



Decision Document

Environmental Protection Act 1986, Part V

Proponent: Shire of Merredin

Licence: L8513/2010/2

Registered office: Shire of Merredin Administration Centre
corner of King & Barrack Streets
MERREDIN WA 6415

Premises address: Merredin Chandler Road Landfill
MERREDIN WA 6415
being Lot 500 on Plan 66111 Chandler Road

Issue date: Thursday, 05 February 2015

Commencement date: Sunday, 08 February 2015

Expiry date: Wednesday, 07 February 2035

Decision

Based on the assessment detailed in this document the Department of Environment Regulation (DER) has decided to issue an amended licence. DER considers that in reaching this decision, it has taken into account all relevant considerations.

Decision Document prepared by: Melissa Chamberlain
Licensing Officer

Decision Document authorised by: Alan Kietzmann
Manager Licensing



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1 Purpose of this Document

This decision document explains how DER has assessed and determined the application and provides a record of DER's decision-making process and how relevant factors have been taken into account. Stakeholders should note that this document is limited to DER's assessment and decision making under Part V of the *Environmental Protection Act 1986*. Other approvals may be required for the proposal, and it is the proponent's responsibility to ensure they have all relevant approvals for their Premises.



2 Administrative summary

Administrative details									
Application type	Works Approval <input type="checkbox"/> New Licence <input type="checkbox"/> Licence amendment <input checked="" type="checkbox"/> Works Approval amendment <input type="checkbox"/>								
Activities that cause the premises to become prescribed premises	<table border="1"> <thead> <tr> <th>Category number(s)</th> <th>Assessed design capacity</th> </tr> </thead> <tbody> <tr> <td>61</td> <td>200 tonnes per annual period</td> </tr> <tr> <td>62</td> <td>2 000 tonnes per annual period</td> </tr> <tr> <td>64</td> <td>5 000 tonnes per annual period</td> </tr> </tbody> </table>	Category number(s)	Assessed design capacity	61	200 tonnes per annual period	62	2 000 tonnes per annual period	64	5 000 tonnes per annual period
	Category number(s)	Assessed design capacity							
	61	200 tonnes per annual period							
	62	2 000 tonnes per annual period							
64	5 000 tonnes per annual period								
Application verified	Date: N/A								
Application fee paid	Date: N/A								
Works Approval has been complied with	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>								
Compliance Certificate received	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>								
Commercial-in-confidence claim	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>								
Commercial-in-confidence claim outcome									
Is the proposal a Major Resource Project?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>								
Was the proposal referred to the Environmental Protection Authority (EPA) under Part IV of the <i>Environmental Protection Act 1986</i> ?	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

The Merredin Chandler Road Landfill is located on Lot 500 on Plan 66111, Chandler Road in the Shire of Merredin ('The Shire'). The premises is approximately 260 kilometres (km) east of Perth, and 6 km north of the Merredin town site. The average yearly rainfall is 314 millimeters (mm) and average monthly evaporation is 180 mm.

The site is located on the Yilgarn Craton, which is characterised predominately by granite rock overlain by weathered clay soils. Testing on site has shown high clay pindan soils to a depth of approximately 18 metres (m), with hypersaline groundwater located at approximately 14 to 20 m (most recent electrical conductivity results of 2160 mS/m). The Shire has estimated that groundwater flows from the north to the south west.

There are no permanent water bodies within 1 km of the site. There are a number of creeks which flow intermittently, the closest of which are located 750 m to the south east of the premises. The Shire advised there are no domestic or industrial uses of groundwater within 2 km of the premises, and the groundwater is proven to be highly saline in nature.

The site receives waste from residents and commercial contractors from within the boundaries of the Shire of Merredin. The site also receives, on occasion, C&D waste, ACM and other general waste from outside the bounds of the Shire of Merredin. Some waste types are stockpiled onsite, such as recyclable paper, cardboard, plastics, batteries and green waste. These wastes are stored and then taken off-site by Avon Waste, once a sizable load is accumulated (approximately every few months). Green waste is stockpiled to be chipped and is then taken away by members of the public.

Liquid wastes are directed to an evaporation pond lined with in-situ clays. All other wastes are buried in the landfill. The landfill uses a trench and fill method where a hole is dug and backfilled with waste using the excavated material as cover. Special Waste Type 1 and 2 are disposed in designated areas with restricted access.

The main potential emission from the premises is leachate from the stored and landfilled wastes. The potential for leachate to impact groundwater or surface water is limited due to the distance to groundwater and the thickness and permeability of clay as indicated in sample bores constructed at the premises.

There is also potential for fugitive dust and odour to be emitted from the premises; however the emissions and potential impacts are likely to be low due to the proximity to sensitive receptors, sealed roads and site management practices including the use of vegetative buffer zones.

