



# Amendment Notice 1

<b>Licensee</b>	Mount Gibson Mining Limited
<b>ACN</b>	074 575 885
<b>Licence Number</b>	L8495/2010/2
<b>File Number:</b>	2010/009798
<b>Premises</b>	Extension Hill Mine Site Mining Tenements G59/30, G59/33, G59/34, L59/68, L59/69, L59/87, M59/338, M59/339, M59/526, M59/454 and M59/609. PAYNES FIND WA 6612
<b>Date of amendment</b>	9 June 2017

## Amendment

The Chief Executive Officer (CEO) of the Department of Environment Regulation (DER) has amended the above licence in accordance with section 59 of the *Environmental Protection Act 1986* 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 and follows.

Date signed: 9 June 2017

**Alana Kidd**

**MANAGER LICENSING – RESOURCE INDUSTRIES**

**LICENSING AND APPROVALS**

an officer delegated under section 20 of the *Environmental Protection Act 1986* (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 for a change of premises boundary to include an additional category 64 landfill. No changes to the aspects of the original licence relating to Categories 5, 64 or 85 have been requested by the Licensee.

Through this notice, DER has also updated the Licence to align with administrative changes implemented within the Department.

The following DER 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

Mount Gibson Mining Limited applied to DER on 18 January 2017 for an amendment to Licence L8495/2010 to extend the Extension Hill Mine Site premises boundary in order to include an additional category 64 Class II landfill. The proposed boundary will include mining tenements M59/454 and M59/609.

The new landfill will be located within the waste rock landform at the proposed Iron Hill mine site, and will be managed through the mine site's Environmental Management System applying the same procedures as the existing landfill at Extension Hill. The annual quantity of disposed waste is not expected to change. The Iron Hill project is effectively an extension of the Extension Hill Mine life, with similar personnel manning levels and operations.

The location of infrastructure associated with current prescribed activities at Extension Hill and the location of the proposed landfill on tenements M59/454 and M59/609 at Iron Hill are shown in Figure 1 below.

## Part IV of the *Environmental Protection Act 1986* (EP Act)

### Ministerial Statement 753

Ministerial Statement (MS) 753 was issued with conditions on 24 October 2007 for the Mt Gibson Iron Ore Mine and Infrastructure Project Shire of Yalgoo. The proposal was to mine and process iron ore from Extension Hill and Extension Hill North within the Mt Gibson Ranges, construct a pipeline to transport the magnetite slurry to Geraldton Port, and construct infrastructure at the port to strip the ore from the slurry for export.

Condition 8-1 required the proponent to submit a Significant Flora Species and Communities Management Plan (the Plan) which included a detailed risk management plan, for, amongst other impacts, the impact of dust deposition and altered hydrology on the populations of *Darwinia masonii*, *Lepidosperma* sp. outside the mining footprint. The Plan also describes measures to manage impacts of the mining operation on significant vegetation within the mine site and downstream, and to include monitoring and mitigation measures.

The Plan was approved by the EPA on 21 August 2008. The approved Plan includes the following commitments of relevance to this licence assessment:

- Monitoring of deposited dust on nearby Declared Rare Flora (DRF) species (*L. gibsonii* and *D. masonii*) against an agreed (with EPA) standard of <4 g/m<sup>2</sup>/month.
- Monitoring of health of nearby DRF species against DEC/EPA approved criteria.
- A 'Dust Management Procedure'. The procedure covers both the construction and operational phases of the project and addresses:
  - Identification of airborne dust:
    - Blast hole Drilling;
    - Material Loading;
    - Haulage;
    - Crushing;
    - Screening;
    - Stockpiling; and
    - Sample Prep.
  - Fixed dust suppression systems:
    - Crusher plant;
    - Ore stockpiles; and
    - Laboratory.
  - Dust monitoring:
    - Depositional monitoring with trigger levels of 4g/m<sup>2</sup>/month in receptor areas tied in with management responses ('Dust Response Programme');
    - Vegetation health; and
    - Weather monitoring for blasting programme.
  - Methods of minimising dust generation:
    - Topsoil management;
    - Operation of water trucks;
    - Site speed limit;
    - Grading and watering of unsealed roads;
    - Use of dust suppressants;
    - Minimisation of material drop height; and
    - Ore stockpile sprays/sprinklers.
- A 'Surface Water Management Procedure' addresses:
  - Surface water controls around infrastructure;
  - Identification of natural drainage prior to mining;
  - Physical drainage control to prevent erosion and disruption of flows;
  - Containment of poor quality runoff water from mining activities;
  - Consideration of downstream water quality/quantity; and
  - Erosion monitoring as required.
- A 'Waste Management Procedure' addresses:
  - Physical barrier around landfill;
  - Management of landfill to comply with *Environmental Protection (Rural Landfill) Regulations 2002*;
  - Caged/covered waste transport to landfill; and
  - Regular maintenance of landfill area.

- Further management procedures which includes aspects such as:
  - o Dust controls for site clearing;
  - o Monitoring dust impacts on DRF; and
  - o Vehicle washdown facilities.

Condition 8-2 requires the Significant Flora Species and Communities Management Plan to be implemented.

MS 753 approved clearing within the Mount Gibson Iron Ore Mine and Infrastructure Project Shire of Yalgoo.

#### **Ministerial Statement 889**

MS 889 was issued on 28 February 2012 to amend MS 753 conditions relating to a performance bond and fauna management along the services corridor.

#### **Ministerial Statement 1045**

On 8 December 2016, MS 1045 was issued and approved Mount Gibson Mining Ltd to construct two mine pits, a waste rock landform and support infrastructure at the Iron Hill and Iron Hill South Deposits. Ore mined at the Iron Hill deposits will be processed at the Extension Hill Mine Site premises.

Condition 6-1 requires the proponent to submit a Flora and Vegetation Outcome-based Condition Environmental Management Plan, with monitoring, trigger criteria and threshold contingency actions. Condition 6-4 requires implementation of this Plan.

MS 1045 approved clearing within the Mt Gibson Range Mine Operations Iron Hill Deposits, including clearing 45 ha within the waste rock landform envelope.

### **Other approvals**

The Licensee has provided the following information relating to other approvals as outlined in Table 1.

**Table 1: Relevant approvals**

<b>Legislation</b>	<b>Number</b>	<b>Approval</b>
<i>Mining Act 1978</i>	25961	Extension Hill Hematite Project Mining Proposal (approved 31/3/10)
	36990	Extension Hill Hematite Project Revised Addendum to Mining Proposal (approved 22/2/13)
	48322	Extension Hill Hematite Project Addendum to Mining Proposal (approved 2/7/14)
	61218	Extension Hill Hematite Project Addendum to Mining Proposal (approved 2/12/16)
	58126	Iron Hill Deposits Hematite Project Mining Proposal (approved 21/12/16)
<i>Rights in Water Irrigation Act 1914</i>	GWL166067	DoW annual groundwater allocation for the Extension Hill and Iron Hill mine sites for use in dust suppression and other mining purposes including for potable water with treatment.

