



Licence Number	L8747/2013/1
Licence Holder	Shire of Boddington
File Number:	2013/001944-1
Premises	Boddington Refuse Disposal Site Lot 71 on Plan 242990 Robins Road BODDINGTON WA 6390
Date of Amendment	5 July 2019

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.

Steve Checker
MANAGER WASTE INDUSTRIES
REGULATORY SERVICES

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

Definitions and interpretation

Definitions

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

Table 1: Definitions

Term	Definition
AACR	Annual Audit Compliance Report
ACN	Australian Company Number
AER	Annual Environment Report
Amendment Notice 1	refers to this document
Category/ Categories/ Cat.	categories of Prescribed Premises as set out in Schedule 1 of the EP Regulations
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
EPA	Environmental Protection Authority
EP Act	<i>Environmental Protection Act 1986 (WA)</i>
EP Regulations	<i>Environmental Protection Regulations 1987 (WA)</i>
Existing Licence	The Licence issued under Part V, Division 3 of the EP Act and in force prior to the commencement of and during this Review
Licence Holder	Shire of Boddington
m ³	cubic metres
NEPM	National Environmental Protection Measure
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 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.

This notice is limited only to an amendment for Category 61. No changes to the aspects of the original Licence relating to Category 64 have been requested by the Licence Holder.

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

- *Guidance Statement: Regulatory Principles (July 2015)*
- *Guidance Statement: Setting Conditions (October 2015)*
- *Guidance Statement: Land Use Planning (February 2017)*
- *Guidance Statement: Licence Duration (August 2016)*
- *Guidance Statement: Decision Making (February 2017)*
- *Guidance Statement: Risk Assessment (February 2017)*
- *Guidance Statement: Environmental Siting (November 2016)*

Amendment description

The Licence Holder was granted Works Approval W5162/2012/1 on 28 June 2012 to authorise the construction of four new liquid waste ponds at the Boddington Refuse Disposal Site, to replace the original five ponds already onsite. Pond 1 was constructed and the Licence L8747/2013/1 amended to authorise operation of Pond 1. Additional ponds were not constructed due to a lack of funding, and the Works Approval subsequently expired on 01 July 2015.

The License Holder lodged an application to amend the Licence on 08 March 2019 requesting the authorisation to construct liquid waste pond 2. This Licence amendment request is unchanged from the works originally approved under W5162/2012/1.

The new liquid waste pond system is designed for a 72 hour, 1 in 100 year annual rainfall event. All new ponds will be lined with 2 mm HDPE liner to prevent seepage from the base of the pond to the underlying groundwater. The HDPE liner is the primary environmental barrier and will be overlaid by a thick geofabric cushion protection layer and a compacted 500 mm sacrificial layer of soil to allow desludging. The ponds will be constructed to a depth of 1.0 metres with a freeboard of 500 mm to allow for an extreme rainfall event and incidental stormwater will be diverted away from the ponds. The naturally occurring soil on site has a high clay content and located in an elevated area where the groundwater is at least 11 metres below natural ground level.

The future construction of Ponds 3 and 4 will be dependent on the need for additional facilities, if and when Ponds 1 and 2 are either offline for desludging or nearing capacity.

Amendment history

Table 2 provides the amendment history for L8747/2013/1

Table 2: Licence amendments

Instrument	Issued	Amendment
R1622/2007/1	27/04/2004	Category 89 Putrescible landfill site which was cancelled and replaced by L8747
L7670/1999/4	30/04/2004	Category 61 liquid waste facility and Category 64 Class II putrescible landfill site, expired 29/04/2005
W5162/2012/1	28/06/2012	Works Approval to allow construction of the liquid waste ponds
L8747/2013/1	04/07/2013	New application
L8747/2013/1	22/05/2014	Licence Amendment
L8747/2013/1	14/06/2019	Amendment Notice 1 to add Works Conditions for Liquid Waste Pond 2 and future Ponds 3 and 4

Infrastructure

The infrastructure to be installed at the Boddington Refuse Disposal Site is detailed in Table 3.

