

Decision Document

Environmental Protection Act 1986, Part V

Proponent: Licence:	Shire of Lake Grace L8406/2009/2
Registered office:	1 Bishop Street LAKE GRACE WA 6353
ABN:	80 159 221 021

Premises address:Newdegate Waste Management Facility
Whurr Road
NEWDEGATE WA 6355
Being Lot 1 on Plan 65474 as depicted in Schedule 1Issue date:Thursday 28 February 2013

Commencement date: Friday 08 March 2013

Expiry date: Friday 07 March 2036

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 and legal requirements and that the Licence and its conditions will ensure that an appropriate level of environmental protection is provided.

Decision Document prepared by: Peter van Schoubroeck Licensing Officer Decision Document authorised by: Caron Goodbourn Delegated Officer



Contents

Cor	ntents	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	12
6	Risk Assessment	13
Арр	pendix A	14

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 App New Licen Licence ar Works App	nce mendmen		ent	
Activities that source the promises to become	Category	number(5)	Assessed design capacity	
Activities that cause the premises to become prescribed premises	62			500 tonnes per year	
	64			200 tonnes per year	
Application verified Application fee paid	Date: not a Date: not a	• •			
Works Approval has been complied with	Yes	No	N//		
Compliance Certificate received	Yes	No	N//	$A \boxtimes$	
Commercial-in-confidence claim	Yes	No⊠			
Commercial-in-confidence claim outcome	Not applic	able			
Is the proposal a Major Resource Project?	Yes	No⊠			
Was the proposal referred to the Environmental Protection Authority (EPA) under Part IV of the <i>Environmental Protection Act 1986</i> ?	Yes	No⊠	Mana	rral decision No: aged under Part V 🛛 ssed under Part IV 🗍	
Is the proposal subject to Ministerial Conditions?	Yes	No⊠	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>)?	ned in section 57			sulted Yes⊡ No⊠	
Is the Premises within an Environmental Protection	Policy (EPI	P) Area	Yes	No⊠	
Is the Premises subject to any EPP requirements? Yes No					



3 Executive summary of proposal and assessment

The Newdegate Waste Management Facility (Newdegate WMF) is a category 64 Class II putrescible landfill and category 62 solid waste depot operated by the Shire of Lake Grace. The Newdegate WMF is located approximately 6 km north east of the Newdegate town site and services the Newdegate community (population approximately 300). The Premises is an area of 30 hectares of which 2 hectares have been proposed for landfilling.

The Newdegate WMF consists of:

- A series of single cell trenches (50 m x 3 m x 3 m) for the disposal of waste;
- Recycling area delineated by heaped gravel windrows;
- A concrete bunded area (9.4 kL capacity), constructed in accordance with AS 1940:2004 houses the waste oil receptacle (4.8 kL capacity);
- Compacted gravel hardstand area with a 1.8 m high enclosed fence for the storage of DrumMuster products; and
- A 1.8 m high fence surrounds the prescribed activities to prevent unauthorised access and to prevent windblown waste escaping the boundary. The entry contains two lockable gates.

The management document Bowman and Associates Pty Ltd 2010, Landfill environmental management plan Newdegate landfill identifies that:

- The site comprises over 2.5m depth of weathered saprolite and soil. The granite gneiss basement is between 2m and 3m below with an expected permeability of less than 1x10⁻⁹m/s (page 3).
- The proposed Newdegate Landfill will be effectively a "dry tomb" landfill (page 10).

The closest residential dwelling is 1500 m west of the Premises. Surrounding land use is agricultural.

The two groundwater monitoring bores installed at the Premises (WRL1 and WRL5) were drilled to a depth of 28.5 and 21.5 mBGL respectively. Standing water level within the bores varies between about 9.5 and 11 mBGL.

Across the Premises, granite bedrock was identified between 2 and 28.5 mBGL. Yellow sand was present at the surface at some locations, with various low permeability sandy loams and clays being present before reaching granite basement rock.

