

Amendment Notice # 2

Licence Number	L8912/2015/1
Licence Holder ACN	Halls Creek Mining Pty Ltd 168 093 347
File Number:	DER2015/001934
Premises	Lamboo Gold Project M80/343, M80/355, M80/359, M80/362, M80/503, M80/471, L80/70 and L80/71 MUELLER RANGES WA 6770

Date of Amendment

31 January 2018

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: 31 January 2018

Alana Kidd

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
AACR	Annual Audit Compliance Report
ACN	Australian Company Number
AER	Annual Environment Report
Amendment Notice	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</i> <i>1986</i> Locked Bag 33 Cloisters Square PERTH WA 6850 <u>info@dwer.wa.gov.au</u>
CS Act	Contaminated Sites Act 2003 (WA)
Delegated Officer	an officer under section 20 of the EP Act
DWER	Department of Water and Environmental Regulation
EPA	Environmental Protection Authority
EP Act	Environmental Protection Act 1986 (WA)
EP Regulations	Environmental Protection Regulations 1987 (WA)
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999 (Cth)
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	Halls Creek Mining Pty Ltd
m³	cubic metres
Minister	the Minister responsible for the EP Act and associated regulations

MS	Ministerial Statement
tpa	tonnes per annum
NEPM	National Environmental Protection Measure
Noise Regulations	Environmental Protection (Noise) Regulations 1997 (WA)
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 Guidance Statement: Risk Assessment
UDR	Environmental Protection (Unauthorised Discharges) Regulations 2004 (WA)

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 to the throughput for Category 5 and the relocation of a Category 64 landfill. No other changes have been requested by the Licence Holder.

The following guidance statements have informed the decision made on this amendment;

- Guidance Statement: Regulatory Principles (July 2015)
- Guidance Statement: Setting Conditions (October 2015)
- Guidance Statement: Decision Making (February 2017)
- Guidance Statement: Risk Assessment (February 2017)
- Guidance Statement: Environmental Siting (November 2016)

Amendment description

On 3 October 2017, Halls Creek Mining Pty Ltd (Licence Holder) submitted an application to DWER for amendment to the Lamboo Gold Project (Lamboo) operational licence L8912/2015/1. The Licence amendment application relates to the following:

- An increase in Category 5 plant throughput from 200,000 tpa to 250,000 tpa; and
- Relocation (and expansion to the east) of the Lamboo Category 64 landfill 25 metres (m) southeast of the site originally approved in 2015.

Category 5

Lamboo's processing plant is a carbon-in-pulp (CIP) plant which currently has an approved throughput of 200,000tpa. The licence holder wishes to increase the Category 5 throughput to 250,000tpa and has stipulated that this will be achieved without any changes to the plant layout or components. The increased throughput will be achieved as a result of:

- Greater availability of ore (from pit and underground);
- Improvement in process efficiencies; and
- Improved working knowledge of the plant since start-up.

No changes to the tailing slurry solids content or the tailings solids deposited density is expected to occur as a result of this licence amendment. Tailings volume will increase to 250,000tpa to reflect the additional throughput of the plant. The Licence Holder has advised that there is sufficient capacity for the increase in tailings volume available in both TSF1 and TSF2.

Category 64

The current location of Lamboo's landfill as set out in the Licence is shown in Figure 1. The Licence Holder has constructed and is operating additional landfill trenches (of which they have not sought approval) adjacent to the approved landfill area. The Licence Holder has stipulated that this decision was based on a review of the site's mining proposal rather that the Licence and as a result an amendment to the Licence was not sought. The Licence Holder has since updated site procedures to ensure that any work undertaken in future is in accordance with the requirements of the Licence.

The Licence Holder wishes to expand the approved landfill area to include the entire fenced area surrounding the new trenches (0.9ha in total). This will allow the Licence Holder to construct future trenches within this area. The location of the new trenches and surrounding fenced area is shown in Figure 2.

