



Licence

Environmental Protection Act 1986, Part V

Licensee: Agnew Gold Mining Company Pty Ltd

Licence: L5110/1988/10

Registered office: Level 5, 50 Colin Street
WEST PERTH WA 6005

ACN: 098 385 883

Premises address: Lawlers Gold Mine
Mining tenements M36/91, M36/171, M36/208, M36/277, M36/622,
L36/161, L36/162, G36/36, G36/37, G36/38, and G36/42
LEINSTER WA 6437
As depicted in Schedule 1 of the licence.

Issue date: Thursday, 13 October 2011

Commencement date: Wednesday, 19 October 2013

Expiry date: Sunday, 18 October 2020

Prescribed premises category

Schedule 1 of the Environmental Protection Regulations 1987

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; or (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	1 000 000 tonnes per annual period
6	Mine dewatering: premises on which water is extracted and discharged to the environment to allow mining of ore.	50 000 tonnes or more per year	1 000 000 tonnes per annual period
89	Putrescible landfill site: premises on which waste as determined by reference to the waste type set out in the document entitled "Landfill Waste Classification and Waste Definitions 1996" published by the Chief Executive Officer and as amended from time to time) is accepted for burial.	More than 20 but less than 5 000 tonnes per year	1100 tonnes per annual period



Conditions

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

Date signed: 23 May 2016

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Tim Gentle

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



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Introduction

This Introduction is not part of the Licence conditions.

DER's industry licensing role

The Department of Environment Regulation (DER) is a government department for the state of Western Australia in the portfolio of the Minister for Environment. DER's purpose is to advise on and implement strategies for a healthy environment for the benefit of all current and future Western Australians.

DER has responsibilities under Part V of the *Environmental Protection Act 1986* (the Act) for the licensing of prescribed premises. Through this process DER works with the business owners, community, consultants, industry and other representatives to prevent, control and abate pollution and environmental harm to conserve and protect the environment. DER also monitors and audits compliance with works approvals and licence conditions, takes enforcement action as appropriate and develops and implements licensing and industry regulation policy.

Licence requirements

This Licence is issued under Part V of the Act. Conditions contained within the Licence relate to the prevention, reduction or control of emissions and discharges to the environment and to the monitoring and reporting of them.

Where other statutory instruments impose obligations on the Premises/Licensee the intention is not to replicate them in the licence conditions. You should therefore ensure that you are aware of all your statutory obligations under the Act and any other statutory instrument. Legislation can be accessed through the State Law Publisher website using the following link:

<http://www.slp.wa.gov.au/legislation/statutes.nsf/default.html>

For your Premises relevant statutory instruments include but are not limited to obligations under the:

- *Environmental Protection (Unauthorised Discharges) Regulations 2004* – these Regulations make it an offence to discharge certain materials such as contaminated stormwater into the environment other than in the circumstances set out in the Regulations.
- *Environmental Protection (Controlled Waste) Regulations 2004* - these Regulations place obligations on you if you produce, accept, transport or dispose of controlled waste.
- *Environmental Protection (Noise) Regulations 1997* – these Regulations require noise emissions from the Premises to comply with the assigned noise levels set out in the Regulations.

You must comply with your licence. Non-compliance with your licence is an offence and strict penalties exist for those who do not comply.

Licence holders are also reminded of the requirements of section 53 of the Act which places restrictions on making certain changes to prescribed premises unless the changes are in accordance with a works approval, licence, closure notice or environmental protection notice.



Licence fees

If you have a licence that is issued for more than one year, you are required to pay an annual licence fee prior to the anniversary date of issue of your licence. Non payment of annual licence fees will result in your licence ceasing to have effect meaning that it will no longer be valid and you will need to apply for a new licence for your Premises.

Ministerial conditions

If your Premises has been assessed under Part IV of the Act you may have had conditions imposed by the Minister for Environment. You are required to comply with any conditions imposed by the Minister.

Premises description and licence summary

Agnew Gold Mining Company Pty Ltd (Agnew Gold) is wholly owned by Goldfields Limited; an international producer of gold with operating mines in Australia, Ghana, Peru and South Africa. Agnew Gold purchased Lawlers Gold Mine (Lawlers) from Barrick (Australia Pacific) Limited in October 2013.

Lawlers is located approximately 9km south of Agnew and 35km south-east of Leinster, Western Australia. Lawlers consists of one underground operation (Fairyland), a mill and numerous historic open pits and associated waste rock dumps across mining and general purpose leases.

Lawlers Gold Mine was originally assessed as a "prescribed premises" under category 5 (processing or beneficiation of metallic or non-metallic ore), 6 (mine dewatering), 33 (chemical blending and mixing), 63 (class I inert landfill), 64 (class II and III inert landfill) and 85 (sewage facility) under Schedule 1 of the *Environmental Protection Regulations 1987*.

The Lawlers gold processing plant uses a carbon-in-pulp (CIP) process to separate gold oxide from primary ores. Ore is milled and mixed with lime and water to form slurry which is passed through a leach and absorption circuit. Waste in the form of tailings is pumped along a bunded pipeline corridor to a two celled tailings storage facility (TSF) where it is discharged in a manner that maximises solids consolidation and process water return.

To ensure the TSF maintains compliance with the International Cyanide Management Code (ICMC) the tailings have a cyanide concentration less than 50 parts per million (ppm) when the tailings are deposited. A hot Caro's acid plant is present onsite for the mixing and blending of hydrogen peroxide and sulphuric acid to form H_2SO_5 which is used for the rapid and effective deconstruction of free and Weak Acid Dissociable (WAD) cyanide in the tailings.

A wastewater treatment plant (WWTP) with the capacity to treat up to 80m³ per day was located at the Lawlers accommodation village. Grey and black water was treated by the WWTP using extended aeration activated sludge for separation and de-nitrification. Treated wastewater from this process was discharged for reuse within the processing circuit, whilst solid waste was removed by a licensed contractor to the Leonora Sewage Treatment Plant for disposal.

Groundwater is sourced from a number of locations across the Lawlers operation and is used for various purposes. Water extracted from the Fairyland pit and Daisy Queen pit is used for mineral ore processing and dust suppression. The Fairyland borefield, located approximately 6.5km to the northeast of the processing plant, supplies Lawlers with groundwater for domestic water purposes.

Previously waste facilities at Lawlers were licensed under category 63 (class I inert landfill site) and 64 (class II or III). To ensure consistency with DER's approach for licensing mine sites that manage waste facilities, these two categories were removed and substituted with category 89. Lawlers have two operational landfills onsite due to the large geographic area encompassed in the licence. These facilities include the Lawlers and Fairyland landfill sites which are located within waste rock dumps. On average, Lawlers dispose of 1100 tonnes of waste per year.

5 May 2016 Amendment

This licence amendment was proponent initiated to amend the mining tenements of the premises which subsequently have a flow on effect to amending licence conditions relevant to those tenements removed. The amendment of tenements resulted in the revision and replacement of schedule 1 maps and figures. This amendment also provided the opportunity to address redundant conditions and align the licence with the new licence format.



Categories 33 and 85 were removed from the licence as mixing of cyanide no longer occurs on the Premises (category 33) and the Wastewater Treatment Plant has been decommissioned and removed (category 85).

23 May 2016 Amendment

An administrative amendment was completed to correct errors in the Premises description and in the frequency of landfill cover requirements in condition 1.2.8, Table 1.2.4.

The licences and works approvals issued for the premises since 19/10/2004;

Instrument log		
Instrument	Issued	Description
L5110/1998/8	19/10/2004	Licence reissue
W4441/2008/1	28/07/2008	Works approval for the addition of monitoring bores
L5110/1998/9	19/10/2008	Licence reissue
L5110/1998/9	23/10/2008	Licence amendment for the addition of monitoring bores
W4743/2010/1	11/10/2010	Works approval for construction of an acid (cyanide destruction) plant
W4441/2008/1	11/10/2010	Works approval for the construction of an in-pit tailings storage facility (TSF)
W3446/1998/1	25/06/2011	Works Approval for the construction of class II or III putrescible landfill site
L5510/1988/10	19/10/2011	Licence reissue
W5130/2012/1	23/03/2012	Works approval to raise embankment of TSF3
L5110/1988/10	12/06/2014	Licence conversion to REFIRE format and licence transfer to Agnew Gold Mining Company Pty Ltd
L5110/1988/10	05/05/2016	Licence amendment – Transfer and removal of tenements resulting in adjustments to conditions maps and figures, removal of redundant licence conditions and align to current licence format.
L5110/1988/10	23/05/2016	Administrative amendment to correct errors in the Premises description, to correct the amount for volume of waste allowed in condition 1.2.1 and the frequency of landfill cover requirements in Table 1.2.4.

