



Decision Document

Environmental Protection Act 1986, Part V

Proponent: Water Corporation

Licence: L7691/1991/5

Registered office: 629 Newcastle Street
LEEDERVILLE WA 6007

Premises address: Three Springs Wastewater Treatment Plant
Water Street
THREE SPRINGS WA 6519
Being Lot 20 on Diagram 73005

Issue date: Thursday, 16 October 2014

Commencement date: Sunday, 26 October 2014

Expiry date: Friday, 25 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	200 cubic metres per day
Application verified	Date: N/A	
Application fee paid	Date: N/A	
Works Approval has been complied with	Yes <input type="checkbox"/>	No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
Compliance Certificate received	Yes <input type="checkbox"/>	No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
Commercial-in-confidence claim	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Commercial-in-confidence claim outcome	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"/>
Is the proposal subject to Ministerial Conditions?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the <i>Environmental Protection Act 1986</i>)?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Is the Premises within an Environmental Protection Policy (EPP) Area	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
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 licence is issued to Water Corporation for the Three Springs Wastewater Treatment Plant (WWTP) located at Lot 20 on Diagram 73005 (Water Street), Three Springs. Three Springs WWTP is a prescribed premises within Schedule 1 of the *Environmental Protection Regulations 1987*, and includes a:

- Primary treatment pond;
- Secondary treatment pond;
- Polishing/evaporation pond (pond 3) with a sampling point located after pond 3.

The Licensee no longer discharges treated wastewater to the Shire for reuse which previously included approximately 40kL per day discharged from the premises to the Shire for reuse (irrigation to land).

Water Corporation discharge treated wastewater for infiltration via a rocky gully to the local seasonal creek (located approximately 50m from the discharge point) which flows south towards the Yarra Yarra Lakes.

A desktop assessment of a groundwater bore (Bore Site Id. 12776794), approximately 148m east of the Premises, identified static water level at approximately 2.3m and TDS is approximately 8074 mg/L (saline). The groundwater forms part of the Yarra Monger catchment area which recharges the Yarra Yarra lake system.

The closest sensitive receptor to the Premises is approximately 375m north-west of the premises, and includes residential and commercial land-uses.

This Licence amendment is as a result of the proponent requesting to remove reuse of treated wastewater from the Licence. This activity is no longer occurring by the Licensee to the Shire. A 'P4 Form' was received from Water Corporation on 22 July 2015 requesting the amendment to be undertaken. In addition, the Licence has been converted to new format with administrative changes included.



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			
Licence section	Condition number L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
General conditions	L1.2.1-L1.2.3	Condition 1.2.2 of the previous licence version has been removed as part of the administrative changes to the Licence conversion to new format.	
Premises operation	L1.3.1-1.3.6	An administrative change has been included within condition 1.3.2, table 1.3.1 to include the waste code for sewage (K130). Condition 1.3.5(b) freeboard has been changed from 'targeted' to 'maintained' in the management of freeboard and the potential risk of overtopping. Current DER procedure recommends the removal of all targets from the Licence with the use of improvement conditions where required. Water Corporation have reviewed this change to the Licence with no comment received in relation to the change.	
Emissions general	L2.1-L2.2	Condition 2.2.1, table 2.2.1 has been updated to reflect the correct discharge process description to the surface water area. This is part of the request to amend submission received from the proponent through a 'P4 form' received 22/07/2015.	Application supporting documentation.
Point source emissions to surface water including monitoring	L2.2.1 L3.2.1	Operation <u>Emission Description</u> <i>Emission:</i> Treated wastewater discharged from WWTP to seasonal creek. <i>Impact:</i> Potential contamination to the surrounding land, creek and groundwater through nutrient loading to the area. <i>Controls:</i> The Licensee discharges excess treated wastewater from Pond 3 of	General provisions of the <i>Environmental Protection Act, 1986</i> .



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		<p>approximately 44kL/ day via a rock gully for infiltration to the seasonal creek.</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Moderate <i>Likelihood:</i> Possible <i>Risk Rating:</i> Moderate</p> <p>The standing water level is approximately 2.3m. TDS is approximately 8,074 mg/L (saline). The creek is seasonal and flows away from the town site in a southerly direction towards the Yarra Yarra lake system and is located outside of the fenced premises area with easy access by people and fauna.</p> <p>Sampling data supplied by Water Corporation (AER 2014) shows that the supplementary feeding of wastewater to the creek is causing artificial flow within the surface water system. The typical effluent quality being discharged from the premises aligns with the 'Australian guidelines for sewerage systems, 1997' (secondary treatment process category), except for TSS (80mg/L) and TP (14mg/L).</p> <p>When assessed against the 'Australian and New Zealand guidelines for fresh and marine water quality (ANZECC), 2000' (Table 5.2.2 and 5.2.3) – recreational guidelines and aesthetics, the discharged treated wastewater exceeds <i>E. coli</i> levels (1,600 cfu/100 ml), pH (9.07), TDS (2611 mg/L, however below background levels), and NH4-N (9.6mg/L).</p> <p>When the monitoring parameters for the creek sampling are assessed against groundwater parameters from the monitoring bores at the premises then pH, NH4-N, NO3+NO2-N, TN and TP are all elevated.</p> <p><u>Regulatory Controls</u> Condition 3.2.1 ensures monitoring of emissions discharged to the rock gully for</p>	<p>Australian guidelines for sewerage systems, 1997.</p> <p>Australian and New Zealand guidelines for fresh and marine water quality (ANZECC), 2000.</p> <p><i>Environmental Protection (Unauthorised discharges) Regulations, 2004.</i></p>



