



Licence

Environmental Protection Act 1986, Part V

Licensee: Water Corporation

Licence: L8050/1991/3

Registered office: 629 Newcastle Street
LEEDERVILLE WA 6007

Premises address: Jurien Wastewater Treatment Plant
Victoria Location 11300 (Crown Reserve 40417)
Airstrip Road
JURIEN BAY WA 6516
Being Lot 11300 on Plan 185509 as depicted in Schedule 1.

Issue date: Thursday, 16 October 2014

Commencement date: Saturday, 01 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	300 cubic metres per day

Conditions

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

Date signed: 12 November 2015

.....
Steve Checker
MANAGER LICENSING (WASTE INDUSTRIES)
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 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 Jurien Wastewater Treatment Plant (WWTP) is located on Victoria Location 11300 (Crown Reserve 40417), Lot 11300 on Plan 185509, via Airstrip Road, Jurien Bay WA 6516, in the Shire of Dandaragan. This site is vested in the Water Corporation for the purposes of the waste water treatment plant servicing the Town of Jurien Bay.

The Premises was upgraded during 2014/ 2015 and consists of two primary ponds, two secondary ponds, two infiltration ponds and an emergency storage overflow pond which was constructed in place of the previous infiltration channel. The premises is fully fenced and locked at all times. There is no aeration of any of the ponds which discharge waters from the secondary pond to the two infiltration ponds for final disposal.

The upgrade works consisted of:

- New sewage/septage discharge facility
- New distribution manhole
- Two new treatment ponds (primary facultative and secondary)
- Two new infiltration ponds
- Treated effluent pipe to new infiltration ponds
- Ramps in infiltration ponds
- New emergency spillways
- Expansion of existing overflow channels
- Flow measurement device to the new infiltration ponds

Average Annual Daily Flows (AADF) to the plant have been rising steadily and in 2012 reached 156 KL/d, just below the treatment capacity of the plant (163KL/d, assuming influent BOD at 300mg/L). Inflows are greatest during the peak tourist summer season (reaching up to 200KL/d in January 2012), but are below the AADF during winter.

The plant is surrounded by rural land, the airport (to the north-west) and future industrial land. The nearest residence is 1.8 km to the west. The closest rural residential lots are 2.5 km to the east, and further residential development is proposed 1.3 km to the south, between the main highway and the ocean. The golf course is located 1.2 km away from the premises.

The nearshore coastal environment adjacent to the town is within the gazetted Jurien Bay Marine Park, north of the point the nearshore zone is within the general use zone whereas from the point south, the nearshore zone is within the Boulanger Island Sanctuary Zone (MPRA, 2005).

The Jurien WWTP is in an area of low, dense coastal heath vegetation where limestone and sand of the Tamala Limestone occurs at shallow depths. In the townsite and immediately to the south, the Tamala Limestone is overlain by fine to medium grained dune sand, the Safety Bay Sand. The surface of the limestone is locally hard "capstone" of low permeability. The water table lies within



the Safety Bay Sand or the Tamala Limestone and is approximately 3 m below the ground at the WWTP. Groundwater levels within two kilometres of the coast are strongly influenced by tides (Rockwater, 2013). Groundwater directional flow has been identified by Water Corporation as being in a north westerly direction, towards the town of Jurien Bay.

The Tamala Limestone is karstic and of high to very high permeability with caves in the formation north-east of the townsite (Drovers Cave National Park); some of which extend down to the water table. Groundwater in the limestone is recharged by the infiltration of rainfall and runoff. It flows westwards under low hydraulic gradients and discharges to the ocean along the coast. Solution channels in the limestone provide preferential paths for groundwater flow.

The Town of Jurien Bay is the nearest residential community to the WWTP and lies approximately 1.8km west of the Plant, along the coast. Jurien Bay is the catchment for the Plant and is growing steadily.

This Licence is the result of an amendment sought by the Licensee to amend the premises details as a result of completed works upgrade carried out under works approval W5495/2014/1 in accordance with the *Environmental Protection Act 1986*, section 53.