## Location, environmental siting and potential receptors

Table 2 below lists the relevant sensitive land uses in the vicinity of the prescribed premises which may be receptors relevant to the proposed amendment.

**Table 2: Receptors and distance from prescribed premises**

Residential and sensitive premises	Distance from Prescribed Premises
White Wells Homestead	Approximately 15 km west of the premises
Ninghan Station	Approximately 20 km north of the premises

Table 3 below lists the relevant environmental receptors in the vicinity of the prescribed premises which may be receptors relevant to the proposed amendment.

**Table 3: Environmental receptors and distance from prescribed premises**

Environmental receptors	Relevant legislation/Authority	Distance from Prescribed Premises
Declared Rare Flora (DRF) - <i>Darwinia masonii</i> , <i>Lepidosperma gibsonii</i> and <i>Eucalyptus synandra</i>	<i>Wildlife Conservation Act 1950</i> (WA)	Flora of the Mt Gibson Ranges. Coincides with the premises and local vicinity.
Vulnerable - <i>Darwinia masonii</i> and <i>Eucalyptus synandra</i>	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (Commonwealth)	Flora of the Mt Gibson Ranges. Coincides with the premises and local vicinity.
Priority 1 Priority Ecological Community (PEC) - Mount Gibson Range vegetation complexes (banded ironstone formation)	<i>Wildlife Conservation Act 1950</i> (WA)	Coincides at Extension Hill and Iron Hill and local vicinity.
Specially Protected Fauna - six fauna species	<i>Wildlife Conservation Act 1950</i> (WA)	In the vicinity.
East Murchison Groundwater Area	<i>Rights in Water Irrigation Act 1914</i> (WA) (RIWI Act)	Premises located on the proclaimed Groundwater Area.
Ephemeral lakes	Department of Water (WA)	Approximately 4 km south of the premises.

## Groundwater

Groundwater at the Mt Gibson Ranges varies from fresh to brackish. The current beneficial use of groundwater is for mineral exploration and mining operations.

Groundwater in the vicinity of Extension Hill Mine occurs in localised fractured rock aquifers and varies between 50 – 100 m below ground level. Water is variable in quality, with nearby TDS levels in the order of 2,500 – 15,000 ppm.

Groundwater in the vicinity of the Extension Hill WWTP and landfill is located on alluvial flats, is typically 15 m below ground level with TDS levels ranging from 2,500 – 4,500 ppm.

The natural topography at the lowest point of base of the proposed Iron Hill waste rock landform is 329.8 m AHD, which is almost 20 m above the groundwater level.

## Surface water

Surface drainage within the broader area in which the Mt Gibson Ranges is situated is

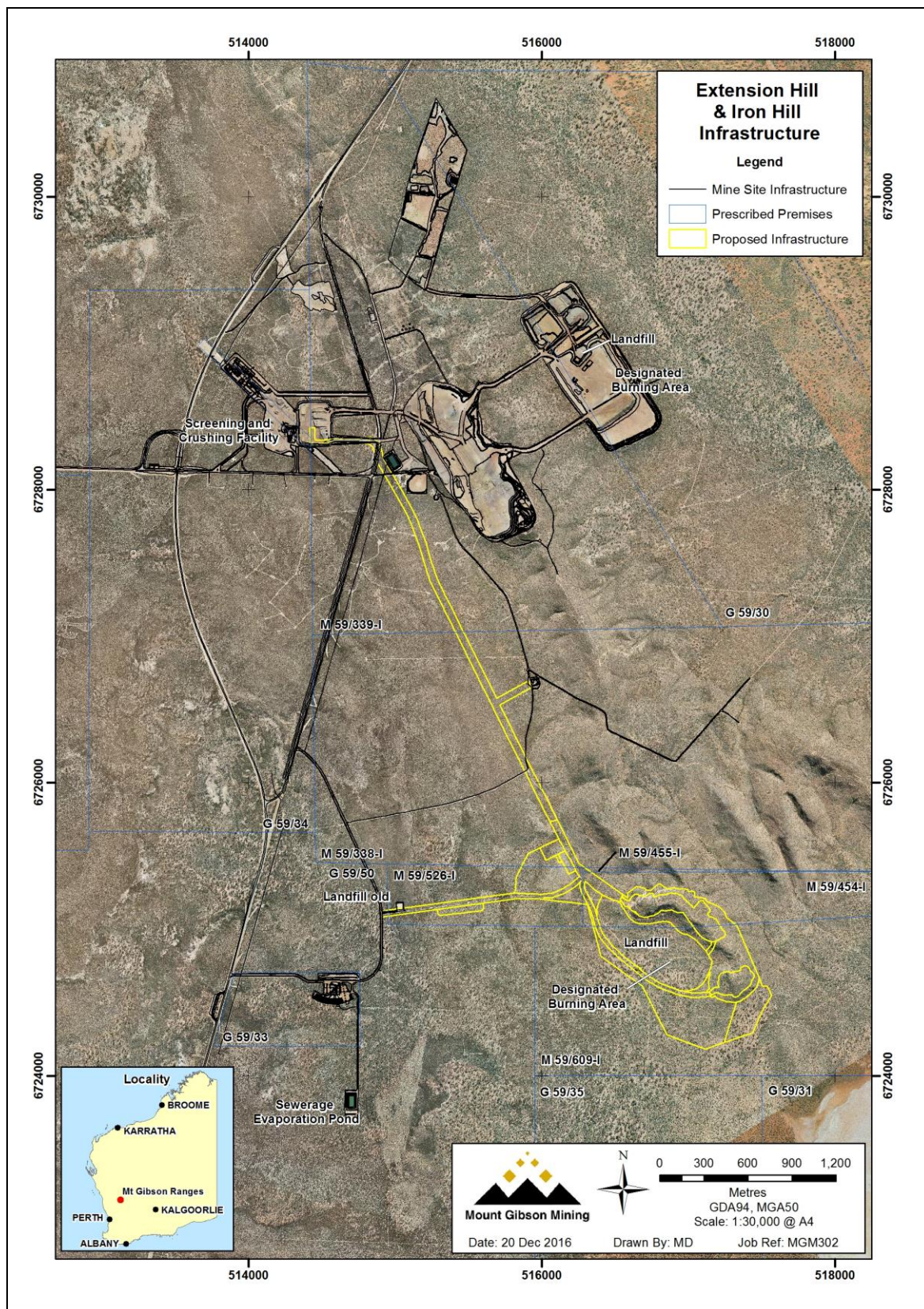
characterised by ephemeral flows following rainfall, with surface drainage towards numerous ephemeral salt lakes.

There are no watercourses or wetlands in the vicinity of the premises. A small unnamed salt lake occurs approximately 650 m southeast of Iron Hill and is typically dry. Lake Moore and Mongers Lake are located 25 km east and 40 km west.

## **Meteorology**

At Mt Gibson Ranges, the climate is semi desert Mediterranean, characterised by hot dry summers with 9 to 11 months of dry weather and mild wet winters. Rainfall is both irregular and variable.





