



# Amendment Report

<b>Licence Number</b>	L9099/2017/1
<b>Licence Holder</b>	Kundana Gold Pty Limited
<b>ACN</b>	009 643 252
<b>File Number:</b>	DER2017/001616
<b>Premises</b>	Carbine/Paradigm Project Area M16/548 Mount Burges Shire of Coolgardie
<b>Date of Report</b>	<b>31/03/2020</b>
<b>Decision</b>	<b>Licence granted</b>

# 1. Definitions and interpretation

## Definitions

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

**Table 1: Definitions**

Term	Definition
AACR	Annual Audit Compliance Report
ACN	Australian Company Number
AER	Annual Environment Report
Amendment Report	refers to this document
Category/ Categories/ Cat.	categories of Prescribed Premises as set out in Schedule 1 of the EP Regulations
CEO	means Chief Executive Officer. CEO for the purposes of notification means:  Director General Department Administering the <i>Environmental Protection Act 1986</i> Locked Bag 33 Cloisters Square PERTH WA 6850 <a href="mailto:info@dwer.wa.gov.au">info@dwer.wa.gov.au</a>
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
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	Kundana Gold Pty Limited
mtpa	million tonnes per annum
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.

Term	Definition
Premises	refers to the premises to which this Amendment Report applies, as specified at the front of this Amendment Report.
Revised Licence	the amended Licence issued under Part V, Division 3 of the EP Act, with changes that correspond to the assessment outlined in this Amendment Report.
Risk Event	as described in <i>Guidance Statement: Risk Assessment</i>

## 2. Amendment Description

The following guidance statements have informed the assessment and decision outlined in this Amendment Report.

- *Guidance Statement: Regulatory Principles (July 2015)*
- *Guidance Statement: Setting Conditions (October 2015)*
- *Guidance Statement: Licence Duration (August 2016)*
- *Guidance Statement: Decision Making (June 2019)*
- *Guidance Statement: Risk Assessment (February 2017)*
- *Guidance Statement: Environmental Siting (November 2016)*

### 2.1. Purpose and scope of assessment

The Licence Holder submitted an application to amend Licence L9099/2017/1 to establish a putrescible landfill under prescribed premises category 89. The Licence Holder has stated the landfill will be used to dispose of waste generated from the Paradigm Gold Mine operation and that it will be located within the waste rock dump (WRD). It is not anticipated that more than 5,000 tonnes per year of waste will be disposed of.

The landfill will only accept inert waste types 1 and 2, putrescible waste and cleanfill. Controlled wastes will be managed and transported offsite by a licenced carrier. The landfilling of tyres will be managed in accordance with Part 6 of the EP Regs. The Licence Holder has also stated that recycling programmes will be undertaken at the site to reduce waste volumes reporting to the landfill.

As the landfill will be located within the WRD, the design of the facility does not include trenches, but more compounds with built up sides and back, using waste rock. The dimensions will be 3 – 4 m deep with 20 m sides and a 30 m tipping face. This will allow operators to drive down to the tipping face and make it easier to cover the waste from behind the tipping face.

Table 2 below outlines the proposed changes to the Licence.

**Table 2: Proposed changes**

Category	Proposed throughput capacity	Description of proposed amendment
89 – putrescible landfill	Not more than 5,000 tonnes per year	Addition of prescribed category 89 to allow landfilling on site.

### 2.2. Consolidation of Licence

As part of this amendment package DWER has consolidated the licence by incorporating changes made under the following Amendment Notices:

- Amendment Notice 1, granted 29 June 2018 – Construction of an additional dewatering pipeline (no new discharge point); and
- Amendment Notice 2, granted 28 March 2019 – to include a new dewatering discharge point known as Phantom Pit.

The obligations of the Licence Holder have not changed in consolidating the licence. DWER has not undertaken any additional risk assessment of the Premises related to previous Amendment Notices.

In consolidating the licence, the CEO has:

- revised licence condition numbers, removed any redundant conditions and realigned condition numbers for numerical consistency; and
- corrected clerical mistakes and unintentional errors.

Previously issued Amendment Notices will remain on the DWER website for future reference and will act a record of DWER's decision making.