Severance

It is the intent of these licence conditions that they shall operate so that, if a condition or a part of a condition is beyond the power of this licence to impose, or is otherwise *ultra vires* or invalid, that condition or part of a condition shall be severed and the remainder of these conditions shall nevertheless be valid to the extent that they are within the power of this licence to impose and are not otherwise *ultra vires* or invalid.

END OF INTRODUCTION



Licence conditions

1 General

1.1 Interpretation

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

1.1.2 For the purposes of this licence, unless the contrary intention appears:

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

'acceptance criteria' has the meaning defined in Landfill Definitions;

'annual period' means the inclusive period from 1 January until 31 December in the following year;

'AS/NZS 5667.1' means the Australian Standard AS/NZS 5667.1 *Water Quality – Sampling – Guidance of the Design of sampling programs, sampling techniques and the preservation and handling of samples*;

'AS/NZS 5667.11' means the Australian Standard AS/NZS 5667.11 *Water Quality – Sampling – Guidance on sampling of groundwaters*;

'clean fill' has the meaning defined in Landfill Definitions;

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

'CEO' for the purpose of correspondence means;

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

'contaminated solid waste' has the meaning defined in Landfill Definitions;

'controlled waste' has the definition in Environmental Protection (Controlled Waste) Regulations 2004;

'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;

'freeboard' means the distance between the maximum water surface elevations and the top of retaining banks or structures at their lowest point;

'inert waste type 1' has the meaning defined in Landfill Definitions;

'inert waste type 2' has the meaning defined in Landfill Definitions;

'hardstand' means a surface with a permeability of 10^{-9} metres/second or less;



'Landfill Definitions' means the document entitled "Landfill Waste Classification and Waste Definitions 1996 (as amended December 2009) published by the Chief Executive Officer and as amended from time to time;

'licence' means this licence numbered L5510/1988/10 and issued under the Act;

'Licensee' means the person or organisation named as Licensee on page 1 of the Licence;

'mbgl' means metres below ground level;

'NATA' means the National Association of Testing Authorities, Australia;

'NATA accredited' means in relation to the analysis of a sample that the laboratory is NATA accredited for the specified analysis at the time of the analysis;

'Premises' means the area defined in the premises map in Schedule 1 and listed as the premises address on page 1 of the licence;

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

'Schedule 1' means Schedule 1 of this licence unless otherwise stated;

'Schedule 2' means Schedule 2 of this licence unless otherwise stated;

'special waste type 1' has the meaning defined in Landfill Definitions;

'special waste type 2' has the meaning defined in Landfill Definitions;

'spot sample' means a discrete sample representative at the time and place at which the sample is taken;

'TSF' means Tailings Storage Facility.

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

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

1.2 Premises operation

1.2.1 The Licensee shall ensure that wastes produced on the premises are only subjected to the process(es) set out in Table 1.2.1 and in accordance with any process limits described in that table.

Table 1.2.1: Management of waste			
Waste type	Waste Code	Process(es)	Process limits ^{1,2}
Clean fill	N/A	Storage, handling and disposal of waste by landfilling	<p>All waste types except sewage</p> <p>No more than 1 100 tonnes per year of all waste types cumulatively shall be disposed of by landfilling.</p> <p>Disposal of waste by landfilling shall only take place within the landfill area shown on the map of emission points in Schedule 1.</p> <p>Waste shall be placed in a defined trench, the</p>
Contaminated Solid Waste			
Inert Waste Type 1			
Inert Waste Type 2			
Putrescibles Contaminated			



Solid Waste			<p>active tipping area shall be restricted to a maximum linear length of 30 metres.</p> <p>The separation distance between the base of the landfill and the highest groundwater level shall not be less than 3m.</p> <p>Must meet the acceptance criteria for Class II landfills.</p> <p>Asbestos Waste</p> <p>Only to be disposed of into a designated asbestos disposal area within the landfill;</p> <p>Not to be deposited within 2 m of the final tipping surface of the landfill; and</p> <p>No works shall be carried out on that landfill that could lead to a release of asbestos fibres.</p>
Special Waste Type 1			

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

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

- 1.2.2 The Licensee shall ensure that tailings, decant water, dewater effluent and hydrocarbon contaminated soil are only discharged into containment cells and/or a turkey's nest with the relevant infrastructure requirements and at the locations specified in Table 1.2.2 and identified in Schedule 1.

Table 1.2.2: Containment infrastructure		
Vessel or compound	Material	Requirements
TSF 3 (cell a and cell b)	Tailings and Treated Sewage Water from Lawlers Camps	Lined with 200mm of compacted clay, or 150mm of compacted clay and 1.5mm HDPE liner to achieve a permeability of $<10^{-9}$ m/s or equivalent
Fairyland Turkey's Nest (TKN)	Mine dewater from Fairyland underground operations	Lined with 200mm of compacted clay, or 150mm of compacted clay and 1.5mm HDPE liner to achieve a permeability of $<10^{-9}$ m/s or equivalent
Lawlers TKN	Decant water from TSF 3	Lined with 200mm of compacted clay, or 150mm of compacted clay and 1.5mm HDPE liner to achieve a permeability of $<10^{-9}$ m/s or equivalent

- 1.2.3 The Licensee shall manage containment infrastructure in Table 1.2.2 such that a minimum top of embankment freeboard of 300mm or a 1 in 100 year/72 hour storm event (whichever is greater) is maintained.

- 1.2.4 The Licensee shall manage TSFs such that:
- (a) a seepage collection and recovery system is provided and used to capture seepage from the TSF;
 - (b) seepage is returned to the TSF or re-used in process;
 - (c) the supernatant pond on the TSF is minimised;
 - (d) the surface on each tailings storage facility is maintained to prevent, or minimise dust emissions.

- 1.2.5 The Licensee shall:
- (a) undertake inspections as detailed in Table 1.2.3;



- (b) where any inspection identifies that an appropriate level of environmental protection is not being maintained, take corrective action to mitigate adverse environmental consequences; and
- (c) maintain a record of all inspections undertaken.

Table 1.2.3: Inspection of infrastructure		
Scope of inspection	Type of inspection	Frequency of inspection
Mine dewater pipelines	Visual integrity	<ul style="list-style-type: none"> • Monthly during care and maintenance • Daily during operations
Tailings delivery pipelines	Visual integrity	
Tailings return water lines	Visual integrity	
Tailings deposition	Visual assessment of beaching	
Decant Pond	Visual assessment of pond, size and location	
External walls of the TSF	Visual integrity	
Internal embankment freeboard of the TSF	Visual to confirm required freeboard capacity is available	

- 1.2.6 The Licensee shall ensure that all pipelines containing environmentally hazardous materials are either:
- (a) equipped with automatic cut-outs in the event of a pipe failure; or
 - (b) provided with a secondary containment sufficient to contain any spill for a period equal to the time between routine inspections; and/or
 - (c) equipped with telemetry systems and pressure sensors to allow the detection of leaks and failures.

- 1.2.7 The Licensee shall manage the landfilling activities to ensure:
- (a) waste is levelled and compacted after it is discharged; and
 - (b) waste is placed and compacted to ensure all faces are stable and capable of retaining rehabilitation material; and
 - (c) rehabilitation of a cell or phase takes place within 6 months after disposal in that cell or, phase has been completed.

- 1.2.8 The Licensee shall ensure that cover is applied to waste in the tipping area in accordance with Table 1.2.4 and that sufficient stockpiles of cover are maintained on site at all times for the tipping area of the site to be covered, in accordance with this condition, at least twice.

