



Licence Number L8406/2009/2

Licence Holder Shire of Lake Grace

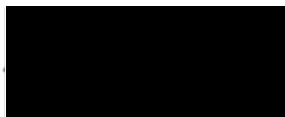
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Premises
Newdegate Waste Management Facility
Lot 1 on Plan 65474 Whurr Road
NEWDEGATE WA 6355

Date of Amendment 14 September 2018

Amendment

The Chief Executive Officer (CEO) of the Department of Water and Environmental Regulation (DWER) has amended the above Licence in accordance with section 59 of the *Environmental Protection Act 1986* (EP Act), as set out in this Amendment Notice. This instrument constitutes written notice of the amendment in accordance with section 59B (9) of the EP Act.



Lauren Fox
A/MANAGER WASTE INDUSTRIES
Regulatory Services – Environment

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

Definitions and interpretation

1. Definitions

In this Amendment Notice, the terms in Table 1 have the meanings defined.

Table 1: Definitions

Term	Definition
Amendment Notice	refers to this document
Category/ Categories/ Cat.	categories of Prescribed Premises as set out in Schedule 1 of the EP Regulations
CEO	means Chief Executive Officer. CEO for the purposes of notification means: Director General Department Administering the <i>Environmental Protection Act 1986</i> Locked Bag 33 Cloisters Square PERTH WA 6850 info@dwer.wa.gov.au
Delegated Officer	an officer under section 20 of the EP Act
Department	means the department established under section 35 of the <i>Public Sector Management Act 1994</i> and designated as responsible for the administration of Part V, Division 3 of the EP Act.
DWER	Department of Water and Environmental Regulation
EP Act	<i>Environmental Protection Act 1986 (WA)</i>
EP Regulations	<i>Environmental Protection Regulations 1987 (WA)</i>
Licence Holder	Shire of Lake Grace
Occupier	has the same meaning given to that term under the EP Act.
Prescribed Premises	has the same meaning given to that term under the EP Act.
Premises	refers to the premises to which this Decision Report applies, as specified at the front of this Decision Report.
Risk Event	as described in <i>Guidance Statement: Risk Assessment</i>

Amendment Notice

This amendment notice is made pursuant to section 59 of the *Environmental Protection Act 1986* (EP Act) to amend the Licence issued under the EP Act for a prescribed premises as set out below. This notice of amendment is given under section 59B (9) of the EP Act.

The following guidance statements have informed the decision made on this amendment

- *Guidance Statement: Regulatory Principles* (July 2015)
- *Guidance Statement: Decision Making* (February 2017)
- *Guidance Statement: Risk Assessment* (February 2017)
- *Guidance Statement: Setting Conditions* (October 2015)

2. Amendment description

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 (Licence Holder) under Existing Licence L8406/2009/2. 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.

Based on available Departmental records, the Premises has been in operation since at least April 2000. The landfill is authorised to accept up to 200 tonnes per year of waste which is infilled into unlined cells.

An application for an amendment to the Existing Licence was received by the Department of Water and Environmental Regulation (DWER) on 7 May 2018. The application is for the removal of conditions related to groundwater monitoring in all bores (WRL1 and WRL5) at the Premises. Amendment Notice 1 is the result of the Licence Holder's application.

Figure 1 below depicts an overview of the Premises layout including the location of the groundwater monitoring bores.

