



## Application for Licence Amendment

### Part V Division 3 of the *Environmental Protection Act 1986*

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<b>Licence Number</b>	L8275/2008/2
<b>Licence Holder</b>	Rox (Murchison) Pty Ltd
<b>ACN</b>	633 617 455
<b>File Number</b>	DER2012/006908-1
<b>Premises</b>	Youanmi Mine Mining Tenements: M57/10, M57/51 and M57/135 SANDSTONE WA 6639  As defined by the Premises map attached to the Revised Licence
<b>Date of Report</b>	20 July 2022
<b>Decision</b>	Revised licence granted

**A/MANAGER, RESOURCE INDUSTRIES  
REGULATORY SERVICES**

an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

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## 1. Decision summary

Licence L8275/2008/2 is held by Oz Youanmi Gold Pty Ltd (Licence Holder) for the Youanmi Gold Mine (the Premises), located at Youanmi Mine, Mining Tenements: M57/10, M57/51 and M57/135, SANDSTONE WA 6639.

This Amendment Report documents the assessment of potential risks to the environment and public health from proposed changes to the emissions and discharges during the operation of the Premises. As a result of this assessment, Revised Licence L8275/2008/2 has been granted.

The Revised Licence issued as a result of this amendment consolidates, amalgamates and supersedes the existing Licence and Amendment Notice 1 previously granted in relation to the Premises. Amendment Notice 1 may still be viewed on the Department's website to show the decision making. The Revised Licence has been granted in a new format with existing conditions being transferred to the new format.

The Delegated Officer has also determined to transfer licence L8275/2008/2 from the existing Licence Holder Oz Youanmi Gold Pty Ltd to Rox (Murchison) Pty Ltd. The transfer is administrative in nature therefore it does not alter the risk profile of the Premises, providing that the activities, emissions, and receptors as stated in existing approvals remain unchanged.

This Amendment Report documents the amendments made pursuant to section 59 and 59(B) of the Environmental Protection Act 1986 (EP Act).

## 2. Scope of assessment

### 2.1 Regulatory framework

In transferring the licence and completing the assessment documented in this Amendment Report, the department has considered and given due regard to its Regulatory Framework and relevant policy documents which are available at <https://dwer.wa.gov.au/regulatory-documents>.

### 2.2 Application summary

#### 2.2.1 Licence Amendment

On 10 September 2021, Rox (Murchison) Pty Ltd (the Applicant) submitted an application to the department to amend Licence L8275/2008/2 under section 59 and 59B of the EP Act. The following amendments are being sought:

- Change to operations by reinstating dewatering of the Youanmi Main Pit and discharge to the site's evaporation ponds.

During a request for further information on 30 November 2021, Licence Holder requested amendments to Category 63.

Table 1 below outlines the proposed changes to the existing Licence.

**Table 1: Proposed throughput capacity changes**

Category	Current throughput capacity	Proposed throughput capacity	Description of proposed amendment
6	-	120,000kL/month or 1,440,000kL/annum.	To allow dewatering of the Youanmi Main Pit and discharge to the site's evaporation ponds.
63	5,000 tonnes per annual period.	5,000 tonnes per annual period in total.	As per reinstatement of operations.

### 2.2.2 Licence Transfer

On 30 November 2021, the Applicant submitted an application to the department to transfer licence L8275/2008/2 under section 59B of the EP Act. The application sought to amend the Licence Holder details as follows:

Licence Holder: Rox (Murchison) Pty Ltd

ACN: 633 617 455

## 2.3 Proposed Activities

Youanmi mine ceased mining operations in 1997 and was placed into care and maintenance. For a brief period in 2008 and 2009 dewatering occurred. The Licence Holder proposes to dewater the Youanmi main pit (1,500,000 kL) and underground developments (500,000 kL) to access drilling platforms and to refurbish access drives, with the objective of mining high grade ore of the Youanmi Deeps ore resource.

Floating pontoons with two 90 kW pumps will be installed to pump out the water. Currently, there is a 400 mm pipe which will connect to seven approximately 110 mm lines which feed into the evaporation ponds. Pumps, flow meters and auto cut-off systems will be installed. Dewatering of the Main pit is expected to take 12-18 months at a rate of 1,480,000 kL per annum.

### 2.3.1 Mine dewatering

Before mining operations can commence, the Licence Holder is required to:

- dewater the Youanmi main pit;
- refurbish the evaporation pond walls which have topsoil sheeting with mine-waste;
- increase the freeboard of the external walls from 0.1 - 0.2 m to 1.0 m;
- install a freeboard limit detection system (automatic cut-off equipment), catchment sumps with pumps, pipeline bunds and flow meters;
- install 2 x (nominal) 90 kW pumps on pontoons in Main Pit; and
- remove vegetation growth.

### Refurbishment requirements

The Youanmi evaporation ponds have not been used in over 12 years. A geotechnical inspection of the evaporation ponds was conducted to investigate the construction methods and current stability of the embankment walls. The investigation found the embankment walls were constructed in two separate ways. Most of the walls were constructed with a rockfill core, with topsoil sheeting of the crests and embankments, whilst the remainder of the perimeter walls were constructed of erodible topsoil.

The rockfill embankments require compacted mine waste to replace areas where topsoil has eroded away and the addition of windrows at both edges of the embankment crest required to increase freeboard from 0.1-0.2 m to 1.0 m.

