



Application for Licence Amendment

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

Licence Number	L8664/2012/2
Licence Holder	Lanfranchi Nickel Mines Pty Ltd
ACN	110 078 263
File Number	2012/002931-1
Premises	Lanfranchi Nickel Mine Legal description – Mineral Lease ML15/346, ML15/347, ML15/377 ML 15/385, ML 15/386, ML 15/387, ML 15/388 ML 15/486, ML 15/487, ML 15/493 and M 15/473 KAMBALDA WA 6429
Date of Report	22 November 2022
Proposed Decision	Intent to grant revised licence

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A/Manager, Waste Industries

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

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1. Decision summary

Licence L8664/2012/2 is held by Lanfranchi Nickel Mine Pty Ltd (Licence Holder) for the Lanfranchi Nickel Mine (the Premises).

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 L8664/2012/2 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 Amendment summary

On 3 June 2022, the Licence Holder submitted an application to the department to amend Licence L8664/2012/2 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act). The amendment being sought is for the activation of a proposed irrigation field as use for emergency overflow to the existing wastewater treatment plant in instances of high rainfall and excess sewage generation.

The premises has in the past had two operational sewage facilities, one located at the Lanfranchi Accommodation Village and one located at the Mine Administration area. Due to maintenance issues, the accommodation village WWTP has been decommissioned and all sewage is diverted to the Mine Administration WWTP. Details are as follows:

- The Accommodation Village WWTP is a MAK MBR-50 Membrane Bioreactor Sewage Treatment Plant system which receives waste water from the accommodation village. Historically, treated waste water from this system was discharged to a nearby 1 ha dedicated spray irrigation area. However, due to maintenance issues relating to the WWTP monitoring results were indicating nutrient levels in excess of limits for Biochemical Oxygen Demand (BOD), total suspended solids (TSS), *E. coli* and for total nitrogen (TN). Due to costs associated with repairing/replacing the WWTP, in order to meet the required water quality, the plant was reverted to a septic system where effluent is stored in the existing tanks, then pumped to the Mine Administration area effluent storage ponds. The spray field associated with the Accommodation Village WWTP was decommissioned as a result.
- The Mine Administration area WWTP consists of four ponds that receive effluent from the Lanfranchi administration and camp facilities. The first pond has mechanical aeration to aerate the effluent intermittently while the remaining holding ponds are for evaporation. When the first pond reaches sufficient volume, the effluent flows into the second holding pond via a pipeline for storage and evaporation. As each pond fills the effluent then flows to the next holding pond, while preserving the 300mm freeboard on each pond.

Due to an increase in personnel isolating at the village as a result of the COVID-19 pandemic, the amount of waste water generated has increased. The applicant is proposing to activate a proposed irrigation field near the evaporation ponds as an overflow protection control in the

case of high rainfall and excess sewage generation from the increase in patronage at the village.

This amendment is limited only to changes to Category 85 activities from the Existing Licence. No changes to the aspects of the existing Licence relating to Category 61A and 89 have been requested by the Licence Holder.

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 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
Construction			
Dust	Installation of irrigation pipeline	Air / windborne pathway	Watering of surfaces to prevent dust lift off where required.
Noise	Installation of irrigation pipeline	Air / windborne pathway	All vehicles and plant will be regularly maintained to ensure they are operating efficiently and are not unduly noisy.
Commissioning and Operation			
Odour	Operation of the irrigation spray field	Air / windborne pathway	Use of the irrigation spray field as emergency overflow only.
Sewage	Failure of contaminant infrastructure	Overland runoff / migration into surface water ways causing ecosystem disturbance or impacting surface water quality and amenity Seepage to soil and groundwater causing contamination and impacting water	The system will utilise a dewatering pump to discharge effluent to the irrigation field, only when required to manage high effluent levels; The pipeline will have an isolation point in the event of a leak; and Routine monitoring of the waste water effluent will be undertaken to ensure nutrient loads do not exceed the requirements for Risk Category C soils.

Emission	Sources	Potential pathways	Proposed controls
		quality	
Treated waste water	<p>Failure of contaminant infrastructure.</p> <p>Discharge of treated waste water to an area other than the dedicated irrigation field.</p>	<p>Flooding or pooling / overspray or spray drift / overland runoff / migration into surface water ways causing ecosystem disturbance or impacting surface water quality and amenity</p> <p>Spills / leaks resulting in seepage to soil and groundwater causing contamination and impacting water quality</p>	<p>The pipeline to the irrigation area will be visually identified as an effluent pipeline;</p> <p>The pipeline will have an isolation point in the event of a leak;</p> <p>Minimal disturbance will occur due to the location from any access track or infrastructure;</p> <p>The system will utilise a dewatering pump to discharge effluent to the irrigation field, only when required to manage high effluent levels;</p> <p>A waste water treated effluent sign will be erected on the fence line to warn of restricted access to the irrigation field;</p> <p>Drip hoses will be used to discharge the effluent over a wide area to prevent pooling and saturation; and</p> <p>Routine monitoring of the waste water effluent will be undertaken to ensure nutrient loads do not exceed the requirements for Risk Category C soils.</p>

