



## Application for Licence Amendment

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

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<b>Licence Number</b>	L9304/2021/1
<b>Licence Holder</b>	Shire of Ashburton
<b>File Number</b>	DER2021/000287
<b>Premises</b>	<p>Pilbara Regional Waste Management Facility</p> <p>Legal description –</p> <p>Lot 550 and Lot 551 on Plan 414367, being Reserve 53324</p> <p>Onslow Road</p> <p>TALANDJI WA 6710</p> <p>Certificate of Title Volume LR3169 Folio 963</p> <p>As defined by the Premises maps attached to the Revised Licence</p>
<b>Date of Report</b>	<b>30/11/2023</b>
<b>Decision</b>	Revised licence granted

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**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 L9304/2021/1 is held by the Shire of Ashburton (Licence Holder) for the Pilbara Regional Waste Management Facility (the Premises), located on Onslow Road, Talandji.

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, amended licence L9304/2021/1 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 27 January 2023, the Licence Holder submitted an application to the department to amend licence L9301/2021/1 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act). The following amendments are being sought:

**Table 1: Proposed amendments**

Amendment Description	Changes requested to existing licence	Emissions required to be risk assessed
Acceptance of putrescible waste to landfill.	Amendment to waste processing and acceptance tables to facilitate burial of both putrescible wastes and Class IV contaminated solid waste in the landfill – addition of premises category 64 with no increase to the assessed design capacity for the landfill, which will remain at 50,000 tonnes per annual period for combined Category 64 and 65 landfilling activities.	Emissions associated with putrescible waste streams (odour, landfill gas, leachate, pests, and pathogens).  Landfill leachate, Dust, Asbestos fibres, Odour, Noise, Landfill Gas, Windblown Waste, Smoke, and/or chemicals and firewater used to control fire were all assessed as part of original works approval and licensing stages

Amendment Description	Changes requested to existing licence	Emissions required to be risk assessed
<p>Addition of Category 57: <i>Used tyre storage (general): premises (other than premises within category 56) on which used tyres are stored.</i></p>	<p>Addition of premises Category 57, changes to waste acceptance and processing tables and change to approved Category 63 capacity to facilitate receipt, storage, and burial of used tyres. To facilitate the burial of the tyres in the tyre monocell, the Shire is also requesting an increase to the assessed production capacity of Category 63 – Class I inert landfill site from 20,000 tonnes per annual period (for Special Waste Type 1 [asbestos]) to 50,000 tonnes per year for combined Special Waste Type 1 and Inert Waste Type 2.</p>	<p>Emissions related to increased tyre acceptance and disposal and associated fire and smoke risk– refer to section 3.4. The Licence Holder initially requested that Category 57 be added to the licence with an assessed design capacity of 25,000 tyres to allow the acceptance and stockpiling of used tyres prior burial. Following further discussions, it was confirmed that storage for a maximum of maximum of 500 tyres would be required pending burial.</p>
<p>Greater flexibility in utilisation of bulk waste areas (i.e., the pads in the C&amp;D and scrap metal area can be used for either material).</p>	<p>Amendment to Bulk Waste Area Operational Requirement and Infrastructure location operational requirements to improve flexibility of site operations</p>	<p>Proposed change will not alter the risk associated with bulk waste handling. Revised condition working required to ensure site hygiene is maintained.</p>
<p>Changes to scrap metal stockpiling and processing</p>	<p>That the acceptance specification is amended to include vehicle bodies, electronic waste, and whitegoods.</p>	<p>Emissions associated with expanded scrap metal streams (car bodies, e-waste, and whitegoods)</p>
<p>Changes to C&amp;D materials</p>	<p>Removal of requirement to maintain stockpiles in a damp state</p>	<p>Proposed change will not alter the risk associated with asbestos management, and the remaining controls are considered sufficient.</p>
<p>Changes to landfill tipping face size</p>	<p>That the process limit specified in Table 2 Waste processing) for the landfill tipping face is changed from a maximum area of 30 m x 30 m to a maximum linear length of 50 m</p>	<p>Proposed changes to tipping face limitations will not alter the risk profile, and consistent with other approved landfills.</p>
<p>Changes to waste cover requirements</p>	<p>That the intermediate cover requirement for neutralised acid sulfate soils, contaminated solid waste and Inert Waste Type 1 specified in Table 3 (Cover requirements) is reduced from 300 mm to 150 mm and that alternative daily cover (ADC) treatments are allowed.</p>	<p>Proposed reduced cover depths will not alter the emissions risk associated with waste burial and are consistent with similar Pilbara landfills. Proposed ADC will comprise commercially available sprayable, or foaming products designed for such landfill applications. The ADC will be managed and applied in accordance with the manufacturer's recommendations.</p>

Amendment Description	Changes requested to existing licence	Emissions required to be risk assessed
Changes to leachate pond management requirements	That the requirement for the landfill leachate pond to be emptied prior to the onset of the wet season so that the pond liner integrity be visually assessed with any necessary repairs made before the onset of the wet season is deleted from the licence.	<p>Proposed change to leachate pond management requirements will not alter the existing risk profile.</p> <p>Landfill leachate pond is constructed with primary and secondary HDPE liners and a Geonet leak detection layer, which provides the primary method of identifying defects with the primary liner.</p> <p>The requirement to empty the pond each year before the onset of every wet season is not practicable.</p> <p>Depending on rainfall experienced during the year and the amount of leachate generated in the landfill cell, it is probable that the leachate pond will be empty or contain sufficiently low levels of leachate by the end of each dry season. The Shire will use this time to perform inspections of the primary liner and make any repairs as necessary.</p>
Changes to use of Turkey's Nest	That the Turkeys Nest is authorised to store both bore and collected surface water runoff pumped from the Surface Water Attenuation Pond for use across the site as dust suppression etc. to reduce reliance on bore water. The licence currently only references the Turkeys Nest as a bore water storage pond only.	<p>Administrative change with no change to premises risk profile.</p> <p>Original licence decision report refers to utilisation of stormwater stored in Turkeys Nest for dust suppression activities.</p>
Revised naming of infrastructure	That the naming of some site infrastructure and equipment is updated to provide more clarity and to be consistent with the infrastructure Map in Schedule 1.	<p>Administrative change with no change to premises risk profile.</p> <p>Updated figures inserted.</p>

Amendment Description	Changes requested to existing licence	Emissions required to be risk assessed
Changes to wording for leachate pump operation	<p>That the operational level for the leachate head in Cell 1 measured in the primary leachate sump as specified in Table 10 of the licence is amended from 'pre-pumping level between 300 mm to 1000 mm' to 'pre-pumping level of 1000 mm' to be clearer and more certain as to when management actions must be implemented.</p> <p>Also requested that administrative amendments are made to provide consistent naming of leachate sumps in the tables of the licence</p>	Administrative change with no change to premises risk profile.
Changes to leachate management requirements	That event triggering management action at the leachate detection layer (Where a cumulative total of 5 litres of liquid is accumulated over a period of 6 months) is deleted or amended as the requirement is not clear or certain.	Accumulated leachate captured by secondary liner and collected within leak detection sump – indicative of primary containment liner failure.
Revised premises maps	<p>Request that the infrastructure Map in Schedule 1 of the licence is updated to reflect the current operational layout of the premises and the amendments proposed in this application, as follows:</p> <ul style="list-style-type: none"> <li>• Addition of the operational extents of the Tyre Monocell and Asbestos Monocell; and</li> <li>• Clarification of the labelling and extent of the Bulk Waste Area.</li> <li>• Updated location for monitoring location L1 (Primary Leachate Sump) and addition of L2 (Leachate Detection Sump).</li> <li>• Removal of groundwater monitoring location BH10.</li> </ul>	<p>Administrative change with no change to premises risk profile.</p> <p>Updated figures inserted.</p>

On 31 July 2023, the Licence Holder submitted a second application for the alteration of the existing prescribed premises boundary. This amendment is to excise an area of approximately 4 hectares (ha) which is to be leased to CD Dodd Scrap Metal Recyclers to operate a scrap metal, cleaning and salvaging operation to support offshore infrastructure decommissioning

works. Emissions associated with the proposed scrap metal, cleaning and salvaging operation shall be assessed under works approval W6828/2023/1. The Delegated Officer has determined that the two applications should be assessed concurrently, and the boundary amended as part of the issue of the revised licence. Revised figures depicting the realigned premises boundary have been inserted into the revised licence.

