



# Licence

## *Environmental Protection Act 1986, Part V*

---

**Licensee:** FMR Investments Pty Ltd

**Licence:** L4680/1988/13

---

**Registered office:** Level 2, 2 Hardy Street  
SOUTH PERTH WA 6151

**ACN:** 009 411 349

**Premises address:** Greenfields Processing Site  
Part mining tenement M15/154 and Lot 102 on Plan 40393  
Great Eastern Highway  
COOLGARDIE WA 6429  
as depicted in Schedule 1.

**Issue date:** Thursday, 22 October 2015

**Commencement date:** Sunday, 1 November 2015

**Expiry date:** Saturday, 31 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	50 000 tonnes or more per year	1 400 000 tonnes per annual period

**Conditions**

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

Date signed: 22 October 2015

.....  
**Danielle Eyre**

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



## Contents

Licence	1
Contents	2
Introduction	2
Licence conditions	4
1 General	4
2 Monitoring	6
3 Information	7
Schedule 1: Maps	10
Schedule 2: Reporting & notification forms	12

## 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 regulates 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

The Greenfield's processing plant and tailings storage facility (TSF) are located approximately 3 km to the north-east of Coolgardie. The processing facility is located on M15/154 under a lease agreement with the tenement holders (Focus Minerals Pty Ltd) and the TSF's are located on Lot 102 on Plan 40393 owned by FMR Investments Pty Ltd.

Greenfield's processing plant is a standard carbon-in-leach gold mill, which toll treats ore from a variety of sources and has a nominal 1 400 000 tonnes per year capacity. Gold ore is transported via a road train and stockpiled on the facility's run-of-mine pad where it is segregated depending on its source. The ore is fed into a ROM bin where it enters the crushing circuit which consists of three stages of crushing. The TSF is located approximately 200 m east of the plant and comprises of three main cells (TSF1, TSF2 and TSF3).

This Licence is the successor to licence L4680/1988/12 and includes an update into the current DER Licence template. The licences and works approvals issued for the Premises for the 5 licences prior to issue of this Licence are:

Instrument log		
Instrument	Issued	Description
L4680/1988/8	09/09/2002	Licence re-issue
W3706/1988/1	16/10/2002	Works Approval for pipeline from Gala open pit to Greenfields pit
W3850/1988/1	27/10/2003	Works Approval for construction of third raise for TSF2
L4680/1988/9	30/09/2003	Licence re-issue
W4108/1988/1	29/05/2005	Works Approval for construction of fourth raise for TSF2
L4680/1988/10	01/11/2004	Licence re-issue
L4680/1988/11	26/10/2007	Licence re-issue
W4755/2010/1	14/10/2010	Works Approval to raise TSF2 by 10m
L4680/1988/12	01/11/2010	Licence re-issue
W5333/2012/1	07/03/2013	Works Approval for construction of TSF3
W5627/2014/1	29/05/2014	Works Approval to pump tailings slurry from Greenfields Mill to Three Mile Hill in-pit TSF
L4680/1988/13	22/10/2015	Licence re-issue

#### 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*;

**'annual period'** means the inclusive period from 1 August until 30 July 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*;

**'averaging period'** means the time over which a limit is measured or a monitoring result is obtained;

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

**'CEO'** for the purpose of correspondence means;  
Chief Executive Officer  
Department administering the Environmental Protection Act 1986  
Locked Bag 33  
CLOISTERS SQUARE WA 6850  
Email: info@der.wa.gov.au;

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

**'HDPE'** means high density polyethylene;

**'Licence'** means this Licence numbered L4680/1988/13 and issued under the Act;

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

**'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;



**‘spot sample’** means a discrete sample representative at the time and place at which the sample is taken; and

**‘usual working day’** means 0800 – 1700 hours, Monday to Friday excluding public holidays in Western Australia.

- 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.
- 1.1.5 Nothing in the Licence shall be taken to authorise any emission that is not mentioned in the Licence, where the emission amounts to:
- (a) pollution;
  - (b) unreasonable emission;
  - (c) discharge of waste in circumstances likely to cause pollution; or
  - (d) being contrary to any written law.

## 1.2 General conditions

- 1.2.1 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.
- 1.2.2 The Licensee shall immediately recover, or remove and dispose of spills of environmentally hazardous materials outside an engineered containment system.
- 1.2.3 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.<sup>1</sup>

Note1: *The Environmental Protection (Unauthorised Discharges) Regulations 2004* make it an offence to discharge certain materials into the environment.

