



## Application for Works Approval

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

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<b>Works Approval Number</b>	W6872/2023/1
<b>Applicant</b>	Shire of Coolgardie
<b>File number</b>	DER2023/000730
<b>Premises</b>	Coolgardie Waste Facility Coolgardie Tip Road Coolgardie WA 6429  Legal description Crown Reserve 3497 Lot 501 on Deposited Plan 255090
<b>Date of report</b>	3 May 2024
<b>Decision</b>	Works approval granted

Adam Green  
A/MANAGER, WASTE INDUSTRIES  
an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

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## 1. Decision summary

This decision report documents the assessment of potential risks to the environment and public health from emissions and discharges during the construction and operation of the premises. As a result of this assessment, works approval W6872/2023/1 has been granted.

## 2. Scope of assessment

### 2.1 Regulatory framework

In completing the assessment documented in this decision report, the Department of Water and Environmental Regulation (the department; DWER) 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 and overview of premises

The Shire of Coolgardie operates the Coolgardie Waste Facility (the premises) under Licence L9377/2023/1 at Coolgardie Tip Road, Coolgardie.

On 16 November 2023, the Shire of Coolgardie (the applicant) submitted an application for a works approval to the department under section 54 of the *Environmental Protection Act 1986* (EP Act). The application is to undertake construction works relating to a new Category 61 liquid waste facility at the premises, which is approximately 2 km east of the town of Coolgardie.

The liquid waste facility is designed to accept 5,000 tonnes per annual period of waste types such as animal effluent and residues (K100), waste from grease traps (K110), septage wastes (K210), car and truck wash waters (L100), industrial wash waters contaminated with a controlled waste (L150) and fire debris or fire wash waters (N140).

The proposed liquid waste facility will consist of the following:

- Two concrete-lined receival pits;
- Two concrete-lined anaerobic sludge ponds; and
- One 5,250 m<sup>2</sup> high-density polyethylene (HDPE) lined evaporation pond.

The premises relates to the category and assessed design capacity under Schedule 1 of the *Environmental Protection Regulations 1987* (EP Regulations) which are defined in works approval W6872/2023/1. The infrastructure and equipment relating to the premises category and any associated activities which the department has considered in line with *Guideline: Risk Assessments* (DWER 2020) are outlined in works approval W6872/2023/1.

## 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 construction and time limited operation which have been considered in this decision report are detailed in Table 1 below. Table 1 also details the control measures the applicant has proposed to assist in controlling these emissions, where necessary.

**Table 1: Proposed applicant controls**

Emission	Sources	Potential pathways	Proposed controls
<b>Construction</b>			
Dust	Earthworks Liner installation Construction of stormwater management infrastructure (bunds)	Air / windborne pathway	<ul style="list-style-type: none"> <li>Implement vehicle speed limit;</li> <li>A water cart will mobilise from the Shire depot and utilised on unsealed roads and other operations as deemed necessary.</li> </ul>
Noise	Vehicle movement on unsealed roads Operation of heavy machinery associated with construction activities	Air / windborne pathway	<ul style="list-style-type: none"> <li>All equipment and machinery will be maintained in good working condition;</li> <li>Vehicles and machinery will move through the site via established roads and tracks only;</li> <li>Implement vehicle speed limit;</li> <li>The existing perimeter screening berm will limit noise impacts to the closest offsite receptor.</li> </ul>
Hydrocarbons	Accidental spills Leaks from machinery/vehicles	Overland flow and infiltration to soil and groundwater	<ul style="list-style-type: none"> <li>All equipment, machinery and vehicles will be maintained in good working condition;</li> <li>Regular pre-start checks to be undertaken on all vehicles and machinery.</li> </ul>
<b>Operation</b>			
Noise	Acceptance, storage and treatment of liquid waste	Air / windborne pathway	<ul style="list-style-type: none"> <li>All equipment and machinery will be maintained in good working condition;</li> <li>Waste acceptance and the operation of equipment and machinery will be restricted to operational hours only;</li> <li>All material handling will be confined to the designated areas;</li> <li>Ensure that all vehicles accessing the site use the designated access roads;</li> <li>Implement vehicle speed limit;</li> <li>If required, plant and equipment will be fitted with appropriate acoustic treatment (i.e., silencers);</li> <li>The existing perimeter screening berm will limit noise impacts to the closest offsite receptor.</li> </ul>

