



Government of **Western Australia**  
Department of **Environment Regulation**

Your ref L7690/1997/6  
Our ref DER2014/001262  
Enquiries C. Conway-Physick  
Phone (08) 9964 0901  
Fax (08) 9921 5713  
Email caroline.conway-  
physick@der.wa.gov.au

Mr Gordon Groth  
Manager Operations - Environmental  
Water Corporation  
PO Box 100  
LEEDERVILLE WA 6902

Dear Mr Groth

**ENVIRONMENTAL PROTECTION ACT 1986: LICENCE GRANTED**

**Premises:** Denham Wastewater Treatment Plant, 70 Monkey Mia Road, Lot 345 on Plan 193644, DENHAM WA 6537  
**Licence Number:** L7690/1997/6

A licence under the *Environmental Protection Act 1986* (the Act) has been granted for the above premises. The Department of Environment Regulation will advertise the issuing of this licence in the public notices section of *The West Australian* newspaper.

The licence includes attached conditions. Under section 58(1) of the Act, it is an offence to contravene a condition of a licence. This offence carries a penalty of up to \$125,000 and a daily penalty of up to \$25,000.

In accordance with section 102(1)(c) of the Act, you have 21 days to appeal the conditions of the licence. Under section 102(3)(a) of the Act, any other person may also appeal the conditions of the licence. To lodge an appeal contact the Office of the Appeals Convenor on 6467 5190 or by email at [admin@appealsconvenor.wa.gov.au](mailto:admin@appealsconvenor.wa.gov.au).

Where a licence is issued for more than one year it requires payment of an annual fee and will cease to have effect if the fee is unpaid. It is the occupier's responsibility to lodge a fee application and pay the annual fee in sufficient time to avoid incurring a late payment fee and for processing to be completed before the licence anniversary date.

If you have any queries regarding the above information, please contact Caroline Conway-Physick on (08) 9964 0901.

Yours sincerely

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

16 October 2014

The Atrium, 168 St Georges Terrace, Perth WA 6000  
Phone (08) 6467 5000 Fax (08) 6467 5562  
Postal Address: Locked Bag 33, Cloisters Square, Perth WA 6850  
[www.der.wa.gov.au](http://www.der.wa.gov.au)



# Licence

## *Environmental Protection Act 1986, Part V*

**Licensee:** Water Corporation  
**Licence:** L7690/1997/6

**Registered office:** 629 Newcastle Street  
LEEDERVILLE WA 6007

**Premises address:** Denham Wastewater Treatment Plant  
70 Monkey Mia Road  
DENHAM WA 6537  
Being Lot 345 on Plan 193644 as depicted in Schedule 1.

**Issue date:** Thursday, 16 October 2014

**Commencement date:** Saturday, 1 November 2014


**Expiry date:** Thursday, 31 October 2019

**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
54	Sewage facility premises – (a) on which sewage is treated (excluding septic tanks); or (b) from which treated sewage is discharged onto land or into waters.	100 cubic metres or more per day	256 cubic metres per day

### 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.

Other Guidelines which you should be aware of include:

- *Western Australian Guidelines for Biosolids Management*, Department of Environment and Conservation, December 2012 (as amended from time to time).

#### **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 Denham Wastewater Treatment Plant is located approximately 1.5 kilometers (km) east of the Denham town-site and is immediately surrounded by bushland. The closest residential receptor is located within the town-site. Little Lagoon (coastal waters) is the closest environmental receptor approximately 1.3km to the north-west of the premises.

The Denham Wastewater Treatment Plant is designed to service a nominal population of approximately 1,280. At 30 June 2012 there were 314 services connected serving a fluctuating population due to the large number of tourists that visit the region. The average daily inflow to the plant for the 2013/14 reporting period was 173.7 cubic metres/day.

The operations at the Denham Wastewater Treatment Plant include the treatment of sewage to a secondary standard and the on-site infiltration of treated wastewater. Plant infrastructure consists of:

- Three stabilisation ponds, a primary facultative pond (Pond 1), maturation pond (Pond 2), and a second maturation pond (Pond 3); and
- Two infiltration/evaporation ponds; treated wastewater is only discharged by on-site infiltration/evaporation during the high peak season flows.

The main potential emissions from the site are discharges of treated wastewater via infiltration to land (and potentially to groundwater) and fugitive emissions in the form of odour.

Discharges of treated wastewater to land are managed by undertaking compliance monitoring prior to discharge.

