



Application for Licence Amendment

Part V Division 3 of the *Environmental Protection Act 1986*

Licence Number	L6756/1996/11
Licence Holder	Shire of Waroona
File Number	2010/002299-1~1
Premises	Buller Road Refuse Disposal Site 702 Buller Road, Waroona Legal description – Lot 1701 on Plan 214632 As defined by the Premises maps attached to the Revised Licence
Date of Report	23 July 2021
Decision	Revised licence granted

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Manager, Waste Industries

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

Table of Contents

1. Decision summary	1
2. Scope of assessment	1
2.1 Regulatory framework	1
2.2 Application summary	1
3. Risk assessment	2
3.1 Source-pathways and receptors	2
3.1.1 Emissions and controls	2
3.1.2 Receptors	3
3.2 Risk ratings	2
4. Consultation	5
5. Conclusion	5
5.1 Summary of amendments	5
References	7
Appendix 1: Summary of Licence Holder’s comments on risk assessment and draft conditions	8
Appendix 2: Application validation summary	9
Table 1: Proposed design or throughput capacity changes	1
Table 2: Licence Holder controls	2
Table 3: Sensitive human and environmental receptors and distance from prescribed activity	4
Table 4. Risk assessment of potential emissions and discharges from the Premises during operation	3
Table 5: Consultation	5
Table 6: Summary of licence amendments	5
Figure 1: Distance to sensitive receptors	1

1. Decision summary

Licence L6756/1996/11 is held by the Shire of Waroona (Licence Holder) for the Buller Road Refuse Disposal Site (the Premises), located at Lot 1701 Buller Road, Waroona.

This Amendment Report documents the assessment of potential risks to the environment and public health from proposed changes to the emissions and discharges during operation of the Premises. As a result of this assessment, Revised Licence L6756/1996/11 has been granted.

The Revised Licence has been granted in a new format with existing conditions being transferred, but not reassessed, to the new format.

2. Scope of assessment

2.1 Regulatory framework

In completing the assessment documented in this Amendment Report, the department has considered and given due regard to its Regulatory Framework and relevant policy documents which are available at <https://dwer.wa.gov.au/regulatory-documents>.

2.2 Application summary

On 24 March 2021, the Licence Holder submitted an application to the department to amend Licence L6756/1996/11 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act). The Licence Holder sought to increase Category 64 capacity to 10,000 tonnes per year.

A detailed site investigation was undertaken in 2018 by 360 Environmental Pty Ltd to determine the site's contamination risk as required under the *Contaminated Sites Act 2003*. The investigation indicated a leachate plume and hydrocarbon plume are present in the groundwater beneath the site (ASK, 2021).

The Shire is seeking to reduce the potential for leachate emissions by bringing forward progressive landfill capping. Currently the volume of waste received at the site is relatively low (2,961.6 tonnes in 2020), meaning that it will take significant time to fill the remaining landfill stages to the final height and undertake capping.

The Licence Holder has advised that progressive capping of the landfill will be able to occur sooner by increasing the annual quantity of waste received. As such, the Shire recently secured an agreement with a nearby local government to receive its mixed waste from transfer station operations for disposal. Most of the waste received will be bulky mixed waste with low putrescible waste content as the neighbouring Shire has a kerbside service that receives all domestic putrescible waste for that Shire (ASK, 2021).

This amendment is limited only to changes to Category 64 activities from the Existing Licence. No changes to the aspects of the existing Licence relating to Category 61 have been requested by the Licence Holder.

Table 1 below outlines the proposed changes to the existing Licence.

Table 1: Proposed design capacity changes

Category	Current design capacity	Proposed design capacity	Description of proposed amendment
64	5,000 tonnes per year	10,000 tonnes per year	Proposed doubling of capacity to enable landfill capping to occur sooner to minimise leachate emissions.

3. Risk assessment

The department assesses the risks of emissions from prescribed premises and identifies the potential source, pathway and impact to receptors in accordance with the *Guidance Statement: Risk Assessments* (DER 2017).

To establish a Risk Event there must be an emission, a receptor which may be exposed to that emission through an identified actual or likely pathway, and a potential adverse effect to the receptor from exposure to that emission.

3.1 Source-pathways and receptors

3.1.1 Emissions and controls

The key emissions and associated actual or likely pathway during premises operation which have been considered in this Amendment Report are detailed in Table 2 below. Table 2 also details the proposed control measures the Licence Holder has proposed to assist in controlling these emissions, where necessary.

