Amendment Report

Application for Licence Amendment

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

Licence Number	L8889/2015/2
Licence Holder	Eastern Metropolitan Regional Council
File Number	DER2015/000777-1
Premises	Red Hill Waste Management Facility Toodyay Road, RED HILL Legal description – Lot 1 on Diagram 15239, Lot 2 on Diagram 68630, Lot 11 on Diagram 69105 and Lot 12 on Deposited Plan 26468 As defined by the Premises map attached to the Revised Licence
Date of Report	17 July 2023
Decision	Revised licence granted

Marko Pasalich
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MANAGER WASTE INDUSTRIES
REGULATORY SERVICES
an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

Table of Contents

1. Decision summary

Licence L8889/2015/2 is held by the Eastern Metropolitan Regional Council (Licence Holder) for the Red Hill Waste Management Facility (the Premises), located at Lot 1 on Diagram 15239, Lot 2 on Diagram 68630, Lot 11 on Diagram 69105 and Lot 12 on Deposited Plan 26468, Red Hill.

This Amendment Report documents the assessment of potential risks to the environment and public health from proposed changes to the emissions and discharges during the operation of the Premises. As a result of this assessment, Revised Licence L8889/2015/2 has been granted.

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 29 March 2023, the Licence Holder submitted an application to the department to amend Licence L8889/2015/2 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act). The following amendments are being sought:

- Installation of enclosed high temperature flares (model HOFGAS-IFL4c) instead of the LMS 7000 Series specified in the licence;
- Permission to accept all Household Hazardous Waste (HHW) materials under the HHW Program. In addition, the licence holder is also seeking to increase the volume of hazardous waste material that can be accepted, from 50 to 500 tonnes per annum;
- Infrastructure requirements relating to the waste oil storage tank;
- Inclusion of the Interim FOGO Facility Hardstand currently operating through Time Limited Operations (TLO) under Works Approval W6613/2021/1;
- Acceptance of an additional 12,000 tpa of (FOGO) for a total of 22,000 tpa. The licence holder proposes to conversely reduce the acceptance limit for green waste by 12,000 tonnes per annum;
- Increase the timeframe for the storage and processing of FOGO waste at the Stage 1 FOGO hardstand;
- Removal of the requirement for ambient air monitoring for pole-waste as the initial 12-month period has passed; and
- Excise a portion of the prescribed premises for a proposed development by another operator.

2.3 Part IV of the EP Act

The premises is currently subject to five Ministerial Statements (MS) under Part IV of the EP Act. In regulating the premises under Part V, Division 3 of the EP Act, DWER will seek to avoid duplication of requirements imposed under Part IV. Pursuant to section 59B(7) of the EP Act, DWER will also not amend a Part V licence that is contrary to, or otherwise than in

accordance with, an implementation agreement or decision.

A summary of the respective Ministerial Statements is provided below:

- MS 274 (15 July 1992) and MS 1140 (1 July 2020) – Relate to the Red Hill Waste Management Facility Extension;
- MS 462 (21 November 1997) – Relates to the establishment of Class IV waste disposal cells at the existing Red Hill Waste Management Facility; and
- MS 976 (9 July 2014), MS 1092 (5 March 2019) and MS 1122 (20 January 2020) – Relate to the proposal to construct and operate a resource recovery facility within the existing Red Hill Waste Management Facility, for the processing of waste to produce energy, using either anaerobic digestion or gasification technology.

The proposed licence amendment does not propose to alter or duplicate requirements covered under these existing Statements.

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 1 below. Table 1 also details the proposed control measures the Licence Holder has proposed to assist in controlling these emissions, where necessary.

Table 1: Licence Holder controls

Emission	Sources	Potential pathways	Proposed controls
Construction			
Dust	Installation of landfill gas flares	Air/windborne pathway	- Speed limit controls are adopted across the Site. - A water cart will be used as required to prevent dust emissions. - Site operators will use appropriate PPE as required to manage potential impacts from dust emissions.
Noise	Installation of landfill gas flares	Air/windborne pathway	- All trucks and mobile equipment to be fitted with broadband noise reversing alarms to minimise the impact from vehicle reversing alarms. - Speed limit controls are adopted across the Site.

Emission	Sources	Potential pathways	Proposed controls
			- All equipment and plant will be maintained in good working condition. - Operating hours will generally be limited to between 8am to 4pm Monday to Saturday and 10am to 4pm Sunday. - Staff and visitors will be provided with appropriate PPE to mitigate any noise impacts associated with the construction and operation. - Operations will comply with the *Environmental Protection (Noise) Regulations 1997*.
Operation			
Potentially contaminated surface water and leachate	HHW storage	Overland runoff and seepage to groundwater	- Existing licence controls. - The HHW Compound layout is surrounded by a lockable perimeter fence and CCTV cameras. - There is a sump located in the centre of the HHW Shed to collect any spills within the building and ensure that they are not released to the environment. - The licence holder records all HHW accepted and stored at the Site using an electronic manifest. - The waste oil storage tank is inspected by staff daily and a spill kit is located nearby to ensure that any spills can be immediately cleaned. - As the waste oil storage tank is located near the Site's community drop-off location, it is continually monitored by Site staff. - The waste oil storage tank is regularly pumped out by a licensed liquid waste contractor as required.
Fire incident – particulates and fire water	HHW storage	Air/windborne pathway and overland runoff	- Existing licence controls.
Potentially contaminated surface water and leachate	Interim FOGO Facility Hardstand	Overland runoff and seepage to groundwater	- Table 1 of Works Approval W6613/2021/1. - Includes Clay liner achieving a coefficient of permeability equal to or less than $1x10^{-9}$ m/s and compacted to at least 95% maximum dry density and leachate drain lined with a 2 mm high density polyethylene (HDPE) geomembrane liner overlain by a cushion geotextile.