Given the remoteness of the site from sensitive receptors, odour emissions are considered low risk however, odour emissions are managed by the ongoing operation, maintenance and desludging of the ponds.

This Licence is the successor to licence L7690/1997/5 and includes the conversion to the new REFIRE format licence.

The licences and works approvals issued for the Premises since 2003 are:





Instrument log		
Instrument	Issued	Description
02175	08/12/1997	Works Approval Amendment - W404/97/0
01041	22/03/1999	Registration - R404/97
L7690/1997/1	20/11/2001	Licence – L404/97
L7690/1997/2	20/11/2002	Licence re-issue
L7690/1997/3	10/11/2003	Licence re-issue
L7690/1997/4	29/09/2004	Licence re-issue
L7690/1997/5	01/10/2009	Licence re-issue
L7690/1997/6	16/10/2014	Licence re-issue

**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*;

'AHD' means the Australian height datum;

'annual period' means the inclusive period from 1 July until 30 June in the following year;

'AS/NZS 2031' means the Australian Standard AS/NZS 2031 *Selection of containers and preservation of water samples for microbiological analysis*;

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

'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 (Midwest)  
Department of Environment Regulation  
PO Box 72  
GERALDTON WA 6531  
Telephone: (08) 9964 0901  
Facsimile: (08) 9921 5713  
Email: [Midwest@der.wa.gov.au](mailto:Midwest@der.wa.gov.au);

'code of practice for the storage and handling of dangerous goods' means 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;

'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 2.6, 2.7 and 2.8;

**'Geobag'** means a geotextile dewatering bag that allows solids to dewater over time while containing the solid component.

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

**'Leachate'** means liquid released by or water that has percolated through waste and which contains some of its constituents.

**'Licence'** means this Licence numbered L7690/1997/6 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;

**'normal operating conditions'** means any operation of a particular process (including abatement equipment) excluding start-up, shut-down and upset conditions, in relation to stack sampling or monitoring;

**'NOx'** means oxides of nitrogen, calculated as the sum of nitric oxide and nitrogen dioxide and expressed as nitrogen dioxide;

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

**'Process equipment'** means any wastewater or sludge containment infrastructure or wastewater treatment vessel;

**'relevant environmental guidelines'** mean the Department of Environment and Conservation guideline, *Assessment Levels for Soil, Sediment and Water* (February 2010), as amended from time to time;

**'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 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 the 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 substances 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 record and investigate the exceedance of any descriptive or numerical limit, and/or target in this section.

1.3.2 The Licensee shall only allow waste to be accepted on to the Premises if:

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

**Table 1.3.1: Waste acceptance**

Waste	Waste Code	Quantity Limit	Specification
<b>Putrescible and Organic wastes</b>			
Sewage	N/A	None specified	Accepted through sewer inflow(s) and tankers only

1.3.3 The Licensee shall ensure that the 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 requirements described in that table.

**Table 1.3.2: Waste processing**

Waste type	Process	Process requirements
Sewage	Physical and biological treatment	Treatment of sewage waste shall be targeted at or below the treatment capacity of 256 m <sup>3</sup> /day

1.3.4 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
Inlet works	Grit and screenings	N/A
Pond 1 (Facultative Pond)	Wastewater	HDPE lined to achieve a permeability of less than $10^{-9}$ m/s or equivalent
Pond 2 (Maturation Pond 1)		
Pond 3 (Maturation Pond 2)		
Infiltration Lagoon 1 & 2	Treated wastewater	Lined with in-situ soils and designed to infiltrate
Sewage sludge compound	Sewage sludge	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 manage all wastewater treatment, and infiltration ponds such that:
- (a) overtopping of the ponds does not occur;
  - (b) a freeboard at or greater than 400mm is targeted;
  - (c) the integrity of the containment infrastructure is maintained;
  - (d) trapped overflows are maintained on the outlet of ponds to prevent carry-over of surface floating matter; and
  - (e) vegetation and floating debris (emergent or otherwise) is prevented from encroaching onto pond surfaces or inner pond embankments.
- 1.3.6 The Licensee shall:
- (a) implement security measures at the site to prevent as far as is practical unauthorised access to the site;
  - (b) undertake regular inspections of all security measures and repair damage as soon as practicable; and
  - (c) ensure the entrance gates are closed and locked when the site is closed or unmanned.