## 1.3 Premises operation

- 1.3.1 The Licensee shall ensure that all pipelines containing environmentally hazardous materials are either:
- (a) equipped with telemetry systems and pressure sensors along pipelines to allow the detection of leaks and failures;
  - (b) equipped with automatic cut-outs in the event of a pipe failure; or
  - (c) provided with secondary containment sufficient to contain any spill for a period equal to the time between routine inspections.
- 1.3.2 The Licensee shall ensure that tailings, decant water, dewatering water and effluent are only discharged into containment cells, dams and ponds with the relevant infrastructure requirements and at the locations specified in Table 1.3.1.

**Table 1.3.1: Containment Infrastructure**

Containment point reference	Material	Infrastructure requirements
TSF 1, 2 and 3	Tailings	Lined with in-situ clay to limit seepage to groundwater
Process water pond	Return water	Lined with HDPE



- 1.3.3 The Licensee shall manage containment cells and ponds in Table 1.3.1 such that a minimum top of embankment freeboard of 500mm or a 1 in 100 year/72 hour storm event (whichever is greater) is maintained.
- 1.3.4 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; and
  - (c) the supernatant pond on the TSF does not exceed 15% of the total surface area.
- 1.3.5 The Licensee shall:
- (a) undertake inspections as detailed in Table 1.3.2;
  - (b) where any inspection identifies that an appropriate level of environmental protection is not being maintained, take corrective action to mitigate adverse environmental consequences as soon as practicable; and
  - (c) maintain a record of all inspections undertaken.

**Table 1.3.2: Inspection of infrastructure**

Scope of inspection	Type of inspection	Frequency of inspection
Tailings pipelines	Visual integrity	Twice daily
Return water lines	Visual integrity	Twice daily
Embankment freeboard	Visual to confirm required freeboard capacity is available	Daily

## 2 Monitoring

### 2.1 General monitoring

- 2.1.1 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.
- 2.1.2 The Licensee shall ensure that :
- (a) monthly monitoring is undertaken at least 15 days apart; and
  - (b) quarterly monitoring is undertaken at least 45 days apart.
- 2.1.3 The Licensee shall record production or throughput data and any other process parameters relevant to any non-continuous or CEMS monitoring undertaken.
- 2.1.4 The Licensee shall ensure that all monitoring equipment used on the Premises to comply with the conditions of this Licence is calibrated in accordance with the manufacturer's specifications and the requirements of the Licence.
- 2.1.5 The Licensee shall, where the requirements for calibration cannot be practicably met, or a discrepancy exists in the interpretation of the requirements, bring these issues to the attention of the CEO accompanied with a report comprising details of any modifications to the methods.



## 2.2 Process monitoring

2.2.1 The Licensee shall undertake the monitoring in Table 2.2.1 according to the specifications in that table.

Table 2.2.1: Process monitoring				
Process description	Parameter	Units	Frequency	Method
Tailings deposition	Volumes of tailings deposited into the TSF	tonnes	Continuous	None specified
	Volumes of water recovered from the TSF			
	Volumes of seepage recovered			

## 2.3 Ambient environmental quality monitoring

2.3.1 The Licensee shall undertake the monitoring in Table 2.3.1 according to the specifications in that table.

Table 2.3.1: Monitoring of ambient groundwater quality					
Monitoring point reference and location	Parameter	Units	Limits	Averaging period	Frequency
MB301, MB302, MB303, MB304, MB305, MB306, MB307 and MB308	Standing water level <sup>1</sup>	mbgl	4	Spot sample	Monthly
	pH <sup>2</sup>	-	-	Spot sample	Quarterly
	Total dissolved solids <sup>2</sup>	mg/L	-	Spot sample	Quarterly
	Weak acid dissociable cyanide		0.5		
	Cadmium, copper, lead, mercury, zinc, arsenic, chromium, iron, magnesium, nickel, sodium, potassium, calcium and chloride.		-		

Note 1: SWL shall be determined prior to the collection of other water samples

Note 2: In-field non-NATA accredited analysis permitted.

# 3 Information

## 3.1 Records

3.1.1 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 5.1.1(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.





- 3.1.2 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.
- 3.1.3 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.
- 3.1.4 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.

