2.2.

1.2.3 The Licensee must not depart from the specifications in Table 1.2.1 except:
 (a) where such departure is minor in nature and does not materially change or affect the infrastructure; or
 (b) where such departure improves the functionality of the infrastructure and does not increase risks to public health, public amenity or the environment;
 and all other Conditions in this Licence are still satisfied.

Table 1.2.1: Works specifications	
Column 1	Column 2
Infrastructure¹	Specifications (design and construction)
1. All	1. Install a security fence around the perimeter of the facility with lockable gated entry/exit points; and 2. Liquid waste infrastructures must be constructed to enable the free drainage of liquid waste from receival area to the lined evaporation pond.



Table 1.2.1: Works specifications	
Column 1	Column 2
Infrastructure¹	Specifications (design and construction)
2. Two concrete primary ponds for acceptance of liquid waste from tankers.	<p>Infrastructure for the acceptance of liquid waste from tankers must conform to the following specifications:</p> <ol style="list-style-type: none"> 1. Be constructed within the area depicted in the Site Plan in Schedule 1; 2. Constructed of reinforced concrete; 3. Must direct all liquid waste to the lined evaporation pond on the premises; 4. Must be engineered and constructed so as to be capable of accommodating the weight and movement of materials and equipment used to remove the solid component of the waste from the pond; 5. Must incorporate bunding, kerbing or have a minimum crest height above ground level to prevent liquid run-on and run-off including runoff from a 24 hour duration, 1 in 20 year ARI critical rainfall event without overflow; 6. Must be designed to achieve a permeability of no greater than 1×10^{-9} m/s or equivalent; and 7. Designed so that a minimum top of embankment freeboard of 500 mm is able to be maintained during operation.
3. Liquid waste evaporation ponds.	<p>The liquid waste evaporation pond must conform to the following specifications:</p> <ol style="list-style-type: none"> 1. Be constructed within the area depicted in the Site Plan in Schedule 1; 2. Constructed on three 150mm compacted clay layers; 3. Lined with a geosynthetic clay liner and welded HDPE plastic liner or equivalent and must be constructed in accordance with the following specifications: <ol style="list-style-type: none"> (i) achieving a permeability of no greater than 1×10^{-9} m/s or equivalent over the working life of the pond; (ii) a minimum thickness of 1.55mm with heat welded joints; (iii) all seams and joins made on site should be continuous; and (iv) panels of the liner should be overlapped by a minimum of 100mm, prior to heat welding or mechanical jointing; 4. Batter slopes for the liners on the sides of ponds must not exceed 1:3 vertical to horizontal elevation to ensure compaction and stability of the pond liner; 5. Must be constructed to maintain a minimum two metres separation distance between the base of the pond and the highest groundwater level; 6. Must incorporate bunding, kerbing or have a minimum crest height above ground level to prevent liquid run-on and run-off including runoff from a 24 hour duration, 1 in 20 year ARI critical rainfall event without overflow; and 7. Designed so that a minimum top of embankment freeboard of 500 mm is able to be maintained during operation.

1.2.4 If any departures outlined in Condition 1.2.3 apply, then the Licensee must provide the CEO with a list of departures which are certified as complying with Condition 1.2.3 at the same time as the certifications under Condition 1.2.5.

1.2.5 The Licensee must submit a construction compliance document to the CEO within one month, following the construction of the Works at the Premises.

1.2.6 The Licensee must ensure the construction compliance document:

- (a) is certified by a suitably qualified professional engineer that each item of infrastructure specified under Condition 1.2.2, Table 1.2.1 has been constructed in accordance with the Conditions of the Licence and any documentation submitted under condition 1.2.4 with no material defects; and



- (b) is signed by a person authorised to represent the Licensee and contain the printed name and position of that person within the company.

1.3 Premises operation

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

1.3.2 The Licensee shall only accept waste on to the premises if:

- (a) it is of a type listed in Table 1.3.1;
- (b) the quantity accepted is below any quantity limit listed in Table 1.3.1;
- (c) it meets any specification listed in Table 1.3.1.

Table 1.3.1: Waste acceptance			
Waste type	Waste Code	Quantity limit	Specification ¹
Septage wastes (Sewage) – domestic wastes from apparatus for the treatment of sewage	K210	2000 tonnes	Liquid waste receipt in tankers. Discharged to primary treatment pond.
Waste from grease traps	K110		
Vegetable and food processing waste	K200		
Sewage	K210		Liquid waste receipt in tankers from Water Corporation.

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

1.3.3 The Licensee shall ensure that where waste does not meet the waste acceptance criteria set out in condition 1.3.2, it is removed from the premises by the delivery vehicle or, where that is not possible, stored in a quarantined storage area or container and removed to an appropriately authorised facility as soon as practicable.

1.3.4 The Licensee shall ensure that wastes accepted onto the Premises are only subjected to the process(es) set out in Table 1.3.2 and in accordance with any process limits described in that table.