Emission	Sources	Potential pathways	Proposed controls
Potentially contaminated surface water and leachate	Stage 1 FOGO Hardstand	Overland runoff and seepage to groundwater	- Controls specified in Table 2 of Licence L8889/2015/2. - Includes bunding to divert stormwater run-off from entering the hardstand, bunded and maintained to contain leachate and drain it to the Stage 1 area. - FOGO leachate sump and graded and maintained to prevent pooling of leachate and achieve drainage to the Stage 1 FOGO leachate sump.
Odour	Interim FOGO Facility Hardstand and Stage 1 FOGO Hardstand	Air/windborne pathway	- Consideration of meteorological conditions during material handling. - Regular maintenance and monitoring of the leachate treatment system. - A complaints register is maintained to ensure that the community can express their comments or concerns (provides a feedback loop to EMRC). - Odour levels across the Site will be continuously monitored by staff and action taken, if required. - The licence holder has recently moved FOGO operations from the Stage 2 FOGO processing location (500m from nearest sensitive receptor) to the Stage 1 FOGO Hardstand (800m from nearest sensitive receptor), further from sensitive receptors, to minimise potential odour impacts.
Fire incident – particulates and fire water	Interim FOGO Facility Hardstand and Stage 1 FOGO Hardstand	Air/windborne pathway and overland runoff	- Existing licence controls and controls assessed during the works approval W6613/2021/1 determination.
Vectors and vermin	Interim FOGO Facility Hardstand and Stage 1 FOGO Hardstand	Air/windborne pathway	- Existing licence controls and controls assessed during the works approval W6613/2021/1 determination.
Dust	Interim FOGO Facility Hardstand and Stage 1 FOGO Hardstand	Air/windborne pathway	- Existing licence controls and controls assessed during the works approval W6613/2021/1 determination.
Noise	Interim FOGO Facility Hardstand and Stage 1 FOGO Hardstand	Air/windborne pathway	- Existing licence controls and controls assessed during the works approval W6613/2021/1 determination.
Point source air emissions	Operation of landfill gas flare	Air/windborne pathway	- Controls as assessed in the 26 June 2020 amendment.

Emission	Sources	Potential pathways	Proposed controls
			- The HOFGAS Flare allows for a 99.9% destruction efficiency for landfill gas which occurs at a combustion temperature between 1,000ºC and 1,200ºC. - The flare is proposed to be located approximately 40 m southwest of the original proposed location, an additional 40 m from the nearest sensitive receptor.
Noise	Operation of landfill gas flare	Air/windborne pathway	- Controls as assessed in the 26 June 2020 amendment. - The flare is proposed to be located approximately 40 m southwest of the original proposed location, an additional 40 m from the nearest sensitive receptor.
Odour	Operation of landfill gas flare	Air/windborne pathway	- Controls as assessed in the 26 June 2020 amendment. - The HOFGAS Flare allows for a 99.9% destruction efficiency for landfill gas which occurs at a combustion temperature between 1,000ºC and 1,200ºC. - The flare is proposed to be located approximately 40 m southwest of the original proposed location, an additional 40 m from the nearest sensitive receptor.

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 2 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 2: Sensitive human and environmental receptors and distance from prescribed activity

Human receptors	Distance from prescribed activity
Semi-rural residential areas and farms	The separation distance from the boundary of the activity (Stage 1 FOGO Hardstand) to the nearest sensitive receptor (rural residence) is approximately 953m. The distance from the Prescribed Premises boundary to this receptor is approximately 566m. Immediately to the east of the Premises (Lot 12); Barbarich Estate comprising of multiple lots ranging from approximately 1 km from Stage 15. To the south and south-east of the of the Premises; multiple lots ranging from approximately 750m from stage 15. Lots are separated from the Premises by a vegetation buffer (approximately 260m to 400m wide)

