Government of Western Australia
Department of Water and Environmental Regulation

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	APP-0026338
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	6/03/2025
Decision	Revised licence granted

Melissa Chamberlain

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

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1. Decision summary

Licence L8889/2015/2 is held by Eastern Metropolitan Regional Council (Licence Holder) for the Red Hill Waste Management Facility (the Premises), located on Toodyay Road, 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 construction and operation of infrastructure at the Premises. As a result of this assessment, Revised Licence L8889/2015/2 has been granted.

The Revised Licence issued as a result of this amendment consolidates and supersedes the existing Licence previously granted in relation to the Premises.

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 1 November 2024, 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 application is to undertake construction works relating to an expansion of the interim Food Organics and Garden Organics (FOGO) processing facility at the premises. The acceptance of FOGO and operation of the interim FOGO facility were approved under an amendment to the premises' operational licence (L8889/2015/2) dated 26 June 2020.

The premises relates to the categories and assessed production capacity under Schedule 1 of the Environmental Protection Regulations 1987 (EP Regulations) which are defined in licence L8889/2015/2. This application is limited to proposing works relating to category 67A compost manufacturing and soil blending activities at the premises, as defined in licence L8889/2015/2. The infrastructure and equipment relating to the premises category and any associated activities which the department has considered in line with Guideline: Risk Assessments (DWER 2020) are outlined in works approval L8889/2015/2.

The key aspects of the application include:

- A request to extend the approved operating period cease date of the FOGO facility from 1 July 2028 to 31 December 2030.
- A request to increase the authorised rate of acceptance of FOGO waste from 22,000 tonnes per annum (tpa) to 30,000 tpa. There is no proposed change to the green waste acceptance rate, which remains at 28,000 tonnes per year. The proposed total increase in category 67A acceptance rate is from 50,000 tpa to 58,000 tpa.
- Seeking to construct a new hardstand and leachate pond adjacent to the existing FOGO hardstand on Lot 11.
- Addition of a picking station for the removal of contaminants from FOGO waste prior to composting and additional mobile aerated floors (MAFs).
- Relocation and reconfiguration of the receivables area, trommel, MAFs, composting windrows and final screening and stockpiling area.

- Request to allow partially composted FOGO waste to be removed from the premises for further processing at another licensed FOGO facility as a contingency.

This amendment is limited only to changes to Category 67A activities from the existing licence. No changes to the aspects of the existing licence relating to Category 12, 61A, 62, 64 and 65 have been requested by the Licence Holder.

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

Table 1: Proposed design or throughput capacity changes

Category	Current design / throughput capacity	Proposed design / throughput capacity	Description of proposed amendment
67A	50,000 tonnes per annual period	58,000 tonnes per annual period	Increase in the authorised rate of acceptance of FOGO waste from 22,000 tonnes per annum (tpa) to 30,000 tpa. Green waste acceptance rate remains at 28,000 tonnes per year. The total category 67A acceptance is proposed to be 58,000 tonnes per year.

2.3 Existing FOGO processing facility

The current FOGO processing facility consists of the Stage 1 hardstand and the Interim FOGO hardstand. The Interim FOGO hardstand, which is an extension of the Stage 1 hardstand, was constructed under works approval W6613/2021/1, and its operation approved for use under L8889/2015/2 in July 2023. The premises is authorised to accept and process 22,000 tonnes of FOGO waste per annual period until 1 July 2028.

FOGO waste was previously also authorised for storing and processing at the green waste processing hardstand, located at the eastern side of the premises, until 31 December 2022. All FOGO waste storage and processing now currently occurs at the Stage 1/Interim facility at the western side of the premises, which is a previously landfilled area. The interim facility allows FOGO to be received and composted at one location, eliminating the need to move partially processed FOGO across the premises. This is intended to reduce the odour risk associated with the activity.

The layout of the current FOGO facility is outlined in Figure 1.

Figure 1: Current FOGO facility layout

There are no proposed changes to the currently approved composting process outlined in L8889/2015/2, other than the addition of a picking station that will be used to manually remove contaminants from FOGO waste prior to composting.

The general composting process used at the premises is outlined in Figure 2 below.

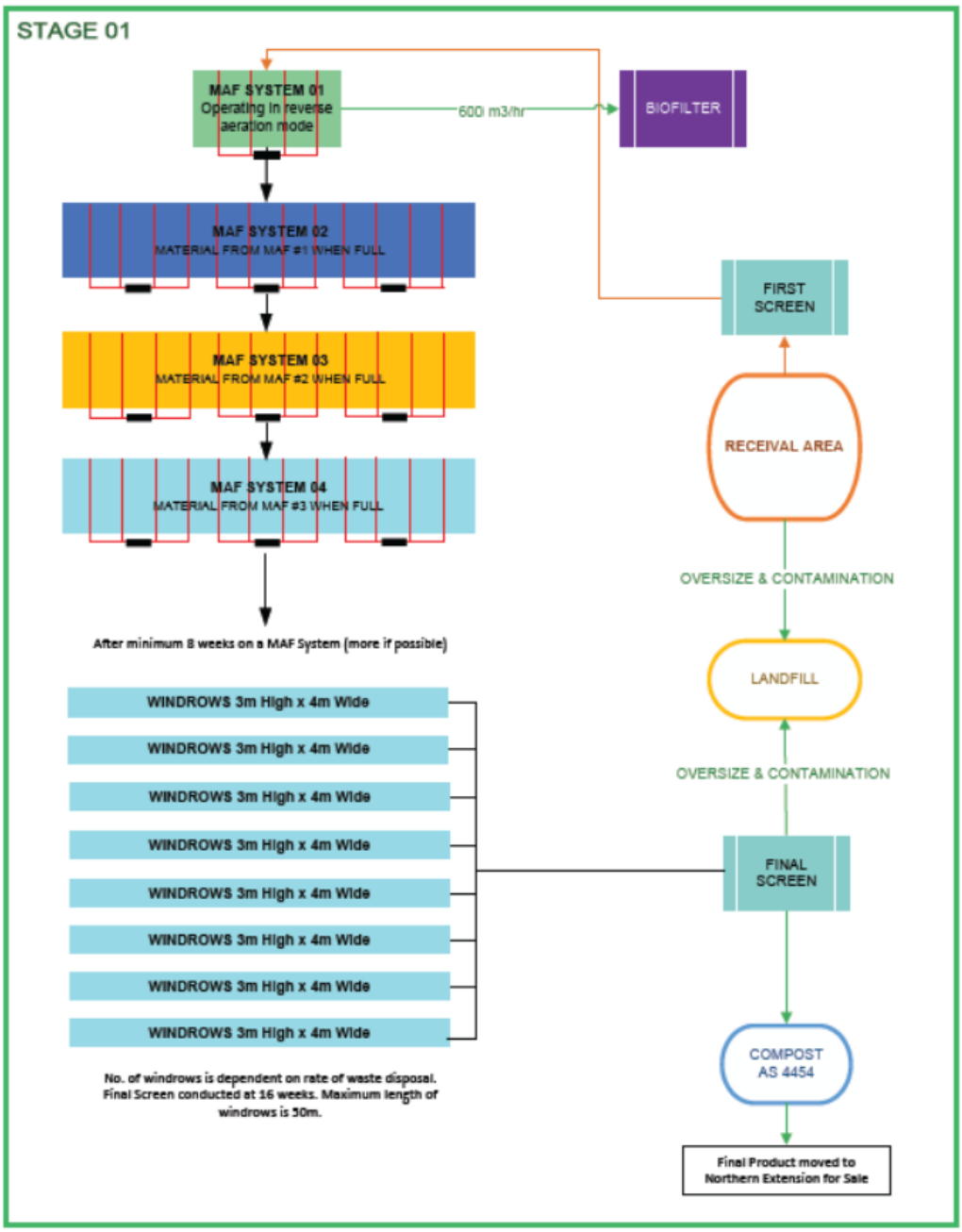

Figure 2: Composting process

2.4 Proposed activities

2.4.1 Infrastructure

The licence holder is proposing to install a new hardstand to the north of the existing hardstand, which will provide approximately 9,000 m^2 of additional operational area for FOGO receipt, processing and storage.