**Figure 1: Site Plan**

## Risk assessment

Table 4 describes the Risk Events associated with the amendment consistent with DER's *Guidance Statement: Risk Assessments* (February 2017). Table 4 identifies whether the emissions present a material risk to human health or the environment, requiring regulatory controls.

A risk rating is determined for risk events in accordance with the Risk Rating Matrix in Appendix 2. DER determines the acceptability and treatment of Risk Events in accordance with the Risk Treatment Table in Appendix 3.

At the time of this amendment, DER has also updated the Licence to align with administrative changes implemented within the Department as described in Table 5 below.

**Table 4: Risk assessment for proposed Category 64 landfill during operation**

Risk Event						Consequence rating	Likelihood rating	Risk	Reasoning
Source/Activities		Potential Emissions	Potential Receptors	Potential Pathway	Potential Adverse Impacts				
Cat 64 – Class II landfill site	Acceptance of up to 150 tonnes waste per annum for burial in a landfill at Iron Hill M59/454 and M59/609.	Noise	White Wells Homestead Ninghan Station	Air	Amenity	Slight	Unlikely	Low	Distance to sensitive receptors is considered too great.  Closest residence approximately 15 km west of the premises.
		Dust associated with handling and cover.	White Wells Homestead Ninghan Station	Air	Amenity	Slight	Unlikely	Low	Distance to sensitive receptor is considered too great.  Closest residence approximately 15 km west of the premises.
			DRFs Priority 1 PEC		Smothering of vegetation	Slight	Unlikely	Low	DER has considered the Part IV monitoring requirements and locations. Impacts to onsite environmental receptors are adequately regulated under Part IV of the EP Act with DRF and PEC monitoring and impact mitigation.  The distance to residential receptors is considered too great for any impact to occur offsite.



		Landfill leachate	East Murchison Groundwater Area	Infiltration through ground	Adverse impacts to beneficial use of groundwater - currently for exploration and mining operations.	<b>Minor</b> (Minimal off site local impacts)	<b>Rare</b>	<b>Low</b>	Scale of operations and distance to groundwater.
		Odour from degradation of putrescible waste.	White Wells Homestead Ninghan Station	Air	Amenity	Slight	Rare	Low	Distance to sensitive receptors is considered too great for any impact.  Closest residence approximately 15 km west of the premises.
			Fauna – including Specially Protected Fauna (six fauna species)		Attraction to, and food source for fauna may impact on natural ecosystems.	<b>Moderate</b> (Off-site local scale impacts)	<b>Unlikely</b>	<b>Medium</b>	Applicant's management controls.  Applicant's management controls include: active tipping area no more than 30 m long; waste covered with dense inert and incombustible material at least fortnightly; and covering material sufficient for 2 months covering stockpiled at the landfill.
		Windblown waste	Fauna – including Specially Protected Fauna (six fauna species)	Air	Odour and food source for fauna - may impact on natural ecosystems.	<b>Moderate</b> (Off-site local scale impacts)	<b>Unlikely</b>	<b>Medium</b>	Applicant's management controls.  Applicant's management controls include: active tipping area no more than 30 m long; waste covered with dense inert and incombustible material at least fortnightly; covering material sufficient for 2 months covering stockpiled at the landfill; landfill area surrounded with either earthen bunds or fencing; and access to landfill area by lockable gate.

		Stormwater runoff	Ground DRFs Priority 1 PEC Vegetation	Path of flow	Contamination of soil.  Potential alteration of local ecosystems	<b>Minor</b>  Low level on site impacts.	<b>Unlikely</b>	<b>Medium</b>	Applicant's management controls.  Applicant's management controls include: surface water drainage designed to divert clean water runoff away from the landfill and contain any contaminated water within the landfill facility.
		Fire and smoke	White Wells Homestead Ninghan Station DRFs Priority 1 PEC Vegetation  Fauna – including Specially Protected Fauna (six fauna species)	Air and fire path	Amenity and potential health impacts  Potential alteration of local ecosystems	<b>Moderate</b>  Off-site local scale mid-level impacts	<b>Unlikely</b>	<b>Medium</b>	Applicant's management controls.  Closest residence approximately 15 km west of the premises.  Applicant's management controls include: active tipping area no more than 30 m long; waste covered with dense inert and incombustible material at least fortnightly; landfill area surrounded with either earthen bunds or fencing; access by lockable gate; a firebreak of at least 3 m to surround the landfill area; and no rubbish burnt at the landfill.

## Administrative Changes

Conditions have been removed from licence L8495/2010/2 in accordance with Administrative changes within DER and DER's Guidance Statement: Guidance Statement: *Setting conditions* (October 2015). Conditions removed are listed below in Table 5.

**Table 5: Administrative changes - Conditions removed**

Condition number	Condition removed	Justification	Replacement condition
L1.1.2	<p>Definitions:</p> <p><i>'AS/NZS 1940' means Australian Standard AS 1940:2004 The storage and handling of flammable and combustible liquids</i></p> <p><i>'AS 2922-1987' means Australian Standard AS 2922-1987 Ambient air - Guide for the siting of sampling unit</i></p> <p><i>'AS/NZS 3580.10.1' means Australian Standard AS/ ANZ 3580.10.1 Methods for sampling and analysis of ambient air - Determination of particulate matter - Deposited matter - Gravimetric method</i></p> <p><i>'code of practice for the storage and handling of dangerous goods' means document titled "Storage and handling of dangerous goods: Code of Practice" published by the Department of Mines and Petroleum, as amended from time to time</i></p> <p><i>'dangerous goods' has the meaning defined in the Dangerous Goods Safety (Storage and Handling of Non-explosives) Regulations 2007</i></p> <p><i>'environmentally hazardous material' means material (either solid or liquid raw materials, materials in the process of manufacture, manufactured products, products used in the manufacturing process, by-products and waste) which if discharged into the environment from or within the premises may cause pollution or environmental harm. Note: Environmentally hazardous materials include dangerous goods where they are stored in quantities below placard quantities. The storage of dangerous goods above placard quantities is regulated by the Department of Mines and Petroleum</i></p> <p><i>'fugitive emissions' means all emissions not arising from point sources identified in sections 2.2, 2.3, 2.4 and 2.5</i></p> <p><i>'Schedule 2' means Schedule 2 of this Licence unless otherwise stated;</i></p>	No longer required as applicable conditions are removed.	NA
L1.2.1	<p><i>Nothing in the Licence shall be taken to authorise any emission that is not mentioned in the Licence, where the emission amounts to:</i></p> <p>(a) <i>pollution;</i></p>	This condition is not valid, enforceable or risk based.	NA

