Government of Western Australia
Department of Environment Regulation

Decision Document

Environmental Protection Act 1986, Part V

Proponent: Water Corporation

Licence: L6786/1991/11

Registered office: 629 Newcastle Street
LEEDERVILLE WA 6007

Premises address: Albany Wastewater Treatment Plant
100 Timewell Road
MCKAIL WA 6330
Being Lot 1 on Diagram 44295 as depicted in Schedule 1; and

Tree Farm 1
35790 Albany Highway (Access via Gunn Road)
DROME WA 6330
Being 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 (excluding the Albany Septage Facility), as depicted in Schedule 1.

Issue date: Thursday, 27 September 2012

Commencement date: Tuesday, 02 October 2012

Expiry date: Sunday, 01 October 2023

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: Dr Bhabesh Das
Senior Licensing Officer

Decision Document authorised by: Caron Goodbourn
Delegated Officer

Contents

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 ☐ New Licence ☐ Licence amendment ☒ Works Approval amendment ☐	
Activities that cause the premises to become prescribed premises	**Category number(s)**	**Assessed design capacity**
	54 – Sewage facility	5 700 cubic metres/day
	61 – Liquid waste facility	3.75 megalitres (approximately 3750 tonnes) per annual period
Application verified Application fee paid	Date: Date: Not applicable (amendment)	
Works Approval has been complied with Compliance Certificate received	Yes☐ No☐ N/A☒ Yes☐ No☐ N/A☒	
Commercial-in-confidence claim	Yes☐ No☒	
Commercial-in-confidence claim outcome		
Is the proposal a Major Resource Project?	Yes☐ No☒	
Was the proposal referred to the Environmental Protection Authority (EPA) under Part IV of the *Environmental Protection Act 1986*?	Yes☐ No☒	Referral decision No: Managed under Part V ☐ Assessed under Part IV ☐
Is the proposal subject to Ministerial Conditions?	Yes☐ No☒	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 *Environmental Protection Act 1986*)?	Yes☐ No☒ Department of Water consulted Yes ☐ No ☒	
Is the Premises within an Environmental Protection Policy (EPP) Area Yes☒ No☐ *Environmental Protection South West Agriculture Zone Wetlands Policy 1998*.		
Is the Premises subject to any EPP requirements? Yes☐ No☒		

3 Executive summary of proposal and assessment

The Albany Wastewater Treatment Plant for the purposes of this Licence includes two separate properties linked by a wastewater pipeline and collectively involved in the treatment of reticulated sewage and discharge of treated wastewater to the environment via controlled irrigation.

Albany Wastewater Treatment Plant (AWWTP)
The AWWTP located at Timewell Rd handles all of Albany's sewage using an Intermittent Decanted Extended Aeration (IDEA) wastewater treatment system. In this facility raw sewage enters the plant through a 6mm step screen which captures large solids, which are later disposed of at a licensed landfill. The screened wastewater then enters one of two IDEA pond systems through a splitter. The IDEA ponds use powerful intermittent aerators and activated sludge to treat the water by consuming nutrients. Aerators are turned off intermittently allowing the particulates to settle so that treated water can be decanted from the surface. Once treated, wastewater is stored on site within a storage dam, prior to being transferred off-site to the separately located Tree Farm 1 (TF1) on Gunn Rd, approximately 9km from the AWWTP.

Surrounding land use is predominantly rural residential in nature, with the nearest residence approximately 500m south of the centre of the treatment plant at Lot 12 on Diagram 23899, South Coast Highway. There are no reserves, EPP areas, declared wetlands or bush plan areas on or close to the site. The site is not within a drinking water supply area. The closest surface water system located to the site is the Five Mile Creek headwater located approximately 2km to the northwest of the treatment plant.

Tree Farm 1
Water is pumped from the Albany WWTP via pipeline to one of two large connected storage dams at TF1, from which it is filtered and chlorinated before being irrigated through 275 ha of Australian Bluegum irrigation groups at TF1, or further transferred via the second dam to another separate premises, "Tree Farm 2" (not regulated under a Part V licence) for direct irrigation of 130.3 ha of Australian Bluegums. Tree Farm 1 is 550 ha in size; however this is made up of rain fed trees and mixed native vegetation (124 ha) serving as a buffer for excess irrigation water and nutrients, the overland flow treatment area (14 ha) and the storage dams (30 ha), as well as the 275 ha irrigation area.

Tree Farm 1 is located within the Torbay Inlet Catchment, in the headwaters of the Seven Mile Creek Catchment. Immediate surrounding land-use is cleared agricultural land for grazing and plantation forestry to the north, however the Albany Airport is located to the east of the tree farm. To the west is DEC Reserve 20948, which is reserved for conservation. The nearest private residence to the septage plant is approximately 1100m to the south (lot 4/D59924).