Table 1.3.2: Waste processing		
Waste type	Process(es)	Process limits
Sewage- from Water Corporation in Tanker trucks	Receipt in tankers; Physical, biological and chemical treatment	Liquid waste shall only be discharged into the primary treatment pond
Septage wastes (Sewage) – domestic wastes from apparatus for the treatment of sewage		
Waste from grease traps		
Vegetable and food processing liquid waste		
Sludge resulting from onsite liquid waste treatment	Storage prior to landfill disposal	Temporary or permanent infrastructure to consist of a bunded hardstand or lined area (lined to achieve a permeability of less than 10 ⁻⁹ m/s or equivalent), capable of preventing surface run-off of leachate and sludge and which includes a leachate collection system

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



Table 1.3.3: Containment infrastructure		
Vessel or compound	Material	Requirements
Primary treatment pond ¹	Wastewater	i) Lined to achieve a permeability no greater than 1×10^{-9} m/s or equivalent; ii) A minimum top of embankment freeboard of 500 mm is maintained; iii) Capacity to store a 24 hour duration, 1 in 20 year ARI critical rainfall event without overflow.
Evaporation ponds ¹	Treated wastewater	i) Lined to achieve a permeability no greater than 1×10^{-9} m/s or equivalent; ii) A minimum top of embankment freeboard of 500 mm is maintained; iii) Capacity to store a 24 hour duration, 1 in 20 year ARI critical rainfall event without overflow.

Note 1: Following submission of construction compliance document in accordance with condition 1.2.5

- 1.3.6 The Licensee shall manage all treatment and evaporation ponds such that:
- (a) a minimum top of embankment freeboard of 500mm is maintained;
 - (b) the integrity of the containment infrastructure is maintained;
 - (c) trapped overflows are maintained on the outlet of ponds to prevent carry-over of surface floating matter;
 - (d) overtopping of the ponds does not occur; and
 - (e) vegetation and floating debris (emergent or otherwise) is prevented from encroaching onto pond surfaces or inner pond embankments.



2 Monitoring

2.1 Monitoring of inputs and outputs

2.1.1 The Licensee shall undertake the monitoring in Table 2.1.1 according to the specifications in that table.

Input/Output	Parameter	Units	Averaging period	Frequency
Waste Inputs	Liquid waste	tonnes	N/A	Each load arriving at the Premises
Waste Outputs	Liquid waste	tonnes	N/A	Each load rejected from the premises



3 Information

3.1 Records

- 3.1.1 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 3.1.1(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.
- 3.1.2 The Licensee must submit to the CEO within 90 days after the end of the annual period, a Compliance Report indicating the extent to which the Licensee has complied with the Conditions in this Licence for the Annual Period
- 3.1.2 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.

3.2 Reporting

- 3.2.1 The Licensee shall submit to the CEO an Annual Environmental Report within 90 calendar days after the end of the annual period. The report shall contain the information listed in Table 3.2.1 in the format or form specified in that table.

Table 3.2.1: Annual Environmental Report		
Condition or table (if relevant)	Parameter	Format or form¹
-	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 2.2.1	Inputs and Outputs	Tabular
3.1.3	Complaints summary	None specified

Note 1: Forms are in Schedule 2



3.3 Notification

3.3.1 The Licensee shall ensure that the parameters listed in Table 3.3.1 are notified to the CEO in accordance with the notification requirements of the table.

Table 3.3.1: Notification requirements			
Condition or table (if relevant)	Parameter	Notification requirement¹	Format or form²
	Removal of sludge from a sewage treatment pond	No less than 14 days in advance of works.	None specified.
1.3.1	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	

Note 1: Notification requirements in the Licence shall not negate the requirement to comply with s72 of the Act