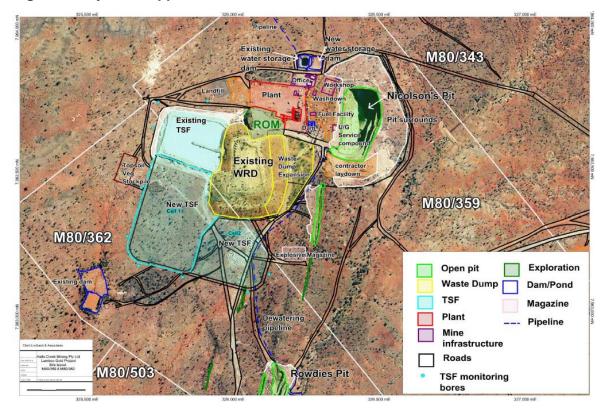
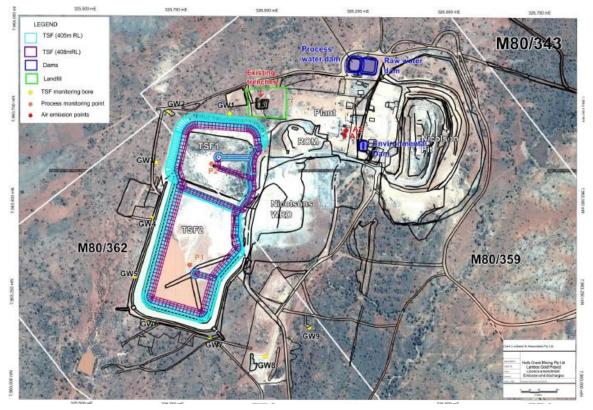


Figure 1: Layout of approved landfill.





There is no change to the volume of waste to be disposed of at the landfill (100 tpa).

Operation of the new trenches will be in accordance with landfill conditions already in place on the licence and will continue to involve:

- Disposal of waste in separate trenches one for industrial (inert) and one for putrescible waste;
- Covering of trenches at least once a week;
- Location of trenches recorded prior to closure of landfill; and
- Maintenance of a fence around the landfill facility.

Table 2 below outlines the proposed changes to the Licence.

Table 2: Proposed throughput capacity changes

Category	Current throughput capacity	Proposed throughput capacity	Description of proposed amendment
5	200,000 tonnes per annual period	250,000 tonnes per annual period	Increasing the throughput to 250,000tpa is within the design capacity of the plant with no modifications required. All additional tailings generated will be discharged to the existing tailings storage facility.
64	100tpa	100tpa	No change to landfill throughput. Landfill will be relocated 25m southeast of the originally approved site and expanded to the east.

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	-	A Mining Proposal addendum to Department of Mines, Industry Regulation and Safety (DMIRS) for the expansion of the landfill to the east has not yet been submitted.

Amendment history

Table 4 provides the amendment history for L8912/2015/1

Table 4: Licence amendments

Instrument	Issued	Amendment
L8912/2015/1	05/11/2015	First issue of operating Licence
L8912/2015/1	29/04/2016	Notice of amendment of licence expiry date, section59b (9) and section 59(1)(k) <i>Environmental Protection Act 1986</i> ; extension of licence expiry date to 8 November 2035. Administrative amendment only
L8912/2015/1	11/7/2017	Notice of amendment to allow for embankment lifts to TSF1 and TSF2
L8912/2015/1	31/01/2018	Issue of this amendment notice to increase Category 5 plant throughput to 250,000 tpa and relocation of Lamboo's landfill and expansion 25m southeast of the originally approved landfill area.

Location and receptors

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.

Residential and sensitive premises	Distance from Prescribed Premises
Lamboo Pastoral Station	~5.5km southwest from plant
Pastoral bores	Within 5km radius of the landfill there are 5 pastoral bores.