## 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.

#### 2.2-2.4 Point source emissions to air, surface water and groundwater

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

### 2.5 Emissions to land

2.5.1 The Licensee shall ensure that where waste is emitted to land from the emission points in Table 2.5.1 and identified on the Map of emission points and monitoring locations in Schedule 1 it is done so in accordance with the conditions of this licence.

<b>Emission point reference</b>	<b>Emission point reference on Map of emission points and monitoring locations</b>	<b>Description</b>	<b>Source including abatement</b>
L1	Infiltration Lagoon 1	Discharge from Maturation Pond 2 (Pond 3)	Treated wastewater pipeline from wastewater treatment plant
L2	Infiltration Lagoon 2	Discharge from Maturation Pond 2 (Pond 3)	Treated wastewater pipeline from wastewater treatment plant

### 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 wastewater sampling is conducted in accordance with AS/NZS 5667.10;
  - (c) all groundwater sampling is conducted in accordance with AS/NZS 5667.11
  - (d) all laboratory samples are submitted to a laboratory with current NATA accreditation for the parameters to be measured unless indicated otherwise in relevant table.
- 3.1.2 The Licensee shall ensure that :
- (a) quarterly monitoring is undertaken at least 45 days apart; and
  - (b) six monthly monitoring is undertaken at least 5 months apart.
- 3.1.3 The Licensee shall record production or throughput data and any other process parameters relevant to any non-continuous monitoring undertaken.
- 3.1.4 The Licensee shall ensure that all monitoring equipment used on the Premises to comply with the conditions of this Licence is calibrated in accordance with the manufacturer's specifications.
- 3.1.5 The Licensee shall, where the requirements for calibration cannot be practicably met, or a discrepancy exists in the interpretation of the requirements, bring these issues to the attention of the Director accompanied with a report comprising details of any modifications to the methods.

#### 3.2-3.4 Monitoring of point source emissions to air

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

#### 3.5 Monitoring of emissions to land

- 3.5.1 The Licensee shall undertake the monitoring in Table 3.5.1 according to the specifications in that table.

Table 3.5.1: Monitoring of emissions to land					
Emission point reference	Monitoring point reference and location on Map of emission points and monitoring locations	Parameter	Units	Averaging Period	Frequency
L1 and L2	None specified (calculated)	Volumetric flow rate (cumulative)	L/s m <sup>3</sup> /day	Monthly	Monthly
	Final Effluent Monitoring location (S4000122)	pH <sup>1</sup>		Spot Sample	Quarterly
		5-day Biochemical Oxygen Demand	mg/L		
		Total Dissolved Solids			
		Total Nitrogen			
		Total Phosphorus			
Escherichia coli	cfu/100 mL				

Note 1: In-field non-NATA accredited analysis permitted.



### 3.6 Monitoring of inputs and outputs

3.6.1 The Licensee shall undertake the monitoring in Table 3.6.1 according to the specifications in that table.

Table 3.6.1: Monitoring of inputs and outputs					
Input/Output	Monitoring point reference and location	Parameter	Units	Averaging period	Frequency
Sewage	Main sewer inlet	Volumetric flow rate (cumulative)	m <sup>3</sup> /day	Monthly	Continuous

### 3.7 Process monitoring

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

### 3.8 Ambient environmental quality monitoring

3.8.1 The Licensee shall undertake the monitoring in Table 3.8.1 according to the specifications in that table and record and investigate results that do not meet any target specified.

Table 3.8.1: Monitoring of ambient groundwater quality				
Monitoring point reference and location of map of emission points and monitoring location	Parameter	Units	Averaging period	Frequency
Groundwater bores: 1/98, 2/98, 3/98 and 4/98	Standing water level	m(AHD) and mBGL	Spot sample	Six monthly
	pH <sup>1</sup>			
	Total nitrogen	mg/L		
	Total phosphorus			
	Total dissolved solids			

Note 1: In-field non-NATA accredited analysis permitted.

### 3.9 Meteorological monitoring

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





## 4 Improvements

### 4.1 Improvement program

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:

- (a) implement a complaints management system that shall record the following information (if known or provided) about complaints received at the Premises concerning any environmental impact of the activities undertaken at the Premises:
  - (i) name and address of the complainants (if consented);
  - (ii) date and time of complaint;
  - (iii) date and time of alleged incident;
  - (iv) alleged source of the incident;
  - (v) general description of the alleged incident, including any environmental or health impacts reported by the complainant;
  - (vi) wind direction, wind speed and temperature at time of alleged incident;
  - (vii) likely source of the alleged incident; and
  - (viii) actions taken by licensee to address complaint, including the outcome of any investigation(s) and action(s) to verify any impacts.
- (b) complete an annual analysis and review of complaints recorded under 5.1.4(a) to identify any common factors and root cause of complaints and proposals to address these.

