

Amendment Report

Application for Licence Amendment

Part V Division 3 of the Environmental Protection Act 1986

Licence Number	L9362/2022/1		
Licence Holder	Norton Gold Fields Pty Limited		
ACN	112 287 797		
File Number	DER2022/000510		
Premises	Binduli Operations		
	Legal description -		
	Part of mining Tenements M26/115, M26/243, M26/387, M26/420, M26/430, M26/445, M26/446, M26/447, M26/474, M26/629 and M26/833.		
	BINDULI WA 6430		
	As defined by the premises map in Schedule 1 and the coordinates outlined in Schedule 2.		
Date of Report	25 March 2024		
Decision	Revised licence granted		

A/Manager, Resources Industries Regulatory Services an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

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1. Decision summary

Licence L9362/2022/1 is held by Norton Gold Fields Pty Ltd (Licence Holder) for the Binduli Operations (the Premises), located within mining tenements M26/115, M26/243, M26/387, M26/420, M26/430, M26/445, M26/446, M26/447, M26/474, M26/629 and M26/833.

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 L9362/2022/1 has been granted.

The Revised Licence issued as a result of this amendment consolidates and supersedes the existing Licence previously granted in relation to the Premises.

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 19 December 2023, the Licence Holder submitted an application to the department to amend Licence L9362/2022/1 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act). The following amendments are being sought:

- The inclusion of Fort William pit as a discharge location for Brine Water that is a waste stream from the Water Treatment Plan (WTP);
- The addition of the pipeline leading from the pre-existing Brine Water pipeline to Fort William pit. Construction of the pipeline leading to Fort William Pit was completed under Works Approval W6504/2021/1 on 13 December 2023 and is currently operating under Time Limited Operations (TLO) since 18 December 2023; and
- Administrative addition of the Barren Liquor Pond (BLP) into the Licence. The Department received the Environmental Compliance Report for the BLP on 27 June 2022. On 29 March 2023 the Department issued Licence L9362/2022/1 to the Licence Holder. This included a risk assessment for Heap leach operations which included the BLP, however at the time the BLP was not included on the licence.

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

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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.

Emission	Sources	Potential pathways	Proposed controls
Brine water	Spill, leak from the pipelines.	Direct discharge to land	 Telemetry shutoff and leak detection; Catch pits installed at low points and has capacity to hold the maximum volume of water contained in the pipeline; Pipelines bunded or buried; and Twice daily inspections of pipelines when operational.
	Overtopping of discharge pit	Direct discharge to land	 Freeboard of 6 m from below the pit crest to be maintained for pit; and Flow meter installed to monitor volume of water discharged to the pit.
	Seepage from pit walls and floor	Seepage from base of pit into groundwater	None proposed

Table 1: Licence Holder controls

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	d distance from	prescribed
activity					

Human receptors	Distance from prescribed activity	
Industrial/commercial/residential premises (Screened out)	The nearest industrial/commercial/residential buildings are located approximately 1.2 kms east of Fort Williams.	
	Due to the nature of the amendment activities and the distance to the receptors there is no risk that the operation will affect the receptors.	
Environmental receptors	Distance from prescribed activity	
Native Vegetation (Mixed Eucalyptus woodlands)	Native vegetation appears both within and surrounds the prescribed premises.	
	 Native vegetation appears to be located 	

	adjacent to some sections of pipeline; andApproximately 280 m east of Fort Williams.
RIWI Goldfields Groundwater Area	Standing Water Level Currently between <u>7.67 mbgl</u> (August 2023 in MBH08) to <u>28.68 mbgl</u> (February 2023 in MBH05) (Norton 2024).
	Groundwater appears to flows to the North using data from the 2022 groundwater monitoring events.
	pH Currently between <u>3.21</u> (August 2023 in MBH04) to <u>7.58</u> (February 2023 in MBH08) (Norton 2024).
	TDS Currently between <u>64,800 mg/L</u> (February 2023 in MBH05) to <u>158,000 mg/L</u> (August 2023 in MBH01).
	The only known groundwater users within 5 kms of the Premises are for mining processing purposes only. There are no other known groundwater users in the local area of the Premises (5 km radius).
Priority or Threatened Flora (Screened out)	Priority and threatened flora were identified nearby the prescribed premises. Nearby identified priority and threatened flora are presented below:
	 P2 flora species is located approximately 4 km east and southwest of Fort Williams.
	No other priority or threatened flora was identified within 5 km of Fort Williams.
	Due to the distance from the activities, priority and threatened flora are not considered as a receptor.
Native Fauna (Screened out)	Native fauna is expected to vacate the site due to noise emissions generated during site operation.
	Therefore, native fauna is discounted as a receptor for the risk assessment.
Priority or Threatened Fauna (Screened out)	Priority and threatened fauna were identified nearby the prescribed premises. Identified priority and threatened fauna are presented below:
	 Critically endangered and Priority 1 species identified approximately 4.8 kms of Fort Willians,
	No other priority or threatened fauna was identified within 5 km of the prescribed premises boundary.
	Due to the distance from the activity, the priority and threatened fauna are discounted and not considered as a receptor.

