



Decision Document

Environmental Protection Act 1986, Part V

Proponent: RAC Tourism Assets Pty Ltd

Licence: L7426/2000/8

Registered office: Level 3, 129 St Georges Terrace
PERTH WA 6000

ACN: 168 253 085

Premises address: Monkey Mia Dolphin Resort
Monkey Mia Road
SHARK BAY WA 6537
Being Lot 556 on Plan 404665, portion of Lot 555 on Plan 404665 (15 metre wide parallel easement for the rising main), portion of Lot 300 on Plan 51888 (15 metre wide parallel easement for the rising main), portion of Lot 130 on Plan 54332 (15 metre wide parallel easement for the rising main), and portion of Lot 130 on Plan 54332 (macerator pit).

Grant date: Thursday, 2 April 2015

Commencement date: Tuesday, 7 April 2015

Expiry date: Monday, 6 April 2029

Decision

Based on the assessment detailed in this document, the Delegated Officer has decided to issue an amended licence. The Delegated Officer considers that in reaching this decision, all relevant considerations have been taken into account.

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 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.



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)	Design Capacity
	54	150 cubic metres per day
Application Verified	Date: N/A	
Application Fee Paid	Date: N/A	
Works Approval has been complied with Compliance Certificate received	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	
Commercial-in-confidence claim	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Requested within application supporting documentation submitted (Attachment 3, pg 2).	
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 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

Location and siting

The Monkey Mia Wastewater Treatment Plant (WWTP) is located approximately 27 kilometres north east of Denham. The WWTP Premises boundary borders the Shark Bay Marine Park and lies within the Shark Bay World Heritage Area. The design capacity of the WWTP is 150 cubic metres per day (m^3/day). The WWTP is located approximately 800m from the Indian Ocean.

Wastewater generated from the Monkey Mia Dolphin Resort (MMDR), and adjacent Department of Parks and Wildlife visitors centre, gravitates via a system of pipes to a pump station located within the MMDR. At this point the waste is macerated and pumped approximately 800 metres (m) south east of the resort to the WWTP. After maceration, wastewater from the rising main is passed through a 2mm drum screen to a wastewater balance tank. The wastewater balance tank is used to buffer diurnal flows, provide an opportunity for dilution and/or neutralisation, and provide a mechanism to temporarily halt processing of wastewater should there be a problem with the downstream equipment. Screened wastewater is then pumped to the biological reactor which involves a Modified Ludzack-Ettinger (MLE) activated sludge process. The movement of the wastewater between anoxic and aerobic zones enables high levels of Nitrogen (N) and Biochemical Oxygen Demand (BOD) reduction. To ensure the treated wastewater quality is achieved, key process indicators for the biological reactor such as flow, dissolved oxygen, mixed liquor suspended solids and pH is continuously monitored via the site Supervisory Control and Data Acquisition (SCADA) system.

Membrane filtration is then used to separate the treated wastewater from the mixed liquor. The small pore size of the membrane ($0.04\mu m$) results in the rejection of solids and the majority of pathogens. The filtered water is directed to the infiltration swale for disposal.

To ensure membrane filtration performance is maintained key process indicators such as flow, trans-membrane pressure and permeate turbidity is also continuously monitored via the site SCADA system.

Due to a significant discharge event in 2010, the proponent was required to prepare and implement a Groundwater Monitoring Program which includes both groundwater and marine surface water monitoring requirements. Elements of this monitoring program have now been adopted under the Licence. An emergency discharge was undertaken in July 2014 due to the capacity of the infiltration swale being exhausted. This was attributed to high tourist numbers and lower than expected evaporation rates.

The WWTP Premises also contains a 1,930 kVA power station and a reverse osmosis plant which discharges $<37.5kL/day$ of brine waste into the swale. Currently the HDPE lined evaporation ponds are considered as emergency storage ponds and desludging ponds only, with the primary emission for treated wastewater and brine water going to the swale for infiltration.