	located on Lot 82 on Diagram 18309 and Lot 501 on Plan 40105, Parkerville (owned by EMRC), followed by a drainage/public recreation reserve (approximately 50m to 125m wide) on Lot 62 on Plan 23731 and Lot 15403 on Plan 40033, Parkerville (vested in the Shire of Mundaring).
Environmental receptors	**Distance from prescribed activity**
Parks and Wildlife Management Lands and Waters	John Forrest National Park: adjacent to the southern boundary of the premises.
Threatened/Priority Fauna	The following species were identified within 2,000 m of the premises boundary: • Two endangered species (Baudin's cockatoo and Carnaby's cockatoo). • One vulnerable species (forest red-tailed black cockatoo). • One species of migratory bird protected under an international agreement (fork-tailed swift). • One Priority 4 species (quenda). One species of special conservation interest (south-western brush-tailed phascogale).
Groundwater	There are two distinct water bearing layers underlying the site: • The upper layer comprises of a perched water table associated with shallow lateritic sediments mainly on low lying areas which have developed above pallid zone clays (impermeable layer of kaolinitic clays). Perched aquifers are reported to be limited in their lateral extent and considered ephemeral during and post winter. • The lower layer comprises the regional groundwater table within granite bedrock (fracture systems) or within extensive saprolite grits (porous, weathered bedrock) often semi confined by pallid zone clays. The Premises is not located within a *Rights in Water and Irrigation Act 1914* proclaimed Groundwater Area.
Surface water	Susannah Brook (Significant Stream) • Approximately 1km to the north of the Premises. Christmas Tree Creek (Watercourse - minor, perennial) • Approximately 370m to the south of the Premises and 680m from the Stage 15 site. Flows in a westerly direction parallel to the southern boundary of the premises and is a tributary to the Jane Brook and Swan River.

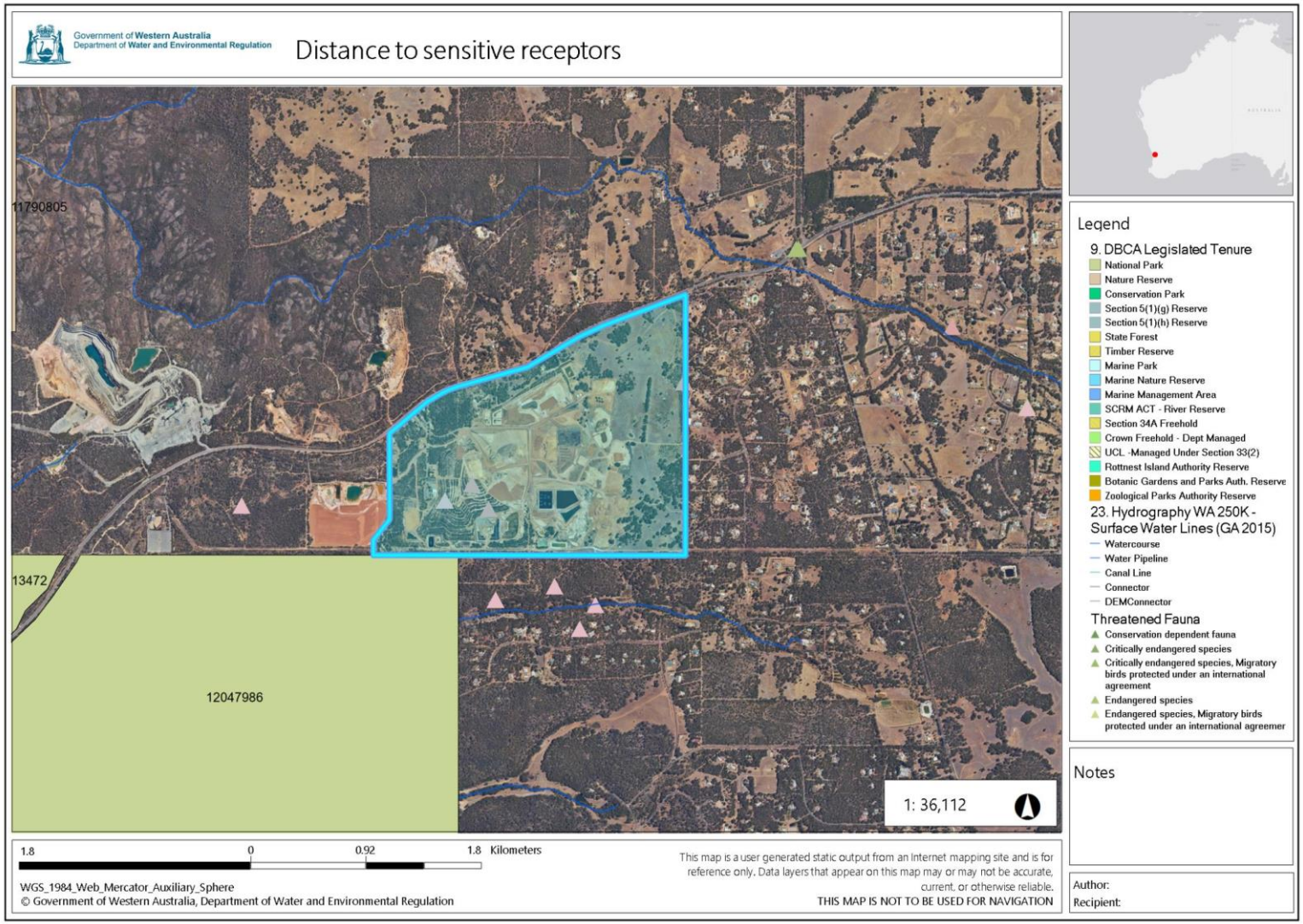

Figure 1: Distance to sensitive receptors

3.2 FOGO Facility Hardstand

The licence holder submitted an Environmental Compliance Report to the department relating to the completion of works for the extension of the existing FOGO processing hardstand and installation of associated equipment under Works Approval W6613/2021/1. This information was submitted on 13 January 2023. Submission of additional information was made to the department on 8 March and 4 April 2023 to supplement the initial report, in response to the department's request for further information.