Table 2: Licence Holder controls

Emission	Sources	Potential pathways	Proposed controls
Dust	<p>Transport of waste loads within the Premises prior to unloading</p> <p>Unloading of waste at the landfill tipping area</p> <p>Covering of waste</p> <p>Vehicle movements on unsealed ground/roads</p>	Air/windborne pathway	<ul style="list-style-type: none"> Asbestos is accepted either wrapped or in a manner that prevents the release of fibres during receipt. Waste is placed in a defined trench or area enclosed in a bund, Adherence to tipping heights and area and minimum covering requirements in accordance with licence Water cart on site and used to suppress dust if required. Excavation works not undertaken during periods of high wind speeds where prevailing winds are likely to impact on surrounding sensitive receptors.
Noise	Vehicle movement and machinery operation	Air/windborne pathway	<ul style="list-style-type: none"> The current landfilling area is surrounded by a buffer of native vegetation. Noise impacts are minimised through limiting the hours of work to weekdays between 8:00am and 3:00pm which are within the daytime hours set out in the Noise Regulations. Machinery only operated as required. All vehicle noise reduction measures will be maintained in good working order.
Odour	Acceptance, burial and decomposition of wastes	Air/windborne pathway	<ul style="list-style-type: none"> Waste is placed in a defined trench or within an area enclosed by earthen bunds. The Tipping Area is restricted to a maximum linear length of 30 metres. Waste in the Tipping Area is covered on a minimum weekly basis with Cover

Emission	Sources	Potential pathways	Proposed controls
			<p>Material so that no waste is left exposed.</p> <ul style="list-style-type: none"> The Tipping Area is no greater than two metres in height. Increasing waste acceptance thresholds to allow capping of waste cells will be undertaken sooner as waste will be able to be brought up to height to allow capping to be undertaken.
Windblow waste	<p>Transport of waste loads within the Premises prior to unloading</p> <p>Unloading of waste at the landfill tipping area</p> <p>Waste within the active landfill cell prior to covering</p>	Air/windborne pathway	<ul style="list-style-type: none"> Waste will be pushed up regularly and thereby compacted, limiting potential to become airborne. Adherence to tipping heights and area and minimum covering requirements in accordance with licence Wind-blown waste will be managed through adequate fencing and operations to prevent litter leaving the site boundary.
Leachate	Acceptance, burial and decomposition of wastes	Seepage to soils and groundwater	<ul style="list-style-type: none"> Only accepting waste in accordance with licence. Maintaining undisturbed groundwater separation of 3m between base of waste disposal area and highest groundwater level Clean stormwater is directed away from any areas where waste is present. Landfilling occurs in distinct stages, to reduce the potential size of the open/active waste body and therefore leachate generation potential. Additional groundwater monitoring bores installed to monitor impacts. Groundwater monitoring undertaken in accordance with licence. Progressive capping (Increasing waste acceptance thresholds to allow capping of waste cells will be undertaken sooner as waste will be able to be brought up to height to allow capping to be undertaken.)

3.1.2 Receptors

In accordance with the *Guidance Statement: Risk Assessment* (DER 2017), the Delegated Officer has excluded employees, visitors and contractors of the Licence Holder's from its assessment. Protection of these parties often involves different exposure risks and prevention strategies, and is provided for under other state legislation.

Table below provides a summary of potential human and environmental receptors that may be impacted as a result of activities upon or emission and discharges from the prescribed premises (*Guidance Statement: Environmental Siting* (DER 2016)).

Table 3: Sensitive human and environmental receptors and distance from prescribed activity

Human receptors	Distance from prescribed activity
Residential premises	~220m south east of the Premises boundary ~480m south west of the Premises boundary
Environmental receptors	Distance from prescribed activity
Multiple use category wetland, palusplain	Adjacent to eastern boundary of the Premises
Conservation category wetland, sumpland	~90m north of the Premises
Buller Nature Reserve	Adjacent to southern boundary of the Premises
Peel Harvey Environmental Protection Policy area	Premises located within policy area
Threatened Ecological Community – Banksia Dominated Woodlands of the Swan Coastal Plain	Mapped within, and adjacent to, the Premises boundary
Murray Groundwater Area – area proclaimed under the Right in Water and Irrigation Act 1914	Premises located within proclaimed area
Major surface water drain	~140m east of the Premises boundary
Groundwater	Depth to groundwater ~13-18m
Groundwater bores - beneficial use	~900m south east of the Premises boundary



