



Application for Works Approval

Part V Division 3 of the *Environmental Protection Act 1986*

Works Approval Number W6485/2020/1

Applicant Shire of Exmouth

File Number DER2020/000561

Premises Qualing Scarp Waste Management Site
Minillya-Exmouth Road
EXMOUTH WA 6707
Lot 219 on Plan 191996

As defined by the Premises maps attached to the issued
Works Approval

Date of Report 3 June 2021

Decision Works approval granted

Tracey Hassell
Manager Waste Industries

an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

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1. Decision summary

This Decision Report documents the assessment of potential risks to the environment and public health from emissions and discharges during the construction and operation of the Premises. As a result of this assessment, Works Approval W6485/2020/1 has been granted.

2. Scope of assessment

2.1 Regulatory framework

In completing the assessment documented in this Decision Report, the department has considered and given due regard to its Regulatory Framework and relevant policy documents which are available at <https://dwer.wa.gov.au/regulatory-documents>.

2.2 Application summary and overview of Premises

On 5 November 2020, the applicant submitted an application for a Works Approval to the department under section 54 of the *Environmental Protection Act 1986* (EP Act).

The application is to undertake construction works relating to an additional evaporation pond for the existing liquid waste facility (LWF) at the Premises. The construction of the additional evaporation will allow the LWF to increase production capacity to 579 tonnes per year. Time Limited Operations were requested as part of the application.

The Premises is approximately 9.3 km south of the Exmouth town centre.

The application relates to the Category 61 LWF and assessed production capacity under Schedule 1 of the *Environmental Protection Regulations 1987* (EP Regulations) which are defined in Works Approval W6485/2020/1. The infrastructure and equipment relating to the Premises category and any associated activities which the department has considered in line with *Guideline: Risk assessments* (DWER 2020) are outlined in Works Approval W6485/2020/1.

2.2.1 Existing Premises

The premises is currently authorised for Category 57 (used tyre storage), Category 61 (LWF) and Category 64 (Class II putrescible landfill) under Schedule 1 of the EP Regulations which are defined in Licence L9001/2016/1 and Amendment Notice 1.

The existing LWF is comprised of two separate concrete discharge pits that flow into two separate receival ponds. The received ponds flow into an evaporation pond. All three ponds are lined with a geosynthetic clay liner (GCL) and 2mm thick high-density polyethylene geomembrane (HDPE). The existing LWF has an authorised production capacity of 350 tonnes per year (see Amendment Notice 1).

The Premises also contains old decommissioned LWF ponds which are located where the new LWF evaporation pond will be installed.

3. Risk assessment

The department assesses the risks of emissions from prescribed premises and identifies the potential source, pathway and impact to receptors in accordance with the *Guideline: Risk assessments* (DWER 2017).

To establish a Risk Event there must be an emission, a receptor which may be exposed to that emission through an identified actual or likely pathway, and a potential adverse effect to the receptor from exposure to that emission.

3.1 Source-pathways and receptors

3.1.1 Emissions and controls

The key emissions and associated actual or likely pathway during premises construction and operation which have been considered in this Decision Report are detailed in Table 1 below. Table 1 also details the proposed control measures the applicant has proposed to assist in controlling these emissions, where necessary.