Proposed activities

The Licensee applied for an amendment to the Licence L7426/2000/8 for:

1. Redefining plant capacity to $150 m^3$ per day as a 7 day average ($1,050 m^3$ per 7 consecutive days) rather than $150 m^3$ per day to allow for occasional peak loads in tourist season;
2. Implementation of irrigation area for recycled water disposal.

The Licensee is proposing to incorporate an irrigation area (approximately $5,100 m^2$) within the current fenced WWTP area for the irrigation of approximately $<30 m^3/day$ (during autumn to spring months) and $<40 m^3/day$ (during summer months) of treated wastewater from the WWTP, during daytime operations.



The irrigation area has historically been used for irrigation of treated wastewater which was halted due to the activity occurring outside the premises boundary. The boundary of the WWTP has subsequently been amended and now incorporates the old irrigation area which has the majority of the irrigation infrastructure already in place.

The Delegated Officer considered that the proposed 7 day averaging period for plant capacity is a reasonable request and is consistent with the application of plant capacity in similar WWTP licenses. It is noted that inflow in busy periods is not able to be controlled by the occupier and therefore occasional peak events are largely unavoidable and do not increase the environmental risk of the premises.

Potential emissions

The irrigation area consists of sporadic native vegetation cover with areas of exposed in-situ sandy soils. Geology in the area is considered to consist of Peron Sandstone (anticline) underlain by tertiary Calcareenite and forms part of the Carnarvon Basin. Monkey Mia forms part of the Sharks Bay World Heritage List with significant biodiversity conservation value.

The depth to groundwater at the Premises is approximately 25 metres.

The current emissions from the Premises include emissions to land via infiltration (swale) and also potential fugitive emissions in the form of odour. The proposed changes to the premises operation process will result in a transfer of a portion of the treated wastewater from direct infiltration (swale) to reduced infiltration via irrigation with higher evaporation potential. The irrigation area will result in increased nutrient enrichment of a second area within the WWTP premises boundary. Nutrient enrichment may cause native vegetation die off, exposing greater areas of soil to wind erosion.

Occupation and planning approval

The Licensee submitted the 'Record of Certificate of Crown Land Title' Volume LR3165 folio 413 for Lot 556 on Deposited Plan 404665 which permits power generation, effluent treatment and disposal, water treatment, resort infrastructure and related purposes. The title is held by the Shire of Shark Bay and was registered on 22 December 2014 with power to lease for any term not exceeding 99 years, subject to the consent of the Minister for Lands, and leased to RAC Tourism Assets Pty Ltd (as registered on 15/09/2015).

The Lease transfer from 'Aspen Monkey Mia Pty Ltd' to 'RAC Tourism Assets Pty Ltd' was undertaken on 15 September 2015 (Landgate).

Consultation

The Licensee has not undertaken any consultation as a result of the proposed changes to operational processes. All other consultation undertaken by DER is stated within Table 5 'Advertisement and Consultation' of the Decision Document.

The Licensee has not referred the application under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) for the current proposed activity. The last referral made in August 2003 (EPBC 2003/1146) for the expansion of the Monkey Mia Resort and upgrade of the WWTP proposed that the premises would dispose of effluent via "evaporation ponds, taking advantage of the very local high evaporation rates, and creating a zero discharge system" (Bowman Bishaw Gorham). The decision issued in October 2003 confirmed that the proposed action was not a controlled action. The Licensee is currently undertaking consultation under the EPBC Act to confirm if there are any matters of national environmental significance in relation to the proposal.

Approval of works

This Licence amendment is to include an irrigation area (approximately 5,100 m²) as an additional method of disposal.



The Delegated Officer considered:

- The proposed method of disposal (disposal to land via irrigation) presents a similar level of environmental risk compared to the current method of disposal (disposal to land via infiltration).
- Disposal via irrigation is expected to increase the disposal capacity of the plant via through increased evaporation.
- Disposal via irrigation is expected to reduce the disposal load on the existing swales, increasing their performance.