As part of this amendment DWER has corrected any clerical mistakes, unintentional errors, and implement grammatical or administrative changes to provide clarification on the intention of the licence conditions.

Chief among these is the confirmation through the modification of Table 5: Waste processing that the occupier is permitted to accept and stockpile clean fill for use as future landfill cover material.

Additionally, and in accordance with correspondence dated 28 October 2022 (DWER reference DWERDT678610), the agreed date for submission of a detailed landfill closure plan under condition 36 (formerly condition 37) has been amended to 22 December 2023.

### 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 premises operation which have been considered in this amendment report are detailed in Table 2 below. Table 2 also details the proposed control measures the Licence Holder has proposed to assist in controlling these emissions, where necessary.

**Table 2: Licence Holder controls**

Emission	Sources	Potential pathways	Proposed controls
Contaminated stormwater runoff	Runoff from uncovered storage of e-waste and whitegoods as part of scrap metal collections.  Runoff from waste handling and storage areas.	Overland flow and infiltration through soil profile with negative impacts on groundwater quality.	Vehicle bodies must be depolluted and contain no liquids.  White goods must be degassed.  Dedicated impermeable hardstands.  Surface water at the premises managed using stormwater diversion drains and attenuation ponds Any litter or foreign matter within the surface water collection system and ponds will be regularly removed.
Odour	Receipt and burial of putrescible waste streams (including facultative pond sludge generated at the premises)	Air / wind dispersion causing impacts to health, wellbeing, and amenity.	Physical separation from sensitive receptors.  Application of appropriate waste covers.
Windblown and animal dispersed litter		Air / wind dispersion and dispersal by avifauna causing impacts to visual amenity and ecosystem health.	Application of cover material.



Emission	Sources	Potential pathways	Proposed controls
Landfill leachate		<p>Overland flow due to overtopping of leachate storage ponds or failure of leachate conveyance infrastructure.</p> <p>Overland runoff (from stormwater migration).</p> <p>Infiltration and subsequent movement on contaminants through groundwater.</p> <p>Abstraction and use of groundwater – direct exposure.</p>	Dual geosynthetic lining systems, including leachate collection and conveyance, and leachate leak detection systems.
Vector emissions – vermin, pests, and pathogens		Insects and both feral and native birds and small mammals acting as vectors for the transmission of pathogens, weed seed and waste by air and land.	<p>Application of appropriate waste covers.</p> <p>Prescribed pest monitoring and management actions within licence.</p>
Landfill gas		Lateral migration through soil, movement through groundwater; or passive venting to air.	<p>The constructed engineering barrier (approved landfill liner system) will contain the landfill waste and reduce the potential for horizontal landfill gas migration.</p> <p>Combined groundwater and landfill gas monitoring bores have been constructed to monitor gas migration.</p> <p>There are 20 operational combined LFG and groundwater wells on site (BH03, BH05, BH11 to BH26).</p> <p>It is the Applicant's position that the current monitoring well spacing at the site is approximately 100 m, which is considered appropriate given the local geology.</p> <p>Landfill gas extraction system and flare may be considered as part of future stages if sufficient volumes of landfill gas support it.</p>

Emission	Sources	Potential pathways	Proposed controls
Class IV landfill leachate from failure of double CSCL system	Unidentified failure of secondary leachate containment system	Overtopping of sump and seepage to ground.	<p>The liquid level in the leak detection sump is monitored by a hydrostatic liquid level sensor. The sensor does not require routine, periodic calibration, or maintenance. If a fault is noted in the sensor, it will be replaced with a new unit.</p> <p>The liquid level is measured every 15 minutes and displayed on the monitoring dashboard in the site weighbridge control room. Data is recorded in the system for reporting purposes.</p> <p>If the 100 mm level is exceeded, an alert is shown on the monitoring dashboard, and an email is sent to relevant operation personnel, including the site manager.</p> <p>The pump in the leachate sump will be subject to annual service to ensure that it is operating correctly and for preventative maintenance to be carried out.</p>
Fire incident: smoke, fumes, and ash	Landfill or stockpiled waste fire (including tyre fire)	Air/windborne pathway.	<p>Placement of daily waste cover.</p> <p>Segregation of different waste stockpiles and maintenance of appropriate buffers.</p> <p>Onsite fire suppression infrastructure.</p>
Fire incident: Fire debris and washwaters		Overland flow and seepage to ground.	Refer to section 3.4.

### 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.

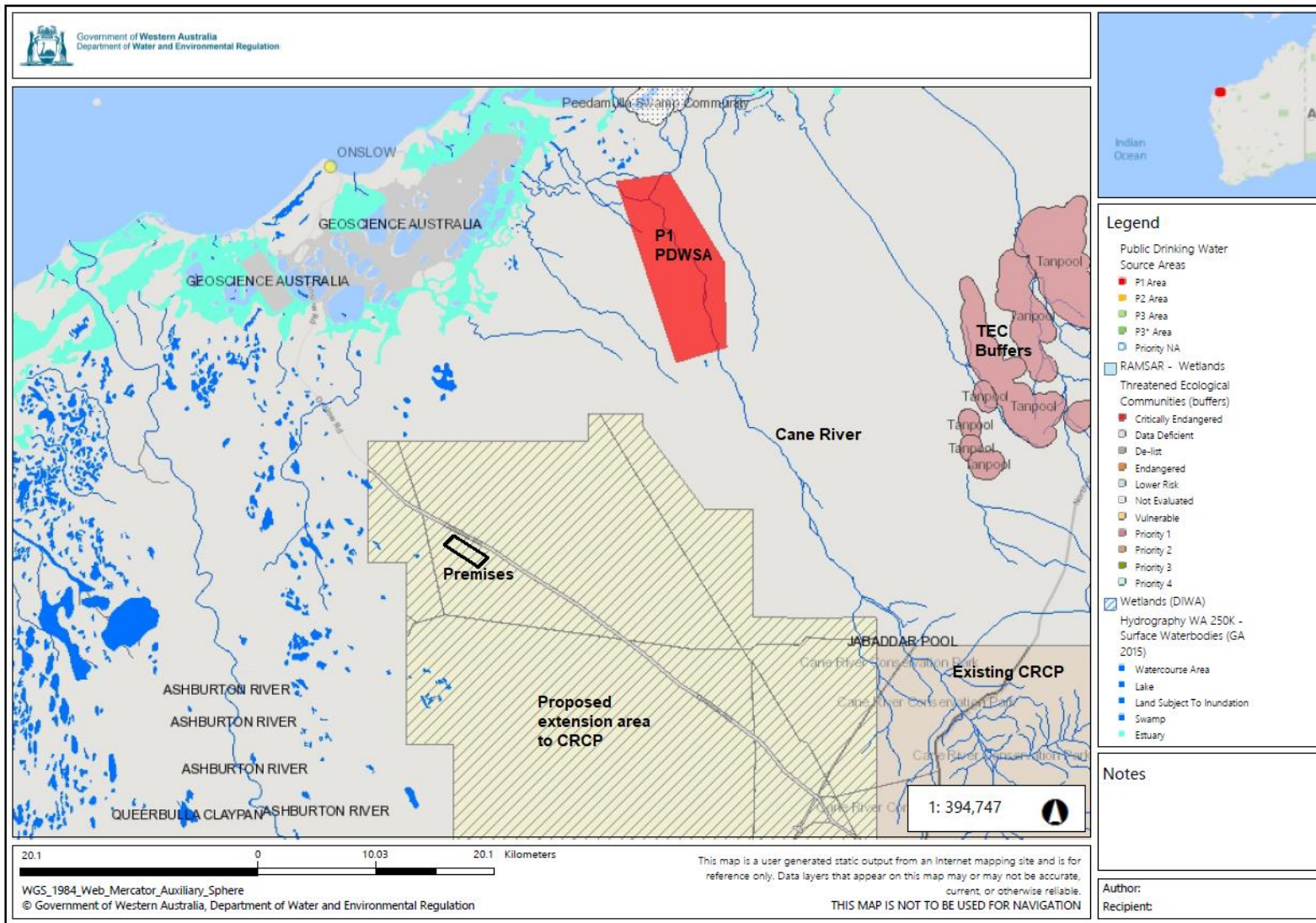
Table 3 below provides a summary of potential human and environmental receptors that may be impacted as a result of activities upon or emission and discharges from the prescribed premises (*Guideline: Environmental siting* (DWER 2020)).

