



Application for Licence Amendment

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

Licence Number	L8692/2012/1
Licence Holder	Paddington Gold Pty Ltd
ACN	008 585 886
File Number	2012/006823-1~1
Premises	Enterprise Gold Mine Part mining tenements M24/29 and M24/170 ORA BANDA WA 6431 As defined by the Premises map attached to the Revised Licence
Date of Report	20 January 2022
Decision	Revised licence granted

**ALANA KIDD
MANAGER, RESOURCE INDUSTRIES**

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

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1. Decision summary

Licence L8692/2012/1 is held by Paddington Gold Pty Ltd (Licence Holder) for the Enterprise Mine Site (the Premises), located at Part mining tenements M24/29 and M24/170, ORA BANDA WA 6431.

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 L8692/2012/1 has been granted.

The Revised Licence has been granted in a new format with existing conditions being transferred, but not reassessed, to the new format.

2. Scope of assessment

2.1 Regulatory framework

In 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

On 04 June 2021, the Licence Holder submitted an application to the department to amend Licence L8692/2012/1 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act). The following amendments are being sought:

- The inclusion of dewatering from the Enterprise Underground Mine following partial completion and compliance of works approval W6279/2019/1; and
- The updating of the premises boundary address and map.

This amendment is limited only to changes to Category 6 activities from the Existing Licence. No changes to the aspects of the existing Licence relating to Category 12 have been requested by the Licence Holder.

The Premises consists of an open pit gold mine, Enterprise Open Pit Mine (located on M24/170), and Gimlet South Pit (located on M24/29), which is used as a water source for dust suppression and a discharge point for dewatering from Enterprise Open Pit. The mining of the ore deposit at Enterprise Mine Site has become uneconomical through open pit methods so the licence holder is proposing to transition to underground mining. This will be achieved by cutting a portal and decline in the northern face of the existing Enterprise Open Pit. The development of the underground requires dewatering of the area to be mined and paste to fill mine cavities for stability.

Works approval W6279/2019/1 assessed the addition of the underground mining including Category 5 for a Paste Fill Plant to process tailings to provide paste fill material for backfilling mine out stopes (voids) to main mine stability for underground mining (not included in this licence amendment application) and Category 6 for the mine dewatering from the Enterprise Underground Mine (this licence amendment application).

2.2.1 Modifications to category 6 mine dewatering

Currently only dewatering water from the Enterprise Open Pit is discharged to the Gimlet South Pit. The licence holder is now requesting to add dewatering water from the Enterprise Underground Mine for transfer to the Enterprise Open Pit and then subsequent transfer to the Gimlet South Pit.

Dewatering infrastructure will not be altered other than the addition of pipes and pumps as needed to pump water from the Enterprise Underground Mine to the Enterprise Open Pit.

Groundwater has the following characteristics:

- The background groundwater quality and levels in the Enterprise Mine show groundwater in the area is brackish to saline with Total Dissolved Solids (TDS) content varying from 7,000 to 27,000mg/L;
- The pH levels have ranged from 6.3 – 7.8, slightly acidic to neutral/slightly alkaline;
- The major ionic composition of the groundwater is salts of sodium and chloride with minor levels of sulphate, magnesium and calcium present. Most other ions are, by comparison, in low total concentrations; and
- Prior to commencement of dewatering activities in 2013 the water level in the Enterprise pit was 376 – 377m RL, approximately 75m below the natural surface. This level is drawn down in the area surrounding the pit by the dewatering to allow mining but it is expected to recover once mining is ceased.

Post mining the surrounding groundwater levels will remain greater than the water level in the pit due to loss from the pit due to evaporation. This makes it a groundwater sink so that the flow of groundwater is into the pit rather than from it, making any potential contamination contained within the pit unlikely to enter the surrounding groundwater.

3. 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.

3.1 Source-pathways and receptors

3.1.1 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 1 below. Table 1 also details the proposed control measures the Licence Holder has proposed to assist in controlling these emissions, where necessary.

Table 1: Licence Holder controls

Emission	Sources	Potential pathways	Proposed controls
Saline water from overtopping of pits	Dewatering water transfer From Enterprise Underground Mine to Enterprise Open Pit and discharge to Gimlet South Pit	Direct discharge	Maintain freeboard >4 metres below crest level of Gimlet South Pit.
Saline water from pipeline rupture	Pipelines transferring mine dewatering water from the Enterprise Underground Mine to the Enterprise Open Pit (pipelines from the Enterprise Open Pit to the Gimlet South Pit have precisely been assessed)	Direct discharge	Daily visual integrity inspections of dewatering pipelines. Secondary containment adequate to contain any spill for a period equal to the time between routine inspections.
Seepage through pits causing groundwater mounding	Enterprise Open Pit and Gimlet South Pit	Seepage to soils and groundwater	Currently more water is required for dust suppression than is available from the Enterprise pit alone so that Gimlet South Pit is required as an extraction point rather than a discharge point. This is unlikely to change as the inflow rate of groundwater to the underground is expected to be 1L/s with a potential high flow of 10L/s. The portal for the underground will also be a limiting factor in the SWL in the pit during operations. If there is a need to discharge to Gimlet South Pit then the activity is already authorised and controlled by the conditions of the Current Licence.