The Delegated Officer therefore considers the proposal for the addition of a 5,200 m² irrigation area to be acceptable.

A full assessment of all emissions, discharges and existing regulatory controls has been undertaken for the site and is documented within the Decision Table in Section 4 of this document.

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
Front page	N/A	<p>Operation An administrative change has been included to improve the format of the front page details, as per DER formatting requirements.</p> <p>Operation is subject to the general provisions of the <i>Environmental Protection Act 1986</i> and relevant subsidiary legislation.</p>	<p>General provisions of the <i>Environmental Protection Act, 1986</i>.</p> <p>DER guidance statement, '<i>Licences and Works Approvals Process</i>'.</p>
Interpretation	L1.1	<p>Operation Conditions 1.1.1 – 1.1.4 require that terminology used within the Licence is referenced to the appropriate definitions where applicable, and that any reference to a standard or guideline is to the most current version of that standard or guideline.</p> <p>An administrative change has been undertaken to update the definitions within the Licence.</p> <p>Operation is subject to the general provisions of the <i>Environmental Protection Act 1986</i>. Category 54 falls under Schedule 1 Part 1 of the <i>Environmental Protection Regulation 1987</i>, and is subject to Licence. The premises currently operates under Licence L7426/2000/8.</p>	<p>General Provisions of the <i>Environmental Protection Act 1986</i>.</p>
General conditions	L1.2.1-L1.2.7	<p>Operation Previous condition 1.2.2 has been amended and renumbered to condition 1.2.1. The Delegated Officer determined that the requirement to continue maintenance of wastewater treatment and monitoring equipment is necessary to validate the risk determinations and regulatory controls for 'emissions to</p>	<p>General provisions of the <i>Environmental Protection Act, 1986</i>.</p> <p><i>Environmental Protection</i></p>



DECISION TABLE			
Licence Section	Condition Number L= Licence	Justification (including risk description & decision methodology where relevant)	Reference Documents
		<p>land' and 'monitoring' (see relevant sections below). The condition has been updated to specify what equipment (i.e. wastewater treatment plant and monitoring bores) is required to be maintained and operated at the premises.</p> <p>Previous condition 1.2.4 has been renumbered condition 1.2.2. This condition relates to the management of spills at the premises in relation to activities within the wastewater treatment plant premises boundary and is covered under 'emissions to land' risk assessment. The premises boundary also includes the reverse-osmosis plant which supplies water to the resort and discharges brine water into the WWTP infiltration swale.</p> <p>The Delegated Officer considers the disposal of brine water from the reverse osmosis plant a contributory activity (as defined within DER guidance statement, 'Licences and Works Approvals Process', September 2015) within the WWTP premises boundary, which impacts upon the capacity and capability of the infiltration swale to operate effectively for the purposes intended (infiltration of treated wastewater). Condition 1.2.2 therefore includes not only sewage and sewage sludge waste types but reserve-osmosis bitters under the management of spills within the premises boundary.</p> <p>Conditions 1.2.3-1.2.7 relate to the establishment of an irrigation area as applied for under this licence amendment application. A risk assessment for irrigation is detailed under 'emission to land below'.</p> <p>Condition 1.2.3 requires the proponent to ensure that construction meets or exceeds the standards defined within Table 1.2.1. These specifications are consistent with the application requirements submitted by the proponent for the construction of the works.</p> <p>Condition 1.2.4 relates to potential deviations/ departures from the proposed upgrade construction requirements (as based upon any variations to the works specifications, Table 1.2.1), and how these should be addressed.</p>	<p><i>(Unauthorised Discharges) Regulations 2004</i></p> <p>DER's Guidance Statement: <i>Regulatory Principles.</i></p> <p>DER's Guidance Statement: <i>Setting Conditions.</i></p> <p>DER's Guidance Statement: <i>Licence and works approval process.</i></p>



