



**Licence Number** L8971/2016/1

**Licence Holder** Radio Gold Pty Ltd

**ACN** 162 869 276

**File Number:** DER2016/000677

**Premises**  
Radio Gold Mine  
Mining Lease M77/633  
SOUTHERN CROSS WA 6426

**Date of Amendment** 14 December 2017

## Amendment

The Chief Executive Officer (CEO) of the Department of Water and Environmental Regulation (DWER) has amended the above Licence in accordance with section 59 of the *Environmental Protection Act 1986* (EP Act) as set out in this Amendment Notice. This Amendment Notice constitutes written notice of the amendment in accordance with section 59B(9) of the EP Act.

Date signed: 14 December 2017

**Tim Gentle**

**MANAGER LICENSING – RESOURCE INDUSTRIES**

an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

# Definitions and interpretation

## Definitions

In this Amendment Notice, the terms in Table 1 have the meanings defined.

**Table 1: Definitions**

Term	Definition
ACN	Australian Company Number
Amendment Notice	refers to this document
Category/ Categories/ Cat.	categories of Prescribed Premises as set out in Schedule 1 of the EP Regulations
Delegated Officer	an officer under section 20 of the EP Act
Department	means the department established under section 35 of the <i>Public Sector Management Act 1994</i> and designated as responsible for the administration of Part V, Division 3 of the EP Act.
DWER	Department of Water and Environmental Regulation
EPA	Environmental Protection Authority
EP Act	<i>Environmental Protection Act 1986</i> (WA)
EP Regulations	<i>Environmental Protection Regulations 1987</i> (WA)
Existing Licence	The Licence issued under Part V, Division 3 of the EP Act and in force prior to the commencement of and during this Review
Licence Holder	Radio Gold Pty Ltd
Landfill definitions	<i>Landfill Waste Classification and Waste Definitions 1996</i>
m <sup>3</sup>	cubic metres
Occupier	has the same meaning given to that term under the EP Act.
Prescribed Premises	has the same meaning given to that term under the EP Act.
Premises	refers to the premises to which this Decision Report applies, as specified at the front of this Decision Report.
Risk Event	as described in <i>Guidance Statement: Risk Assessment</i>

## Amendment Notice

This amendment is made pursuant to section 59 of the *Environmental Protection Act 1986* (EP Act) to amend the Licence issued under the EP Act for a prescribed premises as set out below. This notice of amendment is given under section 59B (9) of the EP Act.

This notice is limited only to an amendment for Category 64. No changes to the aspects of the original Licence relating to Category 6 have been requested by the Licence Holder.

## Amendment description

On 13 July 2017, Radio Gold Pty Ltd. (Licence Holder) submitted an application to the Department of Environment Regulation (now DWER) for an amendment to the Radio Gold Mine licence (L8971/2016/1).

The application pertains to the addition of Category 64 putrescible landfill and authorisation to construct and operate the putrescible landfill.

The waste disposal facility will consist of 2 landfill cells with a 5 metre (m) distance between each cell. Each cell will be 150m by 5m by 2 m deep. Only one cell is to be active at any one time. A 1 m high bund will be constructed around the cell to prevent windblown waste. A wire mesh fence (1 m in height) will be placed on top of the bund.

A stormwater bund will be constructed around the facility (0.5m high) to direct stormwater around the facility.

It is estimated that 25 tonnes of waste is to be disposed each year which will consist of putrescible waste generated from the mine camp and general packaging waste from the site as a whole.

The landfill is to be located within already cleared areas with the approximate coordinates in Table 2 below.

**Table 2: Approximate coordinates of putrescible landfill facility**

MGA 50		
Boundary Point Location	Easting	Northing
NW	698883.354	6577591.898
NE	698954.454	6577591.176
SE	698954.454	6577526.212
SW	698882.633	6577526.933

## Other approvals

The Licence Holder has provided the following information relating to other approvals as outlined in Table 3.

**Table 3: Relevant approvals**

Legislation	Number	Approval
Mining Act 1978	N/A	A mining proposal has been submitted to the Department of Mines, Industry Regulation and Safety (DMIRS). Confirmation was received on 8 November 2017 from DMIRS that the mining proposal includes the putrescible landfill and that DMIRS has no comment at this time.

## Residential/sensitive premises

Table 4 below lists the relevant sensitive land uses in the vicinity of the Prescribed Premises which may be receptors relevant to the proposed amendment.