Table 1: Proposed applicant controls

Emission	Sources	Potential pathways	Proposed controls
Construction			
Dust	Earthworks, vehicle and equipment movements, installation of infrastructure	Air/ windborne pathway	Standard dust controls (e.g. water cart) Vehicle speed limits Cessation of works during high winds
Noise			Separation distance to receptors Maintenance of and limits on machinery operations
Odour			Separation distance to receptors Monitoring of odour emissions during works Complaints register
Contaminated solid waste	Waste and sludge from old decommissioned LWF ponds	Discharge to land/ seepage to groundwater	All contaminated solid waste and sludge from the old decommissioned LWF ponds will be removed prior to construction of the new evaporation pond and landfilled appropriately.
Operation			
Noise	Operation, increase in trucks using the LWF	Air/ windborne pathway	Separation distance to receptors Maintenance of and limits on machinery operations
Odour	Liquid waste and sludge in the new evaporation pond		Separation distance to receptors Monitoring of odour emissions during works Complaints register
Seepage	Seepage of liquid waste through the new evaporation pond	Discharge to land/ seepage to groundwater	Lined with a geosynthetic clay liner (GCL) and 2 mm High Density Polyethylene (HDPE), including: <ul style="list-style-type: none"> • installation by a suitable qualified technician • systematic qualitative and quantitative testing • leak detection survey. Regular liner inspection and maintenance, including when empty at the end of summer.
Contamination of stormwater and/ or overflow	Discharge of stormwater contaminated with liquid waste and Overflow of the LWF with the new evaporation pond	Discharge to land/ seepage to groundwater	New pond operational capacity of 261 m ³ and total capacity of 450 m ³ , increasing the LWF production capacity from 350 tonnes to 579 tonnes per year. Two 160 mm pipes connecting the existing evaporation pond to the new evaporation pond. Pond crest elevated above existing ground level and sloped away from the pond Operational 0.5 m freeboard

Emission	Sources	Potential pathways	Proposed controls
Contaminated solid waste	Waste and sludge from new LWF ponds	Discharge to land	All sludge/contaminated soils removed from the LWF will be landfilled.

3.1.2 Receptors

In accordance with the *Guideline: Risk assessments* (DWER 2020), the Delegated Officer has excluded employees, visitors and contractors of the applicant's from its assessment. Protection of these parties often involves different exposure risks and prevention strategies and is provided for under other state legislation.

Table 2 and Figure 1 below provides a summary of potential human and environmental receptors that may be impacted as a result of activities upon or emission and discharges from the prescribed premises (*Guideline: Environmental siting* (DWER 2020)).

Table 2: Distance of sensitive human and environmental receptors from the prescribed premises

Human receptors	Distance from prescribed activity
Commercial/ general industry	North east of premises ~600 m within (land zoned special use)
Land zoned <i>floodplain special control area 5</i>	Directly north of the premises and the LWF
Land zoned <i>foreshore reserve</i>	Directly east of the premises, across Minilya-Exmouth Road
Land zoned <i>rural</i>	Surrounding premises south, west and north
Land zoned <i>industrial development</i>	North of premises ~150 m
Land zoned <i>civic and community</i>	South east of the premises ~350 m (no development identified)
Residence	South of the premises ~450 m (land zoned <i>special use</i>)
Registered aboriginal heritage site	Directly east of premises, across Minilya-Exmouth Road
Priority 1 Exmouth drinking water reserve	West of the premises ~900 m (up hydraulic gradient)
<i>Rights in Water and Irrigation Act 1914</i> proclaimed Gascoyne groundwater and Pilbara surface water areas	Premises is located within designated areas Note: licensed groundwater abstraction occurs within the Premises (Shire of Exmouth GWL178368)
Environmental receptors	Distance from prescribed activity
Cape Range Subterranean Waterways	Premises is located within designated areas
Ephemeral Surface water	Directly north of the premises and the LWF
Exmouth Gulf	750 m east of premises
Groundwater	Water table ~11.7-16.5 mbgl at the premises



Figure 1: Location of sensitive receptors

3.2 Risk ratings

Risk ratings have been assessed in accordance with the *Guideline: Risk assessments* (DWER 2020) for each identified emission source and takes into account potential source-pathway and receptor linkages as identified in Section 3.1. Where linkages are in-complete they have not been considered further in the risk assessment.

Where the applicant has proposed mitigation measures/controls (as detailed in Section 3.1), these have been considered when determining the final risk rating. Where the Delegated Officer considers the applicant's proposed controls to be critical to maintaining an acceptable level of risk, these will be incorporated into the Works Approval as regulatory controls.