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		<p>Condition 1.2.5 requires upgrades or minor departures from the defined construction requirements to be listed and submitted through to DER within the construction compliance document, stated within condition 1.2.8. This ensures that departures from the approved works can be assessed and actioned as required.</p> <p>Conditions 1.2.6 and 1.2.7 require the submission of a construction compliance document prior to operation of the premises upgrade. This will ensure that upgrades undertaken (installation of the irrigation area) are certified as having been constructed in accordance with the Licence requirements, and that the appropriate testing has been conducted by the proponent for inclusion within the compliance report document.</p>	
Premises operation	L1.3.2 to L1.3.7	<p>Operation</p> <p><u>Emission Description</u> <i>Emission:</i> Treated wastewater and brine water discharged through spills, overtopping and incorrect acceptance and treatment processes onsite. <i>Impact:</i> Contamination of surrounding land, surface water and groundwater with an increase of nutrients and other contaminants. <i>Controls:</i> The applicant only accepts effluent from its own ablutions and water treatment facilities onsite. The site operates a membrane filtration system which significantly reduces the parameter load from the wastewater treatment plant which has resulted in high quality treated wastewater discharged from the premises. Proposed disposal via irrigation is expected to mitigate historical capacity issues with the onsite swale.</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Moderate <i>Likelihood:</i> Possible <i>Risk Rating:</i> Moderate</p> <p><u>Regulatory Controls</u> Condition 1.3.2, Table 1.3.1 details 'Waste acceptance' specifications to</p>	<p>General provisions of the <i>Environmental Protection Act, 1986</i>.</p> <p>Application supporting documentation.</p> <p><i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i>.</p> <p>DER's <i>Guidance Statement: Regulatory Principles</i></p> <p>DER's <i>Guidance Statement: Setting Conditions</i></p>



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Licence Section	Condition Number L= Licence	Justification (including risk description & decision methodology where relevant)	Reference Documents
		<p>authorise the activities being undertaken at the premises for sewage receipt and brine waste and to limit acceptance to waste generated by the Monkey Mia Dolphin Resort (and co-located Department of Parks and Wildlife office). The waste code for sewage has been included into the table.</p> <p>A change from the previous licence has been included with the addition of 'Note 1', Table 1.3.1, relating to a monthly average for sewage which is to be reflected within the reporting of sewage volume received to the premises. This is in response to the proponent requesting the reporting of volumes based upon an average flow as defined within Section 1, pg. 5, of the application supporting documentation. The Delegated Officer considered that the request is acceptable and does not materially impact the environmental risk of the premises.</p> <p>Condition 1.3.3 requires the proponent to contact the CEO in the event of any other forms of waste being accepted to the premises that are not permitted as per Table 1.3.1 of the Licence. The premises has limited capacity (infrastructure limits) to accept waste types due to the size of the WWTP and the sensitivity of the receiving environment (located within a World Heritage listed area).</p> <p>Condition 1.3.4, Table 1.3.2 details the requirements for waste processing based on the specifications of the onsite plant and operational aspects detailed in the application. The table has been updated from the previous licence to include the brine water processing already being undertaken at the premises and the inclusion of the treated wastewater to be discharged to the proposed irrigation area.</p> <p>Condition 1.3.5 authorises the containment infrastructure at the premises and specifies the appropriate infrastructure for the containment of specific wastes. The condition has been updated from the previous licence to improve sentence structure and to include brine storage.</p>	



DECISION TABLE			
Licence Section	Condition Number L= Licence	Justification (including risk description & decision methodology where relevant)	Reference Documents
		<p>Condition 1.3.6 has been retained from the previous licence and specifies the management requirements for the holding ponds and infiltration swale to ensure correct operation and minimise overtopping events.</p> <p>Condition 1.3.7 has been retained and relates to the security measures necessary to minimise the risk of unauthorised access to the premises which may lead to public exposure, sabotage or unauthorised emissions.</p> <p><u>Residual Risk</u> <i>Consequence: Moderate</i> <i>Likelihood: Unlikely</i> <i>Risk Rating: Moderate</i></p>	



