



## Application for Licence Amendment

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

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<b>Licence Number</b>	L2904/2025/1
<b>Licence Holder</b>	Pure Environmental WA Pty Ltd
<b>ACN</b>	609 291 858
<b>File Number</b>	App-0030575
<b>Premises</b>	Karratha Liquid Waste Facility Lot 120 Pindan Road, GAP RIDGE WA 6714  Legal description –  Lot 120 on Deposited Plan 414552 Certificate of Title Volume 4027 Folio 393 As defined by the premises map attached to the issued licence.
<b>Date of Report</b>	22 September 2025
<b>Decision</b>	Revised licence granted

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## 1. Decision summary

Licence L2904/2025/1 (L2904) is held by Pure Environmental Pty Ltd (Licence Holder) for the Karratha Liquid Waste Facility (the Premises), located at Lot 120 Pindan Road, Gap Ridge.

This Amendment Report documents the assessment of potential risks to the environment and public health from proposed changes to the emissions and discharges during the operation of the Premises. As a result of this assessment, Revised Licence L2904 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. The Revised Licence has been granted in a new format with existing conditions being transferred, but not reassessed, to the new format.

## 2. Scope of assessment

### 2.1 Regulatory framework

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

### 2.2 Application summary

On 15 August 2025, the Licence Holder submitted an application to the department to amend Licence L2904 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act). The following amendments are being sought:

- Operation of the Drying Bed constructed under works approval W6929/2024/1 (W6929).

The respective Critical Containment Infrastructure Report required under condition 2 and 3 of W6929 was submitted on 11 July 2025 and assessed as compliant on 29 July 2025. The Drying Beds were not authorised under the existing licence to be operated so this licence amendment will facilitate authorisation to operate the Drying Beds.

The Licence Holder is also requesting to add Drilling Mud to waste acceptance at the premises, which will be processed in the Drying Bed. Drilling Mud will be weighed upon arrival and then transported to the Drying Bed. The Drilling mud will be segregated into windrows for drying and the windrows will be turned to ensure the waste dries evenly. Once spadable the waste will be analysed for contaminant concentrations and disposed to an appropriate landfill.

There are no changes to Category 61 and 61A activities proposed under this amendment from what is currently authorised under the Existing Licence.

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

**Table 1: Licence Holder controls**

Emission	Sources	Potential pathways	Proposed controls
Dust	Operation of Drying Bed	Air/windborne pathway	Water carts. Restricted vehicle speed.
Noise	Machinery movements		Compliance with the <i>Environmental Protection (Noise) Regulations 1997</i> (Noise Regulations). Size of premises restricts vehicle speeds.
Odour	Storage of Drilling mud		Drill Mud is not odourous. Highly odours waste not accepted on site. Waste Acceptance procedure.
Leachate		Seepage to soils and groundwater	Drying Bed constructed to meet not less than 1 x 10-8 m/s permeability with bunds surrounding Bed. Depth to groundwater 6 – 10 mbgl. Groundwater monitoring.
Contaminated Stormwater		Seepage to soils and overflow to surface water	Drying beds are bunded which directs stormwater away from the Bed.

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

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

Human receptors	Distance from prescribed activity
Commercial Premises	Adjacent to the Premises

Stayover Kingfisher Village	1.4 km southeast of the Premises
Cievo Karratha Village	2.2 km northeast of the Premises
Residential Properties	3 km northeast of the Premises
<b>Environmental receptors</b>	<b>Distance from prescribed activity</b>
Pilbara Groundwater Area (RIWI Act 1914) <ul style="list-style-type: none"> <li>Groundwater typically 6-10 m below existing ground level</li> </ul> Hyper saline brackish	Premises mapped within this designated area
Pilbara Surface Water Area (RIWI Act 1914)	Premises mapped within this designated area
Threatened ecological communities. Roebourne Plains gilgai grasslands	Premises mapped within this area
Surface water lines <ul style="list-style-type: none"> <li>Seven Mile Creek</li> </ul> Minor non perennial water course	500 m east of Premises

### 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 3.

The Revised Licence L2904 that accompanies this Amendment Report authorises emissions associated with the operation of the Premises.

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

**Table 3: Risk assessment of potential emissions and discharges from the Premises during 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
Source / Activities	Potential emission	Potential pathways and impact	Receptors	Licence Holder's controls				
Receival and Operation of the Liquid waste facility  Vehicle movements	Dust	Air/windborne pathway causing impacts to health and amenity	Adjacent commercial premises	Refer to Section 3.1	C = Slight L = Unlikely <b>Low Risk</b>	Y	Condition 9	N/A
	Noise		Stayover Kingfisher Village 1.4 km southeast of Premises Civeo Karratha Village 2.2 km northeast of Premises	Refer to Section 3.1	C = Slight L = Unlikely <b>Low Risk</b>	Y	N/A <i>Environmental Protection (Noise) Regulations 1997</i>	N/A
	Odour		Residential property 3 km northeast of Premises	Refer to Section 3.1	C = Moderate L = Unlikely <b>Medium Risk</b>	Y	Condition 10	N/A
	Leachate	Liquid waste infiltration to groundwater through the base of the Drying bed	Groundwater 6-10mbgl	Refer to Section 3.1	C = Moderate L = Unlikely <b>Medium Risk</b>	Y	Conditions 1, 3, 4, 6, 7 and 8	N/A
	Contaminated stormwater	Overland runoff potentially causing ecosystem disturbance or impacting surface water quality	Threatened ecological community. Seven Mile creek 500 m east of Premises.	Refer to Section 3.1	C = Minor L = Unlikely <b>Low Risk</b>	Y	Condition 8	N/A

