



Application for Licence Amendment

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

Licence Number	L8569/2011/2
Licence Holder	Northern Star (Carosue Dam) Pty Ltd
ACN	116 649 122
File Number	APP-0032868
Premises	Porphyry Gold Mine Legal description – Part of mining tenements M31/3, M31/4, M31/5, M31/6, M31/30, M31/76, M31/380, M31/381, L31/44, L31/59, L31/62, L31/63, L31/45 and M31/172 MENZIES WA 6436 As defined by the premises maps in Schedule 1
Date of Report	11 March 2026
Decision	Revised licence granted

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1. Decision summary

Licence L8569/2011/2 is held by Northern Star (Carosue Dam) Pty Ltd (Licence Holder) for the Porphyry Gold Mine (the Premises), located within mining tenements M31/3, M31/4, M31/5, M31/6, M31/30, M31/76, M31/380, M31/381, L31/44, L31/59, L31/62, L31/63, L31/45 and M31/172, Menzies, Western Australia.

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 construction and operation of the Premises. As a result of this assessment, Revised Licence L8569/2011/2 has been granted.

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 Amendment summary

On 11 December 2025, the Licence Holder submitted an application to the department to amend Licence L8569/2011/2 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act). The following amendments are being sought:

- Installation and operation of an additional mine dewater discharge point located at Million Dollar Pit 3 South (MD3(S)).
- Installation of sprinkler systems at the Million Dollar and Wallbrook Waste Rock Dumps (WRD's) for the purpose of mine dewater discharge and dust suppression; and
- Construction of a new dewatering pipeline to transport mine dewater from the Porphyry pits to the new discharge points at MD3(S), and the Million Dollar and Wallbrook Waste Rock Dumps WRD's via the Porphyry turkey nest.

The purpose of this licence amendment is to establish a new discharge point at MD3(S), with associated pipelines and additional discharge points at the WRD's to facilitate ongoing Porphyry mining operations and dust management. As noted above, the WRD's will act as authorised mine dewater discharge points for the primary purpose of dust suppression. The location of the proposed discharge points and associated pipelines are illustrated in Figure 1.

This amendment is limited only to changes to Category 6 from the Existing Licence. No changes to the aspects of the existing Licence relating to Category 5, 12, 63, 64 and 73 have been requested by the Licence Holder.

Table 1 below outlines the proposed changes to the existing Licence

Table 1: Proposed design capacity changes

Category	Current design capacity	Proposed design capacity	Description of proposed amendment
6	3 000 000 tonnes per annual period	N/A	No changes to design capacity are proposed.