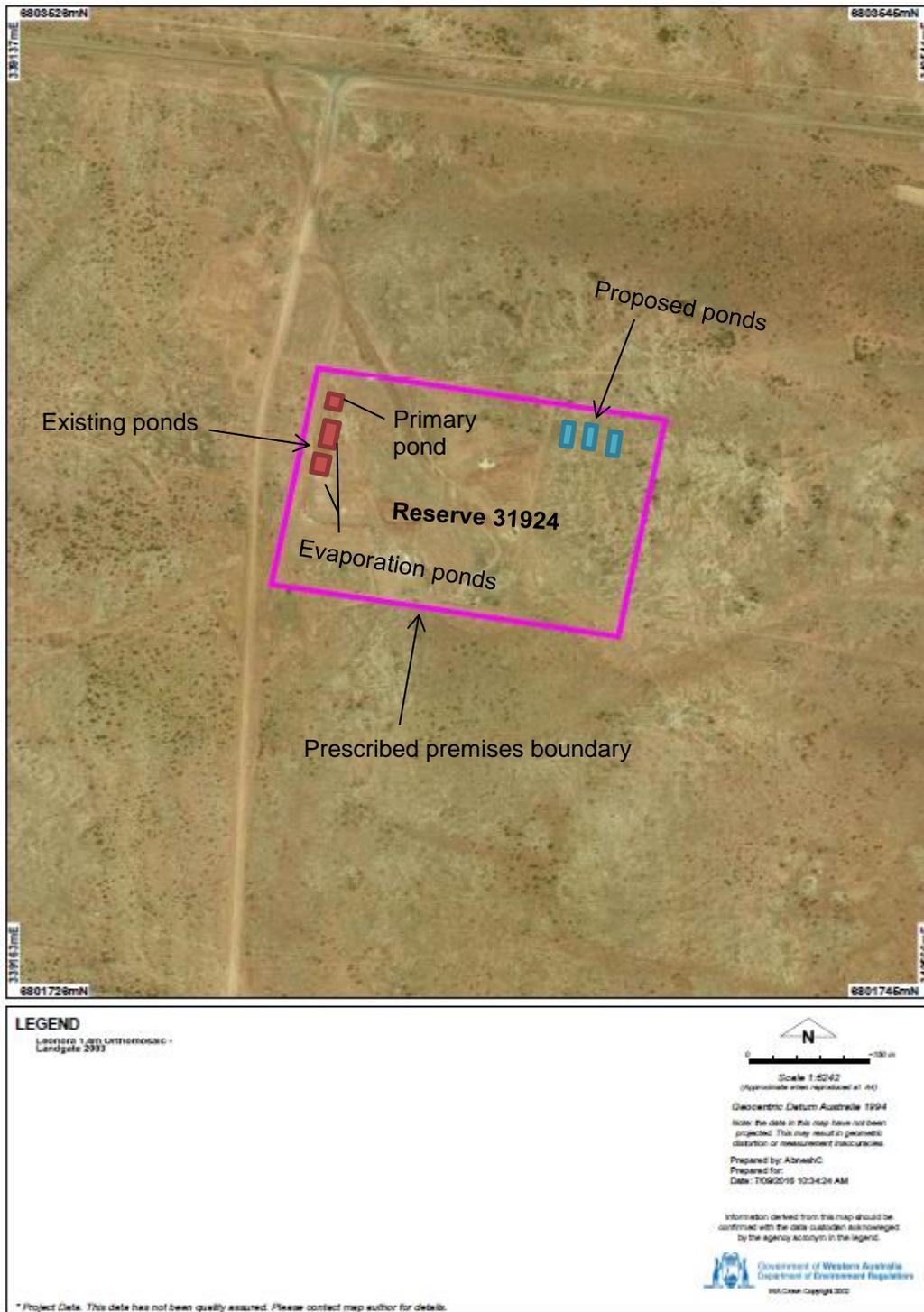
Note 2: Forms are in Schedule 2



Schedule 1: Maps

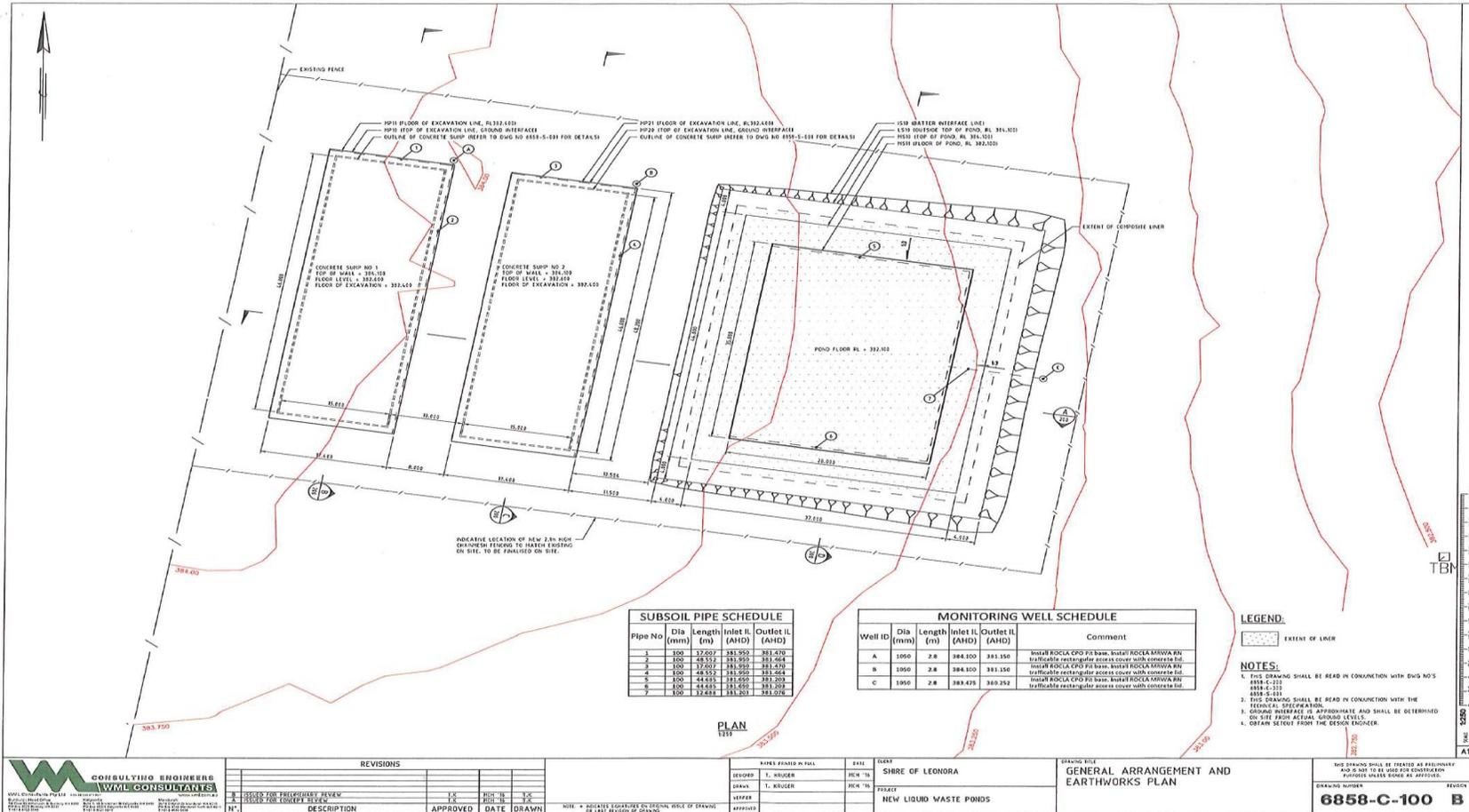
Premises Map

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





Site Plan





Licence: L8815/2014/1
 Form: N1

Licensee: The Shire of Leonora
 Date of breach:

Notification of detection of the breach of a limit.

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

Part A

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

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



Part B

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

Name	
Post	
Signature on behalf of The Shire of Leonora	
Date	



Decision Document

Environmental Protection Act 1986, Part V

Licensee: Shire of Leonora

Licence: L8815/2014/1

Registered office: 16 Tower Street
LEONORA WA 6438

Premises address: Shire of Leonora Refuse Site
Reserve 31924 Lot 521
LEONORA WA 6438

Issue date: Thursday, 21 August 2014

Commencement date: Monday, 25 August 2014

Expiry date: Thursday, 24 August 2030

Decision

Based on the assessment detailed in this document, the Delegated Officer has decided to issue an amended licence. The Delegated Officer considers that in reaching this decision, all relevant considerations have been taken into account.

Decision Document prepared by:

Abnesh Chetty
Licensing Officer

Decision Document authorised by:

Steve Checker
Delegated Officer



Contents

Decision Document	1
Contents	2
1 Purpose of this Document	2
2 Administrative summary	3
3 Executive summary of proposal and assessment	4
4 Decision table	7
5 Advertisement and consultation table	15
6 Risk Assessment	16
Appendix B	17

1 Purpose of this Document

This decision document explains how DER has assessed and determined the application and provides a record of DER's decision-making process and how relevant factors have been taken into account. Stakeholders should note that this document is limited to DER's assessment and decision making under Part V of the *Environmental Protection Act 1986*. Other approvals may be required for the proposal, and it is the proponent's responsibility to ensure they have all relevant approvals for their Premises.



2 Administrative summary

Administrative details		
Application type	Works Approval <input type="checkbox"/>	
	New Licence <input type="checkbox"/>	
	Licence amendment <input checked="" type="checkbox"/>	
	Works Approval amendment <input type="checkbox"/>	
Activities that cause the premises to become prescribed premises	Category number(s)	Assessed design capacity
	61A	2,000 tonnes per year
Application verified	Date: N/A	
Application fee paid	Date: N/A	
Works Approval has been complied with	Yes <input type="checkbox"/>	No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
Compliance Certificate received	Yes <input type="checkbox"/>	No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
Commercial-in-confidence claim	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Commercial-in-confidence claim outcome		
Is the proposal a Major Resource Project?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Was the proposal referred to the Environmental Protection Authority (EPA) under Part IV of the <i>Environmental Protection Act 1986</i> ?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Is the proposal subject to Ministerial Conditions?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
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"/>
Is the Premises within an Environmental Protection Policy (EPP) Area	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Is the Premises subject to any EPP requirements?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>



3 Executive summary of proposal and assessment

The Shire of Leonora (the Shire) is a local government area in the Goldfields-Esperance region of Western Australia, about 240 kilometres north of the city of Kalgoorlie and about 830 kilometres northeast of Perth. The Shire covers an area of 32,189 square kilometres.

The Shire has a population of approximately 2,500 (Australian Bureau of Statistics, 2011 Census) whilst the town of Leonora has a population of around 1,500. Metal ore mining and other mining support services are the largest employment type in the Shire.

The Shire operates liquid waste ponds located to the southeast of the town, adjacent to where the Shire also operates a Category 89 landfill on Registration R1724/2005/1. The site is unmanned with twice-weekly inspections. The nearest two residences are located 1km from the site, with the closest town residences over 2km away. The source of the waste received includes from town septic tanks, mine camps in the region and from water corporation in tanker trucks during breakdowns at the pump stations. The pond system is currently unlined and operated primarily by separation of solids in a primary pond with overflow to evaporation ponds. Treated sludge is disposed of at the landfill once the pond has been dried, with the majority of the liquid being lost to evaporation. Public access to the landfill is restricted during sludge disposal.

This licence is the result of an application to amend licence L8815/2014/1 to authorise the construction and operation of works at the premises. The following works are proposed under the amendment application:

- construction of two reinforced primary concrete ponds for the acceptance of liquid waste from tankers;
- construction of a secondary evaporation pond with composite liner; and
- installation of perimeter fence.

The proposed ponds which will be situated at the northeastern corner of Reserve 31924 will . The pond area is fenced and the site will be graded so that stormwater drains away from the ponds.

Following the construction and operation of the new waste ponds the existing ponds will be decommissioned and rehabilitated.

The storage volume for each pond will be as follows:

Primary concrete pond 1: 1035m³
Primary concrete pond 2: 1035m³
Secondary pond 1 : 2573m³

The new ponds will not increase the currently approved acceptance volume. Information provided with the application states that the facility proposes to accept a maximum of 2,000 tonnes of liquid waste per annum.