The licences and works approvals issued for the Premises since 20/06/2001 are:

Instrument log		
Instrument	Issued	Description
W3151/1991/1	20/06/2001	Works Approval
L8050/1991/1	25/10/2005	Licence re-issue
L8050/1991/1	09/05/2008	Licence amendment
L8050/1991/2	17/09/2009	Licence re-issue
L8050/1991/3	16/10/2014	Licence reissue and amendment to new format
W5495/2014/1	16/01/2014	Works Approval for premises upgrade
L8050/1991/3	12/11/2015	Licence amendment on completion of works upgrade

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 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;
Chief Executive Officer
Department Administering the Environmental Protection Act 1986
Locked Bag 33
CLOISTERS SQUARE WA 6850
Email: info@der.wa.gov.au;

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

'emergency event' means 1 in 10 year, 72 hour rainfall event or greater;

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

'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;



'in-situ soils' means soils that are in place and have not been moved from their original place of deposition;

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

'Licence' means this Licence numbered L8050/1991/3 and issued under the Act;

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

'NATA' means the National Association of Testing Authorities, Australia;

'NATA accredited' means in relation to the analysis of a sample that the laboratory is NATA accredited for the specified analysis at the time of the analysis;

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

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

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

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

'sewage' means waste containing faecal matter or urine;

'six monthly' means the 2 inclusive periods from 1 July to 31 December and 1 January to 30 June in the following year;

'spot sample' means a discrete sample representative at the time and place at which the sample is taken; and

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

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

1.1.4 Any reference to a guideline or code of practice in the Licence means the version of that guideline or code of practice in force from time to time, and shall include any amendments or replacements to that guideline or code of practice made during the term of this Licence.

1.1.5 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 General conditions

1.2.1 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.

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



- 1.2.3 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.¹

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 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 ¹
Putrescible and Organic Wastes			
Sewage – waste from the reticulated sewerage system	K130	300 cubic metres/day	Accepted through sewer inflow(s) and via tankers only.
Septage wastes	K210		Tankered into the premises and discharged directly into the primary pond via the receivable point.
Grease wastes	K110	<100 t/annual period and as part of total premises design capacity	This includes biological wastes only (e.g. grease wastes from food preparation)

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 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 maintained at or below the treatment capacity of 300 m ³ /day.
Sewage sludge	Storage	N/A



- 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
Pond 1 – Primary	Wastewater	Clay lined to achieve a permeability of less than 10^{-9} m/s or equivalent.
Pond 1B – Primary	Wastewater	Clay lined to achieve a permeability of less than 10^{-9} m/s or equivalent.
Pond 2 – Secondary	Wastewater	Clay lined to achieve a permeability of less than 10^{-9} m/s or equivalent.
Pond 2B – Secondary	Wastewater	Clay lined to achieve a permeability of less than 10^{-9} m/s or equivalent.
Infiltration pond 1	Wastewater	Base unlined, in-situ soils; geotextile embankments.
Infiltration pond 2	Wastewater	Base unlined, in-situ soils; geotextile embankments.
Emergency Overflow Infiltration Pond	Treated wastewater	Unlined, in-situ soils.
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. The sewage sludge geobag laydown area should be managed such that: (a) stormwater runoff is prevented from entering the area; (b) discharges/leachate from the area are directed to the primary ponds.

- 1.3.5 The Licensee shall manage all wastewater treatment, evaporation, and infiltration ponds such that:

- (a) overtopping of the ponds does not occur;
- (b) a freeboard equal to, or greater than, 300mm is maintained;
- (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 manage the infiltration of treated wastewater such that:

- (a) treated wastewater is evenly distributed over the infiltration area; and
- (b) wastewater disposal is to be rotated between the infiltration areas on a regular basis to minimise soil erosion and surface ponding and allow the soils to dry between disposal; and
- (c) sludges are removed from the base of the pond to maintain the infiltration performance;



- 1.3.7 The Licensee shall:
- (a) implement security measures at the site to prevent as far as is practical unauthorised access to the site; and
 - (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 specified in any part of section 2 of this Licence.

2.2 Emissions to land

- 2.2.1 The Licensee shall ensure that where waste is emitted to land from the emission points in Table 2.2.1, and identified on the map of emission points in Schedule 1, it is done so in accordance with the conditions of this Licence.