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 re	centors and distance	from activity	v boundary
	ceptors and distance	nom activit	y boundary

Environmental receptors	Distance from Prescribed Premises
Laura River tributaries	A number of ephemeral tributaries are located within the prescribed premises which only flow after heavy rainfall. The closest tributary is approximately 250m from the landfill site. Surface water drains to the north away from the landfill.
Groundwater	Data from the GIS Dataset – WIN Groundwater sites indicate depth to groundwater in the area is approximately 40- 55 meters below ground level (mbgl)I. Lamboo's Annual Environmental Report for the 2016/2017 annual period includes monitoring data for standing water levels in bores surrounding the TSF. This data indicates that no groundwater was intercepted in all monitoring bores for this period. Bores are slotted between 18-24mbgl.
	Groundwater supplies have been developed for homestead water use and stock watering on the Lamboo pastoral lease. The produced water is of domestic and stock quality (generally less than 5,000 mg/L total dissolved solids (TDS).
	Groundwater occurs in limited quantities in fractures in the predominantly impermeable bedrock, and in some weathered material. Overall the rocks have low permeability; and groundwater would flow at low rates south-westerly and westerly.
Conservation significant fauna	A Level 1 fauna assessment was undertaken by Keith Lindbeck and Associates in 2011. The premises and surrounding area does not contain habitat of high ecological significance from a faunal Perspective, or contain faunal assemblages that are ecologically significant. The vegetation of this survey area does not represent habitats unique to any Threatened Ecological Communities.
Threatened or priority flora	No Declared Rare Flora or Priority flora has been reported within the premises boundary or nearby.

Risk assessment

Tables 7 and 8 below describe the Risk Events associated with the amendment consistent with the *Guidance Statement: Risk Assessments* (DER, 2017a). Both tables identify whether the emissions present a material risk to public health or the environment, requiring regulatory controls.

	Risk Event								
Source/	Activities	Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts	Consequence rating	Likelihood rating	ood Risk	Reasoning
Category 64 Class II or III putrescible landfill site	Construction of future landfill trenches	Dust associated with construction activities	Lamboo Pastoral Station homestead is ~ 5.5km southwest of the premises	Air: Particulate matter (dust)	Health and amenity impacts	Slight	Unlikely	Low	Water trucks are used on site to reduce dust lift off. Given the separation distance to the neatest sensitive receptor (Lamboo Pastoral Station 5.5km), the risk of impact by dust is considered to be Iow. No additional regulatory controls are required to mitigate this risk.
		Noise associated with construction activities	Lamboo Pastoral Station homestead is ~ 5.5km southwest of the premises	Air: Noise generated through the operation of equipment	Health and amenity impacts	Slight	Unlikely	Low	Given the separation distance to the nearest sensitive receptor (Lamboo Pastoral Station 5.5km), the risk of impact by noise is considered to be low . No additional regulatory controls are required to mitigate this risk.
		Waste: associated with leaks and spills of hydrocarbons	Soils and surface water systems	Land and waters: Direct discharge/ runoff during rainfall events	Localised contamination of soils and/or contamination of surface water systems	Slight	Unlikely	Low	No hydrocarbons storage will be required for the construction of future landfill trenches. The only potential hydrocarbon leaks will be from machinery tanks or refueling of machinery at the landfill site. Any spills are likely to be low in volume and localized to the spill site. Spill equipment will be maintained at site. In the event of a spill the contaminated soil will be collected and disposed of at the designated (clay lined and bunded) bioremediation facility within the waste dump on site. The existing hydrocarbon management measures are satisfactory and the risk to the environment is Iow. No additional regulatory controls are required to mitigate this risk.

Table 7: Risk assessment for proposed amendments during construction

	Risk Event								
Source/Activities		Potential Potential receptors		Potential	Potential adverse impacts	Consequen ce rating	Likelihood rating	Risk	Reasoning
Category 5 Processing or beneficiation of metallic or non-metallic ore	Increased throughput at the processing plant and increased discharge of tailings	Dust: associated with ore handling	Lamboo Pastoral Station homestead is ~ 5.5km southwest of the premises	Air: Particulate matter (dust)	Health and amenity impacts	Slight	Unlikely	Low	The Licence Holder uses water carts, sprinklers and spray systems to manage dust. Dust suppression sprays are installed on the crushing circuit, at four points on the crusher and crushed ore conveyor system in the processing plant. The distance to the nearest sensitive receptor is 5.5km (Lamboo Pastoral Station). The existing dust management measures are satisfactory and the risk to the environment is Iow. No additional regulatory controls are required to mitigate this risk
		Noise: associated with ore handling	Lamboo Pastoral Station homestead is ~ 5.5km southwest of the premises	Air: Noise generated through the operation of equipment	Health and amenity impacts	slight	Unlikely	Low	Operating noise will be attenuated by distance (5.5km to nearest sensitive premises). Any noise complaints are recorded and investigated. No noise complaints were received during the 2016-2017 reporting period (HCM AER 2016/2017). Noting the above points the risk of impact of noise is considered Iow . No additional regulatory controls are required to mitigate this risk.
		Waste: Increased tailings disposal to the tailings storage facility due to an increase in processing of ore.	Groundwater with beneficial use for stock watering (less than 5000 mg/L TDS in area). Depth to Groundwater is 40-55mbgl	Land and waters: Seepage of leachate	Contamination of groundwater potentially used for livestock drinking purposes. Adverse	Moderate	Unlikely	Medium	The increase in throughput at the processing plant will result in an increase in tailings being produced and subsequently discharged into the TSFs. An increase from 200 000 tpa to 250 0000 tpa of tailings is expected. It is expected that the tailings slurry solids content and tailings solids deposition density will not change as a result of the increase in