Table 1.2.4: Cover requirements			
Waste Type	Material	Depth	Timescales
Clean Fill	No cover required	N/A	N/A
Inert Waste Type 1	No cover required	N/A	N/A
Inert Waste Type 2	Inert waste type 1, soil or clay	100mm	By the end of the fortnight in which the waste was deposited. Plastic waste with the potential to become windblown shall be covered as soon as practicable after deposit.
Putrescible	Inert Waste Type 1, soil or clay	150mm	To be covered by the end of the week in which the waste was deposited with sufficient quantities of Type 1 inert waste, clean fill or other appropriate cover material to prevent the spread of fire and harbouring of disease vectors.
Special Waste Type 1	Inert waste type 1 or clean fill	Progressive cover; 300mm	Following deposition and prior to compaction



	Solid waste or soil	Final Cover: 1000mm	By the end of the working day in which the waste was deposited

1.2.9 The Licensee shall ensure that wind-blown waste is contained within the boundary of the landfill and that wind-blown waste is returned to the tipping area on at least a monthly basis.

2 Emissions

2.1 General

2.1.1 The Licensee shall record and investigate the exceedance of any descriptive or numerical limit specified in this Licence.

2.2 Emissions to land

2.2.1 The Licensee shall ensure that where waste is emitted to land from the emission points in Table 2.2.1 it is done so in accordance with the conditions of this Licence.

Table 2.2.1: Emissions to land

Emission point reference	Description	Source including abatement
Daisy Queen pit	Receiving environment – previously mined pit	Water from dewatering operations of Lawlers mine operations

3 Monitoring

3.1 General monitoring

3.1.1 The Licensee shall ensure that:

- (a) all water samples are collected and preserved in accordance with AS/NZS 5667.1;
- (b) all groundwater sampling is conducted in accordance with AS/NZS 5667.11; and
- (c) all laboratory samples are submitted to and tested by a laboratory with current NATA accreditation for the parameters being measured [unless indicated otherwise in relevant the table].

3.2 Monitoring of point source emissions to groundwater

3.2.1 The Licensee shall undertake the monitoring in Table 3.2.1 according to the specifications in that table.

Table 3.2.1: Monitoring of emissions to groundwater

Emission point reference	Parameter	Units	Frequency
Water from mine dewatering programme discharged from the Fairyland pit to the Daisy Queen pit.	pH	pH units	Quarterly ¹
	Electrical conductivity at 25°C	µS/cm	
	Total dissolved solids	mg/L	
	Cadmium		
	Arsenic		
	Copper		
	Mercury		
Selenium			

Note 1: Quarterly monitoring is to be undertaken at least 45 days apart.



3.3 Monitoring of inputs and outputs

3.3.1 The Licensee shall undertake the monitoring in Table 3.3.1 according to the specifications in that table.

Table 3.3.1: Monitoring of inputs and outputs				
Input/Output	Parameter	Units	Averaging period	Frequency
Mine dewatering discharged from the Fairyland pit to the Daisy Queen pit	Cumulative volume	KL	N/A	Quarterly ¹

Note 1: Quarterly monitoring is undertaken at least 45 days apart.

3.4 Ambient environmental quality monitoring

3.4.1 The Licensee shall undertake the monitoring in Table 3.4.1 according to the specifications in that table and record and investigate results that do not meet any limit specified.

Table 3.4.1: Monitoring of ambient groundwater quality						
Monitoring point reference and location	Parameter	Target	Limit	Units	Averaging period	Frequency
TSF3 monitoring bores; MB1, MB2, MB3, MB4, MB5, MB6, MB7, MB8, MB9 and MB10	Standing water level (SWL) ²	6	4	mbgl	Spot sample	Monthly ³
	L17, L18, L34, L52 and L53	Standing water level (SWL) ²	-	4		mbgl
L8 and Satellite Well	pH ¹	-	-	pH units	Annual	Annual
	total dissolved solids ¹	-	-	mg/L		
	Cadmium	-	-	mg/L		
	Arsenic	-	-	mg/L		
	Copper	-	-	mg/L		
	Weak acid dissociable cyanide	-	-	mg/L		
	Mercury	-	-	mg/L		
	Selenium	-	-	mg/L		
L8 and Satellite Well	Standing water level (SWL) ²	6	4	mbgl	Quarterly ⁴	Quarterly ⁴
	pH ¹	-	6.0 – 9.0	pH units		
	total dissolved solids ¹	-	2000	mg/L		
	Cadmium	-	0.01	mg/L		
	Arsenic	-	0.5	mg/L	Annual	Annual
	Copper	-	0.5	mg/L		
	Weak acid dissociable cyanide	-	0.5	mg/L		
	Mercury	-	0.002	mg/L		
Selenium	-	0.2	mg/L			

Note 1: Field sample results are to be reported as per condition 5.2.1. An exemption from NATA laboratory analysis is allowed given geographical remoteness of the sample site and the short holding time of the parameter.



Note 2: Standing water level shall be determined prior to collection of water samples.

Note 3: Monthly monitoring is undertaken at least 15 days apart;

Note 4: Quarterly monitoring is undertaken at least 45 days apart.

- 3.4.2 The Licensee shall, upon becoming aware that groundwater levels in monitoring bores are shallower than 6 metres below ground level, within 6 months, design and implement a groundwater recovery plan.
- 3.4.3 The Licensee shall, upon becoming aware that groundwater quality in monitoring bores L8 and/or Satellite Well exceed the limit for any parameter in Table 3.4.1, within 6 months, design and implement a groundwater recovery plan to protect water quality in downstream resources.
- 3.4.4 The Licensee shall ensure that the groundwater recovery plan required by either condition 3.4.2 or 3.4.3 of this licence includes:
- (a) notification to the CEO in writing of when and in how many bores the limit could not be met;
 - (b) any significant environmental impacts observed;
 - (c) strategies to achieve the groundwater level or groundwater quality limit including predicted increases in groundwater recovery and any additional recovery bores or trenches required;
 - (d) predicted timeframes to achieve the groundwater level or groundwater quality limit and
 - (e) strategies to ensure the limit will be met in the future.
- 3.4.5 The groundwater recovery plan outlined in condition 3.4.4 shall be submitted to the CEO for review prior to implementation.

4 Information

4.1 Records

- 4.1.1 All information and records required by the licence shall:
- (a) be legible;
 - (b) if amended, be amended in such a way that the original and subsequent amendments remain legible or are capable of retrieval;
 - (c) except for records listed in 4.1.1(d) be retained for at least 6 years from the date the records were made or until the expiry of the licence or any subsequent licence; and
 - (d) for those following records, be retained until the expiry of the licence and any subsequent licence:
 - (i) off-site environmental effects; or
 - (ii) matters which affect the condition of the land or waters.
- 4.1.2 The Licensee shall complete an Annual Audit Compliance Report indicating the extent to which the Licensee has complied with the conditions of the licence, and any previous licence issued under Part V of the Act for the premises for the previous annual period.
- 4.1.3 The Licensee shall implement a complaints management system that as a minimum records the number and details of complaints received concerning the environmental impact of the activities undertaken at the premises and any action taken in response to the complaint.

4.2 Reporting

- 4.2.1 The Licensee shall submit to the CEO an Annual Environmental Report within 59 calendar days after the end of the annual period. The report shall contain the information listed in Table 4.2.1 in the format or form specified in that table.



Table 4.2.1: Annual Environmental Report		
Condition or table (if relevant)	Parameter	Format or form¹
-	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
4.1.2	Compliance	Annual Audit Compliance Report (AACR)
4.1.3	Complaints summary	None specified
Table 3.2.1	Monitoring of emissions to groundwater	None specified
Table 3.3.1	Monitoring of inputs and outputs	None specified
Table 3.4.1	Monitoring of ambient groundwater quality	None specified
Table 3.4.1	Limit exceedances	None specified

Note 1: Forms are in Schedule 2

- 4.2.2 The Licensee shall ensure that the Annual Environmental Report also contains:
- (a) an assessment of the information contained within the report against previous monitoring results and licence limits; and
 - (b) a list of any original monitoring reports submitted to the Licensee from third parties for the annual period and make these reports available on request.