Licence amendment

Water Corporation has submitted an application with supporting documentation on 29 July 2016 for the amendment to Albany WWTP licence L6786/1991/11. This Licence is the result of an amendment for the Licensee to undertake hydrostatic testing on the HDPE liner laid on the brackish water storage pond as shown on the premises map. The brackish water is the result of Water Corporation's Reverse Osmosis (RO) treatment of water facility at Denmark. The hydrostatic test will determine the integrity of the liner laid on the pond for the storage of brackish water. It is proposed that approximately 3000 kL of treated wastewater will be taken from the treated wastewater storage pond at the Albany WWTP premises to conduct this test. The treated wastewater storage pond is located within close proximity to the brackish water storage pond. The Licensee proposes to undertake hydrostatic testing on the liner of the pond according to the following:

- undertake hydrostatic testing in September 2016;
- approximately 3000 kL of treated wastewater will be required for the test;
- it will take 24 – 48 hours to fill the pond;
- hydrostatic testing will take approximately 5 -10 days to accurately detect any leaks;
- visual monitoring will be conducted twice a day throughout the testing period; and
- it will take less than 24 hours to drain empty the pond.

The main emission from this activity is discharges of treated wastewater (maximum possible 3000kL in a catastrophic failure event) to land and groundwater through leaks being present in the HDPE liner. The licensee has a number of control measures in place to reduce the impacts from this emission. The treated wastewater that will be used for the test has the quality as attached in Appendix 1. Given the pond can be completely drained back to the treated wastewater storage pond in less than 24 hours, the environmental risk of the proposed testing is low. If any leaks are detected, the pond will be immediately emptied, repaired, filled again and retested. Leaks will be detected by setting up an evaporation pan and stilling well to measure pond level accurately. The seepage rate will be assessed over 24 hour intervals for a minimum of 7 days. If seepage exceeds that of the permeability of the HDPE, then the leak is confirmed. The pond will be emptied and further investigation will be carried out to ascertain the location of the leak.

This partial Decision Document explains in further detail how DER has assessed the proposed amendment and determined the amendment application made by the Licensee and the recommended changes to the licence as a result.

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**
Interpretation	L1.1.5	Previous condition 1.1.5 is removed from the licence because the condition is not valid, enforceable or risk based.	Schedule 1 Redundant conditions
General conditions	L1.2.1 - L1.2.2 L5.1.2	Previous condition 1.2.1 regarding maintenance of pollution control and monitoring equipment is removed from the licence because the condition is not enforceable as it is not sufficiently clear or certain. Previous condition 1.2.2 regarding recovery, removal and disposal of spilled hazardous materials is removed from the licence because the condition is not enforceable as it is not sufficiently clear or certain. Previous condition 5.1.2 removed because the condition is not valid, enforceable or risk based.	Schedule 1 Redundant conditions
Premises operation	L1.2.11 – 1.2.12	**Operation** Emission Description *Emission:* Seepage of treated wastewater from the brackish water storage pond under test during hydrostatic testing for 5 to 10 days. Only 3000kL is proposed to be used in the testing process. The quality of the treated water used for the test is attached in Appendix 1. *Impact:* Local pollution of soil or groundwater with contaminants from the treated wastewater such as Nitrogen, Phosphorus, Biochemical Oxygen Demand and E.Coli. *Controls:* The pond will be immediately emptied to the treated wastewater storage pond if any leaks are detected, which may take less than 24 hours. An evaporation pan and stilling well will be set up to measure pond level accurately. If seepage exceeds that of the permeability of the HDPE, then the leak is confirmed. The pond will be	Albany Wastewater Treatment Plant: Licence Amendment Application dated 29 July 2016 (Water Corporation) Additional information –

DECISION TABLE			
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		emptied and inspections of the liner will be carried out to ascertain the location of the liner. The leaks will then be repaired or replaced with a new liner, pond will be refilled and retested. Hydrostatic testing is to ensure the integrity of the HDPE liner laid on the pond for the storage of brackish water. The lined pond has 3.75 ML capacity only 300kL of treated wastewater will be used for the testing. Risk Assessment *Consequence*: Insignificant *Likelihood:* Unlikely *Risk Rating:* Low Regulatory Controls Condition 1.2.11 has been included to the licence requiring the Licensee to undertake hydrostatic testing on the liner of the pond in accordance with the condition. Condition 1.2.12 has been included to the licence requiring the Licensee to submit a compliance document upon the completion of hydrostatic testing on the liner of the pond and prior to commissioning. Residual Risk *Consequence*: Insignificant *Likelihood:* Unlikely *Risk Rating:* Low	treated water quality Appendix 1 QA/QC Manual for the Installation of Geomembranes, March 2015
Licence Duration	N/A	In processing this amendment, DER has not reassessed any of the operations or emissions and discharges. There has been no change to licence duration as part of this amendment. The licence duration was extended to 1 October 2023 via an amendment in 2015. There are no circumstances in the operation of the facility that warrant amending the expiry date	N/A