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 advised of proposal 25 August 2025.	<p>The City of Karratha replied on 2 September 2025 advising:</p> <p>The City of Karratha Environmental Health Team has provided the following comments:</p> <ul style="list-style-type: none"> <li>Given the history of odour issues from this site, the main concern is additional odour sources. The application states drill muds are mostly odourless, and highly odorous materials will not be accepted on site. Based on this information there are no further concerns from the EH section and no objection to the license amendment.</li> <li>From the information provided, the City understands that the proposed licence amendment is consistent with existing Development Approvals.</li> </ul>	Noted.
Licence Holder was provided with draft amendment on 9 September 2025.	<p>The Applicant responded on 19 September 2025</p> <p>Refer to Appendix 1</p>	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
Condition 1 Table 1	Add 'Drilling muds' to waste acceptance table.
Condition 3	Add 'Drilling Mud' to Waste type column and amended Sewage Sludge

Table 2	<p>(generated onsite).</p> <p>Amended 300m<sup>3</sup> to 1500m<sup>3</sup> and added '<i>To be placed in windrows within Drying bed and turned to ensure even drying</i>'</p> <p>Delete '<i>sewage sludge resulting from onsite liquid waste treatment</i>'.</p>
Condition 4 Table 3	<p>Add 'Drying Bed' to Vessel or compound and Material column and delete '<i>sewage sludge compound and sewage sludge</i>' respectively.</p> <p>Delete '<i>and sludge and which includes a leachate collection system</i>' as the Drying bed does not have a leachate collection system.</p>
Schedule 1: Maps	New Treatment Pond Location Map to include Drying Bed.

## 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.



## 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 1 Table 1	<p>The Applicant consulted with DWER Controlled Waste to discuss the categorisation of drill mud as a controlled waste.</p> <p>It was confirmed during this engagement that it was the intention of DWER Controlled Waste to have drill muds classified as a controlled waste classification and reflect the contaminants present. Pure therefore recommends that Table 1: Waste Acceptance be amended as per the table below (item in yellow) to allow for Pure to accurately classify drill muds received at the Karratha Liquid Waste Facility. The intention is to allow for drill muds (a low-risk waste) to be received whilst ensuring that they are classified accurately from a regulatory point of view.</p> <table border="1"> <tr> <td>Drilling muds</td><td>Controlled waste determined by drill mud contaminants</td><td> <ul style="list-style-type: none"> <li>Drill muds contaminated with Controlled Waste</li> </ul> <p>Codes:</p> <p>D190, D200, D220, D230, D270, D300, J100, J120, J180, L150, M130, M250, N205</p> </td></tr> </table>	Drilling muds	Controlled waste determined by drill mud contaminants	<ul style="list-style-type: none"> <li>Drill muds contaminated with Controlled Waste</li> </ul> <p>Codes:</p> <p>D190, D200, D220, D230, D270, D300, J100, J120, J180, L150, M130, M250, N205</p>	<p>Noted</p> <p>Table 1 amended as requested.</p>
Drilling muds	Controlled waste determined by drill mud contaminants	<ul style="list-style-type: none"> <li>Drill muds contaminated with Controlled Waste</li> </ul> <p>Codes:</p> <p>D190, D200, D220, D230, D270, D300, J100, J120, J180, L150, M130, M250, N205</p>			
Condition 3 Table 2	<p>After discussing sewage sludge management with the Department Pure requests sewage sludge remains as a waste type that can be managed through the drying bed as per the works approval. Pure originally removed this as DWER were concerned with odour, however we have an odour consultant coming to site in early October 2025 whose scope includes (but is not limited to) assessment and advice on managing odour during the desludging process. As part of the Karratha Liquid Waste Facilities desludging notification process Pure will provide a methodology and detail odour management.</p> <p>Additional odour controls will be submitted as part of a broader licence</p>	<p>Noted</p> <p>Table 2 amended as requested.</p>			

Condition	Summary of Licence Holder's comment	Department's response						
	<p>amendment, post the October 2025 visit by the odour consultant.</p> <p>Please refer below for recommended change to Table 2: Waste Processing in light yellow.</p> <p><u>Volume held in the Drying Bed</u></p> <p>Pure has reviewed the capacity of the drying bed (70m x 30m x 1m) and compared this capacity to the process limit in Table 2: Waste Processing. Based on the infrastructure capacity Pure requests the maximum quantity held in the drying bed to be amended to 1,500 m<sup>3</sup>, which is 80% capacity, allowing for stormwater/leachate management and drying.</p> <table border="1"> <tr> <td>Sewage sludge resulting from onsite liquid waste treatment</td><td>Drying out of ponds; Storage prior to landfill disposal</td><td>1,500 <del>600</del> m<sup>3</sup> at any one time prior to landfill disposal off-site.</td></tr> <tr> <td>Drilling Mud Sewage Sludge (generated onsite)</td><td></td><td>- To be placed in windrows within Drying Bed and turned to ensure even drying</td></tr> </table>	Sewage sludge resulting from onsite liquid waste treatment	Drying out of ponds; Storage prior to landfill disposal	1,500 <del>600</del> m <sup>3</sup> at any one time prior to landfill disposal off-site.	Drilling Mud Sewage Sludge (generated onsite)		- To be placed in windrows within Drying Bed and turned to ensure even drying	
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