4.3 Notification

- 4.3.1 The Licensee shall ensure that the parameters listed in Table 4.3.1 are notified to the CEO in accordance with the notification requirements of the table.

Table 4.3.1: Notification requirements			
Condition or table (if relevant)	Parameter	Notification requirement¹	Format or form²
2.1.1	Breach of any limit specified in the licence	Part A: As soon as practicable but no later than 5pm of the next usual working day. Part B: As soon as practicable but no later than 5pm of the next usual working day.	N1
3.4.1	Breach of any limit specified in the licence	No later than 5pm of the next usual working day.	N1

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

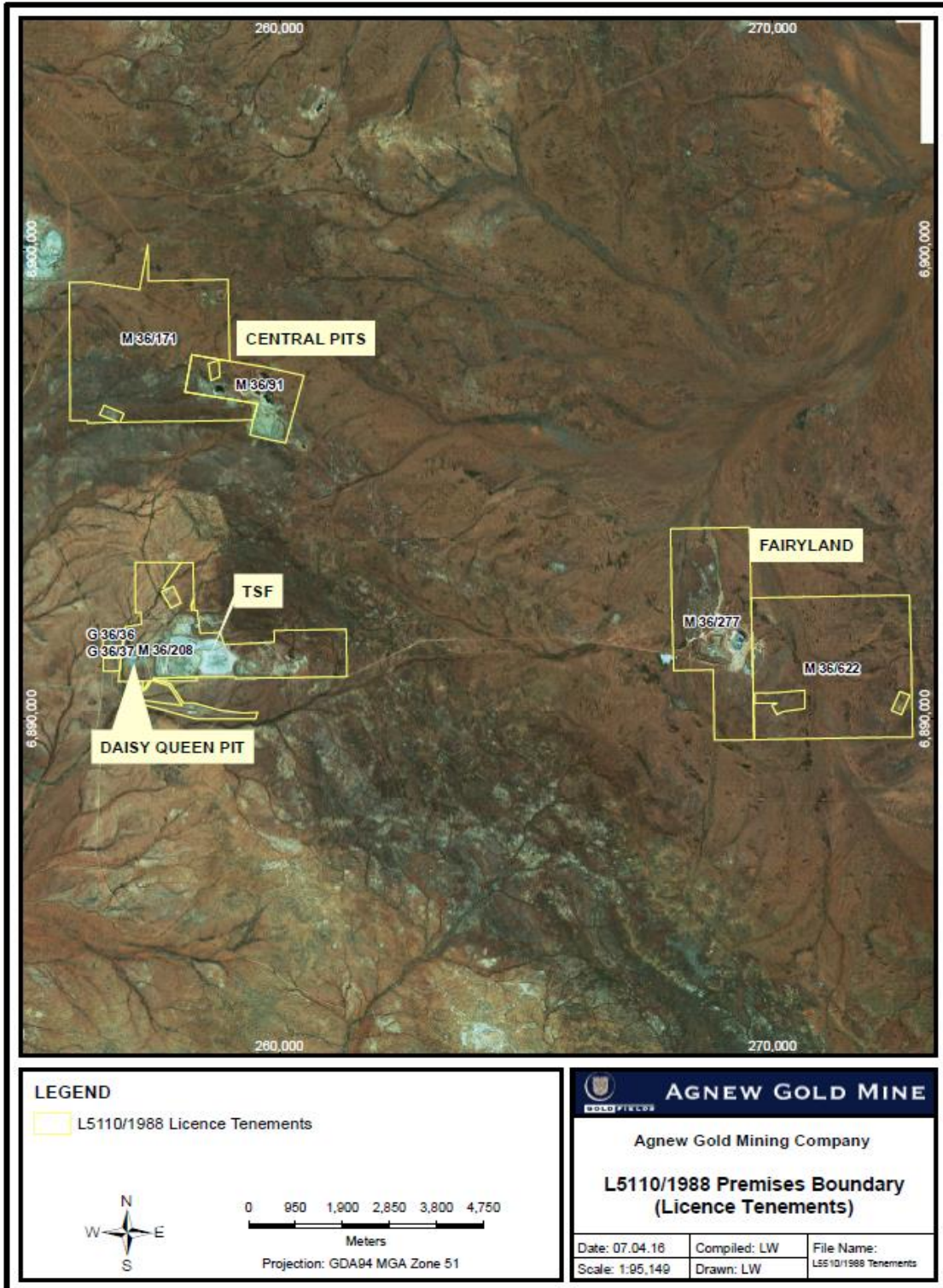
Note 2: Forms are in Schedule 2



Schedule 1: Maps

Premises map

The premises' location is shown in the map below. The yellow line depicts the premises' boundaries.





Map of storage locations

The locations of containment infrastructure detailed in Table 1.3.1 are shown in the maps below.



LEGEND

L5110/1988 Licence Tenements

Projection: GDA04 MGA Zone 51

AGNEW GOLD MINE
GOLD FIELDS

Agnew Gold Mining Company

L5110/1988
Lawlers Containment Infrastructure

Date: 25.10.15	Compiled: SLS	File Name:
Scale: 1:12,000	Drawn: SLS	Lawlers Containment



LEGEND

L5110/1988 Licence Tenements

Meters

Projection: GDA94 MGA Zone 51

AGNEW GOLD MINE
GOLD FIELDS

Agnew Gold Mining Company

L5110/1988
Fairyland Containment Infrastructure

Date: 25.10.15	Compiled: SLS	File Name:
Scale: 1:10,000	Drawn: SLS	Fairyland Containment



Map of monitoring locations

Site groundwater monitoring bores defined in Table 3.4.1 are shown below.