Table 2.2.1: Emissions to land			
Emission point reference	Emission point reference on Map of emission points	Description	Source including abatement
L1	Infiltration ponds 1 and 2	Discharge of wastewater from secondary pond 2B and 2 to infiltration ponds 1 and 2	Treated wastewater from secondary ponds
L2	Emergency overflow infiltration pond	Discharge from infiltration ponds 1 and 2	Discharge of wastewater in an emergency event only



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 microbiological samples are collected and preserved in accordance with AS/NZS 2031; and
- (e) all laboratory samples are submitted to and tested by a laboratory with current NATA accreditation for the parameters being measured unless indicated otherwise in the relevant table.

3.1.2 The Licensee shall ensure that :

- (a) monthly monitoring is undertaken at least 15 days apart;
- (b) quarterly monitoring is undertaken at least 45 days apart; and
- (c) six monthly monitoring is undertaken at least 5 months apart.

3.1.3 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.

3.1.4 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 CEO accompanied with a report comprising details of any modifications to the methods.

3.2 Monitoring of emissions to land

3.2.1 The Licensee shall undertake the monitoring in Table 3.2.1 according to the specifications in that table.

Table 3.2.1: Monitoring of emissions to land					
Emission point reference	Monitoring point reference	Parameter	Units	Averaging Period	Frequency
M1	Monitoring outfall flume facility (from secondary treatment ponds '2 and 2B' prior to entering infiltration ponds)	pH ¹	pH	Spot Sample	Quarterly
		Biochemical Oxygen Demand	mg/L		
		Total Dissolved Solids	mg/L cfu/100 mL		
		Total Suspended Solids			
		Nitrate + Nitrite-nitrogen			
		Ammonium-nitrogen			
		Total Nitrogen			
		Total Phosphorus			
		<i>Escherichia coli</i> ²			

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

Note 2: Actual units are to be reported except where the result is greater than the highest detectable level of 24,000 cfu/100mL. In this case the reporting of the highest detectable level is permitted.



3.3 Monitoring of inputs and outputs

3.3.1 The Licensee shall undertake the monitoring in Table 3.3.1 according to the specifications in that table.

Table 3.3.1: Monitoring of inputs and outputs					
Input/Output	Monitoring point reference	Parameter ¹	Units	Averaging period	Frequency
Sewage - Inlet Flow	SPS Magflow volume (M2)	Volumetric flow rate (cumulative)	m ³ /day	Monthly	Continuous
Septage waste	Tankered waste receival point (M3)	Volumetric flow rate (cumulative)	m ³ /day	Monthly	Continuous
Treated wastewater discharged to onsite infiltration ponds 1 and 2	Outflow meter (M1)	Volumetric flow rate (cumulative)	m ³ /day	Monthly	Continuous
Treated wastewater discharged to the emergency overflow infiltration pond	M4	-			Spot sample

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

3.4 Ambient environmental quality monitoring

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

Table 3.4.1: Monitoring of ambient groundwater quality				
Monitoring point reference and location	Parameter	Units	Averaging period	Frequency
Monitoring Bores: 1/97 (or 2/97), 5/97 (or 6/97), 1/14 (or 5/14); 3/14 (or 4/14) (Schedule 1)	Standing water level ¹	mBGL	Spot sample	Six monthly
	pH ¹	pH		
	Total Dissolved Solids	mg/L		
	Total Nitrogen			
	Total Phosphorus			

Note 1: In-situ non-NATA accredited sampling permitted.



4 Improvements

4.1 Improvement program

4.1.1 The Licensee shall complete the improvements in Table 4.1.1 by the date of completion in Table 4.1.1.

Table 4.1.1: Improvement program		
Improvement reference	Improvement	Date of completion
IR1	<p>The Licensee shall develop and submit to the CEO for review:</p> <p>A 'nutrient management strategy' for treated wastewater discharged at the premises.</p> <p>The strategy (based on historical data) must include, but not limited to:</p> <ul style="list-style-type: none">- an assessment of the nutrient loads from the premises to the infiltration ponds and emergency overflow pond;- potential environmental risks as a result of infiltration taking place at the premises;- consideration of alternatives for the reuse of wastewater;- determination of which bores are upgradient and down gradient;- determination of any improvement requirements to the treatment process to reduce nutrient loading;- indicative timeframes for implementation of any measures required to rectify any issues/ risks identified from the assessment process.	31/12/2016

5 Information

5.1 Records

- 5.1.1 All information and records required by the Licence shall:
- be legible;
 - if amended, be amended in such a way that the original and subsequent amendments remain legible or are capable of retrieval;
 - 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
 - for those following records, be retained until the expiry of the Licence and any subsequent licence:
 - off-site environmental effects; or
 - matters which affect the condition of the land or waters.
- 5.1.2 The Licensee shall ensure that:
- 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
 - any person who performs tasks on the Premises is informed of all of the conditions of the Licence that relate to the tasks which that person is performing.