### 3.2 Reporting

- 3.2.1 The Licensee shall submit to the CEO an Annual Environmental Report by 30 September in each year. The report shall contain the information listed in Table 3.2.1 in the format or form specified in that table.

Table 3.2.1: Annual Environmental Report		
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
Table 2.2.1	Process monitoring	None specified
Table 2.3.1	Ambient groundwater monitoring	None specified
5.1.3	Compliance	Annual Audit Compliance Report (AACR)
5.1.4	Complaints summary	None specified

Note 1: Forms are in Schedule 2

- 3.2.2 The Licensee shall ensure that the Annual Environmental Report also contains:
- (a) any relevant process, production or operational data recorded under Condition 3.1.3; and
  - (b) an assessment of the information contained within the report against previous monitoring results and Licence limits.
- 3.2.3 The Licensee shall submit the information in Table 3.2.2 to the CEO according to the specifications in that table.

Table 3.2.2: Non-annual reporting requirements				
Condition or table (if relevant)	Parameter	Reporting period	Reporting date (after end of the reporting period)	Format or form
-	Copies of original monitoring reports submitted to the Licensee by third parties	Not Applicable	Within 14 days of the CEO's request	As received by the Licensee from third parties





### 3.3 Notification

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

Table 3.3.1: Notification requirements			
Condition or table (if relevant)	Parameter	Notification requirement <sup>1</sup>	Format or form <sup>2</sup>
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	N1
-	Notification of care and maintenance status	Within seven days of the decision to enter care and maintenance status	None specified
-	Intention to resume normal operations from care and maintenance status	At least 30 days before operations recommence.	None specified