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

Human receptors	Distance from prescribed activity
Pastoral stations and leases	Lands used for agricultural purposes (grazing) on Minderoo and Peedamulla station extend from ~3.2 km west and ~8 km north of the Premises. Minderoo Station homestead is located ~20 km south-west of the Premises.  Peedamulla Station homestead and campground are located ~40km east northeast of the premises.
Onslow town site and industrial areas	Wheatstone oil and gas worker accommodation is located ~22 km north-west of the Premises. Onslow town site is located ~30 km north-west of the Premises.
Users of Conservation Park (existing and proposed)	The proposed extension to the Cane River Conservation Park (CRCP) includes all lands surrounding the Premises except easements associated with the Onslow Road and associated infrastructure.  The boundary of the proposed extension to the CRCP is located between 150 and 1,500 m from the PRWMF infrastructure.
Environmental receptors	Distance from prescribed activity
Cane River Conservation Park (CRCP)	Current: located approximately 32 km south-east. Proposed extension: surrounding the Premises, between approximately 150 m and 1,500 m from the PRWMF infrastructure.  No management plan has been published for the existing or proposed extension to the CRCP. Consistent with section 56 of the CALM Act, the purpose of conservation parks is to conserve the natural environment, protect flora and fauna and preserve features of archaeological, historic or scientific interest while providing for suitable levels of public recreation.
Public Drinking Water Source Area (PDWSA) under the <i>Country Areas Water Supply Act 1947</i>	The Cane River Water Reserve Priority 1 PDWSA is located approximately 21.1 km north-east (up-gradient) of the Premises.

Surface Water: River systems	<p>The Premises is located along the divide of the Ashburton River and Cane River catchment which discharges into the Ashburton River catchment. Ashburton River: Approximately 20.5 km west of the Premises (down-gradient).</p> <p>Cane River: Approximately 22 km north-east of the Premises (up-gradient)</p>
Surface Water Resource Proclaimed Area	<p>Surface Water Area which is proclaimed area under the RIWI Act. The Premises is specifically located within the Ashburton River surface water resource proclaimed portion.</p> <p>Surface water areas are proclaimed for the purposes of regulating the taking of water from watercourses and wetlands and where there is a need for systematic management for the use of water.</p>
Surface water bodies	<p>A series of non-perennial lakes are situated to the west (down-gradient), south-west (up-gradient) and north-east (up-gradient) of the Premises. The closest of these is located approximately 2.3 km west of the Premises.</p> <p>Beyond these is a series of Saline Coastal Flats which extend towards the Indian Ocean.</p>
Threatened Ecological Communities (TEC) (buffers)	<p>The closest TEC buffer, being Tanpool land system, is situated 36.8 km north-east of the Premises.</p> <p>A Tanpool land system is a “highly restricted land system that occurs between Pannawonica and Onslow. It consists of stony plains and low ridges of sandstone and other sedimentary rocks supporting hard spinifex grasslands and snakewood shrublands” (DBCA, 2017), with a Priority 1 category rating.</p>
Indian Ocean	<p>Approximately 40.3 km north-west (down-gradient) of the Premises</p>
Groundwater: superficial and confined aquifers	<p>The Premises is located with the Carnarvon confined Birdrong aquifer and Carnarvon superficial aquifer. Talis (2018a) reported that the superficial aquifer was not encountered during intrusive investigations at the Premises. Depth to groundwater ranges across the Premises from 5.4 metres below ground level (m BGL) (BH03 January 2018) to 20.9 m BGL (BH10 April 2019).</p> <p>Groundwater dependent ecosystems have not been investigated within the unallocated crown land surrounding the Premises, proposed as an extension to the CRCP, for the purposes of the risk assessment they are assumed to be potentially present.</p>

<p>Users of groundwater resources</p>	<p>The Premises is located within the RIWI Act proclaimed Pilbara Groundwater Area.</p> <p>Groundwater licences are granted ~20 km south-west (Ashburton River – bore is up-gradient), ~27 km north-east (Cane River – up-gradient) and from ~16 km north-west (down-gradient) of the Premises. A series of licences are also granted along the Onslow Road from ~5 km north-west (up-gradient) and ~1 km south-east (up-gradient) that are predominately granted to Main Roads Western Australia.</p> <p>Groundwater may also be used for stock water on nearby pastoral stations.</p>
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**Figure 1: Relative distance to sensitive 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 incomplete 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 L9304/2021/1 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 4. Risk assessment of potential emissions and discharges from the Premises during operation**

Risk Event					Risk rating <sup>1</sup> C = consequence L = likelihood	Licence Holder's controls sufficient?	Conditions <sup>2</sup> of licence	Justification for additional regulatory controls
Premises category: Source/Activities	Potential emission	Potential pathways and impact	Receptors	Licence Holder's controls				
<b>Operation</b>								
Category 62: receipt and stockpiling of e-waste and whitegoods for offsite recycling	Contaminated stormwater	Overland flow and infiltration to soil profile and underlying groundwater with implications for groundwater users.	Licensed groundwater users and livestock	Refer to Section 5.1	C = Slight L = Unlikely <b>Low Risk</b>	Y	Condition 1 and 3	N/A
Category 64: Putrescible waste acceptance and burial	Odour	Airbourne pathway resulting in negative amenity and potentially detrimental health impacts.	Pastoral station workers Cane River Conservation Reserve visitors	Refer to Section 5.1	C = Slight L = Unlikely <b>Low Risk</b>	Y	Condition 15	N/A
	Vector emissions – vermin, pests, and pathogens	Movement via air, or transmission via fauna.	Pastoral station workers Cane River Conservation Reserve visitors	Refer to Section 5.1	C = Slight L = Unlikely <b>Low Risk</b>	Y	Condition 15 and 20	N/A
	Windblown waste/litter	Air/windborne pathway causing impacts to amenity. Dispersal by scavenging fauna.	Pastoral station workers Cane River Conservation Reserve visitors	Refer to Section 5.1	C = Slight L = Possible <b>Low Risk</b>	Y	Condition 21	N/A



Risk Event					Risk rating <sup>1</sup> C = consequence L = likelihood	Licence Holder's controls sufficient?	Conditions <sup>2</sup> of licence	Justification for additional regulatory controls
Premises category: Source/Activities	Potential emission	Potential pathways and impact	Receptors	Licence Holder's controls				
	Landfill leachate	Infiltration to soil profile and underlying groundwater with implications for groundwater users	Groundwater: superficial and confined aquifers. Users of groundwater resources.	Refer to Section 5.1	C = Moderate L = Possible <b>Medium Risk</b>	Y	Condition 24, 32, 34, and 35	N/A
	Contaminated stormwater runoff	Infiltration to soil profile and underlying groundwater with implications for groundwater users	Groundwater: superficial and confined aquifers. Users of groundwater resources.	Refer to Section 5.1	C = Minor L = Unlikely <b>Medium Risk</b>	Y	Condition 14 and 23	N/A
	Fire incident: smoke, fumes, and ash	Air/windborne pathway causing impacts to health and amenity.	Pastoral station workers Cane River Conservation Reserve visitors	Refer to Section 5.1	C = Moderate L = Likely <b>High Risk</b>	N	Condition 15, 17, 21, and 24	Limitation imposed on the number of tyres which may be stockpiled onsite to minimise potential impacts of an accidental fire at the premises.  Condition prescribing containment of fire-fighting washwater inserted.
	Fire incident: Fire debris and washwaters	Overland flow and seepage to ground – causing impact to surrounding native ecosystem and groundwater quality.	Groundwater: superficial and confined aquifers. Users of groundwater resources.	Refer to Section 5.1	C = Moderate L = Possible <b>Medium Risk</b>	Y	Condition 23	

Risk Event					Risk rating <sup>1</sup> C = consequence L = likelihood	Licence Holder's controls sufficient?	Conditions <sup>2</sup> of licence	Justification for additional regulatory controls
Premises category: Source/Activities	Potential emission	Potential pathways and impact	Receptors	Licence Holder's controls				
	Fugitive landfill gas	Passive venting to air Lateral migration through soil	Remnant native vegetation.	Refer to Section 5.1	C = Possible L = Major <b>High Risk</b>	N	<b><u>Condition 40</u></b>	<b>Refer to section 3.3.1</b>
Category 65: Leak detection system management	Landfill leachate	Infiltration to soil profile and underlying groundwater with implications for groundwater users	Licensed groundwater users and livestock	Refer to Section 5.1	C = Moderate L = Possible <b>Medium Risk</b>	Y	Condition 33	Refer to section 3.3.2

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.