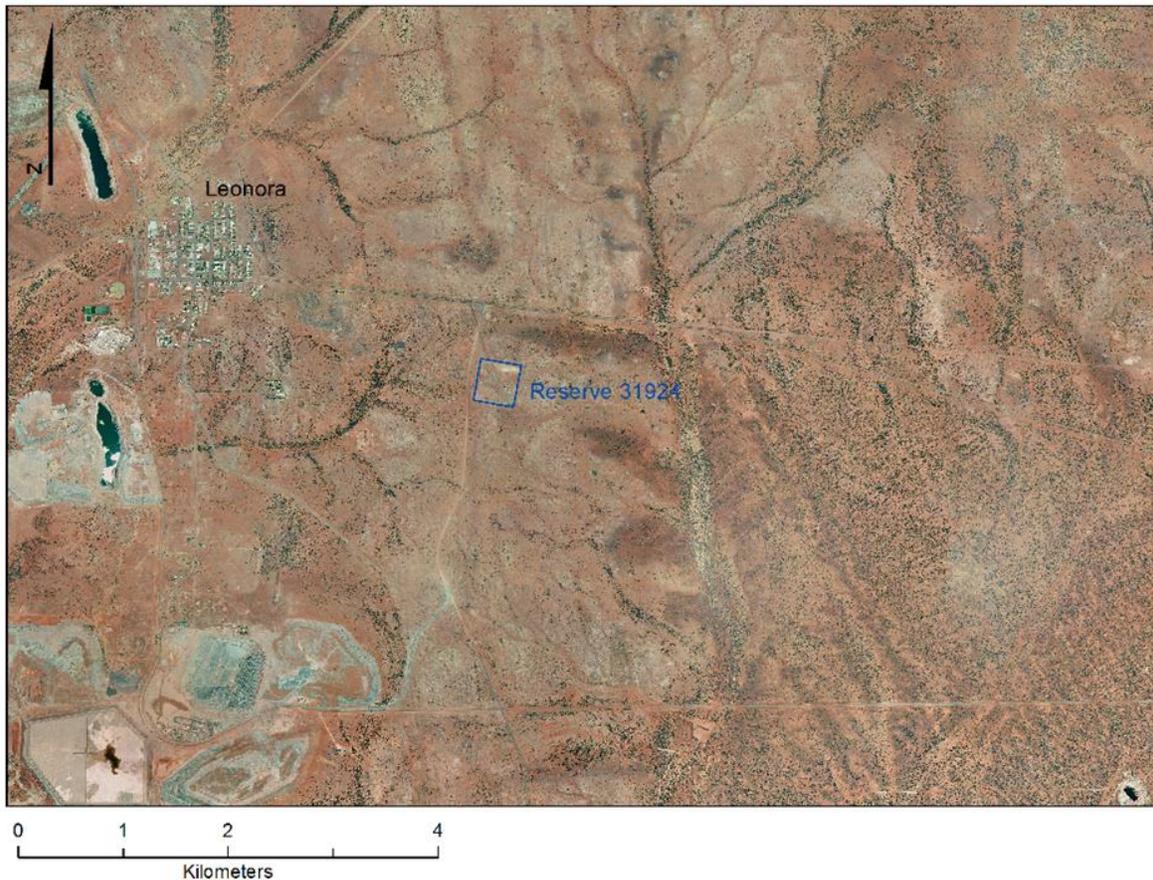
Location and siting

The site, covering an area of 8500m² is located approximately 2.6km east of the township of Leonora. The surrounding land consists of crown reserve and typically consists of bush with small mature trees and shrubs on exposed earth. The site location is shown in the map below.

The following information in relation to location and siting has been summarised from the application:



- **Topography:** The site is located on a slight elevated ridge, causing the southern half of the site to drain to the south east, and northern portion to drain to the north east. The crest of the ridge that dissects the site west to east falls from 384.1 mAHD at the western site boundary to 383.4 mAHD at the eastern edge of the site.
- **Geology:** Leonora lies in the eastern goldfields Province within the Archean Yilgarn craton. The site is located in the malcolm greenstone belt which comprises mainly volcanics and sedimentary rocks. The greenstones in the lake raeside area are generally deeply weathered, usually 50 to 70m but may be up to 100m. The Leonora surface geology comprises pebbly colluvium. Within a few hundred metres of the site the underlying geology of quartz feldspar schist derived from felsic volcanic rock outcrops at the surface. Further to the south basalt and quartz muscovite schist outcrops. The overlying colluvium is cainozoic in age, the underlying bedrock of the greenstone formation is Archaen in age.



- **Hydrogeology:** The site is located above the same aquifer formed from secondary fracturing within the weathered green stone rocks. The aquifer forms part of the lake raeside palaeodrainage system. Regional groundwater flows through the fractured bedrock towards lake raeside in the south west direction, away from the station creek wellfield. Recharge of the aquifer is derived from infiltration of rainfall. The amount of recharge is expected to be low due to low rainfall and high evaporation. Movement of groundwater within the fractured rock is controlled by the geological structure and outflow may be restricted, causing increased salinity.
- **Hydrology:** The site is located on a slight elevated ridge, therefore the southern half of the site drains to the south east, and the northern portion drains to the north east. The site drains towards two non-perennial water courses that flow only during heavy rain events located



650m to an unnamed minor non perennial watercourse that flows south wards. The water flows beneath the goldfields highway and in to lake raeside, a salt lake approximately 7.5km south of the site.

