



Licence Number L6818/1997/11

Licence Holder Shire of Bridgetown-Greenbushes

File Number: DER2015/000123

Premises Bridgetown Waste Management Facility
Lot 903 on Plan 189961
Boyup Brook Road
BRIDGETOWN WA 6255

Date of Amendment 29/03/2018

Amendment

The Chief Executive Officer (CEO) of the Department of Water and Environment Regulation has amended the above licence in accordance with section 59 of the *Environmental Protection Act 1986* as set out in this Amendment Notice.

Date signed: 29 March 2018

Stephen Checker
MANAGER LICENCING (WASTE INDUSTRIES)
REGULATORY SERVICES (ENVIRONMENT)

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

Amendment Notice

This Notice is issued under 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.

Amendment Description

On 8 March 2018 the Shire of Bridgetown-Greenbushes (Licence Holder) submitted an application to amend the existing Licence requesting approval via licence condition to extend operation of the existing Liquid Waste Facility until 31 December 2018, pending the approval (currently in process) and construction of new liquid waste ponds. The Licensee does not propose construction of any additional infrastructure under this Amendment Notice.

The Licensee has submitted a separate application for the construction of the new liquid waste ponds.

Table 4 provides the amendment history for L6818/1997/11.

Table 1: Licence amendments

Instrument	Issued	Amendment
L6818/1997/11	03/05/2013	Licence re-issue
W5677/2014/1	23/07/2015	New works approval granted (additional cell)
W5667/2014/1	22/08/2016	Works approval amended (construction of cell 2)
L6818/1997/11	22/08/2016	Licence amendment (operation of cell 1 and leachate pond)
L6818/1997/11	09/02/2017	Amendment Notice 1 (extension to use Liquid Waste Facility until 31/03/18)
L6818/1997/11	29/03/2018	Amendment Notice 2 (extension to use Liquid Waste Facility until 31/12/18)

Risk Assessment

Table 1 - Risk assessment for the proposed amendments under operation

Activity	Potential emission	Potential receptors	Potential pathway	Potential impacts	Material risk	Reasoning
Category 61 – Liquid waste facility	Leachate: infiltration from the liquid waste pond	Groundwater Surface water Local soils within the Premises	Land and groundwater – direct infiltration into soil and groundwater. Surface water - Overland flow into residential properties (including dams) adjacent to landfill	Alteration to soil and /or vegetation. Alteration to groundwater that has the potential to disrupt ecological processes of groundwater with excess metals, heavy metals and nutrients Alteration to surface water that has the potential to disrupt ecological processes of surface water body excess metals, heavy metals and nutrients	Yes	<p>Leachate emissions such as metals, heavy metals and nutrients are expected to occur at the Liquid Waste Facility (LWF) as the ponds are not lined. The LWF is an inter-connected pond system located to the north and upslope of the historic landfill. The LWF is constructed using insitu unlined soils.</p> <p>Water balance calculations assessed under the licence amendment issued on 22 August 2016 indicate that liquid waste volumes discharged to the LWF are greater than those evaporated, which suggests leakage through the liner.</p> <p>Seepage of liquid waste from the ponds could result in the nutrients (nitrogen and phosphorus) and other contaminants (metals and heavy metals) entering the groundwater which could impact local groundwater quality and down gradient receptors (native vegetation, groundwater users, potential surface water expression). Any leachate from the LWF ponds would potentially migrate through down hydraulic gradient landfilled waste. Leachate could mobilise additional contaminants within the landfilled waste. The LWF is located ~250 and ~300 metres within the southern and eastern boundaries of the Premises. Surface water is adjacent to the Premises: a spring and agricultural dam are located ~250 metres east of the Premises boundary; an agricultural dam is located ~750 metres south of the Premises; and numerous dams are located from ~300 to ~900 meters in an arc extending west to south west of the Premises boundary. Minor watercourses originate within 500 meters of the Premises boundary to the south west, south and east. Local groundwater is found 1-4 mbgl and extends >20 mbgl deep. Groundwater may express as surface water down slope of the Premises. A spring is known to occur 250 metres east of the Premises boundary. No groundwater abstraction has been identified close to the Premises down hydraulic gradient.</p> <p>The LWF is understood to be constructed with insitu soils and not exceed a depth of 3-4 mbgl. No details are available of the pond liner construction standard. There is no information to suggest that the pond liner was treated in anyway suggesting that the LWF is wholly constructed from the surface laterite/ mottled layer. Visual observations support the assumption that the LWF was constructed by direct excavation into the insitu soil. Groundwater monitoring bores are not installed in locations that allow potential seepage emissions from the LWF to be differentiated from leachate arising from landfilled waste.</p> <p>The Licence Holder has advised that the extension will allow time for the Shire to fund and construct and alternate LWF.</p>