### 3.3 Detailed risk assessment for putrescible waste burial

#### 3.3.1 Landfill gas

Biological decomposition of organic matter under anaerobic conditions within the landfill cell results in the generation of landfill gases; chiefly methane and carbon dioxide, with a small proportion of the overall landfill gas mixture comprising carbon monoxide, hydrogen sulphide and other volatile organic compounds (VOCs).

On 9 May 2023, the Delegated Officer issued a request for information to the applicant in relation to what infrastructure was present or proposed at the premises to mitigate the potential risks associated with landfill gas emissions. On 7 July 2023 a detailed response was provided outlining some potential landfill gas management actions, including the proposed utilisation of 20 operational combined LFG and groundwater wells on site (BH03, BH05, BH11 to BH26), and the potential future construction of a landfill gas collection system.

The Environment Protection Authority Victoria's Landfill gas fugitive emissions monitoring guideline (EPA 2018) provides that groundwater monitoring bores should not be used for landfill gas monitoring, as these are typically screened only within an aquifer and not across unsaturated strata through which gas moves. In some cases, a small amount of the groundwater bore screen may be within unsaturated strata or the part of the bore screen may become unsaturated due to groundwater level changes. As a result, groundwater monitoring bores will return either false negatives or unrepresentative landfill gas readings.

As part of the amendment the Delegated Officer has deemed that consolidated Landfill Gas Management Plan and Risk Assessment which addresses the long-term management of landfill gases at the premises will be required as a condition of the licence.

#### 3.3.2 Leachate leak detection protocols

The Class IV landfill has been constructed with a leachate collection system consisting of permeable gravel installed above the primary lining system, with submersible pneumatic pumps to automatically extract collected landfill leachate when sufficient head is present over the pump's inlet. A leak detection layer is also present above the secondary lining system consisting of a series of pipes that direct leachate towards a collection sump and extraction point. In the event the integrity of the primary layer is compromised, the leak detection system will direct leachate towards a secondary extraction sump. The Licence Holder has indicated that regular inspections of the leachate collection and storage system are to be undertaken to ensure leachate is contained within the leachate ponds or the landfill cell footprint.

The originally issued licence included the following management action in relation to the leachate leak detection layer.

<i>Leachate leak detection layer</i>	<i>Where a cumulative total of 5 litres of liquid is accumulated over a period of 6 months</i>	<i>a) The Licence Holder must cease the acceptance of waste for disposal to landfill until directed to re-commence by the CEO. b) The Licence Holder must report the exceedance to the CEO within 7 days.</i>
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The Licence Holder has requested that this requirement be removed on the basis that the location from which this measurement is not specified, and that if it does in fact relate to the 1.0 m x 1.0 m leachate leak detection sump; then five litres of liquid in the sump would equal a depth of 0.005 m (0.5 cm), which is very difficult to measure using available sensor technology.

On 9 May 2023, the Delegated Officer issued a request for information to the applicant in relation to how the premises operator proposes to monitor the leachate leak detection sump. On 7 July 2023 a response was received in which the applicant stated:

*“The liquid level in the leak detection sump is monitored by a hydrostatic liquid level sensor. The sensor does not require routine, periodic calibration, or maintenance. If a fault is noted in the sensor, it will be replaced with a new unit. The liquid level is measured every 15 minutes and displayed on the monitoring dashboard in the site weighbridge control room. Data is recorded in the system for reporting purposes. If the 100 mm level is exceeded, an alert is shown on the monitoring dashboard, and an email is sent to relevant operation personnel, including the site manager. The pump in the leachate sump will be subject to annual service to ensure that it is operating correctly and for preventative maintenance to be carried out.”*

Based on the above, the Delegated Officer has agreed to modify the wording within Table 11 to better reflect the requirements set out in Table 10. However, the requirement that the Licence Holder cease waste acceptance where leachate accumulation within the detection sump is recorded has been retained.

### 3.4 Used tyre storage and burial.

The acceptance, storage, and disposal of used tyres (Inert Waste Type 2) was excluded from the existing licence as the Tyre Monocell had not yet been constructed when the licence application was made. The first stage of the Tyre Monocell was constructed in September 2022 under Works Approval W6225/2019/1, with a compliance certificate submitted to DWER on 4 October 2022 under condition 3 of the works approval.

The Tyre Monocell will continue to be constructed in stages to maintain sufficient void space for the forecast deliveries following the design specification of the first stage, specifically:

- 10 m x 10 m trench;
- Minimum separation distance of 3.0 m between the base of the Tyre Monocell and the maximum recorded groundwater level; and
- Unsealed roadway to the monocell.

As part of the works approval process, the Licence Holder has previously committed to ensuring that used tyres will be stored in accordance with the Department of Fire and Emergency Services *Guidance Note: GN02 Bulk storage of rubber tyres including shredded and crumbed tyres (DFES, 2019)*.

The Licence Holder requests that the licence amendment includes the flexibility to progress the Tyre Monocell in stages without requiring subsequent, frequent licence amendment processes.

As noted in the Application Summary above, the Licence Holder initially requested that Category 57 be added to the licence with an assessed design capacity of 25,000 tyres to allow the acceptance and stockpiling of used tyres prior burial.

Following further discussions, it was confirmed that only storage for a maximum of maximum of 500 tyres would be required pending burial.

The Shire is also requesting an increase to the assessed production capacity of Category 63 – Class I inert landfill site from 20,000 tonnes per annual period (for Special Waste Type 1 [asbestos]) to 50,000 tonnes per year for combined Special Waste Type 1 and Inert Waste Type 2.

Tyres will be buried whole upon receipt with baling or shredding prior to burial no longer proposed. Deposited tyres will be covered at the end of each day with at least 100 mm of cover. Once the trench is filled, a final capping of cover material will be applied to a minimum depth of 0.5 m.

Although the acceptance and disposal of used tyres (Inert Waste Type 2) were excluded from the previous licence, DWER included the activity in its risk assessment, which noted that the inclusion of this activity could increase the likelihood of a fire given the volume of additional

waste material proposed. However, DWER considered that the activity did not alter the risk rating of the event.

The existing licence requires that the following fire suppression infrastructure is maintained at the premises, and would be deployed for use in the tyre stockpiles or monocell in the event of a fire:

- 100,000 L water tank or two 50,000 L tanks,
- Fire extinguishers; and
- 10,000 L water cart.

Fire washwater (Fire suppressant runoff) management in the event of a tyre fire was risk assessed as part of works approval W6225/2019/1. No specific containment infrastructure for fire debris and washwaters within the tyre monocell has been constructed; however, runoff from fire suppression shall be contained to the operational tyre monocell trench or otherwise contained to the premises by surface water management infrastructure.

Stormwater diversion structures such as swales and levee embankments as well as drainage structures have been constructed to manage surface water flow around the Premises. The Premises infrastructure has been designed with consideration of local climate conditions. The Works Approval assessment considered a 1 in 100 year, 72-hour storm event for the design of infrastructure at the Premises, as well as assessing potential for flooding, catastrophic failure and overtopping of surface water and leachate storage ponds and structures.