Potential sensitive receptors

The following information in relation to receptors has been summarised from the application:

- The department of water geographic data atlas shows a water tank located approximately 1.1km east of the site and a well with windmill located 1.41km to the south east of the site, both are located besides the unnamed minor non perennial creek that the site drains to. These are the only water extraction/storage assets identified with the sites water shed. The well with windmill is associated with a small land holding and no other information is currently available on these assets.
- The nearest residential property is located 1.4km to the south east and the nearest collective group of settlements are located some 2km to the west of the site.

Planning approval

Email received from the Shire of Leonora Principal Environmental Health Officer/Building Surveyor on 16 September 2016 advised DER that planning approval for the construction work was not required.

Potential emissions

The main potential emissions generated from the site will be dust and odour. It is anticipated that these emissions can be adequately managed under the provisions of the *Environmental Protection Act 1986* and mitigation measures put in place by the Licensee.

This licence is the result of an application to amend licence L8815/2014/1 to authorise works at the premises. The Licence has also been converted into DER's new licence template and during this process a Decision Document has been developed that assesses in detail all risks associated with the Premises. A number of DER initiated amendments have also been made in line with DER's current licensing practices.



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
Front page	N/A	The licence expiry date was amended on 29 April 2016 to 24 August 2030 in line with DER's Guidance Statement, Licence Duration November 2014 (revised May 2015). The expiry date has been updated accordingly.	DER's Guidance Statement, Licence Duration November 2014 (revised May 2015).
Introduction	N/A	Table of contents updated. Administrative changes have been included within the Licence amendment process in accordance with DER protocol. Premises description and Licence summary section updated. Instrument log table updated.	N/A
Interpretation	L1.1.1	Definitions updated	N/A
General conditions	1.2.1 – 1.2.7	Previous Licence Condition 1.2.1 has been removed from the licence as it was not consistent with DER's <i>Guidance Statement. Setting Conditions</i> as it relates to general advice rather than explanatory statement and not a valid or enforceable condition. The Delegated Officer considers that impacts from emissions can be	General provisions of the <i>Environmental Protection Act 1986</i> .



