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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 checked="" type="checkbox"/> Licence amendment <input type="checkbox"/> Works Approval amendment <input type="checkbox"/>	
Activities that cause the premises to become prescribed premises	Category number(s)	Assessed design capacity
	54	1,100 cubic metres per day
Application verified	Date: 13/07/2015	
Application fee paid	Date:	
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 checked="" 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"/>	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 checked="" type="checkbox"/> No <input 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

The Kalbarri Wastewater Treatment Plant (WWTP) is located on Lot 11322 on Plan 183298, corner of Porter Street and Atkinson Crescent, Crown reserve 36661, Kalbarri, WA which is approximately 588 kilometres (km) north of Perth. It is a prescribed premises within Schedule 1 of the *Environmental Protection Regulations 1987*.

The Premises consists of one primary aerated pond, one secondary pond, two tertiary ponds and two polishing ponds with final treated wastewater used for irrigation of the Kalbarri Golf Course (KGC). The treated wastewater is chlorinated at the premises and used to irrigate approximately 22 hectares (ha) of fairways and greens at the KGC. The total area of the golf course reserve is 72 ha. KGC currently irrigates with a combination of bore water and treated wastewater. This is managed by the golf course who also hold a Department of Health Licence (D69/NH000). Water Corporation supplied 102,579kL of treated wastewater from the premises, during 2014 reporting period to the Kalbarri Golf Course for reuse (AER 2013/2014).

Water Corporation was granted a Works Approval W5207/2012/1 for an upgrade to the Kalbarri WWTP. The upgrade involved the installation of a new inlet works to reduce debris entering the treatment pond through removal of screenings and debris in the influent flow. Also, new aeration units were installed to increase redundancy of the equipment, therefore mitigating the risk of reducing the treatment capacity during maintenance works on the aerators. In addition, a new chlorination (disinfection) system was installed to ensure the recycled water supplied to the golf course complies with Department of Health (DoH) guidelines.

The town of Kalbarri obtain their drinking water supply from bores south-east of the town with the PDWSA bore fields predominantly located within the Kalbarri National Park. The vulnerability of the groundwater system is considered "high" due to the aquifer being unconfined and "at risk from increased development" (Department of Water, Water Resource Protection Report Series, Report No. 64, June 2006).

Department of Water confirmed (Email, October 2014) that the Premises and reuse scheme do not fall within the borefield catchment area supplying Kalbarri town, however any nutrient release from the Premises "may pose a risk to water quality in the Murchison River and Estuary". A Department of Water assessment of groundwater salinity showed TDS to be less than 400mg/L (good fresh water quality) increasing closer to the coast, with a thin lens of brackish groundwater at or near the water table". The depth to groundwater is approximately 13 to 23m bgl becoming shallower closer to the coast. (Department of Water, Water Resource Protection Report Series, Report No. 64, June 2006).

The premises is located approximately 1.7km south-east of the Murchison River and estuary, and approximately 2km south-east of the Indian Ocean.

The nearest active land use to the WWTP is the Kalbarri cemetery, approximately 350 m west of the WWTP and the Kalbarri National Park to the east and south of the Premises. The Kalbarri Light Industrial Area is approximately 460 m southwest of the Plant.

The main potential risk emissions from the premises is seepage or infiltration of treated or untreated effluent due to its proximity to the Kalbarri PDWSA and other environmental marine and freshwater receptors. The current monitoring bores for the Premises, '1/97' and '2/97', are also the production bores for Kalbarri Port.

This Licence is the successor to L5954/1991/11 and includes a conversion to new format. In addition, administrative changes have been included to the licence conditions and details updated as to the premises process and design. The Licence is being reissued for a period of twenty years in accordance with DER policy (Licence duration, May 2015).



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	Administrative conditions have been included within this section of the Licence as a result of the conversion of the Licence to new format. Condition 1.2.3 replaces conditions 3(i) and 3(ii) of the old Licence.	General provisions of the <i>Environmental Protection Act 1986</i> . <i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i> .
Premises operation	L1.3.1-L1.3.6	Condition 1.3.4, Table 1.3.3, replaces condition 11(a), 11(b)(iii) and 11(c) of the old Licence. Condition 1.3.5 replaces conditions 3(iii)-(v) of the old Licence. Condition 5(a) has been removed from the Licence as the old condition is considered redundant within the new format licence.	
Emissions general	L2.1	Descriptive or numerical limits are defined within this section of the Licence.	
Emissions to land including monitoring	L2.2.1-L2.2.2 L3.2.1	Operation <u>Emission Description</u> <i>Emission:</i> Treated wastewater discharged to emergency overflow storage pond which is designed to allow for infiltration. Treated wastewater is also applied to land (Kalbarri Golf Course).	General provisions of the <i>Environmental Protection Act 1986</i> . Australian guidelines for