Additional regulatory controls may be imposed where the applicant's controls are not deemed sufficient. Where this is the case the need for additional controls will be documented and justified in Table 3.

Works Approval W6485/2020/1 that accompanies this Decision Report authorises construction and time-limited operations. The conditions in the issued Works Approval, as outlined in Table 3 have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

An amendment to licence L9001/2016/1 is required following the time-limited operational phase authorised under the Works Approval to authorise emissions associated with the ongoing operation of the new evaporation pond. A risk assessment for the operational phases of the new evaporation pond has been included in this Decision Report, however licence conditions will not be finalised until the department assesses the licence application.

Table 3: Risk assessment of potential emissions and discharges from the Premises during construction and operation

Risk Event					Risk rating ¹ C = consequence L = likelihood	Applicant controls sufficient?	Conditions ² of Works Approval	Justification for additional regulatory controls
Source/ Activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls				
Construction								
Earthworks, vehicle and equipment movements, including: <ul style="list-style-type: none">• Installation of infrastructure• Removal of residual waste	Dust	Air/ windborne pathway causing impacts to public health and amenity	Residences ~450 m south, users of adjacent lands	Refer to Section 3.1.1, Table 1	C = Minor L = Rare Low Risk	Yes	N/A	The Applicant's commitment to dust suppression controls is noted. In consideration of the scope and siting of the works and activities authorised at the premises under Licence L9001/2016/1, the emissions of dust from construction of the new evaporation pond are considered to be adequately regulated by the general provisions of the EP Act.
	Noise				C = Minor L = Rare Low Risk	Yes	N/A	In consideration of the scope and siting of the works and activities authorised at the premises under Licence L9001/2016/1, emissions of noise from construction of the new evaporation pond are considered to be adequately regulated under the <i>Environmental Protection (Noise) Regulations 1997</i> .
	Odour				C = Minor L = Rare Low Risk	Yes	N/A	No odour complaints for the premises have been identified. In consideration of the scope and siting of the works and activities authorised at the premises under Licence L9001/2016/1, the emissions of odour from construction of the new evaporation pond are considered to be adequately regulated by the general provisions of the EP Act.
	Contaminated solid waste	Discharge to land/ seepage to groundwater	Groundwater at the premises or other lands receiving the waste	Refer to Section 3.1.1, Table 1	C = Major L = Rare Medium Risk	Yes	N/A	The Applicant's commitment to landfill residual contaminated solid waste is noted. The quantity and quality of the residual waste is uncertain. The Delegated Officer has assumed the waste is comprised of grease trap, septage and sewage sources only (as authorised under Licence L9001/2016/1) and has been located in unlined depressions at the premises for a number of years. The major consequence considers that leachate from the waste types could result in impacts to an area of high conservation significance (Cape Range Subterranean Waterways). The rare likelihood considers that the works will remove and appropriately manage the waste. The Applicant must ensure that the disposal of any contaminated solid waste to the adjacent landfill complies with the conditions of Licence L9001/2016/1. Where characterisation of the contaminated solid waste is undertaken it must, at a minimum, follow the approach set out in section 6 of the <i>Landfill waste classification and waste definitions (December 2019)</i> . Provisions of the <i>Contaminated Sites Act 2003</i> may also be relevant in the identification and removal of contaminated solid waste during construction.

