



Works Approval

Environmental Protection Act 1986, Part V

Works Approval Holder: **Evolution Mining (Phoenix)
Pty Ltd**

Works Approval Number: **W5799/2015/1**

Registered office: Level 3, 1 Altona Street
WEST PERTH WA 6005

ACN: 140 269 316

Premises address: Phoenix Red Dam Mining Project
Mining tenements M16/344, M16/534, L16/98, L16/99 and L16/100
COOLGARDIE WA 6429
as depicted in Schedule 1.

Issue date: Thursday 19 March 2015

Commencement date: Monday 23 March 2015

Expiry date: Friday 22 March 2019

The following category/s from the *Environmental Protection Regulations 1987* cause this
Premises to be a prescribed premises for the purposes of the *Environmental Protection Act 1986*:

Category number	Category description	Category production or design capacity	Approved premises production or design capacity
6	Mine dewatering: premises on which water is extracted and discharged into the environment to allow mining of ore.	50 000 tonnes or more per year	442 000 tonnes per annual period

Conditions

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

Date signed: 17 March 2016

.....
Tim Gentle

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



Works Approval Conditions

1 General

1.1 Interpretation

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

1.1.2 In the Works Approval, unless the contrary intention appears:

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

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

'CEO' for the purpose of correspondence means;

Chief Executive Officer
At the following address:
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;

'Commissioning' means the process of operation and testing that verifies the works and all relevant systems, plant, machinery and equipment have been installed and are performing in accordance with the design specification set out in the works approval application;

'Premises' means the area defined in the Premises Map in Schedule 1 and listed as the Premises address on page 1 of the Works Approval;

'Schedule 1' means Schedule 1 of this Works Approval unless otherwise stated;

'Works Approval' means this Works Approval numbered W5799/2015/1 and issued under the Act;

'Works Approval Holder' means the person or organisation named as the Works Approval Holder on page 1 of the Works Approval;

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

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

1.2 General conditions

1.2.1 The Works Approval Holder shall construct the works in accordance with the documentation detailed in Table 1.2.1:



Table 1.2.1: Construction Requirements¹

Document	Parts	Date of Document
Application for a Dewatering Works Approval and Operating Licence, Category 6 – Mine Dewatering, L16/98, L16/99, L16/100, M16/344 and M16/534, Red Dam Project, Phoenix Gold Limited	All, including Drawings and Appendices	January 2015

Note 1: Where the details and commitments of the documents listed in condition 1.2.1 are inconsistent with any other condition of this works approval, the conditions of this works approval shall prevail.

5 Information

5.1 Reporting

5.1.1 The Works Approval Holder shall submit a compliance document to the CEO, following the construction of the works and prior to commissioning of the same.

5.1.2 The compliance document shall:

- (a) certify that the works were constructed in accordance with the conditions of the works approval;
- (b) be signed by a person authorised to represent the Works Approval Holder and contain the printed name and position of that person within the company.

5.2 Notification

5.2.1 The Works Approval Holder shall ensure that the parameters listed in Table 5.2.1 are notified to the CEO and are in accordance with the notification requirements of the table.

Table 5.2.1: Notification requirements

Condition or table (if relevant)	Parameter	Notification requirement	Format or form
1.2.4	Commencement of commissioning	7 days prior to start	None specified
	Completion of commissioning	7 days after completion	

Schedule 1: Maps

Premises map

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





Decision Document

Environmental Protection Act 1986, Part V

Proponent: Evolution Mining (Phoenix) Pty Ltd

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Decision

Based on the assessment detailed in this document the Department of Environment Regulation (DER), has decided to issue an amended works approval. DER considers that in reaching this decision, it has taken into account all relevant considerations and legal requirements and that the Works Approval 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: Tim Gentle
Manager Licensing – Resources Industries
(South)
Delegated Officer



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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 type="checkbox"/> Licence amendment <input type="checkbox"/> Works Approval amendment <input checked="" type="checkbox"/>	
Activities that cause the premises to become prescribed premises	Category number(s)	Assessed design capacity
	6	442 000
Application verified	Date: 29 February 2016	
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		
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: 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: 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 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 and assessment

The Red Dam project area is located approximately 42 kilometres (km) north-north-west of Coolgardie in the Eastern Goldfields region of Western Australia. Phoenix Gold Limited (Phoenix) is proposing to mine the Red Dam deposit via conventional open cut methods. The mine will consist of an open pit that will yield 500 000 tonnes of ore. In addition to the pit and waste rock landform, the project will include a high grade run-of-mine pad and a low grade run-of-mine pad, an office/laydown area, a turkey's nest dam, dewatering pipeline, topsoil and subsoil stockpiles, haul road and flood protection bunds. The ore will be transported to Greenfields Mill in Coolgardie where processing will take place.

The water table was established at 34 mbgl at Red Dam, the final pit floor depth will be 109.5 m and thus dewatering is required for the last 75 m. It is estimated that dewatering of the project will be required for 8 of the 11 month life of mine period. It was determined the discharge at Red Dam will be at 25 L/s, equates to 90 m³ per hour and 788 400 m³ per annum. However, as the life of mine is less than one year and the dewatering period is determined at 8 months, the maximum discharge from the pit will be 525 600 m³.

Groundwater will be pumped via a pipeline from the pit to the Red Dam turkey's nest for settling. Some water will be used for dust suppression on site and haul roads. A combination of diesel and/or electric pumps will be used. Mine discharge capacity is planned for 25 L/s through a 200 mm diameter HDPE pipe. Excess mine water will be transported from the turkey's nest (gravity fed) along the pipeline to the existing Broads Dam pit, 7.2 km away.

The turkey's nest will be 75 m x 60 m with a 4 m crest (1 m freeboard and 5 m depth). Dam capacity will be 9 900 m³, sufficient for 4.5 days of dewatering storage. The pond liner will be a high density polyethylene of 1 mm thickness with permeability of <10⁻⁹ m/s.

The pipeline will conform to AS/NZ 2033:2008 design requirements (installation of polyethylene pipe systems) and AS/NZ 4130:2009 (Polyethylene pipes for pressure applications) pressure requirements. The pipeline will have an outside diameter of 200 mm of HDPE material pipe fusion welded and will deliver mine dewater at 14 L/s along the gravity flow system to Broads Dam pit. A flow meter will be installed at the turkey's nest to determine the volume of water discharged.



In January 2016, Phoenix Gold Limited was acquired by Evolution Mining Limited (Evolution). This Works Approval was issued in March 2015 for a duration of one year and hence was due to expire on 22 March 2016. As Evolution has now taken over the premises, an extension of expiry for three years has been granted through this amendment process, as well as updating to the current occupier name. As the ACN has remained the same during the take-over, this is not considered a transfer of owner, but an amendment to change the name.

As part of this amendment, DER has considered whether the risk profile or emissions and discharges from the premises has significantly changed since the Works Approval was granted. No changes have occurred and therefore, DER has not amended conditions relating to emissions and discharges.



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
Licence Duration	N/A	The duration of the Works Approval has been extended for an extra three years. The expiry date is now Friday 22 March 2019.	DER's Guidance Statement – Licence Duration May 2015



5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
08/03/2016	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