- 5.1.3 The Licensee shall complete an Annual Audit Compliance Report indicating the extent to which the Licensee has complied with the conditions of the Licence, and any previous licence issued under Part V of the Act for the Premises for the previous annual period.
- 5.1.4 The Licensee shall implement a complaints management system that as a minimum records the number and details of complaints received concerning the environmental impact of the activities undertaken at the Premises and any action taken in response to the complaint.

5.2 Reporting

- 5.2.1 The Licensee shall submit to the CEO an Annual Environmental Report within 63 calendar days after the end of the annual period (1 September). 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 ¹
-	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 exceedances and any action taken	None specified
1.3.5	Summary of any freeboard exceedances and any action taken	None specified
Table 3.2.1	Monitoring of emissions to land	None specified
Table 3.3.1	Monitoring of inputs and outputs	None specified
	Methodology and calculations used to estimate the daily volumetric flow rate of treated wastewater pumped to infiltration ponds and emergency overflow infiltration pond, and results of those calculations	
Table 3.4.1	Monitoring of ambient groundwater quality	None specified
5.1.3	Compliance	Annual Audit Compliance Report (AACR)
5.1.4	Complaints summary	None specified

Note 1: Forms are in Schedule 2

- 5.2.2 The Licensee shall ensure that the Annual Environmental Report also contains:
- any relevant process, production or operational data recorded; and
 - an assessment of the information contained within the report against previous monitoring results and Licence limits.
- 5.2.3 The Licensee shall submit the information in Table 5.2.2 to the CEO 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 ¹
-	Copies of original monitoring reports submitted to the Licensee by third parties	Not Applicable	Within 14 days of the CEO's request	As received by the Licensee from third parties

Note 1: Forms are in Schedule 2



5.3 Notification

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

Table 5.3.1: Notification requirements			
Condition or table (if relevant)	Parameter	Notification requirement ¹	Format or form ²
-	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 ³	
-	Groundwater bores being de-commissioned or rendered useless	Within 14 days	
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 working day Part B: As soon as practicable	N1
2.2.1	Potential discharge of wastewater to the emergency overflow infiltration pond	No less 24 hours prior to discharge	None specified
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, and (iv) the method by which the community will be advised of the desludging activities.

