



Licence Number L6786/1991/11

Licence Holder Water Corporation

ACN 280 034 349 17

File Number: DER2016/000759

Premises

Albany Wastewater Treatment Plant
100 Timewell Road
MCKAIL WA 6330; and
35790 Albany Highway (Access via Gunn Road)
DROME WA 6330

Legal description –

Lot 1 on Diagram 44295, Lot 2 on Diagram 43845, Lot 749 on Plan 100633, Lot 815 on Plan 101284, Lot 3325 on Plan 79932, Lot 4822 on Plan 157224 and Lot 10 on Diagram 84694 (including the Albany Septage Facility), as depicted in Schedule 1.

Date of Amendment 14/6/2019

Amendment

The Chief Executive Officer (CEO) of the Department of Water and Environmental Regulation (DWER) has amended the above Licence in accordance with section 59 of the *Environmental Protection Act 1986* (EP Act) as set out in this Amendment Notice. This Amendment Notice constitutes written notice of the amendment in accordance with section 59B(9) of the EP Act.

Steve Checker

MANAGER WASTE INDUSTRIES

REGULATORY SERVICES

an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

Definitions and interpretation

Definitions

In this Amendment Notice, the terms in Table 1 have the meanings defined.

Table 1: Definitions

Term	Definition
ACN	Australian Company Number
Amendment Notice	refers to this document
Category/ Categories/ Cat.	categories of Prescribed Premises as set out in Schedule 1 of the EP Regulations
CEO	means Chief Executive Officer. CEO for the purposes of notification means: Director General Department Administering the <i>Environmental Protection Act 1986</i> Locked Bag 10 JOONDALUP DC WA 6919 info@dwer.wa.gov.au
Delegated Officer	an officer under section 20 of the EP Act
Department	means the department established under section 35 of the <i>Public Sector Management Act 1994</i> and designated as responsible for the administration of Part V, Division 3 of the EP Act.
DWER	Department of Water and Environmental Regulation
EP Act	<i>Environmental Protection Act 1986</i> (WA)
EP Regulations	<i>Environmental Protection Regulations 1987</i> (WA)
Existing Licence	The Licence issued under Part V, Division 3 of the EP Act and in force prior to the commencement of and during this Review
Licence Holder	Water Corporation
m ³	cubic metres
Minister	the Minister responsible for the EP Act and associated regulations
Noise Regulations	<i>Environmental Protection (Noise) Regulations 1997</i> (WA)

Prescribed Premises	has the same meaning given to that term under the EP Act.
Premises	refers to the premises to which this Decision Report applies, as specified at the front of this Decision Report.
Risk Event	as described in <i>Guidance Statement: Risk Assessment</i>
WWTP	Wastewater Treatment Plant

Amendment Notice

This amendment is made pursuant to section 59 of the *Environmental Protection Act 1986* (EP Act) to amend the Licence issued under the EP Act for a prescribed premises as set out below. This notice of amendment is given under section 59B(9) of the EP Act.

This notice is limited only to an amendment to authorise the relining of the IDEA #1 lagoon. No further changes to the aspects of the original Licence relating to Category 54 or Category 61 have been requested by the Licence Holder.

The following guidance statements have informed the decision made on this amendment

- *Guidance Statement: Regulatory Principles (July 2015)*
- *Guidance Statement: Setting Conditions (October 2015)*
- *Guidance Statement: Decision Making (February 2017)*
- *Guidance Statement: Risk Assessment (February 2017)*

Amendment description

The Licence Holder applied for an amendment to Albany Wastewater Treatment Plant's (WWTP) existing licence L6786/1991/11 on 18 April 2019.

The Albany WWTP has undergone upgrades to improve the performance of the WWTP and increase the capacity of the IDEA Lagoon #1 (IDEA #1) via works approval W5890/2015/1, which has since expired. The existing IDEA #1 was originally lined with clay with the embankments lined with shotcrete for erosion protection. A geotechnical investigation into the condition of the existing liner recommended that the IDEA pond floor needed to be relined with clay in order to achieve a final compacted thickness of 500mm. Following the installation of this new clay liner, the IDEA #1 was filled with treated wastewater to conduct hydrostatic testing. Seepage was recorded indicating failure of the containment infrastructure.

Numerous lining systems were investigated for the IDEA #1 including Clay liner, Reinforced Concrete, BGM, and HDPE. The clay liner was disregarded as it has not performed well historically at the site. As the IDEA #1 has a large amount of concrete structures (footings, foundation and pipe supports), it was difficult to achieve the approved compaction rate around the structures, therefore the seal between the clay liner and the concrete structures were insufficient and the likely cause of the leaks. BGM liner was also disregarded due to its lower flexibility making it difficult to manoeuvre around the concrete structures, potentially causing cracks and therefore hard to detect leaks.