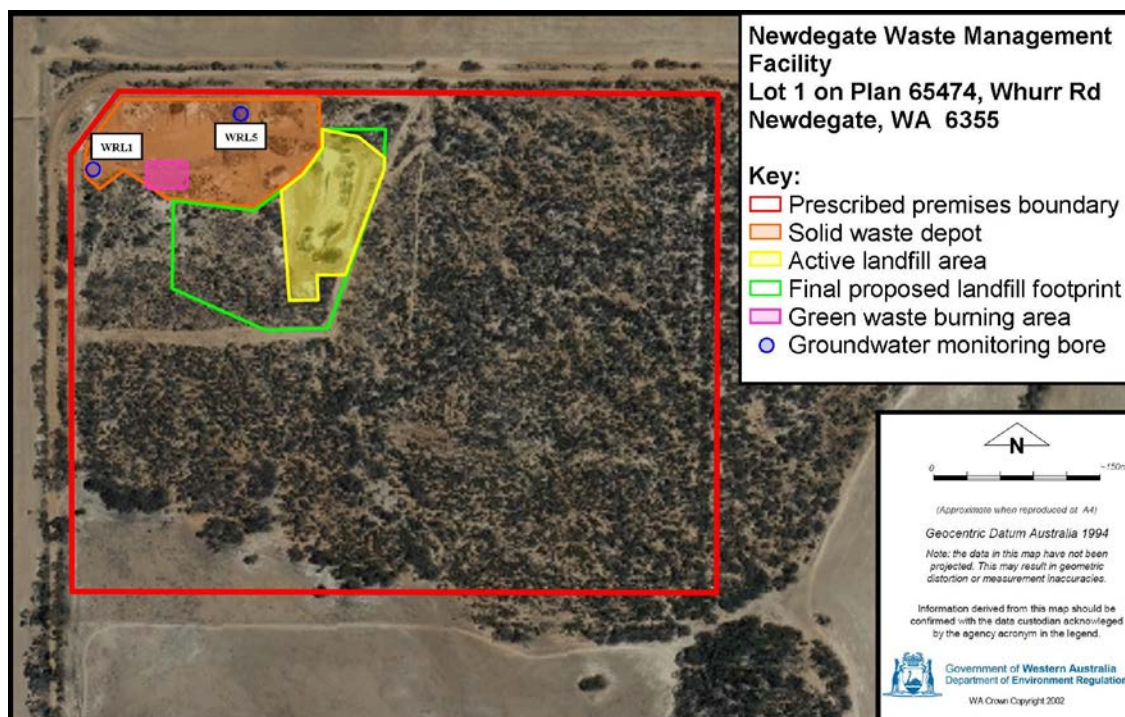


Figure 1: Premises site layout

3. Amendment history

Table 2 provides the amendment history for L8406/2009/2

Table 2: Licence amendments

Instrument	Issued	Amendment
L8406/1997/12	20/04/2016	Licence amended to: <ul style="list-style-type: none">• 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 granted based on the risk assessment and bore WRL5 no longer being accessible.• Update the Premises map
L8406/2009/2	14/09/2018	Amendment Notice 1: Removal of groundwater monitoring requirements.

4. Background

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 1×10^{-9} m/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) in 2009 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.

The following groundwater information were used in the network design:

- Shallow granitic bedrock was intersected to the east and south of the facility, becoming deeper in the north-west corner of the landfill;
- Local groundwater flow (beneath the landfill) is expected to follow the bedrock topography;
- The infiltration of rainfall in the area of shallow bedrock to the east and south may occur but is not significant (indicated by the elevated groundwater salinity);
- Any groundwater flowing away from the site is expected to cross the site boundary in

the north-west corner of the site, and the inferred local north-westerly flow direction may tend to westerly and towards the large salt lake some distance from the site;

- There are no known or observed groundwater users or groundwater dependent ecosystems due to the elevated salinity and the depth to water;
- Location of two bores, one each on the western and northern site boundaries, distant from the area of shallow bedrock, are considered sufficient to assess any changes in the groundwater quality caused by operations at the site;

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.

In April 2016 the Licence was amended to remove the requirement to sample groundwater monitoring bore WRL5. This approval was granted based on the risk assessment and bore WRL5 no longer being accessible.

Groundwater monitoring was undertaken for all bores in May 2017. Table 3 provides the observations at the monitoring bores.

Table 3

Premises	Monitoring bore	Observations
Newdegate Waste Management Facility	WRL 1	Water present – well was sampled
	WRL 5	A section of tubing (previously obstructing the well casing was successfully removed. Water present – well was sampled

Table 4 summarises the results of the laboratory analyses for the groundwater monitoring undertaken by the Licensee

Table 4

GME	Sample marks	pH	EC	TDS	NH ₃ -N	Total N	Total P	K	Cl	As	Cd	Cr	Cu	Pb	Mn	Hg	Ni	Zn
Jan 2010	WRL1	6.83	12.1	8100	0.27	NA	NA	93	4020	<0.001	<0.0001	0.002	0.004	0.022	NA	<0.0001	NA	0.032
June 2016	WRL1	6.5	11	6700	0.18	0.9	0.18	75	3500	0.002	<0.002	<0.01	<0.01	0.02	<0.01	<0.002	0.01	0.01
June 2016	Dup 1 (WRL 1)	6.7	11	6700	0.15	0.8	0.15	84	3600	0.002	<0.002	<0.01	<0.01	<0.01	<0.01	<0.002	<0.01	<0.01
May 2017	WRL1	6.1	15.7	8600	NA	3.7	0.10	NA	5000	<0.002	0.00033	<0.00050	0.0025	0.032	0.086	<0.010	0.012	0.22
Jan 2010	WRL5	6.44	8.37	6290	0.29	NA	NA	67	2850	<0.001	<0.0001	<0.001	0.006	0.047	NA	<0.0001	NA	0.093
May 2017	WRL5	5.7	9.12	5000	NA	2.6	0.04	NA	2800	<0.002	0.00025	<0.00050	0.0027	0.024	0.018	<0.010	<0.0050	0.17