The embankments constructed of topsoil are required to be replaced by compacted mine waste embankments constructed outside the footprint of the existing topsoil embankments.

The permeability of the evaporation pond base is unknown. The base was constructed according to Notice of Intent no 1996-116, approved by the Department of Minerals and Energy in 1996. It is expected to be low, however some vertical seepage is anticipated, which will return groundwater to its source. No alterations to the embankment base are proposed.

### **Mine dewatering discharge quality**

On the 12 February 2022, investigation of the Main Pit water quality showed the water to be hypersaline, with salinity increasing in depth, though relatively evenly stratified. From two sample sites within the Main Pit, the 10 m samples returned TDS results of 40,300 mg/L and 39,800 mg/L; 30 m samples returned 53,900 mg/L and 54,100 mg/L TDS for site 1 and 2 respectively, and the 40 m sample at Site 2 returned 64,000 mg/L TDS.

The pH of the pit water is relatively neutral ranging from a pH of 7.87 at 10 m depth and a pH of 7.25 at 40 m depth.

Results for metals varied with no one trend. Three elements which were found to exceed the ANZECC 1997 water quality guidelines were arsenic (3.48 mg/L at 40 m), calcium (1,990 mg/L at 10 m, 2,490 mg/L and 2,260 mg/L at 30 m (sites 1 and 2 respectively) and 2,710 mg/L at 40 m (site 2)) and Manganese (5.53 mg/L and 5.33 mg/L at 30 m (sites 1 and 2 respectively) and 7.68 mg/L at 40 m).

Traces of other metals were detected and remained within the ANZECC water quality guideline limits at all depths included caesium (0.06 mg/L at 10 m, 0.2 mg/L at 30 m and 0.1 mg/L at 40 m), chromium (0.011 mg/L at 30 m), cobalt (0.01 mg/L at 30 m), fluoride (up to 1 mg/L at 30 m), lithium (0.2 mg/L at all depths), nickel (0.011 mg/L at 30 and 40 m), phosphorus (up to 0.89 mg/L at 40 m), silicon (up to 28.7 mg/L at 40 m) and Uranium (0.2 mg/L at 10 m, 0.09 mg/L at 30 m and 0.07 mg/L at 40 m). Three TPH(V)/BTEX surrogate compounds are present. Cyanide and mercury were not detected.

As a result of detection of the above suite of parameters in the Main Pit and limited information in the hydrogeological conditions in the area to inform the risk assessment, further water quality testing of the mine dewatering discharge for a broad suite of potential contaminants of concern will be required prior to dewatering, and ongoing on a quarterly basis (refer to risk assessment conducted in Table 5).

### **Ambient groundwater monitoring summary**

Seven groundwater monitoring bores surround the Youanmi mine site. Samples taken from the Youanmi groundwater monitoring bores found the pH is slightly alkaline with an average pH of 7.8. Salinity is fresh to brackish. Low concentrations of ammonia, nitrogen, arsenic, barium, boron, chromium, cobalt, copper, iron, lead, molybdenum, nickel phosphorus, zinc, recoverable hydrocarbons and TPH(V)/BTEX surrogate compounds were detected. There was only one exceedance of the water quality guidelines recorded, which was of phosphorus (4.75 mg/L at YD64).

### **Native vegetation survey**

Native vegetation adjacent to the evaporation ponds ranges between poor and very good condition of Mulga woodland. A hypersaline spill which occurred in 1996 due to damage of an evaporation pond exterior wall from Cyclone Bobby, has changed the vegetation type within the spill area from Mulga woodland to Open Samphire Shrubland.

Photo monitoring is currently being conducted by the Licence Holder to determine the extent of impact and monitor recovery of the area.

### 2.3.2 Relocation of landfill

The existing inert landfill (Category 63) is located within Hill End Pit where the Licence Holder proposes to mine in the future. The Licence Holder proposes to relocate the landfill from the Hill End Pit to the southern end of United North waste rock dump (Youanmi Landfill).

The landfill area is 9,189 m<sup>2</sup> and approximately 10 m elevation above the surrounding ground level. The access ramp is 1,820 m<sup>2</sup>, approximately 240 m long, 7.5 m wide at a gradient of 1 in 24.

The Licence Holder has stated that they will operate the landfill to comply with the *Environmental Protection (Rural Landfill) Regulations 2002*. Though it should be noted these regulations only apply to Registered sites.

The landfill is currently used to bury used tyres and other inert waste. The new landfill will continue to store the same inert wastes.

Total putrescible wastes generated onsite remain less than 20 tonnes per annum as per Amendment 1 and do not require approval through the licence or a separate registration in accordance with regulation 5B of the Environmental Protection Regulations 1987. Putrescible wastes disposed of at the Landfill are kept separate from the inert wastes.

## 2.4 Consolidation of Licence

As part of this amendment package the department has consolidated the licence by incorporating changes made under the Amendment Notices as summarised in Table 2.

**Table 2: Licenses consolidated in this amendment**

Instrument	Issued	Summary of approval
L8275/2008/2	12/12/2013	Licence granted
L8275/2008/2	26/04/2016	Notice of Amendment of Licence Expiry Dates
L8275/2008/2	29/06/2017	Amendment Notice 1 to include Category 63 and make amendments to the current ambient groundwater monitoring requirements.

The obligations of the Licence Holder have not changed in consolidating the licence. The department has not undertaken any additional risk assessment of the Premises related to previous Amendment Notices.