Legend

- 4. Geomorphic Wetlands - Swan Coastal Plain (Management)**
- Conservation
 - Resource Enhancement
 - Multiple Use
 - Not Assessed
 - Not Applicable
- 9. DBCA**
- Legislated Tenure**
- National Park
 - Nature Reserve
 - Conservation Park
 - Section 5(1)(g) Reserve
 - Section 5(1)(h) Reserve
 - State Forest
 - Timber Reserve
 - Marine Park
 - Marine Nature Reserve
 - Marine Management Area
 - SCRM ACT - River Reserve
 - Section 34A Freehold
 - Crown Freehold - Dept Managed
 - UCL - Managed Under Section 33(2)
 - Rottnest Island Authority Reserve
 - Botanic Gardens and Parks Auth. Reserve
 - Zoological Parks Authority

Notes

Author:
Recipient:

0.6 0 0.32 0.6 Kilometers

WGS_1984_Web_Mercator_Auxiliary_Sphere
© Government of Western Australia, Department of Water and Environmental Regulation.

This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.

THIS MAP IS NOT TO BE USED FOR NAVIGATION

Figure 1: Sensitive receptors

Licence: L6756/1996/11

3.2 Risk ratings

Risk ratings have been assessed in accordance with the *Guidance Statement: Risk Assessments* (DER 2017) for those emission sources which are proposed to change and takes into account potential source-pathway and receptor linkages as identified in Section 3.1. Where linkages are in-complete they have not been considered further in the risk assessment.

Where the Licence Holder has proposed mitigation measures/controls (as detailed in Section 3.1), these have been considered when determining the final risk rating. Where the Delegated Officer considers the Licence Holder's proposed controls to be critical to maintaining an acceptable level of risk, these will be incorporated into the licence] as regulatory controls.

Additional regulatory controls may be imposed where the Licence Holder's controls are not deemed sufficient. Where this is the case the need for additional controls will be documented and justified in Table 4.

Table 4. Risk assessment of potential emissions and discharges from the Premises during operation

Risk Event					Risk rating ¹ C = consequence L = likelihood	Licence Holder's controls sufficient?	Conditions ² of licence	Justification for regulatory controls
Source/Activities	Potential emission	Potential pathways and impact	Receptors	Licence Holder's controls				
Operation								
Increased acceptance and burial of waste, including the additional deliveries and increased movement of machinery at the premises.	Dust	Air/windborne pathway causing impacts to health and amenity	Closest residences located 200 m south east of the premises. Buller Road Nature Reserve located adjacent southern boundary of the premises.	Refer to Section 3.1	C = Minor L = Unlikely Medium Risk	Y	Conditions 1, 3, 9 and 13	Increased waste acceptance will see an increase in the amount of vehicle and equipment movement at the Premises. The existing conditions are considered appropriate to manage the risk of dust and noise emissions.
	Noise	Air/windborne pathway causing impacts to health and amenity	Closest residences located 200 m south east of the premises.	Refer to Section 3.1	C = Minor L = Unlikely Medium Risk	Y	Condition 3	
	Odour	Air/windborne pathway causing impacts to health and amenity	Closest residences located 200 m south east of the premises.	Refer to Section 3.1	C = Minor L = Unlikely Medium Risk	Y	Conditions 1, 3, 9 and 10	The proposed waste acceptance increase does not alter the final volume of each landfill cell as assessed though previous applications.
	Windblow waste	Air/windborne pathway causing impacts to amenity	Buller Road Nature Reserve located adjacent southern boundary of the premises.	Refer to Section 3.1	C = Minor L = Unlikely Medium Risk	Y	Conditions 3, 5 and 9	The existing conditions are considered appropriate to manage the risk of windblown waste impacting receptors.
	Leachate	Infiltration through soil	Peel Harvey Environmental	Refer to	C = Moderate	Y	Conditions 3, 7, 9 and	The proposed waste acceptance increase

Licence: L6756/1996/11

Risk Event					Risk rating ¹	Licence Holder's controls sufficient?	Conditions ² of licence	Justification for regulatory controls
Source/Activities	Potential emission	Potential pathways and impact	Receptors	Licence Holder's controls	C = consequence L = likelihood			
		profile to groundwater causing potential impacts on ecological values and beneficial uses associated with quality of water in the aquifer	Protection area. Groundwater dependent threatened ecological community located within and adjacent to the premises. Groundwater at 13-18m	Section 3.1	L = Possible Medium Risk		16 <u>Condition 1</u>	does not alter the final volume of each landfill cell as assessed through previous applications. As such, leachate emissions associated with the proposed amendment are likely to be similar to those assessed previously. A limit has been placed on the amount of putrescible waste (municipal and vegetative waste) permitted to be landfilled each year to ensure that leachate emissions are not increased. The application was referred to the department's Contaminated Sites Branch who advised that as long as a limit on putrescible waste remains in place, then the increased intake of inert waste has the benefit of bringing forward landfill closure thus reducing leachate volume entering groundwater.

