



# Works Approval

## *Environmental Protection Act 1986, Part V*

**Works Approval Holder:** Gold Road Resources Pty Ltd

**Works Approval Number:** W5973/2016/1

**Registered office:** Level 2, 26 Colin Street  
 WEST PERTH WA 6005

**ACN:** 109 289 527

**Premises address:** Yamarna Exploration Camp Landfill  
 M38/435 and M38/436  
 LAVERTON WA 6440  
 as depicted in Schedule 1.

**Issue date:** Monday, 12 September 2016

**Commencement date:** Monday, 19 September 2016

**Expiry date:** Saturday, 18 September 2021

The following category/s from the *Environmental Protection Regulations 1987* cause this Premises to be a prescribed premises for the purposes of the *Environmental Protection Act 1986*:

Category number	Category description	Category production or design capacity	Approved premises production or design capacity
89	Putrescible landfill site	More than 20 but less than 5 000 tonnes per year	300 tonnes per annual period

**Conditions**

This Works Approval is subject to the conditions set out in the attached pages.

Date signed: 12 September 2016

.....  
**Steve Checker**  
**MANAGER LICENSING (WASTE INDUSTRIES)**

Officer delegated under section 20  
 of the *Environmental Protection Act 1986*



# Works Approval Conditions

## 1 General

### 1.1 Interpretation

1.1.1 In the Works Approval, definitions from the *Environmental Protection Act 1986* apply unless the contrary intention appears.

1.1.2 In the Works Approval, unless the contrary intention appears:

**'Act'** means the *Environmental Protection Act 1986*;

**'annual period'** means the inclusive period from 1 April until 31 March in the following year;

**'CEO'** means Chief Executive Officer of the Department of Environment Regulation;

**'CEO'** for the purpose of correspondence means;

Chief Executive Officer  
Department Administering the *Environmental Protection Act 1986*  
Locked Bag 33  
CLOISTERS SQUARE WA 6850  
Email: [info@der.wa.gov.au](mailto:info@der.wa.gov.au)

**'hazardous waste'** has the meaning defined in Landfill Definitions;

**'Landfill Definitions'** means the document titled "Landfill Waste Classification and Waste Definitions 1996" published by the Chief Executive Officer of the Department of Environment as amended from time to time.

**'Premises'** means the area defined in the Premises Map in Schedule 1 and listed as the Premises address on page 1 of the Works Approval;

**'putrescible'** has the meaning defined in Landfill Definitions;

**'Schedule 1'** means Schedule 1 of this Works Approval unless otherwise stated;

**'Works Approval'** means this Works Approval numbered W5973/2016/1 and issued under the Act; and

**'Works Approval Holder'** means the person or organisation named as the Works Approval Holder on page 1 of the Works Approval.

1.1.3 Any reference to an Australian or other standard in the Works Approval means the relevant parts of the standard in force from time to time during the term of this Works Approval.

1.1.4 Any reference to a guideline or code of practice in the Works Approval means the current version of the guideline or code of practice in force from time to time, and shall include any amendments or replacements to that guidelines or code of practice made during the term of this Works Approval.



**1.2 General conditions**

1.2.1 The Works Approval Holder must ensure that the proposed Works specified in Column 1 of Table 1.2.1 meets or exceeds the specifications in Column 2 of Table 1.2.1 for the infrastructure in each row of Table 1.2.1.

1.2.2 The Works Approval Holder must not depart from the specifications in Column 2 for the infrastructure in each row of Table 1.2.1 except:

- (a) where such departure is minor in nature and does not materially change or affect the infrastructure; or
- (b) where such departure improves the functionality of the infrastructure and does not increase risks to public health, public amenity or the environment;

and in accordance with all other Conditions in this Works Approval.

<b>Table 1.2.1: Construction specifications</b>	
<b>Column 1</b>	<b>Column 2</b>
<b>Infrastructure</b>	<b>Specifications (design and construction)</b>
All	<ul style="list-style-type: none"> <li>(a) ensure enough cover material is available at any time and readily available on the site for the tipping area of the site to be covered; and</li> <li>(b) ensure there is a firebreak of at least 3m around the boundary of the site</li> </ul>
Landfill trench/pit	<ul style="list-style-type: none"> <li>(a) the tipping area is not greater than 30 metres(m) in length and 2m above ground level in height;</li> <li>(b) the tipping area is within 35m from the fence surrounding the site and 100m from any surface water body;</li> <li>(c) the separation distance between the base of the landfill and the highest groundwater level shall not be less than three metres;</li> <li>(d) the landfill must be fenced with a high security fence with access to the facility through lockable gated entry/exit points; and</li> <li>(e) The landfill must be designed to ensure that waste does not get washed or blown outside the site.</li> </ul>