In consolidating the licence, the CEO has:

- updated the format and appearance of the Licence;
- deleted the redundant AACR form set out in schedule 2 of the previous licence and advise the Licensee to obtain the form from the department's website;
- revised licence condition's numbers, and removed any redundant conditions and realigned condition numbers for numerical consistency; and
- corrected clerical mistakes and unintentional errors.

The full consolidation of licence conditions as they relate to this Revised Licence are detailed in Section 5.3. Previously issued Amendment Notices will remain on the department's website for future reference and will act as a record of the department's decision making.

## 3. Assessments

### 3.1.1 Transfer Assessment

The assessment of the transfer application is limited to a review of ownership details to determine if a transfer may occur.

#### Legal entity status

Rox (Murchison) Pty Ltd is a registered company with a valid and current entry on the Australian Securities & Investments Commission register (ACN 633 617 455) and is therefore a legal entity.

Rox (Murchison) Pty Ltd is the current leaseholder of the Premises.

A current company extract has been provided.

The current Licence Holder, Oz Youanmi Gold Pty Ltd, advised they do not object to the licence being transferred to the applicant.

#### Fitness and competency

The Applicant advised it has not been convicted or paid a penalty for an offence under a provision of the EP Act or its subsidiary legislation or similar environmental protection legislation in Australia.

### 3.1.2 Risk Assessment

The department assesses the risks of emissions from prescribed premises and identifies the potential source, pathway and impact to receptors in accordance with the *Guideline: Risk assessments* (DWER 2020).

To establish a Risk Event there must be an emission, a receptor which may be exposed to that emission through an identified actual or likely pathway, and a potential adverse effect to the receptor from exposure to that emission.

## 3.2 Source-pathways and receptors

### 3.2.1 Emissions and controls

The key emissions and associated actual or likely pathway during premises operation which have been considered in this Amendment Report are detailed in Table 3 below.



Table 3 also details the proposed control measures the Licence Holder has proposed to assist in controlling these emissions, where necessary.

**Table 3: Licence Holder controls**

Sources	Emission	Potential pathways	Proposed controls
<b>Construction</b>			
Reconstruction of evaporation pond walls.	Dust	<ul style="list-style-type: none"> <li>Windblown</li> </ul>	<ul style="list-style-type: none"> <li>No proposed controls. There are no identified nearby receptors requiring additional controls.</li> </ul>
Construction of Class I inert landfill	Noise	<ul style="list-style-type: none"> <li>Airborne</li> </ul>	<ul style="list-style-type: none"> <li>No proposed controls. There are no identified nearby receptors requiring additional controls.</li> </ul>
<b>Operation</b>			
Dewatering from the Main Pit into evaporation ponds.	Hypersaline mine water.	<ul style="list-style-type: none"> <li>Seepage of leachate through base / embankments of evaporation ponds.</li> <li>Direct discharge overtopping of the evaporation ponds.</li> <li>Direct discharge from ruptures of the pipeline.</li> </ul>	<ul style="list-style-type: none"> <li>Seepage collection drains extend around the perimeter of the evaporation ponds, with two collection sumps and pumping systems to be installed, all returning water to the ponds.</li> <li>Flow meters will be installed.</li> <li>12 hourly inspections and depth recordings (records will need to be maintained).</li> <li>Manual pond water level management, (managing flow rates, seepage drains, sumps and portable pumps).</li> <li>Maintain 1 m freeboard that is incorporated into the design of the evaporation pond outer wall refurbishment.</li> <li>2x 'Amazon Bubbler' freeboard limit detection systems which shutdown pumps upon detection or seepage return pumps on.</li> <li>Pipelines will be banded their entire length, with the initial 200 m section draining back to the main pit in the event of a spill.</li> <li>Photo monitoring at quarterly intervals to coincide with groundwater bore monitoring.</li> </ul>
Operation of Class I inert landfill	Waste	<ul style="list-style-type: none"> <li>Windblown</li> </ul>	<ul style="list-style-type: none"> <li>Ensuring the tipping area is not greater than 30 m in length or 2 m above ground level;</li> <li>The landfill will be fenced to a standard which is an effective barrier to stock, and prevents as far as possible windblown waste escaping the facility;</li> </ul>

Sources	Emission	Potential pathways	Proposed controls
			<ul style="list-style-type: none"> <li>Waste will be prevented from being blown or washed outside the site by the fence, and will be returned at least once per month if it does occur; and</li> <li>Waste will not be disposed within 35 m of the fence surrounding the site. There is no surface water body within 100 m and the site is &gt;3m from the water table.</li> </ul>
	Dust	<ul style="list-style-type: none"> <li>Windblown</li> </ul>	<ul style="list-style-type: none"> <li>No proposed controls. There are no identified nearby receptors requiring additional controls.</li> </ul>
	Contaminated storm water	<ul style="list-style-type: none"> <li>Stormwater flowing into landfill pit.</li> </ul>	<ul style="list-style-type: none"> <li>Stormwater will be diverted from areas of the site where there is waste and contained within the site if it does come into contact with waste.</li> </ul>