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

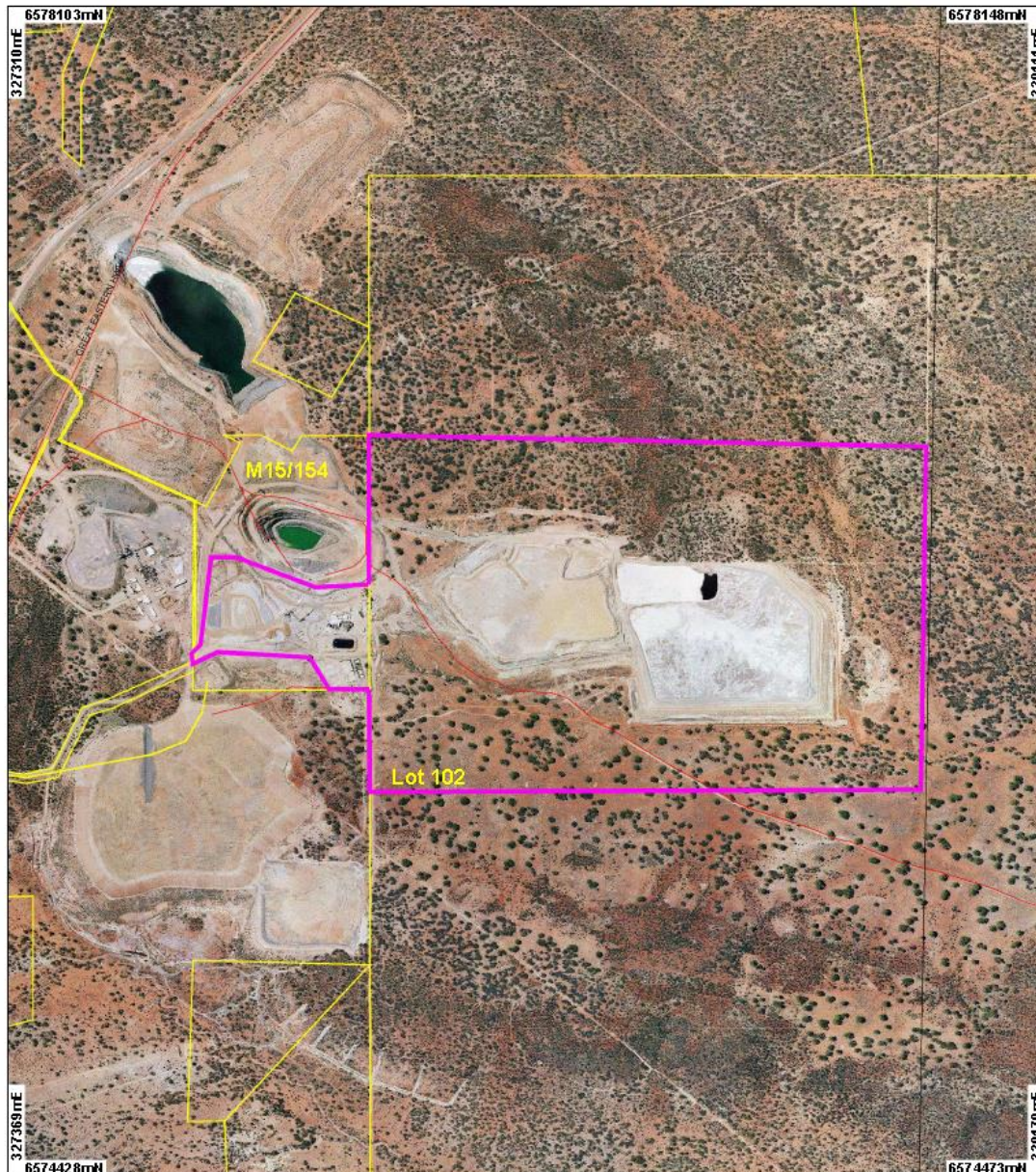
Note 2: Forms are in Schedule 2



## Schedule 1: Maps

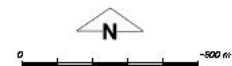
### Premises map

The Premises is shown in the map below. The pink line depicts the Premises boundary.



#### LEGEND

- Road Centrelines
- Image Index
- Recently added
- Coverage
- Mining tenements
- Kalgoorlie 50cm Orthomosaic - Landgate 2006



Scale 1:17061  
Approximate when reproduced at A4

Geocentric Datum Australia 1994

Note: the data in this map have not been projected. This may result in geometric distortion or measurement inaccuracies.

Prepared by: ckr the da  
Prepared for:  
Date: 4/10/2012 11:51:42 AM

Information derived from this map should be confirmed with the data to which it is owed by the appropriate authority in the legend.



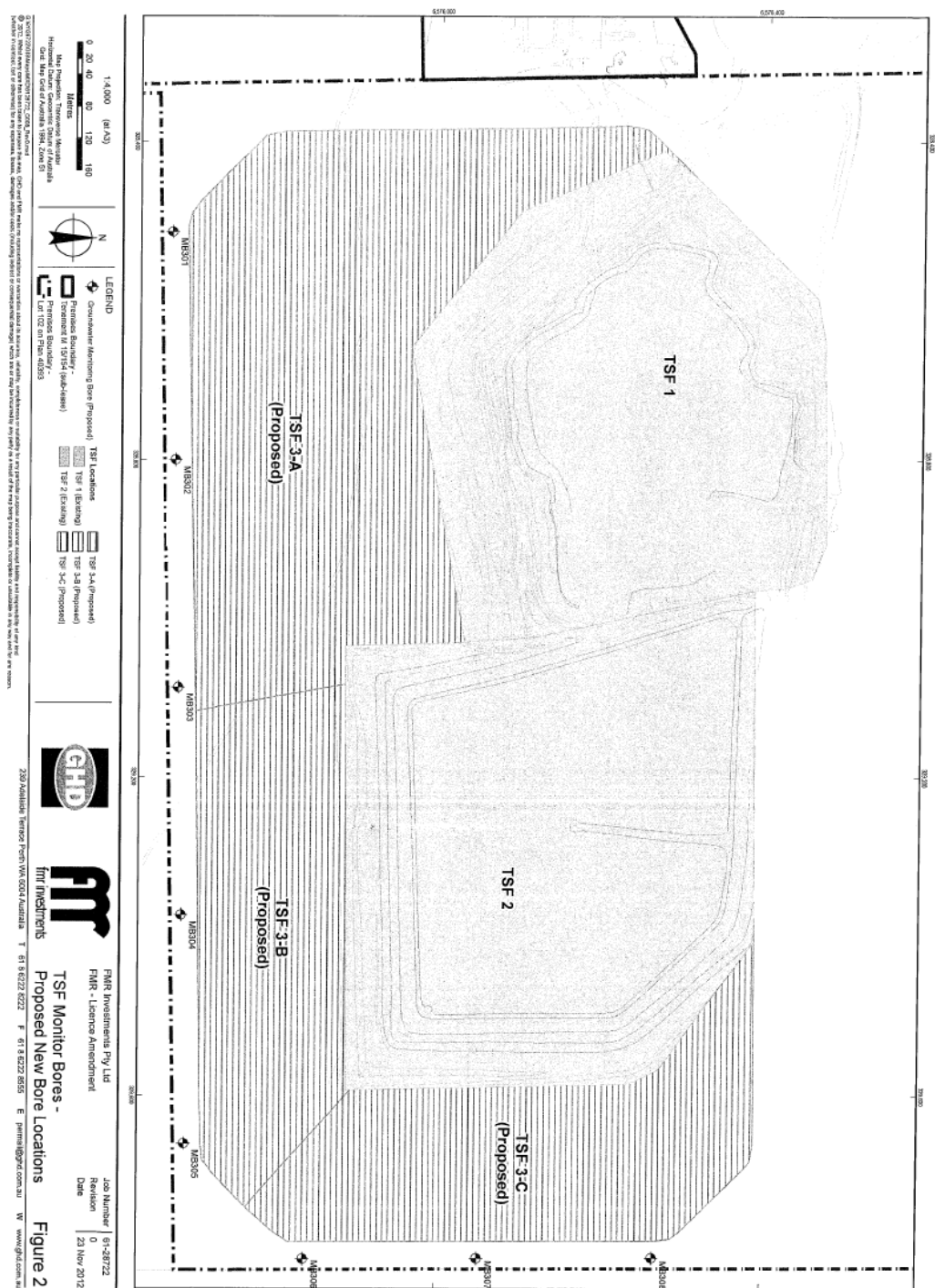
Department of  
Environment and Conservation  
Our environment, our future  
W.A. Crown Copyright 2002