## **2 Information**

### **2.1 Reporting**

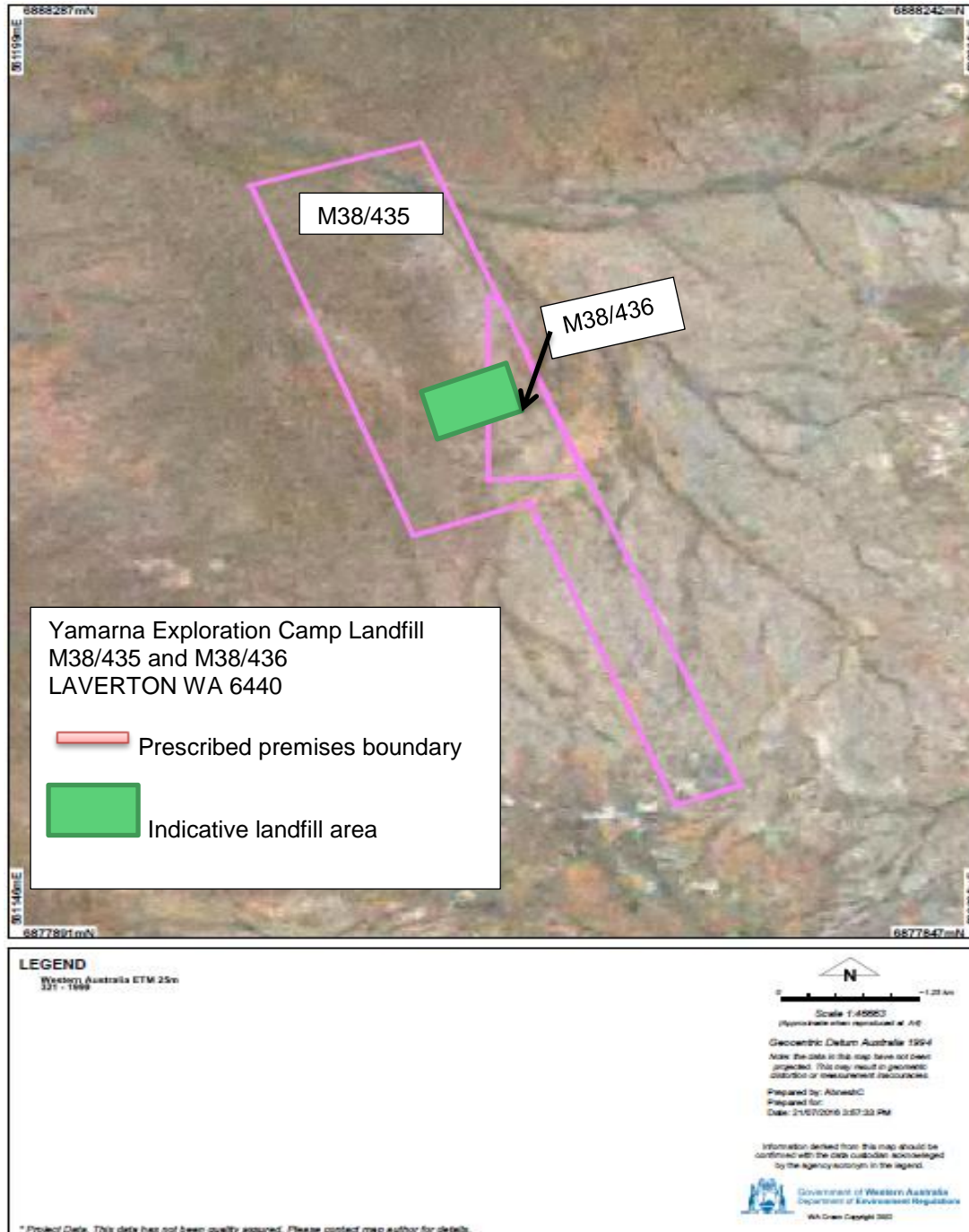
- 2.1.1 The Works Approval Holder shall submit a compliance document to the CEO, following the construction of Premises and prior to commencing operations.
- 2.1.2 The Works Approval Holder must ensure the construction compliance document:
- (a) is certified by a suitably qualified professional engineer or builder that each item of infrastructure specified in Condition 1.2.1, Table 1.2.1 has been constructed and tested in accordance with the Conditions of the Works Approval with no material defects;
  - (b) contains a list of any departures authorised under Condition 1.2.2 which are certified as being compliant with Condition 1.2.2; and
  - (c) be signed by a person authorised to represent the Works Approval Holder and contain the printed name and position of that person within the company.