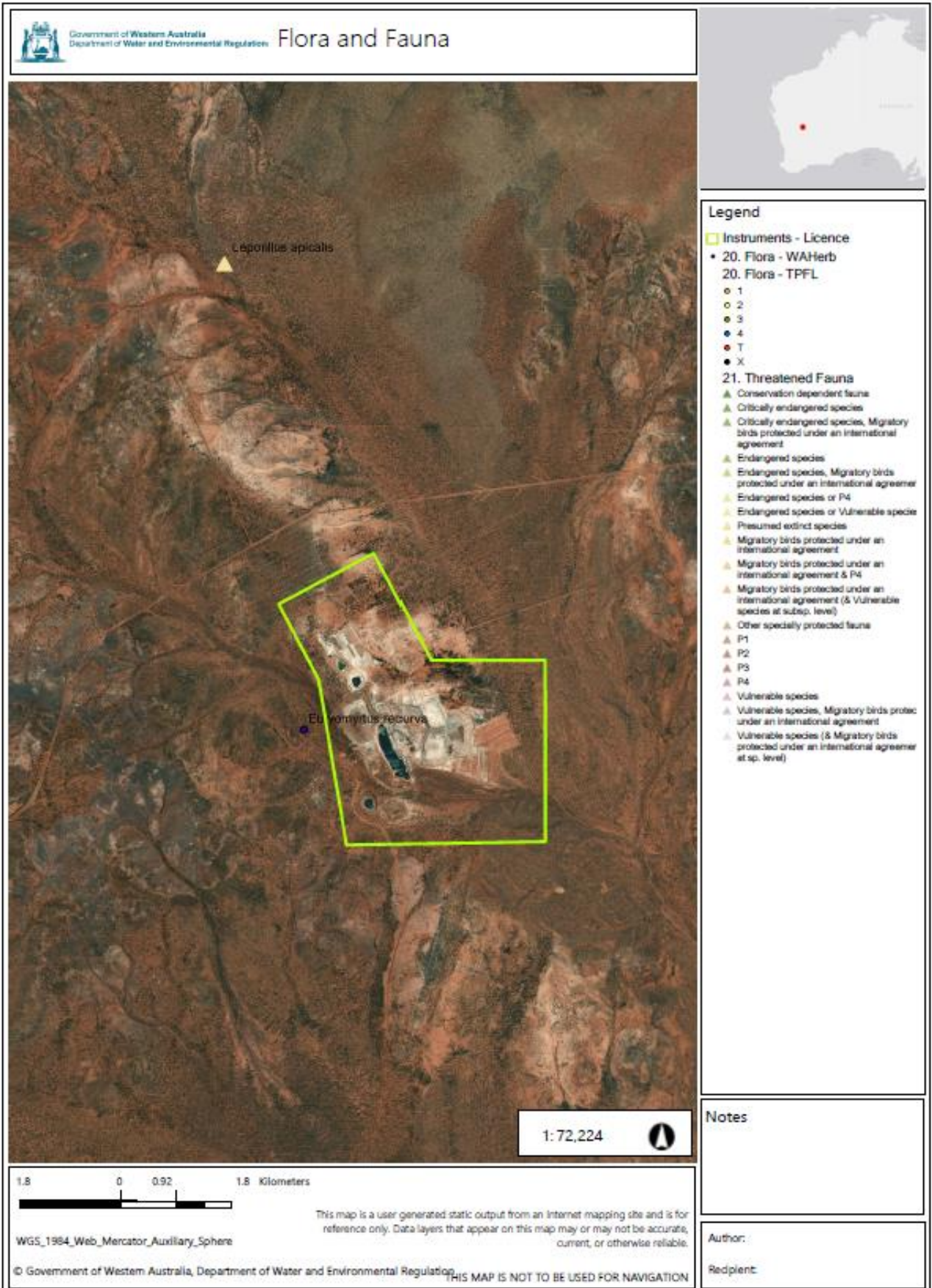
### 3.2.2 Receptors

In accordance with the *Guideline: Risk assessments* (DWER 2020), the Delegated Officer has excluded employees, visitors and contractors of the Licence Holder from its assessment. Protection of these parties often involves different exposure risks and prevention strategies and is provided for under other state legislation.

Table 4 below provides a summary of potential human and environmental receptors that may be impacted as a result of activities upon or emissions and discharges from the prescribed premises (*Guideline: Environmental siting* (DWER 2020)).

**Table 4: Sensitive human and environmental receptors and distance from prescribed activity**

Environmental receptors	Distance from prescribed activity
Groundwater	Approximately 30 metres below ground level (mbgl).
Historical stock watering bores	Unnamed bore – Approximately 2.0 km north-west of the Premises. Water quality 816 mg/L TDS when last sampled (sampled 1979). DOW WIN database. No owner.
	Southern Cross Well – Approximately 3.8 km north-east of the Premises. Water quality 3,300 mg/L TDS when last sampled (sampled 1979). DOW WIN database. No current owner.
	Shed bore – Approximately 3.7 km south-east of the Premises. Water quality 1,920 mg/L TDS when last sampled (sampled 1979). DOW WIN database. No current owner.
Native Vegetation	Native vegetation (mulga shrubland or woodland with some halophytic shrublands and a minor component of perennial grasses). Distances between native vegetation and infrastructure vary. The distance to the closest vegetation from the evaporation ponds outer walls is approximately 10 m. The distance of the inert landfill to the nearest onsite native vegetation is approximately 70 m.
Fauna	Lesser Stick-nest Rat ( <i>Leprillus apicalis</i> ) 7.3 km north.