Table 3:

	Infrastructure: Prescribed Activity Category 61
1	<p>Construction of Liquid Waste Pond 2:</p> <ul style="list-style-type: none"> Cover an area of 900m²; To be lined with a 2 mm HDPE liner with a permeability of $\leq 1 \times 10^{-9}$ m/sec; Embankments adequately constructed to provide a freeboard of 500mm.
2	<p>Future construction of Liquid Waste Pond 3 and 4:</p> <ul style="list-style-type: none"> Cover an area of 920m²; To be lined with a 2 mm HDPE liner with a permeability of $\leq 1 \times 10^{-9}$ m/sec; Embankments adequately constructed to provide a freeboard of 500mm.
3	<p>Construction of stormwater drainage infrastructure to redirect uncontaminated stormwater away from the Liquid Waste Pond 2.</p>

Location and receptors

Table 4 below lists the relevant sensitive land uses in the vicinity of the Prescribed Premises which may be receptors relevant to the proposed amendment.

Table 4: Receptors and distance from activity boundary

Residential and sensitive premises	Distance from Prescribed Premises
Residential Premises	1.5km north of the Premises boundary.
Aboriginal Sites and Heritage Places	The Boddington Mining Area 09 (ID 4249) that contains artefacts and scatter, is located on top of the Premises location. The Boddington Mining Area 08 (ID 4248) that contains artefacts and scatter, is located 210m north of the Premises boundary.

Table 5 below lists the relevant environmental receptors in the vicinity of the Prescribed Premises which may be receptors relevant to the proposed amendment.

Table 5: Environmental receptors and distance from activity boundary

Environmental receptors	Distance from Prescribed Premises
Threatened and Priority Fauna	900m south-east of the Premises boundary: <ul style="list-style-type: none"> • Vulnerable – <i>Dasyurus geoffroii</i> (Western Quoll) • Endangered – <i>Calyptorhynchus</i> sp. 'white-tailed black cockatoo' • Special Conservation Interest (CD) – <i>Phascogale tapoatafa wambenger</i> (south-western brush-tailed phascogale) • Priority 4 – <i>Notamacropus irma</i> (western brush wallaby)
	2600m east of the Premises boundary: <ul style="list-style-type: none"> • Endangered – <i>Calyptorhynchus latirostris</i> (Carnaby's cockatoo)
	The Priority 4 listed <i>Notamacropus irma</i> (western brush wallaby) is located 1030m west of the Premises boundary.
Watercourses	<ul style="list-style-type: none"> • The Hotham River, a major non-perennial watercourse, is located 2100m north of the Premises boundary. • Two minor non-perennial watercourses are located 2790m east-north-east and 4040m south of the Premises Boundary.