Emission	Sources	Potential pathways	Proposed controls
Odour		Air / windborne pathway	<ul style="list-style-type: none"> <li>All liquid waste to be contained and transported in sealed leak-proof containers or liquid waste trucks;</li> <li>Consideration of meteorological conditions during material handling;</li> <li>Minimal disturbance of the anaerobic receival ponds crust during operation;</li> <li>Regular sludge removal of the anaerobic receival ponds;</li> <li>A complaints register will be maintained to ensure that the community can express their comments or concerns regarding the operations of the liquid waste facility;</li> <li>Odour levels across the premises will be monitored by staff and action taken, if required.</li> </ul>
Spills of liquid waste and potentially contaminated stormwater		Overtopping and overland flow with subsequent seepage to ground	<ul style="list-style-type: none"> <li>The waste receival pits will be constructed with concrete-lined and feature a concrete lip to prevent spillages or splashback.</li> <li>Low permeability liners are used in all ponds, including HDPE and concrete lining systems;</li> <li>Ongoing and proactive monitoring of pond integrity and levels;</li> <li>Ponds are designed using a conservative water balance and a 1-in-20-year, 24-hour rainfall events without overtopping;</li> <li>Monitoring of meteorological conditions (i.e., storm events);</li> <li>Regular desludging from the anaerobic ponds to prevent loss of capacity;</li> <li>All ponds are raised or bunded to prevent inundation from surface waters;</li> <li>Ongoing groundwater monitoring to be undertaken in accordance with existing Licence L9377/2023/1.</li> </ul>
Seepage of liquid waste		Subsurface seepage	<ul style="list-style-type: none"> <li>Low permeability liners are used in all ponds, including HDPE and concrete lining systems;</li> <li>Ongoing and proactive monitoring of pond integrity and levels;</li> <li>Ongoing groundwater monitoring to be undertaken in accordance with existing Licence L9377/2023/1.</li> </ul>

Emission	Sources	Potential pathways	Proposed controls
Fire	Acceptance, storage and treatment of liquid waste	Air / windborne pathway	<ul style="list-style-type: none"> <li>• Establishing and maintaining fire breaks between the site boundary and surrounding areas;</li> <li>• Screening of loads for potentially hot wastes or wastes with a risk of spontaneous combustion;</li> <li>• Restrictions to smoking on site;</li> <li>• A mobile water tanker equipped with firefighting pump and apparatus will be mobilised to Site from the Shire's nearby depot in case of an emergency;</li> <li>• Regular maintenance of all equipment, plant, vehicles, and machinery;</li> <li>• Regular pre-start checks to be undertaken on all vehicles and machinery;</li> <li>• Fire suppression equipment to undergo regular testing;</li> <li>• Induction/training of staff in fire risks, mitigation, and response capability.</li> </ul>