	<p>(b) unreasonable emission;</p> <p>(c) discharge of waste in circumstances likely to cause pollution; or</p> <p>(d) being contrary to any written law.</p>		
L1.2.2	<i>The Licensee shall operate and maintain all pollution control and monitoring equipment to the manufacturer's specification or any relevant and effective internal management system.</i>	This condition is not enforceable as it is not sufficiently clear or certain.	NA
L1.2.3	<i>The Licensee, except where storage is prescribed in section 1.3, shall ensure that environmentally hazardous materials are stored in accordance with the Code of Practice for the Storage and handling of dangerous goods and in accordance with AS/NZS 1940.</i>	This condition is not enforceable as it is not sufficiently clear or certain.	<p>DMP administers legislation for the storage, handling and transport of dangerous goods.</p> <p>Environmentally hazardous materials above placard quantity, as defined in the <i>Dangerous Goods Safety (Storage and Handling of Non-Explosives) Regulations 2007</i> that are classified as dangerous goods are regulated by DMP.</p> <p><i>The Environmental Protection (Unauthorised Discharges) Regulations 2004</i> are applicable.</p>
L1.2.4	<i>The Licensee shall immediately recover, or remove and dispose of spills of environmentally hazardous materials outside an engineered containment system.</i>	This condition is not enforceable as it is not sufficiently clear or certain.	<p>The general provisions of the <i>Environmental Protection Act 1986</i> are applicable.</p> <p><i>The Environmental Protection (Unauthorised Discharges) Regulations 2004</i> are applicable.</p>
L1.2.5	<p><i>The Licensee shall:</i></p> <p><i>(a) implement all practical measures to prevent stormwater run-off becoming contaminated by the activities on the Premises; and</i></p> <p><i>(b) treat contaminated or potentially contaminated stormwater as necessary prior to being discharged from the Premises.1</i></p>	<p>This condition is not enforceable as it is not sufficiently clear or certain.</p> <p>Stormwater at Extension Hill Mine Site is regulated by MS 753 conditions 8-1 and 8-2 by requirement to implement a Significant Flora Species and Communities Management Plan.</p>	Risk of stormwater is assessed for the proposed landfill at Iron Hill in Table 4.
L1.3.8	<i>The Licensee shall ensure that no waste is burnt on the premises, except for fire training purposes in accordance with condition 1.3.9.</i>	<p>The activity is not directly related to the primary activity.</p> <p>Emergency Response</p>	NA
L1.3.9	<i>The licensee shall ensure that the ignition of fires only occurs for training purposes at the premises, and only up to a maximum of 12 times per year.</i>		

L1.3.10	<p><i>The licensee shall ensure that, in accordance with condition 1.3.9, only the following materials up to a maximum of the quantities stipulated shall be burnt annually:</i></p> <p>(a) <i>Two light vehicles (excluding tyres);</i></p> <p>(b) <i>200 litres of diesel;</i></p> <p>(c) <i>30 litres of unleaded fuels; and</i></p> <p>(d) <i>Non-treated pallets.</i></p>	<p>Training ERT is a requirement of the Mines Safety and Inspection Act and relates to mining activities not mineral processing activities.</p>	
L1.3.11	<p><i>The licensee shall, in accordance with condition 1.3.9:</i></p> <p>(a) <i>advise the Director and the Bush Fire Control officer at the Shire of Yalgoo (and DFES during prohibited and restricted burning times) in writing at least 24 hours prior to commencement of burning;</i></p> <p>(b) <i>ensure that fires are ignited in designated burning area only;</i></p> <p>(c) <i>provide an adequate water supply and distribution system to prevent fires from escaping beyond the boundary of the burning area;</i></p> <p>(d) <i>extinguish all fires completely before sunset, to ensure that fires only occur during daylight hours; and</i></p> <p>(e) <i>attend the fire until it is extinguished.</i></p>		
L2.2, L2.3, L2.4, L2.8, L3.2, L3.3, L3.4, L3.6, L3.9, and Section 4	No specified conditions	These provisions are not valid, enforceable or risk based.	NA
L2.6.1	<i>The Licensee shall use all reasonable and practical measures to prevent and where that is not practicable, to minimise dust emissions from the Premises.</i>	This condition is not risk based.	NA
L2.6.2	<i>The Licensee shall ensure that no visible dust generated by the activities on the Premises crosses the boundary of the Premises.</i>	This condition is not risk based.	



L2.6.3	<p><i>The Licensee shall ensure the measures required by condition 2.6.1 include, but are not limited to, the use of:</i></p> <p><i>(a) water sprays, dust collection systems, coverings on transfer points from materials handling and plant operations; and</i></p> <p><i>(b) water sprays, sprinklers, water carts or cannons, onto working and non-working faces of stockpiles and trafficable surfaces.</i></p>	Impact of dust emissions on significant receptors at Extension Hill Mine site are regulated by MS 753 conditions 8-1 and 8-2 by requirement to implement a 'Significant Flora Species and Communities Management Plan' and at Iron Hill Mine site a 'Flora and Vegetation Outcome-based Condition Environmental Management Plan'.	
L2.6.4	<i>The Licensee shall place dust receptors at the premises to record dust emissions.</i>		
L2.6.5	<i>The Licensee shall not cause or allow dust emissions greater than the limits listed in Table 2.6.1.</i>		
L3.8.1	<i>The Licensee shall keep a monthly record of all dust emissions at the receptor areas that are greater than 4 grams/ m2/ month.</i>		
L2.7.1	<i>The Licensee shall ensure that odour emitted from the Premises does not unreasonably interfere with the health, welfare, convenience, comfort or amenity of any person who is not on the Premises.</i>	This condition is not risk based.	<p>NA</p> <p>Distance to closest sensitive receptor is 15 km.</p> <p>The general provisions of the <i>Environmental Protection Act 1986</i> are applicable.</p>
5.1.2	<p><i>The Licensee shall ensure that:</i></p> <p><i>(a) any person left in charge of the Premises is aware of the conditions of the Licence and has access at all times to the Licence or copies thereof; and</i></p> <p><i>(b) any person who performs tasks on the Premises is informed of all of the conditions of the Licence that relate to the tasks which that person is performing.</i></p>	This condition is not enforceable as the requirements for compliance are not clear.	NA
L5.2.1	<p><i>Dust monitoring results</i></p> <p><i>Dust monitoring</i></p>	Dust conditions removed and no longer applicable for annual reporting.	NA
L5.3.1	<i>The Licensee shall ensure that the parameters listed in Table 5.3.1 are notified to the</i>	Duplication of the <i>Environmental Protection</i>	NA

	<i>Director in accordance with the notification requirements of the table.</i>	<i>Act 1986 s.72.</i>	
Schedule 2	Annual Audit Compliance Report Proforma	This Proforma is superseded by DER's <i>Guideline: Annual Audit Compliance Reports</i> (August 2016)	Applicable form is downloadable from DER's website.
	Form LR1	Specific Proforma for monitoring reporting not required.	NA
	Form N1	L5.3.1 has been deleted.	NA

## Decision

### Category 64 Class II landfill - approved production

The current licence category 64 (Class II putrescible landfill site) approved premises production or design capacity is 105 tonnes per annual period. The application and reference documents indicate that this amount is the expected production (which may vary). Current condition 1.3.1 limits landfill acceptance to 150 tonnes per annual period.