The Licence Holder has determined that a double layer HDPE liner is best suited for the IDEA #1, with a 2mm primary (internal) liner and a 1.5mm secondary (external) liner. The flexibility of the HDPE liner will allow attachment around the concrete structures and provide an adequate seal. To avoid interconnection between the pond floor and the banks, the Licence Holder has decided to line the entire pond (banks and floor) to minimise interfaces of different materials and thereby reducing the risk of leaks. There will be a drainage system between the primary and secondary liners which will drain to a sump to allow for detection of any leaks.

Amendment history

Table 2 provides the amendment history for L6786/1991/11.

Table 2: Licence amendments

Instrument	Issued	Amendment
L6786/1991/5	04/10/2000	Licence re-issue

Instrument	Issued	Amendment
L6786/1991/6	10/09/2001	Licence re-issue
L6786/1991/7	11/10/2002	Licence re-issue
L6786/1991/8	06/10/2003	Licence re-issue
L6786/1991/9	21/09/2004	Licence re-issue
L6786/1991/10	27/09/2007	Licence re-issue
L6786/1991/10	20/01/2011	Licence amendment – significant review of operations
L6786/1991/10	28/04/2011	Licence amendment – improvement condition to install soil probes
L6786/1991/10	08/09/2011	Licence amendment – removal of Septage plant
L6786/1991/11	27/09/2012	Licence re-issue
L6786/1991/11	24/09/2015	Licence amendment – changes to soil moisture monitoring and addition of brackish water storage
L6786/1991/11	29/09/2016	Licence amendment – authorize hydrostatic testing of the brackish water storage pond, using treated wastewater
L6786/1991/11	22/02/2018	Amendment Notice 1 – reinstate Septage plant for the discharge of material from annual sewer pump station cleaning activities from Timewell Road WWTP.
L6786/1991/11	23/03/2018	Amendment Notice 2 – Administrative change to reflect multiple source locations of the sewerage pump station sewerage cleanout within condition 3.3.1 and in the introduction section of the Licence
L6786/1991/11	14/06/2019	Amendment Notice 3 – Authorisation to re-line the IDEA #1 lagoon with a double layer HDPE liner system.

Location and receptors

Table 3 below lists the relevant sensitive land uses in the vicinity of the Prescribed Premises which may be receptors relevant to the proposed amendment.

Table 3: Receptors and distance from activity boundary

Residential and sensitive premises	Distance from Prescribed Premises
<i>Waterways Conservation Act Management Area</i>	<i>380m south, 434m east, and 551m south east</i>
<i>Nearest Residence</i>	<i>500m south</i>

Table 4 below lists the relevant environmental receptors in the vicinity of the Prescribed Premises which may be receptors relevant to the proposed amendment.

Table 4: Environmental receptors and distance from activity boundary

Environmental receptors	Distance from Prescribed Premises
<i>Remnant vegetation</i>	<i>Adjacent WWTP on all sides</i>
<i>Threatened Fauna- Calyptorhynchus latirostris -</i>	<i>130m south west</i>

Environmental receptors	Distance from Prescribed Premises
<i>White-tailed Black Cockatoo</i>	
<i>Threatened Fauna – Isoodon fusciventer – Southern Brown Bandicoot</i>	497m east north east
<i>TEC buffer zone – Banksia coccinea Thicket</i>	1.4km north
<i>TEC buffer zone – Astartea scoparia Swamp Thicket</i>	1.68km south
<i>Surface water – Seven Mile Creek (minor river)</i>	Approximately 2km away

Risk assessment

Tables 5 and 6 below describe the Risk Events associated with the amendment consistent with the *Guidance Statement: Risk Assessments*. Both tables identify whether the emissions present a material risk to public health or the environment, requiring regulatory controls.

Table 5: Risk assessment for proposed amendments during construction

Risk Event						Consequence rating	Likelihood rating	Risk	Reasoning
Source/Activities		Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts				
Cat 61 Liquid Waste Facility And Cat 54: Sewage facility	Construction activities related to the Lining of IDEA lagoon #1	Dust: associated with construction activities and vehicle movements	Residence 500m south of site Remnant vegetation adjacent the WWTP Threatened fauna 130 – 500m from site	Air	Health and amenity impacts Smoother vegetation – inhibiting the growth and survival of vegetation threatened fauna dependent upon	Minor	Possible	Medium	The Delegated Officer has included condition 1.2.19 to ensure dust suppression techniques are employed to lower the risks relating to dust from construction activities.
Cat 61 Liquid Waste Facility And Cat 54: Sewage facility	Construction Activities related to the Lining of IDEA lagoon #1	Noise: associated with construction activities and vehicle movements	Residence 500m south of site Threatened fauna 130 – 500m from site	Air	Health and amenity impacts	Slight	Unlikely	Low	The construction activities are expected to last approximately 3 months. The Delegated Officer considers the separation distance between the site and the nearest residence as acceptable and any noise emissions can be adequately managed under the Noise Regulations.