This Decision Document is for an amendment to Licence L8406/2009/2 granted on 20 April 2016 for amendments sought by the Licensee to:

- Decrease the landfill waste cover requirements from daily to weekly: approval has been granted.
- Remove the requirement to spread and compact the waste: approval has been granted.
- Include the existing category 62 solid waste depot activities on the Licence;
- Remove the requirement to sample groundwater monitoring bore WRL5: approval has been granted based on the risk assessment and bore WRL5 no longer being accessible.
- Update the Premises map.

Administrative changes are included in this licence amendment.



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.

Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
Interpretation	L1.2.2	 Operation Amendment to Licence condition 1.1.2 to: remove definitions of terms not used in the amended licence update contact details for DER; and include new definitions for the following regulatory controls: Defining waste acceptance criteria by waste types in accordance with the terms used in the Landfill Definitions. Defining the approved active landfill area, being the area depicted in Schedule 1 of the licence (Condition 1.2.4(a)). The active landfill area is a sub-area of the final proposed landfill footprint originally approved by Works Approval W4574/2009/1. The Works Approval expired on 18/10/2012 along with the approval to clear vegetation. DER will undertake a review of the approval to clear all vegetation within the final landfill footprint and subject to approval to clear being granted amend the active landfill area to include the entire final proposed landfill footprint. No approval to clear any vegetation is granted by Licence L8406/2009/2. Specifying that inert waste type 1 must not contain asbestos (Condition 1.2.2(c)(ii)) and that an asbestos management plan will be required (Condition 3.1.1). Update notification and reporting contact details (Conditions 4.2.1 and 4.3.1). Specify the approved area for green waste burning. Defining the requirements for capping and rehabilitation (Conditions 1.2.5 and 1.2.7). 	General provisions of the Environmental Protection Act 1986

Page 5 of 16



DECISION TAI						
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents			
section General conditions	L= Licence N/A	Operation Conditions 1.2.1 – 1.2.5 in the previous licence version have been deleted. The conditions are considered redundant. Subsequently the risk of emission posed by stormwater has been risk assessed. Emission description: Emission: The quality of stormwater discharged from the Premises may deteriorate where stormwater is not appropriately managed or comes into contact with contaminants (e.g. hydrocarbons or waste) or becomes loaded with sediment. Impact: Stormwater and contaminants leaving the Premises and entering adjacent lands, being native vegetation may potentially impact the ecosystem health or agricultural land which may impact crops. Some contaminants may have the potential to migrate through soils into the groundwater. Controls: All stormwater arising within the solid waste depot drains into a sump; waste is stored on compacted earth. Stormwater is contoured away from the landfill trench. Risk assessment: Consequence: Minor Likelihood: Unlikely Risk Rating: Moderate Regulatory controls: It is considered that the provisions of Section 49 of the Environmental Protection Act 1986 and the provisions of the Environmental Protection (Unauthorised Discharge) Regulations 2004 are sufficient to regulate the emissions of stormwater during construction. Regulatory controls under Section 1.2 of the Licence limit the risk of emission by placing controls on waste types accepted and stored. Residual risk: Controls on waste types accepted and stored.	General provisions of the Environmental Protection Act 1986			
		Consequence: Minor Likelihood: Rare Risk Rating: Low				

