



Amendment Notice 2

Licence Number L7113/1997/12

Licence Holder Shire of Lake Grace

File Number: DER2014/001109

Premises
Lake Grace Waste Management Facility
Lot 15615 on Plan 180011 Biddy-Camm Road
LAKE GRACE WA

Date of Amendment 09/08/2018

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 Amendment Notice constitutes written notice of the amendment in accordance with section 59B (9) of the EP Act.

Date signed 9 August 2018

Rebecca Kelly

MANAGER WASTE INDUSTRIES

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 Lake Grace Waste Management Facility (LGWMF) is located approximately 280km south-east of Perth and 3.9km north east of the Lake Grace town site. The LGWMF is classified as a prescribed premises category 57 (used tyre storage – general) and category 64 (Class II putrescible landfill) facility which is operated by the Shire of Lake Grace (Licence Holder) under Existing Licence L7113/1997/12 granted under Part V of the *Environmental Protection Act 1986* (EP Act).

Based on available Departmental records, the Premises has been in operation since at least April 2000. The landfill is authorised to accept up to 5,000 tonnes per year of waste which is infilled into unlined cells.

Amendment Notice 1, granted 14 June 2016, included regulatory controls to monitor groundwater quality in response to the Premises being classified as 'Possibly Contaminated – Investigation Required' under the *Contaminated Sites Act 2003*.

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 (SLG1 to SLG4) at the Premises. Amendment Notice 2 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.