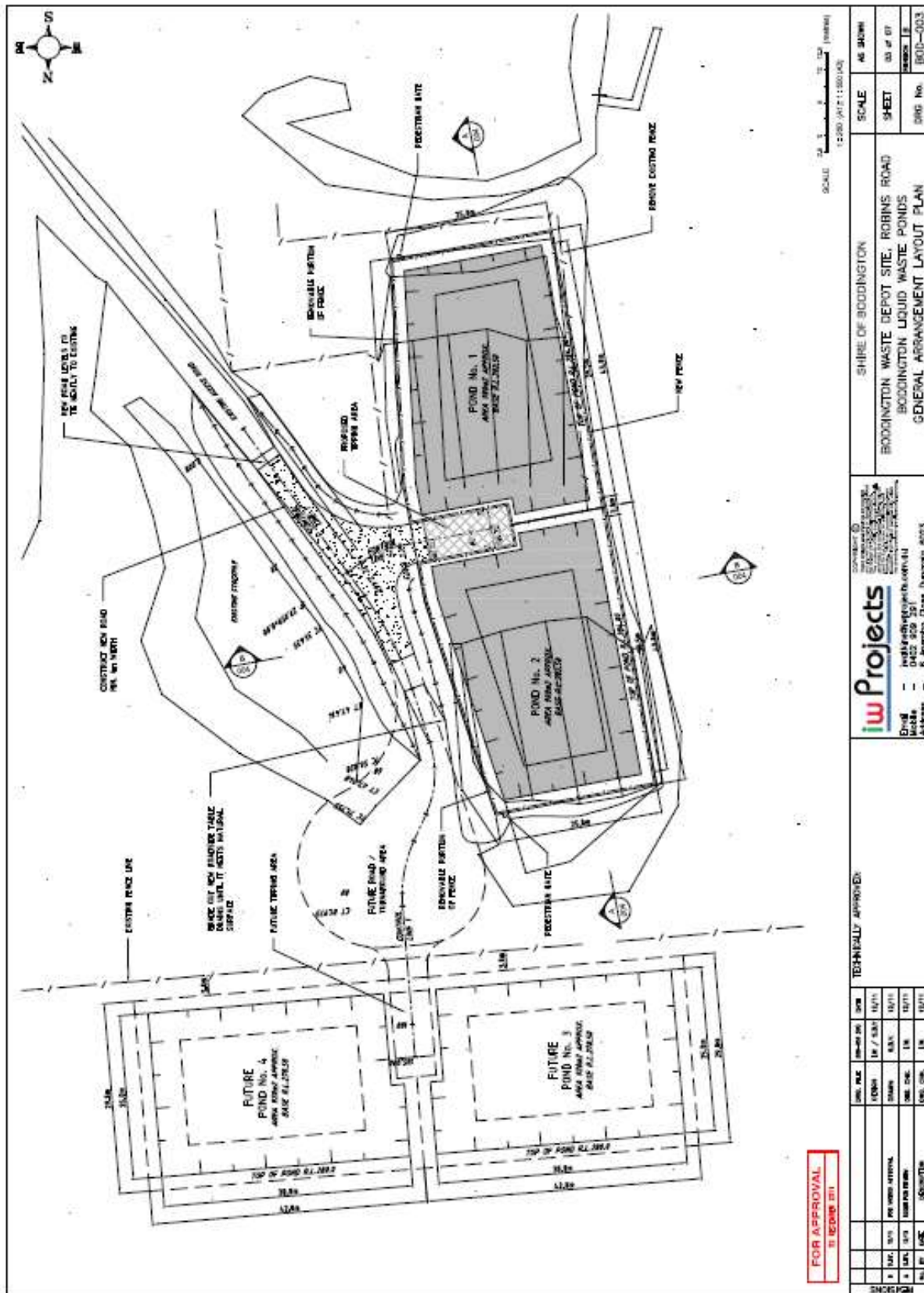


Figure 1: Boddington Refuse Disposal Site Liquid Waste Ponds layout

Risk assessment

Tables 6 and 7 below describe the Risk Events associated with the amendment consistent with the *Guidance Statement: Risk Assessments*. Both tables identify whether the emissions present a material risk to public health or the environment, requiring regulatory controls.

Table 6: Risk assessment for proposed amendments during construction

Risk Event					Consequence rating	Likelihood rating	Risk	Reasoning	
Source/Activities	Potential emissions	Potential pathway	Potential receptors	Potential adverse impacts					
Construction of Liquid Waste Ponds	Vehicle movements on unsealed roads	Noise	Air / wind dispersion	Residential premises 1.5km north	Amenity impacts	Minor	Unlikely	Rare	The Delegated Officer considers a separation distance of 1.5km sufficient to ensure dust and noise emissions will not significantly impact upon amenity. If any noise impacts arise, management under the Noise Regulations will be adequate. No further risk assessment is required.
	Construction of new ponds and infrastructure	Dust							
	Construction of new ponds and infrastructure	Spills of untreated and treated liquid waste	Overland flow Subsurface leaching	Surface water of the Hotham River, and two minor non-perennial watercourses	Surface water contamination	Minor	Unlikely	Rare	The Delegated Officer considers a separation distance of over 2.1km sufficient to ensure spills of untreated and treated liquid waste will not significantly impact upon surface waters. No further risk assessment is required.
Spills of hydrocarbons from vehicles and equipment		Direct discharge to land and surface waters	Surface water of the Hotham River, and two minor non-perennial watercourses	Surface water contamination	Minor	Unlikely	Rare	The Delegated Officer considers a separation distance of over 2.1km sufficient to ensure spills of hydrocarbons will not significantly impact upon surface waters. No further risk assessment is required.	