Table 8: Risk assessment for proposed amendments during operation

Waste: Soils and Land and Localised Moderate Rare Med	 monitoring results indicate that all bores have been dry (HCM, AER 2016/2017). Bores are slotted at 18-24mbgl. Depth to groundwater in area is approximately 40-55mbgl. It is unlikely that groundwater quality will be impacted by seepage from the TSF. During commissioning of the new (recently reinstated) TSF1 cell onsite, in September 2017, a permeation of water occurred through the west -eastern wall of the TSF1 into the adjacent waste rock dump. As a result of this event the eastern wall of TSF cell 1 will be / has been cut away to floor level and a 900mm key trench cut in with a compacted clay wall rebuilt back up to 402m RL level to ensure seepage no longer occurs. The investigation has since been closed by DWER. It is considered that the existing seepage management measures are satisfactory and the risk to the environment has been determined as medium. No additional regulatory controls are therefore required to mitigate this risk.
Increased surface water waters: contamination	dium The Licence Holder has advised that there is adequate storage capacity within the TSFs

		tailings disposal to the tailings storage facility due to an increase in processing of ore	systems. Distance to nearest Laura River tributary is approximately 90 m to the west southwest of TSF2.	Overtopping of cells	of soils and/or contamination of surface water systems				for the increase in tailings from 200 000 tpa to 250 000tpa (HCM Response - further information, Nov 2017). To prevent overtopping of the TSF cells the Licence Holder maintains a total design freeboard of 0.5m and during operation removes excess water (via decant) to ensure that any ponding of water is maintained in the vicinity of the decant towers and not towards the TSFs wall structures (HCM response for further information, Nov 2017). The existing overtopping management measures are satisfactory and the likelihood of overtopping is determined to be rare, and the risk to the environment is therefore considered as medium. No additional regulatory controls are required to mitigate this risk.
Category 64 Class II or III putrescible landfill site	Operation of Lamboo's putrescible landfill trenches	Dust: Associated with stockpiled cover material, vehicle movement and covering activities	Lamboo Pastoral Station homestead is ~ 5.5km southwest of the premises	Air: Particulate matter (dust)	Health and amenity impacts	Slight	Unlikely	Low	Water trucks are used on site to reduce dust lift off. Given the separation distance to the nearest sensitive receptor (Lamboo Pastoral Station 5.5km), the risk of impact by dust is considered to be Iow. No additional regulatory controls are required to mitigate this risk.
		Noise: Associated with vehicular movement and covering activities	Lamboo Pastoral Station homestead is ~ 5.5km southwest of the premises	Air: Noise generated through the operation of equipment	Health and amenity impacts	Slight	Unlikely	Low	Given the separation distance to the neatest sensitive receptor (Lamboo Pastoral Station 5.5 km) the risk of impact by noise is considered to be low . No additional regulatory controls are required to mitigate this risk.
		Waste: Windblown waste	Lamboo Pastoral Station homestead is ~ 5.5km southwest of the premises	Air: Windblown waste and deposition outside of landfill cells	Aesthetic impacts	Slight	Unlikely	Low	Given that the landfill area is fenced, no priority fauna have been reported near the landfill area and that a condition already exists on the licence for the management of windblown waste (condition 1.2.8) the risk of impact by windblown waste is considered to be low. No additional regulatory controls are