**Table 4: Receptors and distance from activity boundary**

Residential and sensitive premises	Distance from Prescribed Premises
Bullfinch town site (population of approximately 40)	8 kilometres to the south from the landfill.

## Specified ecosystems

Table 5 below lists the relevant specified ecosystems in the vicinity of the Prescribed Premises which may be receptors relevant to the proposed amendment.

**Table 5: Specified ecosystems and distance from activity boundary**

Environmental receptors	Distance from Prescribed Premises
Priority 1 (Highclere) Threatened Ecological Site Buffer. The ecological community is the Highclere Hills Priority Ecological Community (PEC).	Located within the 50 km buffer (Highclere Hills are located more than 20 km from the premises). A letter dated 1 November 2017 was received from the Department of Biodiversity, Conservation and Attractions. The letter received states that the landfill area is likely to consist of degraded vegetation and the facility is unlikely to impact on the Highclere Hills PEC.

## Groundwater and water resources

Table 6 below lists the relevant groundwater and water resources in the vicinity of the Prescribed Premises which may be receptors relevant to the proposed amendment.

**Table 6: Groundwater and water resources and distance from activity boundary**

Environmental receptors	Distance from Prescribed Premises
Minor non-perennial watercourses	More than 200 metres from the proposed landfill.
Avon River System proclaimed surface water area	Site within area proclaimed under the <i>Rights in Water and Irrigation Act 1914</i> .
Goldfields proclaimed groundwater area	Site within area proclaimed under the <i>Rights in Water and Irrigation Act 1914</i> .
Geomorphic wetland – Lake Deborah West	5 kilometres to the north east.
Groundwater	<p>All bores within a 6 kilometre radius are production or exploration bores.</p> <p>TDS bore data and information supplied from the applicant indicate that the groundwater is brine (&gt;35 000 mg/L).</p> <p>The depth to groundwater provided by the applicant is 17 metres below ground level (mbgl).</p> <p>Standing Water Level data in nearby bores indicates that the groundwater is 50 mbgl.</p>

## Risk assessment

Tables 5 and 6 below describe the Risk Events associated with the amendment consistent with the *Guidance Statement: Risk Assessments*. Both tables identify whether the emissions present a material risk to public health or the environment, requiring regulatory controls.

**Table 5: Risk assessment for proposed amendments during construction**

Risk Event						Consequence rating	Likelihood rating	Risk	Reasoning
Source/Activities		Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts				
Cat 64 Putrescible landfill sites	Construction of landfill facility	<b>Dust:</b> Associated with construction activities	No residents or sensitive receptors in close proximity  Highclere Hills PEC	Air: Particulate matter (dust)	Health and amenity impacts  Impacts to vegetation	Slight	Rare	Low	The closest sensitive receptors are located at Bullfinch townsite approximately 8 kilometres to the south.  The landfill is to be located in an already cleared area and the Highclere Hills are located more than 20 km from the landfill facility.  The Delegated Officer considers the distance to be too great for impacts to occur.
	Construction of landfill facility	<b>Noise:</b> Associated with construction activities	No residents or sensitive receptors in close proximity	Air: Noise	Health and amenity impacts	Slight	Rare	Low	The closest sensitive receptors are located at Bullfinch townsite approximately 8 kilometres to the south.  The Delegated Officer considers the distance to be too great for an impact to occur.
	Refueling of equipment during construction of landfill facility	<b>Waste:</b> Associated with leaks and spills of hydrocarbons	Localised soils and groundwater. No surface water systems within 200 m of the landfill	Direct discharge and seepage through to groundwater	Contamination of groundwater	N/A	N/A	N/A	No additional hydrocarbons are to be stored on site for the construction of the landfill.

**Table 6: Risk assessment for proposed amendments during operation**

Risk Event						Consequence rating	Likelihood rating	Risk	Reasoning
Source/Activities		Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts				
Cat 64 Putrescible landfill site	Operation of landfill facility	<b>Dust:</b> Associated with the disposal waste and covering activities	No residents or sensitive receptors in close proximity.  PEC is not in close proximity	Air: Particulate matter (dust)	Health and amenity impacts  Impacts to vegetation	Slight	Rare	Low	The closest sensitive receptors are located at Bullfinch townsite approximately 8 kilometres to the south.  Although the site is located in the PEC 50km buffer, the Highclere Hills are located more than 20 km from the proposed landfill. The Delegated Officer considers the distance to be too great for an impact to occur.
	Operation of landfill facility	<b>Noise:</b> Vehicular noise during the disposal of waste	No residents or sensitive receptors in close proximity	Air: Noise	Health and amenity impacts	Slight	Rare	Low	The closest sensitive receptors are located at Bullfinch townsite approximately 8 kilometres to the south. The Delegated Officer considers the distance to be too great for an impact to occur.
	Refueling of equipment during operation of landfill facility	<b>Waste:</b> Associated with leaks and spills of hydrocarbons	Localised soils and groundwater. No surface water systems within 200 m of the landfill	Direct discharge and seepage through to groundwater	Contamination of groundwater	N/A	N/A	N/A	No additional hydrocarbons are to be stored on site for the construction of the landfill

