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1 Purpose of this Document

This decision document explains how DER has assessed and determined the application for a works approval or licence, 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.

Works approval and licence conditions

DER has three types of conditions that may be imposed on works approvals and licences. They are as follows;

Standard conditions (SC)

DER has standard conditions that are imposed on all works approvals and licences regardless of the activities undertaken on the Premises and the information provided in the application. These are included as the following conditions on works approvals and licences:

Works approval conditions: 1.1.1-1.1.4, 1.2.1, 1.2.2, 5.1.1 and 5.1.2.

Licence conditions: 1.1.1-1.1.3, 1.2.1-1.2.4, 5.1.1-5.1.4 and 5.2.1.

For such conditions, justification within the Decision Document is not provided.

Optional standard conditions (OSC)

In the interests of regulatory consistency DER has a set of optional standard conditions that can be imposed on works approvals and licences. DER will include optional standard conditions as necessary, and are likely to constitute the majority of conditions in any licence. The inclusion of any optional standard conditions is justified in Section 4 of this document.

Non standard conditions (NSC)

Where the proposed activities require conditions outside the standard conditions suite DER will impose one or more non-standard conditions. These include both premises and sector specific conditions, and are likely to occur within few licences. Where used, justification for the application of these conditions will be included in Section 4.



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	<table border="1"> <thead> <tr> <th>Category number(s)</th> <th>Assessed Design capacity</th> </tr> </thead> <tbody> <tr> <td>54</td> <td>2,000 cubic metres per day</td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </tbody> </table>	Category number(s)	Assessed Design capacity	54	2,000 cubic metres per day				
	Category number(s)	Assessed Design capacity							
	54	2,000 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									
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> ?	<table border="1"> <tr> <td>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></td> <td> Referral decision No: Managed under Part V <input type="checkbox"/> Assessed under Part IV <input type="checkbox"/> </td> </tr> </table>	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"/>						
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?	<table border="1"> <tr> <td>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></td> <td> Ministerial statement No: EPA Report No: </td> </tr> </table>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Ministerial statement No: EPA Report No:						
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>)?	<table border="1"> <tr> <td>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></td> <td>Department of Water consulted Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></td> </tr> </table>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Department of Water consulted Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>						
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Department of Water consulted 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, e.g. Site is subject to SO ₂ requirements of Kwinana EPP.									



3 Executive summary of proposal

The Kununurra Wastewater Treatment Plant (WWTP) is licensed to treat up to 2000kL/day of wastewater and treats wastewater to a secondary standard using two series of primary, secondary, tertiary and quaternary ponds and is operated by Water Corporation (WC). Following pond treatment, effluent is subject to chlorination before being discharged to the M1 Channel.

The WWTP is located 1.3 kilometres south west of the Kununurra town centre (Post Office), which is located in the Kimberley region of Western Australia and is the administrative and commercial precinct for the Ord River Irrigation Area (ORIA) (DoE 2003). The closest sensitive receptor is 1 km to the south east, which are residents in the Kimberleyland Caravan Park. The region experiences a tropical climate with a distinct dry and wet season. The wet season is from November to April and is characterised by high temperatures, high humidity and heavy rainfall from monsoonal and cyclonic activity, whilst the dry season is from May to October and is comprised of moderate temperatures and low rainfall. Although subject to variability, the mean annual rainfall for Kununurra is 850mm, with the majority of this rain falling in the wet season (BoM 2012). Constructed in 1967, the plant was upgraded in 1988. Treated wastewater from the WWTP is discharged to the Water Corporation's M1 Channel, which is located approximately 200m to the west of the WWTP. The M1 Channel draws water from the Kununurra Diversion Dam and supplies this water via a gravity-fed system to customers on the Ivanhoe Plain of the ORIA for irrigation purposes (Water Corporation 2012).

Any significant degradation to the quality of the water within the M1 Channel (as a result of discharge from the Kununurra WWTP) may have impact on the suitability of the water for irrigation purposes. Notwithstanding this, the continued release of water from the Kununurra Diversion Dam into the M1 Channel during the dry season is believed to ensure that the quality of water within the channel is suitable for irrigation purposes. However during the wet season when there is little demand for irrigation water from the M1 Channel, the channel is flushed with water from the Kununurra Diversion Dam as required to ensure that the water quality within the channel is of a suitable standard.

The nearest sensitive receptor is approximately 1 km away south-east from the premises. The premises are surrounded by native vegetation and the Department of Park and Wildlife arboretum. Depth to groundwater is unknown below the WWTP.

Water Corporation has submitted a Form P4 on 13 May 2015 requesting the licence be amended to allow the presence of Duckweed in the WWTP ponds. In subsequent discussions WC has requested that the ponds have the ability to overflow in extreme rainfall events. As part of this amendment, DER has not re-assessed the acceptability or impacts of emissions and discharges from the Premises or re-visited any existing emission control levels. No changes to the conditions on the licence have been made with the exception of condition 1.3.5 (a), (e) and (f) in section 1 of the licence.



4 Decision table

All applications are assessed under the *Environmental Protection Act 1986*, the *Environmental Protection Regulations 1987*, DER's *Policy Statement No.7 – Operational Risk Management* and the risk matrix attached to this decision document in Appendix A. Where other references have been used in making the decision they are detailed in the decision table.

DECISION TABLE				
Works Approval / Licence section	Condition number W = Works Approval L = Licence	OSC or NSC	Justification (including risk description & decision methodology where relevant)	Reference documents
Premises operation	L1.3.5 (e) and (f) L1.3.5(a)	OSC	<p>Operation Duckweeds, or water lens, are fast growing (blooms typically occur in waters rich in nutrients, especially phosphorus and/or nitrogen), flowering aquatic plants which float on or just beneath the surface of still or slow-moving bodies of fresh water and wetlands. In October 2013 Water Corporation submitted duckweed technical investigation report on the investigation into impacts on wastewater treatment efficiency, including Biochemical Oxygen Demand, Suspended Solids and nutrient removal processes and evaporative processes, from the presence of duckweed on ponds in the north west of the State. DER assessed the report and concluded that the findings provide evidence to support Water Corporation's request to allow for duckweed on wastewater treatment ponds in the Kimberley.</p> <p>WC have requested that overtopping of the ponds does not occur except as a result of an extreme rainfall event. This condition appears on other WC licenses.</p>	<p>General Provisions of the <i>Environmental Protection Act 1986</i></p> <p>Application supporting documentation.</p> <p>L6270/1991/10</p>
Licence Duration	N/A	N/A	The licence duration remains five years (no change to duration as part of this amendment). WC is proposing to construct a new WWTP in 2023 and upgrade the WWTP in 2017.	N/A



5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
29/05/2015	Proponent sent a copy of proposed Licence amendment	The signed waiver letter was received on 6 June 2015 with no further comment made.	Finalisation of Licence amendment



6. Risk Assessment

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

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