							required to mitigate this risk.
Waste: Contaminated stormwater associated with contact with deposited waste	Surface water systems The closest Laura River tributary is approximately 250m from the landfill site	Land and waters: Contaminated stormwater	Contamination of stormwater potentially impacting on surface water systems	Slight	Rare	Low	 Any contaminated stormwater that has been in contact with deposited waste is expected to remain within the fenced landfill area. The Licence Holder will place material excavated to construct the trench around the perimeter of the trench (excluding entry), forming a bund, and will prevent surface water flowing into the trenches. The closest Laura River tributary is approximately 250m from the landfill site (only flows following heavy rainfall) and contaminated stormwater is not expected to have an impact at this distance. Any potential leachate from the landfill is not expected to reach groundwater which is approximately 40-55 mbgl. Noting the points outlined above the risk of impact of contaminated stormwater is considered to be low. No additional regulatory controls are required to mitigate this risk.
Waste: Disposal of waste to land	Groundwater with beneficial use for stock watering (less than 5000 mg/L TDS in area). Depth to Groundwater is 40-55mbg	Land and waters: Seepage of leachate	Contamination of groundwater potentially used for livestock drinking purposes. Adverse impacts to the health and survival of vegetation dependent upon groundwater.	Slight	Unlikely	Low	There is a low potential for leachate generation due to the low volume of waste being disposed of (100 tpa) and the hot arid environment the premises is located in. Depth to groundwater in the area is 40- 55mgl. Given this distance it is unlikely that leachate from the landfill would reach groundwater. Noting the points outlined above the risk of impact of leachate seepage is considered to be Iow. No additional regulatory controls are required to mitigate this risk.

Decision

Increase in plant throughput

Based on the application supporting documentation, the Delegated Officer has determined that the increased throughput at the processing plant presents a medium risk to the environment as a result of the increased discharge of tailings to the TSF, and a low risk to the environment for noise and dust emissions. However, these risks may be acceptable subject to the additional regulatory controls outlined below.

The approved premises production or design capacity for Category 5 has been increased to 250 0000 tpa. This is an increase of 50 000 tpa to account for the increase in throughput at the processing plant and increased discharge of tailings into the TSF.

Condition 2.3.1 of the Licence has been amended to increase the process limit for Category 5 *processing or beneficiation of metallic or non-metallic ore* at the Premises from 200 000 tpa up to 250 000 tpa.

Conditions currently on the Licence capture operational emissions relating to processing of tailings at the TSF and the monitoring and reporting of ambient groundwater quality at the TSFs. The Delegated Officer considers no new conditions or an amendment to these conditions is required.

Expansion of approved landfill area

The Delegated Officer has determined the key emissions associated with construction and operation of the relocated and expanded landfill area. 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 constructing future landfill trenches within the new designated landfill area only. This requirement has been formalised in Licence condition 1.2.2.

Conditions currently on the Licence capture operational emissions relating to the operation of the site landfill. The Delegated Officer considers no new conditions or an amendment to these conditions is required.

Other Amendments

The Delegated Officer has also updated Figure 2 in Schedule 1 with a new map outlining the location of the new approved landfill area.

Licence Holder's comments

The Licence Holder was provided with the draft Amendment Notice on 15 January 2018. The 21 day consultation period was waived by the Licence Holder and no comments were made on the draft amendment notice.

Amendment

- 1. The licence is amended by the addition of Condition 1.2.2 as demonstrated by the insertion of underlined text below:
 - 1.2.2 <u>The Licence Holder shall ensure that each item of infrastructure or equipment</u> <u>specified in column 1 of Table 1.2.2 is constructed in accordance with the</u> <u>requirements specified in column 2 of Table 1.2.2.</u>