Kurrawang Nature Reserve (DBCA Legislative tenure) (Screened out)	Located adjacent to the west side of the prescribed premises boundary and approximately 3.0 kms southwest from Fort William. Due to the distance from the activity and receptor it is concluded that the amendment will not change the risk to the Kurrawang Nature Reserve and will be discounted for this assessment.
<u>Marlinyu Ghoorlie Group</u> The Marlinyu Ghoorlie Group submitted a claim in 2017 (WC2017/007). Claim has	The prescribed premises is located within the Marlinyu Ghoorlie Native Title claim that is "accepted for registration".
been accepted by the National Native Title Tribunal. (Screened out)	As of 1 February 2024 no determination/native currently exists for the claim and therefore is discounted within the risk assessment.
Vulcan 6 (Artefacts/Scatter) (Screened out)	Located approximately 2 kms northwest of the prescribed premises.
	Due to the distance to the receptor the activities on site are unlikely to affect the receptor and therefore the receptor is discounted for this risk assessment.
Binduli Rock Hole (<i>Place ID: 21047</i>) (Screened out)	The Binduli Rock Hole is situated adjacent to the prescribed premises and it located approximately 1.5 kms east from Fort Williams Pit.
	The site type is classified as a "Historical, Mythological, Natural Feature, Water Source."
	Due to the distance to the receptor from Fort Williams the operations are unlikely to affect the receptor and therefore the receptor is discounted for this risk assessment.

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 in-complete 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 L9362/2022/1 that accompanies this Amendment Report authorises emissions associated with the operation of the Premises i.e. discharging brine water into Fort William.

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 operation

Risk Event					Risk rating ¹			
Source/Activities	Potential emission	Potential pathways and impact	Receptors	Licence Holder's controls	C = consequence L = likelihood	Licence Holder's controls sufficient?	Conditions ² of licence	Justifi
Operation								
Discharge of brine water from Water Treatment Plant to Fort William.	Pathways • Leaks, sp rupture of resulting i discharge environmed Impact • Direct corwith reception causing contamina stress or of Brine water Pathways • Overtopping resulting i discharge environmed Impact • Overtopping resulting i discharge environmed Impact • Direct corwith reception with reception • Direct corwith reception • Coroundwater • Groundwater • Groundwater • Groundwater • Groundwater • Direct corw	 Pathways Leaks, spills or rupture of pipeline resulting in a discharge to the environment. Impact Direct contact with receptors causing contamination, stress or death. 	Native vegetation	Refer to Section 5.1	C = Minor L = Possible Medium Risk	Y	Condition 2 – pipelines containing brine discharge requirements (telemetry, automatic cut- outs and secondary containment). Condition 3 – Pipeline inspection requirement	The Lic controls the exis Existing and ins Fort Wi of impa
		 Pathways Overtopping of pit resulting in a discharge to the environment. Impact Direct contact with receptors. 	Native vegetation		C = Minor L = Unlikely Medium Risk	Y	Condition 1 – Pit freeboard requirements Condition 3 – Freeboard inspection requirement Condition 4 – authorised discharge points Condition 5 – Emissions and discharge monitoring	Storage freeboa It is ant brine w basis. months The lice controls the exis include below p This is overtop Conditi inspect include Conditi monito William
		 Pathways Leaching of brine water through Fort William base or walls. Impact Groundwater mounding /groundwater quality changes. 	Native vegetation Groundwater		C = Moderate L = Unlikely Medium Risk	Y	Condition 1 – Pit freeboard requirements Condition 3 – Freeboard inspection requirement Condition 4 – authorised discharge points Condition 5 – Emissions and discharge monitoring	Mine de Centuri pipeline can be The wa (brine) is now time lin The bri elevate numbe concen

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ication for additional regulatory controls / general comments

cence Holder is proposing to apply the same ls to Fort Williams Pit as those that apply to isting brine discharge pit (Fort Scott).

g conditions 2 and 3 (pipeline requirements spections) apply to the new brine pipeline to /illiam Pit and are sufficient in managing risk acts from pipeline leaks/spills.