## 4. Consultation

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

**Table 5: Consultation**

Consultation method	Comments received	Department response
Department of Planning, Lands, and Heritage was provided a copy of the application package via email on 11/09/2023	None received.	Not applicable.
Department of Health was provided a copy of the application package via email on 11/09/2023	<p><i>1. Wastewater management</i></p> <p><i>DoH has received an application to construct new evaporation ponds and drying pads in connection with this proposal. The application is currently being assessed. It is noted that the application lacked information such as detailed plans, engineering certification for the evaporation ponds, water balance calculations, and certification of the hydraulic loading capacity of the ponds. DoH will contact the applicant to supplement the necessary information for further assessment and consideration for approval</i></p>	<p>Noted. A works approval for the construction of the proposed evaporation ponds and drying pads is currently under assessment, and does not impact the assessment of the application for licence amendment.</p>
	<p><i>2. Chemical hazards</i></p> <p><i>DoH recommends that the Shire of Ashburton adopts planning restrictions to prohibit any new development on and within the 500m buffer around the site to minimise the public health impacts of lateral movement of landfill gases, dust and odour that may impact developments within that distance. This restriction should remain in place until it is demonstrated that the waste body is no longer generating landfill gas.</i></p> <p><i>It is understood that landfill gas will be collected and flared during site operation. The DoH encourages the operator to explore opportunities to recover energy from the waste gas as part of Western Australia's "Green Energy" agenda.</i></p> <p><i>The proponent should be aware that the burial of waste in land is a land use associated with the creation of contaminated sites. The proponent may wish to investigate how to</i></p>	<p>Noted.</p> <p>A condition requiring the preparation and submission of a landfill gas management plan is to be inserted as part of the licence amendment.</p> <p>Normal contaminated site management, development, and environmental approval processes still apply to closed landfills.</p> <p>In accordance with the Guideline: Risk assessments (DWER 2020), the Delegated Officer has excluded</p>

	<p><i>avoid the site being reported and classified as a future contaminated site under the Contaminated Sites Act 2003. The proponent should consider now how the site is to be rehabilitated and reused following cessation of waste disposal activities to maximise its future beneficial use. Sufficient funds should be set aside over the operational life of the site to achieve these objectives.</i></p> <p><i>The proposed changes to the licence are likely to increase the risk of dust, odour and fumes generation and exposure to site workers. As the site is a workplace, the proponent should discuss the proposal with the Department of Mines, Industry Regulation and Safety (WorkSafe) which has primary responsibility for the health and safety of workers on site.</i></p>	<p>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.</p>
<p>Department of Mines, Industry Regulation, and Safety was provided a copy of the application package via email on 11/09/2023</p>	<p><i>"DMIRS have no comment on the Shire of Ashburton application for an amendment to licence (L9304/2021/1)."</i></p> <p>However, as part of a separate stakeholder referral process, DMIRS has advised the department that:</p> <p><i>"(exploration lease) E08/3371 was withdrawn in September 2022. As I understand if this application had proceeded the section 19 area would have been excised."</i></p>	<p>Noted. Withdrawal of exploration lease E08/3371 has no implication on amendments sought.</p>
<p>Licence Holder was provided with draft amendment on 18 October 2023</p>	<p>Refer to Appendix 1.</p>	<p>Refer to Appendix 1.</p>

## 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
-	Cross-references inserted and/or corrected throughout document.
Prescribed premises category description and Assessed production / design capacity)	Category 57 – Used tyre storage (general): premises (other than premises within category 56) on which used tyres are stored. Inserted with an assessed design capacity of 25,000 tyres.
	Category 63 - Class I inert landfill site: premises (other than clean fill premises) on which waste of a type permitted for disposal for this category of prescribed premises, in accordance with the Landfill Waste Classification and Waste Definitions 1996, is accepted for burial assessed design capacity increased from 20, 000 to 50, 000 tonnes per annual period.
	Category 64 – Class II or III putrescible landfill site: premises (other than clean fill premises) on which waste of a type permitted for disposal for this category of prescribed premises, in accordance with the Landfill Waste Classification and Waste Definitions 1996, is accepted for burial inserted (with an assessed design capacity of 50, 000 tonnes per annual period in conjunction with Category 65 - Class IV secure landfill site: premises (other than clean fill premises) on which waste of a type permitted for disposal for this category of prescribed premises, in accordance with the Landfill Waste Classification and Waste Definitions 1996, is accepted for burial).
1, Table 1	Green waste inserted as a permitted waste type in place of “putrescible waste “ Acceptance specification “household and commercial bulk greenwaste” inserted.
	Scrap Metal acceptance specification expanded to facilitate receipt of car bodies, white goods, and electronic waste.
	Inert Waste Type 1 (tyres) incorporated into Category 63 throughput
	Inert Waste Type 1 description for combined Category 64 and 65 activities amended to preclude used tyres (captures under Category 57 and 63 activities (storage and monocell).
	Class II, Class III, and Class IV putrescible waste inserted under Category 63, with a combined quantity limit of 50,000 tonnes per annum for Category 64 and 65 activities. Acceptance specification grammar amended. Stipulation that no sludges be accepted for burial changed to no non-spadeable materials.
3, Table 2	Process limits amended.



	Specifications for tyre storage included.
	Process limits for Inert Waste Type 1 accepted for Category 13 activities amended to facilitate alternation between use of processing hardstands and requirement for C&D stockpiled to be maintained in a damp state.
	Greenwaste inserted as a waste type, and prohibition on greenwaste burial in landfill removed to allow both re- use within premises, or landfilling.
	Scrap metal process limits amended to capture electronic waste, car bodies and white goods acceptance.
	Non-spadeable material from the desludging of liquid waste ponds may prohibited for burial.
	Requirement for testing of spadeable liquid waste pond sludges prior to landfilling inserted.
9	Requirement for All stockpiles to be maintained in a damp state removed.
14	Wording amended for clarity and improved enforceability (May 2021 OEMP outdated). Tipping face dimensions amended to 50m as per amendment application.
15, Table 3	Cover requirements revised. Use of ADC on Special Waste Type 1 and 2 prohibited. Note added to stipulate that minimum depth cover requirement does not apply where alternative daily cover has been approved for use.
20	Wording and grammar corrected to improve readability and enforceability. Prescribed actions from May 2021 OEMP incorporated into condition. Control measures amended to reflect premises operations.
23	New fire management condition inserted.
24, Table 4	Requirement for leachate landfill pond to be drained and visually inspected annually prior to onset of “wet season” removed. Requirement for maintenance of less than 1 m leachate head clarified. Turkeys nest Site infrastructure and equipment amended to facilitate use for storage of both abstracted groundwater and uncontaminated stormwater from the surface water management system. Liner requirement changed to reflect actual construction. Turkeys nest freeboard requirement removed in favor on prohibition on overtopping. Bulk waste area operational requirements amended to facilitate flexible use of hardstands. Reference to required hardstand permeability and bunding amended to accurately prescribe required coefficient of permeability. Administrative wording errors corrected.
33, Table 9	Infrastructure naming amended for consistency.

34, Table 10	Infrastructure naming amended for consistency.
	Secondary leachate collection sump changed to Leachate detection sump (L2).
35, Table 11	Infrastructure naming amended for consistency.
	Secondary leachate collection sump and Leachate leak detection layer requirements combined into singular Leachate detection sump (L2)
38 & 39 (formerly 36 & 37)	Closure plan submission date changed to 21 March 2024.
40	New condition requiring submission of a consolidated Landfill Gas Management Plan and Risk Assessment inserted to address potential landfill gas impacts associated with receipt and burial of putrescible waste streams moving forward.
Table 12	Condition number references revised and cross- references inserted.
Table 13, Definitions	Contaminated Solid Waste definition inserted.
	Operational Environmental Management Plan (OEMP) deleted.
	tpa definition inserted.
Schedule 1	Revised figures inserted.
Schedule 6	Tyre storage specifications inserted.
All pages	Footnotes updated.

## 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. DWER 2020, *Guideline: Risk Assessments*, Perth, Western Australia.
4. Environment Protection Authority Victoria. Landfill gas fugitive emissions monitoring guideline. Publication 1684, February 2018.