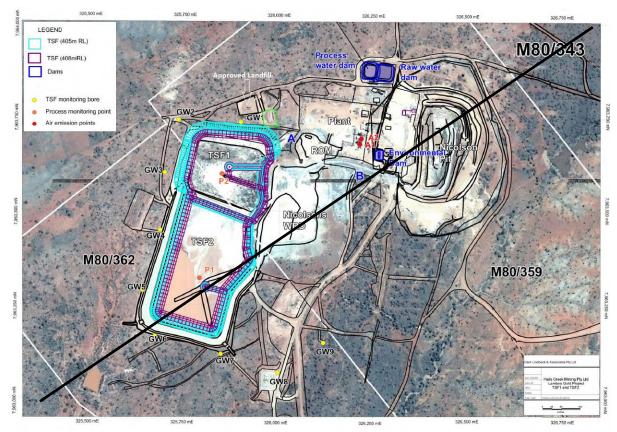
<u>Column 1</u>	Column 2				
Infrastructure	Requirements_				
Landfill trenches	Constructed within the approximate boundaries below:				
		MGA Zone	52 (GDA 94)		
		ID	Easting	<u>Northing</u>	
		<u>1</u>	325,939.32	<u>7,963,801.71</u>	
		2	326,024.42	<u>7,963,808.61</u>	
		<u>3</u>	326,050.62	<u>7,963,806.03</u>	
		<u>4</u>	326,048.63	<u>7,963,723.77</u>	
		<u>5</u>	325,947.91	7,963,729.50	

Table 1.2.2: Lamboo Landfill Infrastructure Requirements

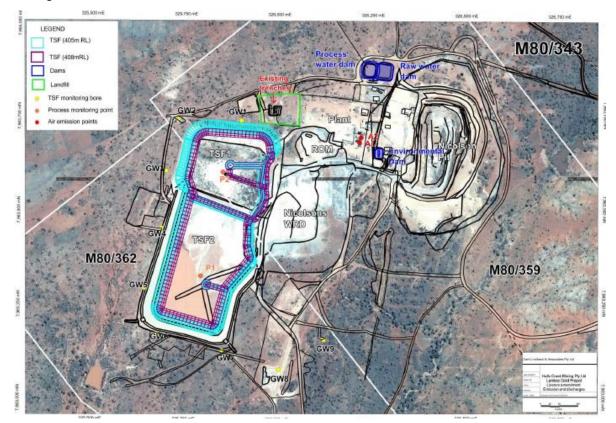
2. Condition 2.3.1 and Table 2.3.1 is amended by the deletion of the text shown in strikethrough and the insertion of underlined bold text below:

Table 2.3.1: Production Limits							
Category number	Category description	Category production or design capacity	Approved Premises production or design capacity				
5	Processing or beneficiation of metallic or non-metallic ore	50 000 tonnes or more per year	200 000- 250 000 tonnes per annual period				
64	Class II putrescible landfill site	20 tonnes or more per year	100 tonnes or more per year				

3. This Licence is amended by the deletion of the following Schedule 1: Maps Figure 2 as shown in strikethrough.



4. This Licence has been amended by the insertion of the following Schedule1: Maps Figure 2



Licence: L8912/2015/1

IR-T08 Amendment Notice (Major) template v2.0 (July 2017)

Appendix 1: Key documents

	Document title	In text ref	Availability
1	Licence L8912/2015/1 – Lamboo Gold	L8912/2015/1	Accessed at
	Project		www.dwer.wa.gov.au
2	Application Form – L8912/2015/1 0		DWER records (A1535539)
	Lamboo Gold Project amendment 3,		
	October 2017, Attachment 3A		
3	Halls Creek Mining Pty Ltd Lamboo	HCM	DWER records (A1565296)
	Gold Project Operating Licence	Response -	
	(L8912/2015/1) Amendment -	further	
	Response to request for further	information,	
	information, 21 November 2017	Nov 2017	
4	Halls Creek Mining Pty Ltd Lamboo	HCM AER	DWER records (A1536929
	Gold Project Annual Environmental	2016/2017	
	Report, Operating Licence (L8912/2015/1), 1 September 2016 –		
	31 August 2017, Prepared by: Clark		
	Lindbeck and Associates, September		
	2017		
8	DER, November 2016. Guidance	DER 2016a	accessed at <u>www.epa.wa.gov.au/</u>
	Statement: Risk Assessments.		
	Department of Environment		
	Regulation, Perth.		