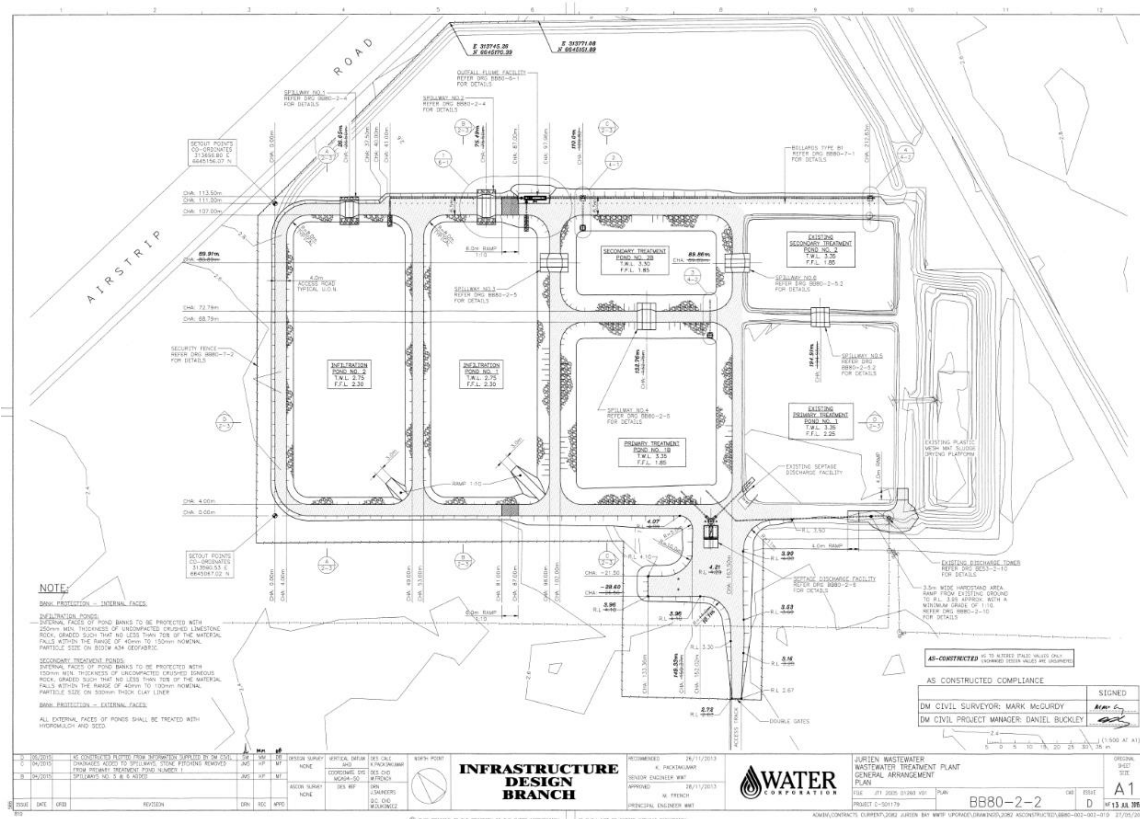


Schedule 1: Maps

Premises map

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

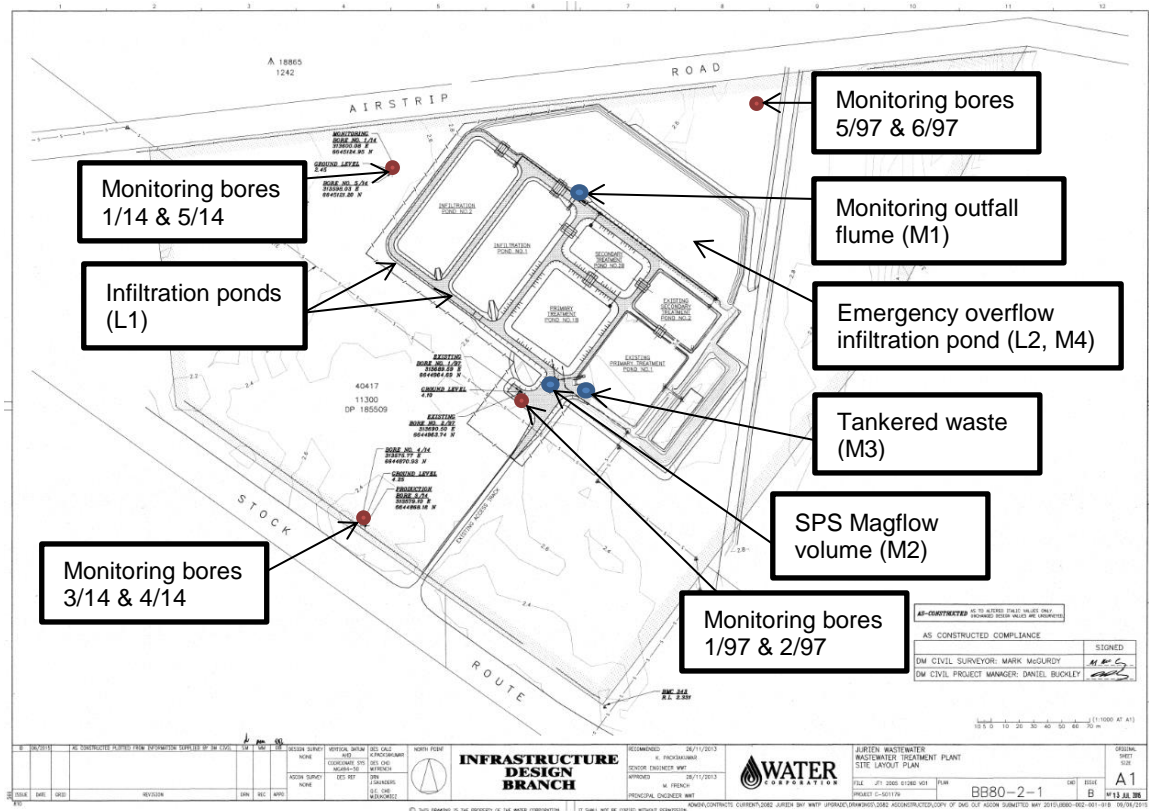






Map of emission and monitoring locations

The locations of the emission and monitoring points defined in Tables 2.5.1, 3.2.1, 3.3.1 and 3.4.1 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: Trading as:	ABN:
Reporting period: _____ to _____	

STATEMENT OF COMPLIANCE WITH LICENCE CONDITIONS

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

Yes ☐ Please proceed to Section C

No ☐ Please proceed to Section B

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

Initial:



SECTION B

DETAILS OF NON-COMPLIANCE WITH LICENCE CONDITION.

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

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

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

Initial:



SECTION C

SIGNATURE AND CERTIFICATION

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

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

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

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

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

SIGNATURE: _____

NAME:
(printed) _____

POSITION: _____

DATE: ____/____/____

SEAL (if signing under seal)

SIGNATURE: _____

NAME:
(printed) _____

POSITION: _____

DATE: ____/____/____



Licence: L8050/1991/3
Form: N1

Licensee: Water Corporation
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 Water Corporation	
Date	



Decision Document

Environmental Protection Act 1986, Part V

Proponent: **Water Corporation**

Licence: **L8050/1991/3**

Registered office: 629 Newcastle Street
LEEDERVILLE WA 6007

Premises address: Jurien Wastewater Treatment Plant
Victoria Location 11300 (Crown Reserve 40417)
Airstrip Road
JURIEN BAY WA 6516
Being Lot 11300 on Plan 185509

Issue date: Thursday, 16 October 2014

Commencement date: Saturday, 01 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 an amended licence. DER considers that in reaching this decision, it has taken into account all relevant considerations.

Decision Document prepared by: Caroline Conway-Physick
Licensing Officer

Decision Document authorised by: Steve Checker