LEGEND

- L5110/1988 Licence Tenements
- Licence Bores

Projection: GDA94 MGA Zone 51

AGNEW GOLD MINE

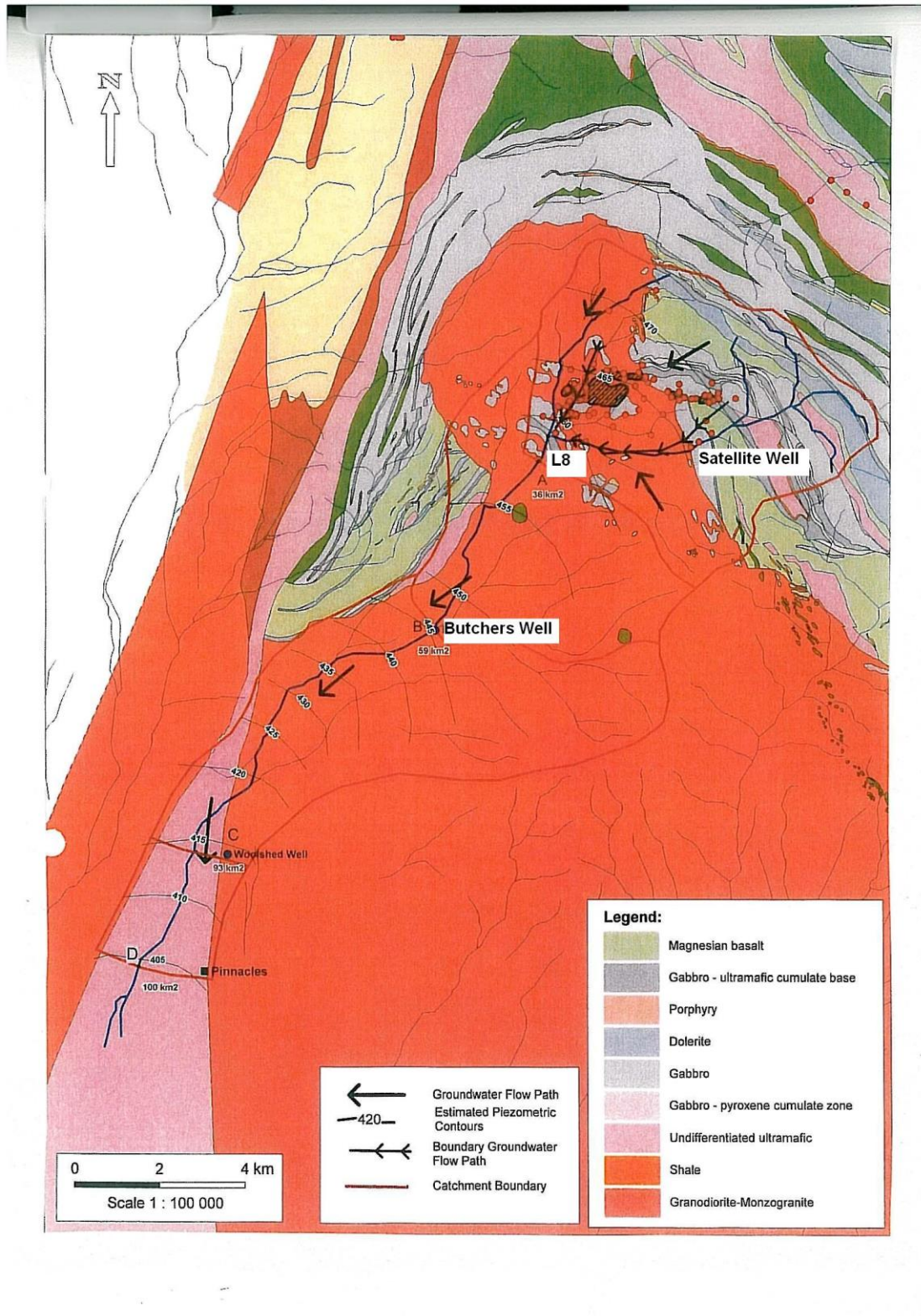
Agnew Gold Mining Company

**L5110/1988
Licence Bore Locations**

Date: 23.10.15	Compiled: SLS	File Name:
Scale: 1:25,000	Drawn: SLS	L5110/1988 Bores



The map below shows the location of monitoring wells L8 and Satellite Well (shown in the previous map) in relation to the local groundwater flows and downstream groundwater wells, including Butchers Well.





Schedule 2: Reporting & notification forms

These forms are provided for the proponent to report monitoring and other data required by the Licence. They can be requested in an electronic format.

ANNUAL AUDIT COMPLIANCE REPORT PROFORMA

SECTION A LICENCE DETAILS

Licence Number:	Licence File Number:
Company Name:	ABN:
Trading as:	
Reporting period: _____ to _____	

STATEMENT OF COMPLIANCE WITH LICENCE CONDITIONS

1. Were all conditions of the Licence complied with within the reporting period? (please tick the appropriate box)

Yes Please proceed to Section C

No Please proceed to Section B

Each page must be initialled by the person(s) who signs Section C of this Annual Audit Compliance Report (AACR).

Initial:



SECTION B DETAILS OF NON-COMPLIANCE WITH LICENCE CONDITION.

Please use a separate page for each Licence condition that was not complied with.

a) Licence condition not complied with:	
b) Date(s) when the non compliance occurred, if applicable:	
c) Was this non compliance reported to DER?:	
<input type="checkbox"/> Yes <input type="checkbox"/> Reported to DER verbally Date _____ <input type="checkbox"/> Reported to DER in writing Date _____	<input type="checkbox"/> No
d) Has DER taken, or finalised any action in relation to the non compliance?:	
e) Summary of particulars of the non compliance, and what was the environmental impact:	
f) If relevant, the precise location where the non compliance occurred (attach map or diagram):	
g) Cause of non compliance:	
h) Action taken, or that will be taken to mitigate any adverse effects of the non compliance:	
i) Action taken or that will be taken to prevent recurrence of the non compliance:	

Each page must be initialled by the person(s) who signs Section C of this AACR

Initial:



SECTION C

SIGNATURE AND CERTIFICATION

This Annual Audit Compliance Report (AACR) may only be signed by a person(s) with legal authority to sign it. The ways in which the AACR must be signed and certified, and the people who may sign the statement, are set out below.

Please tick the box next to the category that describes how this AACR is being signed. If you are uncertain about who is entitled to sign or which category to tick, please contact the licensing officer for your premises.

If the licence holder is		The Annual Audit Compliance Report must be signed and certified:
An individual	<input type="checkbox"/> <input type="checkbox"/>	by the individual licence holder, or by a person approved in writing by the Chief Executive Officer of the Department of Environment Regulation to sign on the Licensee's behalf.
A firm or other unincorporated company	<input type="checkbox"/> <input type="checkbox"/>	by the principal executive officer of the Licensee; or by a person with authority to sign on the Licensee's behalf who is approved in writing by the Chief Executive Officer of the Department of Environment Regulation.
A corporation	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	by affixing the common seal of the Licensee in accordance with the <i>Corporations Act 2001</i> ; or by two directors of the Licensee; or by a director and a company secretary of the Licensee, or if the Licensee is a proprietary company that has a sole director who is also the sole company secretary – by that director, or by the principal executive officer of the Licensee; or by a person with authority to sign on the Licensee's behalf who is approved in writing by the Chief Executive Officer of the Department of Environment Regulation.
A public authority (other than a local government)	<input type="checkbox"/> <input type="checkbox"/>	by the principal executive officer of the Licensee; or by a person with authority to sign on the Licensee's behalf who is approved in writing by the Chief Executive Officer of the Department of Environment Regulation.
a local government	<input type="checkbox"/> <input type="checkbox"/>	by the chief executive officer of the Licensee; or by affixing the seal of the local government.

It is an offence under section 112 of the *Environmental Protection Act 1986* for a person to give information on this form that to their knowledge is false or misleading in a material particular. There is a maximum penalty of \$50,000 for an individual or body corporate.

I/We declare that the information in this annual audit compliance report is correct and not false or misleading in a material particular.

SIGNATURE: _____

SIGNATURE: _____

NAME:
(printed) _____

NAME:
(printed) _____

POSITION: _____

POSITION: _____

DATE: ____/____/____

DATE: ____/____/____

SEAL (if signing under seal)



Licence: L5110/1988/10
Form: N1

Licensee: Agnew Gold Mining Company Pty Ltd
Date of breach:

Notification of detection of the breach of a limit or any failure or malfunction of any pollution control equipment or any incident which has caused, is causing or may cause pollution.

These pages outline the information that the operator must provide.
Units of measurement used in information supplied under Part A and B requirements shall be appropriate to the circumstances of the emission. Where appropriate, a comparison should be made of actual emissions and authorised emission limits.

Part A

Licence number	
Name of operator	
Location of premises	
Time and date of the detection	

Notification requirements for the breach of a limit	
Emission point reference/ source	
Parameter(s)	
Limit	
Measured value	
Date and time of monitoring	
Measures taken, or intended to be taken, to stop the emission	

Notification requirements for any failure or malfunction of any pollution control equipment or any incident which has caused, is causing or may cause pollution	
Date and time of event	
Reference or description of the location of the event	
Description of where any release into the environment took place	
Substances potentially released	
Best estimate of the quantity or rate of release of substances	
Measures taken , or intended to be taken, to stop any emission	
Description of the failure or accident	



Part B

Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident.	
Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission.	
The dates of any previous N1 notifications for the premises in the preceding 24 months.	

Name	
Post	
Signature on behalf of	
Date	



Decision Document

Environmental Protection Act 1986, Part V

Proponent: Agnew Gold Mining Company Pty Ltd

Licence: L5110/1988/10

Registered office: Level 5, 50 Colin Street
WEST PERTH WA 6005

ACN: 098 385 883

Premises address: Lawlers Gold Mine
Mining tenements M36/91, M36/171, M36/208, M36/277, M36/622,
L36/161, L36/162, G36/36, G36/37, G36/38, and G36/42
LEINSTER WA 6437
As depicted in Schedule 1 of the licence.

Issue date: Thursday, 13 October 2011

Commencement date: Wednesday, 19 October 2013

Expiry date: Sunday, 18 October 2020

Decision

Based on the assessment detailed in this document the Department of Environment Regulation (DER), has decided to issue a licence amendment. DER considers that in reaching this decision, it has taken into account all relevant considerations and legal requirements and that the Licence and its conditions will ensure that an appropriate level of environmental protection is provided.