The Delegated Officer considers that 150 tonnes per annual period should be the category 64 approved premises production or design capacity. The Licence is amended accordingly.

### Category 5 Processing or beneficiation of metallic or non-metallic ore – production limit

The current licence category 5 approved premises production or design capacity is 5,000,000 tonnes per annual period. The Delegated Officer considers this amount should be conditioned as a limit, because it is the assessed amount.

### Category 85 Sewage facility – production limit

The current licence category 89 approved premises production or design capacity is 48 cubic metres per day. The Delegated Officer considers this amount should be conditioned as a limit, because it is the assessed amount.

### Category 64 Class II landfill – Iron Hill

The landfill proposed to be located within the waste rock landfill at the Iron Hill mine site has been risk assessed. The Delegated Officer considers that the Applicant's controls for the landfill will be regulated by the Licence to manage risks which have been assessed as medium. The Licence is amended accordingly.

Licence condition 1.3.5 for covering of landfill waste remains the same.

### Premises boundary

The applicant has requested the premises boundary be amended to include mining tenements M59/454 and M59/609, to include a category 64 Class II landfill to be located in the waste rock landform at the Iron Hill Mine site. The tenements are contiguous with the current premises boundary. Ore mined at the Iron Hill mine will be processed at Extension Hill.

The Delegated Officer considers the premises boundary map should be amended as proposed, and infrastructure included in the amended map to locate the landfill.

### Administrative changes

The Delegated Officer considers the administrative changes outlined in Table 5 above should be included in the amendment.

## Amendment History

Table 6 provides the amendment history for L8495/2010/2.

**Table 6: Licence amendments**

Instrument	Issued	Amendment
W4435/2008/1	04/09/2008	Works Approval
L8495/2010/1	20/01/2011	Licence issued
L8495/2010/1	13/10/2011	Licence amendment for general condition updates
L8495/2010/1	30/08/2012	Licence amendment for landfill conditions

L8495/2010/1	20/06/2013	Licence amendment for dust suppression conditions
L8495/2010/1	07/11/2013	Licence amendment to update conditions
L8495/2010/1	12/12/2013	Licence amendment for condition changes
L8495/2010/2	16/01/2014	Licence reissue and REFIRE conversion
L8495/2010/2	01/05/2014	Licence amendment for production increase and condition upgrade
L8495/2010/2	29/04/2016	Notice of Amendment to extend expiry date to 20 January 2031
L8495/2010/2	9/06/2017	Amendment Notice 1 to extend boundary to include an additional landfill

## Licence Holder's Comments

The Licensee was provided with the draft Amendment Notice on 26 May 2017. Licensee responded on 2 June 2017 that there were no comments and requested the remaining comment period be waived.

## Amendment

1. The premises location is amended by the addition of the mining tenements highlighted in bold underline as shown below.

Extension Hill Mine Site

Mining Tenements G59/30, G59/33, G59/34, L59/68,  
L59/69, L59/87, M59/338, M59/339, M59/526, **M59/454**  
**and M59/609**.

PAYNES FIND WA 6612

2. The approved premises production or design capacity on page 1 of the licence is amended by the deletion of the text shown in strikethrough below and the insertion of the text highlighted in bold underline as shown below.

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: premises on which – (a) metallic or non-metallic ore is crushed, ground, milled or otherwise processed; (b) tailings from metallic or non-metallic ore are reprocessed; or (c) tailings or residue from metallic or non-metallic ore are discharged into a containment cell or dam.	50 000 tonnes or more per year	5 000 000 tonnes per annual period
64	Class II putrescible landfill site	20 tonnes or more per year	<del>105</del> <b><u>150</u></b> tonnes per annual period
85	Sewage facility	More than 20 but less than 100 cubic metres per day	48 cubic metres per day

3. The licence is amended by the insertion of the definitions highlighted in bold underline as shown below and the deletion of the definitions as shown in strikethrough below.

**'AACR' means an Annual Audit Compliance Report in a format approved by the CEO**

**as presented by the Licence Holder or as specified by the CEO (guidelines and templates may be available on the Department's website).**

**'Director'** means Director, Environmental Regulation Division of the Department of Environment Regulation for and on behalf of the Chief Executive Officer as delegated under section 20 of the Act;

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

Regional Leader, Industry Regulation, Midwest Region  
Department of Environment Regulation  
PO Box 72  
GERALDTON WA 6531  
Telephone: (08) 9964 0901  
Facsimile: (08) 9921 5713  
Email: [GeraldtonIR@der.wa.gov.au](mailto:GeraldtonIR@der.wa.gov.au);

**CEO for the purposes of notification means:**

**Director General**  
**Department Administering the *Environmental Protection Act 1986***  
**Locked Bag 33 Cloisters Square**  
**PERTH WA 6850**  
**info@der.wa.gov.au**

**'AS/NZS 1940'** means Australian Standard AS 1940:2004 *The storage and handling of flammable and combustible liquids*;

**'code of practice for the storage and handling of dangerous goods'** means document titled "Storage and handling of dangerous goods: Code of Practice" published by the Department of Mines and Petroleum, as amended from time to time;

**'dangerous goods'** has the meaning defined in the Dangerous Goods Safety (Storage and Handling of Non-explosives) Regulations 2007;

**'environmentally hazardous material'** means material (either solid or liquid raw materials, materials in the process of manufacture, manufactured products, products used in the manufacturing process, by-products and waste) which if discharged into the environment from or within the premises may cause pollution or environmental harm. Note: Environmentally hazardous materials include dangerous goods where they are stored in quantities below placard quantities. The storage of dangerous goods above placard quantities is regulated by the Department of Mines and Petroleum;

**'fugitive emissions'** means all emissions not arising from point sources identified in sections 2.2, 2.3, 2.4 and 2.5;

**'six monthly'** means the 2 inclusive periods from 1 October to 31 March and 1 April to 30 September in the following year;

**'quarterly'** means the 4 inclusive periods from 1 October to 31 December and in the following year, 1 January to 31 March, 1 April to 30 June, and 1 July to 30 September;

4. The Licence is amended by the deletion of the following conditions as shown in strikethrough below.

1.2.1 Nothing in the Licence shall be taken to authorise any emission that is not mentioned in the Licence, where the emission amounts to:

- (e) pollution;
- (f) unreasonable emission;
- (g) discharge of waste in circumstances likely to cause pollution; or
- (h) being contrary to any written law.