### 3.1.2 Receptors

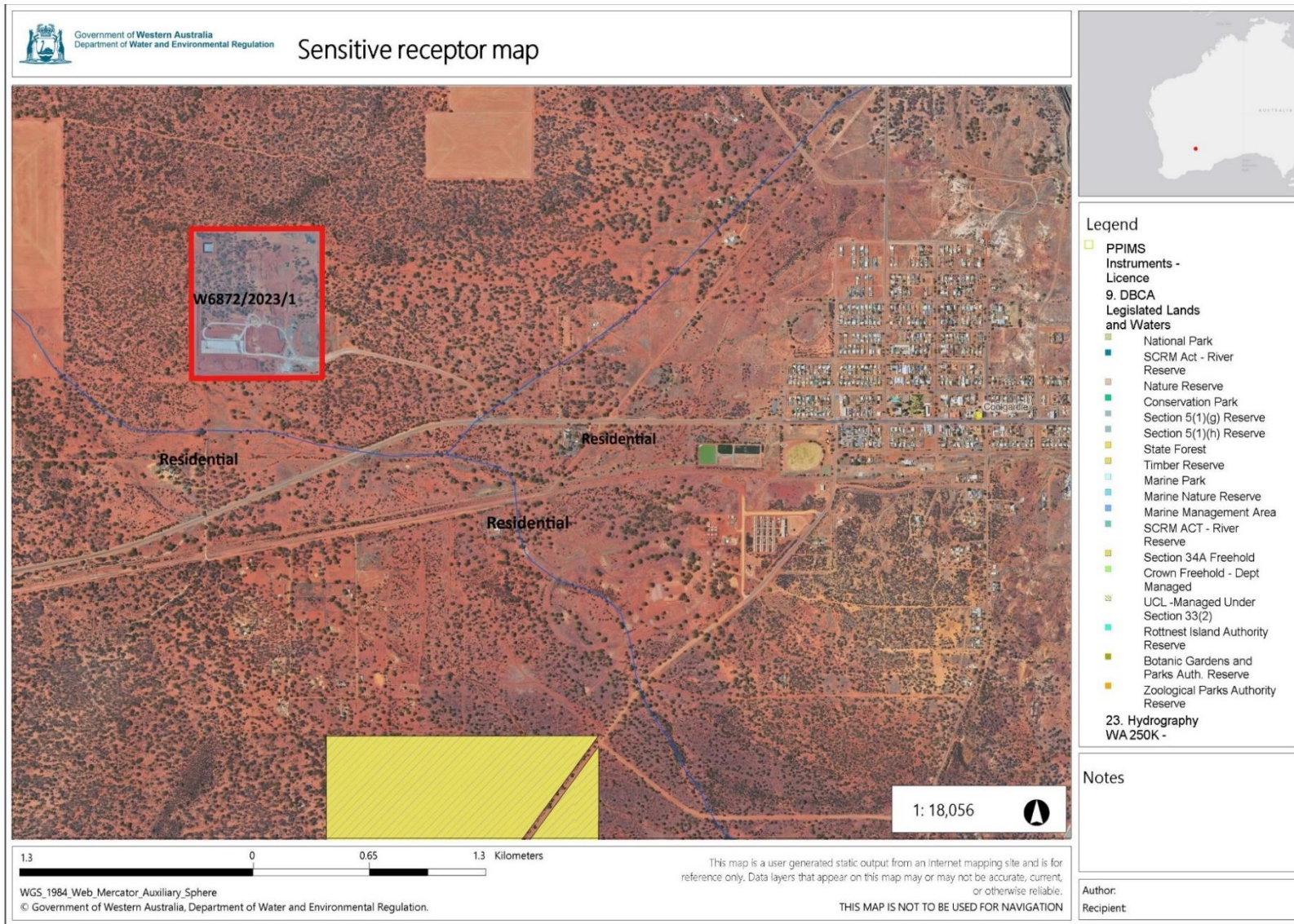
In accordance with the *Guideline: Risk Assessment* (DWER 2020), the Delegated Officer has excluded the applicant's employees, visitors, and contractors from its assessment. Protection of these parties often involves different exposure risks and prevention strategies and is provided for under other state legislation.

Table 2 and Figure 1 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**

<b>Human receptors</b>	<b>Distance from prescribed activity</b>
Residential premises	420 m south of the premises boundary; Approximately 800 m to the south of the premises (South of Great Eastern Highway) and the Goldfields Water Supply Scheme pipeline corridor.
Coolgardie Camel farm	Approximately 800 m south-west of the premises boundary
Coolgardie Cemetery	Approximately 1 km east of premises boundary.
Coolgardie Golf Club	Approximately 1.1 km southeast of premises boundary.
<b>Environmental receptors</b>	<b>Distance from prescribed activity</b>
Remnant native vegetation	Immediately adjacent to premises boundary
Specified Ecosystems – DBCA legislated tenure	1.6 km south – Kangaroo Hills timber reserve
<i>Rights In Water Irrigation Act 1914</i>	The Premises is located within proclaimed Goldfield Groundwater Area
Underlying groundwater (non-potable purposes)	Approximate depth to groundwater is 25 – 30 mBGL based on findings of the factual geotechnical report. Closest user is 4.5 km east of premises
Threatened or Priority Ecological Communities	None recorded within a 2 km buffer of the premises boundary.
Minor non-perennial unnamed creek	200 m south - non-perennial, minor feature. Creek drains to the west - northwest discharging into a Salt Lake approximately 14 km northwest of the premises