### 3. 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
<i>Rights in Water and Irrigation Act 1914 (RIWI Act)</i>	GWL 104053(8)	Abstraction of up to 1,500,000 kL of groundwater for 'dewatering for mining purposes' and dust suppression from the Paradigm pit.
	CAW 200981(1)	Licence to Construct or Alter Well, 26/02/2018
<i>Mining Act 1978</i>	NOI 1658, Reg ID 15060	Carbine Project (1994)
	NOI 3777, Red ID 17164	Paradigm Open Cut Project (2001)
	NOI 4354, Reg ID 17741	Paradigm Underground Project (2003)
	Mining Proposal Reg. ID 73908	Approved 14/05/2018 to undertake minor clearing and establish the dewatering bores, associated pumping infrastructure and spur lines.
	Mining Proposal Reg. ID 77054	Approved 26/04/2019 to construct the Paradigm landfill.

### 4. Amendment history

Table 4 provides the amendment history for L9099/2017/1.

**Table 4: Licence amendments**

Instrument	Issued	Amendment
L9099/2017/1	20/12/2017	New Licence for dewatering Paradigm Pit discharging in Carbine pit
L9099/2017/1	29/06/2018	Amendment Notice 1 for additional discharge pipeline (no new discharge point)
L9099/2017/1	28/03/2019	Amendment Notice 2 for discharging mine dewater into the nearby Phantom pit to provide additional water storage for current and future operations
L9099/2017/1	31/03/2020	Licence amendment for the addition of category 89 – putrescible landfill and for the amalgamation of Amendment Notices 1 and 2

## 5. Location and receptors

The premises is located within the Shire of Coolgardie and is 60km northwest of the City of Kalgoorlie-Boulder and 17km southeast of Ora Banda. Table 5 below lists the relevant sensitive land uses in the vicinity of the Prescribed Premises which may be receptors relevant to the proposed amendment.

**Table 5: Receptors and distance from activity boundary**

Sensitive premises	Distance from Prescribed Premises
Department of Biodiversity Conservation and Attractions Lands and Water – Rowels Lagoon Conservation Park and Clear and Muddy Water Nature Reserve (conservation of Flora and Fauna)	8km northwest of the pits

Table 6 below lists the relevant environmental receptors in the vicinity of the Prescribed Premises which may be receptors relevant to the proposed amendment.

**Table 6: Environmental receptors and distance from activity boundary**

Environmental receptors	Distance from Prescribed Premises
Groundwater is saline to hypersaline with Total Dissolved Solids (TDS) concentrations up to 90,000 milligram per litre (mg/L).	Groundwater is approximately 40m below ground level (mbgl)

## 6. Risk assessment

Table 7 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 7: Risk assessment for proposed amendments during construction and operation**

Risk Event				Consequence rating <sup>1</sup>	Likelihood rating <sup>1</sup>	Risk <sup>1</sup>	Reasoning	Regulatory controls (refer to conditions of the granted instrument)
Source/Activities	Potential emissions	Potential receptors, pathway and impact	Applicant controls					
<p>Landfilling – construction includes earthmoving activities and vehicle movement on unsealed roads.</p> <p>Operation of trenches involves earthmoving activities when waste is covered and movement of vehicles</p>	<p>Dust</p> <p>Noise</p>	<p>Air/wind No residence or other sensitive receptors in close proximity. The closest residence is 17km away.</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>The closest sensitive receptors are located 17km from the putrescible landfill. Minimal dust and noise emissions are expected to be generated during construction and operation of the landfill. The Delegated Officer considers that a pathway for dust and noise emissions does not exist.</p> <p>The provision of the <i>Environmental Protection (Noise) Regulations 1997</i> are applicable</p>	<p>N/A</p>
<p>Disposal of putrescible waste into a trench</p>	<p>Odour</p>	<p>Air/wind No residence or other sensitive receptors in close proximity. The closest residence is 17km away.</p>	<p>The landfill will be covered at least monthly with a sufficient amount of inert material.</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>The closest sensitive receptors are located 17km from the putrescible landfill. The Delegated Officer considers that a pathway for odour emissions does not exist</p>	<p>N/A</p>
<p>Disposal of putrescible and inert wastes into a trench</p>	<p>Seepage to groundwater</p>	<p>Underlying groundwater is greater than 40 mbgl</p>	<p>Landfill to be located within the waste rock dump</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>The depth to groundwater beneath the landfill is greater than 40 mbgl and therefore it is unlikely any leachate generated would reach the groundwater.</p>	<p>N/A</p>
	<p>Wind-blown waste</p>	<p>Air/wind Wind may carry uncovered waste and impact on any surrounding flora and fauna.</p>	<p>The landfill will be covered at least monthly with a sufficient amount of inert material.</p>	<p>Minor</p>	<p>Unlikely</p>	<p>Low</p>	<p>Due to the small volume of waste to be disposed of, the location of the landfill within the waste rock dump and the covering of waste with inert material, the risk of wind-blown waste impacting on surrounding flora and fauna is low.</p>	<p>Monthly covering of waste with sufficient cover will be added as a condition of the licence.</p>