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
Town of Widgiemooltha	Approximately 25 km west of the Premises
St Ives Gold Mine	Approximately 5 km north from the Premises WWTP
Environmental receptors	Distance from prescribed activity
Lake Lefroy system	Approximately 5 km east of Premises WWTP
Drainage lines / Ephemeral Creek	Approximately 500 m south, 800 m north west and 2 km west of Premises WWTP
Underlying groundwater (non-potable purposes)	Groundwater is generally 50 m bgl in the Kambala mining region

<p>Threatened and/or priority fauna:</p> <ul style="list-style-type: none"> • Peregrine Falcon (<i>Falco peregrinus</i>) • Carpet Python (<i>Morelia spilota</i>) • Crested Shrike-tit (south western subspecies) (<i>Falcunculus frontatus</i>) • Crested Bellbird (<i>Oreoica gutturalis</i>) • White-browed Babbler (western wheatbelt subspecies) (<i>Pomatostomus superciliosus ashbyi</i>) • Rainbow Bee-eater (<i>Merops ornatus</i>) 	<p>Species have been recorded within the area and have habitats present within the mine site boundary.</p>
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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 L8664/2012/2 that accompanies this Amendment Report authorises emissions associated with the operation of the Premises.

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 construction, commissioning and 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				
Construction								
Installation of infrastructure associated with the irrigation field	Dust	Air/windborne pathway causing impacts to health and amenity	Surrounding vegetation	Refer to Section 3.1	C = Slight L = Possible Low Risk	Y	Condition 1, 2, 3 & 4	N/A
	Noise			Refer to Section 3.1	C = Slight L = Possible Low Risk	Y	Condition 1, 2, 3 & 4	N/A
Commissioning and Operation								
Discharge of treated waste water onto the irrigation field	Nutrient rich / poorly treated effluent	Spills / leaks resulting in migration into surface water ways causing ecosystem disturbance or impacting surface water quality and amenity Spills / leaks resulting in seepage to soil and groundwater causing contamination and impacting water quality	Surrounding flora and fauna Lake Lefroy system approximately 5km to the east Surface water drainage lines and ephemeral creeks Underlying groundwater	Refer to Section 3.1	C = Moderate L = Unlikely Medium Risk	Y	Condition 1, 2, 3, 4, 5, 21 & 25 <u>Condition 22, 23, 24 & 31</u>	The delegated officer has included discharge limits for contaminants of potential concern and monitoring requirements within the licence. Historical monitoring of wastewater from the ponds shows high variability within the concentrations of contaminants. The delegated officer determined that ongoing monitoring of the effluent is necessary to ensure there is no occurrence of environmental harm from the irrigation of poorly-treated waste water.

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.

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IR-T15 Amendment report template v3.0 (May 2021)

4. Consultation

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

Table 4: Consultation

Consultation method	Comments received	Department response
Local Government Authority advised of proposal 4 October 2022	No comments received	N/A
Department of Health advised of proposal 4 October 2022	<p>The Department of Health provided an email response on 26 October 2022. The DoH have no objections to the proposal subject to the applicant reapplying for an onsite wastewater treatment system and disposal area along with a recycled water quality management plan (RWQMP). The DoH has previously received an application for a RWQMP, however, according to DoH's records this approval was not finalised as notification was given that the mine was commencing closure.</p> <p>The DoH also notes that it does not normally support stormwater entering any form of wastewater apparatus, and this will be assessed along with other criteria upon the applicant formally applying for approval. Aerial photos of the existing wastewater ponds indicate that the ponds may currently be poorly maintained with large trees and vegetation growth on the pond banks that may require significant maintenance and repair.</p>	The department acknowledges the DoH's comments and notes that it is up to the licence holder to ensure all relevant approvals are in place.
Licence Holder was provided with draft amendment on 26 October 2022	Email received from the applicant on 21/11/2022 advising they were happy with the proposed amendment.	N/A