Page 6 of 16

IRLB_TI0669 v2.7



Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
Premises operation	L1.2.1-1.2.10	 Amendment to Licence conditions include: All conditions have been renumbered in chronological order. Condition 1.2.1 has been inserted to specify that any limit being exceeded within section 1.2 of the licence is investigated, this will help prevent reoccurrence. Condition 1.2.2 (being Condition 1.3.1 in the previous licence version) has been amended to: Specify waste types by the terms used in the Landfill Definitions and that the specifications of the waste are in accordance with a Class II unlined landfill. Specify waste types by prescribed activity, being landfill or solid waste depot. Condition 1.2.3 (being Condition 1.3.2 in the previous licence version) has been amended to specify that waste at the Premises which does not meet the specifications under Condition 1.2.1 is immediately removed from the Premises. Condition 1.2.4¹ (being Condition 1.3.3 in the previous licence version) has been amended to incorporate the provisions of conditions 1.3.4, 1.3.7 and 1.3.8 in the previous licence version. Condition 1.3.4(f) in the previous licence version which requires the spreading of waste prior to compaction has been deleted following a request from the Shire of Lake Grace; no equipment is available to compact the waste (approval is granted based on the risk assessment in Appendix A). The provision to apply cover to putrescible wastes in layers at a minimum of 500 mm has been maintained under condition 1.2.4 specifies: waste types by the terms used in the Landfill Definitions; waste types by prescribed activity, being landfills or solid waste depot In addition the amendment to Condition 1.2.4 specifies: waste is located within areas previously approved for the activities; waste is subject to previously approved processes; landfill is undertaken with appropriate controls to limit the risk of emissions (odour, airborne waste, leachate, vermin and pests). <td>General provisions o the Environmental Protection Act 1986</td>	General provisions o the Environmental Protection Act 1986

Environmental Protection Act 1986 Decision Document: L8406/2009/2 File Number: DER2016/000375 Page 7 of 16



DECISION TAE	BLE		
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		 Condition 1.2.5 has been inserted to clearly specify the cover requirements for waste types that have been approved for landfilling. The condition replaces Condition 1.3.4(d) in the previous licence version and authorises cover material to be applied a minimum of weekly instead of daily (a risk assessment is undertaken in Appendix A). Conditions 1.3.10, 1.3.11, 1.3.12 and 1.3.13 in the previous licence version have been removed and replaced by Condition 4.3.1 under the notification section of the Licence. Conditions 1.3.15 and 1.3.16 have been deleted. Condition 1.2.4 grants approval for trenches no greater than 3 metres below ground level which maintains the separation distance to groundwater. No surface waters bodies have been identified of relevance and approval for the landfilling to occur within the active landfill area has been granted. Condition 1.3.17 has been deleted. The requirement of Condition 2.3.1 requires parameters to be monitored from the groundwater monitoring bore (WRL1); inherently the integrity of the bores must be maintained to allow sampling to occur. 	
Emissions general	N/A	 Operation Amendment to Licence conditions include: Sections 2.1-2.8 in the previous licence version have been deleted, there are no specified conditions and the text was a construction that was used to retain consistent numbering in the previous licence version. 	General provisions of the Environmental Protection Act 1986



DECISION TAB			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
Monitoring general	L2.1.1, 2.2.1 and 2.3.1	 Operation Amendment to Licence conditions include: All conditions have been renumbered in chronological order. Sections 3.2-3.5, 3.7 and 3.9 in the previous licence version have been deleted, there are no specified conditions and the text was a construction that was used to retain consistent numbering in the previous licence version. Condition 2.1.1 (being Condition 3.1.1 in the previous licence version) has been amended for administrative formatting and to specify that some parameters to be monitored under Condition 2.3.1 are exempt from requiring NATA accreditation. Condition 2.2.1 (being Condition 3.6.1 in the previous licence version) has been amended to specify waste input parameters by the waste type under the Landfill Definitions and to specify an annual averaging period. Condition 2.3.1 (being Condition 3.6.1 in the previous licence version) has been amended to specify that standing waste level in the groundwater monitoring bores must be measured in SWL and BGL format, that total phosphorus must be monitored (a primary indicator of nutrient contamination) and that non-NATA accredited analysis is permitted for standard parameters. Within condition 2.3.1 the requirement to undertake sampling of monitoring bore WRL5 has been removed. The bore has become blocked and samples are not currently attainable. Based on the risk assessment in Appendix A for the leachate emission risk and location of the bore away from the landfill cells the removal of the monitoring requirement is considered acceptable. Should the blockage within the bore casing be resolved the requirement to resume monitoring will be reinstated. 	General provisions of the <i>Environmental</i> <i>Protection Act</i> 1986