Table 7: Risk assessment for proposed amendments during operation

Risk Event					Consequence rating	Likelihood rating	Risk	Reasoning	
Source/Activities	Potential emissions	Potential pathway	Potential receptors	Potential adverse impacts					
Operation of Liquid Waste Ponds	Treatment of liquid waste	Odour	Air / wind dispersion	Residential premises 1.5km north	Amenity impacts	Minor	Unlikely	Rare	The Delegated Officer considers a separation distance of 1.5km sufficient to ensure odour emissions will not significantly impact upon amenity. No further risk assessment is required.
		Seepage of untreated and treated liquid waste from ponds	Overland flow Subsurface seepage	Vegetation adjacent to the Premises	Soil contamination inhibiting vegetation survival and growth	Moderate	Unlikely	Medium	The Delegated Officer considers lining of the new liquid waste ponds with HDPE will ensure seepage of untreated and treated liquid waste is minimised. To ensure construction occurs as specified, the Delegated Officer shall apply the Applicant's construction commitments as conditions on the Licence.
		Overtopping of ponds with untreated and treated liquid waste	Direct discharge to land and surface waters	Surface water of the Hotham River, and two minor non-perennial watercourses	Surface water contamination	Moderate	Unlikely	Medium	The Delegated Officer considers designing of the new liquid waste ponds to withstand a 72 hour, 1 in 100 year rainfall event, plus ensuring a 500mm freeboard is maintained, will ensure the risk of overtopping of ponds is minimised. To ensure construction occurs as specified, the Delegated Officer shall apply the Applicant's construction commitments as conditions on the Licence.

Decision

Licence Holder controls are conditioned on the Licence to ensure that construction of the ponds are HDPE lined with a permeability of $\leq 1 \times 10^{-9}$ m/sec and embankments are adequately constructed to provide a freeboard of 500mm. Conditions 1.4.1 to 1.4.3 have been added to the Licence to ensure construction works occur as specified.

Conditions 1.3.15 and 1.3.16 currently on the Licence capture operational requirements relating to the management of the liner and freeboard. No further operational conditions are required.

Licence Holder's comments

The Licence Holder was provided with the draft Amendment Notice on 20 May 2019. The Licence Holder did not provide any comments.

Amendment

- The Definitions section of the Licence is amended by insertion of the red text shown in underline below:
'CEO' for the purpose of correspondence means:
Director General
Department administering the Environmental Protection Act 1986
Locked Bag 10
JOONDALUP DC WA 6919
info@dwer.wa.gov.au
- The Licence is amended by insertion of the following Condition 1.4 and sub-conditions 1.4.1 to 1.4.4:

1.4 Infrastructure and equipment

- 1.4.1 The Licence Holder must install and undertake the Works for the infrastructure and equipment:
- specified in Column 1; and
 - to the requirements specified in Column 2; of Table 1.4.1 below.

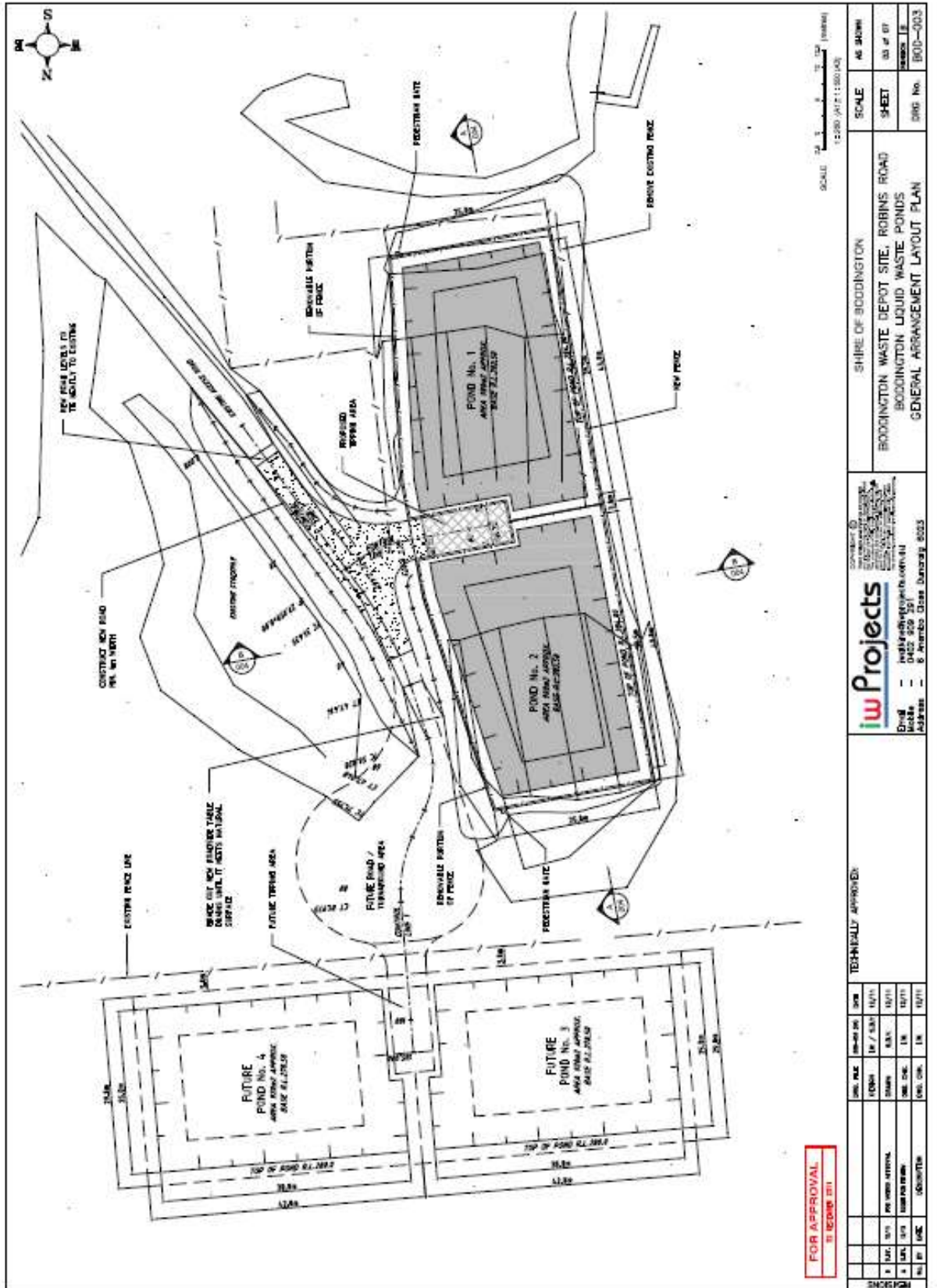
Table 1.4.1: Infrastructure and equipment requirements table