3.1.2 Receptors

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

Table 2 below provides a summary of potential human and environmental receptors that may be impacted as a result of activities upon or emission and discharges from the prescribed premises (*Guideline: Environmental siting* (DWER 2020)).

Table 2: Sensitive human and environmental receptors and distance from prescribed activity

Human receptors	Distance from prescribed activity
Ora Banda townsite (the Ora Banda Inn as	1.5km from the proposed location of the paste fill plant

the most regularly operated residential property)	
Environmental receptors	Distance from prescribed activity
Threatened/Priority Flora <i>Notisia intonsa</i> Priority 3 (previously <i>Gnephosis intonsa</i> : Priority 1)	Located on the southern and eastern boundary of the Prescribed Premises
Threatened/Priority Fauna Threatened/Priority Fauna Malleefowl - vulnerable. Live sitings in the premise boundary known but nesting mounds are not active. 1 mound active early 2018. Malleefowl nesting mounds. The nests located by the 2018 Annual Malleefowl Monitoring were not showing signs of recent use. (Enterprise underground MP, 2019)	100m – 2km from both the paste plant and the edge of the pit.
Geomorphic Wetlands Brown Lagoon (nearest of a series of lagoons and lakes including Clear and Muddy Lakes and Rowles Lagoon)	11km
Parks and Wildlife Managed Lands and Waters: Clear and Muddy Lakes Nature Reserve Rowles Lagoon Conservation Park Credo Station	21km from nearest border of reserve 21.5km from nearest border of park Approximately 9km from border of station, 26km from homestead
One Priority Flora taxon; <i>Notisia intonsa</i> (previously <i>Gnephosis intonsa</i>) (P3) is known to occur within the survey area based on previous GHD flora surveys in 2009. The location of this taxon was searched with no living specimens of this taxon located, it is however an annual species and the Botanica survey in 20161 was outside of the time when annuals could be expected to be present. Nine broad vegetation communities were identified within the survey area. These communities comprised of two different landform types and four major vegetation groups. These communities were represented by a total 28 Families, 43 Genera and 108 Taxa. Based on Keighery's vegetation health rating scale (1994), all nine vegetation communities were rated as 'Good' which depicts vegetation structures that have been significantly altered by very obvious signs of multiple disturbances, in this instance as a result of exploration activities, grazing, vehicle access, historic clearing and mining activities; however it retains its basic structure and has capacity to regenerate.	Within M24/170 and M24/29
Groundwater	Depth to groundwater approximately 75m (Enterprise underground MP, 2019). The proposed underground

Area: Goldfields Subarea: Rebecca Aquifer: Combined - Fractured Rock West - Palaeochannel	mine intersects the groundwater. Water is not suitable for potable use due to salinity (7,000 to 27,000mg/L). It is used for dust suppression in mining.
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3.2 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 3.1. 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 3.1), 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 3.

The Revised Licence L8692/2012/1 that accompanies this Amendment Report authorises emissions associated with the operation of the Premises i.e. Category 6 activities.

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

Table 3. Risk assessment of potential emissions and discharges from the Premises during operation

Risk Event					Risk rating ¹ C = consequence L = likelihood	Licence Holder's controls sufficient?	Conditions ² of licence	Justification for additional regulatory controls
Source/Activities	Potential emission	Potential pathways and impact	Receptors	Licence Holder's controls				
Operation								
Dewatering water transfer From Enterprise Underground Mine to Enterprise Open Pit and discharge to Gimlet South Pit	Saline water from overtopping of Enterprise Open Pit or Gimlet South Pit	Direct discharge Impacts to soils and vegetation	Soils, native vegetation	Refer to Section 3.1	C = Moderate L = Unlikely Medium Risk	Y	Condition 1, Table 1 Infrastructure and equipment requirements Requires freeboard to be maintained >4 metres below crest level of Gimlet South Pit Condition 13, Table 3 Emissions and discharge monitoring Requires monitoring of the mine dewatering water in the Gimlet South Pit Condition 18, Table 4 Annual Environmental Report Requires monitoring results to be provided Condition 19, Table 6 Notification requirements Requires notification of limit breaches	N/A
	Saline water from pipeline rupture	Direct discharge Impacts to soils and vegetation	Soils, native vegetation	Refer to Section 3.1	C = Moderate L = Unlikely Medium Risk	Y	Condition 1, Table 1 Infrastructure and equipment requirements Requires daily visual integrity inspections of dewatering pipelines Condition 6 Requires that all pipelines containing environmentally hazardous substances are provided with secondary	N/A