Decision Document prepared by: Neville Welsh
Senior Licensing Officer

Decision Document authorised by: Tim Gentle
Manager Licensing – (Resources Industries)



Contents

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1 Purpose of this Document

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

2 Administrative summary

Administrative details		
Application type	Works Approval <input type="checkbox"/>	<input type="checkbox"/>
	New Licence <input type="checkbox"/>	<input type="checkbox"/>
	Licence amendment <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Works Approval amendment <input type="checkbox"/>	<input type="checkbox"/>
Activities that cause the premises to become prescribed premises	Category number(s)	Assessed design capacity
	5	1 000 000 tonnes per year
	6	1 000 000 tonnes per year
	89	1 100 tonnes per year
Application verified	Date: 09/12/2015	
Application fee paid	Date: N/A	
Works Approval has been complied with	Yes <input type="checkbox"/>	No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
Compliance Certificate received	Yes <input type="checkbox"/>	No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
Commercial-in-confidence claim	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Commercial-in-confidence claim outcome	N/A	
Is the proposal a Major Resource Project?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Was the proposal referred to the Environmental Protection Authority (EPA) under Part IV of the <i>Environmental Protection Act 1986</i> ?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
	Referral decision No: <input type="checkbox"/>	
	Managed under Part V <input type="checkbox"/>	



		Assessed under Part IV <input type="checkbox"/>
Is the proposal subject to Ministerial Conditions?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Ministerial statement No: N/A EPA Report No: N/A
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the <i>Environmental Protection Act 1986</i>)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Department of Water consulted Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Is the premises within an Environmental Protection Policy (EPP) Area Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If Yes include details of which EPP(s) here.		
Is the premises subject to any EPP requirements? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If Yes, include details here, eg Site is subject to SO ₂ requirements of Kwinana EPP.		

3 Executive summary of proposal

Premises description and licence summary

Agnew Gold Mining Company Pty Ltd (Agnew Gold) is wholly owned by Goldfields Limited; an international producer of gold with operating mines in Australia, Ghana, Peru and South Africa. Agnew Gold purchased Lawlers Gold Mine (Lawlers) from Barrick (Australia Pacific) Limited in October 2013.

Lawlers is located approximately 9km south of Agnew and 30km south-east of Leinster, Western Australia. Lawlers consists of one underground operation (Fairlyland), a mill and numerous historic open-cut pits and associated waste rock dumps across mining and general purpose leases.

Lawlers Gold Mine was originally assessed as a “prescribed premises” under category 5 (processing or beneficiation of metallic or non-metallic ore), 6 (mine dewatering), 33 (chemical blending and mixing), 63 (class I inert landfill site), 64 (class II or III landfill site) and 85 (sewage facility) under schedule 1 of the Environmental Protection Regulations 1987.

The Lawlers gold processing plant uses a carbon-in-pulp (CIP) process to separate gold oxide from primary ores. Ore is milled and mixed with lime and water to form resultant slurry which is passed through a leach and absorption circuit consisting of various agitated vessels, leaching tanks and absorption tanks containing carbon. Waste in the form of tailings is pumped along a bunded pipeline corridor to a two celled tailings storage facility (TSF) where it is discharged in a manner that maximises solids consolidation and process water return.

To ensure the TSF maintains compliance with the International Cyanide Compliance Code (ICMC) the tailings must have a cyanide concentration less than 50 parts per million (ppm) when the tailings are deposited. A hot Caro’s acid plant is present onsite for the mixing and blending of hydrogen peroxide and sulphuric acid to form H₂SO₅ which is used for rapid and effective deconstruction of free and Weak Acid Dissociable (WAD) cyanide in the tailings. Due to the instability of this mixture, the solution must be prepared onsite and used quickly after preparation. The mixture enters the tailings hopper where the cyanide slurry and sulphuric acid mixture remain for a short residence time to complete the cyanide reaction.

A wastewater treatment plant (WWTP) with the capacity to treat up to 80m³ per day was located at the Lawlers accommodation village. Grey and black water was treated by the WWTP using extended aeration activated sludge with separation and denitrification. Treated wastewater from this process was discharged into the tailings storage facility (TSF) for reuse within the processing circuit, whilst



solid waste was removed by a licensed contractor to the Leonora Sewage Treatment Plant for disposal.

Groundwater is sourced from a number of locations across the Lawlers operation and is used for various purposes. Water extracted from the Fairyland pit and Daisy Queen pit is used for mineral ore processing and dust suppression. The Fairyland Borefield located approximately 6.5km to the north-east of the processing plant supplies Lawlers with groundwater for domestic water purposes.

Previously waste facilities at Lawlers were licensed under category 63 (class I inert landfill site) and 64 (class II or III). To ensure consistency with DER's approach for licensing mine sites that manage waste facilities, these two categories were removed and substituted with category 89. Lawlers have two operational landfills onsite due to the large geographic area encompassed in the licence. These facilities include the Lawlers and Fairyland landfill sites which reside within waste rock dumps. On average, Lawlers dispose of 1100 tonnes of waste per year.

5 May 2016 Amendment

This licence amendment was proponent initiated to amend the mining tenements of the Premises which subsequently have a flow on effect requiring amendments to licence conditions relevant to those tenements removed. The amendment of tenements resulted in the revision and replacement of schedule 1 maps and figures. This amendment also provided the opportunity to address redundant conditions and align the licence with the new licence format.

Errors made during the last amendment of 20 June 2014 in transposing ambient groundwater limits and targets have been corrected. The analytes for the mine dewatering quality monitoring program have also been amended to be consistent with analytes sampled in the ambient groundwater monitoring program.

Categories 33 and 85 were removed from the licence as mixing of cyanide no longer occurs on the Premises (category 33) and the Wastewater Treatment Plant has been decommissioned and removed (category 85).

23 May 2016 Amendment

An administrative amendment was completed to correct errors in the Premises description, in the authorised volume of waste able to be disposed of in condition 1.2.1, Table 1.2.1 and in the frequency of landfill cover requirements in condition 1.2.8, Table 1.2.4.



4 Decision table

All applications are assessed under the *Environmental Protection Act 1986*, the Environmental Protection Regulations 1987, and the risk matrix attached to this Decision Document in Section 6 and DER's Industry Regulation Emissions and Discharges Assessment Framework. Where other references have been used in making the decision they are detailed in the decision table.

DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
Tenement amendment and requested amendments	N/A	<p>Tenements M36/174, M36/314, L36/43, L36/44, L36/83, L36/108 and L36/196 have been removed from this licence. The removal of these tenements has resulted in amendments to conditions 1.3.2, 2.5.1, 3.5.1, 3.6.1.</p> <p>This amendment updates former condition 1.3.5 inspection frequency from 'Daily' to 'Monthly', plus former condition 3.8.1 will be amended to rectify a previous error to change targets to 6 mbgl and limit to 4 mbgl. As part of the licence format review, all targets will be removed from the licence.</p> <p>Schedule 1 maps 1 to 4 have been replaced with more recent accurate maps, Map 5 remains unchanged and map 6 has been removed from the licence. Schedule 2 Form ET1 has been removed and substituted by existing form N1.</p>	N/A
Interpretation	L1.1.3 - L1.1.4	<p>The definitions of 'code of practice for the storage and handling of dangerous goods', 'dangerous goods', 'landfill waste classification and waste definitions 1996 (as amended December 2009)' and 'fugitive emissions' have been removed.</p> <p>The definition of 'acceptable criteria', 'clean fill', 'CEO' for the purpose of correspondence, 'contaminated solid waste', 'environmentally hazardous material', 'inert waste type 1', 'inert waste type 2', 'special waste type 1', 'special waste type 2' and 'TSF' have been either added or amended to reflect the most current definitions.</p>	N/A