The department assessed the documentation submitted and determined that the requirements of conditions 3 and 4 of the works approval had been satisfied, notifying the licence holder on 27 April 2023.

3.3 Air monitoring program relating to the shredding of treated power poles

On 22 October 2021, the Minister for Environment made a determination on a third-party appeal (Appeal number 55 of 2020) against a licence amendment dated 4 November 2020, which authorised the shredding of treated power poles within the Class IV landfill cell. The appellant's key concern related to potentially contaminated dust generated by shredding power pole waste having the potential to pollute rainwater tanks and food gardens at nearby residential homes.

In making the determination the Minister determined to allow the appeal in part, with one of the amendments to specify the addition of requirements to carry-out an operational dust monitoring program over a representative period of time, to verify the adequacy of dust controls proposed by the licence holder.

As such, the licence was amended on 26 November 2021, such that the following conditions (among other amendments) were included:

Condition 37: Requirement to undertake ambient air monitoring during shredding activities using a High Volume Air Sampler to determine the concentration of PM_{10}, Total Suspended Particulates (TSP) and heavy metal contents to assess the potential for human health impacts due to inhalation.

The department considered the use of a High Volume Sampler(s) configured for PM_{10} and TSP sampling to determine the concentration of PM_{10}, TSP and metals (including arsenic) in ambient air for a period of twelve months, located on the eastern boundary between the shredder and receptors, appropriate for the assessment of health impacts.

Condition 439: The addition of quarterly ambient monitoring reports to be prepared and submitted to the department, with reports a to include an interpretive summary against relevant assessment levels as published in *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales (Environment Protection Authority NSW, 2016)*.

3.3.1 Assessment of quarterly ambient air monitoring reports

The licence holder submitted five quarterly ambient air monitoring reports for the period from January 2022 to March 2023 in accordance with condition 42 of the licence.

The January to March 2023 quarterly report provided additional ambient air quality (background samples) during periods when power poles were not being processed.

Results within these reports were compared against ambient air quality guideline values (AGVs) from *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales (Environment Protection Authority NSW, 2016)* and the department's *Draft*

Guideline: Air Emissions (DWER), 2019.

During times of power pole shredding, all required parameters were significantly below the specified AGVs.

TSP: Data ranged between 7.7 to 48.5 µg/m^3, below the guideline maximum ambient concentration values at 25°C for a 24-hour averaging period of 82 µg/m^3.

PM_{10}: Data ranged between 5.3 to 28.5 µg/m^3, below the guideline maximum ambient concentration values at 25°C for a 24-hour averaging period of 46 µg/m^3.

Arsenic: The levels for arsenic remained below the limit of detection for arsenic (TSP <0.0012 µg/m^3 and PM10 <0.0014 µg/m^3) throughout the period, with one exception on 14 March 2022, with an arsenic TSP reading of 0.0018 µg/m^3. All readings were below the guideline maximum ambient concentration values at 25°C for a 24-hour averaging period of 0.027 µg/m^3. It was also noted that Practical Quantification Limits were changed from static to fluctuating (based on Air Volume), due to an updated Laboratory Information Management System as of 18 August 2022.

Copper: Data ranged between 0.0014 to 0.008 µg/m^3 for TSP and below the limit of detection to 0.008 µg/m^3 for PM_{10}, below the guideline maximum ambient concentration values at 25°C for a 24-hour averaging period of 0.92 µg/m^3.

Chromium: Data ranged between 0.002 to 0.012 µg/m^3 for TSP and below the limit of detection to 0.016 µg/m^3 for PM_{10}, below the Chromium (III) compounds guideline maximum ambient concentration values at 25°C for a 24-hour averaging period of 0.46 µg/m^3 and the Chromium (VI) compounds guideline maximum ambient concentration values at 25°C for a 1-hour averaging period of 0.09 µg/m^3.

Boron: Data ranged between below the limit of detection to 0.014 µg/m^3 for TSP and below the limit of detection to 0.018 µg/m^3 for PM_{10}, below the guideline maximum ambient concentration values at 25°C for a 1 hour averaging period of 275 µg/m^3. It is noted that higher concentrations were detected until July 2022, up to a maximum of 10 µg/m^3, whereby it was determined that the filter used contained significant amounts of boron (likely borosilicate glass). A quartz filter was used since 18 August 2022, with the boron concentrations significantly decreasing from that time.

The results of the background ambient air quality monitoring indicated the following:

TSP: Data ranged between 35.1 to 56.1 µg/m^3, below the guideline maximum ambient concentration values at 25°C for a 24-hour averaging period of 82 µg/m^3 and was consistent with those concentrations during power pole shredding periods.

PM_{10}: Data ranged between 20.0 to 28.5 µg/m^3, below the guideline maximum ambient concentration values at 25°C for a 24-hour averaging period of 46 µg/m^3 and was consistent with those concentrations during power pole shredding periods.

Copper: Data ranged between 0.0071 to 0.0091 µg/m^3 for TSP and 0.0018 to 0.0038 µg/m^3 for PM_{10}, below the guideline maximum ambient concentration values at 25°C for a 24-hour averaging period of 0.92 µg/m^3, consistent with those concentrations during power pole shredding periods.