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

Condition	Summary of Licence Holder's comment	Department's response						
1, Table 1: Waste acceptance.	<p>Request to amend the acceptance specification for scrap metal as follows:  <del>Limited to electrical transmission cables, non-reactive exotic and specialist alloys, drill rods, and general solid metal waste, depolluted vehicle bodies, electronic waste, and whitegoods.</del></p> <p>Removal of the term 'Limited to' will provide some flexibility for the Shire regarding the types of scrap metal accepted at the facility that may not be explicitly described under the types of waste listed in the specification. For example, the PRWMF is close to Onslow, which is the base for several large-scale decommissioning projects – the facility occasionally receives requests to accept items from these projects such as metal cables coated in plastic. The requested amendment will allow the Shire to discuss these specific requests with DWER without the current limitation, which the applicant views as restrictive.</p>	<p>Noted.                      Plastic-coated scrap metal presents a different risk profile which has not been assessed.                      If the material cannot be described using the listed terms, then a separate risk assessment would be necessary.</p>						
	<p>Request to amend the waste type and acceptance specification for Inert Waste Type 2 to delete the restriction to used tyres only:</p> <table border="1"> <thead> <tr> <th>Waste type</th> <th>Quantity limit</th> <th>Acceptance specification</th> </tr> </thead> <tbody> <tr> <td>Inert Waste Type 2 (<del>used tyres</del>)</td> <td>Combined total of 50,000 tpa for Category 63 activities</td> <td><del>Used tyres only</del> <b>Non applicable</b></td> </tr> </tbody> </table>	Waste type	Quantity limit	Acceptance specification	Inert Waste Type 2 ( <del>used tyres</del> )	Combined total of 50,000 tpa for Category 63 activities	<del>Used tyres only</del> <b>Non applicable</b>	<p>Noted.                      This waste type is deliberately listed against category 63 to capture the burial of used tyres in the dedicated moncell.                      The burial of other materials meeting the definition of Inert Waste Type 2 in this moncell has not been previously proposed, and has not been risk assessed.</p>
	Waste type	Quantity limit	Acceptance specification					
Inert Waste Type 2 ( <del>used tyres</del> )	Combined total of 50,000 tpa for Category 63 activities	<del>Used tyres only</del> <b>Non applicable</b>						
<p>The PRWMF receives numerous requests regarding the acceptance of Inert Waste Type 2 other than tyres from the local oil and gas industry, such as rubber conveyor belts, empty and clean Intermediate Bulk Containers (IBCs) and uncontaminated rigid plastics. Although designated as the 'Tyre Monocell', the intent is for the cell to accept all types of Inert Waste Type 2.</p>	<p>Noted.                      The acceptance and landfill burial of materials meeting the definition of Inert Waste Type 2 other than tyres is approved in Table 1 against Category 64 and 65 activities.                      There has been no previous mention of the burial of other rubber, IBCs, or rigid plastics within the tyre moncell., and such activity has not been risk assessed.</p>							

Condition	Summary of Licence Holder's comment	Department's response
3, Table 2: Waste processing.	Request to delete 'used tyres' in the waste types column and replace with 'Inert Waste Type 2' to allow all types of this waste to be disposed of to the Tyre Monocell.	<p>Noted.</p> <p>There has been no previous mention of the stockpiling and storage of materials meeting the definition of Inert Waste Type 2 other than tyres.</p> <p>These materials have specific storage and burial requirements which have not been addressed in the amendment application; and have therefore not been risk assessed.</p>

	<p>Request to amend the process description for green waste to remove the limitation of reuse within the premises to allow the Shire to re-use processed green waste outside of the premises (e.g., on other Shire maintained properties):  <del>Acceptance, storage, and processing prior to re-use within the premises.</del>  Note: there is a typographical error in the process limits for green waste:  <i>c. Green waste and mulch stockpiles will be stored in maximum volumes of 3 m high, 10 m wide and 40 m long and stockpiles <del>with</del> <u>will</u> be separated by a minimum 10 m.</i></p>	<p>Noted.  Typographical error corrected.</p> <p>Deletion of greenwaste re-use restrictions refused.  The distribution of unpasteurised mulch derived from mixed provenance household and commercial greenwaste has the potential to result in the spread of plant pathogens and weed propagules.  In December 2022 the department published the <i>Guideline: Better practice organics recycling</i> (the guideline) (DWER 2022). The guideline sets environmental performance objectives (EPO) and identifies benchmark controls for the planning, design, and operation of organics recycling facilities. The guideline also defines better practice for organics recycling facilities in relation to the Waste Avoidance and Resource Recovery Strategy 2030. The guideline applies to all existing organics recycling facilities that are prescribed premises and new applications for a works approval or licence for organics recycling facilities under Part V Division 3 of the EP Act. Organics recycling facilities may be regulated as a Category 61A: Solid waste facility or Category 67A: Compost manufacturing and soil blending prescribed premises under Schedule 1 of the <i>Environmental Protection Regulations 1987</i>. Section 8.10 of the guidelines addresses product quality, with the environmental performance objective “Contaminants in feedstocks are treated effectively and recycled organic products are fit-for-purpose”.  Operators of organics recycling facilities are responsible for ensuring all products are fit-for-purpose for the proposed end use. A fit-for-purpose product provides beneficial qualities to the receiving environment when used and does not contain contaminants at a level that could cause pollution or environmental harm.  Table 8 of the guideline specifies the feedstock or process requirements for Category A products, including raw mulch. Category A products from an organics recycling facility must comply with the minimum requirements set out in AS 4454 and, if relevant, the unrestricted-use requirements in the biosolids guidelines. The guideline requires that raw mulches are produced using a single known plant material type that embodies minimal risk of plant propagules, pathogens, and other contaminants, with management measures implemented to prevent raw mulches from being cross-contaminated by</p>
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Condition	Summary of Licence Holder's comment	Department's response
		<p>moderate-risk, high-risk or non-standard feedstocks. Category A products also need to meet the upper contaminant limits in Table 9 of the guideline.</p> <p>As the applicant has not proposed any controls to mitigate the potential spread of weed propagules or pathogens outside the premises, the proposed off-site use does not meet the EPO of the guidelines and this activity shall not be approved as part of this licence amendment.</p>
	<p>Request to amend the process limits for Special Waste Type 1 (asbestos) to clarify that contaminated solid waste containing asbestos can be disposed of in the Class IV cell (Cell 1) at the premises:</p> <p><i>a. All asbestos waste will be disposed of to the designated asbestos monocell <b>or Cell 1</b> immediately upon acceptance.</i></p> <p><i>b. Any waste identified as containing asbestos or potentially containing asbestos after being accepted on site is to be disposed of to the asbestos monocell <b>or Cell 1</b>.</i></p> <p><i>c. Cover material is to be graded to allow for surface water drainage away from buried material.</i></p>	<p>Noted.</p> <p>Asbestos disposal restricted to designated asbestos monocell. Burial of ACM within the Class IV cell has not been risk assessed and shall not be approved as part of this licence amendment.</p>
	<p>Request to amend the waste types listed for acceptance and disposal by landfilling to Cell 1 to clarify that Special Waste Type 1, Special Waste Type 3 and Putrescible Wastes can be accepted:</p> <p><i>Clean Fill, Uncontaminated Fill, Neutralised Acid Sulfate Soils, Inert Waste Type 1 <del>accepted for landfilling</del>, <b>Putrescible Waste</b>, Contaminated Solid Waste, Special Waste <b>Type 1</b>, Type 2 <b>and Type 3</b>.</i></p>	<p>Noted.</p> <p>Text amended to facilitate receipt and burial of putrescible wastes ad Special waste type 3 to Cell 1.</p> <p>AAs stated above, asbestos disposal restricted to designated asbestos monocell. Burial of ACM within the Class IV cell has not been risk assessed and shall not be approved as part of this licence amendment.</p>
	<p>Request to amend the process limits for waste types listed for acceptance and disposal by landfilling to Cell 1 to remove the restriction on putrescible waste and to clarify that spadeable waste from the liquid waste ponds can be accepted:</p> <p><i>e. No <del>putrescible wastes including green wastes or sludges</del> <b>non-spadeable materials</b> from the liquid waste ponds may be disposed of via landfilling at the premises.</i></p> <p>The term 'sludges' has been changed to 'materials' when referring to non-spadeable properties to be consisted with terminology used by industry – i.e., some industrial waste generators use the term 'sludge' to describe dehydrated solid materials that are actually spadeable.</p>	<p>Noted.</p> <p>Text amended to facilitate putrescible waste burial (including greenwaste).</p> <p>Term sludge retained as it pertains specifically to liquid waste pond desludging activities in this instance.</p>