The existing and proposed extension hardstand areas are located above previously filled and capped landfill cells. The thickness and type of the capping layer used on the landfill is not known. The new hardstand will be constructed above the existing ground surface. The leachate pond is proposed to have a maximum depth of 3.1 m, but the final elevation of the deepest point is proposed to be only approximately 0.5 m below ground level. As such, some

excavation may be required to install the leachate pond, however the proposed works should have a minimal impact on the capping layer installed over historical landfill cells in this area.

The new hardstand is proposed to be constructed using a similar profile and materials as the existing hardstand and will comprise (from bottom to top):

- A subgrade of gravels, sandy gravels or gravelly clays (various thickness);
- A clay leachate barrier, with a minimum thickness of 500 mm, compacted to 95% of maximum dry density;
- A ferricrete protective layer with a thickness of 500 mm, compacted to 95% of maximum dry density; and
- A ferricrete bund with a height of 500 mm and width of 1,000 mm around the perimeter of the hardstand.

The hardstand is proposed to be graded to the north with a fall of approximately 2.0% to direct leachate and potentially contaminated stormwater towards the expansion leachate pond. A new leachate pit and drain will be constructed to direct run off from the new hardstand to the expansion leachate pond for retention. The new expansion leachate pond will comprise (from bottom to top):

- A 500 mm thick compacted clay attenuation layer; and
- A 2.0 mm thick high-density polyethylene (HDPE) liner.

The expansion leachate pond has a minimum design capacity of 1,100 m3 which has been calculated to contain a 1 in 100 year, 72-hour durations storm. It is also proposed to contain an automatic system to pump leachate to other leachate ponds on the premises should the maximum capacity be reached. Deployment of the automatic pump is intended to ensure that a minimum freeboard of 500 mm will be maintained and will not be compromised by increased leachate and contaminated stormwater input from the expanded hardstand area.

The proposed design and construction specifications meet the benchmark controls for leachate barriers on hardstand surfaces, and liners in ponds or drainage infrastructure as listed in Guideline: Better practice organics recycling (DWER 2022). The technical specifications of the new hardstand and leachate pond are depicted in Figure 3, Figure 4 and Figure 5.