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
General conditions	N/A	<p>Former Condition L1.2.1 of the previous licence, which specified that the Licence did not authorise pollution and unreasonable emissions, has been removed as the condition is not valid or enforceable and is addressed under the general provisions of the <i>Environmental Protection Act 1986</i>.</p> <p>Former Condition L1.2.2, related to pollution control and monitoring equipment, has been removed from the licence as it is unclear as to which monitoring or pollution control equipment it relates to and as the site has no pollution control or monitoring equipment specified within the Licence, this condition is not applicable to this site.</p> <p>The previous licence included conditions L1.2.3 and L1.2.4 which related to specified storage and clean-up requirements for environmentally hazardous materials. These conditions have been removed from the licence. It is the Licensee's responsibility that environmentally hazardous materials are stored appropriately in a manner which prevents discharge to the environment. Any discharges to the environment may be subject to the <i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i>.</p> <p>Former condition L1.2.5 which relates to separation of stormwater from potential contamination sources is not clear or certain and does not specify what stormwater infrastructure is required to be constructed / maintained or what specific management actions are required and is removed from the licence.</p>	<i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i>
Premises operation	L1.2.1 - L1.2.9	<p>As there are no longer any conditions in the 'General Conditions' section, the 'Premises operation' conditions and tables have been re-numbered L1.2.1 to L.1.2.9.</p> <p>Conditions L1.2.4, L1.2.5, L1.2.7 and Table 1.2.4 have been amended to remove the term 'as soon as practicable' as this term is invalid and unenforceable.</p>	
	L1.2.1	<p>There have been amendments to the <i>Environmental Protection (Controlled Waste) Regulations 2004</i> which include new waste codes for controlled wastes.</p> <p>Table 1.2.1 named 'Management of waste' has been amended to reflect the Controlled Waste</p>	<i>Environmental Protection (Controlled Waste) Regulations 2004</i>



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p>changes and column titled 'Waste Code' has been inserted. See Appendix A for DER assessment of asbestos waste facilities.</p> <p>23 May 2016 Administrative Amendment</p> <p>A correction has been made to the permitted volume of waste for disposal in Table 1.2.1 in order to ensure consistency with the allowed amount under category 89.</p>	<p><i>Environmental Protection (Rural Landfill) Regulations 2002</i></p> <p><i>Environmental Protection Act 1986</i></p> <p>DER Guidance Statement: <i>Licences and Works Approvals process</i> (September 2015)</p>
	L1.2.2	Due to the change in tenements covered within the Premises boundary, containment infrastructure located at the New Holland Mine (Genesis Turkey's Nest and Bioremediation Pad) have been removed from the licence. The containment point reference column has been removed as it is now redundant.	Application supporting documentation
	L1.2.2 L1.2.3 - L1.2.5	DER's assessment and decision making is attached as Appendix B.	<i>Environmental Protection Act 1986</i>
	L1.2.6	<p>Pipelines - Emergency Operation</p> <p><u>Emission Description</u> <i>Emission:</i> Environmentally hazardous materials including hypersaline mine dewater, tailings slurry or tailings liquor (supernatant) released to land from a pipeline failure. <i>Impact:</i> Hypersaline water, tailings slurry or tailings liquor released to vegetation may result in vegetation impact or death. <i>Controls:</i> Tailings delivery and water return pipelines will be situated within bunded drains that contain catchment pits situated at low points along the pipeline route for the containment of</p>	<i>Environmental Protection Act 1986</i>



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p>spills. In the event of a pipeline failure, the drains will be able to hold the spilt hypersaline water within the sumps where it can be managed and recovered. A telemetry system with automatic cut-off sensors will be installed as part of the pipeline infrastructure which can alert operators to pipeline leaks and failures.</p> <p><u>Risk Assessment</u> <i>Consequence: Minor</i> <i>Likelihood: Rare</i> <i>Risk Rating: Low</i></p> <p><u>Regulatory Controls</u> Condition 1.2.6 specifies that pipelines containing environmentally hazardous materials are either required to be equipped with automatic cut-outs in the event of a failure; have secondary containment sufficient to contain the spill; and/or have telemetry systems and pressure sensors installed to detect leaks and failures.</p> <p><u>Residual Risk</u> <i>Consequence: Minor</i> <i>Likelihood: Rare</i> <i>Risk Rating: Low</i></p>	
	L1.2.8	<p>23 May 2016 Administrative Amendment</p> <p>Frequency of placement of cover on the landfills has been corrected to fortnightly for inert waste type 2, and weekly for putrescible waste. Refer also to Appendix A for DER's assessment and decision making.</p>	Application supporting documentation
Emissions general	L2.1.1	<p>Condition L2.1.1 has been amended to remove the terms 'or target' and 'any part of section 2 of'. As this was a previous licence condition an assessment was not required however validity and enforceability reconsidered.</p> <p>Former licence sections L2.2 to L2.4 plus sections L2.7 and L2.8 have also been removed as</p>	<p><i>Environmental Protection Act 1986</i></p> <p>Application supporting documentation</p>



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		there are no conditions in each of these sections.	
Point source emissions to groundwater including monitoring	L2.2.1	Condition L2.5.1 has been renumbered to L2.2.1. Due to the change in tenements forming the Premises' boundary, emission point 'Hidden Secret pit' has been removed from Table 2.2.1 as it is no longer within the Premises boundary. DER's assessment and decision making in relation to point source emissions to groundwater is included as Appendix C.	<i>Environmental Protection Act 1986</i> Application supporting documentation
Fugitive emissions	N/A	Former Licence conditions L2.6.1 to L2.6.2 requiring reasonable and practical measures to be implemented to reduce dust emissions and prevent visible dust emissions from crossing the premises boundary have been removed due to administrative changes in the way DER is conditioning fugitive emissions.	N/A
Noise	N/A	Noise generated from the Lawlers operation originates from the crusher, milling circuit, haulage and mobile equipment associated with the processing plant. However, given the nearest sensitive receptor is located approximately 30km from the mine site (township of Leinster), the impact of any noise emissions is likely to be minimal. No specified conditions relating to noise are included in the licence and will be managed under the provisions of the <i>Environmental Protection (Noise) Regulations 1997</i> .	<i>Environmental Protection (Noise) Regulations 1997</i>
Monitoring general	L3.1.1, L3.2.1	Condition L3.1.1 remains unchanged. Former licence sections L3.2 to L3.4 plus sections L3.7 and L3.9 have been removed as there are no conditions to these sections that require risk assessment. Former condition L3.5.1 has been renumbered to L3.2.1. Due to the change in tenements forming the Premises boundary the emission point 'and from Vivien pit to Hidden Secret pit'	<i>Environmental Protection Act 1986</i> Application supporting documentation



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		was removed from the Table.	
Monitoring of inputs and outputs	L3.3.1	Condition L3.6.1 has been renumbered to 3.3.1. The application to amend has requested the removal of 'Mine dewatering discharged from Vivien pit to Hidden Secret Pit' from the inputs and outputs table. This change presents low risk and therefore minimal impact to the environment and is considered an acceptable licence amendment.	<i>Environmental Protection Act 1986</i> Application supporting documentation
Ambient environmental quality monitoring	L3.4.1	<p>Condition L3.8.1 and Table 3.8.1 has been renumbered to 3.4.1. The application to amend has requested the replacement of the target and limits values of 6 and 4 mbgl respectively. This was also an error made by DER at the last amendment of 20 June 2014.</p> <p>DER has also corrected the error of the ambient groundwater quality limits for bores L8 and Satellite Well being classed instead as targets. Previous licences prior to 2014 imposed the groundwater quality parameters as limits given the potential to impact on a downstream groundwater resource that is used for livestock. A stock bore, Butchers Well, is located 6km south-southwest of TSF2 and Lawlers Creek to the south west.</p> <p>Frequency of monitoring of metals and metalloids in groundwater bores surrounding the TSF has been reduced to annual monitoring, given the site is in care and maintenance. If then event that operations recommence, this frequency will require review.</p> <p>Refer also to DER's assessment and decision making in relation to the Tailings Storage Facility operation in Appendix B.</p> <p>DER considers the use of targets as not enforceable as it does not clearly indicate an outcome for the licensee to achieve. Therefore targets were removed from this table and outcome based limits will remain in the licence.</p>	<i>Environmental Protection Act 1986</i> L5110/1988/10 Amendment date: 14 December 2012
Information	L4.1.1 to L4.1.3, L4.2.1 to 4.2.6	As the 'Improvement' sections of the licence have been removed, the 'Information' section has been re-numbered as number 4.	<i>Environmental Protection Act 1986</i>