DECISION TABLE			
Licence Section	Condition Number L= Licence	Justification (including risk description & decision methodology where relevant)	Reference Documents
Odour	4.1.3	<p><u>Emission Description</u> <i>Emission:</i> Odour from effluent accepted and treated at the premises. <i>Impact:</i> Nuisance impacts in the vicinity. There are no residential receptors in the vicinity. The Delegated Officer considers that the management of any odour impacts from the premises to the licensee's adjacent resort is the responsibility of the licensee. <i>Controls:</i> High treatment standard of the onsite plant.</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Possible <i>Risk:</i> Low</p> <p><u>Regulatory Controls</u> The Delegated Officer noted that DER has no record of odour complaints from the facility. The Delegated Officer considered that general onsite housekeeping and the high treatment standard of the onsite plant is expected to mitigate any odour issues. As the risk from odour has been determined as 'Low', the Delegated Officer considers that impacts from odour emissions can be sufficiently regulated under section 49 of the <i>Environmental Protection Act 1986</i>.</p> <p>Condition 4.1.3 requires the licensee to record and investigate any complaints received concerning the environmental impact of the activities undertaken at the Premises. DER will review this information to validate the current controls and risk assessment.</p> <p><u>Residual Risk</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Possible <i>Risk:</i> Low</p>	<p>General provisions of the <i>Environmental Protection Act 1986</i></p> <p>DER's <i>Guidance Statement: Regulatory Principles</i></p> <p>DER's <i>Guidance Statement: Setting Conditions</i></p> <p>DER's <i>Guidance Statement: Land Use Planning</i></p>
<p><i>Environmental Protection Act 1986</i> Decision Document: L7426/2000/8 File Number: 2011/003272-2</p>		<p>Amendment date: Thursday, 10 November 2016</p>	<p>Page 12 of 22 IRLB_TI0669 v2.7</p>



DECISION TABLE			
Licence Section	Condition Number L= Licence	Justification (including risk description & decision methodology where relevant)	Reference Documents
Noise	4.1.3	<p><u>Emission Description</u> <i>Emission:</i> Noise from wastewater treatment processes at the premises. <i>Impact:</i> Nuisance impacts in the vicinity. There are no residential receptors in the vicinity. The Delegated Officer considers that the management of any noise impacts from the premises to the licensee's adjacent resort is the responsibility of the licensee. <i>Controls:</i> Low noise plant operation.</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Possible <i>Risk:</i> Low</p> <p><u>Regulatory Controls</u> The premises is subject to the <i>Environmental Protection (Noise) Regulations 1997</i>.</p> <p>The Delegated Officer noted that DER has no record of noise complaints from the facility. The Delegated Officer considered that the onsite plant has a low noise generating potential. As the risk from noise has been determined as 'Low', the Delegated Officer considers that any impacts from emissions of noise can be sufficiently regulated under the <i>Environmental Protection (Noise) Regulations 1997</i>.</p> <p>Condition 4.1.3 requires the licensee to record and investigate any complaints received concerning the environmental impact of the activities undertaken at the Premises. DER will review this information to validate the current controls and risk assessment.</p> <p><u>Residual Risk</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Possible <i>Risk:</i> Low</p>	<p><i>Environmental Protection (Noise) Regulations 1997</i></p> <p>DER's Guidance Statement: <i>Regulatory Principles</i></p> <p>DER's Guidance Statement: <i>Setting Conditions</i></p> <p>DER's Guidance Statement: <i>Land Use Planning</i></p>
<p><i>Environmental Protection Act 1986</i> Decision Document: L7426/2000/8 File Number: 2011/003272-2</p>		<p>Amendment date: Thursday, 10 November 2016</p>	<p>Page 13 of 22 IRLB_TI0669 v2.7</p>