## Schedule 1: Maps

### Premises map

The Premises is shown in the map below. The pink lines depict the Premises boundary.





# Decision Document

## *Environmental Protection Act 1986, Part V*

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**Proponent:** Gold Road Resources Pty Ltd

**Works Approval:** W5973/2016/1

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**Registered office:** Level 2, 26 Colin Street  
WEST PERTH WA 6005

**ACN:** 109 289 527

**Premises address:** Yamarna Exploration Camp Landfill  
M38/435 and M38/436  
LAVERTON WA 6440

**Issue date:** Monday, 12 September 2016

**Commencement date:** Monday, 19 September 2016

**Expiry date:** Saturday, 18 September 2021

### **Decision**

Based on the assessment detailed in this document the Delegated Officer has decided to issue a works approval. The Delegated Officer considers that in reaching this decision, all relevant considerations have been taken into account.

Decision Document prepared by:

Abnesh Chetty  
Licensing Officer

Decision Document authorised by:

Steve Checker  
Delegated Officer



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### 1 Purpose of this Document

This decision document explains how DER has assessed and determined the application and provides a record of DER's decision-making process and how relevant factors have been taken into account. Stakeholders should note that this document is limited to DER's assessment and decision making under Part V of the *Environmental Protection Act 1986*. Other approvals may be required for the proposal, and it is the proponent's responsibility to ensure they have all relevant approvals for their Premises.



## 2 Administrative summary

Administrative details		
Application type	Works Approval <input checked="" type="checkbox"/> New Licence <input type="checkbox"/> Licence amendment <input type="checkbox"/> Works Approval amendment <input type="checkbox"/>	
Activities that cause the premises to become prescribed premises	<b>Category number(s)</b>	<b>Assessed design capacity</b>
	89	300 tonnes per annual period
Application verified	Date: 18 May 2016	
Application fee paid	Date: 15 June 2016	
Works Approval has been complied with	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	
Compliance Certificate received	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	
Commercial-in-confidence claim	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Commercial-in-confidence claim outcome	Not applicable	
Is the proposal a Major Resource Project?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Was the proposal referred to the Environmental Protection Authority (EPA) under Part IV of the <i>Environmental Protection Act 1986</i> ?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Referral decision No: Managed under Part V <input type="checkbox"/> Assessed under Part IV <input type="checkbox"/>
Is the proposal subject to Ministerial Conditions?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Ministerial statement No: EPA Report No:
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the <i>Environmental Protection Act 1986</i> )?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Department of Water consulted Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Is the Premises within an Environmental Protection Policy (EPP) Area Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Is the Premises subject to any EPP requirements? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		





### 3 Executive summary of proposal and assessment

A works approval application has been submitted by Gold Road Resources Pty Ltd (GRR) for a proposed landfill associated with the Yamarna Exploration Camp (Yamarna Camp). The Yamarna Camp and associated landfill are located on mining tenements M38/435 and M38/436 in Laverton, which are owned by GRR who also own the Yamarna pastoral lease. The Yamarna Camp dates back to the early 1970s. It was previously utilised as a pastoral camp and used for limited cattle and wool production. The pastoral lease is on the eastern margin of the arid rangelands of Western Australia which is used for grazing, there are no immediately adjoining pastoral leases.

The application details that the Yamarna Camp consists of small scale, transportable buildings and temporary infrastructure to accommodate up to 70 people. GRR have applied with the DMP for the camp to be expanded and upgraded to accommodate a total of 70 people. As a result of the expansion a Class II Putrescible Landfill defined as 'an un-lined landfill designed to accept putrescible and inert wastes' will be required for more than 20 but less than 5,000 tonnes per annum. This includes wastes that contain organic materials such as food wastes and wastes of animal or vegetable origin, which readily bio-degrade within the environment of a landfill. General camp and office waste will be disposed of in this landfill, including food stuffs. No chemical waste or hydrocarbons will be disposed of in the landfill. For the establishment of the landfill, the proponent advised that 1ha of clearing has been approved by Department of Mines and Petroleum (DMP). This clearing takes into consideration the requirement for a fire break, fence and 35m boundary from fence.