**Figure 1 Distance to sensitive receptors**

### 3.3 Risk ratings

Risk ratings have been assessed in accordance with the *Guideline: Risk Assessments* (DWER 2020) for those emission sources which are proposed to change and takes into account potential source-pathway and receptor linkages as identified in Section 3.2. Where linkages are incomplete they have not been considered further in the risk assessment.

Where the Licence Holder has proposed mitigation measures/controls (as detailed in Section 3.2), these have been considered when determining the final risk rating. Where the Delegated Officer considers the Licence Holder's proposed controls to be critical to maintaining an acceptable level of risk, these will be incorporated into the licence as regulatory controls.

Additional regulatory controls may be imposed where the Licence Holder's controls are not deemed sufficient. Where this is the case the need for additional controls will be documented and justified in Table 5.

The Revised Licence L8275/2008/2 that accompanies this Amendment Report authorises emissions associated with the operation of the Premises i.e., dewatering and inert landfills.

The conditions in the Revised Licence have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

**Table 5. Risk assessment of potential emissions and discharges from the Premises during operation**

Risk Event					Risk rating <sup>1</sup> C = consequence L = likelihood	Licence Holder's controls sufficient?	Conditions <sup>2</sup> of licence	Justification for additional regulatory controls
Source/ Activities	Potential emissions	Potential pathways and impacts	Receptors	Licence Holder's controls		Y/N		
<b>Construction</b>								
Construction of inert landfill	Dust	Airborne dust may settle on plant leaves, negatively impacting on photosynthetic activity.	Native vegetation.	Refer to Table 3.	C = Slight L = Possible <b>Low Risk</b>	N/A	N/A	N/A
<b>Operation</b>								
Dewatering into evaporation ponds	Saline, sediment laden, and /or potentially contaminated water from Main Pit or abstraction bores	Seepage of leachate through base and embankments of evaporation ponds causing impacts to groundwater resources and local native vegetation	East Murchison groundwater area and stock watering bores	Refer to Table 3.	C = Slight L = Rare <b>Low Risk</b>	Y	<b>1, 2, 8, 9, 10, 11, 12, 13, 14, 16, 17, 18, 21, 22, 23.</b>	New conditions include the infrastructure equipment and construction tables to account for regulated infrastructure on the site and associated monitoring and reporting requirements.  In accordance with DWER's guideline Risk Assessments (2017) the applicant's controls have been conditioned (photo monitoring).  Mine dewatering is considered an emission as it is anticipated some seepage from the evaporation ponds will occur.  Increase in groundwater monitoring quality parameters, to capture other potential
			Vegetation (mulga shrubland or woodland with some halophytic shrublands and a minor component of perennial grasses)	Refer to Table 3.	C = Minor L = Possible <b>Medium Risk</b>	Y		
		Overfilling causing direct discharge overtopping of the evaporation ponds (from dewatering operations or a 1 in 100 ARI 72-hour storm event) causing impacts to local native vegetation.	Refer to Table 3.	C = Minor L = Rare <b>Low Risk</b>	Y			
		Direct discharge pipeline ruptures of the pipeline leading from the Main Pit to the evaporation ponds causing impacts to local	Refer to Table 3.	C = Slight L = Possible <b>Low Risk</b>	Y			

Licence: L8275/2008/1

Risk Event					Risk rating <sup>1</sup> C = consequence L = likelihood	Licence Holder's controls sufficient?	Conditions <sup>2</sup> of licence	Justification for additional regulatory controls
Source/Activities	Potential emissions	Potential pathways and impacts	Receptors	Licence Holder's controls		Y/N		
		native vegetation	grasses)					contaminants, not historically sampled for to inform future risk assessments. Dewater discharge monitoring has also been conditioned.
		Fauna ingress, where animal health or life may be impacted.	Fauna (Migratory birds and local wildlife).	Refer to Table 3.	C = Minor L = Rare <b>Low Risk</b>	Y	<b><u>24</u></b>	Monitoring to record animal drownings and reported in the AER.
Operation of inert landfill	Dust	Airborne dust may settle on plant leaves, negatively impacting on photosynthetic activity.	Native vegetation.	Refer to Table 3.	C = Slight L = Possible <b>Low Risk</b>	N/A	N/A	N/A
	Waste	Airborne waste may settle on plant leaves, negatively impacting on photosynthetic activity.	Native vegetation.	Refer to Table 3.	C = Slight L = Unlikely <b>Low Risk</b>	Y	<b><u>1, 2, 3, 4, 5, 6, 7, 17, 18, 21, 22, 23.</u></b>	New conditions include the infrastructure equipment and construction tables to account for regulated infrastructure on the site and associated reporting requirements.

Note 1: Consequence ratings, likelihood ratings and risk descriptions are detailed in the *Guideline: Risk assessments* (DWER 2020).

Note 2: Proposed Licence Holder's controls are depicted by standard text. **Bold and underline text** depicts additional regulatory controls imposed by department.

## 4. Consultation

Table 6 provides a summary of the consultation undertaken by the department.

**Table 6: Consultation**

Consultation method	Comments received	Department response
Department of Mines, Industry Regulation and Safety (DMIRS) advised of proposal (7/01/2022)	<p>DMIRS replied on 18/01/2022 advising that:</p> <p>“From our review of the information provided for L8275/2008/2, it would appear no new ground disturbance or infrastructure are required for pit dewatering activities. As such, it is unlikely a Mining Proposal would be required and there is no MP currently under assessment.</p> <p>The only point that is unclear from the information provided is that if new production bores are required. Please let DMIRS know if new production bores are proposed, as a Mining Proposal would likely be required.”</p>	DWER has confirmed with the Applicant that no new production bores are proposed to be installed for this application and existing bores will be used.