Condition	Summary of Licence Holder's comment	Department's response																										
	<p>Request to amend the process limits for liquid wastes to allow spadeable solids from the liquid waste ponds to be disposed of in Cell 1:  <i>f. <del>Sludges and solids</del> <b>Non-spadeable materials</b> removed from the treatment ponds must be removed offsite to an appropriate licenced facility.</i></p>	<p>Noted.  Wording amended to facilitate on-side disposal of spadeable sludges and sediment to Cell 1.  Term sludge retained as it pertains specifically to liquid waste pond desludging activities in this instance.</p>																										
<p>15, Table 3: Cover requirements</p>	<p>Request to amend the cover requirements to:</p> <ul style="list-style-type: none"> <li>clarify the use of Alternative Daily Cover (ADC) and that ADC is not subject to minimum depth requirements</li> <li>remove the reference to used tyres for Inert Waste Type 2 disposed of in the Tyre Monocell</li> <li>reduce the minimum depth requirement for intermediate cover of Inert Waste Type 2 from 100 mm to 50 mm. The risk associated with tyres once disposed of in the Tyre Monocell is minimal and a 50 mm cover is considered sufficient whilst providing operational flexibility. The risks associated with tyre storage outside of the monocell are sufficiently controlled by the process limits specified in Table 2.</li> </ul> <table border="1" data-bbox="555 746 1319 1358"> <thead> <tr> <th>Waste Type</th> <th>Material</th> <th>Minimum Depth</th> <th>Timescales</th> </tr> </thead> <tbody> <tr> <td>Special Waste Type 1 and 2</td> <td>Clean fill, Uncontaminated</td> <td>300 mm <u>(excluding ADC)</u></td> <td>Immediate cover of material.</td> </tr> <tr> <td>Inert waste type 2 (excluding tyres)</td> <td>Fill, Type 1 Inert waste, or soil or proprietary</td> <td>100 mm <u>(excluding ADC)</u></td> <td>Intermediate cover <del>and</del> <b>or</b> ADC material to be applied at the end of each day.</td> </tr> <tr> <td>Putrescible waste, Neutralised Acid Sulfate Soils, Contaminated Solid Waste, and Inert Waste Type 1 accepted for landfilling</td> <td>alternative daily cover (ADC) treatments or other material that satisfies the requirement to mitigate against</td> <td>150 mm <u>(excluding ADC)</u></td> <td>This material may be partially removed at the beginning of the operations the next day prior to landfilling.</td> </tr> <tr> <td>Contaminated Solid Waste containing or suspected of containing ACM, and Special Waste Type 3.</td> <td>any environmental health impacts from landfilled waste</td> <td>300 mm</td> <td>Immediately following disposal in <del>Cell 1 Class IV cell</del></td> </tr> <tr> <td rowspan="2">Inert waste type 2 (<del>tyres</del>)</td> <td rowspan="2">Clean fill, Uncontaminated Fill, Type 1 Inert waste, or soil</td> <td>100 <del>50</del> mm</td> <td>Immediately following placement in monocell trench.</td> </tr> <tr> <td>500 mm</td> <td>Final cover at completion of filling each monocell trench.</td> </tr> </tbody> </table>	Waste Type	Material	Minimum Depth	Timescales	Special Waste Type 1 and 2	Clean fill, Uncontaminated	300 mm <u>(excluding ADC)</u>	Immediate cover of material.	Inert waste type 2 (excluding tyres)	Fill, Type 1 Inert waste, or soil or proprietary	100 mm <u>(excluding ADC)</u>	Intermediate cover <del>and</del> <b>or</b> ADC material to be applied at the end of each day.	Putrescible waste, Neutralised Acid Sulfate Soils, Contaminated Solid Waste, and Inert Waste Type 1 accepted for landfilling	alternative daily cover (ADC) treatments or other material that satisfies the requirement to mitigate against	150 mm <u>(excluding ADC)</u>	This material may be partially removed at the beginning of the operations the next day prior to landfilling.	Contaminated Solid Waste containing or suspected of containing ACM, and Special Waste Type 3.	any environmental health impacts from landfilled waste	300 mm	Immediately following disposal in <del>Cell 1 Class IV cell</del>	Inert waste type 2 ( <del>tyres</del> )	Clean fill, Uncontaminated Fill, Type 1 Inert waste, or soil	100 <del>50</del> mm	Immediately following placement in monocell trench.	500 mm	Final cover at completion of filling each monocell trench.	<p>Noted.  Annotation added to table to indicate that minimum cover depths are not applicable where the use of ADC is approved.  Use of ADC for special wastes is not approved, and table has been altered to reflect this.  Reduced cover requirement for tyre monocell permitted.</p>
Waste Type	Material	Minimum Depth	Timescales																									
Special Waste Type 1 and 2	Clean fill, Uncontaminated	300 mm <u>(excluding ADC)</u>	Immediate cover of material.																									
Inert waste type 2 (excluding tyres)	Fill, Type 1 Inert waste, or soil or proprietary	100 mm <u>(excluding ADC)</u>	Intermediate cover <del>and</del> <b>or</b> ADC material to be applied at the end of each day.																									
Putrescible waste, Neutralised Acid Sulfate Soils, Contaminated Solid Waste, and Inert Waste Type 1 accepted for landfilling	alternative daily cover (ADC) treatments or other material that satisfies the requirement to mitigate against	150 mm <u>(excluding ADC)</u>	This material may be partially removed at the beginning of the operations the next day prior to landfilling.																									
Contaminated Solid Waste containing or suspected of containing ACM, and Special Waste Type 3.	any environmental health impacts from landfilled waste	300 mm	Immediately following disposal in <del>Cell 1 Class IV cell</del>																									
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		500 mm	Final cover at completion of filling each monocell trench.																									



Condition	Summary of Licence Holder's comment	Department's response
20 (feral animal control)	<p>Request to amend the requirements for feral animal control as follows:  <i>The Licence Holder must implement measures to control feral animals and prevent infestations of flies, vermin, and weeds at the Premises, including but not limited to:</i></p> <p><i>a. <b><u>Annual feral animal survey carried out by suitably qualified person</u></b> <del>Continuous deployment of camera traps for feral animal detection;</del></i></p> <p><i>b. Weekly inspection and maintenance of the fence controlling the ingress of feral animals;</i></p> <p><i>c. <b><u>Periodic deployment of camera traps for feral animal detection where required following outcomes of annual surveys or periodic inspections:</u></b></i></p> <p><i>d. If feral animals and vermin are detected, appropriate eradication measures shall be undertaken, including baiting and trapping; and</i></p> <p><i>e. Quarterly visual inspections for the presence of weeds, and suitable treatment measures undertaken.</i></p> <p>The PRWMF has a comprehensive on-site CCTV system that covers the landfill and other operational areas. In the event of a pest survey or if site employees detect potential activities or evidence of feral animals on-site, camera traps can be deployed.</p>	Noted. Requested amendments inserted.
24, Table 4: infrastructure and equipment requirements.	<p>Request to amend the operational requirements for the leachate collection system to clarify that the maximum leachate head above the landfill cell floor must be less than 1 m to be consistent with the changes made to Table 10: Leachate management:</p> <p><i>f. Must maintain <b><u>less than 1,000 mm</u></b> <del>between 300 mm to 1 m</del> leachate head above the landfill cell floor liner post pumping.</i></p>	Noted. Text amended accordingly.

Condition	Summary of Licence Holder's comment	Department's response
	<p>Request to amend the operational requirements for the Turkey's Nest Pond to:</p> <ul style="list-style-type: none"> <li>clarify that the pond liner is a minimum of 1.6 mm thick and not 2 mm as was specified in the works approval for the PRWMF – some off-specification rolls of liner from Cell 1 were used in the construction of the Turkey's Nest Pond (the rolls did not meet the required 2 mm thickness, recording 1.6 mm); this non-compliance with the works approval was notified to DWER and the discrepancy has been assessed by a suitably qualified engineer, which determined that 1.6 mm thick liners provide a similar impermeability to 2 mm liners (ATC Williams, 2022); therefore, the use of the 1.6 mm thick liner does not present an increased environmental risk, especially considering that the pond is used to store bore and surface water</li> <li>replace the requirement for a 500 mm freeboard to be maintained with one that stipulates that the pond must not overtop – a freeboard requirement for a pond that contains clean bore and surface water is considered unnecessarily restrictive</li> </ul> <p>a. One pond lined with <del>2</del> <b>minimum 1.6</b> mm HDPE constructed to the dimensions of 52 m x 32 m with a total pond volume of 2,416 m<sup>3</sup></p> <p>b. <del>To be maintained with a 500 mm freeboard</del> <b><u>The pond must not overtop.</u></b></p>	<p>Noted. Text amended accordingly.</p>

Condition	Summary of Licence Holder's comment	Department's response
	<p>Request to amend the operational requirements for the refuelling pad and wash down pad to clarify the bunding requirements:  <i>a. Impermeable <b>bunded</b> concrete pad with perimeter bund and sump.</i></p> <p>Both pads are constructed in impermeable concrete with bunding provided by concrete walls or the concrete access ramps down to the wash pad and refuelling pad, i.e., there is no perimeter bund as such (refer to photos below).</p> 	<p>Noted. Text amended accordingly.</p>
<p>32, Table 8: Leachate Monitoring requirements</p>	<p>Request to amend '<i>Leachate sump of Cell 1-L1</i>' to '<i>Primary leachate sump (L1)</i>' – the location has been changed on page 22 of the draft licence but not on page 21.</p>	<p>Noted. Text amended accordingly.</p>