DECISION TABLE			
Licence Section	Condition Number L= Licence	Justification (including risk description & decision methodology where relevant)	Reference Documents
Emissions to land including monitoring	L2.1.1 L2.2.1 L3.1.1 – L3.1.3 L3.2.1 L3.4.1 L3.4.2	<p><u>Emission Description</u> <i>Emission:</i> Discharge of treated wastewater to the irrigation area and infiltration swale. <i>Impact:</i> Potential contamination of surrounding land with nutrient rich wastewater and infiltration to groundwater (approximately 25 mBGL). Premises located in a World Heritage Area. <i>Controls:</i> The application outlines that the following steps will be in place to manage discharges to land:</p> <ol style="list-style-type: none"> 1) Membrane filtration system which significantly reduces the parameter load from the wastewater treatment plant which has resulted in high quality treated wastewater 2) Operator on-site daily; 3) Water production and treated water tank levels are monitored remotely and will identify excess water discharge; 4) Irrigation buffer to premises boundary of 3 m will be in place; 5) Site is relatively flat minimising run-off from irrigation; 6) Signage for non-potable water use will be present at the irrigation area; 7) Lilac pipework used for identification of non-potable treated water; 8) Irrigation design to ensure treated water contained on-site (i.e.: no spray drift beyond fence line); 9) Lined emergency storage pond available. <p>The Delegated Officer agrees that the above controls are appropriate in mitigating risks from emissions to land.</p> <p>Department of Health document <i>Guidelines for the Non-potable Uses of Recycled Water in Western Australia, August 2011</i> has effluent compliance values for recycled water for the irrigation for municipal use with unrestricted access.</p>	<p>Application supporting documentation.</p> <p>General provisions of the <i>Environmental Protection Act, 1986</i>.</p> <p>DER's <i>Guidance Statement: Regulatory Principles</i></p> <p>DER's <i>Guidance Statement: Setting Conditions</i></p> <p>Australian guidelines for sewerage systems 1997.</p> <p><i>Guidelines for the Non-potable Uses of Recycled Water in Western Australia, August 2011</i>, Department of Health.</p>
	<p><i>Environmental Protection Act 1986</i> Decision Document: L7426/2000/8 File Number: 2011/003272-2</p>	<p>Amendment date: Thursday, 10 November 2016</p>	<p>Page 14 of 22</p> <p>IRLB_TI0669 v2.7</p>



DECISION TABLE			
Licence Section	Condition Number L= Licence	Justification (including risk description & decision methodology where relevant)	Reference Documents
		<p><u>Risk Assessment</u> <i>Consequence:</i> Minor <i>Likelihood:</i> Possible <i>Risk Rating:</i> Moderate</p> <p><u>Regulatory Controls</u> As the licence contains numerical limits, Condition 2.1.1 requires the recording and investigation of any limit exceedances.</p> <p>Condition 2.2.1 provides authorisation for emissions to land and has been updated to reflect the additional discharge area to the irrigation area as 'L2'.</p> <p>Condition 2.2.2 has been retained from the previous licence and specifies the limits for emissions to land. The Delegated Officer has reviewed the limits which were based on Department of Health document <i>Guidelines for the Non-Potable Uses of Recycled Water in Western Australia, August 2011</i> and considers them appropriate for protecting the environment and public health. The condition has been amended to include the continuous monitoring of the volumetric flow rate for treated wastewater to the new emission point 'L2' (irrigation area).</p> <p>Condition 3.1.1 specifies the appropriate methodology for required.</p> <p>Conditions 3.1.2 and 3.1.3 relate to the calibration of monitoring equipment which will ensure that monitoring equipment is sufficiently accurate.</p> <p>Condition 3.2.1 specifies the monitoring requirements for emissions to land and has been retained from the previous licence. The Delegated Officer has reviewed the monitoring requirements and considers that they are appropriate for monitoring the quality of effluent discharged to land. Table 3.2.1 has had additional 'Aluminium' monitoring parameters included as the proponent 'alum' doses the treated wastewater prior to discharge to land which will influence aluminium levels in the soils.</p>	
<p><i>Environmental Protection Act 1986</i> Decision Document: L7426/2000/8 File Number: 2011/003272-2</p>		<p><u>Residual Risk</u> <i>Amendment date:</i> Thursday, 10 November 2016 <i>Consequence:</i> Minor <i>Likelihood:</i> Possible <i>Risk Rating:</i> Low</p> <p>Depth to groundwater is approximately 25 mBGL.</p>	<p>Page 15 of 22 IRLB_TI0669 v2.7</p>