## 5. Conclusion

### 5.1 Transfer Application

The Delegated Officer determined that the transfer of the licence is an administrative amendment, which does not alter the risk profile of the Premises. Following review of the legal entity status and fitness and competency of the Applicant, the Delegated Officer determined to transfer licence L8275/2008/2 from Oz Youanmi Gold Pty Ltd to Rox (Murchison) Pty Ltd, on the grounds it is a current legal entity with legal access to the Premises and is a fit and competent operator with no known convictions.

The Premises shall continue to operate in accordance with the latest Licence conditions and regulatory requirements. The decision document for the previous Licence will remain on the department’s website for future reference and will act as a record of the department’s decision making.

### 5.2 Amendment Application

Based on the assessment in this Amendment Report, the Delegated Officer has determined that a Revised Licence will be granted, subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

### 5.3 Summary of amendments

Table 7 provides a summary of the proposed amendments and will act as record of implemented changes. All proposed changes have been incorporated into the Revised Licence as part of the amendment process.



**Table 7: Summary of licence amendments**

Condition no.	Proposed amendments
Licence history	Inclusion of Licence expiry extension, Amendment Notice 1 and current amalgamation.
1, Table 1	Inclusion of an infrastructure and equipment requirements table, for operational and location requirements of category 6 and 63 related items of infrastructure.
2, Table 2	Inclusion of a construction requirements table for new category 6 and 63 related items of infrastructure.
3	Updated wording and formatting.
4	Updated wording and formatting.
5	Updated wording and formatting.
6, Table 4	Updated wording and formatting. Inclusion of the Youanmi Landfill as a waste processing site for inert waste type 1 and type 2.
7	Updated wording and formatting.
8	Updated wording and formatting. Change of Premises production or design capacity limit from 0 tonnes per annual period to 1,480,000 tonnes per annual period.
9, Table 7	Inclusion of an authorised emissions table as mine dewater and seepage are considered emissions.
10	Updated wording and formatting.
11	Updated wording and formatting.
12	Updated wording and formatting.
13	Updated wording and formatting.
14, Table 8	Inclusion of discharge quality monitoring table for mine dewater. A large suite of parameters is included to capture other potential contaminants, not historically sampled for.
15, Table 9	Updated wording and formatting. pH limits added. A large suite of parameters is included to capture other potential contaminants, not historically sampled for.
16, Table 10	Inclusion of vegetation quality monitoring table to reflect proponents photo monitoring as a control for hypersaline impacts to the environment.
17	Updated condition and formatting.
18	Inclusion of condition regarding books.
19	Inclusion of Audit of Compliance condition for a report to be submitted after completion of construction items.
20	Inclusion of condition detailing who can sign off the Audit of Compliance report.
21	Updated condition and formatting.
22	Updated condition and formatting.

23, Table 11	Updated condition and formatting. Inclusion of animal removals in AER to track impact of evaporation ponds upon native animals and whether suitable fencing needs to be erected.
24	Updated wording and formatting.
25, Table 12	Updated wording and formatting. Table to include notification for condition 9 (hypersaline releases that has or may cause environmental impact).
Table 13	Updated definitions table.
Schedule 1: Maps	Updated wording and formatting. Inclusion of the Main Pit dewatering system map and Youanmi Landfill area map.
Schedule 2: Forms	Removal of ET1 forms. Updated N1 form.

**Table 8: Consolidation of licence conditions in this amendment**

Existing condition	Condition summary	Revised licence condition	Conversion notes
N/A	Licence Holder Details	Licence Holder Details	Updated in accordance with Licence Transfer application.
N/A	Expiry Date	Expiry Date	In accordance with the Notice of Amendment of Licence Expiry Dates (29/04/2016)
N/A	Contents, Introduction and Instrument Log	Licence History	Removal of Contents and Introduction. Revised to current licensing format.
1.1.1	Interpretation	Interpretation	Redundant conditions. Revised to current licensing format.
1.1.2	Definitions section	Definitions and Table 13	Revised to current licensing format.
1.1.3	Australian or another standard	Interpretation section, Definitions and Table 13	Redundant condition. Revised to current licensing format.
1.1.4	Reference to code of practice	Interpretation section	Redundant condition. Revised to current licensing format.
N/A	Infrastructure and equipment requirements	Condition 1 and Table 1	Inserted to current licensing format.
N/A	Construction requirements	Condition 2 and Table 2	Inserted to current licensing format.
1.3.1	Numerical limits	Condition 3	New numbering and updated wording.
1.3.2	Waste acceptance	Condition 4 and Table 3	New numbering and updated wording. New numbering.
1.3.3	Waste removal or storage	Condition 5	New numbering and updated wording.
1.3.4	Waste processing	Condition 6 and Table 4	New numbering and updated wording.