	Operation of landfill facility	<b>Waste:</b> Windblown waste or waste in the cell	No residents of sensitive receptors in close proximity  Native fauna	Air: windblown	Feral predators attracted to the food waste may predate on native fauna	Slight	Rare	Low	Noting the Licensees proposed controls (fortnightly covering with clean fill and bunding and fencing to reduce windblown waste); the Delegated Officer considers the risk of windblown waste or attraction of feral predators to be low.
		<b>Waste:</b> Contaminated stormwater associated with contact with deposited waste	No surface water systems are located within 200 m of the landfill	Land and Waters: Contaminated stormwater	Contamination of stormwater potentially impacting on surface water systems and groundwater	Slight	Rare	Low	Noting that there are no surface water systems within 200 m of the landfill, the Delegated Officer considers the risk of stormwater to be low.
		<b>Waste:</b> Seepage of leachate due to putrescible waste decomposition and contact with infiltrating rainwater	Groundwater	Infiltration to groundwater	Underlying groundwater	Slight	Rare	Low	Noting the depth to groundwater, the limited potential use of the groundwater and the low potential for leachate generation due to the arid environment, the Delegated Officer considers the consequence the risk to be low.



## Decision

The Delegated Officer has determined the key emissions associated with construction and operation of the putrescible landfill. Based on the application supporting documentation, the Delegated Officer has determined that the construction and operation of the landfill presents a low risk of impact to the environment.

The Licence Holder has committed to controls for construction and operation and these controls have been conditioned in the licence.

Conditions 1.2.5 to 1.2.8 have been included in the licence and relate to the construction requirements provided by the Licence Holder, and compliance reporting requirements once the facility has been constructed.

Conditions 1.2.9 to 1.2.11 specify operational requirements for the landfill facility (waste types to be accepted, cover requirements, collection of windblown waste). As the amount of waste has been provided as an estimate (25 tonnes per annum), a quantity limit of 50 tonnes per annum has been included within condition 1.2.9 to allow for a marginal increase where required.

## Licence Holder's comments

The Licence Holder was provided with the draft Amendment Notice on 10 November 2017. The Licence Holder responded on 14 December 2017 providing confirmation of acceptance of the conditions.

## Amendment

1. The Prescribed premises category has been amended by the insertion of the bold text shown in underline below:

### ***Prescribed premises category***

*Schedule 1 of the Environmental Protection Regulations 1987*

<b>Category number</b>	<b>Category description</b>	<b>Category production or design capacity</b>	<b>Approved Premises production or design capacity</b>
06	<i>Mine dewatering: premises on which water is extracted and discharged into the environment to allow mining of ore.</i>	<i>50 000 tonnes or more per year</i>	<i>150,000 tonnes per annual period</i>
<b><u>64</u></b>	<b><u>Class II putrescible landfill site</u></b>	<b><u>20 tonnes or more per year</u></b>	<b><u>50 tonnes per annual period</u></b>

2. Definitions of the Licence is amended by the deletion of the text shown in strikethrough below and the insertion of the bold text shown in underline below:

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

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

~~Chief Executive Officer~~

~~At the following address:~~

~~Department Administering the Environmental Protection Act 1986~~  
~~Locked Bag 33~~  
~~CLOISTERS SQUARE WA 6850~~  
~~Telephone: (08) 9333 7510~~  
~~Facsimile: (08) 9333 7550~~  
~~Email: info@der.wa.gov.au~~

**Director General**

**Department Administering the Environmental Protection Act 1986**  
**Locked Bag 33 Cloisters Square**  
**PERTH WA 6850**  
[info-der@dwer.wa.gov.au](mailto:info-der@dwer.wa.gov.au)

3. The following definitions have been inserted into the licence.

***Inert Waste Type 1'*** has the meaning defined in Landfill Definitions;

***'Inert Waste Type 2'*** 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;

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

4. The Licence is amended by the insertion of the following Conditions 1.2.5 to 1.2.11 below:

1.2.5 The Licensee shall ensure that each item of infrastructure or equipment specified in column 1 of Table 1.2.3 is designed and constructed in accordance with the requirements specified in column 2 of Table 1.2.3.