**Figure 1: Distance to sensitive receptors**

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IR-T13 Decision report template (short) v3.0 (May 2021)



## 3.2 Risk ratings

Risk ratings have been assessed in accordance with the *Guideline: Risk Assessments* (DWER 2020) for each identified emission source and takes into account potential source-pathway and receptor linkages as identified in Section 3.1. Where linkages are in-complete they have not been considered further in the risk assessment.

Where the applicant 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 applicant's proposed controls to be critical to maintaining an acceptable level of risk, these will be incorporated into the works approval as regulatory controls.

Additional regulatory controls may be imposed where the applicant's controls are not deemed sufficient. Where this is the case the need for additional controls will be documented and justified in Table 3.

Works approval W6872/2023/1 that accompanies this decision report authorises construction and time-limited operations. The conditions in the issued works approval, as outlined in Table 3 have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

A licence is required following the time-limited operational phase authorised under the works approval to authorise emissions associated with the ongoing operation of the premises. A risk assessment for the operational phase has been included in this decision report, however licence conditions will not be finalised until the department assesses the licence application.

**Table 3: Risk assessment of potential emissions and discharges from the premises during construction and time limited operation**

Risk events					Risk rating <sup>1</sup> C = consequence L = likelihood	Applicant controls sufficient?	Conditions <sup>2</sup> of works approval	Justification for additional regulatory controls
Sources / activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls				
<b>Construction</b>								
Earthworks Liner installation Construction of stormwater management infrastructure (bunds) Vehicle movement on unsealed roads Operation of heavy machinery associated with construction activities	Dust	Air / windborne pathway causing impacts to health and amenity	Residences 420 m south Adjacent native vegetation	Refer to Section 3.1	C = Slight L = Unlikely <b>Low Risk</b>	Y	N/A	The Delegated Officer considers that the Applicant's proposed controls are likely to be sufficient at mitigating dust emissions
	Noise			Refer to Section 3.1	C = Slight L = Unlikely <b>Low Risk</b>	Y	N/A	The Delegated Officer considers noise emissions associated with the construction can be sufficiently managed through the <i>Environmental Protection (Noise) Regulations 1997</i>
Accidental spills Leaks from machinery/vehicles	Hydrocarbons	Overland runoff potentially causing ecosystem disturbance or impacting surface water quality	Adjacent native vegetation Kangaroo Hills timber reserve ~1.6 km south of the premises Goldfield Groundwater Area Minor non-perennial watercourse 200m south Groundwater users (current and potential future users)	Refer to Section 3.1	C = Moderate L = Unlikely <b>Medium Risk</b>	Y	N/A	The Delegated Officer considers that the applicant's proposed controls are likely to be sufficient to mitigate emissions to land and water from accidental spills and leaks of hydrocarbons.

Risk events					Risk rating <sup>1</sup> C = consequence L = likelihood	Applicant controls sufficient?	Conditions <sup>2</sup> of works approval	Justification for additional regulatory controls
Sources / activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls				
<b>Operation (including time-limited-operations operations)</b>								
Acceptance, storage and treatment of liquid waste	Noise	Air / windborne pathway causing impacts to health and amenity	Residences 420 m south Adjacent native vegetation	Refer to Section 3.1	C = Slight L = Unlikely <b>Low Risk</b>	Y	N/A	The Delegated Officer considers noise emissions associated with the time limited operations can be sufficiently managed through the <i>Environmental Protection (Noise) Regulations 1997</i>
	Odour	Air / windborne pathway causing impacts to health and amenity		Refer to Section 3.1	C = Moderate L = Possible <b>Medium Risk</b>	Y	Condition 1, 7, 8, 9	The Delegated Officer considers that the applicant's proposed controls are likely to be sufficient to mitigate odour emissions during time limited operations. It is noted that the operational licence may be subject to further odour management conditions eg odour field assessments and acceptance limits for high risk odorous liquid wastes.