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
	L4.3.1	<p>Previous condition L5.1.2 has been removed. This condition required any person who was left in charge of the Premises, to be aware of the licence conditions. This condition is not clear or enforceable as knowledge of licence conditions does not prevent breaches from occurring, and it is not a defence to offences under the <i>Environmental Protection Act 1986</i> if the Licensee or its agents claim they are unaware of the conditions.</p> <p>Condition L4.2.1 has been amended to reflect the new numbering of conditions referred to in the table.</p> <p>Condition L4.3.1 has been amended to require notification if any limit of the licence is breached (i.e. limit exceedances from table 3.4.1).</p>	
Licence Duration		<p>This licence was subject to compliance inspection and annual environmental review in 2015 and the Premises has been risk assessed as having a low risk to the environment and public health.</p> <p>In accordance with the DER's Guidance Statement, <i>Licence duration</i> (Revised May 2015), and consideration to extended the licence period for 20 years will be assessed when this licence expires. The licence expiry date has been extended to 18 October 2020.</p>	DER's Guidance Statement, <i>Licence duration</i> (Revised May 2015)



5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
08/04/2016	Proponent sent a copy of draft instrument	Comments received 13/04/2016.	Licensee comments were not included in final Licence.
05/05/2016	Licence issued.	Licensee noted errors in signed Licence regarding previous comments.	DER has made an administrative amendment to the Licence to correct identified errors.
23/05/2016	Proponent sent a copy of draft updated instrument	No comments.	
23/05/2016	Amended licence issued.		



6 Risk Assessment

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

Table 1: Emissions Risk Matrix

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



Appendix A

Premises Operation – Waste Facilities

Normal Operation

Emission Description

Emission: Asbestos fibres and putrescible waste leachate released into environment.

Impact: Contamination of surrounding land impacting water resources and/or reduced local air quality. Health impacts to humans including asbestosis.

Controls: The proponent has dug a cell trench within the defined landfill cell in the Premises for the placement and containment of asbestos and asbestos containing material.

This asbestos cell is separate from the general landfilling activities and is clearly identifiable.

Asbestos waste is covered and left undisturbed to reduce the risk of asbestos fines being released.

All other landfill wastes are covered during the life of the landfill.

Risk Assessment

Consequence: Minor

Likelihood: Unlikely

Risk Rating: Moderate

Regulatory Controls

Condition L1.2.1 identifies the waste produced at the premises and identifies the waste types, waste code (Controlled Waste Regulation), and process limits for the waste disposed of at the Premises.

Table 1.2.1 includes:

- a separation limit to ensure a 3 metre vertical separation distance between the base of the landfill and the highest groundwater level;
- within designated areas indicated in the licence schedule;
- placed in a defined trench with a restricted width of 30 metres;
- accumulative volumes of waste produced shall not exceed 1 100 tonnes per year;
- asbestos waste will be separated into a designated area greater than 2 metres from the landfill and will remain undisturbed;
- sewage waste to be disposed offsite to an appropriate facility couriered by a licensed contractor.

Condition L1.2.7 describes the management of the landfill by ensuring it is level, has stable slopes, well compacted and is capable of rehabilitation that shall be established within 6 months at the completion of the cell being filled.

Condition L1.2.8 specifies the cover material requirements and the timeframe the cover material shall be applied.

Condition L1.2.9 specifies the management methods for wind-blown waste.

The existing licence conditions provide adequate protection and ensure waste produced at the Premises is managed.

Residual Risk

Consequence: Minor

Likelihood: Unlikely

Risk Rating: Moderate



Appendix B

Premises Operation – Tailings Storage Facility

Normal Operation

Emission Description

Emission: Seepage from the TSF into the surrounding groundwater.

Impact: Seepage can result in groundwater mounding underneath the TSF, and if rising groundwater levels are within 4 m of the ground level, the groundwater may inundate rootzones of vegetation resulting in potential death.

Seepage may also alter the local groundwater quality due its elevated metals, metalloids, cyanide and salinity in relation to the receiving groundwater system. Unchecked seepage may result in contamination of a downstream water resource at Butchers Well (located to the south west of the Premises – refer map in Schedule 1). This resource is used for livestock drinking water.

Controls: Adequate design of the TSF with management measures including regular monitoring of groundwater around the TSF, regular inspections of infrastructure and surrounding vegetation. Seepage trenches are also in place around the TSF to recover seepage.

Risk Assessment

Consequence: Moderate

Likelihood: Possible

Risk Rating: Moderate

Regulatory Controls

Condition L1.2.2 ensures that tailings are only deposited into the specified containment infrastructure.

Condition L1.2.5 ensures that required inspections of the TSF are taken.

Conditions L1.2.3 and L1.2.4 are included in the Licence to ensure the TSF is managed and operated appropriately. An annual water balance is a consideration should impacts become apparent in the future.

Condition L3.4.1 requires ambient monitoring of groundwater quality in the area of the TSF and provides a target and limit for standing water levels in monitoring bores. Groundwater quality limits are also in place for the two monitoring bores upstream of Butchers Well (Satellite Well and L8)

In the event that current management practices are inadequate and groundwater monitoring results indicate that the groundwater standing water level target or groundwater quality limits are not met, a groundwater recovery plan must be developed and implemented (refer conditions L3.4.2, L3.4.3, L3.4.4 and L3.4.5).

Residual Risk

Consequence: Moderate

Likelihood: Possible

Risk Rating: Moderate

Emergency Operation

Emission Description

Emission: Overtopping of tailings liquor from the TSF during an extreme rainfall event or due to operator error.

Impact: Tailings (supernatant) liquor may adversely impact health of local vegetation and may affect the water quality of adjacent surface water resources, dependent of the size of the release and whether it occurs during a rainfall event.



Controls: The Licensee has committed to the maintaining a minimum freeboard of 300mm on the internal embankment of the TSF at all times and to daily visual inspections of the TSF (external TSF walls, surface ponding and tailings deposition).

Risk Assessment

Consequence: Moderate

Likelihood: Rare

Risk Rating: Moderate

Regulatory Controls

Condition L1.2.2 specifies the authorised containment infrastructure. Condition L1.2.3 specifies that the embankment freeboard must be below or at 300mm or the freeboard sufficient to contain a 1 in 100 year, 72 hour duration rainfall event (whichever is greater). Condition L1.2.4 requires that the supernatant pond on the TSF is minimised.

Daily inspections of embankment freeboard and tailings beaching are required by condition L1.2.5. L1.2.5 includes provision for monthly inspections when the mine is in care and maintenance.

Residual Risk

Consequence: Moderate

Likelihood: Rare

Risk Rating: Moderate



Appendix C

Point source emissions to groundwater, including monitoring – dewatering from one pit to another pit

Normal Operation

The Licensee has a Department of Water Licence permitting the abstraction of 4,830,000 kL mine dewater per annual period.

Emission Description

Emission: Mine dewatering discharge from Fairyland Pit into Daisy Queen receiving pit, then discharging to groundwater.

Impact: Concentration of salts in groundwater may occur due to evaporation in the pit, increasing salinity of the water source over time and raising local groundwater levels due to increased water level height of the receiving pit.

Controls: Condition L3.2.1 requires quarterly monitoring of the water quality. Condition L3.3.1 requires the volume being discharged from Fairyland pit to the Daisy Queen pit to be recorded.

Risk Assessment

Consequence: Minor, not significant as the dewater is of similar quality to that of the receiving environment.

Likelihood: Unlikely

Risk Rating: Moderate

Regulatory Controls

Condition L3.3.1 requires quarterly monitoring of the dewater quality and volumes being discharged from Fairyland pit to the Daisy Queen pit.

Condition L1.2.6 covers the operation of the infrastructure pipeline and leak detection addresses prevention and management of pipeline leaks.

Residual Risk

Consequence: Minor

Likelihood: Rare

Risk Rating: Low