



Works Approval

Environmental Protection Act 1986, Part V

Works Approval Holder: Hanssen Pty Ltd

Works Approval Number: W5910/2015/1

Registered office: 271 Stirling Crescent
HAZELMERE WA 6055

ACN: 058 600 427

Premises address: Oasis Hotel
10070 West Swan Road
HENLEY BROOK WA 6055
Being Lot 201 on Diagram 91285 as depicted in Schedule 1

Grant date: Wednesday, 11 May 2016

Commencement date: Monday, 16 May 2016

Expiry date: Tuesday, 15 May 2018

The following category/s from the *Environmental Protection Regulations 1987* cause this Premises to be a prescribed premises for the purposes of the *Environmental Protection Act 1986*:

Category number	Category description	Category production or design capacity	Approved premises production or design capacity
85	Sewage facility: premises – (a) on which sewage is treated (excluding septic tanks); or (b) from which treated sewage is discharged onto land or into waters	More than 20 m ³ but less than 100 m ³ per day	66m ³ per day

Conditions

This Works Approval is subject to the conditions set out in the attached pages.

Date signed: 11 May 2016

.....
Alan Kietzmann
Manager Licensing, Waste Industries
Officer delegated under section 20
of the *Environmental Protection Act 1986*



Works Approval Conditions

1 General

1.1 Interpretation

1.1.1 In the Works Approval, definitions from the *Environmental Protection Act 1986* apply unless the contrary intention appears.

1.1.2 In the Works Approval, unless the contrary intention appears:

'Act' means the *Environmental Protection Act 1986*;

'AS/NZS 5667.10' means the Australian Standard AS/NZS 5667.10 *Water Quality – Sampling – Guidance on sampling of waste waters*;

'annual period' means the inclusive period from 1 April until 31 March in the following year;

'averaging period' means the time over which a limit or target is measured or a monitoring result is obtained;

'BOD5' means the oxygen demand exerted after 5 days of a Biological Oxygen Demand (BOD) test;

'CEO' means Chief Executive Officer of the Department of Environment Regulation;

'CEO' for the purpose of correspondence means;

Chief Executive Officer
Department Administering the Environmental Protection Act 1986
Locked Bag 33
CLOISTERS SQUARE WA 6850
Email: info@der.wa.gov.au

'cfu/100 mL' means colony forming units per 100 millilitres;

'Commissioning' means the process of operation and testing that verifies the works and all relevant systems, plant, machinery and equipment have been installed and are performing in accordance with the design specification set out in the works approval application;

'NATA' means the National Association of Testing Authorities, Australia;

'NATA accredited' means in relation to the analysis of a sample that the laboratory is NATA accredited for the specified analysis at the time of the analysis;

'Premises' means the area defined in the Premises Map in Schedule 1 and listed as the Premises address on page 1 of the Works Approval;

'Schedule 1' means Schedule 1 of [this](#) Works Approval unless otherwise stated;

'spot sample' means a discrete sample representative at the time and place at which the sample is taken;

'Works Approval' means this Works Approval numbered W5910/2015/1 and issued under the Act; and



'Works Approval Holder' means the person or organisation named as the Works Approval Holder on page 1 of the Works Approval.

1.1.3 Any reference to an Australian or other standard in the Works Approval means the relevant parts of the standard in force from time to time during the term of this Works Approval.

1.1.4 Any reference to a guideline or code of practice in the Works Approval means the current version of the guideline or code of practice in force from time to time, and shall include any amendments or replacements to that guidelines or code of practice made during the term of this Works Approval.

1.2 General conditions

1.2.1 The Works Approval Holder shall construct the works in accordance with the documentation detailed in Table 1.2.1:

Table 1.2.1: Construction Requirements ¹		
Document	Parts	Date of Document
Department of Environment Regulation – Oasis Hotel Waste Water Treatment Plant – AQUASOL Water Treatment Solutions, Version 1	All	July 3, 2015
Oasis Hotel: Nutrient and Irrigation Management Plan – AQUASOL Water Treatment Solutions	All	May 21, 2015
Oasis Hotel: Odor [sic] Management Plan – AQUASOL Water Treatment Solutions	All	May 21, 2015
Oasis Hotel Waste Water Treatment Plant – AQUASOL Water Treatment Solutions, Version 2 (Nutrient Load Amendment)	All	February 16, 2016

Note 1: Where the details and commitments of the documents listed in condition 1.2.1 are inconsistent with any other condition of this works approval, the conditions of this works approval shall prevail.