Note 1: Consequence ratings, likelihood ratings and risk descriptions are detailed in the *Guidance Statement: Risk Assessments* (DER 2017).

Note 2: Proposed Licence Holder's controls are depicted by standard text. **Bold and underline text** depicts additional regulatory controls imposed by department.

4. Consultation

Table provides a summary of the consultation undertaken by the department.

Table 5: Consultation

Consultation method	Comments received	Department response
Department of Biodiversity, Conservation and Attractions (DBCA) advised of proposal (21/05/2021)	Letter received via email on 25 June 2021 advising that it's DBCA's expectation that DWER will ensure the proposed licence amendment does not impact nearby bushland and wetland areas.	Noted
Public Stakeholders advised of proposal via letter (21/05/2021)	One comment was received supporting the short-term increase in waste acceptance to allow for cell closure and capping, but suggesting that once this outcome is reached, waste acceptance should be scaled back to waste from local ratepayers only.	Noted. Whilst DWER is not able to set direction for future waste sources that may be accepted by the licence holder, the intent of the received submission is considered to have been communicated to the Licence Holder via this table.
Licence Holder was provided with draft amendment on 2 July 2021	Comments received via email on 19 July 2021. Refer to Appendix 1 for a summary of comments.	Refer to Appendix 1

5. Conclusion

Based on the assessment in this Amendment Report, the Delegated Officer has determined that a Revised Licence will be granted, subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

5.1 Summary of amendments

Table provides a summary of the proposed amendments and will act as record of implemented changes. All proposed changes have been incorporated into the Revised Licence as part of the amendment process.

Table 6: Summary of licence amendments

Condition no.	Proposed amendments
1.1.1 and 1.1.2 Definition	Definitions moved to the back of the Licence (Table 8)
3.1.1	Changes to groundwater monitoring requirements to include 3 additional off-site wells and changes to parameter suite.
1.1.3 Australian or other standard	Redundant condition removed.
1.2.1 onwards	All condition and table numbers updated to current licence format.

Condition no.	Proposed amendments
Revised condition 1 (Table 1)	Annual limit of waste increased to 10,000 tonnes A quantity limit has been added for putrescible waste.
Revise condition 16 (Table 5)	Location updated to include reference to Figure 2 in Schedule 1 New monitoring bores added
Improvement conditions	Conditions removed as evidence has been provided that the conditions have been met.
Revised condition 19	Condition updated to align with current wording
Figure 2 of Schedule 1	New map added to depict the location of all monitoring bores.

References

1. ASK 2021, Attachment 3B Proposed Activities: Licence Amendment to Increase Approved Premises Production or Design Capacity.
2. Department of Environment Regulation (DER) 2016, *Guidance Statement: Environmental Siting*, Perth, Western Australia.
3. DER 2017, *Guidance Statement: Risk Assessments*, Perth, Western Australia.
4. DER 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
5. DWER 2019, *Industry Regulation Guide to Licensing*, Perth, Western Australia.

Appendix 1: Summary of Licence Holder's comments on risk assessment and draft conditions

Condition	Summary of Licence Holder's comment	Department's response
1, Table 1	Licence Holder requested to include municipal waste to the putrescible waste types to cover the general waste kerbside collection bins for the residents of the shire of Waroona.	The Delegated Officer notes this requested and has updated the condition accordingly.
14	In regards to monitoring of inputs and outputs the Licence Holder advised that they conducted an audit of putrescible waste being accepted from the Shire of Murray to be able to determine a breakdown of the waste. The breakdown estimated that 15% was food/ organic and the remaining 85% was bulk mixed waste. The Licence Holder asked if the department would accept this as a measuring method.	The Delegated Officer notes that a waste audit has been conducted and has asked the Licence Holder to submit this information in the annual report to identify how the inputs were determined.
Schedule 1	The Licence Holder pointed out that there was a slight discrepancy between the landfill area indicated in Figures 1 and 3.	The Delegated Officer notes that the maps are slightly different owing to one (Figure 1) being a freehand drawn map produced by the department and the other (Figure 3) being a surveyed drawing. The department will update the maps in a future amendment once more accurate data (shapefile or coordinates) are available. The definition of Active Landfill Area has been amended to include the word 'indicative'.