Chromium: Data ranged between 0.0056 to 0.06 µg/m^3 for TSP 0.0026 to 0.0042 µg/m^3 for PM_{10}, below the Chromium (III) compounds guideline maximum ambient concentration values at 25°C for a 24-hour averaging period of 0.46 µg/m^3 and the Chromium (VI) compounds guideline maximum ambient concentration values at 25°C for a 1-hour averaging period of 0.09 µg/m^3, consistent with those concentrations during power pole shredding periods.

Boron: Data ranged between below the limit of detection to 0.02 µg/m^3 for TSP and below the limit of detection for PM_{10}, below the guideline maximum ambient concentration values at 25°C for a 1 hour averaging period of 275 µg/m^3, consistent with those concentrations during

power pole shredding periods.

The ambient monitoring results for the 15 month period, when considered with the background ambient monitoring results for Quarter 1 2023, indicates that there is unlikely to be an unacceptable impact to human health at sensitive receptors downwind from the shredding activities, as all parameters monitored remained significantly below the relevant guideline values, and were comparatively consistent with the ambient background levels.

3.4 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 3.

The Revised Licence L8889/2015/2 that accompanies this Amendment Report authorises emissions associated with the operation of the Premises.

The conditions in the Revised Licence have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

Table 3. Risk assessment of potential emissions and discharges from the Premises during construction and operation

Risk Event					Risk rating[1] C = consequence L = likelihood	Licence Holder's controls sufficient?	Conditions[2] of licence	Justification for additional regulatory controls
Source/Activities	**Potential emission**	**Potential pathways and impact**	**Receptors**	**Licence Holder's controls**				
Construction								
Installation of landfill gas flares	Dust	Air/windborne pathway causing impacts to health and amenity	Residences 566 m from the prescribed premises boundary	Refer to Section 3.1	C = Slight L = Unlikely **Low Risk**	Y	N/A	Dust is not considered likely to cause any distinguishable impacts to residential receptors based on the separation distance. The Delegated Officer considers that the provisions of section 49 of the EP Act (Causing pollution and unreasonable emissions) is sufficient to regulate dust emissions from construction activities, where required.
	Noise			Refer to Section 3.1	C = Slight L = Unlikely **Low Risk**	Y	N/A	Noise is not considered likely to cause any distinguishable impacts to receptors at this distance. The Delegated Officer considers that the provisions of the *Environmental Protection (Noise) Regulations 1997* are sufficient to regulate noise emissions from construction activities.
Operation								
HHW storage	Potentially contaminated surface water and leachate	Overland runoff potentially causing ecosystem disturbance or impacting surface water quality. Seepage to soil and groundwater resulting in disturbance of groundwater	Susannah Brook approximately 1 km to the north of the Premises Christmas Tree Creek approximately 370 m to the south of the Premises Groundwater system	Refer to Section 3.1	C = Moderate L = Unlikely **Medium Risk**	Y	Conditions 1 and 4 Existing conditions 25 to 27 **Condition 5**	The Delegated Officer considers the licence holder's controls to be sufficient to mitigate leachate and surface water emissions during operation of the HHW storage compound. However, further standard processing specifications have been included to mitigate the risks posed by the storage of HHW.

Risk Event					Risk rating[1] C = consequence L = likelihood	Licence Holder's controls sufficient?	Conditions[2] of licence	Justification for additional regulatory controls
Source/Activities	**Potential emission**	**Potential pathways and impact**	**Receptors**	**Licence Holder's controls**				
		quality.						
HHW storage	Fire incident – particulates and fire water	Air/windborne pathway causing impacts to health and amenity. Overland runoff potentially causing ecosystem disturbance or impacting surface water quality.	Residences 566 m from the prescribed premises boundary Susannah Brook approximately 1 km to the north of the Premises Christmas Tree Creek approximately 370 m to the south of the Premises	Refer to Section 3.1	C = Major L = Unlikely **Medium Risk**	Y	Conditions 1 and 4 Existing conditions 16 to 18 **Condition 5**	The Delegated Officer considers the licence holder's controls to be sufficient to mitigate fire incident emissions during operation of the HHW storage compound. However, further standard processing specifications have been included to mitigate the risks posed by the storage of HHW.
Interim FOGO Facility Hardstand	Potentially contaminated surface water and leachate	Overland runoff potentially causing ecosystem disturbance or impacting surface water quality. Seepage to soil and groundwater resulting in disturbance of groundwater quality.	Susannah Brook approximately 1 km to the north of the Premises Christmas Tree Creek approximately 370 m to the south of the Premises Groundwater system	Refer to Section 3.1	C = Minor L = Unlikely **Medium Risk**	Y	Condition 1, 4, 5 and 6 Existing conditions 25 to 27	Operational conditions from the works approval W6613/2021/1 determination have been applied as part of this amendment. The Delegated Officer considers the licence holder's controls and existing licence controls to be sufficient to mitigate surface water contamination during operation of the Interim FOGO Facility Hardstand.
Stage 1 FOGO Hardstand	Potentially contaminated surface water and leachate	Overland runoff potentially causing ecosystem disturbance or impacting surface water quality. Seepage to soil and groundwater resulting in disturbance of groundwater quality.	Susannah Brook approximately 1 km to the north of the Premises Christmas Tree Creek approximately 370 m to the south of the Premises Groundwater system	Refer to Section 3.1	C = Minor L = Unlikely **Medium Risk**	Y	Condition 1, 4, 5 and 6 Existing conditions 25 to 27	Operational conditions from the works approval W6613/2021/1 determination have been applied as part of this amendment. The Delegated Officer considers the licence holder's controls and existing licence controls to be sufficient to mitigate surface water contamination during operation of the Stage 1 FOGO Hardstand.