The proponent's Flora and fauna surveys have not identified any Threatened Flora or Fauna, Priority Flora or Fauna, Threatened Ecological Communities (TEC's) or Priority Ecological Communities (PEC) within the Yamarna Camp area. There are no registered European or Aboriginal Heritage sites within the Yamarna Camp as registered under Section 5 of the *Aboriginal Heritage Act 1972*. The Delegated notes and accepts this advice.

The delegated officer has determined that the activities trigger category 89 under Schedule 1 of *Environmental Protection Regulations 1987*.

This Decision Documents is based on an assessment of the Applicants application for a Part V *Environmental Protection Act 1986* Works Approval which was verified on 18 May 2016. The assessment is for the construction of a class II putrescible landfill.

No assessment of other potential prescribed activities at the Yamarna Camp is undertaken in this Decision Document.

#### Location and siting

The Yamarna Camp (and associated landfill) is located approximately 134km north-east of the township of Laverton, WA on the Yamarna Pastoral Lease. The Pastoral Lease is adjoined by the Cosmo-Newbery Aboriginal Reserve. The camp is located approximately 80km south of the nearest community Cosmo Newberry and 134km from the nearest major town of Laverton. To the east of the Lease is the Yeo Lake Nature Reserve which has been set aside for the protection of flora and fauna. The Yamarna tenements are accessible by road from Laverton. There are currently two serviced access roads; the White Cliffs Road through the middle of the tenements and the Warburton Road (Great Central Highway) further to the north. There are no sensitive receptors within a 5km radius of the camp.

#### Geology

Rock Unit Name	Lithology Type	Lithology Description
Colluvium 38491	Colluvial Sediment	Colluvium, sheetwash, talus; gravel piedmonts and aprons over and around bedrock; clay-silt-sand with sheet and nodular kankar; alluvial and aeolian sand-silt-gravel in depressions and broad valleys in Canning Basin; local calcrete, reworked laterite



### Hydrogeology

The Yamarna Project area has no natural water source areas or large granite outcrops that may support pockets of water. Any water on the ground as a result of episodic rainfall does not remain in situ for very long. According to the Geoscience Australia database (2001) no inland water or intermittent streams are located within the Yamarna camp area. Depth of the groundwater is greater than 15 metres below surface.