- ~~1.2.2 The Licensee shall operate and maintain all pollution control and monitoring equipment to the manufacturer's specification or any relevant and effective internal management system.~~
- ~~1.2.3 The Licensee, except where storage is prescribed in section 1.3, shall ensure that environmentally hazardous materials are stored in accordance with the Code of Practice for the Storage and handling of dangerous goods and in accordance with AS/NZS 1940.~~
- ~~1.2.4 The Licensee shall immediately recover, or remove and dispose of spills of environmentally hazardous materials outside an engineered containment system.~~
- ~~1.2.5 The Licensee shall:~~  
~~(a) implement all practical measures to prevent stormwater run-off becoming contaminated by the activities on the Premises; and~~  
~~(b) treat contaminated or potentially contaminated stormwater as necessary prior to being discharged from the Premises.~~
- ~~Note1: The *Environmental Protection (Unauthorised Discharges) Regulations 2004* make it an offence to discharge certain materials into the environment.~~
- ~~1.3.6 The Licensee shall implement the following security measures at the site:~~  
~~(a) erect and maintain suitable fencing to prevent unauthorised access to the site;~~  
~~(b) ensure that any entrance gates to the premises are securely locked when the premises are unattended; and~~  
~~(c) undertake regular inspections of all security measures and repair damage as soon as practicable.~~
- ~~1.3.8 The Licensee shall ensure that no waste is burnt on the premises, except for fire training purposes in accordance with condition 1.3.9.~~
- ~~1.3.9 The licensee shall ensure that the ignition of fires only occurs for training purposes at the premises, and only up to a maximum of 12 times per year.~~
- ~~1.3.10 The licensee shall ensure that, in accordance with condition 1.3.9, only the following materials up to a maximum of the quantities stipulated shall be burnt annually:~~  
~~(a) Two light vehicles (excluding tyres);~~  
~~(b) 200 litres of diesel;~~  
~~(c) 30 litres of unleaded fuels; and~~  
~~(d) Non-treated pallets.~~
- ~~1.3.11 The licensee shall, in accordance with condition 1.3.9:~~  
~~(a) advise the Director and the Bush Fire Control officer at the Shire of Yalgoo (and DFES during prohibited and restricted burning times) in writing at least 24 hours prior to commencement of burning;~~  
~~(b) ensure that fires are ignited in designated burning area only;~~  
~~(c) provide an adequate water supply and distribution system to prevent fires from escaping beyond the boundary of the burning area;~~  
~~(d) extinguish all fires completely before sunset, to ensure that fires only occur during daylight hours; and~~  
~~(e) attend the fire until it is extinguished.~~

## ~~2.2 Point source emissions to air~~

~~There are no specified conditions relating to point source emissions to air in this section.~~

## ~~2.3 Point source emissions to surface water~~

~~There are no specified conditions relating to point source emissions to surface water in this section.~~

## ~~2.4 Point source emissions to groundwater~~

~~There are no specified conditions relating to point source emissions to groundwater in this section.~~

## **2.6 Fugitive Emissions**

~~2.6.1 The Licensee shall use all reasonable and practical measures to prevent and where that is not practicable, to minimise dust emissions from the Premises.~~

~~2.6.2 The Licensee shall ensure that no visible dust generated by the activities on the Premises crosses the boundary of the Premises.~~

~~2.6.3 The Licensee shall ensure the measures required by condition 2.6.1 include, but are not limited to, the use of:~~

- ~~(a) water sprays, dust collection systems, coverings on transfer points from materials handling and plant operations; and~~
- ~~(b) water sprays, sprinklers, water carts or cannons, onto working and non-working faces of stockpiles and trafficable surfaces.~~

~~2.6.4 The Licensee shall place dust receptors at the premises to record dust emissions.~~

~~2.6.5 The Licensee shall not cause or allow dust emissions greater than the limits listed in Table 2.6.1.~~

<b>Table 2.6.1: Dust emission limits</b>			
<b>Emission point reference</b>	<b>Parameter</b>	<b>Limit<sup>1</sup> (including units)</b>	<b>Averaging period</b>
Dust monitoring receptor points – ambient environment	Dust	4 g/m <sup>3</sup> /month	Spot sample

~~Note 1: Referenced to 'Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales, 2005'.~~

## **2.7 Odour**

~~2.7.1 The Licensee shall ensure that odour emitted from the Premises does not unreasonably interfere with the health, welfare, convenience, comfort or amenity of any person who is not on the Premises.~~

## **2.8 Noise**

~~There are no specified conditions relating to noise in this section.~~

## **3.2 Monitoring of point source emissions to air**

~~There are no specified conditions relating to monitoring of point source emissions to air in this section.~~

## **3.3 Monitoring of point source emissions to surface water**

~~There are no specified conditions relating to monitoring of point source emissions to surface water in this section.~~

## **3.4 Monitoring of point source emissions to groundwater**

~~There are no specified conditions relating to monitoring of point source emissions to groundwater in this section.~~

## **3.6 Monitoring of inputs and outputs**

~~There are no specified conditions relating to monitoring of inputs and outputs in this section.~~

### 3.8 — Ambient environmental quality monitoring

3.8.1 — The Licensee shall keep a monthly record of all dust emissions at the receptor areas that are greater than 4 grams/ m<sup>2</sup>/ month.

### 3.9 Meteorological monitoring

There are no specified conditions relating to meteorological monitoring in this section.

## 4 — Improvements

There are no specified improvement conditions in this section.

5.1.1 — The Licensee shall ensure that:

- (a) — any person left in charge of the Premises is aware of the conditions of the Licence and has access at all times to the Licence or copies thereof; and
- (b) — any person who performs tasks on the Premises is informed of all of the conditions of the Licence that relate to the tasks which that person is performing.

5.1.2 — The Licensee shall ensure that the parameters listed in Table 5.3.1 are notified to the Director in accordance with the notification requirements of the table.

Table 5.3.1: Notification requirements			
Condition or table (if relevant)	Parameter	Notification requirement <sup>1</sup>	Format or form <sup>2</sup>
-	Any failure or malfunction of any pollution control equipment or any incident which has caused, is causing or may cause pollution	Part A: As soon as practicable but no later than 5pm of the next usual working day.  Part B: As soon as practicable	N1

Note 1: Notification requirements in the licence shall not negate the requirement to comply with s72 of the Act

Note 2: Forms are in Schedule 2

5. The Licence is amended by the deletion of Schedule 2 (with associated reporting and notification forms) as shown in strikethrough below.

### Schedule 2: Reporting & notification forms

6. The Licence is amended by the addition of the text highlighted in bold underline below.

**The Licensee shall ensure the limits specified in the table below are not exceeded.**

Production or design capacity limits		
<u>Category<sup>1</sup></u>	<u>Category description<sup>1</sup></u>	<u>Premises production or design capacity limit</u>
<b><u>5</u></b>	<b><u>Processing or beneficiation of metallic or non- metallic ore.</u></b>	<b><u>5,000,000 tonnes per annual period</u></b>
<b><u>85</u></b>	<b><u>Sewage facility</u></b>	<b><u>48 cubic metres per day</u></b>

**Note 1: Environmental Protection Regulations 1987, Schedule 1**

7. The Licence is amended by the deletion of the text shown in strikethrough below and the insertion of the text highlighted in bold underline as shown in below.

1.3.3 The Licensee shall ensure that wastes accepted onto the landfill, tyre disposal facility and wastewater treatment plant are only subjected to the processes set out in Table 1.3.2 and in accordance with any process limits described in that Table.