\* Project Data. This data has not been quality assured. Please contact map author for details.



### Map of monitoring locations

The locations of the monitoring points defined in Table 2.3.1 are shown below.





## 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: Trading as:	ABN:
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: \_\_\_\_\_

NAME:  
(printed) \_\_\_\_\_

POSITION: \_\_\_\_\_

DATE: \_\_\_\_/\_\_\_\_/\_\_\_\_

SEAL (if signing under seal)

SIGNATURE: \_\_\_\_\_

NAME:  
(printed) \_\_\_\_\_

POSITION: \_\_\_\_\_

DATE: \_\_\_\_/\_\_\_\_/\_\_\_\_



Licence: L4680/1988/13  
Form: N1

Licensee: FMR Investments Pty Ltd  
Date of breach:

### Notification of detection of the breach of a limit.

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	

## 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 FMR Investments Pty Ltd	
Date	





# Decision Document

## *Environmental Protection Act 1986, Part V*

---

**Proponent:** **FMR Investments Pty Ltd**

**Licence:** **L4680/1988/13**

---

**Registered office:** Level 2, 2 Hardy Street  
SOUTH PERTH WA 6151

**ACN:** 009 411 349

**Premises address:** Greenfields Processing Site  
Part mining tenement M15/154 and Lot 102 on Plan 40393  
Great Eastern Highway  
COOLGARDIE WA 6429

**Issue date:** Thursday, 22 October 2015

**Commencement date:** Sunday, 1 November 2015

**Expiry date:** Saturday, 31 October 2020

### **Decision**

Based on the assessment detailed in this document the Department of Environment Regulation (DER), has decided to issue a licence. 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: **Fiona Sharpe**  
Licensing Officer

Decision Document authorised by: **Danielle Eyre**  
Delegated Officer



## Contents

Decision Document	1
Contents	2
1 Purpose of this Document	2
2 Administrative summary	2
3 Executive summary of proposal and assessment	3
4 Decision table	4
5 Advertisement and consultation table	8
6 Risk Assessment	9
Appendix A	10

## 1 Purpose of this Document

This decision document explains how DER has assessed and determined the application 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"/> New Licence <input checked="" type="checkbox"/> Licence amendment <input type="checkbox"/> Works Approval amendment <input type="checkbox"/>	
Activities that cause the premises to become prescribed premises	Category number(s)	Assessed design capacity
	5	1 400 000 tonnes per year
Application verified	Date: 07/09/2015	
Application fee paid	Date: 23/09/2015	
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		
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 checked="" type="checkbox"/> No <input type="checkbox"/>	Referral decision No: Managed under Part V <input checked="" 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: EPA Report No:



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"/>	
Is the Premises subject to any EPP requirements? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

### 3 Executive summary of proposal and assessment

The Greenfields processing plant and tailings storage facility (TSF) are located approximately 3 km to the north-east of Coolgardie. The processing facility is located on M15/154 under a lease agreement with the tenement holders (Focus Minerals Pty Ltd) and the TSF's are located on Lot 102 on Plan 40393 owned by FMR Investments Pty Ltd.