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p>sufficiently regulated under section 49 of the <i>Environmental Protection Act 1986</i> (is an offence to cause pollution and unreasonable emissions). This condition was worded as follows: <i>"Nothing in the Licence shall be taken to authorise any emission that is not mentioned in the Licence, where the emission amounts to:</i></p> <ul style="list-style-type: none"> (a) <i>pollution;</i> (b) <i>unreasonable emission;</i> (c) <i>discharge of waste in circumstances likely to cause pollution; or</i> (d) <i>being contrary to any written law."</i> <p>Previous Licence Condition 1.2.2, relating to the maintenance of pollution control and monitoring equipment, has been removed as it was not consistent with DER's <i>Guidance Statement: Setting Conditions</i> in that the condition was not enforceable as the specific equipment or internal management system endorsed was not clearly designated. This condition was worded as follows: <i>"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."</i></p> <p>Previous Licence Condition 1.2.3, relating to the storage of environmentally hazardous material in accordance with the code of practice for the storage and handling of dangerous goods has been removed as it related to a code of practice which is not administered by DER. The storage of dangerous goods is regulated by the Department of Mines and Petroleum. Previous Licence Condition 1.2.3 was worded as follows: <i>"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."</i></p>	<p><i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i></p> <p>DER's <i>Guidance Statement: Regulatory Principles</i></p> <p>DER's <i>Guidance Statement: Setting Conditions</i></p> <p>DER's <i>Guidance Statement: Licence and works approval process</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>Previous Licence Condition 1.2.4, now 1.2.1, which related to immediately recovering or removing and disposing of spills of environmentally hazardous materials outside an engineered containment system has been updated to only reference wastes approved under the licence rather than the previous broad term “environmentally hazardous materials” which may potentially regulate materials beyond the scope of the licence and is not in accordance with DER’s <i>Guidance Statement: Licence and works approval process</i>. Previous Licence Condition 1.2.4 was worded as follows: <i>“The Licensee shall immediately recover, or remove and dispose of environmentally hazardous materials outside an engineered containment system.”</i></p> <p>Construction Licence Conditions 1.2.2 and 1.2.3 have been added to the Licence to detail the design and construction specifications for approved works at the premises.</p> <p>1.2.4 - 1.2.6 relate to the certification of works approved under the licence.</p> <p>Further information relating to the assessment and decision making are provided in Appendix B.</p>	
Premises operation	L1.3.1 – 1.3.6 & Table 1.3.1	<p>Licence Condition 1.3.1, relating to the investigation of exceedances has been updated to reflect wording in current Licence template. The word “target” was removed from condition 1.3.1 as targets have been removed from the licence in accordance with DER licensing protocol.</p> <p>Licence Condition 1.3.2, details waste that is permitted to be received on-site. Table 1.3.1 has also been updated to reflect correct waste code for sewage waste received via tanker trucks from Water Corporation.</p> <p>Licence Condition 1.3.3, ensures that any waste that does not meet the</p>	<p>General provisions of the <i>Environmental Protection Act 1986</i></p> <p>DER’s <i>Guidance Statement: Setting Conditions</i></p> <p>DER’s <i>Guidance Statement: Land use</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>requirements of Licence Condition 1.3.2, is removed from the premises, or stored in a quarantined area or container and removed to an appropriately authorised facility as soon as practicable.</p> <p>Licence Condition 1.3.4, ensures waste brought to the premises are directed to the appropriate approved treatment/storage infrastructure.</p> <p>Licence Condition 1.3.5, ensures that all waste is stored within suitable containment infrastructure onsite. appropriate containment infrastructure. Further information relating to the assessment and decision-making in relation to this requirement is provided in Appendix B.</p> <p>Licence Condition 1.3.6, stipulates the construction certification requirements for the secondary and evaporation pond.</p>	<p><i>planning</i></p> <p><i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i></p> <p><i>DER's Guidance Statement: Regulatory Principles</i></p>
Emissions	L2.1 – L2.5 L2.6 & L2.8	Licence Conditions 2.1 – 2.5 stating “no specified conditions” have been removed in line with DER’s <i>Guidance Statement: Setting Conditions</i> .	<i>DER's Guidance Statement: Setting Conditions</i>
Odour	L2.7	<p><u>Emission Description</u></p> <p><i>Emission:</i> Odour from liquid waste accepted and stored at the premises.</p> <p><i>Impact:</i> Nuisance impacts in the vicinity. The nearest residential property is located approximately 1.4km to the south east and the nearest collective group of settlements are located some 2km to the west of the site.</p> <p><i>Controls:</i> Site is in an isolated location with adequate buffer provided to the nearest residents.</p> <p> </p> <p><u>Risk Assessment</u></p>	<p>General provisions of the <i>Environmental Protection Act 1986</i></p> <p> </p> <p><i>DER's Guidance Statement: Regulatory Principles</i></p> <p> </p> <p><i>DER's Guidance</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>Consequence:</i> Insignificant <i>Likelihood:</i> Possible <i>Risk:</i> Low</p> <p><u>Regulatory Controls</u> Previous Licence Condition 2.7.1 which stated “<i>The Licensee shall ensure that odour emitted from the Premises does not unreasonably interfere with the health, welfare, convenience, comfort or amenity of any person who is not on the Premises</i>” has not been included in the amended licence. The Delegated Officer noted that DER has no record of odour complaints from the liquid waste facility. The Delegated Officer considered that separation to receptors and general onsite housekeeping is expected to mitigate any odour issues. As the risk from odour has been determined as ‘Low’, previous condition 2.7.1 has not been included in the amended licence. The Delegated Officer considers that impacts from emissions from odour can be sufficiently regulated under section 49 of the <i>Environmental Protection Act 1986</i>.</p> <p>Current condition 3.1.3 requires the licensee to record and investigate any complaints received concerning the environmental impact of the activities undertaken at the Premises. DER will review this information to determine the ongoing effectiveness of controls.</p> <p><u>Residual Risk</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Rare <i>Risk:</i> Low</p>	<p><i>Statement: Setting Conditions</i></p> <p>DER’s <i>Guidance Statement: Land Use Planning</i></p>
Monitoring	3.1-3.6 & 3.7-3.9	Consistent with DER’s <i>Guidance Statement: Setting Conditions</i> , this section was deleted because it did not contain any conditions.	<p>General provisions of the <i>Environmental Protection Act 1986</i></p> <p>DER’s <i>Guidance</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>Statement: Setting Conditions</i></p> <p>DER's Guidance <i>Statement: Regulatory Principles</i></p>
	2.1 & Table 2.1.1	Previous Licence condition 3.6, now 2.1 requires accurate recording of all liquid waste received at the premises. Table 2.1.1 updated which now also requires the Licensee to record all liquid waste rejected from the premises.	<p>General provisions of the <i>Environmental Protection Act 1986</i></p> <p>DER's Guidance <i>Statement: Setting Conditions</i></p> <p>DER's Guidance <i>Statement: Regulatory Principles</i></p>
Improvements	L4.1.1	<p>Previous Licence condition 4.1.1 (IR1) has been removed as it related to issues which are now addressed under the current licence amendment. The condition was worded as follows:</p> <p><i>"The Licensee shall submit to the CEO a report that details the construction design to build new ponds and the closure and rehabilitation of the existing liquid waste ponds which includes but is not limited to the following:</i></p> <p>(a) <i>The details for the design and location of a new pond system, considering the recommendations within Water Quality Protection Note 39 (Department of Water (DoW), 2009);</i></p> <p>(b) <i>Determination of the liner/engineered base required to meet a hydraulic conductivity of 10⁻⁹ m/s or less, considering the recommendations within</i></p>	<p>General provisions of the <i>Environmental Protection Act 1986</i></p> <p>DER's Guidance <i>Statement: Setting Conditions</i></p> <p>DER's Guidance <i>Statement: Regulatory Principles</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>Water Quality Protection Note 26 (DoW, 2013) and Water Quality Protection Note 27 (DoW, 2013);</i></p> <p>(c) <i>Determination of the volume of the proposed pond system (allowing adequate capacity for a 500mm freeboard and justified by a water balance which considers all inputs into and outputs from the pond system);</i></p> <p>(d) <i>An assessment of the environmental risks during both construction and operation of the new pond system and all management and/or monitoring proposed to address those risks; and</i></p> <p>(e) <i>Timelines for construction of the new pond/s and the closure and rehabilitation of the existing liquid waste ponds.”</i></p> <p>The requirements for the certification of this construction are now captured under conditions 1.2.2 to 1.2.6.</p>	<p>DER’s <i>Guidance Statement: Licence and Works Approval Process</i></p>
Information	L3.1 to L3.3	<p>Previous Licence condition 5.1.1, now 3.1.1 ensures all records required by the Licence are retained and be made available to the CEO.</p> <p>Previous Licence condition 5.1.2 has been removed as it has been identified as redundant. This condition related to maintaining awareness of conditions of Licence, which is not considered a relevant factor in determining compliance. The wording of this condition was as follows: <i>“The Licensee shall ensure that:</i> (a) <i>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</i> (b) <i>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.”</i></p> <p>Previous Licence condition 5.1.3, now 3.1.2 relating to the Annual Audit Compliance Report (AACR) has been updated to reflect that the AACR template is now available on DER’s website.</p>	<p>General provisions of the <i>Environmental Protection Act 1986</i></p> <p>DER’s <i>Guidance Statement: Setting Conditions</i></p> <p>DER’s <i>Guidance Statement: Regulatory Principles</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>Previous Licence condition 5.1.4, now 3.1.3 requires the Licensee to implement a complaints management system.</p> <p>Previous Licence condition 5.2.1, now 3.2.1 outlines the requirement to submit to DER an annual environmental report (AER).</p> <p>Previous table 5.2.1, now 3.2.1 has been updated to reflect the current requirements of the Licence. The requirement to submit the AACR with the AER has been removed from table 3.2.1 as the AACR submission is now a standalone requirement.</p> <p>Previous Licence Condition 5.3, now 3.3 requires notification to the CEO, when there is a breach of any limit specified in the Licence, when there is a failure or malfunction of any pollution control equipment and when sludge will be removed from the sewage treatment pond.</p>	
Licence Duration	N/A	The licence was amended on 29/04/2016 to extend the expiry date until 24/08/30 in line with DER's Guidance Statement, Licence Duration November 2014 (revised May 2015). No further change of this date is proposed as part of this amendment.	DER's <i>Guidance Statement, Licence Duration November 2014</i> (revised May 2015).