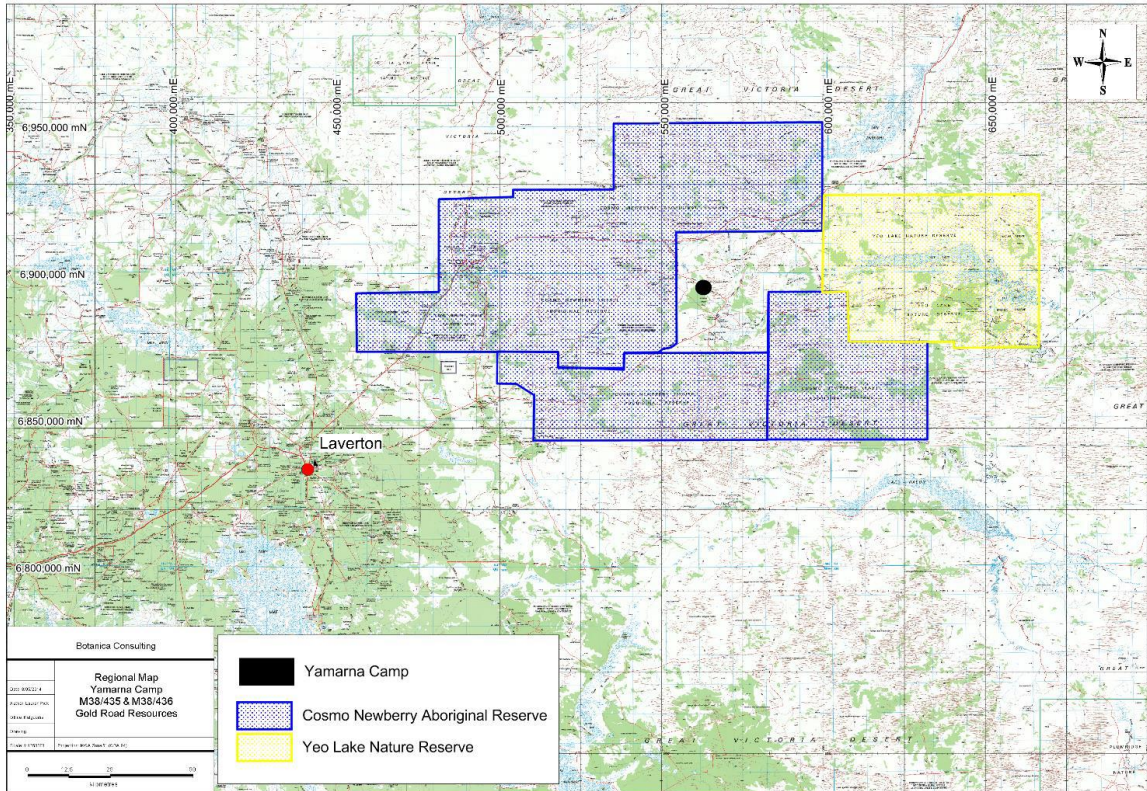


Figure 1: Regional Map of the Yamarna Camp showing location of the premises

### Topography

The Yamarna Camp lies within the Great Victoria Desert (GVD) Region of Western Australia (WA) within the Eremaean Province in an area known as the Helms Botanical District. According to the Interim Biogeographic Regionalisation of Australia (IBRA) the GVD Region is further divided into sub-regions with the Yamarna Camp and landfill area located within the Shield Subregion. The Shield subregion is located at the western end of the GVD and is underlain by Yilgarn Craton which has the highest proportion of sandplains. The topography is undulating, mostly with longitudinal dunes. Shallow earthy loams overlying red-brown hardpan frequently occur between the dunes; otherwise red earthy sands, with red-brown sands in the dunes.

### Geology

Colluvium, sheetwash, talus; gravel piedmonts and aprons over and around bedrock; clay-silt-sand with sheet and nodular kankar; alluvial and aeolian sand-silt-gravel in depressions and broad valleys in Canning Basin; local calcrete, reworked laterite.

### Sensitive Receptors

There are no sensitive receptors within a 5km radius of the camp.

### Yeo Lake nature reserve

Yeo Lake Nature Reserve is located approximately 35km north-east of the landfill area. Yeo Lake is described as a 'seasonal/intermittent saline lake' by the Directory of Important Wetlands in Australia. However, it is thought that the lake is fresh when it fills before becoming saline.



### Proposed works and potential emissions

The total area proposed for the development of landfill is estimated to be 1.004ha. No further specifications of the landfill were provided in the Applicants submission.

### Approval of works

The applicant has listed that other approvals will be required for the project as follows:

Approval	Status
Grant of Mining Tenement and associated Tenement Conditions	Granted
Shire of Laverton Building Permits for new dwellings	Pending approval
Shire of Laverton septic system permit	Pending approval
Mining Proposal for the Yamarna Exploration Camp	Pending approval
Mine Closure Plan for the Yamarna Exploration Camp	Pending approval

The Shire of Laverton Principal Environmental Health Officer/ Building Surveyor advised DER on 12/09/2016 that planning approval for the landfill is not required.

This Decision Document and the Works Approval specifies the assessment of the Applicant's proposal, the regulatory requirements for the Works and operations to proceed.

Approval to operate and accept putrescible and inert waste for burial will be subject to an approval under Regulation 4 of the Landfill Regulations being granted.



## 4 Decision table

All applications are assessed in line with the *Environmental Protection Act 1986*, the *Environmental Protection Regulations 1987* and DER's Operational Procedure on Assessing Emissions and Discharges from Prescribed Premises. Where other references have been used in making the decision they are detailed in the decision document.

DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
Interpretation	W1.1.1, W1.1.2	<p><b>Construction</b> Conditions 1.1.1 – 1.1.2 require that terminology used within the Works Approval is referenced to the appropriate definitions where applicable.</p> <p><b>Operation</b> Operation of the Works may refer to terminology and definitions within:</p> <ul style="list-style-type: none"> <li>• <i>Environmental Protection Act 1986</i>;</li> <li>• <i>Environmental Protection (Controlled Waste) Regulations 2004</i>;</li> <li>• <i>Environmental Protection (Rural Landfill) Regulations 2002</i>; and</li> <li>• <i>Landfill Waste Classification and Waste Definitions 1996</i> published by the Chief Executive Officer as amended from time to time.</li> </ul>	General provisions of the <i>Environmental Protection Act 1986</i>
General conditions	W1.2.1, W1.2.2  Registration (Cat 89)	<p><b>Construction</b> Detailed plans or specifications of the proposed Works were not provided in the application therefore design and performance specifications have been set as a requirement in Condition 1.2.1. Category 89 registered premises are subject to the <i>Environmental Protection (Rural Landfill) Regulations 2002</i>, the design specifications have therefore been based on the relevant requirements of this legislation.</p> <p>Condition 1.2.2 also allows for minor deviation from the design and construction specifications where such departures are appropriate to improve the functionality of the infrastructure and does not increase risks to public health, public amenity or the environment.</p>	<p>General provisions of the <i>Environmental Protection Act 1986</i></p> <p>DER's <i>Guidance Statement: Regulatory Controls</i></p> <p>DER's <i>Guidance Statement: Licence and works approval process</i></p>