Existing condition	Condition summary	Revised licence condition	Conversion notes
			New numbering. Inclusion of Youanmi Landfill.
1.3.5	Cover requirements	Condition 7 and Table 5	New numbering and updated wording. New numbering.
1.3.6	Mine dewatering capacity limits	Condition 8 and Table 6	New numbering and updated wording. Removal of reference to 'targets'. New numbering.
2.6.2	Visible dust generated	Removed	Redundant Condition. Not risk based.
N/A	Emissions and discharges	Condition 9 and Table 7	To account for mine dewater and seepage as an emission.
2.1.1	Water sample standards	Condition 10	New numbering and updated wording.
2.1.2	Quarterly monitoring	Condition 11	New numbering and updated wording.
2.1.3	Monitoring equipment calibration	Condition 12	New numbering and updated wording.
2.1.4	Discrepancies	Condition 13	New numbering and updated wording.
N/A	Discharge quality monitoring	Condition 14 and Table 8	Inclusion of discharge quality monitoring table for mine dewater.
2.2.1	Ambient environmental quality monitoring	Condition 15 and Table 9	New numbering and updated wording. Removal of reference to "target". New numbering.
N/A	Monitoring of Vegetation quality	Condition 16 and Table 10	Inclusion of vegetation quality monitoring table to reflect proponents photo monitoring as a control for hypersaline impacts to the environment.
3.1.1	Records	Condition 17	New numbering. Condition updated.
N/A	Books	Condition 18	New condition. Supports condition 15.
N/A	Construction report	Condition 19	New condition
N/A	Construction report sign-off	Condition 20	New condition.
3.1.2	Annual Audit Compliance Report	Condition 21	New numbering. Condition updated.
3.1.3	Complaints Management Condition.	Condition 22	New numbering. Condition updated.

Existing condition	Condition summary	Revised licence condition	Conversion notes
3.2.1 and Table 3.2.1	Annual Environmental Report	Condition 23 Table 11	New numbering. Condition updated. Updated table format. Wording updated. Removal of reference to "target(s)".
3.2.2	Annual Environmental Report	Condition 24	New numbering, updated wording. Removal of reference to "targets".
3.3.1	Notification requirements	Condition 25 Table 12	New numbering, updated wording. New numbering.
Schedule 1	Premises Map	Figure 1	Updated format and wording.
Schedule 1	Map of monitoring locations	Figure 2	Updated format and wording. Inclusion of Table 9.
Schedule 1	Landfill (Hill End Pit) area map	Figure 3	Updated format and wording.
Schedule 1	Main Pit Dewatering System Map	Figure 4	Map of Dewatering Infrastructure and pipeline route
Schedule 1	Landfill (Youanmi) area map	Figure 5	Map of the proposed Youanmi Landfill situated within the southern end of the United North rock dump.
Schedule 2 Reporting & notifications	ET1 and N1 Notification Form	N/A	Redundant attachments, deleted from Licence. All forms are found on DWER's website at <a href="http://www.dwer.wa.gov.au">www.dwer.wa.gov.au</a>

## References

1. Department of Environment Regulation (DER) 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
2. Department of Water and Environmental Regulation (DWER) 2020, *Guideline: Environmental Siting*, Perth, Western Australia.
3. DWER 2020, *Guideline: Risk Assessments*, Perth, Western Australia.
4. Coburn Resources Pty Ltd 2021, *Application form: Transfer works approval or licence; notify new occupier registered premises* (DWERDT505162), Perth, Western Australia.
5. Department of Water and Environmental Regulation (DWER) 2019, *Guideline: Decision making*, Perth, Western Australia.

## Appendix 1: Summary of Licence Holder's comments on risk assessment and draft conditions

### Draft Conditions:

Condition	Summary of Licence Holder's comment	Department's response
2, Table 2	Please add the word 'nominal', relating to pump size and pipeline diameter in the 1st and 2nd line of Table 2. Sizes provided in RFI response letter dated 29 April 2022 were intended as Approximate or Nominal sizing, based on initial supplier discussions. However, it is possible that slightly higher or lower rated pumps are installed based on further pump performance and cost discussions, also larger diameter pipelines to reduce pressure and make pumping safer and more efficient.	Added 'nominal' to Table 2.
14, Table 9.	Groundwater Monitoring Bores 94TWRC1 (Town Well) and 94TWRC2 have been included in Table 1 (Condition 1) though not included in Table 9 (Condition 14) or shown on Figure 2 (Schedule 1). Please add to Table 9.	Added bores to Table 9.
Schedule 1: Maps	Rox to provide an updated map of monitoring locations to include Groundwater Monitoring Bores 94TWRC1 (Town Well) and 94TWRC2 which were listed in Table 1. This map is to replace Figure 2.	Replaced Figure 2 with updated map.

### Risk Assessment:

Condition	Summary of Licence Holder's comment	Department's response
Table 1	Table 1: Shows the Current Throughput Capacity for Category 63 to be zero ( - ), however the Actual Capacity is currently 5,000 tonnes per annual period. Please include the 5,000 tonnes in the Current throughput capacity column of Table 1.	Updated Current Throughput Capacity for Category 63 to 5,000 tonnes per annual period.
Section 2.3	Wording adjustment required from "which connects" to "will connect".  Inclusion of the words "approximate" or "nominal" for pipeline and pump sizes, and sizes denoted are indicative only.	Updated wording.
2.3.2	Rox understands the decision document for the previous Licence will remain on the DWER website for future reference, however, is concerned the advice received from DWER in 2016 (re. not needing the landfill licensed or registered to accept putrescible waste as <20 tonnes per annum) would not be sufficiently visible if not included in the current Amendment Report.	Added text referring to the ongoing generation of putrescible waste less than 20 tonnes per annum.  Added text to clarify the Hill End Pit is the existing inert landfill used to store used tyres, which is proposed to be relocated.