Risk Event					Risk rating[1] C = consequence L = likelihood	Licence Holder's controls sufficient?	Conditions[2] of licence	Justification for additional regulatory controls
Source/Activities	**Potential emission**	**Potential pathways and impact**	**Receptors**	**Licence Holder's controls**				
Interim FOGO Facility Hardstand and Stage 1 FOGO Hardstand	Odour	Air/windborne pathway causing impacts to health and amenity	The separation distance from the Stage 1 FOGO Hardstand to the nearest sensitive receptor is approximately 953 m.	Refer to Section 3.1	C = Moderate L = Possible **Medium Risk**	Y	Condition 1, 4, 5 and 6 Existing conditions 29 and 38	Operational conditions from the works approval W6613/2021/1 determination have been applied as part of this amendment. The Delegated Officer considers the licence holder's controls and existing licence controls to be sufficient to mitigate odour emissions during operation of the Interim FOGO Facility Hardstand and Stage 1 FOGO Hardstand.
Interim FOGO Facility Hardstand and Stage 1 FOGO Hardstand	Fire incident – particulates and fire water	Air/windborne pathway causing impacts to health and amenity. Overland runoff potentially causing ecosystem disturbance or impacting surface water quality.	Residences 566 m from the prescribed premises boundary Susannah Brook approximately 1 km to the north of the Premises Christmas Tree Creek approximately 370 m to the south of the Premises	Refer to Section 3.1	C = Minor L = Unlikely **Medium Risk**	Y	Condition 1, 4, 5 and 6 Existing conditions 16 to 18 and 29	Operational conditions from the works approval W6613/2021/1 determination have been applied as part of this amendment. The Delegated Officer considers the licence holder's controls and existing licence controls to be sufficient to mitigate fire incident emissions during operation of the Interim FOGO Facility Hardstand and Stage 1 FOGO Hardstand.
Interim FOGO Facility Hardstand and Stage 1 FOGO Hardstand	Vectors and vermin	Air/windborne pathway causing impacts to health and amenity	The separation distance from the Stage 1 FOGO Hardstand to the nearest sensitive receptor is approximately 953 m.	Refer to Section 3.1	C = Minor L = Possible **Medium Risk**	Y	Condition 1, 4, 5 and 6 Existing conditions 29 and 38	Operational conditions from the works approval W6613/2021/1 determination have been applied as part of this amendment. The Delegated Officer considers the licence holder's controls and existing licence controls to be sufficient to mitigate vector emissions during operation of the Interim FOGO Facility Hardstand and Stage 1 FOGO Hardstand.
Interim FOGO Facility Hardstand and Stage 1	Dust	Air/windborne pathway causing impacts to health	The separation distance from the Stage 1 FOGO Hardstand to the	Refer to Section 3.1	C = Minor L = Unlikely	Y	Condition 1, 4, 5 and 6	Operational conditions from the works approval W6613/2021/1 determination have been applied as

Risk Event					Risk rating[1] C = consequence L = likelihood	Licence Holder's controls sufficient?	Conditions[2] of licence	Justification for additional regulatory controls
Source/Activities	**Potential emission**	**Potential pathways and impact**	**Receptors**	**Licence Holder's controls**				
FOGO Hardstand		and amenity	nearest sensitive receptor is approximately 953 m.		**Medium Risk**		Existing condition 38	part of this amendment. The Delegated Officer considers the licence holder's controls and existing licence controls to be sufficient to mitigate dust emissions during operation of the Interim FOGO Facility Hardstand and Stage 1 FOGO Hardstand.
Interim FOGO Facility Hardstand and Stage 1 FOGO Hardstand	Noise	Air/windborne pathway causing impacts to health and amenity	The separation distance from the Stage 1 FOGO Hardstand to the nearest sensitive receptor is approximately 953 m.	Refer to Section 3.1	C = Slight L = Unlikely **Low Risk**	Y	Condition 1, 4, 5 and 6 Existing condition 38	Operational conditions from the works approval W6613/2021/1 determination have been applied as part of this amendment. The Delegated Officer considers the licence holder's controls and existing licence controls to be sufficient to mitigate noise emissions during operation of the Interim FOGO Facility Hardstand and Stage 1 FOGO Hardstand.
Operation of landfill gas flare	Point source air emissions	Air/windborne pathway causing impacts to health and amenity	The separation distance from the Stage 1 FOGO Hardstand to the nearest sensitive receptor is approximately 953 m.	Refer to Section 3.1	C = Minor L = Unlikely **Medium Risk**	Y	Existing conditions 30 to 32, 37 and 42 to 45	The Delegated Officer considers the destruction efficiency of the HOFGAS Flare equivalent to the LMS Flares and determined that the risk profile associated with changing the flare infrastructure is unchanged. The Delegated Officer considers the licence holder's controls and existing licence controls, as assessed during the 26 June 2020 amendment, to be sufficient to mitigate air emissions during operation of the landfill gas flare.
Operation of landfill gas flare	Noise	Air/windborne pathway causing impacts to health and amenity	The separation distance from the Stage 1 FOGO Hardstand to the nearest sensitive	Refer to Section 3.1	C = Moderate L = Possible **Medium Risk**	Y	Existing conditions 33 to 38	The Delegated Officer considers the destruction efficiency of the HOFGAS Flare equivalent to the LMS Flares and determined that the risk profile associated with changing