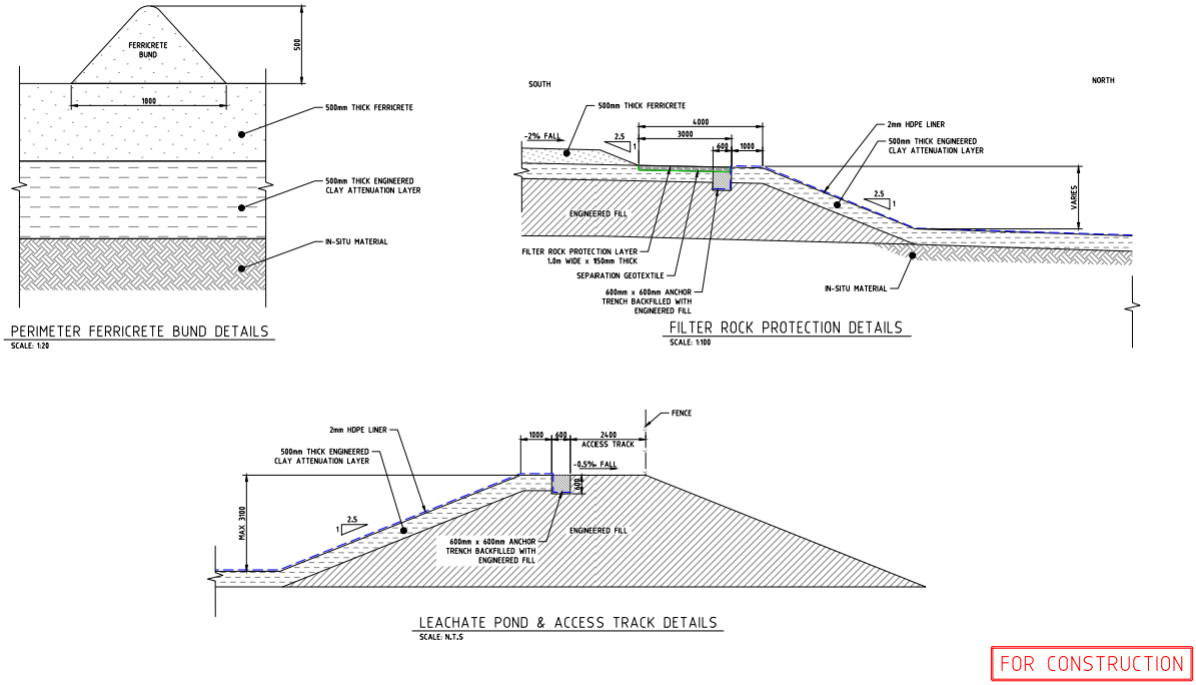

Figure 3: FOGO expansion hardstand and leachate pond construction specifications

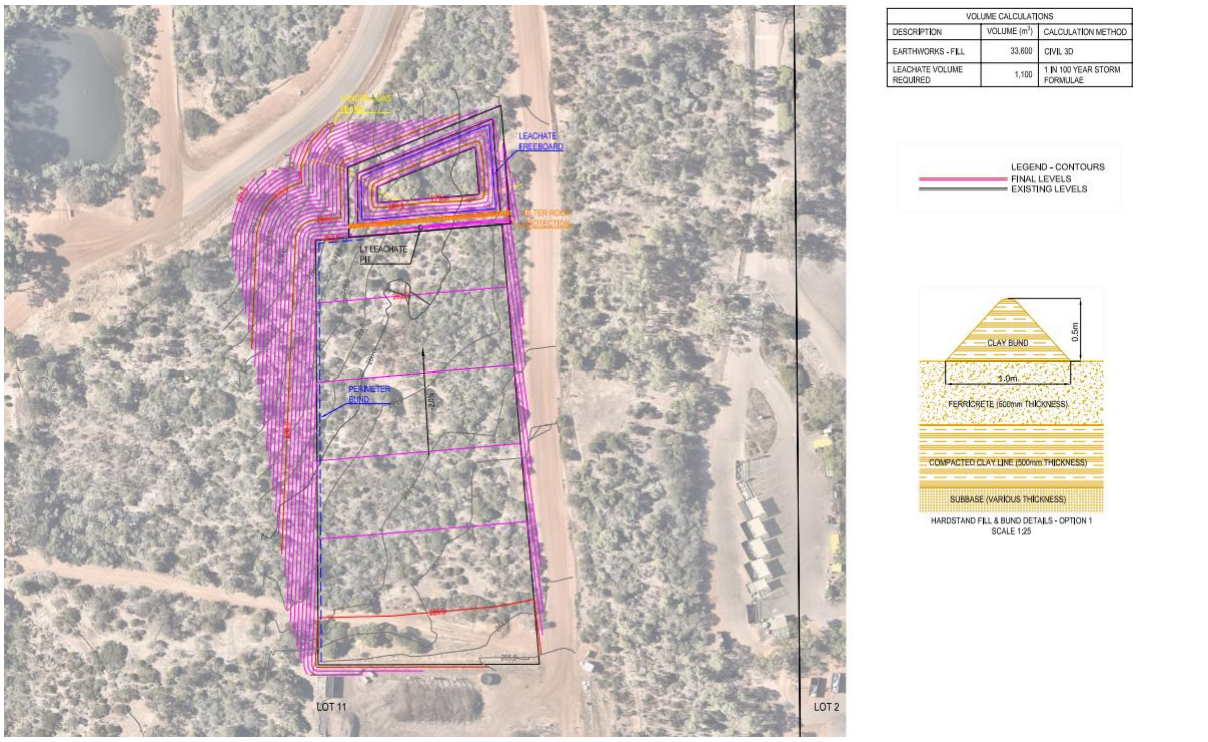

Figure 4: FOGO expansion hardstand and leachate pond construction specifications

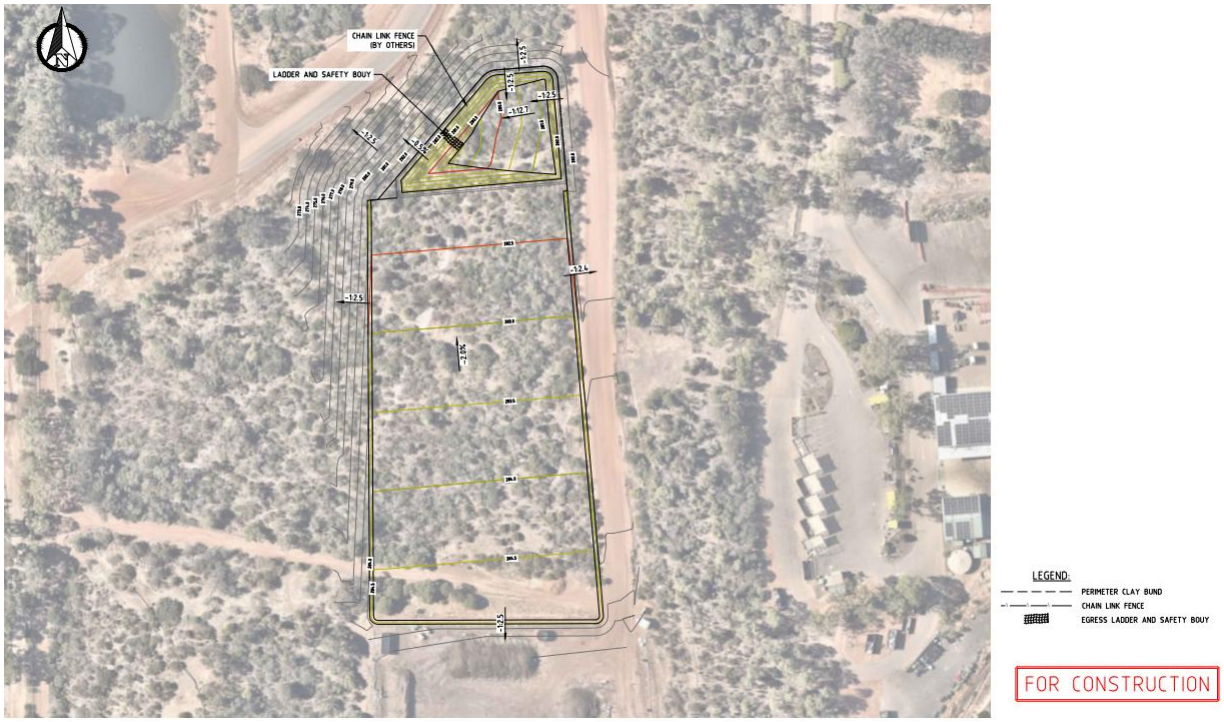

Figure 5: FOGO expansion hardstand and leachate pond construction specifications

The proposed picking station is a prefabricated unit with an extended hopper that will allow material from a trommel to be directly loaded to the conveyor, where it will be conveyed to the picking station. Contaminants will be manually removed from waste and any contaminants not suitable for recovery/recycling will be disposed to a Class III landfill cell on the premises within 48 hours of being screened. FOGO waste that has been through the picking station will then be moved to the MAFs systems.

The general arrangement of the new picking station is shown in Figure 6.

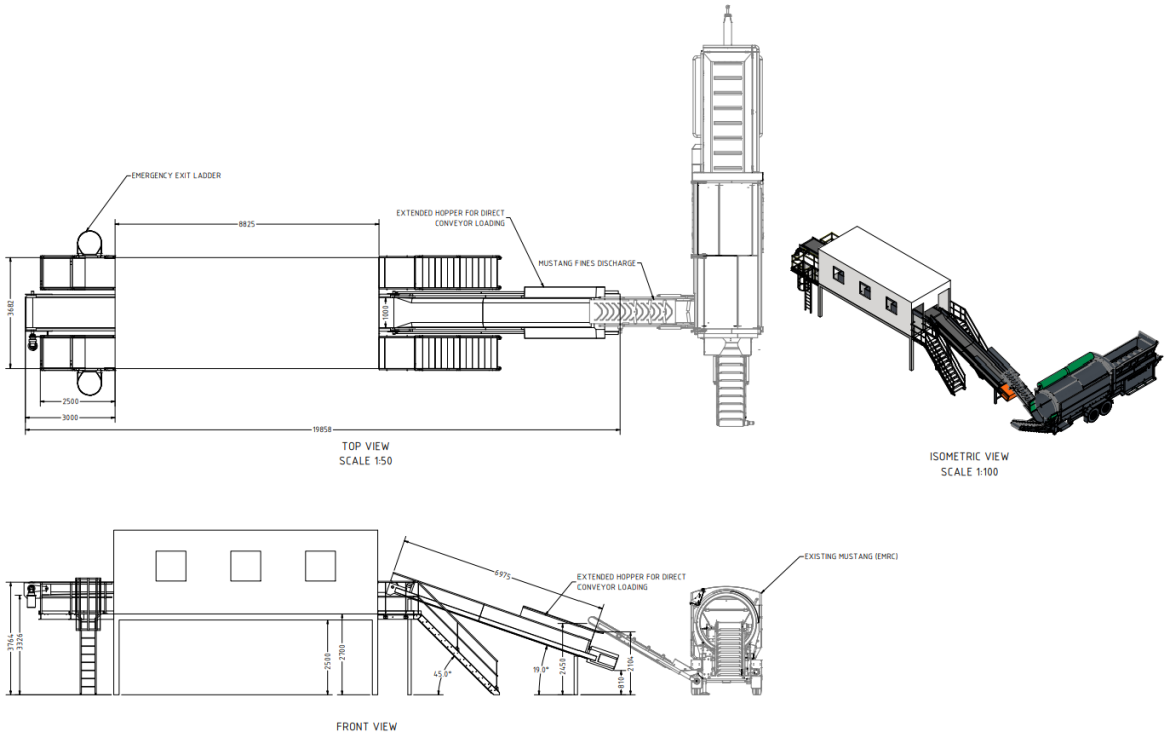

Figure 6: Picking station general arrangement

2.4.2 Operation of the FOGO facility

The application proposes a reconfiguration of the FOGO facility layout, however there are no proposed changes to the currently approved composting process outlined in L8889/2015/2, other than the addition of a picking station that will be used to manually remove contaminants from FOGO waste prior to composting.

The licence holder has advised that the number of MAFs and trommels and their locations is dependent on contractual business requirements. If the licence holder is required to process more product to final stage, then more MAFs would be set up, but if screened material is being sent offsite for further processing, two trommels and fewer MAFs would be set up. The proposed layout of the expanded FOGO facility is shown in Figure 7.