The Greenfields processing plant is a standard carbon-in-leach gold mill, which toll treats ore from a variety of sources and has a nominal 1 400 000 tonnes per year capacity.

The TSF is located approximately 200 m east of the plant and comprises of three main cells (TSF1, TSF2 and TSF3).



## 4 Decision table

All applications are assessed in line with the *Environmental Protection Act 1986*, the *Environmental Protection Regulations 1987* and DER's Operational Procedure on Assessing Emissions and Discharges from Prescribed Premises. Where other references have been used in making the decision they are detailed in the decision document.

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	L1.2.1 – 1.2.3	General conditions 1.2.1 – 1.2.3 are included in the Licence.	General provisions of the <i>Environmental Protection Act 1986</i> .
Premises operation	L1.3.1 – 1.3.5	DER's assessment and decision making are detailed in Appendix A.	Application supporting documentation
Emissions general	L – no conditions	No general emission conditions are required.	N/A
Point source emissions to air including monitoring	L – no conditions	<b>Operation</b> There are no significant point source air emissions from the operation. No conditions are required.	General provisions of the <i>Environmental Protection Act 1986</i> .
Point source emissions to surface water including monitoring	L – no conditions	<b>Operation</b> There are no significant point source emissions to surface water from the operation. No conditions are required.	General provisions of the <i>Environmental Protection Act 1986</i> .
Point source emissions to groundwater including	L – no conditions	<b>Operation</b> There are no significant point source emissions to groundwater from the operation. No conditions are required.	General provisions of the <i>Environmental Protection Act</i>



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L = Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
monitoring			1986.
Emissions to land including monitoring	L – no conditions	<b>Operation</b> There are no significant point source emissions to land from the operation. No conditions are required.	General provisions of the <i>Environmental Protection Act 1986</i> .
Fugitive emissions	L – no conditions	<b>Operation</b> Significant fugitive emissions are not expected to occur from the operations. Dust is generally not an issue at the premises. Water trucks and sprays are used for dust suppression on haul roads and other trafficked areas as well as in the crushing and grinding circuits. FMR enforces a speed limit of 20 km per hour on and around the TSFs which minimises dust lift. No conditions are required for fugitive emissions.	Application supporting documentation  General provisions of the <i>Environmental Protection Act 1986</i> .
Odour	L – no conditions	<b>Operation</b> No significant odour emissions are expected from the premises. No conditions are required.	General provisions of the <i>Environmental Protection Act 1986</i> .
Noise	L – no conditions	<b>Operation</b> Significant noise emissions are not expected from the premises. The town of Coolgardie is the nearest human sensitive receptor to the site, located approximately 3 km south-west. There have been no recorded noise complaints received. No conditions are required.	Application supporting documentation  <i>Environmental Protection (Noise) Regulations 1997</i>
Monitoring general	L2.1.1 – 2.1.2	Conditions 2.1.1 and 2.1.2 have been included in the Licence to ensure monitoring is undertaken in accordance with the relevant standards and undertaken at appropriate intervals.	General provisions of the <i>Environmental</i>



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L = Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
			<i>Protection Act 1986.</i>
Monitoring of inputs and outputs	L – no conditions	There is no monitoring of inputs and outputs required.	N/A
Process monitoring	L2.2.1	Process monitoring has been included in this Licence to ensure tailings deposition and water recovered from the TSF is measured.	General provisions of the <i>Environmental Protection Act 1986.</i>
Ambient quality monitoring	L2.3.1	<p><b>Normal Operation</b>  <i>Emission:</i> Tailings held in the TSF as a waste product from gold processing include cyanide and metals and metalloids. Seepage from the TSF into the surrounding groundwater may occur over time as tailings are deposited into the facility.  <i>Impact:</i> Contamination of groundwater and surrounding soils and potentially vegetation death.  <i>Controls:</i> The TSFs are constructed with a clay liner to minimise seepage. Groundwater monitoring is undertaken around the TSFs from a network of eight monitoring bores. A water balance model prepared by GHD for TSF3, including seepage rate calculations determined that seepage would be less than 0.05% of the total slurry discharged.</p> <p><u>Risk Assessment</u>  <i>Consequence:</i> Moderate  <i>Likelihood:</i> Possible  <i>Risk Rating:</i> Moderate</p> <p><u>Regulatory Controls</u>            Condition 2.3.1 requires quarterly ambient groundwater monitoring in order to determine if any seepage is occurring into the surrounding groundwater. A standing</p>	<p>Application supporting documentation</p> <p>General provisions of the <i>Environmental Protection Act 1986.</i></p>