Condition	Summary of Licence Holder's comment	Department's response
35, Table 11: Management Actions	<p>Request for the department or re-consider the deletion of the management action requiring the Shire to cease the acceptance of waste into Cell 1 if the leachate head in the leachate detection sump (L2) exceeds 100 mm.</p> <p><del>e. The Licence Holder must cease the acceptance of waste for disposal to landfill until directed to re-commence by the CEO.</del></p> <p>The presence of leachate in the leachate detection sump does not indicate the secondary liner has been breached and there is leak of leachate to the environment. The leak detection layer is present above the secondary lining system and consists of a series of pipes that direct leachate towards the collection sump and extraction point. If the integrity of the primary layer is compromised, the secondary lining system will remain intact, and the leak detection system will direct leachate towards the leachate detection sump. Should leachate be detected in the sump, the Shire will implement the remaining management actions, including monitoring, analysis, investigation and reporting to DWER within seven days.</p> <p>If the monitoring and investigation actions implemented following a detection of leachate in the sump in conjunction with the periodic groundwater monitoring indicate that leachate may be leaking to the environment, the Shire will determine in consultation with DWER whether cessation of waste acceptance into Cell 1 is necessary.</p> <p>Further, if required in response to a leachate detection event, DWER may give a prevent notice to the Shire under section 73A of the <i>Environmental Protection Act 1986</i> requiring, for example, waste acceptance into Cell 1 to cease.</p> <p>The Shire considers that these controls are sufficient to control the risk of leachate impacting the environment.</p>	<p>Request not supported.</p> <p>The liner system requirements for a Class IV landfill cell are set out in the Landfill Definitions.</p> <p>The identification of a leak within the primary liner means that containment is contingent on the secondary liner only, therefore the ongoing use of the cell for acceptance of Class IV waste is not acceptable.</p>
38 (Landfill Closure Plan)	<p>Request to extend the due date for the provision of the Landfill Closure Plan from '22 December 2023' to '21 March 2024'. The Shire has engaged a consultant to prepare the closure plan with the expected delivery date in December 2023. The Shire is requesting a short extension to allow the plan to be reviewed, finalised and provided to DWER, taking into account employee and consultant availability will be limited over the 2023/2024 holiday period.</p>	<p>Noted.</p> <p>Extension granted. Nature of premises has changed, and additional time for closure plan preparation is justified.</p>

Condition	Summary of Licence Holder's comment	Department's response
40 (Landfill Gas Management Plan and Risk Assessment)	Request to extend the due date for the provision of the Landfill Gas Management Plan and Risk Assessment from '22 December 2023' to '20 December 2024'. The extension will allow time for the Shire to engage a suitably qualified consultant and for the plan and risk assessment to be prepared. The time will also allow the Shire to better understand the putrescible waste acceptance rate and composition and, therefore, the landfill gas generation potential of the landfill and associated management measures.	Noted. Extension granted. Additional time for plan preparation is justified.
43, Table 12: Annual Environmental Report	Correct typographical error in Row 2 from 'Condition 2019' to 'Condition 20'.	Noted. Text amended accordingly.

## Appendix 2: Application validation summary

SECTION 1: APPLICATION SUMMARY				
<b>Application type</b>				
Works approval	<input type="checkbox"/>			
Licence	<input checked="" type="checkbox"/>	Relevant works approval number:		None <input type="checkbox"/>
		Has the works approval been complied with?	Yes <input type="checkbox"/> No <input type="checkbox"/>	
		Has time limited operations under the works approval demonstrated acceptable operations?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	
		Environmental Compliance Report / Critical Containment Infrastructure Report submitted?	Yes <input type="checkbox"/> No <input type="checkbox"/>	
		Date Report received:		
Renewal	<input type="checkbox"/>	Current licence number:		
Amendment to works approval	<input type="checkbox"/>	Current works approval number:		
Amendment to licence	<input checked="" type="checkbox"/>	Current licence number:	L9304/2021/1	
		Relevant works approval number:	W6225/2019/1	N/A <input type="checkbox"/>
Registration	<input type="checkbox"/>	Current works approval number:		None <input type="checkbox"/>
Date application received		27/01/2023		
<b>Applicant and Premises details</b>				
Applicant name/s (full legal name/s)		Shire of Ashburton		
Premises name		Pilbara Regional Waste Management Facility		
Premises location		Onslow Road TALANDJI WA 6710		
Local Government Authority		Shire of Ashburton		
<b>Application documents</b>				
HPCM file reference number:		DWERDT718243		
Key application documents (additional to application form):		Application Form Licence Application Document		
<b>Scope of application/assessment</b>				

Summary of proposed activities or changes to existing operations.

13 amendments have been requested

1. Acceptance of putrescible waste to landfill.
2. Addition of Category 57.
3. Clarification for bulk waste description.
4. Changes to scrap metal stockpiling and processing.
5. Changes to C&D materials.
6. Changes to landfill tipping face size.
7. Changes to waste cover requirements.
8. Removal of the requirements to empty and inspect leachate pond.
9. Allow the turkey nest to store surface water.
10. Revise naming of infrastructure.
11. Change wording for leachate pump operation.
12. Changes to leachate management requirements.
13. Changes to premises map

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

**Table 1: Prescribed premises categories**

Prescribed premises category and description	Proposed production or design capacity	Proposed changes to the production or design capacity (amendments only)
Category 13 - Crushing of building material: premises on which waste building or demolition material (for example, bricks, stones, or concrete) is crushed or cleaned	50,000 tonnes per annual period	No change
Category 61 - Liquid waste facility: premises on which liquid waste produced on other premises (other than sewerage waste) is stored, reprocessed, treated or irrigated.	1,000 tonnes per annual period	No change
Category 61A - Solid waste facility: premises (other than premises within category 67A) on which solid waste produced on other premises is stored, reprocessed, treated, or discharged onto land.	20,000 tonnes per annual period	No change
Category 62 – Solid waste depot: premises on which waste is stored or sorted, pending final disposal or re-use, other than in the course of operating – (a) A refund point (as defined in the Waste Avoidance and Resource Recovery Act 2007 section 47C(1)) (a refund point); or (b) A facility or other place (an aggregation point) for the aggregation of containers that have been returned to refund points until those containers are accepted for processing or disposal.	100,000 tonnes per annual period	No change
Category 63 - Class I inert landfill site: premises (other than clean fill premises) on which waste of a type permitted for disposal for this category of prescribed premises, in accordance with the Landfill Waste Classification and Waste Definitions 1996, is accepted for burial.	20,000 tonnes per annual period	Increase to 50,000 tonnes per annual period
Category 64 – Class II or III putrescible landfill site: premises (other than clean fill premises) on which waste of a type permitted for	Not currently on the licence	New category  50,000 tonnes per annual period



disposal for this category of prescribed premises, in accordance with the Landfill Waste Classification and Waste Definitions 1996, is accepted for burial		(combined Category 64 and Category 65 activities)
Category 65 - Class IV secure landfill site: premises (other than clean fill premises) on which waste of a type permitted for disposal for this category of prescribed premises, in accordance with the Landfill Waste Classification and Waste Definitions 1996, is accepted for burial.	50,000 tonnes per annual period	No change
Category 57 – Used tyre storage (general): premises (other than premises within category 56) on which used tyres are stored.	Not currently on the licence	25,000 tyres

#### Legislative context and other approvals

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

<p>Has the applicant applied for, or have an existing RIWI Act licence or permit in relation to this proposal?</p>	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>	
<p>Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the EP Act)?</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	
<p>Is the Premises situated in a Public Drinking Water Source Area (PDWSA)?</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	
<p>Is the Premises subject to any other Acts or subsidiary regulations (e.g. <i>Dangerous Goods Safety Act 2004, Environmental Protection (Controlled Waste) Regulations 2004, State Agreement Act xxxx</i>)</p>	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>	<p><i>Dangerous Goods Safety Act 2004, Environmental Protection (Controlled Waste) Regulations 2004</i></p>
<p>Is the Premises within an Environmental Protection Policy (EPP) Area?</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	
<p>Is the Premises subject to any EPP requirements?</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	
<p>Is the Premises a known or suspected contaminated site under the <i>Contaminated Sites Act 2003</i>?</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	