The licence holder is currently seeking funding to construct an Arena style roof over the FOGO composting area, which is intended to assist in better moisture control of maturing compost. The potential roof has been considered in this risk assessment.

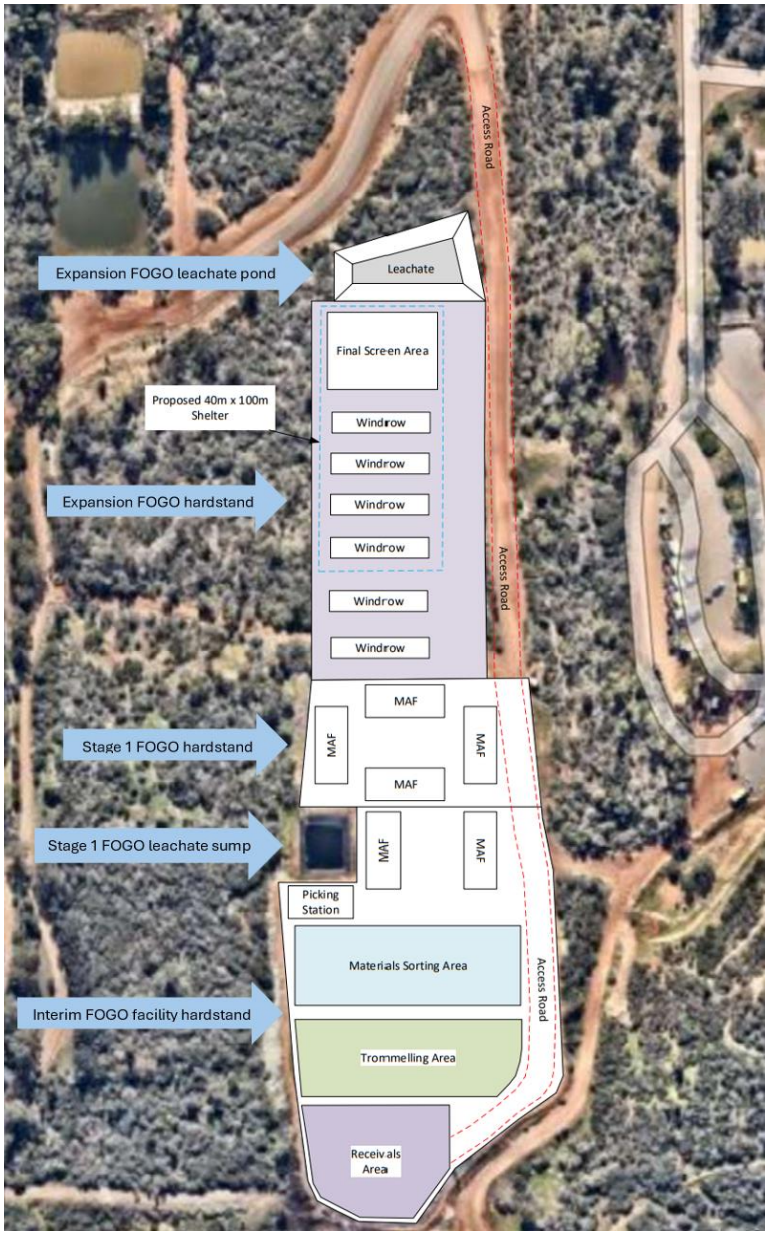

Figure 7: Proposed expanded FOGO facility layout

The current licence requires that composting products produced from FOGO waste must

remain on the premises until monitoring results confirm that chemical contaminant concentrations are below the specified maximum concentrations. Through this application, the licence holder is requesting that partially composted FOGO waste be allowed to be taken to another facility that is licensed to accept and process FOGO waste as a contingency.

There are no proposed changes to monitoring of waste inputs and outputs, or record keeping and reporting. These will be maintained in accordance with the conditions of the current licence.

2.5 Odour complaints

As of 26 February 2025, since the last amendment to licence L8889/2015/2 on 17 July 2023, there have been 39 odour complaints reported to DWER regarding this premises. The applicant has reported there were 24 odour complaints received by the premises in 2023. There may be duplication between some complaints received by the applicant and the department, if the complainant contacted both parties to register their complaint. There are multiple potential odour sources at the premises and complaints are not always able to be attributed to a specific source.

2.6 Odour field assessments

The requirement to undertake Odour Field Assessments (OFAs) at the premises was specified as a regulatory control on the licence when the licence was amended on 30 March 2020. The purpose of the OFAs was to resolve uncertainty about the nature and extent of existing odour impacts from the premises.

Four OFAs were conducted at the premises during November 2020, February 2021, May 2021 and August 2021. All OFAs were conducted after FOGO receipt commenced at the premises in July 2020. The OFAs identified the following activities as the main potential sources of odour at the premises (in no particular order):

- active landfill tip face;
- green waste processing at the Stage 2 area;
- fugitive emissions of landfill gas (biogas) resulting from biogas extraction from filled and capped landfill cells and the on-site biogas powered power plant; and
- FOGO receipt and composting.

The OFAs provided evidence that operations at the premises were causing observable odours at off-site sensitive receptor locations to the north and north-east of the premises. These results generally supported the veracity of past odour complaints from residents in these areas.

The findings of the OFAs were consistent with the primary odour sources being located to the east of the central landfill mound. The OFAs concluded that the tip face and/or fugitive losses of biogas were the main source of odours observed off-site from the premises and no FOGO odours were observed off-site. This finding is inconsistent with the applicant's complaint records over the same period (November 2020 to August 2021) which attributed most complaints to the FOGO operations at the Stage 2 area or transfers of FOGO from the Stage 1 area to the Stage 2 area. Based on these conflicting conclusions, the main source of off-site odour impacts at the premises remains uncertain.

The subsequent relocation of all FOGO activities from the Stage 2 area to the current facility in the western part of the premises has stopped the transfer of material across the site and provided a larger separation distance to sensitive receptors. This is intended to reduce the risk of odour emissions impacting receptors.

2.7 Part IV of the EP Act

The premises is currently subject to six Ministerial Statements (MS) under Part IV of the EP Act. In regulating the premises under Part V, Division 3 of the EP Act, the department will seek to avoid duplication of requirements imposed under Part IV. Pursuant to section 59B(7) of the EP Act, the department 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

(A) 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 works proposed under this approval do not contradict the requirements of these Ministerial statements.

2.8 Native vegetation clearing

The proposed works require clearing of less than 2 hectares of revegetation growth over the cap of closed landfill cells.

Regulation 5, Item 1 under the Environmental Protection (Clearing of Native Vegetation) Regulations 2004 provides an exemption for a clearing permit in these circumstances as the clearing is to construct a structure. No separate clearing permit or assessment of clearing under this amendment application is required.

If the hardstand is removed in the future, leaving the area bare may be detrimental to the environment and the department would recommend that the area be revegetated in these circumstances. The licence holder has advised that in these circumstances they intend for the area to be revegetated in accordance with the landfill capping standards for the premises.

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 *Guideline: Risk assessments* (DWER 2020).