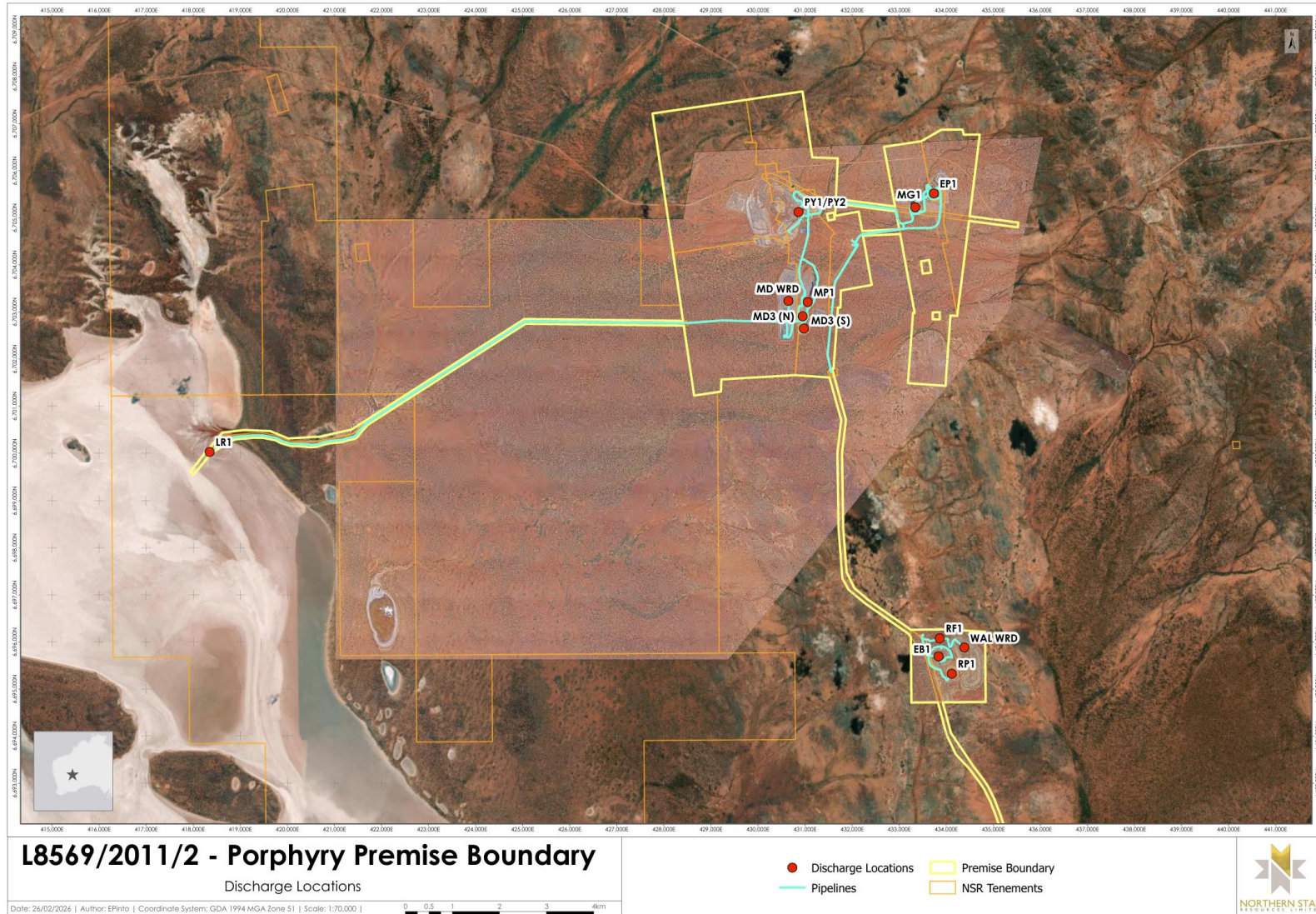


Figure 1: Location of dewatering pipelines, authorised discharge locations and spray field

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2.2.1 Mine dewatering operations

To support ongoing mining operations within the Carosue Dam Operation (CDO), mine dewater is extracted from the Porphyry pit and underground and transported to the Million Dollar pit via the turkeys nest before being discharged at the existing authorised discharge point, Million Dollar pit 1 (MP1 as per licence L8569/2011/2).

However, this existing authorised discharge point is no longer used due to safety concerns, and as such, a new authorised discharge point is proposed at Million Dollar pit 3 South (MD3(S)). It is proposed that MD3(S) will serve as the new backup water storage location previously provided by MP1, with MD3(S) already having been approved under the Porphyry Mining Proposal (registration ID 129177). This amendment is therefore being sought to effectively add this activity to the operating licence.

Additional discharge points are proposed to be installed at the Million Dollar and Wallbrook Waste Rock Dumps (WRD's) for the purpose of dust suppression. The Licence Holder estimates the annual volumes of mine dewater to be discharged via the Million Dollar WRD to be approximately 300,000 kL and approximately 100,000 kL for the Wallbrook WRD respectively.

To support the transfer of mine dewater extracted from Porphyry pit and underground, new pipelines are also proposed to be installed from Porphyry pit to the new authorised discharge points at MD3(S) and the Million Dollar and Wallbrook WRD's. The dust suppression infrastructure for the Million dollar and Wallbrook WRD's will include sprayers and sprinklers systems.

The location for all newly proposed infrastructure is illustrated in Figure 1.

2.2.2 Hydrogeology

A feasibility study was undertaken to determine whether there is adequate additional storage capacity in MD3(S) to receive dewatering from the Porphyry pit and the Porphyry underground mine. The results of these investigations concluded that the MD3(S) pit currently holds 0.70 GL of water and has an estimated total water storage capacity of 1.38 GL (Pennington Scott, 2025). The Licence Holder anticipates that this provides an adequate surplus capacity to receive excess dewatering from Porphyry underground.