Risk Event					Risk rating[1] C = consequence L = likelihood	Licence Holder's controls sufficient?	Conditions[2] of licence	Justification for additional regulatory controls
Source/Activities	**Potential emission**	**Potential pathways and impact**	**Receptors**	**Licence Holder's controls**				
			receptor is approximately 953 m.					the flare infrastructure is unchanged. The Delegated Officer considers the licence holder's controls and existing licence controls, as assessed during the 26 June 2020 amendment, to be sufficient to mitigate noise emissions during operation of the landfill gas flare.
Operation of landfill gas flare	Odour	Air/windborne pathway causing impacts to health and amenity	The separation distance from the Stage 1 FOGO Hardstand to the nearest sensitive receptor is approximately 953 m.	Refer to Section 3.1	C = Slight L = Unlikely **Low Risk**	Y	Existing conditions 30 to 32, 37 and 38	The Delegated Officer considers the destruction efficiency of the HOFGAS Flare equivalent to the LMS Flares and determined that the risk profile associated with changing the flare infrastructure is unchanged. The Delegated Officer considers the licence holder's controls and existing licence controls, as assessed during the 26 June 2020 amendment, to be sufficient to mitigate odour emissions during operation of the landfill gas flare.

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

Table 4: Consultation

Consultation method	Comments received	Department response
Application advertised on the department's website	None received	N/A
Licence Holder was provided with draft amendment on 13 June 2023	The Licence Holder replied on 4 July 2023. Refer to Appendix 1	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 5 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 5: Summary of licence amendments

Condition no.	Proposed amendments
1, Table 1	Inclusion of HHW acceptance specifications, an increase to HHW acceptance limits and acceptance limit specified for waste oil. Acceptance limit for green waste and FOGO amended.
4, Table 2	Storage and processing of FOGO waste extended until 1 July 2028. Infrastructure requirements for Interim FOGO facility hardstand added. Mobile aerated floors requirement added for Interim FOGO facility. Infrastructure requirements for HHW compound and waste oil storage tank added.
5, Table 3	Hazardous Waste processing specifications added. FOGO processing specifications adopted from W6613/2021/1.
6, Table 4	Inclusion of leachate from the Interim FOGO facility hardstand specification.
37 to 39	Removed due to completion of monitoring requirement.
43, Table 14	Landfill gas flares requirements amended.
Definitions	Inclusion of new definitions.

References

1. Department of Environment Regulation (DER) 2016, *Guidance Statement: Environmental Siting*, Perth, Western Australia.
2. DER 2017, *Guidance Statement: Risk Assessments*, Perth, Western Australia.
3. DER 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
4. Department of Water and Environmental Regulation (DWER) 2019, Guideline: Decision Making, Perth, Western Australia
5. DWER 2019, Guideline: 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
Condition 5, Table 3	FOGO waste will no longer be processed at the Stage 2 green waste processing hardstand, which will be used for storage of final product only. As such, amendment to Table 3 is necessary.	The proposed requirements relating to the Stage 2 green waste processing hardstand have been amended.
Definitions	Removal of obsolete definition (quarterly period).	The department accepts the proposed amendment.
Schedule 1	Following a decision to relocate the proposed development to a location outside of the prescribed premises boundary, there is no longer a requirement for a portion of the existing boundary to be excised from the Licence.	The prescribed premises boundary has been reverted to the previous version.
Conditions 37 and 39	The Licence Holder requests that the AACR and AER submission date is changed to 31 May each year, thereby staggering the reporting requirements for the two waste management facilities operated by the Licence Holder.	The Delegated Officer considers an extension of the AACR and AER submission date by one month to be appropriate, being 30 April each year. This extension was considered appropriate due to the significant reporting requirements the licence holder has under other legislation, including reporting under condition 9 of MS 274 (as amended by MS 1140) for the *Surface Water and Groundwater Environmental Management Plan: Red Hill Waste Management Facility*, performance review reporting under condition 7-1 and compliance auditing under condition 8-1 of MS 462.