Appendix 2: Application validation summary

SECTION 1: APPLICATION SUMMARY (as updated from validation checklist)				
Application type				
Works approval	<input type="checkbox"/>			
Licence	<input type="checkbox"/>	Relevant works approval number:		None <input type="checkbox"/>
		Has the works approval been complied with?	Yes <input type="checkbox"/> No <input type="checkbox"/>	
		Has time limited operations under the works approval demonstrated acceptable operations?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	
		Environmental Compliance Report / Critical Containment Infrastructure Report submitted?	Yes <input type="checkbox"/> No <input type="checkbox"/>	
		Date Report received:		
Renewal	<input type="checkbox"/>	Current licence number:		
Amendment to works approval	<input type="checkbox"/>	Current works approval number:		
Amendment to licence	<input checked="" type="checkbox"/>	Current licence number:	L6756/1996/11	
		Relevant works approval number:	N/A	<input checked="" type="checkbox"/>
Registration	<input type="checkbox"/>	Current works approval number:	None	<input type="checkbox"/>
Date application received	24/03/2021			
Applicant and Premises details				
Applicant name/s (full legal name/s)	Shire of Waroona			
Premises name	Buller Road Refuse Disposal Site			
Premises location	702 Buller Road, Waroona, WA			
Local Government Authority	Shire of Waroona			
Application documents				
HPCM file reference number:	2010/002299-1~1			
Key application documents (additional to application form):	Supporting documentation: Attachment 3B proposed activities			
Scope of application/assessment				
Summary of proposed activities or changes to existing operations.	Increase Category 64 capacity to 10,000tpa from 5,000tpa			

Category number/s (activities that cause the premises to become prescribed premises)

Table 1: Prescribed premises categories

Prescribed premises category and description	Assessed production or design capacity	Proposed changes to the production or design capacity
Category 64: Class II putrescible landfill	5,000tpa	10,000tpa
Category 61: Liquid waste facility	850tpa	n/a

Legislative context and other approvals

Has the applicant referred, or do they intend to refer, their proposal to the EPA under Part IV of the EP Act as a significant proposal?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Referral decision No: Managed under Part V <input type="checkbox"/> Assessed under Part IV <input type="checkbox"/>
Does the applicant hold any existing Part IV Ministerial Statements relevant to the application?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Ministerial statement No: EPA Report No:
Has the proposal been referred and/or assessed under the EPBC Act?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Reference No:
Has the applicant demonstrated occupancy (proof of occupier status)?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Certificate of title <input type="checkbox"/> General lease <input type="checkbox"/> Expiry: Mining lease / tenement <input type="checkbox"/> Expiry: Other evidence <input type="checkbox"/> Expiry:
Has the applicant obtained all relevant planning approvals?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	Approval: Expiry date: If N/A explain why?
Has the applicant applied for, or have an existing EP Act clearing permit in relation to this proposal?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	CPS No: N/A No clearing is proposed.
Has the applicant applied for, or have an existing CAWS Act clearing licence in relation to this proposal?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Application reference No: N/A Licence/permit No: N/A No clearing is proposed.
Has the applicant applied for, or have an existing RIWI Act licence or permit in relation to this proposal?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Application reference No: Licence/permit No: Licence / permit not required.

<p>Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the EP Act)?</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	<p>Name: N/A Type: Has Regulatory Services (Water) been consulted? Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Regional office:</p>
<p>Is the Premises situated in a Public Drinking Water Source Area (PDWSA)?</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	<p>Name: N/A Priority: P1 / P2 / P3 / N/A Are the proposed activities/ landuse compatible with the PDWSA (refer to WQPN 25)? Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/></p>
<p>Is the Premises subject to any other Acts or subsidiary regulations (e.g. <i>Dangerous Goods Safety Act 2004, Environmental Protection (Controlled Waste) Regulations 2004, State Agreement Act xxxx</i>)</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>	<p>Environmental Protection (Controlled Waste) Regulations 2004 – controlled waste is accepted at the premises (K210 and K110)</p>
<p>Is the Premises within an Environmental Protection Policy (EPP) Area?</p>	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>	<p>Located within the Peel Harvey Protection Policy Area</p>
<p>Is the Premises subject to any EPP requirements?</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	
<p>Is the Premises a known or suspected contaminated site under the <i>Contaminated Sites Act 2003</i>?</p>	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>	<p>Classification: possibly contaminated – investigation required (PC–IR) Date of classification: 30/08/2017</p>