5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
19 October 2016	Proponent sent a copy of draft instrument	No comments received	NA



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 B

Emission Description - Leakage and contaminated runoff risk assessment

Emission Risk Assessment - Operation

Emission: Potential emissions include stormwater contaminated with pathogens, grease and oil may enter the environment from the overflow of the ponds and failure of pond linings.

Impact: Contamination of surrounding land and surface water drainage systems. Potential impacts on the surrounding environment from the addition of pathogens, grease and oil.

Controls: Based on the hydrogeological investigation work carried out at the site the near surface soil onsite was found to have a permeability of the order of 10^{-8} m/s. Additional engineering controls such as use of composite liner and concrete tanks for the storage and treatment of waste water to significantly reduce seepage potential have been proposed in the application. The proposed concrete ponds will also be designed to have a free board level of 500mm. This will help prevent any overflow of wastewater out of the ponds. Since the ponds will be lined with a composite liner (HDPE) or other suitable impervious membrane or liner to hold all liquids, it will minimise the risk of liquid waste seeping into the soil from below. The application details that the proponent will undertake regular inspections on the condition and integrity of the ponds.

Risk Assessment

Consequence: Minor

Likelihood: Unlikely

Risk Rating: Moderate

Regulatory Controls

Design and performance specifications for the proposed works have been set as a requirement in condition 1.2.2.

Condition 1.2.3 also allows for minor deviation from the design and construction specifications where such departures are appropriate to improve the functionality of the infrastructure and does not increase risks to public health or the environment. The Delegated Officer considers that storage and treatment ponds must be designed, lined and constructed so as to not present an unacceptable risk of the contamination of the surrounding land.

Condition 1.2.2 also requires that all ponds achieve a permeability of no greater than 1×10^{-9} m/s or equivalent. The Delegated Officer considers that as the ponds will retain liquid waste on a long term basis, this degree of permeability is appropriate to mitigate seepage emissions. Condition 1.2.2 also requires the infrastructure to incorporate bunding, kerbing or have a crest height above ground level to prevent liquid run-on and run-off including runoff from a 24 hour duration, 1 in 20 year ARI critical rainfall event without overflowing.

Condition 1.3.5, ensures that all waste is stored within suitable containment infrastructure onsite. The Delegated Officer considers that all liquid waste storage and treatment ponds on the premises should be designed to contain a 1 in 20 year ARI critical rainfall event, which provides a commensurate level of containment for the risk of runoff impacts.

Condition 1.3.6 (a) has been amended to ensure that the ponds maintain a 500mm freeboard in accordance with the design specifications.



Licence Condition 1.2.6 has been added to the Licence which requires that works are confirmed as compliant with the Licence construction specifications by a suitably qualified person.

Residual Risk

Consequence: Minor

Likelihood: Rare

Risk Rating: Low