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 construction and operation of infrastructure at the premises 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

Sources	Emission	Potential pathways	Proposed controls
Construction			
Construction of new FOGO facility hardstand and leachate pond. Installation and relocation of equipment (picking station, MAFs, screen, odour defence system etc.).	Dust	Air/windborne pathway	• Speed limit controls adopted across the site. • Water cart used as required to prevent dust emissions.
	Noise		• All trucks and mobile equipment fitted with broadband noise reversing alarms to minimise the impact from vehicle reversing alarms. • Speed limit controls adopted across the site. • All equipment and plant maintained in good working condition. • Construction hours generally limited to between 8am to 4pm Monday to Saturday and 10am to 4pm Sunday.
Relocation of landfill gas infrastructure	Landfill gas		None proposed
Operation			

Acceptance and processing of FOGO waste	Contaminated stormwater and leachate	Surface runoff and seepage to groundwater	• FOGO facility hardstand constructed in accordance with design specification.
			• Areas used for the storage of FOGO waste are:
			  – Bunded to divert stormwater run-off from entering the hardstand.
			  – Bunded and maintained to contain leachate and drain it to the FOGO facility leachate sump or leachate ponds.
			• Hardstand graded and maintained to prevent pooling of leachate and achieve drainage to the FOGO facility leachate sump or leachate ponds.

Sources	Emission	Potential pathways	Proposed controls
	Odour	Air/windborne pathway	• Consideration of meteorological conditions during material handling. • FOGO waste received at the premises is stored on MAFs operated in reverse aeration mode with extracted air discharge via biofilter. • FOGO waste stored on MAFs operating in forward aeration mode to maintain aerobic conditions for at least six weeks after relocation from first MAF. • Turning of windrows on MAFs takes place during relatively calm wind conditions. • Oxygen and moisture levels in windrows optimised to promote biological degradation and prevent anaerobic conditions. • Maintenance of an odour defence system around the FOGO facility. • Complaints register is maintained. • Odour levels across the site are continuously monitored by staff and action taken, if required. • FOGO facility operations cease if noticeable odour is detected at the premises boundary.
	Dust		• FOGO composting conducted using MAFs reducing the need to disturb the waste by turning. • Turning of windrows on MAFs occurs during relatively calm wind conditions. • FOGO waste is kept in a damp state.
	Noise		• All trucks and mobile equipment fitted with broadband noise reversing alarms to minimise the impact from vehicle reversing alarms. • Speed limit controls adopted across the site. • All equipment and plant maintained in good working condition. • Operational hours of the FOGO facility are generally limited to between 8am to 4pm Monday to Saturday. • Operations comply with the Environmental Protection (Noise) Regulations

Sources	Emission	Potential pathways	Proposed controls
			1997.
	Litter and debris		• Use of trommels and picking station to remove contaminants. • Picking station is enclosed. • FOGO waste is kept in a damp state. • Residual physical contaminants disposed to the landfill within 48 hours of being screened from FOGO waste or compost.
	Vermin/ pests and pathogens	Direct contact	• Residual physical contaminants disposed to the landfill within 48 hours of being screened from FOGO waste or compost. • Windrows on MAFs in forced aeration mode turned at least once to deter fly infestations in outer material. • Deployment of fly baiting stations around the FOGO area.
Collection and storage of leachate/pumping to other leachate	Leachate from damage to liners or overtopping of leachate ponds	Surface runoff and seepage to groundwater	• Expansion leachate pond constructed in accordance with design specification. Proposed final minimum elevation of the leachate pond is 279.5 m AHD, ~10m above the underlying groundwater level. • Minimum 500 mm freeboard maintained in FOGO facility leachate sump and ponds. • Weekly inspection by site personnel of FOGO facility leachate sump and ponds to check compliance with the freeboard requirement. • Infrastructure in place to automatically pump excess leachate to landfill leachate ponds. • Excess leachate managed by pumping to the landfill leachate ponds.
	Odour	Air/windborne pathway	• Maintenance of an odour defence system around the FOGO facility. • Regular maintenance and monitoring of the leachate treatment system. • Complaints register is maintained. • Odour levels across the site are continuously monitored by staff and action

Sources	Emission	Potential pathways	Proposed controls
ponds			taken, if required. • FOGO facility operations cease if noticeable odour is detected at the premises boundary.
Fire	Smoke	Air/windborne pathway	• Residual physical contaminants disposed to the landfill within 48 hours of being screened from FOGO waste or compost. • FOGO waste is kept in a damp state. • Windrows are no more than 5 m high, 16 m wide and 30 m long. • Windrows on MAFs are separated by at least 1 m of clear ground and non-MAF windrows are separated from other combustible materials by at least 5 m of clear ground.
	Fire wash water	Surface runoff and seepage to groundwater	None proposed
Sale of final compost product to public	Contamination or poor quality of products	Discharge of contaminants to land by application of poor-quality products	• Minimum processing time at least six weeks on MAFs and at least eight weeks in windrows without forced aeration • Windrows on MAFs in forced aeration mode turned at least once to move outer material into the core of the windrow and help pasteurise of the whole composting mass. • Two phases of screening to remove residual physical contaminants. • FOGO waste processed to achieve pasteurisation as defined in AS 4454. • Composting products produced from FOGO waste meet the maximum chemical, physical and biological contaminant concentrations in AS 4454. • Composting products produced from FOGO waste monitored for chemical, physical and biological contaminant concentrations and remain on the premises until the monitoring results verify compliance with the specified concentration limits. • Irrigation water used at the FOGO facility is sourced from the FOGO leachate.

3.1.2 Receptors

In accordance with the *Guideline: Risk assessments* (DWER 2020), 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 3 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 *(Guideline: Environmental siting* (DWER 2020)).

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

Human receptors	**Distance from prescribed activity**
Residential premises	Closest residences are approximately 730 m southeast, 970 m northeast and 1.8 km east (measured from the proposed expanded FOGO area and associated leachate pond).
Red Hill Quarry	Approximately 1.46 km m northwest of the FOGO area.
Red Hill Auditorium concert hall	Approximately 1.4 km west of the premises boundary.
Environmental receptors	**Distance from prescribed activity**
John Forrest National Park	Immediately to the south of the premises boundary.
Class A Nature Reserve Object ID: 11879	Approximately 2600 m northwest of the premises boundary.
Threatened and Priority Flora	3 records of species with conservation status 4 within 3 km of the premises boundary.
Threatened fauna	28 records within 3 km of the premises boundary, including records within the premises boundary.
Surface water	Premises is within the Swan River System Proclaimed Surface Water Area.
Surface water courses	• Object ID: 765424 Approximately 250 m south of the premises boundary • Object ID: 1144064 - Susannah Brook Approximately 1000 m north of the premises boundary • Object ID: 461573 Approximately 2 km north of the premises boundary
Groundwater	Groundwater monitoring data from the licence holder's Annual Environmental Reports indicates the groundwater level near

	the proposed expansion site is ~265 to 270 m AHD. The elevation of the proposed expansion site is ~275 to 285 m AHD, indicating the depth to groundwater is ~5 to 10m. Groundwater flow is in a southwesterly direction.
Cultural receptors	**Distance from prescribed activity**
Aboriginal Cultural Heritage sites (Register)	• **Name:** Herne Hill Ochre **ID:** 3433 **Type:** Creation/Dreaming Narrative; Ochre ~1.2 km west from premises boundary • **Name:** Gidgegannup Petroglyph 2 and Wirdarchi Sleeping Spot **ID:** 24882 **Type:** Creation / Dreaming Narrative; Engraving; Landscape / Seascape Feature ~770 m northwest from premises boundary • **Name**: Red Hill #2 **ID:** 17697 **Type:** Artefacts / Scatter ~1.22 km west from premises boundary • **Name**: Red Hill **ID:** 3721 **Type:** Creation / Dreaming Narrative; Quarry; Water Source Immediately west of premises boundary. Premises boundary is partially within the site. • **Name:** Susannah Brook Waugal **ID:** 3656 **Type:** Creation / Dreaming Narrative; Other; Water Source ~1.87 km northwest from premises boundary • **Name:** RED/01 – Engraving **ID:** 21170 ~680 m northwest of premises boundary • **Name:** Gidgegannup Petroglyph **ID:** 21077 **Type:** Engraving ~620 m northwest of premises boundary • **Name:** Gidgegannup Scarred Tree **ID:** 21078 **Type:** Modified Tree ~590 m northwest of premises boundary • **Name:** Gidgegannup Gnamma Hole and Lizard Trap **ID:** 21080 **Type:** Other; Water source ~460 m northwest of premises boundary