### 5.2 Reporting

5.2.1 The Licensee shall submit to the Director an Annual Environmental Report within 60 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.



Table 5.2.1: Annual Environmental Report		
Condition or table (if relevant)	Parameter	Format or form <sup>1</sup>
-	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 1.3.2	Summary of any treatment capacity target exceedances and any action taken.	
1.3.5	Summary of any freeboard target exceedances and any action taken.	
Table 3.5.1	Monitoring of emissions to land	
	Methodology and calculations used to estimate the daily volumetric flow rate of treated wastewater discharged to emission points L1 and L2 and results of those calculations.	
	Contaminant loading (kg/day and kg/ha/day – monthly average and total annual loading kg/yr and kg/ha/yr) to land at emission points L1 and L2 of parameters monitored in Table 3.5.1 (all except pH and E.coli)	
Table 3.6.1	Summary of inputs	
Table 3.8.1	Monitoring of ambient groundwater quality	
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 ensure that the Annual Environmental Report also contains:
- (a) any relevant process, production or operational data recorded under condition 3.1.3; and
  - (b) an assessment of the information contained within the report against previous monitoring results and Licence limits and/or targets.

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

Table 5.2.2: Non-annual reporting requirements				
Condition or table (if relevant)	Parameter	Reporting period	Reporting date (after end of the reporting period)	Format or form
-	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

### 5.3 Notification

5.3.1 The Licensee shall ensure that the parameters listed in Table 5.3.1 are notified to the Director at the Contact Address and in accordance with the notification requirements of the table.





Table 5.3.1: Notification requirements			
Condition or table (if relevant)	Parameter	Notification requirement <sup>1</sup>	Format or form <sup>2</sup>
-	Taking process equipment offline for maintenance works that may result in increased odour emissions	No less than 72 hours in advance of works	None specified
-	Removal of sewage sludge from a treatment pond, wastewater treatment vessel, sewage sludge storage pond or Geobag	No less than 14 days in advance of works <sup>3</sup>	
1.3.1 and 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 working day  Part B: As soon as practicable	N1
	Any failure or malfunction of any pollution control equipment or any incident, which has caused, is causing or may cause pollution		
3.1.5	Calibration report	As soon as practicable.	None specified

Note 1: No notification requirement in the Licence shall negate the requirement to comply with s72 of the Act.