Ammonium concentrations in groundwater do not appear to be elevated and well below levels (< 0.5mg/L) derived from non-potable use guidelines values published in DWER's guideline *Assessment and management of contaminated sites, December 2014*, indicating that it is unlikely that leachate emissions are impacting on groundwater quality.

5. Risk assessment – leachate

Table 5 below describes the Risk Events associated with the amendment consistent with the *Guidance Statement: Risk Assessments*. The table identifies whether the emission presents a material risk to public health or the environment, requiring regulatory control.

Table 5: Risk assessment for proposed amendments during operation

Risk Event					Continue to detailed risk assessment?	Reasoning	
Source/Activities	Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts			
Cat 64: Putrescible landfill site	Placement of putrescible waste into the ground (unlined landfill cell) Storage of putrescible waste prior to infilling	Leachate	Groundwater	Seepage through soil	Contamination of groundwater supply for nearby users	No	No groundwater users are present. Depth to groundwater at the Premises is approximately 28.5m bgl. Groundwater data indicates a highly saline water quality representative of regional conditions. 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 1×10^{-9} m/s.
			Native vegetation is located directly south and west of Premises boundary	Overland migration; Movement through groundwater (seepage through soil)	Impacts to vegetation from excessive nutrients or other contaminates in leachate	No	
			Various salt lake systems (closest is located approximately 55 km from the Premises boundary)		Contamination of surface waters at the point of groundwater expression	No	
			Lake Grace North located approximately 56 km from Premises boundary			No	
Lake Grace South located	No	Seepage and overland migration are not considered likely to travel to these receptors.					

			approximately 65 km south-west of Premises boundary				
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6. Decision

Based on the risk assessment in Table 5 above, the Delegated Officer has determined that the Licence will be amended by the removal of groundwater monitoring requirements and definitions related to groundwater monitoring.

Amendments to definitions have been undertaken by the Department to reflect updated terminology and to reflect the change in Departmental contacts. These changes are described in Section 8 below.

No other changes have been made.

7. Licence Holder's comments

The Licence Holder was provided with the draft Amendment Notice on 17 August 2018. The Licence Approval Holder advised on 3 September 2018 that they have no further comments on the proposed changes and waived the remaining consultation period.

8. Amendment

1. The Definitions section of the Licence is amended by the removal of the text shown in strikethrough and the inclusion of the text shown in red and underline below:

~~“AS/NZS 5667.1” means the Australian Standard AS/NZS 5667.1 Water Quality – Sampling – Guidance of the Design of sampling programs, sampling techniques and the preservation and handling of samples;~~

~~“AS/NZS 5667.11” means the Australian Standard AS/NZS 5667.11 Water Quality – Sampling – Guidance on sampling of groundwaters;~~

CEO means Chief Executive Officer;

CEO for the purposes of notification means:

Director General

Department Administering the Environmental Protection Act 1986

Locked Bag 33 Cloisters Square

PERTH WA 6850

info@dwer.wa.gov.au

~~“clean fill” means material that will have no harmful effects on the environment and which consists of rock or soil arising from the excavation of undisturbed material (as defined in the “Landfill Waste Classification and Waste Definitions 1996”); for material not from a clean excavation, it must be validated to have contaminants below relevant ecological investigation levels (as defined in the document “Assessment Levels for Soil, Sediment and Water, Department of Environment, 2003”); has the meaning defined in Landfill Definitions;~~

Condition means a condition to which this Licence is subject under s.62 of the EP Act;

Department means the department established under section 35 of the Public Sector Management Act 1994 and designated as responsible for the administration of Part V, Division 3 of the EP Act;

~~“Director” means Director, Environmental Regulation Division of the Department of Environment and Conservation for and on behalf of the Chief Executive Officer as~~