Risk Event				Consequence rating <sup>1</sup>	Likelihood rating <sup>1</sup>	Risk <sup>1</sup>	Reasoning	Regulatory controls (refer to conditions of the granted instrument)
Source/Activities	Potential emissions	Potential receptors, pathway and impact	Applicant controls					
	Contaminated stormwater	Overland flow into surrounding environment which may impact on any surrounding flora and fauna or contamination of nearby surface water.  The closest surface water body to the landfill is Rowels Lagoon, approximately 8.5 km away.	Windrows and bunds will be used to divert stormwater away from the landfill compound.	Minor	Unlikely	Low	Due to the controls in place by the Licence Holder, the risk of contaminated stormwater impacting on any surrounding flora/fauna and surface water is considered low.	The Licence is required through licence conditions to construct and operate the landfill as per original design.

*Note 1: Consequence ratings, likelihood ratings and risk descriptions are detailed in the Department's Guidance Statement: Risk Assessments (February 2017)*



## 7. Conclusion

Based on the assessment in this Amendment Report, the Delegated Officer has determined that a licence amendment will be granted, subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

### 7.1. Summary of amendments

Table 10 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 10: Licence amendments**

Condition No.	Proposed amendments
1	Inclusion of landfill and requirements into the Authorised Emissions table (Table 2)
2	Updating of the Infrastructure and equipment controls table (Table 3) to incorporate changes from Amendment Notices 1 and 2. Addition of the landfill to Table 3 with associated operational requirements. This includes types of waste the landfill can accept and cover requirements.
6	Updated to align with Amendment Notice 2
7	Updated to align with Amendment Notice 2
9 - 11	Conditions 9 – 11 have been added to the licence, requiring the Licence Holder to construct in accordance with design requirements and to provide a Compliance Report to the CEO.
Site plan map	Updated site plan map to show location of landfill

**Alana Kidd**  
**Manger – Resource Industries**  
REGULATORY SERVICES

*An officer delegated by the CEO under section 20 of the EP Act*

## Appendix 1: Key documents

	Document title	Availability
1	Licence L9099/2017/1 – Carbine/Paradigm Project Area	accessed at <a href="http://www.dwer.wa.gov.au">www.dwer.wa.gov.au</a>
2	Application Form date 17 January 2020 and supporting document <i>RE: Kundana Gold Pty Ltd, Licence L9099/2017/1 – Licence Amendment Application for Landfill Site</i>	DWER records (DWERDT245425)
3	DER, July 2015. <i>Guidance Statement: Regulatory principles</i> . Department of Environment Regulation, Perth.	accessed at <a href="http://www.dwer.wa.gov.au">www.dwer.wa.gov.au</a>
4	DER, October 2015. <i>Guidance Statement: Setting conditions</i> . Department of Environment Regulation, Perth.	
5	DER, November 2017. <i>Guidance Statement: Risk Assessments</i> . Department of Environment Regulation, Perth.	
6	DER, November 2017. <i>Guidance Statement: Decision Making</i> . Department of Environment Regulation, Perth.	

## Appendix 2: Summary of Licence Holder comments

The Licence Holder was provided with the draft Amendment Report on 26 March 2020 for review and comment. The Licence Holder responded on 27 March 2020. The following comments were received on the draft Licence and Amendment Report.

Condition	Summary of Licence Holder comment	DWER response
Condition 1, Table 2	Column 1 incorrectly refers to 'Carbine landfill'. This should be 'Paradigm landfill';	The wording has been corrected to say 'Paradigm landfill'
Schedule 1, Dewatering Infrastructure Map	The map does not show the Carbine-Phantom pipeline from Amendment Notice 2. The Licence Holder has provided the correct map.	The map has been replaced with the correct version.
Amendment Report – Table 3	Response to DWER comment regarding Mining Proposal.	Updated information on the granted Mining Proposal has been included in Table 3