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Licence Section	Condition Number L= Licence	Justification (including risk description & decision methodology where relevant)	Reference Documents
		<p>Conditions 3.4.1 to 3.4.5 specify ambient groundwater and marine monitoring requirements at the resort and have been retained from the previous licence. Due to the sensitivity of the receiving environment consisting of a World Heritage and high-tourism value marine (dolphin interaction) area, the Delegated Officer considers the monitoring of groundwater for chemical and microbiological parameters to be appropriate.</p> <p>Monitoring parameters, locations and actions have been taken from the 'Groundwater Monitoring Program – Monkey Mia Dolphin Resort (Revision 3)' August 2011 (Program) which was submitted to DER in response to requirement 4 of an Environmental Protection Notice served on the previous occupier Aspen Parks Property Management Ltd in relation to a 2010 seepage incident and adopted into the previous licence thereafter.</p> <p>Table 3.4.1 has been updated to include 'Total Aluminium' as a result of the proponent 'Alum' dosing to manage phosphorus levels within the treated wastewater. 'Alum' is used as a flocculant for the settling out of particulate matter and assists in the reduction of phosphorus in wastewater which predominantly becomes held up in the sediment.</p>	
<i>Environmental Protection Act 1986</i> Decision Document: L7426/2000/8 File Number: 2011/003272-2		Amendment date: Thursday, 10 November 2016	Page 16 of 22 IRLB_TI0669 v2.7



DECISION TABLE										
Licence Section	Condition Number L= Licence	Justification (including risk description & decision methodology where relevant)	Reference Documents							
Monitoring of inputs and outputs	L3.3	Condition 3.3.1 has been retained as it requires the monitoring of inflows and outflows which are necessary to determine compliance, nutrient loading and potential impacts. The condition has been updated to include monitoring of volumes discharged to the irrigation area, with minor administrative changes to wording in other sections of Table 3.3.1.	General provisions of the <i>Environmental Protection Act 1986</i> .							
Improvements	L4.1.1 – L4.1.2	<p>Previous conditions 4.1.1 and 4.1.2 have been removed as they related to a previous improvement requirement which was submitted 9/9/2016. The conditions were worded as follows:</p> <p><i>4.1.1 The Licensee shall complete the improvements in Table 4.1.1 by the date of completion in Table 4.1.1.</i></p> <p><i>4.1.2 The Licensee, for improvements not specifically requiring a written submission, shall write to the CEO stating whether and how the Licensee is compliant with the improvement within one week of the completion date specified in Table 4.1.1.</i></p>	DER's <i>Guidance Statement: Setting Conditions</i> .							
		<p>Table 4.1.1 : Improvement program</p> <table border="1"> <thead> <tr> <th>Improvement reference</th> <th>Improvement</th> <th>Date of completion</th> </tr> </thead> <tbody> <tr> <td>IR1</td> <td><i>The Licensee shall prepare and submit to the CEO a Wastewater Disposal Plan (WDP). The WDP shall include but not be limited to, an assessment of the potential impacts to the environment on-site, and the disposal capacity associated with the disposal of reverse osmosis brine waste and wastewater effluent.</i></td> <td>30/06/2015</td> </tr> </tbody> </table>		Improvement reference	Improvement	Date of completion	IR1	<i>The Licensee shall prepare and submit to the CEO a Wastewater Disposal Plan (WDP). The WDP shall include but not be limited to, an assessment of the potential impacts to the environment on-site, and the disposal capacity associated with the disposal of reverse osmosis brine waste and wastewater effluent.</i>	30/06/2015	
		Improvement reference		Improvement	Date of completion					
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DECISION TABLE			
Licence Section	Condition Number L= Licence	Justification (including risk description & decision methodology where relevant)	Reference Documents
Information	L4.1.1 L4.1.2 L4.1.3	<p>Condition 4.1.1 which relates to the keeping of records related to the licence has been retained on the licence. The Delegated Officer considers that this requirement is necessary to enable proper review and investigation of incidents, trends or elevated monitoring results.</p> <p>Condition 4.1.2 has been updated as the AACR requirement is now 'standalone' and the required form has been updated and is now accessed online. The Licensee is able to utilise the form template for the Compliance report as per DER website www.der.wa.gov.au.</p> <p>Previous condition 5.1.2 has not been retained in the amended license as the Delegated Officer considers that the awareness of licence conditions is not a relevant factor in determining compliance. The condition was worded as follows: :</p> <p><i>The Licensee shall ensure that:</i></p> <ul style="list-style-type: none"> (a) <i>any person left in charge of the Premises is aware of the conditions of the Licence and has access at all times to the Licence or copies thereof; and</i> (b) <i>any person who performs tasks on the Premises is informed of all of the conditions of the Licence that relate to the tasks which that person is performing.</i> <p>Condition 4.1.3 relating to complaints management has been retained.</p> <p>Condition 4.2.1 and 4.2.2 outline annual reporting requirements. Condition 4.2.1 has been updated to reflect the requirements of the amended licence.</p> <p>Condition 4.3.1 and 4.2.3 outline non-annual reporting and notification requirements.</p>	<p>General provisions of the <i>Environmental Protection Act 1986</i>.</p> <p>DER's Guidance Statement: <i>Regulatory Principles</i>.</p> <p>DER's Guidance Statement: <i>Setting Conditions</i>.</p>
Licence Duration	N/A	The Licence duration was extended on 29 April 2016. The Licensee was notified by letter of the change to duration period. The Licence expiry date is	DER's Guidance Statement, <i>Licence</i>