	• **Name:** Gumbargorra **ID:** 27112 **Type:** Ritual / Ceremonial; Creation / Dreaming Narrative; Landscape / Seascape Feature ~1.8 km northwest of premises boundary • **Name:** Red Hill #1 **ID:** 17696 **Type:** Artefacts/ Scatter ~670 m west of premises boundary • **Name:** Ancestral Owl Stone **ID:** 26057 **Type:** Ritual / Ceremonial; Creation / Dreaming Narrative; Landscape / Seascape Feature; Other; Rock Shelter; Shell ~1.96 km northwest of premises boundary
Aboriginal Cultural Heritage sites (Historic)	• **Name:** Darling Range **ID:** 3188 **Type:** Camp; Creation / Dreaming Narrative; Hunting Place; Meeting Place; Landscape / Seascape Feature; Plant Resource. Premises is within the site • **Name:** Gidgegannup Isolated Artefacts **ID:** 21076 ~680 m north of premises boundary • **Name:** Gidgegannup Rock shelter **ID:** 21079 **Type:** Rock shelter ~680 m northwest of premises boundary • **Name:** Christmas Tree Creek **ID:** 26286 **Type:** Creation / Dreaming Narrative; Landscape / Seascape Feature; Water Source ~260 m south of premises boundary

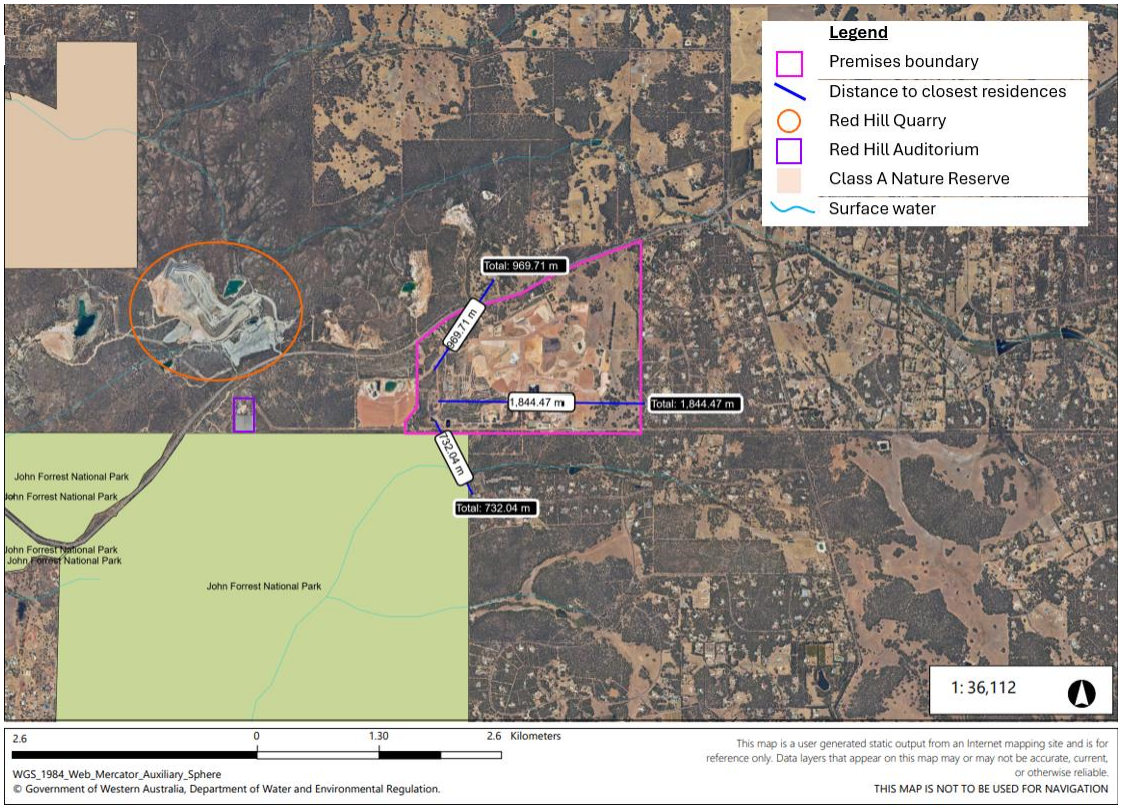

Figure 8: Distance to human and environmental sensitive receptors

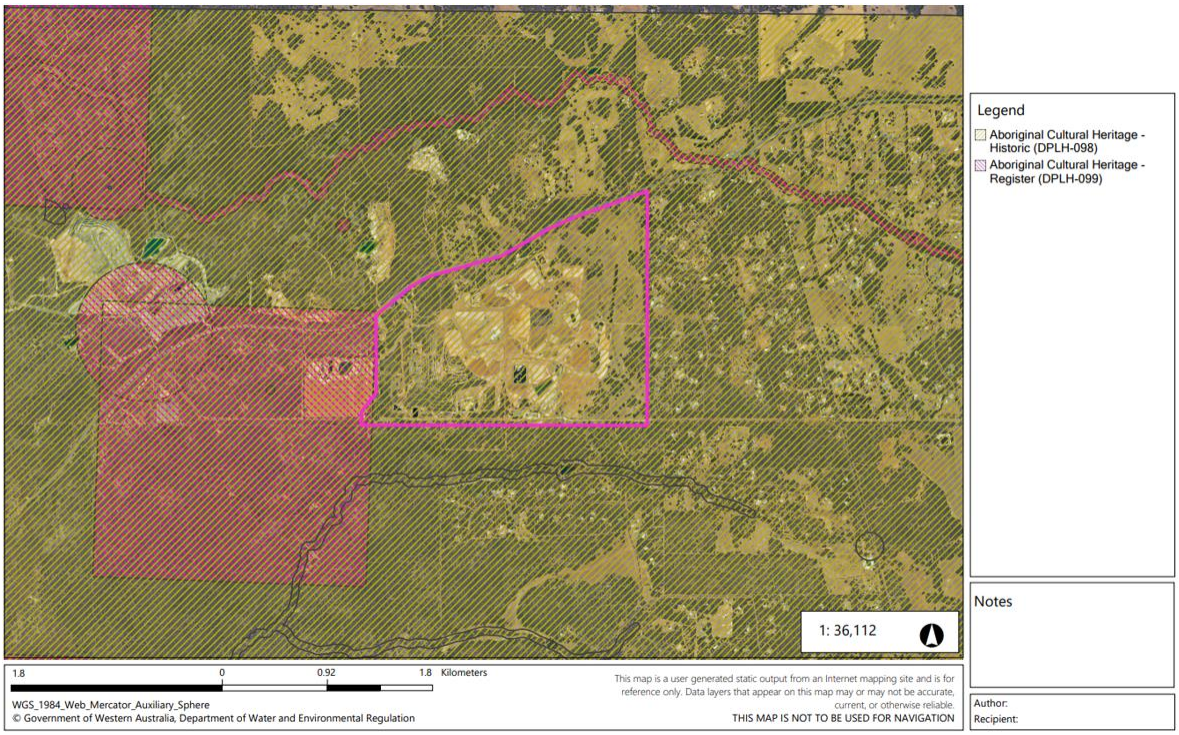

Figure 9: Distance to cultural receptors

3.2 Risk ratings

Risk ratings have been assessed in accordance with the *Guideline: Risk Assessments* (DWER 2020) 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.