5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
7/09/2016	Proponent sent a copy of draft instrument	Comments received on 22/09/2016 are as follows: • Condition 1.2.11 - If a leak is found and repaired will we be required to report this as a part of the compliance report issued? • Condition 3.4.1, 3.5.1 and 3.5.3 – These conditions require sampling of pH and there is a requirement under Standard 5667 that lab pH analysis is completed with 6 hours of the sample being taken. This is generally not achievable due to the distance to the laboratory and request that the licence permits 'In-field non-NATA accredited analysis' under Standard 5667 by means of a reference and Note against the pH parameter. • Condition 5.3.1, Table 5.3.1 – The Licensee requested to add a row with notification requirement “no less than 14 days prior’ for parameter “taking soil moisture probes offline for tree harvest works. • Condition 3.5.1, table 3.5.3 - Bore A2 has been capped and is no longer able to be pumped for sampling. A new bore has been installed in close vicinity. Replace Bore A2 with A2-15.	• Technically this is not required under the licence • Conditions 3.4.1, 3.5.1 and 3.5.3 are amended with a foot note to permit infield non-NATA accredited analysis. Other licensed premises have that option. • A row is added to the Table 5.3.1 requiring the Licensee to notify no less than 14 days prior to taking probes offline for tree harvesting works. This notification is appropriate because tree harvesting will take place from time to time. • Table 3.5.3 has been updated with the new bore A2-15. This bore has been installed within close proximity to the bore A2.

Date	Event	Comments received/Notes	How comments were taken into consideration
		• Condition 3.5.1, Table 3.5.2 - 6 of the nine specified soil moisture probes have been removed from their location as the plots have been harvested. This will reoccur with additional harvest activity in the future and will result in administrative non-compliance. Request that the licence adds an exemption for soil moisture monitoring when the probes are no longer operational in the instance of harvest.	• It is considered that there will be a break in continuous monitoring during tree harvesting works when the probes are no longer operational. The Table 3.5.2, frequency column has been amended by adding "(with the exception when the probes are no longer operational for tree harvest works)".

6 Risk Assessment

Note: This matrix is taken from the DER Corporate Policy Statement No. 07 - Operational Risk Management

Table 1: Emissions Risk Matrix

Likelihood	Consequence				
	Insignificant	Minor	Moderate	Major	Severe
Almost Certain	Moderate	High	High	Extreme	Extreme
Likely	Moderate	Moderate	High	High	Extreme
Possible	Low	Moderate	Moderate	High	Extreme
Unlikely	Low	Moderate	Moderate	Moderate	High
Rare	Low	Low	Moderate	Moderate	High

Appendix 1

Reading Date	NH4	TKN	TP	FRP	TN	NO32	ECOLI	BOD	BOD_FILT	COND	SS	PH_LAB	TDS
14/07/2015	<0.05	1.3	6.2	6.22	10	8.9	10000	<5	<5	105	<5	7.8	600
11/08/2015	<0.05	1.3	5.9	5.5	10	9.1	1700	<5	<5	107	<5	7.82	620
9/09/2015	0.6	2.2	5.4	5.18	4.8	2.6	720	<5	<5	103	<5	7.91	600
14/10/2015	1.8	3.8	6.9	6.18	5.8	2	20000	<5	<5	114	20	7.94	630
10/11/2015	0.12	2.4	4.8	4.23	10	7.7	14000	<5	<5	114	10	7.94	670
8/12/2015	0.22	2.5	5.9	5.7	8.7	6.2	1800	<5	<5	104	<5	7.89	610
12/01/2016	1.4	3.4	7		5.1	1.7	490	<5	<5	112	10	7.92	660
9/02/2016	20	20	4.4	4.15	21	0.83	20000	<5	<5	127	10	7.94	620
8/03/2016	1.2	2.8	7.7	6.88	4.1	1.3	2500	<5	<5	115	15	7.94	600
12/04/2016	0.4	1.6	5.7	5.93	14	12	2200	<5	<5	105	<5	7.82	600
10/05/2016	<0.05	1	5.5	5.23	15	14.3	1900	<5	<5	113	10	7.84	670
14/06/2016	1.8	3	4.9	4.85	5.3	2.3	1300	<5	<5	101	<5	7.87	590
12/07/2016	1.4	2.4	4.2	4.58	8.8	6.5	210	<5	<5	100	<5	8.02	550
9/08/2016	3.2	4.8	5	4.3	8.5	3.7	3100	<5	<5	105	10	7.8	590