Licence: L8692/2012/1

Risk Event					Risk rating ¹	Licence Holder's controls sufficient?	Conditions ² of licence	Justification for additional regulatory controls
Source/Activities	Potential emission	Potential pathways and impact	Receptors	Licence Holder's controls	C = consequence L = likelihood			
							containment adequate to contain any spill for a period equal to the time between routine inspections	
	Seepage through pit causing groundwater mounding	Infiltration through the base and embankments resulting in groundwater contamination and groundwater mounding	Native vegetation and groundwater	Refer to Section 3.1	C = Minor L = Possible Medium Risk	Y	Condition 13, Table 3 Emissions and discharge monitoring Requires monitoring of the mine dewatering water in the Gimlet South Pit Condition 18, Table 4 Annual Environmental Report Requires monitoring results to be provided	N/A

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 4 provides a summary of the consultation undertaken by the department.

Table 4: Consultation

Consultation method	Comments received	Department response
Licence Holder was provided with draft amendment on (08/12/2021)	Waiver email received 17/01/2022.	Documents finalised – no response required.

5. Conclusion

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.

5.1 Summary of amendments

Table 5 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 5: Summary of licence amendments

Existing condition	Condition summary	Revised licence condition	Conversion notes
N/A	Contents	N/A	Deleted as per current licensing format.
N/A	Introduction	N/A	Deleted as per current licensing format.
N/A	Licence history	Licence history	Administrative changes.
1.1.1	Interpretation	Interpretation	Updated as per current licensing format.
1.1.2	Definitions	Definitions	Moved to the back of the Licence, now Table 7.
1.1.3	Australian or other standard	Interpretation	Condition deleted and now included in the updated 'Interpretation' section as per current licensing format.
1.1.4	Reference to code of practice	Interpretation	Condition deleted and now included in the updated 'Interpretation' section as per current licensing format.
1.3.3, Table 1.3.1	Inspections	1, Table 1	Modified to Operational requirements in line with new licence template.
2.4.2, Table 2.4.2	Freeboard of Gimlet South Pit	1, Table 1	Modified to Operational requirements in line with new licence template.

Existing condition	Condition summary	Revised licence condition	Conversion notes
2.4.3, Table 2.4.3	Freeboard of Gimlet South Pit	1, Table 1	Modified to Operational requirements in line with new licence template.
1.2.1	Emissions authorisations	N/A	Removed as per new licence template and covered by the general provisions of the EP Act.
1.2.2	Maintain as per manufacturer's specifications	2	Updated in line with current condition wording.
1.2.3	Hazardous materials storage	3	Updated in line with current condition wording.
1.2.4	Removal of spills/leaks	4	Updated in line with current condition wording.
1.2.5	Stormwater contamination	5	Updated in line with current condition wording.
1.3.1	Pipelines	6	Updated in line with current condition wording.
1.3.2	Saline dewatering effluent	7	Condition number changed only.
2.3.1, Table 2.4.1	Authorised discharge points	8, Table 2	Updated to new format. Included Enterprise Underground Mine.
2.6.1	Minimise dust emissions	9	Condition number changed only.
2.6.2	No visible dust crossing boundary	10	Updated in line with current condition wording.
3.1.1	Sampling	11	Condition number changed only.
3.1.2	Monitoring frequency	12	Updated in line with current condition wording.
3.4.1, Table 3.4.1	Emissions monitoring	13, Table 3	Updated to new format. Included parameters from works approval W6279/2019/1.
5.1.1	Books	14 and 15	Updated in line with current condition wording.
5.1.2	Person left in charge	N/A	Removed as per new licence template and covered by the general provisions of the EP Act.
5.1.3	AACR	16	Updated in line with current condition wording.
5.1.4	Complaints	17	Updated in line with current condition wording.
5.2.1	AER	18, Table 4	Updated in line with current condition wording.