Delegated Officer



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1 Purpose of this Document

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



2 Administrative summary

Administrative details		
Application type	Works Approval <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
	54 – Sewage facility	300 cubic metres per day
Application verified	Date: N/A (proponent initiated amendment 17/9/2015)	
Application fee paid	Date: N/A	
Works Approval has been complied with	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> (W5495/2014/1)	
Compliance Certificate received	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> (19/08/2015)	
Commercial-in-confidence claim	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Commercial-in-confidence claim outcome	N/A	
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"/> (DoW contacted during works approval phase – no response received.)	
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 ₂ requirements of Kwinana EPP.		



3 Executive summary of proposal and assessment

This decision document is the result of an amendment sought by the Licensee to amend the premises details as a result of completed works upgrade carried out under works approval W5495/2014/1 in accordance with the *Environmental Protection Act 1986*, section 53. The Premises daily capacity has been increased from 200m³/d to 300m³/d. General administrative changes have been included within the amendment process.

The Jurien Wastewater Treatment Plant (WWTP) is located on Victoria Location 11300 (Crown Reserve 40417), Lot 11300 on Plan 185509, via Airstrip Road, Jurien Bay WA 6516, in the Shire of Dandaragan. This site is vested in the Water Corporation for the purposes of the waste water treatment plant servicing the Town of Jurien Bay.

The Premises was upgraded during 2014/ 2015 and consists of two primary ponds, two secondary ponds, two infiltration ponds and an emergency storage overflow pond which was constructed in place of the previous infiltration channel. The premises is fully fenced and locked at all times. There is no aeration of any of the ponds which discharge waters from the secondary ponds ('2' and '2B') to the two new infiltration ponds for final disposal.