	Column 1	Column 2	Column 3
Item	Infrastructure	Requirements	Site Plan reference
1	Liquid Waste Pond 2	<ul style="list-style-type: none">Constructed to cover an approximate area of 900m²;To be free of leaks and defects and lined with a 2 mm HDPE liner with a permeability of $\leq 1 \times 10^{-9}$ m/sec;Embankments adequately constructed to provide a freeboard of 500mm.	As shown in Schedule 1: Maps Liquid Waste Ponds Map
2	Liquid Waste Pond 3 and 4:	<ul style="list-style-type: none">Constructed to cover an approximate area of 920m²;To be free of leaks and defects and lined with a 2 mm HDPE liner with a permeability of $\leq 1 \times 10^{-9}$ m/sec;Embankments adequately constructed to provide a freeboard of 500mm	As shown in Schedule 1: Maps Liquid Waste Ponds Map
3	Stormwater drainage infrastructure	To redirect uncontaminated stormwater away from all Liquid Waste Ponds.	

- 1.4.2 The Licence Holder must not depart from the requirements specified in Column 2 of Table 1.4.1 except:
- (a) where such departure does not increase risks to public health, public amenity or the environment; and
 - (b) all other Conditions in this Licence are still satisfied.
- 1.4.3 Subject to Condition 1.4.1, within 30 days of the completion of the Works specified in Column 1 of Table 1.4.1, the Licence Holder must provide to the CEO an engineering certification from a suitably qualified professional confirming each item of infrastructure or component of infrastructure specified in Column 1 of Table 1.4.1 has been constructed with no material defects and to the requirements specified in Column 2 of Table 1.4.1.
- 1.4.4 Where a departure from the requirements specified in Column 2 of Table 1.4.1 occurs and is of a type allowed by Condition 1.4.2, the Licence Holder must provide to the CEO a description of, and explanation for, the departure along with the certification required by Condition 1.4.3.
3. The Licence is amended by the addition of the following Map in Schedule 1: Maps.

Liquid Waste Ponds Map

The Liquid Waste Ponds are shown in the map below.



Appendix 1: Key documents

	Document title	In text ref	Availability
1	Licence L8747/2013/1 – Boddington Refuse Disposal Site	L8747/2013/1	accessed at www.dwer.wa.gov.au
2	DER, July 2015. <i>Guidance Statement: Regulatory principles.</i> Department of Environment Regulation, Perth.	DER 2015a	accessed at 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	