This licence is the result of an amendment sought by the Licensee to construct and operate a new animal burial pit. The pit will be approximately 7 m wide, 7 m long and 4 m deep and inclusive of a small vehicle access ramp. The pit will be surrounded by 1.8 m high fencing with a lockable gate. This amendment does not result in a change of activities, throughput, emissions or discharges. A number of DER initiated amendments have also been made to ensure consistency with licence templates.



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
Interpretation/ General Conditions	N/A	<p>Previous condition 1.1.5 is removed as it is an explanatory statement and not a valid or enforceable condition.</p> <p>Previous conditions 1.2.1 and 1.2.2 are removed as they are not enforceable as they are not sufficiently clear or certain. The requirements of previous condition 1.2.2 have been replicated in Table 1.2.2 to specifically refer to spills of hazardous waste types.</p> <p>Previous condition 1.2.5 is removed as it is unclear what stormwater infrastructure is required, or what specific management actions are required.</p> <p>As there are no longer conditions under the heading '1.2 General Conditions' this has been removed.</p>	L8513/2010/2
Premises operation	L1.2.13	Condition 1.2.13 requires that the new animal pit is constructed in accordance with the document titled 'Application form: works approval/licence' dated 8 January 2016 so that works undertaken are consistent with those assessed for this amendment.	'Application form: works approval/licence' dated 8 January 2016
Emissions to Groundwater	N/A	<p><u>Emission Description</u></p> <p><i>Emission:</i> Leachates from the decomposition of animal bodies.</p> <p><i>Impact:</i> Leachates may enter groundwater in the area.</p> <p><i>Controls:</i> The animal pit will be lined with in-situ clays. The Shire expects that the permeability of these soil is low, in the vicinity of $<1.0 \times 10^{-9}$ m/s. The pit is to a depth of 4 m which maintains a minimum distance of 7 m to groundwater which</p>	L8513/2010/2



		<p>is found at 14-20 m.</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Minor <i>Likelihood:</i> Unlikely <i>Risk Rating:</i> Low</p> <p><u>Regulatory Controls</u> Due to the low risk of leachates migrating to groundwater no specific conditions relating to emissions to groundwater are required.</p> <p>Current condition 1.2.3 requires that Special Waste Type 2 is buried in a designated Special Waste Type 2 disposal area, and no works shall be carried out on the landfill that could lead to a disturbance of Special Waste Type 2.</p> <p><u>Residual Risk</u> <i>Consequence:</i> Minor <i>Likelihood:</i> Unlikely <i>Risk Rating:</i> Low</p>	
Fugitive emissions	N/A	Construction and operation of the animal pit is not expected to cause significant dust emissions.	N/A
Odour	N/A	<p><u>Emission Description</u> <i>Emission:</i> Odour from receipt and disposal of animal bodies. <i>Impact:</i> Odour can negatively impact on the welfare and amenity of those on nearby properties. There are no sensitive receptors within 2 km of the premises. <i>Controls:</i> Special Waste Type 2 is immediately covered with 1000 mm of Type 1 inert waste or soil.</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Minor <i>Likelihood:</i> Possible <i>Risk Rating:</i> Low</p> <p><u>Regulatory Controls</u> Condition 1.2.5 and Table 1.2.4 require the licensee to immediately cover</p>	<p>Supporting documentation</p> <p>General provisions of the <i>Environmental Protection Act 1986</i>.</p>



		<p>Special Waste Type 2 with 1000 mm of Type 1 inert waste or soil.</p> <p>This assessment has determined the risk of odour being low and any associated emissions can be suitably regulated under section 49 of the <i>Environmental Protection Act 1986</i>.</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Minor <i>Likelihood:</i> Possible <i>Risk Rating:</i> Low</p>	
Noise	N/A	Construction and operation are not expected to cause significant noise emissions.	N/A
Information	N/A L3.2.3-3.2.4	<p>Previous condition 3.1.2 is removed as it is not enforceable as the requirements for compliance are not clear.</p> <p>Condition 3.2.3 requires the licensee to submit a compliance document following construction of the works to certify that works are constructed as specified. The condition requires the documents to be submitted 4 weeks before commissioning to provide DER with enough notification to review the documentation before the pit is in use.</p> <p>Condition 3.2.4 specifies the requirements of the compliance document.</p>	N/A
Licence duration	N/A	The licence duration has been extended to 20 years from the original issue date as a full assessment of the premises was recently undertaken and there are no factors which otherwise limit the licence duration.	Department of Environment Regulation, Guidance Statement, Licence Duration, November 2014 (revised May 2015).



5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
28/01/2016	Proponent sent a copy of draft instrument	No comments received, waiver form signed and returned on 1/2/2016	Licence amendment progressed to issue as soon as possible.



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