Risk Event					Risk rating ¹ C = consequence L = likelihood	Applicant controls sufficient?	Conditions ² of Works Approval	Justification for additional regulatory controls
Source/ Activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls				
Operation (including time-limited-operations operations)								
Operation of the new pond at the LWF, including removal of accumulated contaminated solid waste/ sludge	Noise	Air/ windborne pathway causing impacts to public health and amenity	Residences ~450 m south, users of adjacent lands	Refer to Section 3.1.1, Table 1	C = Minor L = Rare Low Risk	N/A	N/A	In consideration of the scope and siting of the LWF and activities authorised at the premises under Licence L9001/2016/1, emissions of noise from operation of the new evaporation pond are considered to be adequately regulated under the <i>Environmental Protection (Noise) Regulations 1997</i> .
	Odour				C = Minor L = Rare Low Risk	N/A	N/A	No odour complaints for the premises have been identified. In consideration of the scope and siting of the LWF and activities authorised at the premises under Licence L9001/2016/1, the emissions of odour from operation of the new evaporation pond are considered to be adequately regulated by the general provisions of the EP Act.
	Seepage	Seepage causing contamination to groundwater	Groundwater at the premises	Refer to Section 3.1.1, Table 1	C = Major L = Rare Medium Risk	Yes	Condition 1 <u>Conditions 2-6</u>	The Applicant's commitments regarding the construction and maintenance of the pond liner and pond capacity are noted. Condition1 of the Works Approval gives effect to the key components of these commitments. The major consequence considers that seepage, stormwater contamination and overflow could result in the short-term impact to areas of high conservation significance; being the Cape Range Subterranean Waterways and Exmouth Gulf marine ecosystem respectively. The rare likelihood considers that liners will be constructed to and maintained as impervious barriers, stormwater will be directed away from the ponds, operational freeboard levels will be maintained during operations.
	Contaminated liquid waste	Discharge to land and surface water causing degradation of ecosystem health	Surface water and Exmouth Gulf marine ecosystem	Refer to Section 3.1.1, Table 1	C = Major L = Rare Medium Risk	Yes	Condition 1 <u>Conditions 2-6</u>	Conditions 2 to 6 of the Works Approval require compliance reporting to ensure the works meet the construction requirements and provide for 180 days of time limited operations (TLO). Groundwater monitoring is required by Licence L9001/2016/1. The groundwater monitoring program may be reviewed upon amendment of the Licence.
	Contaminated solid waste	Discharge to land/ seepage to groundwater causing degradation of ecosystem health	Groundwater at the premises or other lands receiving the waste	Refer to Section 3.1.1, Table 1	C = Major L = Rare Medium Risk	Yes	N/A	The Applicant's commitment to landfill residual contaminated solid waste is noted. This activity will not reasonably foreseeably occur under TLO. The activity may be assessed as part of an application by the applicant to amend Licence L9001/2016/1 following construction and commencement of TLO. The major consequence considers that leachate from the waste types could result in the impacts to an area of high conservation significance (Cape Range Subterranean Waterways). The rare likelihood considers that the waste will be managed appropriately during operations.

Note 1: Consequence ratings, likelihood ratings and risk descriptions are detailed in the *Guideline: Risk assessments* (DWER 2020).

Note 2: Proposed applicant controls are depicted by standard text. **Bold and underline text** depicts additional regulatory controls imposed by department.

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IR-T13 Decision Report Template (short) v2.0 (July 2020)

4. Consultation

Table 4 provides a summary of the consultation undertaken by the department.

Table 4: Consultation

Consultation method	Comments received	Department response
Application referred to Department of Biodiversity, Conservation and Attractions (05/02/2021)	No objections to works and noted: <ul style="list-style-type: none">The application does not identify groundwater and stygofauna as sensitive receptors.Investigations to date have not identified down gradient subterranean fauna, however the data remains inconclusive and there remains the potential for occurrence in the area.Recommends ongoing groundwater monitoring for potential impacts from leachate.	Noted. The presence of the Cape Range Subterranean Waterways has been assessed in this decision report (see Sections 3.1.2 and 3.2). A source-pathway-receptor relationship is considered to be present to potential stygofauna in Cape Range Subterranean Waterways down hydraulic gradient of the premises. Conditions have been added to the Works Approval to ensure the new evaporation pond is sufficiently lined to prevent seepage. The current Licence L9001/2016/1 for operations at the premises includes groundwater monitoring.
Application advertised on the department's website	None received	N/A
Applicant was provided with draft documents on 21 May 2021.	Email received from Applicant on 28 May 2021 requesting to waive the comment period.	Noted

5. Conclusion

Based on the assessment in this Decision Report, the Delegated Officer has determined that a Works Approval will be granted, subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

It is noted that removal and handling of contaminated solid waste and sludge from the old decommissioned LWF ponds may be subject to provisions under the *Contaminated Sites Act 2003*. It is the Applicant's responsibility to understand and address all regulatory requirements related to the activity.