1.2.2 The Works Approval Holder must ensure that the Works specified in Column 1 of Table 1.2.2 meet or exceed the specifications in Column 3 of Table 1.2.2 for the infrastructure in each row of Table 1.2.1.

1.2.3 The Works Approval Holder must not depart from the specifications in Column 1, 2 and 3 for the infrastructure in each row of Table 1.2.2 except:

- where such departure is minor in nature and does not materially change or affect the infrastructure; or
- where such departure improves the functionality of the infrastructure and does not increase risks to public health, public amenity or the environment;

and in accordance with all other conditions in this Works Approval.



Table 1.2.2: Infrastructure to be constructed		
Column 1	Column 2	Column 3
Infrastructure	Area	Details
Waste Water Treatment Plant	South western corner of Lot 201 on Diagram 91285	Consisting of a <ul style="list-style-type: none">• Rotary screen• Wet Scrubber• 1 200 KLt Anareobic tank• 2 100KLt Biological aeration tanks with independent aerators• 1 100KLt Facultative/Clarifier tank• 1 15KLt Final Polishing tank• 1 32KLt holding tank• 1 32KLt Irrigation tank• 1 15KLt sludge tank• 3 AQ6000 media filters• 2 Carbon media filters• 2 Resin media filters• Flow meters located before the rotary screen, sludge tank and holding tank.

1.2.4 The Works Approval Holder shall undertake commissioning in accordance with the commissioning plan 'Aquasol Commissioning Program: Oasis Hotel Wastewater Treatment System, Aquasol Water Treatment Solutions, undated' received by DER on 29 July 2015.

1.2.5 The Works Approval Holder shall commission the Waste Water Treatment System, for a period not exceeding 7 days.

2 Emissions

2.1 Emissions to land

2.1.1 The Works Approval Holder shall ensure that where waste is emitted to land from the emission point in Table 2.1.1 and identified on the Irrigation map in Schedule 1 it is done so in accordance with the conditions of this Works Approval.

Table 2.1.1: Emissions to land		
Emission point reference	Description	Source including abatement
L1	Pipe feeding irrigation of 1.45 hecatres of premises lawn and gardens	Treated wastewater from wastewater treatment plant

2.1.2 The Works Approval Holder shall not cause or allow emissions to land greater than the limits listed in Table 2.1.2.



Table 2.1.2: Emission limits to land			
Emission point reference	Parameter	Limit (including units)	Averaging period
L1	pH	6.5-8.5 pH units	Spot Sample
	BOD5	20 mg/L	
	<i>E.coli</i>	100 cfu/100ml	
	Total Nitrogen	8 mg/L	
	Total Phosphorous	0.5 mg/L	
	Total Suspended Solids (TSS)	30 mg/L	
	Chlorine	2.0 mg/L	24 Hours
	Effluent flow rate	66 kL/day	

3 Monitoring

- 3.1.1 The Works Approval Holder shall ensure that:
- (a) all wastewater sampling is conducted in accordance with AS/NZS 5667.10;
 - (b) all laboratory samples are submitted to and tested by a laboratory with current NATA accreditation for the parameters being measured.
- 3.1.2 The Works Approval Holder shall undertake the monitoring specified in Table 3.1.1 during the commissioning period.

Table 3.1.1: Monitoring of effluent quality					
Monitoring point reference	Parameter	Limit	Units	Averaging period	Frequency
L1	pH	6.5-8.5	pH units	Spot Sample	Weekly
	BOD5	20	Mg/L		
	<i>E.coli</i>	100	cfu/100ml		
	Total Nitrogen	8	mg/L		
	Total Phosphorous	0.5	mg/L		
	Total Suspended Solids (TSS)	30	mg/L		
	Chlorine	2.0	mg/L	24 Hours	Continuous
	Effluent flow rate	66	kL/day		

4 Information

4.1 Reporting

- 4.1.1 The Works Approval Holder shall submit a compliance document to the CEO, following the construction of the works and prior to commissioning of the same.
- 4.1.2 The compliance document shall:
- (a) certify that the works were constructed in accordance with the conditions of the Works Approval;
 - (b) be signed by a person authorised to represent the Works Approval Holder and contain the printed name and position of that person within the company.