## Appendix 2: Application validation summary

SECTION 1: APPLICATION SUMMARY (as updated from validation checklist)					
<b>Application type</b>					
Works approval	<input type="checkbox"/>				
Licence	<input type="checkbox"/>	Relevant works approval number:	None	<input type="checkbox"/>	
		Has the works approval been complied with?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
		Has time limited operations under the works approval demonstrated acceptable operations?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
		Environmental Compliance Report / Critical Containment Infrastructure Report submitted?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
		Date Report received:			
Renewal	<input type="checkbox"/>	Current licence number:			
Amendment to works approval	<input type="checkbox"/>	Current works approval number:			
Amendment to licence	<input checked="" type="checkbox"/>	Current licence number:	L8275/2008/2		
		Relevant works approval number:	N/A	<input checked="" type="checkbox"/>	
Registration	<input type="checkbox"/>	Current works approval number:	None	<input type="checkbox"/>	
Date application received	10 September 2021				
<b>Applicant and Premises details</b>					
Applicant name/s (full legal name/s)	Rox (Murchison) Pty Ltd (633 617 455)				
Premises name	Youanmi Gold Mine				
Premises location	Youanmi Mine Mining Tenements M57/10 and M57/51 SANDSTONE WA 6639				
Local Government Authority	Shire of Sandstone				
<b>Application documents</b>					
HPCM file reference number:	DWERDT502778				
Key application documents (additional to application form):	<ul style="list-style-type: none"> <li>210910_Rox Resources Ltd_L8275 Amendment Supporting Document_Dewatering Rev_0</li> <li>210910_Rox Resources Ltd_L8275 Amendment Supporting Document_Dewatering Rev_0_with appendices</li> </ul>				
<b>Scope of application/assessment</b>					

<p>Summary of proposed activities or changes to existing operations.</p>	<p><i>Licence amendment</i></p> <p>Operation of Mine Dewatering.</p> <p>To reinstate mine dewatering (Category 6) at the Youanmi Gold Mine, at a rate of 1,480,000kL/annum and discharge to the site's evaporation ponds.</p>	
<p>Category number/s (activities that cause the premises to become prescribed premises)</p>		
<p>Table 1: Prescribed premises categories</p>		
<p><b>Prescribed premises category and description</b></p>	<p><b>Assessed production or design capacity</b></p>	<p><b>Proposed changes to the production or design capacity</b></p>
<p>Category 6: Mine Dewatering</p>	<p>1,480,000kL/annum</p>	<p>1,480,000kL/annum</p>
<p><b>Legislative context and other approvals</b></p>		
<p>Has the applicant referred, or do they intend to refer, their proposal to the EPA under Part IV of the EP Act as a significant proposal?</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	<p>Referral decision No: Managed under Part V <input type="checkbox"/> Assessed under Part IV <input type="checkbox"/></p>
<p>Does the applicant hold any existing Part IV Ministerial Statements relevant to the application?</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	<p>Ministerial statement No: N/A EPA Report No: N/A</p>
<p>Has the proposal been referred and/or assessed under the EPBC Act?</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	<p>Reference No: No clearing required.</p>
<p>Has the applicant demonstrated occupancy (proof of occupier status)?</p>	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>	<p>Certificate of title <input type="checkbox"/> General lease <input type="checkbox"/> Expiry: Mining lease / tenement <input type="checkbox"/> Expiry: Other evidence <input type="checkbox"/> Expiry:</p>
<p>Has the applicant obtained all relevant planning approvals?</p>	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/></p>	<p>Approval: Expiry date: If N/A explain why?</p>
<p>Has the applicant applied for, or have an existing EP Act clearing permit in relation to this proposal?</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	<p>CPS No: N/A No clearing is proposed.</p>
<p>Has the applicant applied for, or have an existing CAWS Act clearing licence in relation to this proposal?</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	<p>Application reference No: N/A Licence/permit No: N/A No clearing is proposed.</p>
<p>Has the applicant applied for, or have an existing RIWI Act licence or permit in relation to this proposal?</p>	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>	<p>Application reference No: TBA Licence/permit No: TBA 5C Licence required – not applied for yet.</p>



<p>Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the EP Act)?</p>	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>	<p>Name: East Murchison Groundwater Area  Type: Proclaimed Groundwater Area  Has Regulatory Services (Water) been consulted?  Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/>  Regional office: Mid-West Gascoyne</p>
<p>Is the Premises situated in a Public Drinking Water Source Area (PDWSA)?</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	<p>Name: N/A  Priority: N/A  Are the proposed activities/ landuse compatible with the PDWSA (refer to <a href="#">WQPN 25</a>)?  Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/></p>
<p>Is the Premises subject to any other Acts or subsidiary regulations (e.g. <i>Dangerous Goods Safety Act 2004, Environmental Protection (Controlled Waste) Regulations 2004, State Agreement Act xxxx</i>)</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	
<p>Is the Premises within an Environmental Protection Policy (EPP) Area?</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	
<p>Is the Premises subject to any EPP requirements?</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	
<p>Is the Premises a known or suspected contaminated site under the <i>Contaminated Sites Act 2003</i>?</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	