DECISION TABLE					
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents		
Improvements	L3.1.1	 Operation Amendment to Licence conditions include: Section 3 (being Section 4 in the previous licence) has been amended to require an Asbestos Management Plan to be submitted which is in accordance with the document Guidelines for managing asbestos at construction and demolition waste recycling facilities. Adherence to such a plan will help ensure the health and safety of workers and members of the public should asbestos inadvertently be accepted and possibly released at the Premises. This is a standard requirement for prescribed premises undertaking waste management and processing activities (a risk assessment is undertaken in Appendix A). 	General provisions of the <i>Environmental</i> <i>Protection Act 1986</i>		

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DECISION TAB	BLE		
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
Information	L4.2.1, 4.2.2 and 4.3.1	 Operation Amendment to Licence conditions include: All conditions have been renumbered in chronological order. Condition 5.1.2 in the previous licence version has been deleted, the condition is redundant. Condition 4.2.1 (being Condition 5.2.1 in the previous licence version) has been amended to clearly specify the annual monitoring report requirements with defined outcomes. The outcomes being the annual data being presented in a tabular format with graphs to represent trends over time. Condition 4.2.2 has been included to ensure that upon request, copies of original monitoring reports submitted to the Licensee by third parties for groundwater data will be produced should DER choose to audit the data reported in the annual environmental report required under Condition 3.2.1. Condition 4.3.1 (being Condition 5.3.1 in the previous licence version) has been amended to specify that: breaches of specified limits within the licence are reported in a timely manner; all unauthorised fires are reported with the required information within the required timeframe; the provisions replace Conditions 1.3.11, 1.3.12 and 1.3.13 in the previous licence version; and 	General provisions of the Environmental Protection Act 1986
Licence Duration	N/A	The previous version of the licence was set to expire on 7 March 2018. The amended licence has been issued for a period of 20 years, expiring on 7 March 2036. This timeframe takes into consideration the factors within the document <i>Guidance statement: licence duration</i> . No other statutory approvals have been identified as limiting the timeframe for the issue of this Licence. The risk of emissions and associated assessment of those emissions have identified the emission risk at the premises is low to moderate.	Department of Environment Regulation 2015, <i>Guidance statement:</i> <i>Licence duration</i> General provisions of the <i>Environmental</i> <i>Protection Act 1986</i>



5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
17/03/2016	Proponent sent a copy of draft instrument	• Regulatory controls for the surface area of landfill cells, the waste cover frequency and rehabilitation timeframes were questioned.	 Regulatory controls for the landfill surface area were deleted; controls on the waste profile and tipping area adequately address the risk. Waste cover frequency was amended to ensure a consistent approach for waste types. The rehabilitation timeframe for closed cells was maintained at 6 months.
25/04/2016	Amended instrument issue was advertised in West Australian		



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

Application to remove requirement to compact waste

The emission risk arising from the requested amendment to remove the requirement to compact waste is considered to pose emission risks. The emission risks arise from the increased physical settlement of waste and cover material over time and subsequent potential failure of the capping of the 'dry tomb' landfill cells. The emission risks are leachate and odour.

Emission description (leachate):

Emission: Increased volumes of stormwater migrating through the waste column, drawing contaminants into the base of the landfill and potential for the migration of leachate and contaminants into the groundwater.

Impact: Nutrients and contaminants (heavy metals) entering the groundwater which could impact local groundwater quality and down gradient receptors (*no proximate groundwater dependant ecosystems or groundwater extraction activities have been identified*). *Controls:* Cover and maintenance of cover martial over landfill cells.

Risk assessment:

Consequence:ModerateLikelihood:UnlikelyRisk Rating:Moderate

Regulatory controls:

Conditions 1.2.2 and 1.2.4 limits the types of waste that may be accepted and landfilled at the premises, therefor limiting the contaminant load present within a cell. Condition 1.2.5 requires that cover material be applied a minimum of weekly and over every 500 mm waste layer. Condition 1.2.7 requires final cover to be maintained on cells.

Residual risk:

Consequence: Moderate Likelihood: Rare Risk Rating: Moderate

Emission description (odour):

Emission: Odour may be generated from putrescible waste if left exposed as a result of failed capping.