Appendix 2: Application validation summary

SECTION 1: APPLICATION SUMMARY					
Application type					
Works approval	☐				
Licence	☐	Relevant works approval number:		None	☐
		Has the works approval been complied with?		Yes ☐ No ☐	
		Has time limited operations under the works approval demonstrated acceptable operations?		Yes ☐ No ☐ N/A ☐	
		Environmental Compliance Report / Critical Containment Infrastructure Report submitted?		Yes ☐ No ☐	
		Date Report received:			
Renewal	☐	Current licence number:			
Amendment to works approval	☐	Current works approval number:			
Amendment to licence	☒	Current licence number:	L8889/2015/1		
		Relevant works approval number:		N/A	☐
Registration	☐	Current works approval number:		None	☐
Date application received		29 March 2023			
Applicant and Premises details					
Applicant name/s (full legal name/s)		Eastern Metropolitan Regional Council			
Premises name		Red Hill Waste Management Facility			
Premises location		Lot 1 on Diagram 15239, Lot 2 on Diagram 68630 and Lot 11 on Diagram 69105 Toodyay Road red Hill and Lot 12 on Plan 26468 Toodyay Road Gidgegannup			
Local Government Authority		City of Swan			
Application documents					
HPCM file reference number:		DWERDT757646			
Key application documents (additional to application form):		HOFGAS- IFL4c flare details			
Scope of application/assessment					

Summary of proposed activities or changes to existing operations.	<u>Construction</u> Installation of HOFGAS-IFL4c enclosed high temperature flares instead of the LMS 7000 Series specified in the licence. <u>Operation</u> The EMRC is requesting the following amendments to its Licence: • Permission to accept all HHW materials under the HHW Program. In addition, the EMRC is also seeking to increase the volume of hazardous waste material that can be accepted, from 50 to 500 tonnes per annum, which includes HHW material and up to 90 tonnes of waste oil per annum; • Infrastructure requirements relating to the waste oil storage tank; • Inclusion of the Interim FOGO Facility Hardstand currently operating through Time Limited Operations (TLO) under Works Approval W6613/2021/1; • Acceptance of an additional 12,000 tpa of (FOGO) for a total of 22,000 tpa. The EMRC is not seeking to increase its acceptance limit for category 67A, which is currently 50,000 tonnes per annual period. Therefore, the EMRC proposes to reduce the acceptance limit for green waste by 12,000 tonnes per annum to a total of 28,000 tonnes per annum. • Increase the timeframe for the storage and processing of FOGO waste at the Stage 1 FOGO hardstand. As specified in Table 2 of the Licence, storage and processing of FOGO waste at the Stage 1 FOGO hardstand is permitted until 31 December 2022. The EMRC is requesting to extend this time limit by approximately five years, until 1 July 2028; • An amendment to the type and location of the landfill gas flare. As per Table 4 of the Licence, the EMRC is permitted to install up to three LMS 7000 Series Landfill Biogas Flares (LMS Flares) directly to the east of the EDL Landfill Gas and Power Plant. The EMRC proposes to use an alternative flare, the HOFGAS-IFL4c enclosed high temperature flare (HOFGAS Flare) and install it in a different location; • Removal of the requirement for ambient air monitoring as the initial 12-month period has passed; and • Excise a portion of L8889/2015/2 to avoid overlapping prescribed premises boundaries resulting from a proposed development at the Site.

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 (amendments only)
Category 64: Class II or III putrescible landfill site	350,000 tonnes per annual period	No change
Category 12: Screening, etc. of material	200,000 tonnes per annual period	No change
Category 62: Solid waste depot	10,000 tonnes per annual period	No change
Category 61A: Solid waste facility	13,000 tonnes per annual period	No change
Category 67A: Compost manufacturing and soil blending	50,000 tonnes per annual period	No change
Category 65: Class IV secure landfill site	Not applicable	No change

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 ☐ No ☒	Referral decision No: Managed under Part V ☐ Assessed under Part IV ☐
Does the applicant hold any existing Part IV Ministerial Statements relevant to the application?	Yes ☒ No ☐	Ministerial statement No: MS274 and MS462 EPA Report No:
Has the proposal been referred and/or assessed under the EPBC Act?	Yes ☐ No ☒	Reference No:
Has the applicant demonstrated occupancy (proof of occupier status)?	Yes ☒ No ☐	Certificate of title ☒ General lease ☐ Expiry: Mining lease / tenement ☐ Expiry: Other evidence ☐ Expiry:
Has the applicant obtained all relevant planning approvals?	Yes ☒ No ☐ N/A ☐	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 ☐ No ☐	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 ☐ No ☐	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 ☐ No ☒	Application reference No: Licence/permit No: Licence / permit not required.
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the EP Act)?	Yes ☐ No ☒	Name: N/A Type: Proclaimed Groundwater Area/Surface Water Area Has Regulatory Services (Water) been consulted? Yes ☐ No ☐ N/A ☐ Regional office: Swan Avon / Mid-West Gascoyne / Kwinana Peel / North West / South West / Goldfields / South Coast
Is the Premises situated in a Public Drinking Water Source Area (PDWSA)?	Yes ☐ No ☒	Name: N/A Priority: P1 / P2 / P3 / N/A Are the proposed activities/ landuse compatible with the PDWSA (refer to WQPN 25)? Yes ☐ No ☐ N/A ☐
Is the Premises subject to any other Acts or subsidiary regulations (e.g. *Dangerous Goods Safety Act 2004, Environmental Protection (Controlled Waste) Regulations 2004, State Agreement Act xxxx*)	Yes ☐ No ☒	
Is the Premises within an Environmental Protection Policy (EPP) Area?	Yes ☐ No ☒	
Is the Premises subject to any EPP requirements?	Yes ☐ No ☒	
Is the Premises a known or suspected contaminated site under the *Contaminated Sites Act 2003*?	Yes ☐ No ☐	Classification: Contaminated - remediation required Date of classification: Oct 27, 2015