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		<p><i>Impact:</i> Contamination of surrounding land and groundwater systems. Potential impacts on ecology of groundwater and surface water from the addition of nutrients. The premises and reuse irrigation area have been identified by DoW as outside of the borefield catchment area supplying Kalbarri town. Depth to groundwater is approximately 13 to 23 mBGL. The closest surface water bodies are the Indian Ocean, approximately 2km west, and the Murchison River and Estuary approximately 1.7km north and west of the Premises.</p> <p><i>Controls:</i> The proponent only discharges treated wastewater to the overflow storage pond in an emergency event therefore throughput to the pond for infiltration is minimised and sporadic.</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Moderate <i>Likelihood:</i> Likely <i>Risk Rating:</i> High</p> <p><u>Regulatory Controls</u> Condition 2.2.1 and 2.2.2 ensure the appropriate use of the emergency overflow storage pond and monitoring parameters required.</p> <p>Emissions to land via the golf course are addressed within Condition 4.1.1, requiring the development of a 'nutrient management strategy'. The strategy is due for submission to DER by 6 November 2015.</p> <p>Condition 3.2.1 replaces condition 8 of the old Licence.</p> <p><u>Residual Risk</u> <i>Consequence:</i> Moderate <i>Likelihood:</i> Possible <i>Risk Rating:</i> Moderate</p>	sewerage systems 1997.



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Licence section	Condition number L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
Odour	N/A	Condition 4 of the old Licence format has been removed from the reissued Licence as it is adequately regulated under Section 49 of the <i>Environmental Protection Act, 1986</i> . The risk of odour impacts from the premises is considered low with there being no sensitive receptors adjoining the premises or within 2 km west and north-west of the facility. A large buffer of remnant native vegetation exists around the premises as well, with the premises on an elevated area.	General provisions of the <i>Environmental Protection Act 1986</i>
Monitoring general	L3.1.1	Administrative changes to identify monitoring standards and monitoring frequency have been included. Condition 3.1.1(a)-(c) replaces condition 10(a) and 10(b)(i)-(iii). Condition 3.1.1(d) replaces condition 10(b)(iv) of the old Licence. Condition 3.1.1(e) replaces condition 10(b)(v) of the old Licence. Condition 10(b)(vi) has been removed as this was a typographical error in the old Licence.	General provisions of the <i>Environmental Protection Act 1986</i>
Monitoring of inputs and outputs	L3.3.1	Monitoring of inputs and outputs has been identified by the inclusion of condition 3.3.1 within the new format Licence. Condition 3.3.1, Table 3.3.1, replaces condition 6 and 7 of the old Licence.	General provisions of the <i>Environmental Protection Act 1986</i>
Ambient quality monitoring	L3.4.1	Monitoring of ambient groundwater quality has been included within condition 3.4.1 of the new Licence which replaces condition 9 of the old Licence. Groundwater targets have not been carried over into the new licence as per current DER protocol. Impacts to groundwater will instead be managed via Condition 4.1.1, requiring the development of a 'nutrient management strategy'.	General provisions of the <i>Environmental Protection Act 1986</i>
Improvements	L4.1.1	There are no additional requirements for the inclusion of any improvement conditions for the Licence as part of the reissue process. Water Corporation is currently completing a nutrient management strategy as part of	General provisions of the <i>Environmental Protection Act 1986</i>



DECISION TABLE			
Licence section	Condition number L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p>improvement condition IR1 within Licence L5954/1991/11, which is to be submitted by 6/11/2015 for consideration by DER.</p> <p>Condition 4.1.1 has replaced condition 12 of the old Licence.</p>	
Information	<p>L5.1.1-L5.1.2</p> <p>L5.1.3</p> <p>L5.2.1</p> <p>L5.3.1</p>	<p>The Licence has been converted to new format . Administrative changes have been included. The file number has been updated to reflect the correct recording document within DER.</p> <p>Condition 5.1.3 replaces condition 2 of the old Licence.</p> <p>Condition 1 of the old Licence has been included into condition 5.2.1 of the new Licence. Condition 5.3.1, Table 5.3.1, replaces condition 5(b) and 11(b)(i)-(ii) of the old Licence.</p> <p>The quantity of treated wastewater has been increased to 1,100m³/ day in accordance with the approved and finalised works approval W5207/2012/1.</p>	N/A
Licence Duration	N/A	<p>The licence is recommended for a twenty year period in accordance with DER policy, 'Guidance statement – Licence duration, May 2015'. The Shire of Northampton have verified that planning approvals for the site are consistent with this duration.</p> <p>There are no current issues or concerns that would warrant the reduction in Licence duration for the Premises. No complaints have been received from the operation of the premises over the last reporting period.</p> <p>This Premises is currently considered a moderate risk site under DER risk matrix assessment.</p>	DER Guidance statement, Licence duration, May 2015.



5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
03/08/2015	Application advertised in West Australian (or other relevant newspaper)	Nil	N/A
10/09/2015	Proponent sent a copy of draft instrument	Email received from Craig Chaudhry, and confirmed via telephone on 24/09/2015 – no comments for submission.	N/A
17/10/2014	Consultation with other interested parties	Department of Water consulted 17/10/2014. Recommendation for nutrient management from the premises.	No issues identified on the location of the WWTP as it is considered to be outside of the catchment area for Kalbarri PDSWA, however a recommendation (nutrient management) from Department of Water was included within a licence amendment carried out in 2014 for submission by Water Corporation, which is due 31/10/2015. No additional considerations. Comments have been included within the risk assessment.
8/10/2015	Consultation – Planning	Shire of Northampton consulted 8/10/2015. Comment received from Hayley Williams (Northampton Town Planner) that there were no issues with the extension of the Licence duration for a period of 20 years. Under 'Town Planning Scheme No. 9' the buffer for the WWTP is in place and there are no current discussions to change the land use.	N/A



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