**Table 1.3.2: Waste processing**

<b>Waste type</b>	<b>Process(es)</b>	<b>Process limits<sup>1, 2</sup></b>
<del>Putrescible waste</del>  <b><u>All landfill waste types</u></b>	Receipt, handling and disposal of waste by landfilling	<del>All waste types</del> - <b><u>Landfill area</u></b>  Disposal of waste by landfilling shall only take place within the landfill areas shown on the Landfill Area <b><u>Site Plan</u></b> map in Schedule 1.  <b><u>Waste shall be disposed of in a defined trench.</u></b>  <b><u>The tipping area shall be no greater than 30 metres in length.</u></b>  <b><u>Surface water drainage shall be designed and maintained to divert surface water runoff away from areas where there is waste; and water that has come in contact with waste shall be retained on the landfill.</u></b>  <b><u>The landfill shall be within an area enclosed by earthen bunds or fencing at least 2 metres in height, to provide an effective barrier to horses or stock.</u></b>  <b><u>Any access into the bunded or fenced landfill area shall be securely locked when it is unattended.</u></b>  <b><u>No waste shall be burnt at the landfill area.</u></b>  <b><u>A firebreak of at least 3 metres shall be maintained around the landfill.</u></b>  <b><u>No waste shall be burnt on the landfill area.</u></b>  The separation distance between the base of the landfill and the highest groundwater level shall not be less than <del>2-3</del> m.  <del>No waste shall be temporarily stored or landfilled within 35 metres from the boundary of the premises.</del>
Putrescible Waste		None specified
Inert Waste Type 1		Crushing and screening if Inert Waste Type 1 is not permitted.
Inert Waste Type 2		Tyres to be stored in piles of up to 100 units with a 6m separation distance between piles.
Contaminated Solid Waste		None specified
Special Waste Type 2		Only to be disposed of into a designated biomedical waste disposal area within the landfill;  Not to be deposited within 2m of the final tipping surface of the landfill; and  No works shall be carried out on the landfill that could lead to biomedical wastes being excavated or uncovered.
Sewage	Wastewater treatment plant	Biological and physical treatment

Note 1: Requirements for landfilling tyres are set out in Part 6 of the *Environmental Protection Regulations 1987*.

Note 2: Additional requirements for the acceptance and landfilling of controlled waste (including asbestos and tyres) are set out in the *Environmental Protection (Controlled Waste) Regulations 2004*.

8. The Licence is amended by the deletion of the text shown in strike through below.

3.1.2 The Licensee shall ensure that:

(a) ~~monthly monitoring is undertaken at least 15 days apart;~~

(b) quarterly monitoring is undertaken at least 45 days apart; and

(c) ~~six monthly monitoring is undertaken at least 5 months apart.~~

9. The Licence is amended by the deletion of the text shown in strikethrough below and the insertion of the text highlighted in bold underline as shown in below.

5.2.1 The Licensee shall submit to the ~~Director~~ **CEO** an Annual Environmental Report within 28 calendar days after the end of the annual period (i.e: 31 October). The report shall contain the information listed in Table 5.2.1 in the format or form specified in that table.

Table 5.2.1: Annual Environmental Report		
Condition or table (if relevant)	Parameter	Format or form <sup>1</sup>
-	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
<del>2.6.4</del>	<del>Dust monitoring results</del>	<del>None specified</del>
3.7.1	Wastewater monitoring	None specified
<del>3.8.1</del>	<del>Dust monitoring</del>	<del>None specified</del>
Table 2.5.2	Monitoring of emissions to land	LR1
Table 2.5.2; Table 2.6.1	Limit exceedences	None specified
5.1.3	Compliance	Annual Audit Compliance Report (AACR)
5.1.4	Incidents and Complaints summary	None specified

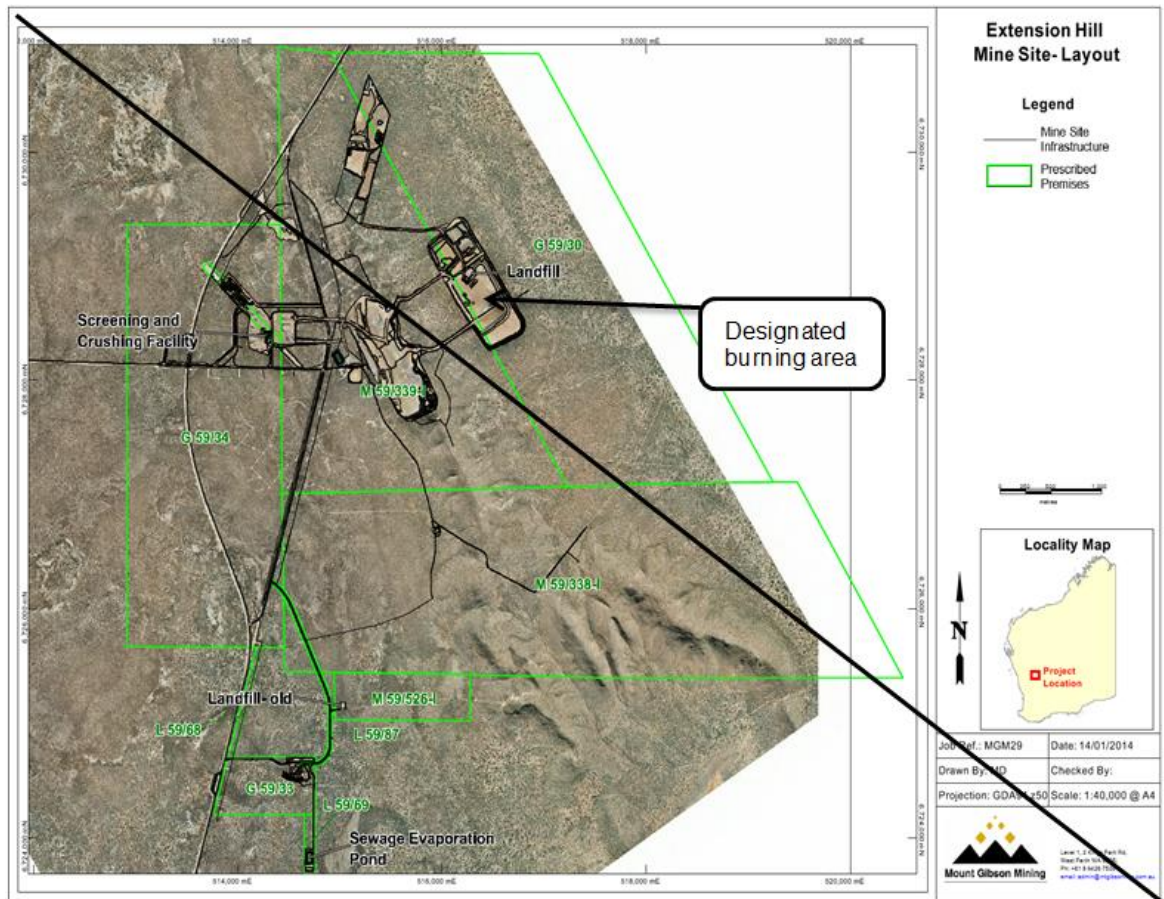
~~Note 1: Forms are in Schedule 2~~

10. The licence is amended by the deletion of the Premises Map and text in Schedule 1 as shown in strikethrough below and the insertion of the text and map highlighted in bold underline as shown below.