					<p>The Licence Holder was required under licence condition 4.1.1 to draft and submit a groundwater monitoring plan by 02/01/2018 and final landfill profile and post closure plan by 03/12/2018 which will aid in detection of any LWF leachate emissions and potential remediation actions.</p> <p>Based on the potential receptor, pathways and impacts and the Licence Holder controls, the Delegated officer considers that the consequence would be Moderate and the likelihood is Possible. Therefore the risk rating for leachate emissions is Medium.</p> <p>The Delegated Officer considers that potential risk of leachate emissions associated with the operation of the LWF (including the requested period of extension) is Medium. This is consistent with the risk assessment of 'Moderate' for the assessment detailed in the decision document for the current licence L6818/1997/11. Delegated Officer considers that amendment to change the operational date for the LWF is extended until 31 December 2018 as requested will not alter the risk profile of the premises.</p>
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Decision

The Delegated Officer has determined that an amendment be made to the Licence to extend the operational date of the LWF to 31 December 2018. This will allow sufficient time for the Licence Holder to finalise the approval (currently underway) for a new alternate site and close the existing LWF. The amendment notice allows operation of the LWF until 31 December 2018 and subsequently incorporates the amending of condition 1.2.7 to cover the LWF by 1 March 2019, which is consistent with the previous 2 month timeframe for cover permitted under the previous Amendment Notice 1.

The Delegated Officer considers the amended conditions as appropriate and in line with other premises as assessed across the State, and in accordance with DWER's regulatory approach.

The Delegated Officer has considered DWER's *Guidance Statement: Regulatory Principles*, *Guidance Statement: Setting Conditions* and *Guidance Statement: Risk Assessment* in granting this amendment, and does not consider that this amendment will impact the risk profile of the premises, which is currently considered as Moderate.

Amendment History

Instrument	Issued	Amendment
L6818/1997/11	29/04/2016	Licence amendment for the extension of the Licence duration to 10 June 2036.
L6818/1997/11	22/08/2016	Licence amendment to operate cell 1, include solid waste depot activities, address future operations and transfer groundwater monitoring and improvement conditions.
L6818/1997/11	9/02/2017	Licence amendment for the amendment of the Liquid Waste Facility operational date to 31 March 2018.
L6818/1997/11	29/03/2018	Licence amendment for the amendment of the Liquid Waste Facility operational date to 31 December 2018.

Licence Holder's Comments

The Licence Holder was provided with the draft Amendment Notice on 29 March 2018 for review and comment. The Licence Holder responded on the same day, waiving the reminder of the comment period and requesting the amendment be issued with no changes.

Amendment

- Condition 1.2.1 Table 1.2.1 is amended by the deletion of the text shown in strikethrough and the inclusion of the red text shown in underline below:

Table 1.2.1: Liquid waste acceptance		
Waste type	Quantity limit	Specification
Septage wastes	Combined total of up to 650 tonnes per annual period for wastes accepted under category 61 for disposal.	(i) Liquid waste must only be accepted to the Premises for discharge to the liquid waste facility pond at the discharge point depicted in Schedule 1 and labelled L1.
Wastes from grease traps		(ii) Liquid waste must not be accepted for discharge to the unlined liquid waste facility pond after 30 March 2018 <u>31 December 2018</u> .
Fire debris and wash water		

- Condition 1.2.7 is amended by the deletion of the text shown in strikethrough and the inclusion of the red text shown in underline below:

The Licensee must manage the liquid waste facility pond such that:

- the pond does not overtop;
- a minimum freeboard of three-hundred (300) millimetres is maintained
- stormwater runoff must not enter the pond or cause erosion of the pond embankments;
- vegetation does not grow in the pond embankment or the pond liner; and
- a cover of no less than 1000 mm of type 1 inert waste or clean fill must be placed over the entire liquid waste facility by ~~1 May 2018~~ 1 March 2019.

Appendix 1: Key Documents

	Document Title	In text ref	Availability
1	Licence L6818/1997/11 – Bridgetown Waste Management Facility	L6896/1997/10	accessed at http://www.dwer.wa.gov.au
2	DER, July 2015. <i>Guidance Statement: Regulatory principles.</i> Department of Environment Regulation, Perth.	DER 2015a	accessed at http://www.dwer.wa.gov.au
3	DER, October 2015. <i>Guidance Statement: Setting conditions.</i> Department of Environment Regulation, Perth.	DER 2015b	
4	DER, August 2016. <i>Guidance Statement: Licence duration.</i> Department of Environment Regulation, Perth.	DER 2016a	
5	DER, November 2016. <i>Guidance Statement: Risk Assessments.</i> Department of Environment Regulation, Perth.	DER 2016b	
6	DER, November 2016. <i>Guidance Statement: Decision Making.</i> Department of Environment Regulation, Perth.	DER 2016c	