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

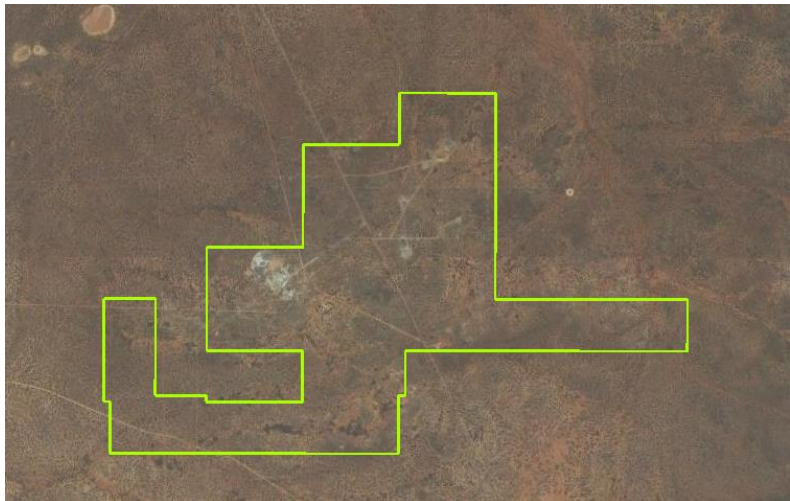
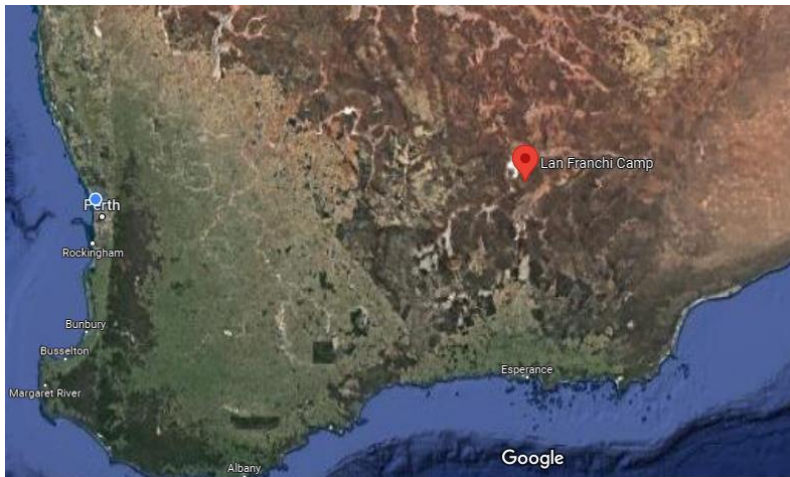
Condition no.	Proposed amendments
1	Inclusion of design and construction requirements for the irrigation field
2, 3 & 4	Reporting requirements for the construction of the irrigation field
5 Table 2	Operational requirements for the irrigation field.
21	Inclusion of an authorised discharge point (irrigation field)
22, 23, 24, 25	Inclusion of discharge limits and monitoring requirements for the irrigation field.
31	Consolidation of change of reporting requirements Amendment Notice from annual reporting to biennial reporting. Addition of irrigation field monitoring results to reporting requirements.
All	Condition numbers updated due to the addition of new conditions. Conditions 18, 19 & 20 have been moved under the Emissions and Discharges heading.

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.

Appendix 1: Application validation summary

SECTION 1: APPLICATION SUMMARY (as updated from validation checklist)					
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:	L8664/2012/2		
		Relevant works approval number:		N/A	<input type="checkbox"/>
Registration	<input type="checkbox"/>	Current works approval number:		None	<input type="checkbox"/>
Date application received		3 June 2022			
Applicant and Premises details					
Applicant name/s (full legal name/s)		Cherish Metals Pty Ltd			
Premises name		Lanfranchi Nickel Mine			

Premises location	Within the boundaries of:		
	ML 15/346	ML 15/347	ML 15/377
	ML 15/383	ML 15/384	ML 15/385
	ML 15/386	ML 15/388	ML 15/486
	ML 15/487	ML 15/493	M 15/472
	CL 3114/1251	CL 3114/1192	
			
			
Local Government Authority	Shire of Coolgardie		
Application documents			
HPCM file reference number:	2012/002931-1~4		
Key application documents (additional to application form):	Application form 1B – ASIC Company extract 2A – Premises Location 2B – Tenement Map 2C – WWTP Irrigation Field Location 3A – WWTP Infrastructure 3B – L8664 Licence Conditions 3C – Zip Folder 6A – Emissions and Discharges 6B – Waste Acceptance		
Scope of application/assessment			

Summary of proposed activities or changes to existing operations.	Construction of a pipeline and irrigation field (addition to an existing WWTP L8664/2012/1).	
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
Category 85: Sewage Facility	Assessed – 80 cubic metres per day.	No proposed changes to production/design capacity.
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: 2 August 2032 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? Within current mining operations
Has the applicant applied for, or have an existing EP Act clearing permit in relation to this proposal?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	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 <input type="checkbox"/> No <input checked="" type="checkbox"/>	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 <input type="checkbox"/> No <input checked="" type="checkbox"/>	Application reference No: N/A Licence/permit No: N/A Licence / permit not required.
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the EP Act)?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Name: Goldfields Groundwater Area Type: Proclaimed Groundwater Area Has Regulatory Services (Water) been consulted? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Regional office: Goldfields
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 type="checkbox"/> No <input checked="" type="checkbox"/>	N/A
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"/>	DMO 4816 – The site was reported by the previous land owner due to visual evidence of contamination observed at several locations, namely hydrocarbon impacts. Classification: possibly contaminated – investigation required (PC–IR) Date of classification: 9 June 2015