Note 2: Forms are in Schedule 2

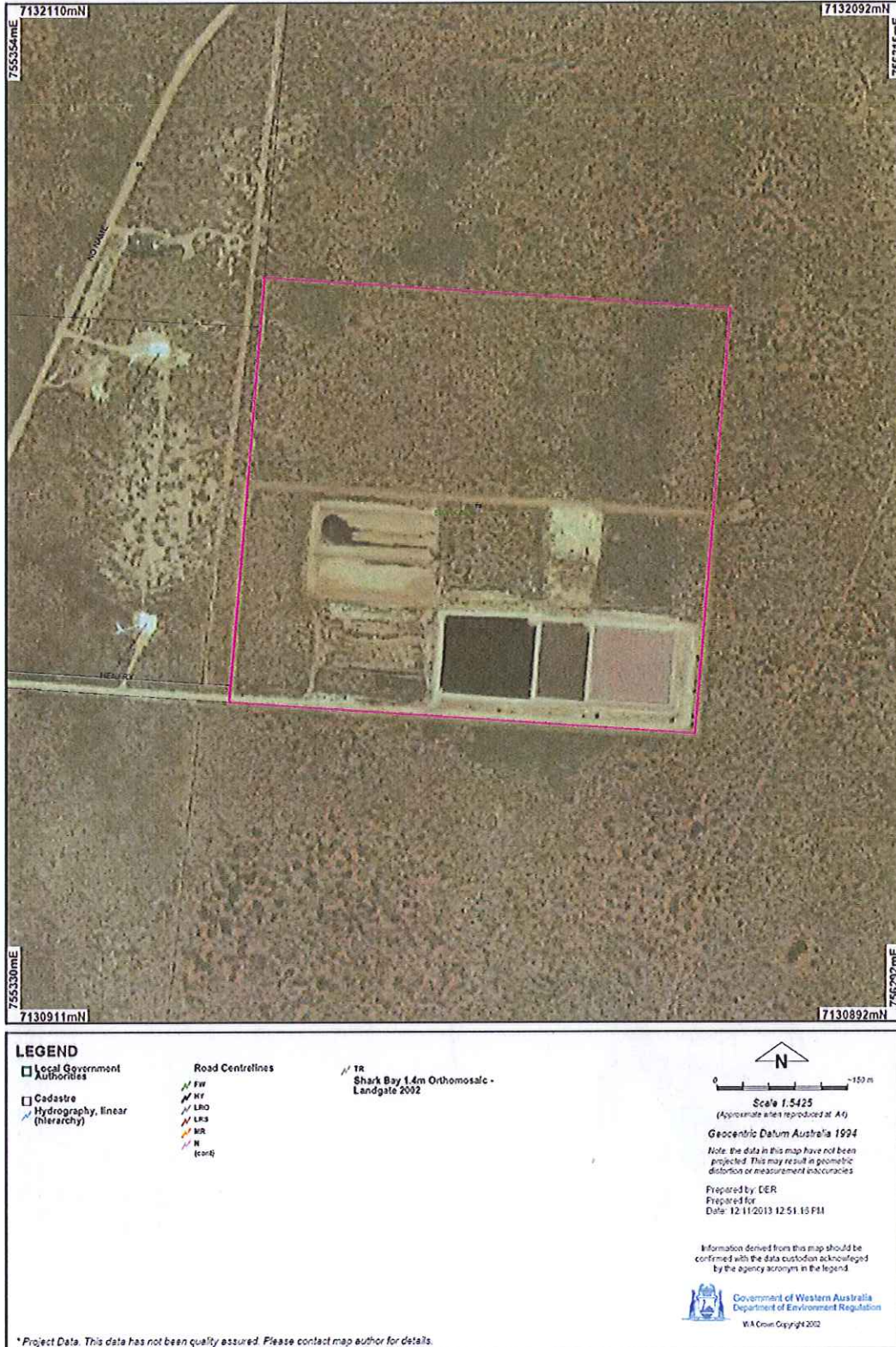
Note 3: The following information shall be included: (i) when desludging is proposed to occur, (ii) the desludging method, (iii) action to mitigate potential odour impacts