The Revised Licence L8889/2015/2 that accompanies this Amendment Report authorises emissions associated with the operation of the Premises i.e. the construction and operation of an expanded FOGO hardstand and leachate pond, and increased acceptance and processing of FOGO waste.

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

Table 4. 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								
Construction of new FOGO facility hardstand and leachate pond.	Dust	**Pathway:** Air/windborne pathway **Impact:** Health and amenity	Human receptors as identified in section 3.1 Users of John Forrest National Park Fauna	Refer to Section 3.1	C = Minor L = Possible **Medium Risk**	Yes	Condition 42	N/A
Installation and relocation of equipment (picking station, MAFs, screen, odour defence system etc.).	Noise				C = Slight L = Unlikely **Low Risk**	Yes	None specified	N/A
Relocation of landfill gas infrastructure	Landfill gas				C = Minor L = Unlikely **Medium Risk**	No	**Condition 42**	Due to the presence of existing landfill gas infrastructure under the proposed construction site, the Delegated Officer has determined any required changes to the landfill gas system must be made before construction works commence.
Operation								
	Contaminated stormwater and leachate	**Pathway:** Surface runoff and seepage to groundwater **Impact:** Contamination of soil, surface water, and groundwater.	John Forrest National Park Flora and fauna	Refer to Section 3.1	C = Moderate L = Unlikely **Medium Risk**	Yes	Condition 4, 5, 6, 7, 25, 26, 42 and 44	N/A

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**				
Acceptance and processing of FOGO waste		Impacts to flora and fauna.	Surface water Groundwater Aboriginal Cultural Heritage sites					
	Odour	**Pathway:** Air/windborne pathway **Impact:** Health and amenity	Human receptors as identified in section 3.1 Users of John Forrest National Park		C = Moderate L = Possible **Medium Risk**	Yes	Condition 3, 4, 5, 8, 21, 22, 23, 28, 38, 42 and 44	N/A
	Dust	**Pathway:** Air/windborne pathway **Impact:** Health and amenity	Human receptors as identified in section 3.1 Users of John Forrest National Park Fauna		C = Minor L = Unlikely **Medium Risk**	Yes	Condition 4 and 5	N/A
	Noise	**Pathway:** Air/windborne pathway **Impact:** Amenity			C = Slight L = Unlikely **Low Risk**	Yes	Condition 4	N/A
	Litter and debris	**Pathway:** Air/windborne pathway **Impact:** Amenity and impacts to flora and fauna	Human receptors as identified in section 3.1 John Forrest National Park Flora and fauna		C = Minor L = Unlikely **Medium Risk**	Yes	Condition 4, 5 and 19	N/A

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**				
			Aboriginal Cultural Heritage sites					
	Vermin/ pests and pathogens	**Pathway:** Direct contact **Impact:** Health and amenity	Human receptors as identified in section 3.1 John Forrest National Park Class A Nature Reserve Flora and fauna Aboriginal Cultural Heritage sites		C = Moderate L = Possible **Medium Risk**	Yes	Condition 1, 4, 5, 6, 8, 29 and 38	N/A
Collection and storage of leachate/pumping to other leachate ponds	Leachate from damage to liners or overtopping of leachate ponds	**Pathway:** Surface runoff and seepage to groundwater **Impact:** Contamination of soil, surface water, and groundwater. Impacts to flora and fauna.	John Forrest National Park Flora and fauna Surface water Groundwater Aboriginal Cultural Heritage sites	Refer to Section 3.1	C = Moderate L = Unlikely **Medium Risk**	Yes	Condition 4, 5, 6, 25, 26, 42 and 44	N/A

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**				
	Odour	**Pathway:** Air/windborne pathway **Impact:** Health and amenity	Human receptors as identified in section 3.1 Users of John Forrest National Park		C = Moderate L = Unlikely **Medium Risk**	Yes	Condition 4, 5, 6, 8, 42	N/A
Fire	Smoke	**Pathway:** Air/windborne pathway **Impact:** Health and amenity	Human receptors as identified in section 3.1 Fauna	Refer to Section 3.1	C = Moderate L = Possible **Medium Risk**	Yes	Condition 1, 4, 5, 6 16, 17, 18, 29	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 FOGO Facility.
	Fire wash water	**Pathway:** Surface runoff and seepage to groundwater **Impact:** Contamination of soil, surface water, and groundwater. Impacts to flora and fauna.	John Forrest National Park Flora and fauna Surface water Groundwater Aboriginal Cultural Heritage sites		C = Moderate L = Possible **Medium Risk**	Yes	Condition 1, 4, 5, 6 16, 17, 18, 29	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 FOGO Facility.
Sale of final compost product	Contamination or poor quality of	Discharge of contaminants to land by	Private and commercial compost	Refer to Section 3.1	C = Moderate	Yes	Condition 1, 2, 3, 4, 5, 6, 21, 22, 23, 28 and 29	N/A

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**				
to public	products	application of poor quality products	users becoming exposed to contaminants (e.g. pathogens) in poor quality products.		L = Unlikely **Medium Risk**			

Note 1: Consequence ratings, likelihood ratings and risk descriptions are detailed in the *Guideline: Risk assessments* (DWER 2020).

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

Table 5: Consultation

Consultation method	Comments received	Department response
Local Government Authority (City of Swan) advised of proposal on 8 January 2025.	No comments received.	N/A
Department of Planning, Lands and Heritage (DPLH) advised of proposal on 8 January 2025.	DPLH replied on 21 January 2025 advising that the subject area is within the public boundary of Aboriginal Registered Site Red Hill (ID 3721). However, the works are not within the actual boundary as administered by DPLH. Therefore, based on the current information held by DPLH, no approvals under the *Aboriginal Heritage Act 1972* (AHA) are required in this instance and Aboriginal Heritage Conservation has no objection to the proposal. DPLH advised the subject area in its entirety may not have been comprehensively surveyed, so it is unknown what other Aboriginal Cultural Heritage may be in the area. The proponent will need to be aware of its obligations under the AHA. Aboriginal Heritage Conservation encourages the proponent consult with the Whadjuk Aboriginal Corporation regarding the proposal.	N/A
Traditional Owners (South West Aboriginal Land and Sea Council) advised of proposal on 8 January 2025.	No comments received.	N/A
Licence Holder was provided with draft amendment on 13 February 2025.	The applicant responded on 21 February 2025 and provided further comments on 24 February 2025. 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 6 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
Cover page	DWER file number updated
Prescribed premises category	Assessed production / design capacity for Category 67A increased from 50,000 to 58,000 tonnes per annual period.
Licence history	Current amendment added
Condition 1, Table 1: Waste acceptance	FOGO waste acceptance rate increased from 22,000 to 30,000 tonnes per annual period
Condition 4, Table 2: Infrastructure requirements	Stage 1 FOGO hardstand: - *Storage and processing of FOGO waste at this location is permitted until 1 July 2028* amended to: *Storage and processing of FOGO waste at this location is permitted until 31 December 2030* - Reference to Figure 4b added
	Stage 1 FOGO leachate sump: - Reference to Figure 4b added
	Interim FOGO facility hardstand: - Addition of *Storage and processing of FOGO waste at this location is permitted until 31 December 2030.* - *New hardstand* amended to *Interim FOGO Facility,* reference to Figures 4a and 4b added
	Addition of Expansion FOGO hardstand and operational requirements
	Addition of Expansion leachate pond and operational requirements
	Addition of Expansion leachate drain and pit and operational requirements
	Compost trommel screeners: - Sunday operational hours removed as licence holder confirmed no FOGO operations occur on Sundays - *Operated at the green waste processing hardstand area labelled in Figure 2.* amended to: *Operated at the green waste processing hardstand area (for green waste) labelled in Figure 2, and the FOGO facility (for FOGO waste) as depicted in Figure 4b.* - *Reference to Figure 4b added*
	Addition of Picking station and operational requirements