### **Premises map**

The Premises boundary and infrastructure is shown in the map below. The ~~green~~ **blue** line depicts the premises boundary.









## Appendix 1: Key Documents

	Document Title	In text ref	Availability
1	Application Form: Amendment L8495/2010/2 and attachments, submitted to DER 18 January 2017	Application	DER records (A1361443)
2	<i>Waste Management MGX-HSE-EH-SW1-370</i> , Mount Gibson Mining Limited,	-	DER records (A1423901)
3	<i>Iron Hill Deposits Hematite Project Mining Proposal</i> , Mount Gibson Mining Limited, December 2016	-	
4	Licence L8495/2010/2 – Extension Hill Mine Site	L8495/2010/2	accessed at <a href="http://www.der.wa.gov.au">http://www.der.wa.gov.au</a>
5	Ministerial Statement 753	MS 753	accessed at <a href="http://www.epa.wa.gov.au/">http://www.epa.wa.gov.au/</a>
6	Ministerial Statement 1045	MS 1045	
7	<i>Mount Gibson Range Mine Operations at Iron Hill Deposits Environmental Impact Assessment (Public Environmental Review)</i> , Mount Gibson Mining Limited, November 2015	-	Assessed at <a href="http://www.epa.wa.gov.au/">http://www.epa.wa.gov.au/</a>
	<i>Iron Hill Deposits Hematite Project Mining Proposal</i> , Mount Gibson Mining Limited, December 2016	-	<a href="http://www.dmp.wa.gov.au/">http://www.dmp.wa.gov.au/</a>
8	<i>Guidance Statement: Setting conditions</i> , October 2015, DER	-	accessed at <a href="http://www.der.wa.gov.au">http://www.der.wa.gov.au</a>
9	<i>Guidance Statement: Environmental Siting</i> , November 2016, DER	-	
10	<i>Guidance Statement: Risk Assessments</i> , February 2017, DER	-	
11	<i>Guidance Statement: Decision Making</i> , February 2017, DER	-	

## Appendix 2 – Risk Rating

A risk rating will be determined for risk events in accordance with the Risk Rating Matrix set out in Table 7 below.

**Table 7: Risk Rating Matrix**

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

DER will undertake an assessment of the consequence and likelihood of the Risk Event in accordance with Table 8 below.

**Table 8: Risk Criteria Table**

Likelihood		Consequence		
The following criteria has been used to determine the likelihood of the Risk Event occurring.		The following criteria has been used to determine the consequences of a Risk Event occurring:		
			Environment	Public Health* and Amenity (such as air and water quality, noise, and odour)
Almost Certain	The risk event is expected to occur in most circumstances	Severe	<ul style="list-style-type: none"> <li><b>on-site impacts:</b> catastrophic</li> <li><b>off-site impacts local scale:</b> high level or above</li> <li><b>off-site impacts wider scale:</b> mid level or above</li> <li>Mid to long term or permanent impact to an area of high conservation value or special significance^</li> <li>Specific Consequence Criteria (for environment) are significantly exceeded</li> </ul>	<ul style="list-style-type: none"> <li>Loss of life</li> <li><b>Adverse health effects:</b> high level or ongoing medical treatment</li> <li>Specific Consequence Criteria (for public health) are significantly exceeded</li> <li><b>Local scale impacts:</b> permanent loss of amenity</li> </ul>
Likely	The risk event will probably occur in most circumstances	Major	<ul style="list-style-type: none"> <li><b>on-site impacts:</b> high level</li> <li><b>off-site impacts local scale:</b> mid level</li> <li><b>off-site impacts wider scale:</b> low level</li> <li>Short term impact to an area of high conservation value or special significance^</li> <li>Specific Consequence Criteria (for environment) are exceeded</li> </ul>	<ul style="list-style-type: none"> <li><b>Adverse health effects:</b> mid level or frequent medical treatment</li> <li>Specific Consequence Criteria (for public health) are exceeded</li> <li><b>Local scale impacts:</b> high level impact to amenity</li> </ul>
Possible	The risk event could occur at some time	Moderate	<ul style="list-style-type: none"> <li><b>on-site impacts:</b> mid level</li> <li><b>off-site impacts local scale:</b> low level</li> <li><b>off-site impacts wider scale:</b> minimal</li> <li>Specific Consequence Criteria (for environment) are at risk of not being met</li> </ul>	<ul style="list-style-type: none"> <li><b>Adverse health effects:</b> low level or occasional medical treatment</li> <li>Specific Consequence Criteria (for public health) are at risk of not being met</li> <li><b>Local scale impacts:</b> mid level impact to amenity</li> </ul>
Unlikely	The risk event will probably not occur in most circumstances	Minor	<ul style="list-style-type: none"> <li><b>on-site impacts:</b> low level</li> <li><b>off-site impacts local scale:</b> minimal</li> <li><b>off-site impacts wider scale:</b> not detectable</li> <li>Specific Consequence Criteria (for environment) likely to be met</li> </ul>	<ul style="list-style-type: none"> <li>Specific Consequence Criteria (for public health) are likely to be met</li> <li><b>Local scale impacts:</b> low level impact to amenity</li> </ul>
Rare	The risk event may only occur in exceptional circumstances	Slight	<ul style="list-style-type: none"> <li><b>on-site impact:</b> minimal</li> <li>Specific Consequence Criteria (for environment) met</li> </ul>	<ul style="list-style-type: none"> <li><b>Local scale:</b> minimal to amenity</li> <li>Specific Consequence Criteria (for public health) met</li> </ul>

^ Determination of areas of high conservation value or special significance should be informed by the *Guidance Statement: Environmental Siting*.

\* In applying public health criteria, DER may have regard to the Department of Health's, *Health Risk Assessment (Scoping) Guidelines*

“on-site” means within the prescribed premises boundary.

## Acceptability and Treatment of Risk Event

DER will determine the acceptability and treatment of Risk Events in accordance with the Risk Treatment Table below:

**Table 9: Risk Treatment Table**

Rating of Risk Event	Acceptability	Treatment
<b>Extreme</b>	Unacceptable.	Risk Event will not be tolerated. DER may refuse application.
<b>High</b>	May be acceptable. Subject to multiple regulatory controls.	Risk Event may be tolerated and may be subject to multiple regulatory controls. This may include both outcome-based and management conditions.
<b>Medium</b>	Acceptable, generally subject to regulatory controls.	Risk Event is tolerable and is likely to be subject to some regulatory controls. A preference for outcome-based conditions where practical and appropriate will be applied.
<b>Low</b>	Acceptable, generally not controlled	Risk Event is acceptable and will generally not be subject to regulatory controls.