4.1.3 The Works Approval Holder shall submit a commissioning report for the Oasis Hotel Waste Water Treatment System, to the CEO within 1 month of the completion of commissioning.

4.1.4 The Works Approval Holder shall ensure the report includes;

- (a) a summary of the monitoring results recorded under condition 3.1.2;
- (b) a list of any original monitoring reports submitted to the Works Approval Holder from third parties for the commissioning period;
- (c) a summary of the environmental performance of the waste water treatment plant as installed, against the design specification set out in the Works Approval application;
- (d) a review of performance against the Works Approval conditions; and
- (e) where they have not been met, measures proposed to meet the design specification and/or Works Approval conditions, together with timescales for implementing the proposed measures.

4.2 Notification

4.2.1 The Works Approval Holder shall ensure that the parameters listed in Table 4.2.1 are notified to the CEO and are in accordance with the notification requirements of the table.

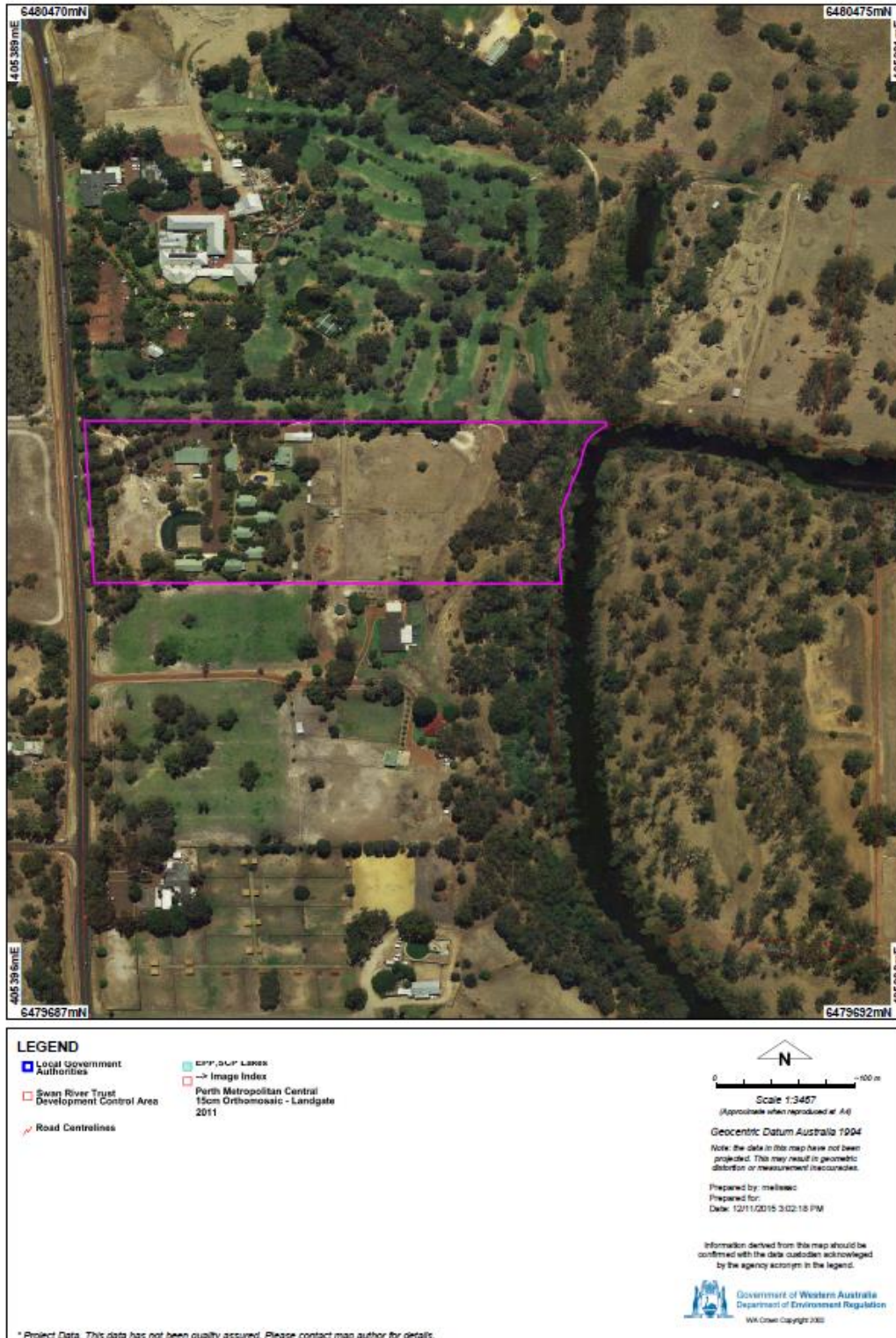
Table 4.2.1: Notification requirements			
Condition or table (if relevant)	Parameter	Notification requirement	Format or form
1.2.4	Commencement of commissioning	7 days prior to start	None specified
	Completion of commissioning	7 days after completion	