References

1. Department of Environment Regulation 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
2. Department of Water and Environmental Regulation (DWER) 2020, *Guideline: Environmental siting*, Perth, Western Australia.
3. DWER 2020, *Guideline: Risk assessments*, Perth, Western Australia.

Appendix 1: Application validation summary

SECTION 1: APPLICATION SUMMARY		
Application type		
Works Approval	<input checked="" type="checkbox"/>	
Date application received	5 November 2020	
Applicant and Premises details		
Applicant name/s (full legal name/s)	Shire of Exmouth	
Premises name	Qualing Scarp Waste Management Site	
Premises location	Lot 219 on Plan 191996 Minilya-Exmouth Road, EXMOUTH WA 6707	
Local Government Authority	Shire of Exmouth	
Application documents		
HPCM file reference number:	DER2020/000561	
Key application documents (additional to application form):	Talis Consultants 2020, <i>Environmental assessment management plan: Qualing scarp waste facility – Liquid waste facility</i> Talis Consultants 2020, <i>Technical specifications: Liquid waste evaporation pond – Qualing scarp waste facility</i>	
Scope of application/assessment		
Summary of proposed activities or changes to existing operations.	Construction of a new evaporation pond 2, in addition to the existing 3 pond liquid waste facility. Time limited operation of the liquid waste facility with the new evaporation pond 2.	
Category number/s (activities that cause the premises to become prescribed premises)		
Table 1: Prescribed premises categories		
Prescribed premises category and description	Proposed design capacity	Proposed changes to the design capacity
Category 61: Liquid waste facility: premises on which liquid waste produced on other premises (other than sewerage waste) is stored, reprocessed, treated or irrigated.	579 tonnes per year	Works will increase the LWF capacity from 350 tonnes per year to 579 tonnes per year
Legislative context and other approvals		
Has the applicant referred, or do they intend to refer, their proposal to the EPA under Part IV of the EP Act as a significant proposal?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	N/A
Does the applicant hold any existing Part IV Ministerial Statements relevant to the application?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	N/A
Has the proposal been referred and/or assessed under the EPBC Act?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	N/A

Has the applicant demonstrated occupancy (proof of occupier status)?	Yes <input type="checkbox"/> No <input type="checkbox"/>	Applicant has stated they are the proprietor on the certificate of title. Applicant is currently authorised as occupier of the prescribed premises under L9001/2016/1
Has the applicant obtained all relevant planning approvals?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	Public works are exempt under Section 6 of the <i>Public Planning and Development Act 2005</i>
Has the applicant applied for, or have an existing EP Act clearing permit in relation to this proposal?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	N/A
Has the applicant applied for, or have an existing CAWS Act clearing licence in relation to this proposal?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	N/A
Has the applicant applied for, or have an existing RIWI Act licence or permit in relation to this proposal?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	N/A
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the EP Act)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Located within <i>Rights in Water and Irrigation Act 1914</i> proclaimed Gascoyne groundwater and Pilbara surface water areas. No discharge to environment proposed as part of application.
Is the Premises situated in a Public Drinking Water Source Area (PDWSA)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	N/A
Is the Premises subject to any other Acts or subsidiary regulations?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	For example: <i>Environmental Protection (Controlled Waste) Regulations 2004</i>
Is the Premises within an Environmental Protection Policy (EPP) Area?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	N/A
Is the Premises subject to any EPP requirements?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	N/A
Is the Premises a known or suspected contaminated site under the <i>Contaminated Sites Act 2003</i> ?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Classification: possibly contaminated – investigation required (PC–IR) Date of classification: 18/10/2010