Existing condition	Condition summary	Revised licence condition	Conversion notes
5.3.1, Table 5.3.1	Notification requirements	19, Table 5	Updated to new format.
Schedule 1: Maps	Maps of infrastructure, emissions points and monitoring points	Schedule 1: Maps	Updated maps and relabeled with Figures.
N/A	Coordinates	Schedule 2: Premises boundary	Included as per new format.
Schedule 2: Reporting & notification forms	AACR Performa	N/A	Removed as per new format.
GR1 form	Mine dewatering water reporting form	N/A	Removed as per new format.
N1 form	Notification form	Schedule 3: Notification form	Included as per new format.

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. Paddington Gold Pty Ltd, Licence Amendment Application - L8692/2012/1 04/06/2021, Kalgoorlie, Western Australia.
5. Paddington Gold Pty Ltd, RE: APPLICANT NOTIFICATION - NOTICE OF PROPOSED AMENDMENT TO LICENCE L8692/2012/1 17/01/2022, Kalgoorlie, Western Australia.

Appendix 2: Application validation summary

SECTION 1: APPLICATION SUMMARY				
Application type				
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:	L8692/2012/1	
		Relevant works approval number:	W6279/2019/1	N/A <input type="checkbox"/>
Registration	<input type="checkbox"/>	Current works approval number:		None <input type="checkbox"/>
Date application received	04 June 2021			
Applicant and Premises details				
Applicant name/s (full legal name/s)	Paddington Gold Pty Ltd			
Premises name	Ora Banda EGS – Enterprise Mine Site			
Premises location	Part mining tenements M24/29 and M24/170 ORA BANDA WA 6431			
Local Government Authority	City of Kalgoorlie Boulder			
Application documents				
HPCM file reference number:	2012/006823-1~1			
Key application documents (additional to application form):	Application form Ro15b – Enterprise pit – revised dewatering and drawdowns – Sept 2011 GWL 160697(3) – Ore Banda – Expiry 18 December 2022 PGM-ENV-PLN-11-02 Enterprise Noise Management Plan PGM-ENV-PLN-11-01 – Enterprise Dust Management Plan NGF-PRO-ENV-006-002B Dust Suppression Procedure MP_78366 Norton Broad Arrow Malleefowl letter report February 2020 AW			

	12.2.20 NGF-ENV-PLN-09-001C Malleefowl Management Plan Malleefowl Mound Marking Procedure PGM-ENC_P:RO-09-002A Revised Application Form	
Scope of application/assessment		
Summary of proposed activities or changes to existing operations.	To amend licence L8692/2012/1 to add dewatering from the Enterprise underground operations to Enterprise Pit. Previously the licence only permitted dewatering from the Enterprise Open Pit. It is also to amend the prescribed premises boundary in accordance with Works Approval W6279/2019/1.	
Category number/s (activities that cause the premises to become prescribed premises)		
Table 1: Prescribed premises categories		
Prescribed premises category and description	Assessed production or design capacity	Proposed changes to the production or design capacity (amendments only)
Category 6: Mine dewatering	500 000 tonnes per year	N/A
Category 12: Screening etc of material	115 000 tonnes per year	N/A
Legislative context and other approvals		
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?	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"/>
Does the applicant hold any existing Part IV Ministerial Statements relevant to the application?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Ministerial statement No: EPA Report No:
Has the proposal been referred and/or assessed under the EPBC Act?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Reference No:
Has the applicant demonstrated occupancy (proof of occupier status)?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Certificate of title <input type="checkbox"/> General lease <input type="checkbox"/> Expiry: Mining lease / tenement <input checked="" type="checkbox"/> Expiry: Other evidence <input type="checkbox"/> Expiry:
Has the applicant obtained all relevant planning approvals?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	Approval: Expiry date: If N/A explain why?
Has the applicant applied for, or have an existing EP Act clearing permit in relation to this proposal?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	CPS No: 3560/5

Has the applicant applied for, or have an existing CAWS Act clearing licence in relation to this proposal?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Application reference No: N/A Licence/permit No: N/A Licence / permit not required..
Has the applicant applied for, or have an existing RIWI Act licence or permit in relation to this proposal?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Application reference No: N/A Licence/permit No: GWL 160697(3)
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the EP Act)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Name: N/A
Is the Premises situated in a Public Drinking Water Source Area (PDWSA)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Name: N/A Priority: N/A Are the proposed activities/ landuse compatible with the PDWSA (refer to WQPN 25)? Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
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>)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<i>Mining Act 1978</i>
Is the Premises within an Environmental Protection Policy (EPP) Area?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	N/A
Is the Premises subject to any EPP requirements?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	N/A
Is the Premises a known or suspected contaminated site under the <i>Contaminated Sites Act 2003</i> ?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Classification: Possibly contaminated – investigation required (PC–IR) Date of classification: 20/02/2020