Schedule 1: Maps

Premises map

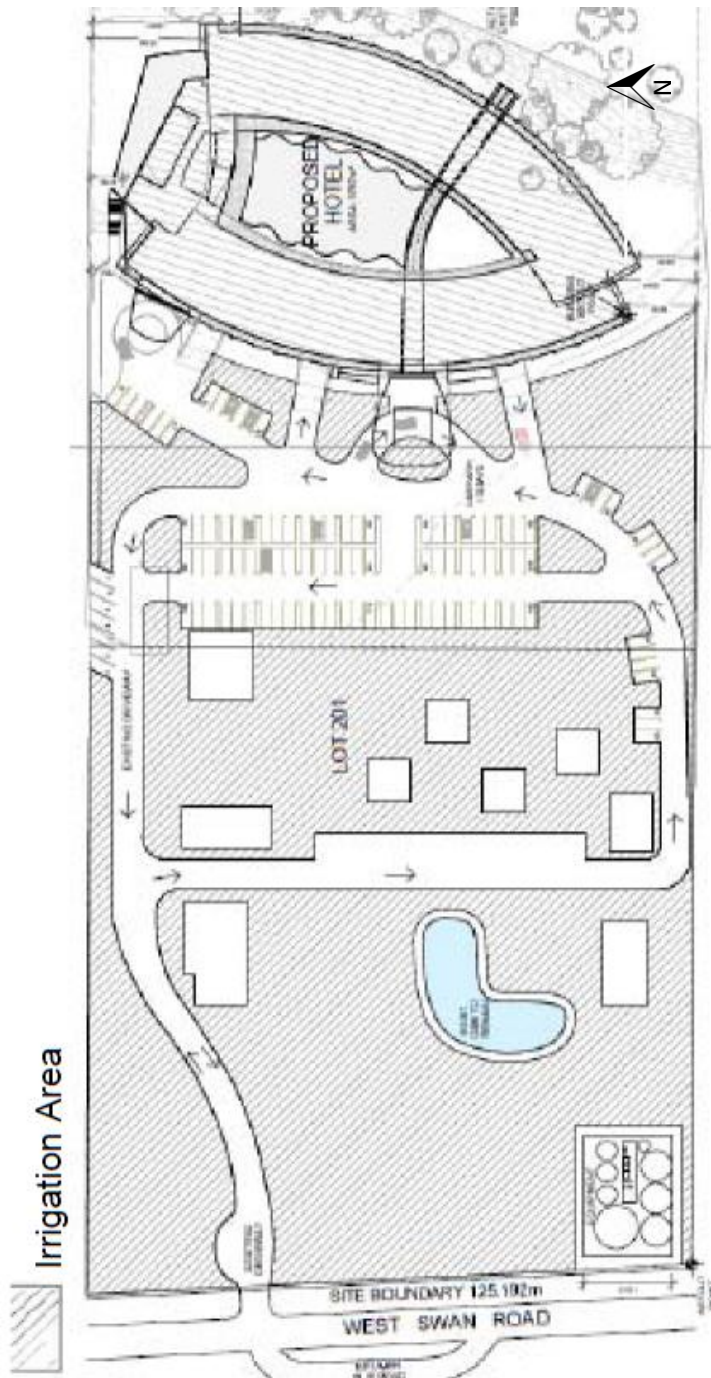
The Premises is shown in the map below. The pink line depicts the Premises boundary.