<b>DECISION TABLE</b>			
<b>Works Approval / Licence section</b>	<b>Condition number W = Works Approval L= Licence</b>	<b>Justification (including risk description &amp; decision methodology where relevant)</b>	<b>Reference documents</b>
		<p><b>Operation</b> Operation of the Works will be subject to registration under the <i>Environmental Protection Act 1986</i> and will be regulated under the provisions of:</p> <ul style="list-style-type: none"> <li>• <i>Environmental Protection Act 1986</i>;</li> <li>• <i>Environmental Protection (Controlled Waste) Regulations 2004</i>;</li> <li>• <i>Environmental Protection (Rural Landfill) Regulations 2002</i>; and</li> <li>• <i>Landfill Waste Classification and Waste Definitions 1996</i> published by the Chief Executive Officer as amended from time to time.</li> </ul>	<p><i>Environmental Protection (Rural Landfill) Regulations 2002</i></p>
<b>Premises operation</b>	<p>N/A</p> <p>Registration ( Cat 89)</p>	<p><b>Construction</b> No approval to operate is granted under the Works Approval.</p> <p><b>Operation</b> The regulatory controls and supporting risk assessments for operation are contained in Appendix A. Approval to operate will be subject to:</p> <ul style="list-style-type: none"> <li>• The general provisions of the <i>Environmental Protection Act 1986</i>; and</li> <li>• The general provisions of the <i>Environmental Protection (Rural Landfill) Regulations 2002</i>.</li> </ul>	<p>General provisions of the <i>Environmental Protection Act 1986</i></p> <p><i>Environmental Protection (Rural Landfill) Regulations 2002</i></p> <p>DER's Guidance Statement: <i>Regulatory Principles</i></p>
<b>Emissions to land including monitoring</b>	<p>N/A</p> <p>Registration ( Cat 89)</p>	<p><b>Construction</b> There will be no emissions to land during construction of the landfill.</p> <p><b>Operation</b> Refer to Appendix 1 for the detailed risk assessment</p>	<p><i>Environmental Protection (Rural Landfill) Regulations 2002</i>.</p> <p><i>Environmental Protection Act 1986</i>.</p>



<b>DECISION TABLE</b>			
<b>Works Approval / Licence section</b>	<b>Condition number W = Works Approval L= Licence</b>	<b>Justification (including risk description &amp; decision methodology where relevant)</b>	<b>Reference documents</b>
<b>Fugitive emissions</b>	N/A  Registration (Cat 89)	<b>Construction</b>  <b>Operation</b> Refer to Appendix 1 for the detailed risk assessment	<i>Environmental Protection (Rural Landfill) Regulations 2002.</i>  DER's Guidance Statement: <i>Regulatory Principles</i>
<b>Odour</b>	N/A  Registration (Cat 89)	<b>Construction and Operation</b>  Refer to Appendix 1 for the detailed risk assessment	<i>Environmental Protection (Rural Landfill) Regulations 2002.</i>  <i>Environmental Protection Act 1986.</i>
<b>Noise</b>	N/A	<b>Construction and Operation</b> <u>Emission description:</u> <i>Emission:</i> Noise arising from construction activities, machinery movement, earthworks and the acceptance and movement of waste. <i>Impact:</i> Interference with the health, welfare, convenience, comfort or amenity of sensitive residential receptors. The next closest residence is located about 5km from the proposed landfill facility. <i>Controls:</i> No controls are specified in the application with regards to those sensitive receptors at the camp site which is situated in the same mining tenements.  <u>Risk assessment:</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Possible	Application supporting documentation.  General provisions of the <i>Environmental Protection Act 1986</i>  <i>Environmental Protection (Noise) Regulations 1997</i>  DER's Guidance Statement:



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p><i>Risk Rating: Low</i></p> <p><u>Regulatory controls:</u> The Delegated Officer considers that the provisions of <i>Environmental Protection (Noise) Regulations 1997</i> will be sufficient to regulate noise emissions during construction and operation. No specified works approval conditions relating to noise are required.</p> <p><u>Residual risk:</u> <i>Consequence: Insignificant</i> <i>Likelihood: Unlikely</i> <i>Risk Rating: Low</i></p>	<i>Regulatory Principles</i>
<b>Information</b>	W2.1.1; W2.1.2;  Registration ( Cat 89)	<p><b>Construction</b></p> <p>Conditions 2.1.2-2.1.3 included in the Works Approval require that the construction specifications for infrastructure are certified as compliant in writing by the Works Approval holder following the completion of construction.</p> <p><b>Operation</b></p> <p>The operational premises will be subject to the <i>Environmental Protection (Rural Landfill) Regulations 2002</i>.</p>	<p>General provisions of the <i>Environmental Protection Act 1986</i></p> <p><i>Environmental Protection (Rural Landfill) Regulations 2002</i></p> <p>DER's <i>Guidance Statement: Setting Conditions</i></p>



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
Works Approval Duration	N/A	<p><b>Construction</b> The document <i>Guidance statement: licence duration</i> does not prescribe duration periods for works approvals. It is proposed to grant the works approval for a five year period. No other statutory approvals have been identified as limiting the duration of the works approval.</p> <p>Subject to the regulatory controls, the residual risk for all works has been classified low.</p>	DER's <i>Guidance statement: Licence Duration</i> .

## 5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
27/06/2016	Application advertised in West Australian (or other relevant newspaper)	No comments received	None applicable
19/08/2016	Proponent sent a copy of draft instrument	Corrected table number	Table number 1.2.2 changed to 1.2.1





## 6 Risk Assessment

*Note: This matrix is taken from the DER Corporate Policy Statement No. 07 - Operational Risk Management*

**Table 1: Emissions Risk Matrix**

Likelihood	Consequence				
	Insignificant	Minor	Moderate	Major	Severe
Almost Certain	Moderate	High	High	Extreme	Extreme
Likely	Moderate	Moderate	High	High	Extreme
Possible	Low	Moderate	Moderate	High	Extreme
Unlikely	Low	Moderate	Moderate	Moderate	High
Rare	Low	Low	Moderate	Moderate	High



## Appendix A

### Stormwater contamination (Construction and Operation)

#### Emission Description

*Emission:* Stormwater contaminated due to hydrocarbons and chemical spills from storage and use of machinery, and leachate from landfilling operations.

*Impact:* Contamination of surrounding land and surface water drainage systems, and groundwater. Potential impacts on quality of groundwater and ecology of surface water from the addition of hydrocarbons, nutrients and heavy metals. The contaminated water project area is internally draining and has few surface water features. Yeo Lake Nature Reserve is located approximately 35km north-east of the landfill area. Yeo Lake is described as a seasonal/intermittent saline lake. However, it is thought that the lake is fresh when it fills before becoming saline. Groundwater is understood to be 15 m below ground level. Groundwater in the surficial sediments-shallow aquifer is brackish.

*Controls:* Stormwater at the site will be adequately managed so that it is diverted from the landfill and that any water which comes into contact with waste be diverted into a sump or retained on the site. Waste that cannot be disposed of at the landfill will be removed from the site by a licensed waste removal contractor in accordance with GRR waste management procedure. Waste minimising and recycling will be implemented where possible. Use of self-bunded equipment and pond liners to form containment bunds and service pads for all hydrocarbon equipment. Contaminated soil to be removed and stored in bunded areas for subsequent disposal to bioremediation facilities. Ensure hydrocarbons are stored and handled on site in a suitable bunded area in accordance with AS1940. The landfill will be managed in accordance with the *Environmental Protection (Rural Landfill) Regulations 2002*. The Regulations require regular burial of the tip, ensuring that stormwater is diverted from the landfill, and if water comes into contact with waste it must be diverted to a sump or retained on site.

#### Risk Assessment

*Consequence:* Minor

*Likelihood:* Unlikely

*Risk Rating:* Moderate

#### Regulatory Controls

- General provisions of the *Environmental Protection Act 1986* and the *Environmental Protection (Unauthorised Discharges) Regulations 2004* will be applicable to the landfill.
- The landfill will be managed in accordance with the *Environmental Protection (Rural Landfill) Regulations 2002* under Registration or Licence conditions.