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L = Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p>water level limit of 4 mbgl has been carried over from the previous licence. This limit is to ensure water levels do not rise significantly, causing potential vegetation harm or death. The current suite of monitoring parameters on the Licence is not sufficient to represent tailings chemistry. The following metals and ions have been added to the quarterly regime; cadmium, copper, lead, mercury, zinc, arsenic, chromium, iron, magnesium, nickel, sodium, potassium, calcium and chloride.</p> <p>WAD CN is listed as a monitoring parameter, however, there was previously no limit. A limit of 0.5 mg/L has now been included in the Licence, in accordance with the International Cyanide Code. Premises operation condition 1.3.4 also ensures the TSFs are managed so that seepage is collected and the supernatant pond is minimised as far as practicable to minimise seepage.</p> <p><u>Residual Risk</u> <i>Consequence:</i> Moderate <i>Likelihood:</i> Possible <i>Risk Rating:</i> Moderate</p>	
<b>Meteorological monitoring</b>	L – no conditions	No conditions are required for meteorological monitoring.	N/A
<b>Improvements</b>	L – no conditions	No improvement conditions are required.	N/A
<b>Information</b>	L3.1.1 – 3.3.1	Standard conditions are included in the Licence relating to the management of records and complaints, notification requirements and the submission of an annual audit compliance report and annual environmental report are included on the Licence.	N/A
<b>Licence Duration</b>	N/A	The duration of the licence has been issued at five years in accordance with DER's Guidance Statement on Licence Duration.	Guidance Statement on Licence Duration





## 5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
28/09/2015	Application advertised in West Australian (or other relevant newspaper)	No comments received	N/A
25/09/2015	Proponent sent a copy of draft instrument	No comments received	N/A



## 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 - Abnormal Operation

#### Emission Description

*Emission:* Pond overtopping and release of tailings containing cyanide, toxic metals, sulfide minerals and dissolved solids.

*Impact:* Contamination of surrounding soils with toxic metals, sulfide minerals, dissolved solids and cyanide affecting soil and ground water quality and causing vegetation stress or even deaths if the exposure is for a prolonged period.

*Controls:* The facilities are constructed and maintained in accordance with original management documents, including a minimum freeboard and daily inspections.

#### Risk Assessment

*Consequence:* Moderate

*Likelihood:* Unlikely

*Risk Rating:* Moderate

#### Regulatory Controls

Condition 1.3.3 relates to maintaining a minimum top of embankment freeboard of 500 mm within all storage facilities containing saline, alkaline or cyanide constituents to accommodate extreme rainfall events and prevent overtopping. Condition 1.3.5 relates to carrying out visual daily inspections by the licensee for the embankment freeboard.

#### Residual Risk

*Consequence:* Moderate

*Likelihood:* Unlikely

*Risk Rating:* Moderate

### Premises Operation - Emergency Situation

#### Emission Description

*Emission:* Tailings are transported in pipelines through areas of native vegetation. Emissions will occur if the pipelines rupture and/or leak.

*Impact:* Contamination of surrounding soils with dissolved solids can affect groundwater quality and cause vegetation stress or even death if exposure is for a prolonged period.

*Controls:* Pipelines have been constructed in accordance with AS/NZS standards.

#### Risk Assessment

*Consequence:* Moderate

*Likelihood:* Possible

*Risk Rating:* Moderate

#### Regulatory controls

Condition's relating to pipelines will be included in the Licence through conditions 1.3.1 and 1.3.5. Condition 1.3.1 will ensure pipelines containing environmentally hazardous materials will be managed appropriately and corrective action is taken in the event that pipelines leak or rupture. Condition 1.3.5 will ensure twice daily inspections are carried out for pipeline integrity.

#### Residual Risk

*Consequence:* Moderate

*Likelihood:* Unlikely

*Risk Rating:* Moderate