Irrigation map

The hatched area depicts the irrigation area in the map below.





Environmental Protection Act 1986, Part V

Works Approval: W5910/2015/1

Expiry date: Tuesday, 15 May 2018

Based on the assessment detailed in this document the CEO's delegated officer has decided to issue a works approval. The delegated officer considers that in reaching this decision, he has taken into account all relevant considerations.

Decision Document authorised by: Alan Kietzmann
Delegated Officer



Contents

Decision Document	1
Contents	2
1 Purpose of this Document	2
2 Administrative summary	3
3 Executive summary of proposal and assessment	4
4 Decision table	5
5 Advertisement and consultation table	11
6 Risk Assessment	14
Appendix A	15

1 Purpose of this Document

This decision document explains how the CEO's delegated officer has assessed and determined the application and provides a record of the decision-making process and how relevant factors have been taken into account. Stakeholders should note that this document is limited to the delegated officer'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 checked="" type="checkbox"/> New Licence <input 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
	85A	66 m ³ per day
Application verified	Date: 1/10/2015	
Application fee paid	Date: 1/11/2015	
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 checked="" type="checkbox"/> No <input type="checkbox"/>	
Commercial-in-confidence claim outcome	Accepted	
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 checked="" type="checkbox"/> No <input 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"/>		
Is the Premises subject to any EPP requirements? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		



3 Executive summary of proposal and assessment

Premises Description

Hanssen Pty Ltd is proposing to construct a Waste Water Treatment Plant (WWTP) to serve a proposed hotel development on Lot 201 on Diagram 91285. Department of Environment Regulation's GIS Viewer program identifies that the Swan River is located immediately adjacent to the eastern boundary of the premises. Bush Forever site 302 associated with this river system is also located immediately adjacent to the eastern boundary. Aboriginal Site SO3034 is located on approximately 100m of the eastern portion of the boundary. The mapping system does not indicate that the site is within any drinking water source areas.

The nearest residence is located immediately to the south of the premises boundary. Other residential properties are located approximately 100 m to the east and approximately 120m south east of the premises. Immediately adjacent to the northern boundary is the Swan Valley Oasis Resort, which the supporting documentation indicates is also owned by the applicant.

Activity Summary

The proposed system will treat grey and black water from a 118 bedroom hotel, as well as 7 chalets and various restaurant/staff areas on the premises. The Works Approval Holder intends to use the treated effluent to irrigate an area of 1.45 hectares.

The supporting documentation describes the treatment system as anaerobic and aerobic treatment along with filtration and disinfection to facilitate biological wastewater treatment to Department of Health effluent standards for Biochemical Oxygen Demand (BOD₅), Suspended Solids (SS) and *E. Coli*, and irrigation loading rates of 140 kg/ha and 10 kg/ha respectively for Nitrogen and Phosphorus. A detailed design of the treatment system is included in Appendix A. Solids collected from the initial screen are directed to the enclosed Sludge Tank 5 which will be trucked off site as required.

The main potential emissions from the activities are odour, and excessive nutrient levels in the irrigated wastewater which can enter surface or groundwater.

Odour is controlled by enclosing the treatment tanks and ventilating through a wet scrubber consisting of water and liquid chlorine. Nutrient loads are controlled via irrigation in two periods to avoid overloading and will be monitored weekly during commissioning and monthly thereafter.

Water balance calculations indicate that excess water may be irrigated during wet months resulting in potential migration of some nutrients to groundwater. Given the distance to groundwater, and that nutrients are likely to be attenuated by the soil profile, the risk of any impact to groundwater and surface water is assessed as low risk. This risk is further mitigated by a Nutrient Irrigation Management Plan which requires morning and evening irrigation, storage of irrigation when the grass is damp and ongoing monitoring of nutrient levels.

There is a buffer capacity in the proposed tanks as a contingency in case irrigation cannot occur, to avoid uncontrolled overflows. Additionally, an alarm system is proposed to alert if there are any failures in the system.