Risk events					Risk rating <sup>1</sup>	Applicant controls sufficient?	Conditions <sup>2</sup> of works approval	Justification for additional regulatory controls
Sources / activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls	C = consequence L = likelihood			
	Spills of liquid waste and potentially contaminated stormwater	Overland runoff potentially causing ecosystem disturbance or impacting surface water quality. Subsurface seepage	Kangaroo Hills timber reserve ~1.6 km south of the premises Goldfield Groundwater Area Minor non-perennial watercourse 200m south Groundwater users (current and potential future users)	Refer to Section 3.1	C = Moderate L = Unlikely <b>Medium Risk</b>	Y	Condition 1, 7, 8, 9	The Delegated Officer considers that the proposed infrastructure and applicant's proposed controls are likely to be sufficient to mitigate spills of liquid waste, potentially contaminated stormwater and seepage of liquid waste during time limited operations.
	Seepage of liquid waste	Subsurface seepage	Adjacent native vegetation	Refer to Section 3.1	C = Moderate L = Unlikely <b>Medium Risk</b>	Y	Condition 1, 7, 8, 9	
Fire event Mixing of incompatible liquid waste types	Fire/smoke	Air / windborne pathway causing impacts to health and amenity	Residences 420 m south Adjacent native vegetation	Refer to Section 3.1	C = Major L = Possible <b>High Risk</b>	Y	N/A	The Delegated Officer considers that the applicant's proposed controls are likely to be sufficient to mitigate fire risk during time limited operations.

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

Note 2: Proposed applicant controls are depicted by standard text. **Additional regulatory controls** depicts additional regulatory controls imposed by department.

## 4. Consultation

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

**Table 4: Consultation**

Consultation method	Comments received	Department response
Application advertised on the department's website on 4 January 2024	None received	N/A
Applicant was provided with draft documents on 09 April 2024	Refer Appendix A	Refer Appendix A

## 5. Conclusion

Based on the assessment in this decision report, the delegated officer has determined that a works approval will be granted, subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

## 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 applicant's comments on risk assessment and draft conditions

Condition	Summary of applicant's comment	Department's response
Condition 1, Table 1	The works approval holder was requested to remove $\leq 1 \times 10^{-9}$ m/sec permeability requirement of HDPE geomembrane from condition 1 of the works approval.	Not actioned as requested. The Delegated Officer considers that geomembrane permeability is a standard requirement for HDPE geomembranes.
Condition 4	The works approval holder was requested to amend condition 4(a) to state the requirement for certification of construction quality assurance validation reports to be carried out by a suitably qualified civil or geotechnical engineer (or equivalent) rather than an independent GITA-accredited engineer.	The condition has been amended as request.
Condition 7, Table 2	The works approval holder was requested to amend the wording of "maintain total operational volume by regular sludge removal" with wording of "undertake regular sludge removal to limit the maximum sludge depth to 1.5m from the pond base."	The condition has been amended as requested. The Delegated Officer notes that freeboard requirements remain on the works approval to mitigate the risk of overtopping from the anaerobic pond.
	The works approval holder was requested to remove $\leq 1 \times 10^{-9}$ m/sec permeability requirement of HDPE geomembrane from condition 7 of the works approval	The condition has amended as request. The condition has been updated to include the requirement to ensure ponds are maintained free from leaks, tears and defects and maintained to prevent damage and ensure the integrity of the HDPE liners.
Condition 9 Table 4	The works approval holder was requested that the monitoring of waste inputs be amended to align with the site's existing licence conditions	The condition has been amended as request.
Schedule 2 Table 6	The works approval holder requested the removal of the specification of the deflection irregularity from Table 6 due to being incorrectly quoted within the draft works approval	Not actioned as requested. The Delegated Officer considers the requirements is to remain in the works approval to ensure the subgrade is constructed to the required specifications. The deflection requirements have been updated to reflect those provided in the technical specification documents submitted with the