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		<p>infiltration to the creek occurs quarterly at the facility.</p> <p>Condition 4.1.1 Improvement conditions 'IR1' and 'IR2' requires the proponent to develop a discharge management plan and health risk assessment for disposal to the creek system.</p> <p><u>Residual Risk</u> <i>Consequence:</i> Moderate <i>Likelihood:</i> Possible <i>Residual Risk Rating:</i> Moderate</p>	
Odour	L2.3	<p>Operation Condition 2.3.1 relating to odour has been removed from the licence through this amendment process.</p> <p><u>Emission Description</u> <i>Emission:</i> Odour from wastewater treatment ponds. <i>Impact:</i> Nuisance odour. <i>Control:</i> The facility is located approximately 375m from the closest human sensitive receptor which is a zoned residential and commercial land use area, with the majority of the surrounding area under agricultural landuse. The surrounding residential area is low density housing within a small town. The facility has a low throughput and has received no complaints relating to odour. The potential risk of odour from the premises is considered to be low.</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Minor <i>Likelihood:</i> Possible <i>Risk Rating:</i> Moderate</p> <p><u>Regulatory controls</u> Odour is considered low risk for the premises and is to be addressed under section 49</p>	General provisions of the <i>Environmental Protection Act, 1986.</i>



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		<p>of the <i>Environmental Protection Act, 1986</i>. This is in accordance with current DER procedure for the management of odour from the prescribed premises.</p> <p>Residual Risk <i>Consequence:</i> Minor <i>Likelihood:</i> Possible <i>Risk Rating:</i> Moderate</p>	
Monitoring general	L3.1.1-L3.1.4	Condition 3.1.2 has had an administrative change included for the description of monthly monitoring for the facility (Condition 3.1.2(a)).	
Monitoring of inputs and outputs	L3.3.1	Condition 3.3.1, Table 3.3.1 'Monitoring of inputs and outputs' includes an administrative change to remove monitoring of treated wastewater to the Shire premises. This is as a result of the cessation of the reuse program as per the 'P4 form' received from the Licensee.	Application supporting documentation.
Improvements	L4.1.1	<p>Condition 4.1.1 has been included as a result of the premises process being altered. Previously the premises had been assessed for discharge of treated wastewater for reuse (irrigation) by the Shire with a DoH licence in operation.</p> <p>The Licensee no longer releases its treated wastewater to the Shire for reuse and approximately 44 cubic metres of treated wastewater are discharged to the seasonal creek as the primary method of disposal of wastewater from the premises. A request for further information was submitted to the Licensee (24/07/2015) to assess the potential risks from the discharge to the adjacent, unfenced seasonal creek. This has been defined further within the risk assessment within conditions 2.2.1 and 3.2.1 'Point source emissions to surface water including monitoring' above.</p> <p>The condition therefore includes two improvement conditions 'IR1' – 'Discharge Management Plan' and 'IR2' – 'Health Risk Assessment'.</p>	



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Licence section	Condition number L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
Information	L5.1 L5.2 L5.3	Operation L5.2.1 has been amended to reflect 63 days for annual report submission date (1 September) after the end of the reporting period. Within Table 5.2.1 specific reporting 'format or form' requirements for submission of monitoring data for emissions to surface water or ambient groundwater quality, has been changed to 'none specified' as per ongoing discussions with Water Corporation. No other changes have been made as a result of the amendment process.	
Licence Duration	N/A	The Licence was issued for a period of five years and expires on 25 October 2019.	N/A



5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
25/08/2015	Proponent sent a copy of draft instrument	<p>An extension to the 21 day consultation period until 31/10/2015 was requested by Gordon Groth, Water Corporation. This was granted by R. Dowd (DER).</p> <p>Comments were received on 30/10/2015 from Craig Chaudhry (Water Corporation). The majority of comments were minor administrative changes, with one request for an extension to the improvement conditions completion timeframe.</p> <p>A copy of the changes was emailed through to Craig Chaudhry on 3/11/2015.</p>	<p>Administrative changes were completed for Tables 2.2.1, 3.3.1 and the introduction summary, as requested.</p> <p>Condition 4.1.1, Improvement conditions completion date was extended from 30/11/2015 to 30/06/2016 for 'IR1' and 'IR2'. This was discussed with Craig Chaudhry on 2/11/2015 with Steve Checker (DER, Manager Licensing).</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