<b>Table 1.2.3: Putrescible landfill infrastructure requirements</b>			
<b>Column 1</b>	<b>Column 2</b>		
<b>Infrastructure</b>	<b>Requirements (design and construction)</b>		
Landfill facility	Constructed within the approximate boundary coordinates below:		
	MGA 50		
	ID	Easting	Northing
	1	698883.354	6577591.898
	2	698954.454	6577591.176
	3	698954.454	6577526.212
	4	698882.633	6577526.933
Earthen stormwater bund	Constructed to divert clean stormwater around the landfill facility		
	To be constructed to a minimum height of 0.5 metres.		
Earthen bund and fence	Bund constructed to a minimum height of 1 metre to prevent windblown waste from the landfill facility		
	Wire mesh fence atop constructed atop the earthen bund to a minimum height of 0.5 metres to prevent windblown waste.		
	To be constructed around the perimeter of the putrescible landfill		
Cell dimensions (2 cells)	150 m by 5 m by 2 m deep		
	Cells to be constructed with a minimum separation 2 metres to highest seasonal water level.		

1.2.6 The Licensee must not depart from the requirements specified in Table 1.2.3 except:

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

1.2.7 The Licensee shall submit a construction compliance document to the CEO, following construction of the putrescible landfill and prior to operation.

1.2.8 The Licensee must ensure the construction compliance document:

- (a) is signed by a person authorised to represent the Licensee and contain the printed name and position of that person within the company; and
- (b) certifies that each item of infrastructure specified in Table 1.2.3 has been constructed in accordance with the conditions of the Licence with no material defects beyond those listed under condition 1.2.6.

1.2.9 The Licensee shall only bury waste generated on the Premises if:

- (a) it is of a type listed in Table 1.2.4; and
- (b) the quantity accepted is below any quantity limit listed in Table 1.2.4; and
- (c) it meets any specification listed in Table 1.2.4.

**Table 1.2.4: Waste types for burial**

<b>Waste type</b>	<b>Quantity limit</b>	<b>Specification <sup>1</sup></b>
Clean Fill	N/A	None Specified
Inert Waste Type 1	No more than 50 tonnes per annual period	None specified
Inert Waste Type 2 (plastics only)		
Putrescible waste (including green waste)		

Note 1: Additional requirements for the acceptance of controlled waste (including asbestos and tyres) are set out in the Environmental Protection (Controlled Waste) Regulations 2004.

1.2.10 The Licensee shall take all reasonable and practical measures to ensure that no wind-blown waste escapes from the Premises and that wind-blown waste is collected on at least a weekly basis and returned to the tipping area.

1.2.11 The Licensee is required to cover the putrescible landfill at a frequency of at least once every 14 days.

5. Condition 3.2.1 of the Licence is amended by the insertion of the text shown in bold underline below.

3.2.1 The Licensee shall submit to the CEO an Annual Environmental Report within 28 calendar days after the end of the annual period. The report shall contain the information listed in Table 3.2.1 in the format or form specified in that table.

**Table 3.2.1: Annual Environmental Report**

<b>Condition or table (if relevant)</b>	<b>Parameter</b>	<b>Format or form<sup>1</sup></b>
-	Summary of any failure or malfunction of any pollution control equipment and any environmental incidents that have occurred during the annual period and any action taken	None specified
1.2.4	Monthly water balance (seepage) measured in kilolitres	
<b><u>1.2.5</u></b>	<b><u>Amount of each waste type (in tonnes) disposed at the putrescible landfill facility.</u></b>	
Table 2.2.1	Ambient groundwater quality data	
3.1.3	Throughput data	
5.1.3	Compliance	Annual Audit Compliance Report (AACR)
5.1.4	Complaints summary	None specified

Note 1: Forms are in Schedule 2

## Appendix 1: Key documents

	Document title	In text ref	Availability
1	Application for amendment with supporting information (13/07/2017)	-	DWER record A1473619
2	Further information supplied (17/09/2017)	-	DWER record A1545253
4	L8971/2016/1 Radio Gold Mine Licence	L8971/2016/1	<a href="http://www.dwer.wa.gov.au">www.dwer.wa.gov.au</a>