# Schedule 1: Maps

## Premises map

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

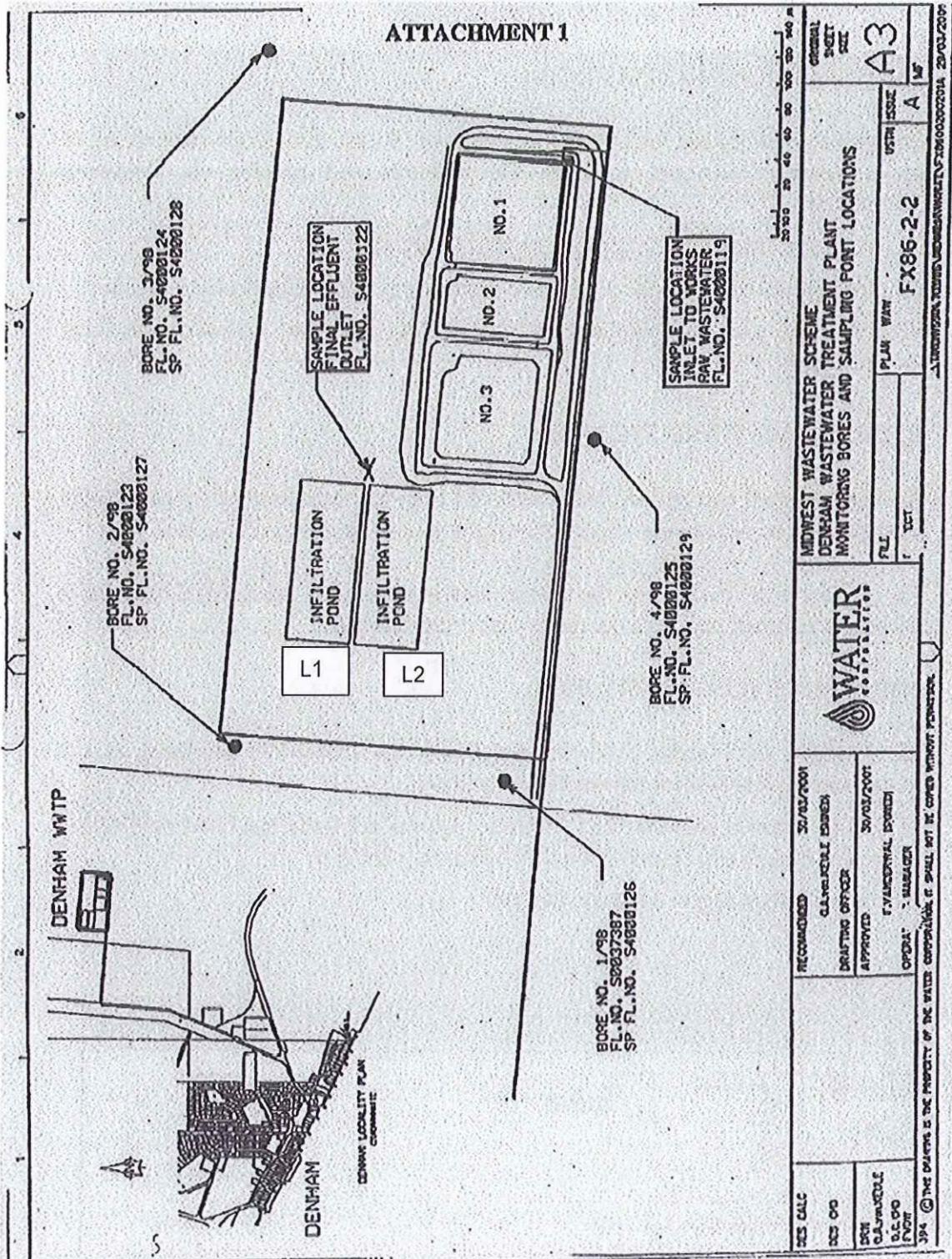






Map of emission points and monitoring locations

The locations of the emission points and monitoring locations defined in Tables 2.5 1, 3.5.1 and 3.8.1 are shown below.





## 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 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"/>	by the individual licence holder, or
	<input type="checkbox"/>	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"/>	by the principal executive officer of the licensee; or
	<input type="checkbox"/>	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"/>	by affixing the common seal of the licensee in accordance with the <i>Corporations Act 2001</i> ; or
	<input type="checkbox"/>	by two directors of the licensee; or
	<input type="checkbox"/>	by a director and a company secretary of the licensee, or
	<input type="checkbox"/>	if the licensee is a proprietary company that has a sole director who is also the sole company secretary – by that director, or
	<input type="checkbox"/>	by the principal executive officer of the licensee; or
	<input type="checkbox"/>	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"/>	by the principal executive officer of the licensee; or
	<input type="checkbox"/>	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"/>	by the chief executive officer of the licensee; or
	<input type="checkbox"/>	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: L7690/1997/6  
 Form: N1

Licensee: Water Corporation  
 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	Water Corporation
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 Water Corporation	
Date	



# Decision Document

## *Environmental Protection Act 1986, Part V*

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**Proponent:** Water Corporation

**Licence:** L7690/1997/6

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**Registered office:** 629 Newcastle Street  
LEEDERVILLE WA 6007

**Premises address:** Denham Wastewater Treatment Plant  
70 Monkey Mia Road  
DENHAM WA 6537  
Being Lot 345 on Plan 193644 as depicted in Schedule 1.

**Issue date:** Thursday, 16 October 2014

**Commencement date:** Saturday, 1 November 2014

**Expiry date:** Thursday, 31 October 2019

### 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.

Decision Document prepared by:

Tessa Smith  
Licensing Officer

Decision Document authorised by:

Stephen Checker  
Manager Licensing (Midwest)





## 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	<b>Category number(s)</b>	<b>Assessed design capacity</b>
	54	256 cubic metres per day
Application verified	Date: 08/07/2014	
Application fee paid	Date: 07/08/2014	
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"/>	Referral decision No: Managed under Part V <input type="checkbox"/> Assessed under Part IV <input type="checkbox"/>
Is the proposal subject to Ministerial Conditions?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Ministerial statement No: EPA Report No:
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the <i>Environmental Protection Act 1986</i> )?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Department of Water consulted Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Is the Premises within an Environmental Protection Policy (EPP) Area	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
If Yes include details of which EPP(s) here.		
Is the Premises subject to any EPP requirements?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
If Yes, include details here, eg Site is subject to SO <sub>2</sub> requirements of Kwinana EPP.		