Condition	Summary of applicant's comment	Department's response
		works approval application.
Schedule 2, Table 7	The works approval holder requested that the requirement that " <i>all seams and joins made on site should be continuous</i> " to be removed from Schedule 2, Table 7 and requested that typographical errors in Table 7 be corrected.	The condition has amended to ensure that all typographical errors have been addressed.
	The works approval holder was requested to remove the conformance testing table from Table 7 due to inconsistency with many of the conformance testing requirements outlined within the Technical Specification	Not actioned as requested. The Delegated Officer considers the conformance testing requirements are to remain in the works approval to ensure the HDPE liner meets the required specifications. The conformance testing requirements have been updated to reflect those provided in the technical specification documents supplied with the works approval application.

## Appendix 2: Application validation summary

SECTION 1: APPLICATION SUMMARY	
<b>Application type</b>	
Works approval	
Date application received	16 November 2023
<b>Applicant and Premises details</b>	
Applicant name/s (full legal name/s)	Shire of Coolgardie
Premises name	Coolgardie Waste Facility
Premises location	Coolgardie Tip Road, Coolgardie WA 6429  Crown Reserve 3497 Lot 501 on Deposited Plan 255090 Volume/Folio: 3025/858
Local Government Authority	Shire of Coolgardie
<b>Application documents</b>	
HPCM file reference number:	DWERVT13704~32
Key application documents (additional to application form):	Environmental Assessment and Management Plan – 10 November 2023  Landfill Environmental Management Plan – April 2023  Coolgardie Waste Management Facility – Liquid Waste Facility Construction – Technical Specification - October 2023  Coolgardie Waste Management Facility – Liquid Waste Facility Construction – CQA - October 2023
<b>Scope of application/assessment</b>	
Summary of proposed activities or changes to existing operations.	Development of a modern liquid waste facility at the Shire's existing Coolgardie Waste Management Facility. Construction will include the following activities: <ul style="list-style-type: none"> <li>• Clearing of vegetation and unsuitable material;</li> <li>• General earthworks to formation levels, of two anaerobic ponds and one evaporation pond;</li> <li>• Anaerobic Ponds <ul style="list-style-type: none"> <li>○ Supply and installation of 0.6mm vapour barrier</li> <li>○ Supply and installation of two in-situ reinforced concrete anaerobic ponds and discharge pits;</li> </ul> </li> <li>• Evaporation Pond <ul style="list-style-type: none"> <li>○ Installation of 300mm thick Compacted Subgrade Layer;</li> <li>○ Supply and installation of 2mm High Density Polyethylene (HDPE) Double Textured Geomembrane;</li> </ul> </li> </ul>

**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
Category 61 – Liquid Waste Facility	Up to 5000 tonnes per year

**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"/>	N/A
Does the applicant hold any existing Part IV Ministerial Statements relevant to the application?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	N/A
Has the proposal been referred and/or assessed under the EPBC Act?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	N/A
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"/>	The Shire of Coolgardie has utilised the Public Works Exemption for the project pursuant to Section 6 of the Planning and Development Act 2005.
Has the applicant applied for, or have an existing EP Act clearing permit in relation to this proposal?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	No clearing is proposed.
Has the applicant applied for, or have an existing CAWS Act clearing licence in relation to this proposal?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	No clearing is proposed.
Has the applicant applied for, or have an existing RIWI Act licence or permit in relation to this proposal?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Licence / permit not required.
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the EP Act)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	N/A
Is the Premises situated in a Public Drinking Water Source Area (PDWSA)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	N/A
Is the Premises subject to any other Acts or subsidiary regulations (e.g. <i>Dangerous Goods Safety Act 2004</i> , <i>Environmental Protection (Controlled</i>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Previously registered - Rural landfill regulations under Registration R1550

<i>Waste) Regulations 2004, State Agreement Act xxxx)</i>		
Is the Premises within an Environmental Protection Policy (EPP) Area?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	N/A
Is the Premises subject to any EPP requirements?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	N/A
Is the Premises a known or suspected contaminated site under the <i>Contaminated Sites Act 2003</i> ?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Incomplete Report Classification: Incomplete Date of classification: N/A