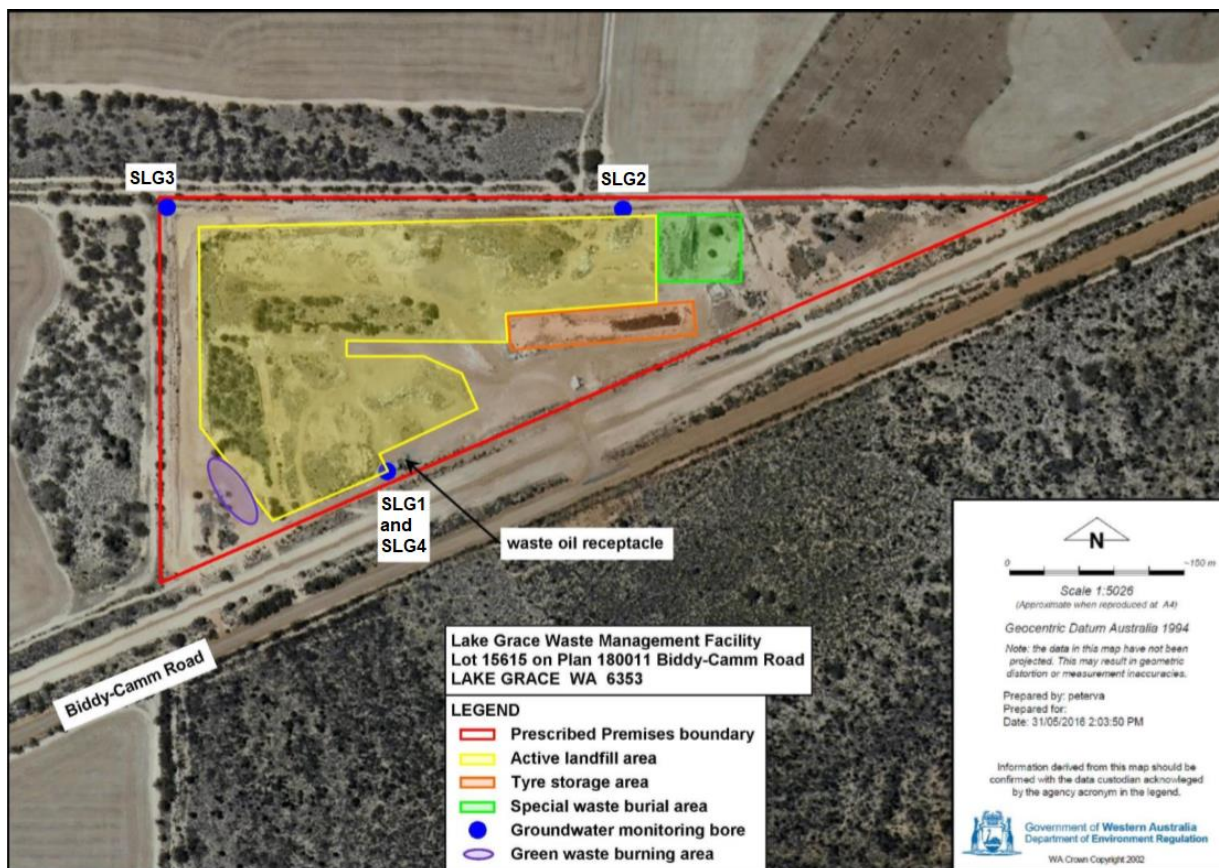


Figure 1: Premises site layout

3. Amendment history

Table 2 provides the amendment history for L7113/1997/12

Table 2: Licence amendments

Instrument	Issued	Amendment
L7113/1997/12	18/07/2016	Amendment Notice 1: Inclusion of groundwater monitoring bore sampling requirements.
L7113/1997/12	09/08/2018	Amendment Notice 2: Removal of groundwater monitoring requirements.

4. Geology and groundwater

As part of the licence renewal granted in February 2013, the Licence Holder was required to install three groundwater monitoring bores at the Premises. Bore logs for the installation of these bores (SLG1, SLG2, SLG3 and SLG4) were provided to the Department in support of the amendment application.

Bore SLG1 met refusal on granite bedrock at approximately 35.5m bgl. Groundwater was not intersected. Bore SGL3 met refusal at approximately 30m bgl and also did not intersect groundwater. SLG2 intersected groundwater at approximately 45m bgl with refusal met on bedrock at 56.5m bgl. The bore logs of these three bores consisted predominantly of sandy clays conducive to a low permeability soil profile. Information provided with the amendment application indicates that bore SGL4, drilled to 4.5 metres and adjacent to the waste oil collection area (and near SGL1), was installed to enable detection of a seasonal shallow water

table. Water was not present when this bore was drilled.

Using the Department's mapping software, the Premises is situated in a predominantly flat area with a grade generally towards the north-west to west based on regional topography maps. Based on the topography, it is assumed that groundwater flow is also likely to be towards the north-west and west.

Groundwater monitoring was undertaken for all bores in December 2014, following installation of the bores, and again in May 2017. Bores SGL1, SGL3 and SGL4 were all dry in 2014. In 2017, Bores SGL3 and SGL4 were both dry. SGL1 contained traces of water but the volume was insufficient to take a sample. SGL2 was the only bore with sufficient water to obtain a sample.

The groundwater samples from SGL2 were saline, with 32,000 to 49,000 mg/L total dissolved solids and 22,000 to 28,000 mg/L chloride. Given the premises' location within an area predominantly characterised by salt lakes, the elevated salinity and chloride results are typical of groundwater quality in the area.

While not directly applicable to the groundwater quality at the Premises, the ANZECC & ARMCANZ (2000) *Australian Water Quality Guidelines for Fresh and Marine Water Quality* (ANZECC) is the only relevant assessment criteria which provides a concentration assessment level for ammonia ($\text{NH}_3\text{-N}$) in groundwater. ANZECC provides an assessment level of 0.9 mg/L for fresh water.

The ammonia concentrations in groundwater do not appear to be elevated as they are less than the ANZECC assessment level (analysed at 0.4 mg/L in 2017).

According to the Department's online *Water Register*, there are no groundwater abstraction bores within the vicinity of Lake Grace.