### **3 Executive summary of proposal and assessment**

The Denham Wastewater Treatment Plant is located approximately 1.5 kilometers (km) east of the Denham town-site and is immediately surrounded by bushland. The closest residential receptor is located within the town-site. Little Lagoon is the closest environmental receptor approximately 1.3km to the north-west of the premises. The depth to groundwater on the premises ranges from 22 to 26 mBGL.

The Denham Wastewater Treatment Plant is designed to service a nominal population of approximately 1,280. At 30 June 2012 there were 314 services connected serving a fluctuating population due to the large number of tourists that visit the region. The average daily inflow to the plant for the 2013/14 reporting period was 173.7 cubic m/day.

The operations at the Denham Wastewater Treatment Plant include the treatment of sewage to a secondary standard and the on-site infiltration of treated wastewater. Plant infrastructure consists of:

- Three stabilisation ponds; a primary facultative pond (Pond 1), maturation pond (Pond 2), and a second maturation pond (Pond 3); and
- Two infiltration/evaporation ponds; treated wastewater is only discharged by on-site infiltration/evaporation during the high peak season flows.

The main emissions from the site are discharges of treated wastewater via infiltration to land (and potentially to groundwater) and potential fugitive emissions in the form of odour.

Discharges of treated wastewater to land are managed by undertaking compliance monitoring prior to discharge.

Given the remoteness of the site from sensitive receptors, odour emissions are considered low risk. Odour emissions are managed by the ongoing operation, maintenance and desludging of the ponds.

The licence has changed from version L7690/1997/5 to L7690/1997/6 and has been converted to the new standardised REFIRE format. As part of this re-issue DER has not reassessed the acceptability of impacts of emissions or discharges from the Premises or revisited existing emission control levels with the exception of stormwater management on the Premises and the controls for managing the potential unauthorised emission of untreated or semi-treated sewage.

3.3,  
3.6

Emission Description:

*Emission:* untreated or semi-treated sewage emission to land through an overflow of treatment ponds, infiltration from treatment ponds, or leachate escaping the sewage sludge compound.

- Overflow of the treatment ponds could be caused by an extreme rainfall event or operational issues (e.g. increase in seasonal inflow to plant).
- Infiltration of untreated and partially treated wastewater to land (and potentially groundwater) could be caused by a breach in the liner of the treatment ponds.
- Sewage sludge leachate may enter the environment through stormwater runoff coming into contact with stored sludge.

*Impact:* erosion and/or contamination of surrounding land and groundwater. The Premises is immediately surrounded by bushland, with the nearest surface water body approximately 1.3 km north-west of the Premises. The distance to groundwater on-site ranges from 22 to 26 mBGL.

*Controls:* freeboard of 400mm is targeted for the wastewater treatment ponds. Treatment ponds are lined with a HDPE liner to achieve a permeability of less than  $10^{-9}$ m/s or equivalent, and vegetation is prevented from growing within the ponds to protect and maintain the integrity of the liner. The sewage sludge compound is a bunded hardstand or lined area (to achieve permeability of less than  $10^{-9}$ m/s) capable of preventing surface runoff of leachate and sludge.

General provisions of the *Environmental Protection Act 1986*.



stormwater prior to being discharged. L1.3.4 is included requiring specific containment standards for wastewater treatment ponds and the sewage sludge compound as stated in the controls above. L1.3.5 is included requiring the management of the wastewater treatment ponds and infiltration pond to prevent overtopping and maintain the integrity of the ponds. L1.3.4 replaces conditions S2(a) and S2(b) of the previous licence. L1.3.5 replaces conditions W2 and W4 of the previous licence.

Residual Risk

*Consequence:* Moderate

*Likelihood:* Unlikely

*Risk Rating:* Moderate

L1.3.1, L1.3.2, L1.3.3 and L1.3.6 have been included in the licence as operational conditions not specifically related to a potential or authorised emission.