~~delegated under Section 20 of the Environmental Protection Act 1986;~~

DWER means Department of Water and Environmental Regulation;

~~“environmentally hazardous material” means material (either solid or liquid raw materials, materials in the process of manufacture, manufactured products, products used in the manufacturing process, by products and waste) which if discharged into the environment from or within the premises may cause pollution or environmental harm;~~

~~“the EP Act” means the Environmental Protection Act 1986;~~

EP Regulations means the Environmental Protection Regulations 1987 (WA);

~~“fugitive emissions” means all emissions not arising from point sources;~~

~~“green waste” means waste that originates from flora and which does not contain or has not been treated or coated with, preserving agents, biocides, fire retardants, paint, adhesive or binders;~~ waste that originates from untreated trees or plants;

~~“Inert Waste Type 1” means waste as defined in the DEC document titled “Landfill Waste Classification and Waste Definitions 1996”;~~ has the meaning defined in Landfill Definitions;

~~“Inert Waste Type 2” means waste as defined in the DEC document titled “Landfill Waste Classification and Waste Definitions 1996”~~ has the meaning defined in Landfill Definitions;

~~“Landfill Waste Classification and Waste Definitions 1996” refers to the document published by the Director General, Department of Environment and Conservation on 17 December 2009;~~ means the document titled “Landfill Waste Classification and Waste Definitions 1996” published by the Chief Executive Officer of the Department of Environment as amended from time to time;

Leachate means liquid released by or water that has percolated through waste and which contains some of its constituents;

~~“Licence” means this Licence numbered L8406/2009/2 and issued under the Environmental Protection Act 1986;~~ refers to this document, which evidences the grant of a Licence by the CEO under s.57 of the EP Act, subject to the Conditions;

Licence Holder refers to the occupier of the premises being the person to whom this Licence has been granted, as specified at the front of this Licence;

~~“Licensee” means the person or organisation named as Licensee on page 1 of the Licence;~~

~~“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 Licence;~~ refers to the premises to which this Licence applies, as specified at the front of this Licence and as shown on the map in

Schedule 1 to this Licence:

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

2 The Licence is amended by the removal of the conditions shown in strikethrough below:

~~2.1.1 The Licensee must ensure that:-~~

~~(a) all water samples are collected and preserved in accordance with AS/NZS 5667.1;~~

~~(b) all groundwater sampling is conducted in accordance with AS/NZS 5667.11; and~~

~~(c) all laboratory samples are submitted to and tested by a laboratory with current NATA accreditation for the parameters being measured unless indicated otherwise in the relevant table.~~

~~2.1.2 The Licensee shall ensure that six monthly monitoring is undertaken at least 5 months apart.~~

~~2.2.1 The Licensee must undertake the monitoring in Table 2.2.1 according to the specifications in Table 2.2.1~~

Table 2.1.1: Monitoring of ambient groundwater quality				
Monitoring point reference and location	Parameter	Units	Averaging period	Frequency
WRL1	Standing water level¹	m(AHD) and mBGL	Spot sample	Six monthly
	pH[‡]			
	Electrical conductivity[‡]	µS/cm		
	Total dissolved solids	mg/L		
	Ammonia-nitrogen			
	Nitrate-nitrogen			
	Total nitrogen			
	Total phosphorus			
	Potassium			
	Chloride			
Metals: arsenic, cadmium, chromium, copper, lead, manganese, mercury, nickel, zinc				

~~Note 1: In field non-NATA accredited analysis permitted~~

Appendix 1: Key documents

	Document title	Availability
1	Licence L8406/2009/2 – Newdegate Waste Management Facility	accessed online at www.dwer.wa.gov.au
2	Application for Amendment – L8406 Newdegate Waste Management Facility including supporting documentation	DWER records (A1669350)
3	DER, October 2015. <i>Guidance Statement: Setting Conditions.</i> Department of Environment Regulation, Perth.	accessed online at www.dwer.wa.gov.au
4	DER, February 2017. <i>Guidance Statement: Risk Assessments.</i> Department of Environment Regulation, Perth.	
5	DER, February 2017. <i>Guidance Statement: Decision Making.</i> Department of Environment Regulation, Perth.	
6	CONTAMINATED SITES FACT SHEET 6 – <i>Contaminated groundwater</i>	accessed online at https://www.der.wa.gov.au/images/your-environment/contaminated-sites/cs-fs-6.pdf