Planning Approval

The Metro East Joint Development Assessment Panel granted Planning Approval for the proposal on 14 April 2016 (DA-949/2015) for a period of 2 years. The approval includes provisions for dust management during construction and identifies noise emissions during construction and the need to comply with the Environmental Protection (Noise) Regulations 1997. The approval also requires a Stormwater Management Plan to be prepared to the satisfaction of the Department of Water and Department of Parks and Wildlife due to the proximity of the development to the Swan River.

This Works Approval is granted for a 2 year period to coincide with the planning approval duration.



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
General conditions	W1.2.1-1.2.5	<p>Condition 1.2.1-1.2.3 requires the works to be constructed in accordance with the documentation supplied in the application.</p> <p>Condition 1.2.4 requires the commissioning to be undertaken in accordance with the commissioning plan supplied in the application.</p> <p>Condition 1.2.5 limits the commissioning period to 7 days, as requested by the Works Approval Holder and ensures that commissioning is not undertaken for an unspecified length of time.</p>	Oasis Hotel Waste Water Treatment Plant – AQUASOL Water Treatment Solutions, Version 1, July 3, 2015
Emissions to land including monitoring	W2.1.1 W2.1.2	<p><u>Emission Description</u> <i>Emission:</i> Wastewater containing bacteria. <i>Impact:</i> Bacteria in the waste water may cause gastroenteritis, spread disease or create other public health impacts. <i>Controls:</i> The Works Approval Holder proposes to treat the wastewater to a standard prescribed by Department of Health. Department of Health have approved the application in principle.</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Unlikely <i>Risk Rating:</i> Low</p>	Oasis Hotel Waste Water Treatment Plant – AQUASOL Water Treatment Solutions, Version 1, July 3, 2015



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p><u>Regulatory Controls</u></p> <p>Condition 2.1.1 specifies the area in which emissions to land (irrigation) can occur. This limits the irrigation to a vegetated area which will absorb the treated waste water and avoid run-off into highly trafficked areas.</p> <p>Condition 2.1.2 specifies limits to certain parameters in line with Department of Health's Guidelines for the Non-potable Uses of Recycled Water in Western Australia, August 2011 to ensure that the risk to public health is adequately controlled.</p> <p><u>Residual Risk</u></p> <p><i>Consequence:</i> Minor <i>Likelihood:</i> Unlikely <i>Risk Rating:</i> Moderate</p> <p><u>Emission Description</u></p> <p><i>Emission:</i> Treated wastewater applied to irrigation areas with nutrients (Phosphorus and Nitrogen) that leach beyond the root zone of the vegetation and migrate to groundwater and discharging to surface water (Swan River). Treated wastewater will be irrigated over 1.45 ha. With the proposed treated wastewater quality, a minimum area of 1.39 ha would be required according to meet the Department of Water, <i>Water Quality Protection Note #22</i> (WQPN22) for Soil Vulnerability Category A; the highest risk category with maximum loading rates of 140 kg/ha/year for Nitrogen and 10 kg/ha/year for Phosphorus.</p> <p><i>Impact:</i> High levels of nutrients such as nitrogen and phosphorus may impact the ecology of water systems and result in eutrophication and algal blooms. The Swan River is in excess of 100 m away from the irrigation area.</p> <p><i>Controls:</i> The WWTP is automated with process monitoring and alarm systems. The Works Approval Holder proposes to treat the wastewater to 8 mg/L Nitrogen and no more than 0.5 mg/L Phosphorus to ensure that the nutrient loading rates meet the</p>	