e capacity of Fort Willaim pit (excluding ard is approximately 2,784,764 m³.

ticipated that approximately 82,637 m³ of vill be discharged to the pit on a monthly With an estimated operating period of 33 s.

ence holder is proposing to apply the same ls to Fort Williams Pit as those that apply to isting brine discharge pit (Fort Scott). This es a freeboard requirement of 6 meters pit crest.

sufficient to mitigate the risk of impacts from pping of the pit.

ions 1 and 3 (which outlines freeboard and tion requirements) has been updated to a Fort William Pit.

ion 5 have also been updated to require oring of the volume of water discharge to fort n pit via a flow meter.

lewater sourced from Navajo Chief Pit and rion pits are pumped through a pit water e to the water treatment plant so the water e treated for use in the heap leach process. aste stream from this water treatment plant was being discharged to Fort Scott Pit and being discharged to Fort Willam Pit under mited operations (W6504/2021/1).

ine water from the water treatment plan has ed levels of total dissolved solids and a er of dissolved major cations and metal ntrations. This is expected given the brine

Risk Event					Risk rating ¹					
Source/Activities	Potential emission	Potential pathways and impact	Receptors	Licence Holder's controls	C = consequence Lic L = likelihood	Licence Holder's controls sufficient?	Licence Holder's controls sufficient?	Licence Holder's controls sufficient? Conditions ² of licence	Conditions ² of licence	Justifi
								water of metals treatme recorde the wa becom volume ground		
								The on the Pre only. T in the le		
								The lice meter f any po impact close to		
								Conditi inspect include		

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.

ication for additional regulatory controls / general comments

contains concentrated left-over salts and s that have been removed by the water lent plant. Although metal concentrations led in the brine water samples are elevated, ater discharged into Fort William pit is likely to he diluted when it is mixed into the large e of pit water and therefore impacts to dwater quality is expected to me low.

hly known groundwater users within 5 kms of emises are for mining processing purposes There are no other known groundwater users local area of the Premises (5 km radius).

cence holder is proposing to maintain a 6 freeboard within the pit which should ensure otential groundwater mounding does not t the root zones of native vegetation located to the discharge pit.

tions 1 and 3 (which outlines freeboard and ction requirements) has been updated to e Fort William Pit.

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 (19 March 2024)	Licence holder responded on 21/03/2024 with no comments and requesting the final licence to be issued asap.	Noted.

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.

Condition no.	Proposed amendments
1	Addition of Fort William Pit to the table of site infrastructure and equipment to have a 6 m freeboard and to receive brine water from the WTP.
1	Included Barron Water Pond to the list of processing and raw water ponds requiring a freeboard and HDPE liner.
3	Addition of Fort William Pit to require visual inspection when discharging brine water to pit.
4	Addition of Fort Williams Pit as a discharge point for brine water from the WTP
5	Addition of Fort William Pit to table requiring volume of water discharged to be monitored and the SWL.
Definitions	Added additional definitions of abbreviations used within the Licence.
Schedule 1: Figure 3	Amened Figure to include Fort William Pit as a discharge location.

Table 5: Summary of licence amendments

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. Norton Gold Fields 2024, Annual Environmental Report, L8327, L8512, L8692 & L9362, Reporting Period: 1 January 31 December 2023.

Appendix 1: Application validation summary

SECTION 1: APPLICATION SUMMARY						
Application type						
Works approval						
Licence		Relevant works approval number:		Non e		
		Has the works approval been complied with?		Yes 🗆 No 🗆		
		Has time limited operations under the works approval demonstrated acceptable operations?		Yes □ No □ N/A □		
		Environmental Compliance Report submitted?		Yes □ No □		
		Date Report received:				
Renewal		Current licence number:	Current licence number:			
Amendment to works approval		Current works approval number:				
Amendment to licence		Current licence number:	^{ce} L9362/2022/1			
		Relevant works approval number:	W6504/2021	N/A		
Registration		Current works approval number:		Non e		
Date application received		19 December 2024				
Applicant and Premises details						
Applicant name/s (full legal name/s)		Norton Gold Field Pty Limited				
Premises name		Binduli North Minesite				
Premises location		Mining tenements: M26/115, M26/243, M26/387, M26/420, M26/430, M26/445, M26/446, M26/447, M26/474, M26/629, M26/833				
Local Government Authority		City of Kaloorlie-Boulder				
Application documents						
HPCM file reference number:		DER2022/000510				
Key application documents (additional to application form):		N/A				
Scope of application/assessment						