Seepage into groundwater is not expected from MD3(S) (Northern Star, 2025), with chief concerns around seepage being focused on groundwater inflows into the pit (Pennington Scott, 2025). The Licence Holder also expects that catastrophic water in-rush to mine from extreme storms can be mitigated by existing on-site stormwater management infrastructure, and the required freeboard level of 6 m below crest level is expected to be sufficient in maintaining a safe operating level for water in the pit (Northern Star, 2025).

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 construction and operation which have been considered in this Amendment Report are detailed in

Table 2 below.

Table 2 also details the proposed control measures the Licence Holder has proposed to assist in controlling these emissions, where necessary.

Table 2: Licence Holder controls

Emission	Sources	Potential pathways	Proposed controls
Construction			
Dust	Construction of new dewater pipelines and associated infrastructure Installation of dust suppression sprinkler systems at Million Dollar and Wallbrook WRD's	Air/windborne pathway	No additional controls for dust have been proposed, however, condition 20 of licence L8569/2011/2 requires the Licence Holder to "use all reasonable and practical measures to prevent, or where that is not practicable, to minimise dust emissions from the premises."
Operation			
Saline to hypersaline mine dewater	Transfer of mine dewater via pipelines	Overland runoff due to leaks and infrastructure failure; infiltration to groundwater	Continue 12 hourly visual inspections of dewatering pipeline integrity.
	Use of mine dewater for dust suppression within the Million Dollar and Wallbrook WRD's	Direct discharge	No controls have been proposed.
	Discharge of mine dewater into Porphyry Turkeys Nest	Overtopping of the Porphyry Turkeys Nest	Maintain 300mm freeboard.
	Discharge of mine dewater into Million Dollar Pit	Overtopping of the Million Dollar Pit	Maintain freeboard of 6 m below pit crest height (344 mRL) for water storage pit.
	Storage of mine dewater in Million Dollar Pit	Seepage of mine dewater through pit base	No controls have been proposed. The Licence Holder has stated that seepage is not expected from the Million Dollar pit.

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 3 below provides a summary of potential human, cultural 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 3: Sensitive human, cultural and environmental receptors and distance from prescribed activity

Human receptors	Distance from prescribed activity
Residential Premises	7 km east-south-east from the premises. <u>This receptor has been screened out due to distance.</u>
Environmental receptors	Distance from prescribed activity
Native vegetation	Native vegetation is present within the premises boundary and adjacent to the Porphyry and Million Dollar pits.
Groundwater	Data from the applicant's 2021 Annual Environmental Report indicates that groundwater at the Enterprise and Margaret's Pits is greater than 20 mbgl. However, there were two instances in 2024 where groundwater came within 4 mbgl in bores adjacent to Margaret's Pit. Although the Total Dissolved Solids (TDS) of the groundwater is not known, the TDS of the water in the pit, which is primarily groundwater seepage, is estimated to be between 5,000 and 105,000 mg/L (Pennington Scott, 2025), indicating saline to hypersaline conditions.
Cultural receptors	Distance from prescribed activity
Aboriginal heritage site	RegID 2323 – Porphyry Gold 2 (Artefacts/Scatter) – located approximately 500 metres north of Porphyry pit area.

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 4.

The Revised Licence L8569/2011/2 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 4. Risk assessment of potential emissions and discharges from the Premises during construction and operation

Risk Event					Risk rating C = consequence L = likelihood	Applicant controls sufficient?	Conditions of licence	Justification for additional regulatory controls
Source/Activities	Potential emissions	Potential pathways and impact	Receptors	Applicant controls				
Construction								
Construction of new dewater pipelines and associated infrastructure Installation of dust suppression sprinkler systems at Million Dollar and Wallbrook WRD's	Dust	Pathway: Air/windborne pathway Impact: Adverse impacts to vegetation health and impacts to cultural heritage sites including reduced amenity and artefact damage	Adjacent vegetation Aboriginal cultural heritage	Refer to section 3.1.1	C = Minor L = Unlikely Low Risk	Y	Condition 20	N/A