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p>highest risk category identified in the Department of Water, Water Quality Protection Note #22 requirements to minimise environmental risk. Over winter months there is expected to be decrease in the daily volume of wastewater being treated given that less tourists are expected to stay in the hotel. Therefore irrigation will be decreased over winter months to account for the additional loading from rainwater. The holding tank and irrigation tank are able to hold a total volume of 64 KL to store water when irrigation is not possible due to damp grass. The revised Nutrient Load Amendment Plan (Version 2, dated 16 February 2016) also specifies that irrigation will take place twice daily to reduce risk of nutrient overloading.</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Possible <i>Risk Rating:</i> Low</p> <p><u>Regulatory Controls</u> Condition 2.1.1 specifies the area in which emissions to land (irrigation) can occur. This limits the irrigation to a vegetated area which will take up the nutrients within the treated wastewater and avoid run-off into highly trafficked areas.</p> <p>Condition 2.1.2 specifies limits to certain parameters in line the mg/L limit for Nitrogen and Phosphorus also meet the Department of Water's Water Quality Protection Note 22: Irrigation with nutrient-rich waste water (July 2008) for Risk Category A (highest risk) and are at volumes that will adequately mitigate risk to groundwater and the Swan River.</p> <p>Due to the distance to groundwater and natural attenuation levels of the soil no additional controls are proposed.</p>	



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<u>Residual Risk</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Possible <i>Risk Rating:</i> Low	
Fugitive emissions		Dust during construction is considered to be minimal and limited to general construction activities. No dust is expected during operation. Potential dust emissions are adequately regulated under section 49 of the EP Act.	Oasis Hotel Waste Water Treatment Plant – AQUASOL Water Treatment Solutions, Version 1, July 3, 2015
Odour	W1.2.1-1.2.3	<u>Emission Description</u> <i>Emission:</i> Odour generated from the acceptance of raw sewage on the premises. <i>Impact:</i> Unacceptable odour emissions affecting the health and wellbeing of residents at the nearest sensitive receptors which are located approximately 100 m to the east and approximately 120 m south east of the premises. Immediately adjacent to the northern boundary is the Swan Valley Oasis Resort. <i>Controls:</i> The treatment tanks will be covered and ventilated in order to prevent fugitive emissions of odourous gases. All contaminated air from tanks will be conducted through a scrubbing system before release into the atmosphere. <u>Risk Assessment</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Unlikely <i>Risk Rating:</i> Low	Oasis Hotel Waste Water Treatment Plant – AQUASOL Water Treatment Solutions, Version 1, July 3, 2015



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L = Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p><u>Regulatory Controls</u> Condition 1.2.1-1.2.3 requires the Works Approval Holder to construct the treatment plant in accordance with the plans specifying that a scrubbing system will be in place.</p> <p>Given the assessed risk, any odour emissions during operation are adequately regulated under section 49 of the EP Act.</p> <p><u>Residual Risk</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Unlikely <i>Risk Rating:</i> Low</p>	
Noise	N/A	Noise during construction is considered to be minimal and limited to general construction activities. No noise emissions are expected during operation. The premises is required to comply with the <i>Environmental Protection (Noise) Regulations 1997</i> at all times.	<i>Environmental Protection (Noise) Regulations 1997</i>
Monitoring	W3.1.1 W3.1.2	<p>Condition 3.1.1 specifies the requirement for monitoring undertaken under the works approval to ensure it is undertaken in the appropriate manner for valid results.</p> <p>Condition 3.1.2 outlines the monitoring that is required during the commissioning period to ensure compliance with the limits specified in condition 2.1.2 and so DER can ascertain that the system is running effectively.</p> <p>The requirement for these limits is risk assessed above in emissions to land.</p>	Oasis Hotel Waste Water Treatment Plant – AQUASOL Water Treatment Solutions, Version 1, July 3, 2015
Information	W4.1.1-4.1.4	Conditions 4.1.1 and 4.1.2 requires the Works Approval Holder to submit a compliance document to the CEO following construction to provide DER with acknowledgement that the works have been completed in accordance with the conditions of the works approval. Condition 4.1.2 requires that the compliance document is signed by a person authorised to represent the Works Approval Holder to provide DER with certainty of the information.	Oasis Hotel Waste Water Treatment Plant – AQUASOL Water Treatment Solutions, Version