#### Residual Risk

*Consequence:* Minor

*Likelihood:* Rare

*Risk Rating:* Low



### **Emission Description – leachate (Operation)**

*Emission:* Leachate to ground and groundwater from decomposition of landfill waste. The landfill will be unlined.

*Impact:* contamination of on-and off-site land and surface water drainage systems if leachate is not properly contained. Impacts to groundwater are expected to be limited due to significant depth to groundwater. No beneficial users of groundwater or groundwater dependant ecosystems have been identified. The depth groundwater at the Premises is greater than 15 metres. Quality of groundwater is hypersaline

*Controls:* Waste that cannot be disposed of at the landfill will be removed from the site by a licensed waste removal contractor in accordance with GRR waste management procedure. Waste minimising and recycling will be implemented where possible. The *Environmental Protection (Rural Landfill) Regulations 2002* requires that the waste in the tipping area is covered monthly which may assist in minimising the development of rainfall generated leachate.

### **Risk Assessment**

*Consequence:* Minor

*Likelihood:* Unlikely

*Risk Rating:* Moderate

### **Regulatory Controls**

- The general provisions of the *Environmental Protection Act 1986* are applicable, including Section 49 causing pollution and unreasonable emission.
- The document *Landfill Waste Classification and Waste Definitions 1996* published by the Chief Executive Officer of the Department of Environment as amended from time to time describes the contaminant levels permitted to be accepted and disposed of at a Category 89 putrescible landfill. The acceptance of waste for disposal not meeting the types permitted for disposal, which could result in increased contaminant levels, may result in a breach of Section 53 of the *Environmental Protection Act 1986*.
- Condition 1.2.1, Table 1.2.1, row (1), item (c) requires that the base level of each burial pit has a minimum separation distance to groundwater of three meters. It is the responsibility of the Applicant to ensure this requirement is complied with, additional investigations may be required.

### **Residual Risk**

*Consequence:* Minor

*Likelihood:* Unlikely

*Risk Rating:* Moderate



### **Emission Description – dust (construction and operation)**

*Emission:* Dust arising from the operations of equipment and vehicle movements during the excavation, disposal and cover of the landfill waste.

*Impact:* Reduced local air quality from airborne particulates, however dust impacts are expected to be limited as the facility is located in a remote area. The camp accommodation is situated in the same mining tenement. The next closest sensory receptor is approximately 5km away from the closest sensory receptor.

*Controls:* During excavation the ground will be wetted down.

### **Risk Assessment**

*Consequence:* Insignificant

*Likelihood:* Unlikely

*Risk Rating:* Low

### **Regulatory Controls**

- The Delegated Officer considers that the provisions of Section 49 of the *Environmental Protection Act 1986* are sufficient to regulate dust emissions during construction and operation.
- Regulation 11 of the *Environmental Protection (Rural Landfill) Regulations 2002* requires the occupier of the landfill site must ensure that no visible dust escapes from the landfill site.

### **Residual Risk**

*Consequence:* Insignificant

*Likelihood:* Unlikely

*Risk Rating:* Low



### **Emission Description – odour (operation)**

*Emission:* Odour may be generated from exposure of putrescible waste.

*Impact:* Interference with the health, welfare, convenience, comfort or amenity of sensitive commercial and residential receptors. The camp accommodation is situated in the same mining tenement. The next closest sensitive receptor is approximately 5km away from the landfill.

*Controls:* All wastes will be securely contained to prevent access by dingos and other animals. The landfill area will be fenced as per the requirements of regulation 4 of the *Environmental Protection (Rural Landfill) Regulations 2002*. Under the *Environmental Protection (Rural Landfill) Regulations 2002*, waste is required to be covered with a dense, inert and incombustible material so that no waste will be left exposed.

### **Risk Assessment**

*Consequence:* Insignificant

*Likelihood:* Unlikely

*Risk Rating:* Low

### **Regulatory Controls**

- The Delegated Officer considers that the provisions of Section 49 of the *Environmental Protection Act 1986* are sufficient to regulate odour emissions.
- Regulation 6 of the *Environmental Protection (Rural Landfill) Regulations 2002* requires the waste in the tipping area of the site to be covered monthly.

### **Residual Risk**

*Consequence:* Insignificant

*Likelihood:* Unlikely

*Risk Rating:* Low