Impact: Interference with the health, welfare, convenience, comfort or amenity of sensitive receptors off-premises. The closest private lands are located about 80 north of the landfill area; the closest residences are located over 1.5 kilometres away. *Controls:* Cover and maintenance of cover martial over landfill cells.

Risk assessment:

Consequence: Insignificant *Likelihood:* Unlikely *Risk Rating:* Low

Regulatory controls:

It is considered that the provisions of Section 49 of the *Environmental Protection Act 1986* are sufficient to regulate odour emissions. Condition 1.2.5 requires that cover material be applied a minimum of weekly and over every 500 mm waste layer. Condition 1.2.7 requires final cover to be maintained on cells. Subsequently settlement level should be reduced and issues arising from the failure of capping should be addressed.

Residual risk:

Consequence: Insignificant *Likelihood:* Rare *Risk Rating:* Low

Note: Due to the potential for increased rates of settlement in the waste mass and landfill cells (due to limited compaction) will need to be considered by the Shire of Lake Grace. Condition 1.2.7 requires that the final landfill profile including capping is maintained.



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Application to reduce waste cover frequency

The emission risk arising from the requested amendment to reduce the frequency of waste cover is considered to pose emission risks. The emission risks arise from the increased exposure to waste to the local air-shed and fauna. The emission risks are:

- Odour; and
- Vermin and pests.

Emission description (odour):

The risk assessment for odour is completed in the section above; the emission risk is low.

Emission description (vermin and pests):

Emission: Exposed and uncovered putrescible waste can provide refuge and nourishment for vermin and pest species (such as feral cats, insects and rodents). *Impact:*

- Interference with the health, welfare, convenience, comfort or amenity of sensitive receptors off-premises. The closest private lands are located about 80 north of the landfill area; the closest residences are located over 1.5 kilometres away.
- Disease and ecosystem implications on native flora and fauna. Native vegetation is location directly south and east of the landfill.

Control: None specified.

Risk Assessment:

Consequence:ModerateLikelihood:PossibleRisk Rating:Moderate

Regulatory controls:

The following regulatory controls limit the exposure of waste that may promote the prevalence of vermin and pest species:

- Condition 1.2.5 requires that cover material be applied a minimum of weekly and over every 500 mm waste layer.
- Condition 1.2.7 requires final cover to be maintained on cells.

Condition 1.2.9 requires infestations to be prevented. Should infestations arise the Licensee will need to implement measures to mitigate the infestation.

Residual Risk:

Consequence:ModerateLikelihood:UnlikelyRisk Rating:Moderate



Government of **Western Australia** Department of **Environment Regulation**

Premises operation (asbestos)

Emission description:

Emission: Asbestos and asbestos fibres may become airborne or spread through soils. *Impact:* The spread of asbestos, particularly airborne fibres poses a significant health risk (e.g. asbestosis) to people exposed to the Premises air shed if not appropriately managed. *Controls:* No asbestos or ACM is accepted at the Premises. The Premises is locked when closed and staffed when open.

Risk assessment:

Consequence:	Major
Likelihood:	Unlikely
Risk Rating:	Moderate

Regulatory controls:

- Condition 1.2.2 limits the waste types accepted which does not include asbestos or ACM.
- Condition 1.2.3 requires that non-conforming wastes, which can include forms of asbestos, are immediately removed from the Premises.
- Condition 3.1.1 (IR1) requires an Asbestos Management Plan to be submitted which is in accordance with the document *Guidelines for managing asbestos at construction and demolition waste recycling facilities*. Adherence to such a plan will help ensure the health and safety of workers and neighbouring residences and members of the public should asbestos inadvertently be accepted and possibly released at the Premises. This is a standard requirement for prescribed premises undertaking such activities.
- Part 3, Division 6, Regulations 42 through 47 of the *Environmental Protection (Controlled Waste) Regulations 2004* provides additional regulatory requirements for the transport and disposal of asbestos.

Residual risk: Consequence: Major Likelihood: Rare Risk Rating: Moderate