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p>Conditions 4.1.3 and 4.1.4 require the Works Approval Holder to submit a commissioning report within 1 month of completion of commissioning that provides monitoring results, a summary of environmental performance, a review of performance and if necessary any proposed improvement measures. DER will review the report and monitoring data to ensure the appropriate level of environmental protection is achieved.</p> <p>Condition 4.2.1 requires the Works Approval Holder to notify the CEO 7 days prior to start of commissioning and 7 days after completion so that DER can be aware of when commissioning is occurring to respond to any complaints or incidents if necessary, and to be able to identify compliance with condition 4.1.3 (submission of a commissioning report within 1 month of commissioning).</p>	1, July 3, 2015
Works Approval Duration	N/A	The Works Approval has been issued for a period of 2 years in line with the Metro East Joint Development Assessment Panel planning approval granted on 14 April 2016 (DA-949/2015).	<i>Department of Environment Regulation, Guidance Statement, Licence Duration, November 2014 (revised May 2015).</i>



5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
23/11/2015	Application advertised in West Australian	No comments received	N/A
20/11/2015	Application referred to Department of Water	<ul style="list-style-type: none">• The referral of a wastewater treatment system is premature as the development application for the proposed hotel has yet to be received• The development for the hotel should include a foreshore assessment compiled in accordance with Operational Policy 4.3: Identifying and establishing waterways foreshore areas (DoW 2012). Flood management and stormwater management also need to be taken into account due to the close proximity of the Swan River• A water management plan should be prepared to demonstrate compliance with Water Quality Protection Note 22: Irrigation with nutrient rich wastewater (DoW, 2008), to ensure the receiving environment can support the additional nutrients.	<ul style="list-style-type: none">• DER is not restricted in assessing the environmental impact of proposals before planning is approved, however a decision will not be made and an instrument will not be issued without planning approval from the relevant authorities.• DER does not have jurisdiction over the approval of the hotel development.• DER does not rely on this protection note in making the assessment, however the applicant has committed to low nutrients levels to do comply with this WQPN #22 .• The applicant has resubmitted a proposal to decrease the loading rates of Nitrogen and Phosphorus to meet the requirements of the highest soil risk category of the WQPN #22.• The risk to groundwater, surface water and land from the proposal has been risk assessed in this decision document as being moderate risk and managed by appropriate controls



Date	Event	Comments received/Notes	How comments were taken into consideration
20/11/2015	Application referred to Department of Aboriginal Affairs	No comments	N/A
05/02/2016	Application referred to Department of Parks and Wildlife Swan Region	Refer hard copy of application to Rivers and Estuaries Division	Hard copy of application referred to Rivers and Estuaries Division.
09/02/2016	Application referred to Department of Parks and Wildlife, Rivers and Estuaries Division.	<p>The proposed site is located on the Swan Coastal Plain, adjacent to a flood-plain and next to land that drains into the Swan River. It is therefore considered a sewerage sensitive area and the following measures to minimise nutrient export should be addressed:</p> <ul style="list-style-type: none">• Separation from groundwater should be at least 1.2m to 1.5m above the highest known groundwater level.• A sewerage disposal system should not be located within 100m of a waterway.• Secondary treatment with nutrient removal should be used. <p>Considering the high phosphorus adsoption level of the lower soil profile, nutrient levels are expected to be significantly lower by the time the treated water reaches the groundwater and the Swan River.</p> <p>Applicant has not demonstrated that there is adequate storage capacity for treated wastewater on-site during winter and spring rain events, when irrigation may result in surface run-off of the treated wastewater (and associated nutrients) through over-land flow into the Swan River.</p>	<ul style="list-style-type: none">• The applicant has advised that separation to groundwater is approximately 16m as per the application.• The wastewater treatment system is located 100m away from the Swan River.• Secondary treatment is proposed in the application to reduce nutrient levels. These have subsequently been revised to values of 8mg/L nitrogen and 0.5mg/L of phosphorus• Over winter months there is expected to be decrease in the daily volume of wastewater being treated given that less tourists are expected to stay in the hotel. Therefore irrigation will be decreased over winter months to account for the additional loading from rainwater. The holding tank and irrigation tank are able to hold a total volume of 64 KL to store water when irrigation is not possible due to damp grass. The revised Nutrient Load Amendment plan (Version 2, dated 16 February 2016) also specifies that irrigation will take place twice daily to reduce risk of nutrient overloading. Therefore the risk is assessed as low



Date	Event	Comments received/Notes	How comments were taken into consideration
			and does not require additional controls in the licence.
18/02/2016	Proponent sent a copy of draft instrument	No additional comment provided	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

Appendix A