Table 6: Risk assessment for proposed amendments during operation

Risk Event						Consequence rating	Likelihood rating	Risk	Reasoning
Source/Activities		Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts				
Cat 61: Liquid Waste Facility And Cat 54: Sewage facility	Operation of the HDPE lined IDEA lagoon #1.	Liquid waste: Leachate / leaks due to failure of containment infrastructure	Groundwater and groundwater dependent vegetation adjacent WWTP	Seepage of leachate	Contaminate groundwater Inhibit health and survival of surrounding vegetation dependent upon groundwater	Minor	Rare	Low	The Delegated Officer considers the use of a double layer HDPE system as an acceptable liner to lower the risk of leaks. The implementation of a drainage system between the primary and secondary liners will enable the Licence Holder to detect any potential leaks before they occur in the primary liner and therefore before contaminants enter the environment.
Cat 61 Liquid Waste Facility And Cat 54: Sewage facility	Operation of the IDEA lagoon #1	Odour:	Residence 500m south of site	Air	Amenity	N/A	N/A	N/A	No changes to odour risk will occur due to changing the liner from clay to HDPE.

Decision

The Delegated Officer considers the lining of the IDEA lagoon #1 with a double layer HDPE system, incorporating a drainage system in between the primary and secondary liners as an acceptable method to reduce the risk of leaks due to failure of the containment infrastructure. The Delegated Officer has decided to grant the amendment subject to the conditions set out below.

Licence Holder controls for the construction of the liner are conditioned on the Licence to ensure that the liner is installed as per application, the banks and floor are lined with a 2mm thick primary and a 1.5mm thick secondary liner. Conditions 1.2.1 currently on the Licence captures operational emissions relating to overtopping of IDEA wastewater treatment and storage ponds; seepage loss from the IDEA wastewater treatment ponds, storage ponds, and sludge drying beds. Condition 3.4.1 has been amended to include monitoring of the new drainage system and associated sump for any potential leaks through the secondary liner. Condition's 1.2.14 to 1.2.19 have been added to the licence to authorise the works associated with re-lining the pond, ensure hydrostatic testing of new liner occurs within 10 days of completion of works, and ensure that dust suppression techniques are implemented if required.

Licence Holder's comments

The Licence Holder was provided with the draft Amendment Notice on 07 June 2019. Comments received from the Licence Holder have been considered by the Delegated Officer as shown in Appendix 2.

Amendment

1. The Licence is amended by the insertion of condition 1.2.14 to 1.2.18 below.

1.2.14 The Licence Holder must install and undertake the Works for the infrastructure and equipment:

Specified in Column 1;

To the requirements specified in Column 2; and

At the location specified in Column 3 of Table 1.2.2 below.

Table 1.2.2: Infrastructure and equipment requirements table

Column 1	Column 2	Column 3
Infrastructure/ Equipment	Requirements (design and construction)	Site plan reference
Double layer HDPE liner system	Double layer HDPE liner system with 2mm thick primary (internal) liner and 1.5mm thick secondary (external) liner. Must be adequately sealed around concrete structures within IDEA #1 floor plan.	Appendix 3 and "IDEA 1" on Appendix 4
Drainage system	Between the primary and secondary liners. Drain to a sump.	Appendix 3

1.2.15 The Licence Holder must not depart from the requirements specified in Column 2 of Table 1.2.2 except:

- a) Where such departure does not increase risks to public health, public amenity or the environment; and*
- b) All other Conditions in this Licence are still satisfied.*

1.2.16 Subject to Condition 1.2.15, within 30 days of the completion of the works specified in Column 1 or Table 1.2.2, the Licence Holder must provide the CEO a report confirming each item in Column 1 of Table 1.2.2 has been constructed with no material defects and to the requirements specified in Column 2.

1.2.17 Where a departure from the requirements specified in Column 2 of Table 1.2.2 occurs and is of a type allowed by Condition 1.2.15, the Licence Holder must provide to the CEO a description of, and explanation for, the departure along with the certification required by Condition 1.2.16.