- L1.3.1 requires the investigation of the exceedance of the sewage processing target within Table 1.3.2 and freeboard target in condition 1.3.5.
- L1.3.2 specifies sewage accepted through sewer inflows as the only waste type that can be accepted.
- L1.3.3 specifies that sewage waste can undergo physical and biological



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>treatment, and overall treatment capacity shall be targeted at 256m<sup>3</sup>/day. A target rather than a limit is specified as the sewer inflows are seasonally variable; therefore a limit wouldn't be appropriate. A reporting requirement is included in Table 5.2.1 requiring a summary of any treatment capacity target exceedances and any action taken.</p> <ul style="list-style-type: none"> <li>L1.3.6 requires security measures to be implemented to prevent unauthorised access, repair damage to any security measures and lock the entrance gates when the site is closed/unmanned.</li> </ul> <p>Note: the requirements of condition S3 of the previous licence have not been reflected in this re-issue as the general provisions of the <i>Environmental Protection Act 1986</i> already require the sewage sludge to be lawfully re-used or disposed of. This does not require regulation through a licence condition.</p>	
Emissions general	L2.1.1	OSC	A descriptive limit will be set through L2.7.1 of the licence and therefore OSC regarding recording and investigation of exceedances of limits or targets has been included.	
Point source emissions to air including monitoring	L2.2, L3.2	N/A	There are no point source emissions to air from the Premises that require regulation through this section.	<p>General provisions of the <i>Environmental Protection Act 1986</i>.</p> <p><i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i>.</p>
Point source emissions to surface water	L2.3, L3.3	N/A	There are no point source emissions to surface water from the Premises.	



		L2.5.1 replaces W1 of the previous licence. L3.5.1 replaces G1(b), W3(a) and W5 of the previous licence.	
	N/A	Fugitive emissions have not been re-assessed as part of this re-issue. As the previous licence did not impose controls on fugitive emissions, no specified conditions have been included in this section. SC 1.2.1 applies.	General provisions of the <i>Environmental Protection Act 1986</i> .
	OSC	Odour has not been re-assessed as part of this re-issue. As the previous licence did not impose controls on odour, no specified conditions have been included in this section. SC 1.2.1 applies.	General provisions of the <i>Environmental Protection Act 1986</i> .
	N/A	Noise has not been re-assessed as part of this re-issue. As the previous licence did not impose controls on noise, no specified conditions have been included in this section. The <i>Environmental Protection (Noise) Regulations 1997</i> and SC 1.2.1 applies.	<i>Environmental Protection (Noise) Regulations 1997</i>  General provisions of the <i>Environmental Protection Act 1986</i>
1.3,	OSC	L3.1.1 is included as a requirement for wastewater and groundwater sampling in	

		non-continuous monitoring. L3.1.4 and L3.1.5 are included as requirements for monitoring equipment to be correctly calibrated.	
	OSC	L3.6.1 has been included in the licence to monitor the sewage volumes entering the wastewater treatment plant. This is necessary for comparison with the daily sewage treatment target volume.	
	N/A	Process monitoring requirements have not been re-assessed as part of this re-issue. As the previous licence did not require process monitoring, no specified conditions have been included in this section.	
	OSC	Ambient monitoring requirements have not been re-assessed as part of this re-issue. L3.8.1 replaces G1(b) and W7(a) of the previous licence.	
	N/A	Meteorological monitoring requirements have not been re-assessed as part of this re-issue. As the previous licence did not require meteorological monitoring, no specified conditions have been included in this section.	
	N/A	No improvement requirements included in the licence.	
2.3,		L5.1.3 (SC) replaces condition G2 of the previous licence. L5.1.4 (SC) replaces conditions G3(a) & G3(b) of the previous licence. L5.2.1 (SC) replaces condition G1(a), W3(b) & W6 of the previous licence. L5.2.2 is included as a requirement to include in the Annual Environmental Report data recorded under L3.1.3 and an assessment of monitoring results	<i>Environmental Protection Regulations 1987</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>against previous results and limits/targets to ensure variations and trends are noted.</p> <p>L5.2.3 is included as a requirement to provide monitoring reports from third parties on the Directors request. L5.2.3 partly replaces condition W8(c), which is also partly covered under condition 5.1.1.</p> <p>L5.3.1 includes optional standard notification requirements for taking process equipment offline and the removal of sewage sludge from a treatment pond etc. L5.3.1 replaces condition S1 of the previous licence.</p> <p>Note: the requirement of condition W7(b) of the previous licence has not been reflected in this re-issue as it is considered that Part 8 Regulation 19 of the <i>Environmental Protection Regulations 1987</i> applies in regards to approved monitoring equipment.</p>	
Licence Duration	N/A	N/A	The Licence duration has been set for a five year period.	







## 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