The upgrade works consisted of:

- New sewage/septage discharge facility
- New distribution manhole
- Two new treatment ponds (primary facultative and secondary)
- Two new infiltration ponds
- Treated effluent pipe to new infiltration ponds
- Ramps in infiltration ponds
- New emergency spillways
- Expansion of existing overflow channels
- Flow measurement device to the new infiltration ponds

The plant is surrounded by rural land, the airport (to the north-west) and future industrial land. The nearest residence is 1.8 km to the west. The closest rural residential lots are 2.5 km to the east, and further residential development is proposed 1.3 km to the south, between the main highway and the ocean. The golf course is located 1.2 km away from the premises.

The nearshore coastal environment adjacent to the town is within the gazetted Jurien Bay Marine Park, north of the point the nearshore zone is within the general use zone whereas from the point south, the nearshore zone is within the Boulanger Island Sanctuary Zone (MPRA, 2005).

The Jurien WWTP is in an area of low, dense coastal heath vegetation where limestone and sand of the Tamala Limestone occurs at shallow depths. In the townsite and immediately to the south, the Tamala Limestone is overlain by fine to medium grained dune sand, the 'Safety Bay Sand'. The surface of the limestone is locally hard "capstone" of low permeability. The water table lies within the Safety Bay Sand or the Tamala Limestone and is approximately 3 m below the ground at the WWTP. Groundwater levels within two kilometres of the coast are strongly influenced by tides (Rockwater, 2013). Groundwater directional flow has been identified by Water Corporation as being in a north westerly direction, towards the town of Jurien Bay.

The nearest surface water body is a wetland which lies approximately 1.5km west of the premises in the Ardross Estate.

The Tamala Limestone is karstic and of high to very high permeability with caves in the formation north-east of the townsite (Drovers Cave National Park); some of which extend down to the water table. Groundwater in the limestone is recharged by the infiltration of rainfall and runoff. It flows



westwards under low hydraulic gradients and discharges to the ocean along the coast. Solution channels in the limestone provide preferential paths for groundwater flow.

The Town of Jurien Bay is the nearest residential community to the WWTP and lies approximately 1.8km west of the Plant, along the coast. Jurien Bay is the catchment for the Plant and is growing steadily.



4 Decision table

All applications are assessed in line with the *Environmental Protection Act 1986*, the *Environmental Protection Regulations 1987* and DER's Operational Procedure on Assessing Emissions and Discharges from Prescribed Premises. Where other references have been used in making the decision they are detailed in the decision document.

DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L = Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
General conditions	L1.2	Condition 1.2.2 has been removed from the Licence as part of current DER procedural changes and through the general administrative updates to be carried out within the Licence. This condition is no longer considered a standard condition within the licence format.	Application supporting documentation
Premises operation	L1.3.2 L1.3.3 L1.3.4 L1.3.5	<p>Condition 1.3.2, Table 1.3.1 has been updated to include the correct 'waste codes' and 'quantity limits' with a request from Water Corporation through the 21 day consultation period to define limits for waste codes in relation to operational requirements.</p> <p>Condition 1.3.4, Table 1.3.3 has been updated to reflect the new ponds and their construction as per the completed works approval, W5495/2014/1.</p> <p>Operation <u>Emission Description</u> <i>Emission:</i> Uncontrolled emissions of wastewater from the treatment plant <i>Impact:</i> Contamination of surrounding land and potential groundwater systems. Potential impacts on ecology of groundwater from the addition of nutrients and heavy metals. <i>Controls:</i> The premises has been designed to ensure sufficient freeboard through the recent capacity upgrade. The pond liners within the treatment ponds is considered better than 1×10^{-9} m/s.</p>	Application supporting documentation