1.2.18 The Licence Holder shall ensure that hydrostatic testing on the liner of the IDEA lagoon #1 is undertaken following installation in accordance with, but not limited to the following:

- a) the IDEA lagoon #1 be filled with no more than 7500 kL of treated wastewater sourced from the treated wastewater storage pond on the premises;
- b) if any leaks are detected during the test, wastewater must be immediately returned to the treated wastewater storage pond, prior to leaks being repaired;
- c) repairs must undergo retesting as per condition 1.2.18(a)-(b); and
- d) hydrostatic testing be completed within 10 days.

1.2.19 The Licence Holder shall ensure that dust generated from works on the Premises does not impact the health or amenity of any person not on the Premises.

2. Condition 5.3.1 of the Existing Licence is amended by the addition of the red text shown in underline below:

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 below:

Table 5.3.1: Notification requirements			
Condition or table (if relevant)	Parameter	Notification requirement¹	Format of form²
2.1.1	Breach of any limit specified in section 2 of this Licence	Part A: As soon as practicable, but no later than 5pm of the next usual working day. Part B: As soon as practicable	N1
1.3.4	The removal of sewage sludge from a treatment pond	No less than 14 days prior	None specified
3.1.4	Calibration report	As soon as	None specified

Table 5.3.1: Notification requirements			
Condition or table (if relevant)	Parameter	Notification requirement ¹	Format of form ²
		practicable	
N/A	Taking a treatment pond offline for maintenance work	No less than 72 hours prior	None specified
N/A	Any discharge of treated or untreated wastewater to the environment that has occurred as a result of: (a) an emergency; (b) accident or malfunction; (c) very heavy precipitation days; or (d) otherwise than in accordance with any condition of this licence.	Within 72 hours of becoming aware	(a) The date(s) and time period(s) of the discharge; (b) A map showing the location of the discharge; (c) The known or probable cause of the discharge; (d) The composition and quantity of the discharge; (e) The known or probable end fate of the discharge; and (f) Action taken to minimize the effect of the waste discharge on the environments.
		Within 7 working days of the discharge	(a) The extent and the total volume of the discharge, estimated nutrient loads and their significance in terms of potential or known environmental impacts; (b) Consultation taken with relevant stakeholders to determine corrective action in the case of any discharges that may impact on Seven Mile Creek; (c) Corrective action taken or planned to mitigate adverse environmental impact; (d) Whether or not the waste involved in the discharge has been removed, dispersed, destroyed, disposed of or otherwise dealt with, and if so, the manner in which the waste was removed, dispersed, destroyed, disposed of or otherwise dealt with; and (e) Corrective action taken or planned to prevent a recurrence of a discharge, including a timeline for implementation.
1.2.11 and 1.2.18	Hydrostatic testing result	Within 7 days after completion	None specified
	Taking soil moisture probes offline for tree harvest works	Not less than 14 days prior to taking probes offline	None specified
N/A	<u>Presence of leaked wastewater from the IDEA lagoon #1 as detected at the IDEA liner drainage discharge point</u>	<u>Within 14 days of detection of initial leak. Quarterly thereafter whilst leak</u>	<u>(a) The period and estimated total volume of the leak;</u> <u>(b) Corrective action taken or planned.</u>

Table 5.3.1: Notification requirements			
Condition or table (if relevant)	Parameter	Notification requirement ¹	Format of form ²
		<u>persists.</u>	

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

Note 2: Forms are in Schedule 2

Appendix 1: Key documents

	Document title	In text ref	Availability
1	Licence L6786/1991/11 – Albany Wastewater Treatment Plant	L6786/1991/11	accessed at www.dwer.wa.gov.au
2	DER, July 2015. <i>Guidance Statement: Regulatory principles</i> . Department of Environment Regulation, Perth.	DER 2015a	accessed at www.dwer.wa.gov.au
3	DER, October 2015. <i>Guidance Statement: Setting conditions</i> . Department of Environment Regulation, Perth.	DER 2015b	
4	DER, November 2016. <i>Guidance Statement: Risk Assessments</i> . Department of Environment Regulation, Perth.	DER 2016b	
5	DER, November 2016. <i>Guidance Statement: Decision Making</i> . Department of Environment Regulation, Perth.	DER 2016c	

Appendix 2: Summary of Licence Holder comments

The Licence Holder was provided with the draft Amendment Notice on 07 June 2019 for review and comment. The Licence Holder responded on 12 June 2019 waiving the remaining comment period (until 1 July 2019). The following comment was received on the draft Amendment Notice.

Condition	Summary of Licence Holder comment	DWER response
1.2.18a	DWER requested the applicant provide a suitable volume of treated wastewater to be used to undertake hydrostatic testing. The applicant provided a figure of 7500kL.	7500kL inserted into the Licence Condition 1.2.18a.

Appendix 4: Premises Map – Timewell Road WWTP