5. Risk assessment – leachate

Table 3 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 3: 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 46.5m bgl. Groundwater data indicates a highly saline water quality representative of regional conditions. Seepage and overland migration are not considered likely to travel to these receptors given the large separation distances.
			Threatened and Priority flora (closest receptor is located approximately 6.25 km south-west of Premises boundary)	Overland migration; Movement through groundwater (seepage through soil)	Impacts to vegetation from excessive nutrients or other contaminants in leachate	No	
			Various salt lake systems (closest is located 4.8 km west of Premises boundary)		Contamination of surface waters at the point of groundwater expression	No	
			Lake Grace North located 5.5 km west of Premises boundary			No	
Lake Grace South located 13.5 km south-west of Premises boundary			No				

6. Decision

Based on the risk assessment in Table 3 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 which were included on Amendment Notice 1.

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 31 July 2018. On 1 August 2018 the Licence Holder waived the comment 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;

~~“Contact Address” for the purpose of correspondence and advice means:~~

~~Regional Leader, Wheatbelt Region~~

~~Department of Environment and Conservation~~

~~PO Box 100~~

~~NARROGIN WA 6312~~

~~Telephone: (08) 9621 3400~~

~~Facsimile: (08) 9621 3410~~

Email: wheatbeltir@dec.wa.gov.au;

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 biodegradable waste comprising plants and their component parts such as flower cuttings, hedge trimmings, branches, grass, leaves, plants, seeds, shrub and tree loppings, tree trunks, tree stumps and similar materials and includes any mixture of those materials;~~ 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 L7113/1997/12 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;~~

~~“putrescible waste” means the component of the waste stream likely to become putrid — including wastes that contain organic materials such as food wastes or wastes of animal or vegetable origin, which readily bio-degrade within the environment of a landfill, as defined in the document titled “Landfill Waste Classification and Waste Definition 1996”; has the meaning defined in Landfill Definitions;~~

~~“Special Waste Type 1” means waste which includes asbestos and asbestos cement products as defined in the document titled “Landfill Waste Classification and Waste Definitions 1996”; has the meaning defined in Landfill Definitions;~~

~~“Special Waste Type 2” means waste which includes clinical waste and products as defined in the document titled “Landfill Waste Classification and Waste Definitions 1996”; has the meaning defined in Landfill Definitions;~~

~~“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.~~

~~2.1.3 The Licensee must undertake the monitoring in Table 2.1.1 according to the specifications in Table 2.1.1~~

Table 2.1.1: Monitoring of ambient groundwater quality

<i>Monitoring point reference and location</i>	<i>Parameter</i>	<i>Units</i>	<i>Averaging period</i>	<i>Frequency</i>
<i>GW1, GW2, GW3 and GW4 on the Premises map in Schedule 1 of the Amendment Notice</i>	<i>Standing water level¹</i>	<i>m(AHD) and mBGL</i>	<i>Spot sample</i>	<i>Six monthly Not until water is available for future sample.</i>
	<i>pH[‡]</i>			
	<i>Electrical conductivity[‡]</i>	<i>µS/cm</i>		
	<i>Total dissolved solids</i>	<i>mg/L</i>		
	<i>Ammonia-nitrogen</i>			
	<i>Nitrate nitrogen</i>			
	<i>Total nitrogen</i>			
	<i>Total phosphorus</i>			
	<i>Potassium</i>			
	<i>Chloride</i>			
<i>Metals: arsenic, cadmium, chromium, copper, lead, manganese, mercury, nickel, zinc</i>				

Note 1: In field non-NATA accredited analysis permitted

Appendix 1: Key documents

	Document title	Availability
1	Licence L7113/1997/12 – Lake Grace Waste Management Facility	accessed online at www.dwer.wa.gov.au
2	Amendment Notice 1 L7113/1997/12 granted 18 July 2016	
3	Application for Amendment - L7113 Lake Grace Waste Management Facility including supporting documentation	DWER records (A1669214)
4	DER, October 2015. <i>Guidance Statement: Setting Conditions.</i> Department of Environment Regulation, Perth.	accessed online at www.dwer.wa.gov.au
5	DER, February 2017. <i>Guidance Statement: Risk Assessments.</i> Department of Environment Regulation, Perth.	
6	DER, February 2017. <i>Guidance Statement: Decision Making.</i> Department of Environment Regulation, Perth.	