DECISION TABLE			
Licence Section	Condition Number L= Licence	Justification (including risk description & decision methodology where relevant)	Reference Documents
		now 06 April 2029. The Licence duration has been determined in accordance with 'DER guidance statement, Licence duration, May 2015'.	<i>Duration</i>



5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
06/10/2016	Proponent sent a copy of draft instrument	<p>Response received back from Jason Jetten (Operations Manager, Permeate Partners) via email on 24/10/2016 with one change requested for consideration, as follows:</p> <p>Irrigation volume to irrigation area to be changed from 25 m³/ day to 30 m³/day during autumn to spring months, and 40 m³/ day during summer months.</p>	<p>The premises currently infiltrates to the infiltration swale. The increased opportunity for evaporation of treated wastewater is considered an improved approach for discharge of treated wastewater, and the increased volumes for irrigation do not result in an increase to throughput at the premises.</p> <p>The Delegated Officer has considered the increase in volumes to the irrigation area acceptable, and the amendment to the irrigation volume has been incorporated within the Licence conditions.</p>
10/08/2016 October 2016	<p>Consultation undertaken with interested parties:</p> <p>Shire of Shark Bay</p> <p>Department of the Environment - Commonwealth</p>	<p>Email sent through to Shire of Shark Bay CEO, Paul Anderson, for request for comment on the proposed application.</p> <p>Nil comment/s received.</p> <p>The proponent referred the application for consideration under the <i>Environment Protection and Biodiversity Conservation Act 1999</i>.</p> <p>DER were advised by Jarrod Livingstone-</p>	<p>Not applicable.</p> <p>Not applicable.</p>



Date	Event	Comments received/Notes	How comments were taken into consideration
		<p>Foggo (Project Engineer, Permeate Partners) via email on 2/9/2016 that: <i>"...early feedback we have is that it is highly unlikely that there will be any 'Matters of national environmental significance' impacted and will not be a controlled act, however we are working through the due diligence and will provide the additional information in relation to this as soon as it comes to hand."</i></p> <p>No further information has been submitted through to DER.</p>	



6 Emissions and discharges risk assessment matrix

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