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p><u>Risk Assessment</u> <i>Consequence:</i> Moderate <i>Likelihood:</i> Possible <i>Risk Rating:</i> Moderate</p> <p><u>Regulatory Controls</u> Condition 1.3.3, Table 1.3.2 has been updated to increase the capacity of the Premises to 300m³/ day, and changed from 'targetted' to 'maintained'.</p> <p>Condition 1.3.5 has been updated to change the word 'target' to 'maintained'. Current DER policy recommends the removal of all targets from the Licence. A freeboard limit is considered appropriate to assist in ensuring untreated wastewater does not discharge from the premises.</p> <p><u>Residual Risk</u> <i>Consequence:</i> Moderate <i>Likelihood:</i> Possible <i>Risk Rating:</i> Moderate</p>	
Emissions to land including monitoring	L2.2 L3.2	<p>Operation <u>Emission Description</u> <i>Emission:</i> Treated wastewater discharged to land for infiltration. <i>Impact:</i> Contamination of surrounding land and potential groundwater systems. Potential impacts on ecology of groundwater from the addition of nutrients and heavy metals. <i>Controls:</i> A monitoring flume has been constructed in the common outlet channel from the treatment ponds just before discharging into either of the infiltration ponds. The data will be stored in a data logger powered by a rechargeable battery. The data will be downloaded for monthly recording and reporting purposes.</p>	<p>General provisions of the <i>Environmental Protection Act, 1986</i>.</p> <p>Application supporting documentation</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><u>Risk Assessment</u> <i>Consequence:</i> Moderate <i>Likelihood:</i> Possible <i>Risk Rating:</i> Moderate</p> <p><u>Regulatory Controls</u> Condition 2.2.1 has been updated to include the new infiltration ponds and emergency overflow infiltration pond in place of the previous infiltration channel.</p> <p>Condition 3.2.1 has been updated to reflect the new monitoring point (monitoring outfall flume) and emission point reference.</p> <p>Condition 4.1.1, Improvement programme 'IR1' has been included for the Licensee to assess and implement a management strategy for nutrient loading risk. This is considered appropriate considering depth to groundwater being approximately 3m, the geology of the area (karstic limestone) and the distance to the marine park (sensitive receptor). As the town is targeted for growth ('Super town') the pressures on the marine environment are expected to grow.</p> <p><u>Residual Risk</u> <i>Consequence:</i> Moderate <i>Likelihood:</i> Possible <i>Risk Rating:</i> Moderate</p>	
Monitoring of inputs and outputs	L3.3	Condition 3.3.1, Table 3.3.1 has been updated to show the correct monitoring of inputs/outs and the reference points have been updated. The information has been included within Schedule 1: Maps.	
Monitoring of ambient	L3.4	Condition 3.4.1, Table 3.4.1 'monitoring point references' has been updated to reflect the new monitoring bores 1/14 (or 5/14) and 3/14 (or 4/14). Bore 3/97 was	Application supporting



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
environmental quality		decommissioned through the works upgrade process (confirmed with Craig Chaudhry, 20/08/2015 via email) due to the placement of the new ponds. Water Corporation are unable to confirm which bores are upgradient or down gradient at this stage. This has been requested within condition 4.1.1, Improvement programme 'IR1' for monitoring assessment purposes.	documentation.
Improvements	L4.1	<p>Condition 4.1.1, improvement programme has been included for the development of a 'nutrient management strategy' for the premises, as assessed within section 2.2 and 3.2, "Emissions to land including monitoring".</p> <p>This is considered appropriate considering depth to groundwater being 3m, the (karstic) geology of the area and the distance to the marine park (sensitive receptor). As the town is targeted for growth ('super town') the pressures on the marine environment are expected to grow. Alternative approaches to the management of treated wastewater have been requested for consideration.</p>	Application supporting documentation.
Information	L5.2 L5.3	<p>Condition 5.2.1, Table 5.2.1 has been updated with the removal of the word 'target'. DER policy recommends the removal of all targets from the Licence.</p> <p>Administrative changes have been made within the Table 5.3.1. An additional notification requirement has been included for the use of the emergency overflow infiltration pond.</p> <p>'Schedule 1: Maps' have been updated to incorporate the new Premises process and layout, emission and monitoring points.</p>	
Licence Duration	N/A	The Licence duration has not been assessed through this Licence amendment process. The Licence expires on 31 October 2019.	



5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
19/10/2015	Proponent sent a copy of draft instrument	<p>Comments were received on 30/10/2015 from Craig Chaudhry (Water Corporation).</p> <p>The majority of comments were minor administrative changes, and with one request for an extension to the improvement conditions completion timeframe.</p> <p>A copy of the changes were emailed through to Craig Chaudhry on 3/11/2015.</p>	<p>Minor administrative changes made to Table 1.3.3, Table 2.2.1, Table 3.3.1 and relocation of emission and monitoring point arrows on 'map of emission and monitoring points' for 'M2' and 'M3'.</p> <p>The improvement condition 'IR1' completion requirement date was changed from 31/12/2015 to 31/12/2016.</p>



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