	Licence amendment	
	This Licence amendment is to include Fort William (Pit) as a discharge location for Brine Water from the Water Treatment Plant (WTP). Construction of the pipeline leading to Fort William was completed under Works Approval W6504/2021/1 on 13 December 2023 and is currently operating under Time Limited Operations (TLO) since 18 December 2023.	
Summary of proposed activities or changes to existing operations.	On 30 January 2024 the Department called the Licence Holder and the Department was informed that the Barren Liquor Pond (BLP) was never added to Licence L9362/2022/1 from Works Approval W6504/2021/1. It was reviewed and confirmed that the BLP was added to the initial Works Approval, an Environmental Compliance Report was completed for it and the BLP was incorporated into the decision report and risk assessment on 29 March 2023. Under this amendment the BLP will be added to the Licence under an administrative amendment only as the risk assessment had already been completed in March 2023.	

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	
Category 5: Processing or beneficiation of metallic or non-metallic ore	5,000,000 tonnes per annual period		N/A	
Category 6: Mine dewatering	1,500,000 tonnes per annual period		N/A	
Category 7: Vat or in situ leaching of material	5,000,000 tonnes per annual period		N/A	
Category 52: Electric power generation	13 MW per annual period		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 □ No ⊠	Referral decision No: ⁄Ianaged under Part V ⊠ Assessed under Part IV □	
Does the applicant hold any existing Part IV Ministerial Statements relevant to the application?		Yes □ No ⊠	Ministerial statement No: EPA Report No:	
Has the proposal been referred and/or assessed under the EPBC Act?		Yes □ No ⊠	Reference No:	

Has the applicant demonstrated occupancy (proof of occupier status)?	Yes □ No ⊠	Mining lease / tenement \boxtimes Expiry:-M26/115 – Bellamel Mining Pty Ltd – 16/03/2029-M26/243 - Bellamel Mining Pty Ltd – 11/06/2032-M26/387 - Bellamel Mining Pty Ltd – 10/12/2034-M26/420 - Bellamel Mining Pty Ltd – 16/09/2035-M26/430 - Bellamel Mining Pty Ltd – 24/10/2035-M26/445 - Bellamel Mining Pty Ltd – 24/10/2035-M26/445 - Bellamel Mining Pty Ltd – 19/01/2037-M26/446 – Norton Gold Fields Pty Ltd – 29/11/2036-M26/474 – Bellamel Mining Pty Ltd – 3/11/2039-M26/629 – Bellamel Mining Pty Ltd – 19/09/2042-M26/833 – Norton Gold Fields Pty Ltd – 27/01/2036	
Has the applicant obtained all relevant planning approvals?	Yes □ No □ N/A ⊠	Approval: Expiry date: If N/A explain why? – Works occurring on mining tenements	
Has the applicant applied for, or have an existing EP Act clearing permit in relation to this proposal?	Yes 🗆 No 🖂	CPS No: N/A No clearing is proposed.	
Has the applicant applied for, or have an existing CAWS Act clearing licence in relation to this proposal?	Yes □ No ⊠	Application reference No: N/A Licence/permit No: N/A No clearing is proposed.	
Has the applicant applied for, or have an existing RIWI Act licence or permit in relation to this proposal?	Yes 🛛 No 🗆	Application reference No: N/A Licence/permit No: GWL167686 (6,450,000 kL)	
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the EP Act)?	Yes □ No ⊠	Name: N/A Type: N/A Has Regulatory Services (Water) been consulted? Yes □ No □ N/A ⊠ Regional office: N/A	

Is the Premises situated in a Public Drinking Water Source Area (PDWSA)?	Yes □ No ⊠	Name: N/A Priority: N/A Are the proposed activities / landuse compatible with the PDWSA (refer to $\underline{9}$)? Yes \Box No \Box N/A \boxtimes
Is the Premises subject to any other Acts or subsidiary regulations (e.g. Dangerous Goods Safety Act 2004, Environmental Protection (Controlled Waste) Regulations 2004, State Agreement Act xxxx)	Yes ⊠ No □	Environmental Protection (Noise) Regulations 1997
Is the Premises within an Environmental Protection Policy (EPP) Area?	Yes □ No ⊠	N/A
Is the Premises subject to any EPP requirements?	Yes □ No ⊠	N/A
Is the Premises a known or suspected contaminated site under the Contaminated Sites Act 2003?	Yes □ No ⊠	Classification: N/A Date of classification: N/A Closest site is "Remediated for restricted use" and is approximately 2 km northeast of the prescribed premises boundary.