	Mobile aerated floors: - Inclusion of the expansion hardstand for MAF locations. - Infrastructure location: *Stage 1 FOGO hardstand and Green waste processing hardstand in Figure 2, and New hardstand* amended to: *FOGO facility as shown in Figure 4b.*
	Addition of Odour defense system and operational conditions.
Condition 5, Table 3: Waste processing	FOGO waste: - Inclusion of the expansion hardstand for FOGO processing location. - Inclusion of Note 4 specifying the storage of mature and pastuerised FOGO products and final blending is authorised to occur at the Green waste processing hardstand until the expansion FOGO hardstand is complete. - References to MAFs 1, 2, 3 and 4 amended to MAFs. - Reference to Stage 1 location amended to FOGO facility. - Inclusion of expansion leachate pond as an irrigation water source for FOGO. - Timeframe for disposing of residual physical contaminants increased from 24 hours to 48 hours
Condition 6, Table 4: Leachate and wastewater management requirements	Inclusion of: *Leachate from the expansion FOGO hardstand - Directed to the expansion FOGO leachate pond.*
Condition 23	*The licence holder must ensure that composting products produced from FOGO waste remain on the premises until monitoring results required by condition 28 are received to verify that condition 22 is satisfied* amended to: *The licence holder must ensure that composting products produced from FOGO waste remain on the premises until monitoring results required by condition 8 are received to verify that condition 22 is satisfied, unless the product is being taken to another facility licensed to accept FOGO waste.*
Condition 29	The word “FOGO” added to specify only FOGO composting products must be analysed by NATA accredited laboratories.
Condition 42, Table 13: Design and construction / installation requirements	Inclusion of the following works: - Expansion FOGO hardstand - Expansion leachate pond - Automatic leachate pump - Expansion leachate drain and pit - Picking station - Mobile aerated floors
New condition 44	Inclusion of construction quality assurance requirements for the following works: - Expansion FOGO hardstand - Expansion leachate pond - Expansion leachate drain and pit

Condition 45 (now condition 46)	Inclusion of the following Environmental Compliance Report requirements: *(b) records of construction quality assurance inspections and test results in accordance with the relevant requirements specified in condition 44 and including a labelled map of test locations* (c) Inclusion of survey heights for the new hardstand *(d) photographs of each item of infrastructure or equipment specified in condition 42*
Definitions	Definitions added: *AHD, AS 1289.5, AS 1289.6.7.1, AS 1289.6.7.2, AS 3798-2007, BGL*
	Definitions removed: *MAF 2, MAF 3 and MAF 4*
	Definitions amended: *MAF 1 (now MAFs), suitably qualified person*
Schedule 1, Figure 4b	Interim FOGO facility map replaced with updated map
Schedule 1	Addition of FOGO facility expansion construction specifications – Figure 5, 6, 7 and 8.

References

1. Department of Environment Regulation (DER) 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
2. Department of Water and Environmental Regulation (DWER) 2020, *Guideline: Environmental Siting*, Perth, Western Australia.
3. Department of Water and Environmental Regulation (DWER) 2022, *Guideline: Better practice organics recycling,* Perth, Western Australia.
4. DWER 2020, *Guideline: Risk Assessments*, 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 4, Table 2, Picking station	The licence holder requested the ability to recycle/recover suitable materials (such as glass and plastic) removed from FOGO material in the picking station.	Accepted.
Condition 4, Table 2, Picking station	The licence holder requested the timeframe for disposal of contaminants picked out of FOGO waste be extended from 24 hours to 48 hours.	Accepted.
Condition 4, Table 2, Odour defense system	The licence holder requested the removal of the brand name of the system.	Accepted.
Condition 5, Table 3, FOGO waste	The licence holder requested the ability to continue to store and blend FOGO final product at the Green waste hardstand while the new FOGO facility is being expanded.	Accepted. This has been added as Note 4 in Table 3.
Condition 5, Table 3, FOGO waste	The licence holder requested the re-wording of: *FOGO waste received at the premises is delivered directly to the Stage 1 FOGO hardstand, Interim FOGO facility hardstand or the expansion hardstand and immediately placed onto a mobile aerated floor* *to* *FOGO waste received at the premises is delivered directly to Stage 1 FOGO Hardstand (also known as the interim FOGO facility/ expanded interim hardstand facility) and will be immediately placed onto a mobile aerated floor.*	The original wording has been kept to ensure consistent wording throughout the instrument.
Condition 5, Table 3, FOGO waste	The licence holder requested the retention of the conditions: *Irrigation water used at the Stage 2 green waste processing hardstand is sourced from siltation/water ponds as designated in Figure 4a, Schedule 1*	Accepted.

Condition	Summary of Licence Holder's comment	Department's response
	and *FOGO Composting Products are not transferred to the green waste processing hardstand until they have:* - *undergone a minimum of 14 weeks aerobic composting; and* - *undergone two phases of screening in the trommel screener to remove physical contaminants* to allow for the continued storage and blending of FOGO composting product at the green waste hardstand while the new FOGO facility is being expanded.	
Condition 5, Table 3, FOGO waste	The licence holder requested the timeframe for disposal of contaminants removed from the green waste processing hardstand and interim FOGO facility be extended from 24 to 48 hours.	Accepted.
Condition 29	The licence holder requested the addition of the specification that only FOGO composting material is required to be analysed by NATA accredited laboratories. The licence holder advised that green waste is primarily used at the site to blend with FOGO to create a final compost product. However, some green waste is used to create a pastuerised mulch, not a compost, which would not fall under the current condition 29. Green waste is assessed to ensure pasteurisation is occurring and non-NATA accredited analysis is undertaken.	Accepted. The amended condition 29 specifies that only FOGO composting material is required to be analysed by a NATA accredited laboratory, and so products such as mulch that do not contain FOGO are not subject to this requirement.
Condition 42, Table 13, Expansion FOGO hardstand	The licence holder advised the permeability of the Engineered Clay Attenuation Layer will be $1x10^{-8}$ m/s, not $1x10^{-9}$ m/s.	The permeability has been corrected.
Condition 42, Table 13, Expansion FOGO hardstand	The licence holder requested that the requirement for the fall of the hardstand be changed from 2% to approximately 2% to allow for slight variation during construction.	The condition has been amended to allow for a fall of approximately 2%.
Condition 42, Table 3, Expansion leachate pond	The licence holder advised the permeability of the Engineered Clay Attenuation Layer will be $1x10^{-8}$ m/s, not $1x10^{-9}$ m/s.	The permeability has been corrected.
Condition 44, Table 14, Expansion FOGO hardstand and expansion leachate pond	The licence holder provided a frequency for the subbase compaction and density testing.	Added to the licence.

Condition	Summary of Licence Holder's comment	Department's response
Amendment report, section 3.1.1, Table 2	The licence holder advised there are no FOGO operations on Sundays.	Sunday has been removed from the listed operational hours for FOGO operations in the proposed controls, and also the operational hours of the compost trommel screeners in condition 4.
All	The licence holder requested the spelling of license be changed to licence.	The instances where license is spelled with an s in the instrument and report are where the verb version of the word is used, which requires the use of an s.
All	The licence holder requested that 'green waste' and 'garden organics' be referred to as the same thing.	The Delegated Officer determined that 'green waste' and 'garden organics' have different meanings, and as such the current use of the term 'green waste' in the licence has not been changed.