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Risk Event					Risk rating C = consequence L = likelihood	Applicant controls sufficient?	Conditions of licence	Justification for additional regulatory controls
Source/Activities	Potential emissions	Potential pathways and impact	Receptors	Applicant controls				
Operation								
Transfer of mine dewater via pipelines	Saline to hypersaline mine dewater	<p>Pathway: Overland runoff due to leaks and infrastructure failure; infiltration to groundwater</p> <p>Impact: Ecosystem disturbance and impacts to vegetation health; impact to groundwater quality; impacts to cultural heritage sites including reduced amenity and artefact damage</p>	<p>Adjacent vegetation</p> <p>Groundwater</p> <p>Aboriginal cultural heritage</p>	Refer to section 3.1.1	<p>C = Minor</p> <p>L = Possible</p> <p>Medium Risk</p>	N	<p>Condition 1, Table 1</p> <p>Existing condition 5</p>	<p>No specifications for pipeline construction were provided. As such, the Delegated Officer has included the requirement for secondary containment (bunding) or other controls as specified, to be installed with new dewatering pipelines.</p> <p>Existing conditions for inspections of the pipelines apply.</p>
Use of mine dewater for dust suppression within the Million Dollar and Wallbrook WRD's		<p>Pathway: Direct discharge</p> <p>Impact: Ecosystem disturbance and impacts to vegetation health; impacts to cultural heritage sites including reduced amenity and artefact damage</p>		Refer to section 3.1.1	<p>C = Minor</p> <p>L = Possible</p> <p>Medium Risk</p>	N	<p>Existing condition 7 regarding saline water used for dust suppression applies.</p>	<p>Although the applicant did not propose any controls for saline water applied to dust suppression, the Delegated Officer is satisfied that existing condition 7 will ensure surrounding vegetation is not damaged.</p>

Risk Event					Risk rating C = consequence L = likelihood	Applicant controls sufficient?	Conditions of licence	Justification for additional regulatory controls
Source/Activities	Potential emissions	Potential pathways and impact	Receptors	Applicant controls				
Discharge of mine dewater into Porphyry Turkey Nest	Saline to hypersaline mine dewater	Pathway: Overtopping of the Porphyry Turkey Nest Impact: Ecosystem disturbance and impacts to vegetation health; impacts to cultural heritage sites including reduced amenity and artefact damage	Adjacent vegetation Groundwater Aboriginal cultural heritage	Refer to section 3.1.1	C = Minor L = Possible Medium Risk	Y	N/A	N/A
Discharge of mine dewater into Million Dollar Pit		Pathway: Overtopping of the Million Dollar Pit Impact: Ecosystem disturbance and impacts to vegetation health		Refer to section 3.1.1	C = Minor L = Unlikely Low Risk	Y	Existing conditions 19 and 24	N/A
Storage of mine dewater in Million Dollar Pit		Pathway: Seepage of mine dewater through pit base Impact: Adverse impacts to groundwater quality due to increase in salinity	Groundwater	Refer to section 3.1.1	C = Minor L = Unlikely Low Risk	Y	Existing condition 24, Table 11	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. **Additional regulatory controls** depicts additional regulatory controls imposed by department.

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4. Consultation

Table 5 provides a summary of the consultation undertaken by the department.

Table 5: Consultation

Consultation method	Comments received	Department response
Licence Holder was provided with draft amendment on 20 February 2026	Licence Holder provided minor additional information required for the pipeline and discharge locations.	Information incorporated not final documents.

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 6 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 6: Summary of licence amendments

Condition no.	Proposed amendments
Licence history	Updated to include additional discharge points at Million Dollar pit 3 South, Million Dollar Waste Rock Dump, and Wallbrook Waste Rock Dump, and the construction of associated pipeline infrastructure for the purpose of discharging mine dewater.
Condition 1, Table 1	Added requirements for the construction of new dewatering pipelines.
Condition 18, Table 8	Added the Million Dollar pit 3 South, Million Dollar Waste Rock Dump, and Wallbrook Waste Rock Dump as authorised discharge points.
Condition 19, Table 9	Added the Million Dollar pit 3 South and prescribed freeboard limit.
Condition 24, Table 11	Added the Million Dollar pit 3 South to the monitoring table.
Schedule 1, Figure 2	Updated map to show new discharge points and associated pipeline infrastructure.

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. Northern Star Resources Ltd 2025, *Application Supporting Documentation - Attachment 6A: Emissions and Discharges*, Perth, Western Australia.
5. Pennington Scott 2025, *Water management strategy for the Million Dollar underground mining project*, Perth, Western Australia.