



Application for Licence Amendment

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

Licence Number	L8721/2013/2
Licence Holder	Karara Mining Limited
ACN	070 871 831
File Number	2012/008499-1
Premises	<p>Karara Minesite Beneficiation Plant</p> <p>Legal description –</p> <p>M59/644, M59/645, M59/721, G59/38, L59/99 and L59/109</p> <p>PERENJORI WA 6620</p> <p>As defined by the Premises maps attached to the Revised Licence</p>
Date of Report	21 November 2022
Decision	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 L8721/2013/2 is held by Karara Mining Limited (Licence Holder) for the Karara Minesite Beneficiation Plant (the Premises), located on Mining Tenements M59/644, M59/645 and M59/721, General Purpose lease G59/38, and Miscellaneous leases L59/99 and L59/109.

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 L8721/2013/2 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 Application summary

On 21 September 2022, the Licence Holder submitted an application to the department to amend Licence L8721/2013/2 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act). The following amendments are being sought:

- Installation and operation of a Category 12 mobile crushing and screening plant, with an authorised throughput of 400,000 tonnes per year, on the premises. Category 12 is a new category to be added to the licence. The Licence Holder intends to use this plant to produce stemming and road base material to be used on the Premises. The raw material will be sourced from waste rock generated from current stage 4 of the Karara Pit. The expected approximate operational period for this infrastructure is 12 months.

No changes to the aspects of the existing Licence relating to Category 5, 6, 54, and 64 have been requested by the Licence Holder.

2.3 Part IV of the EP Act

The Premises is subject to the conditions specified in Ministerial Statement (MS) 805 under Part IV of the EP Act. In regulating the Premises under Part V, Division 3 of the EP Act, DWER will seek to avoid duplication of requirements imposed under Part IV.

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

Table 1: Licence Holder controls 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
Dust	Placement and operation of the screening and crushing plant (with mounted screen)	Air/windborne pathway	<ul style="list-style-type: none">Water truck used to wet down the feedstock and product stockpiles.
Noise			<ul style="list-style-type: none">Proposed crusher will only run during day shift.
Hydrocarbons (eg. Hydraulic oil or diesel) and chemicals	Spillage and leakage from crushing / screening machinery and vehicles	Direct discharge to land	<ul style="list-style-type: none">No hydrocarbons stored at the work area;Spills kits will be available at the work area; andSpills will be managed in accordance with the KML environmental Plan – Waste Management.
Sediment laden stormwater		Contaminated stormwater runoff	
Saline water	Processed material stockpiles	Use for dust suppression	<ul style="list-style-type: none">Water used for dust suppression will be primarily fresh water sourced from the Yandanooka aquifer, however provision has been made to utilize saline water, if necessary.No potential impacts of saline water run off on native vegetation is expected given the proposed mobile crusher is located on the WRD and appropriate surface water drainage features have been constructed on the WRD in line with the design of the WRD.

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
Karara Homestead	6km south-east from Waste Rock Dump (WRD). Screened as receptor due to distance
Aboriginal heritage sites	Identified by the DWER GIS system: <ul style="list-style-type: none"> Granite Pavement with Rock Hole (ID:24848) – 1.1km west of WRD; and Karara/02 – Mt Karara (ID: 20720) over WRD area. Screened as receptor due to activity occurring on WRD (pre-disturbed land)
Environmental receptors	Distance from prescribed activity
DBCA legislated land	Mungada Ridge National Park 13.7km north-east of estimated location of mobile crusher. Screened as receptor due to distance
Priority Ecological Community (PEC)	Location of mobile crusher overlaps the Blue Hills (Mount Karara/Mungada Ridge/Blue Hills) vegetation complexes (banded ironstone formations) – Priority 1
Priority flora	Identified by the DWER GIS system: <ul style="list-style-type: none"> P1 <i>Acacia karinae</i> located 530m south-west of location of mobile crusher. The area holds a large percentage of the population of <i>Lepidosperma</i> species.
Ecologically significant fauna	Identified from the DWER GIS several species within 1km of proposed activity: <ul style="list-style-type: none"> Several sitings of Malleefowl (<i>Leipoa ocellata</i>) (Vulnerable); Several trappings of Western spiny-tailed skink (<i>Egernia stokesii badia</i>) (Vulnerable); and - Note: These two species are considered under the EPBC Act approval 2006/3017 for the premises project. Several sitings of Northern shield-backed trapdoor spider (<i>Idiosoma clypeatum</i>) (P3).
Gascoyne Groundwater area	DWER GIS system: salinity 3000-7000 mg/L TDS The depth to groundwater ranges from 2.7m to 24.4 mblg. Screened as receptor as no pathway for emission to impact groundwater
Surface water	Ephemeral (Minor) creek line along north-west edge of the WRD (and location of the mobile crusher).
Karara Rangeland Park	Overlaps the prescribed premises. Karara Iron Ore Project is located on formal pastoral land that has been incorporated into the Karara Rangeland Park – managed by DBCA.

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 L8721/2013/2 that accompanies this Amendment Report authorises emissions associated with the operation of the Premises i.e. Category 12 crushing and screening 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 construction 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								
Activities: <ul style="list-style-type: none">Placement of screen / crusher and associated equipment including vehicle movements	Dust	Pathway: air / windborne pathway Impact: smothering of vegetation	Native vegetation Ecologically significant flora, fauna, PEC and Karara Rangeland Park.	N/A	C =Slight L = Rare Low Risk	N/A	N/A	Due to the nature of the construction stage and the duration required to move the mobile crusher onto site, it is considered that the risk is low, and no additional regulatory controls are required. Additionally, the MS 805 (section 6) requires the Licence Holder to monitor and manage impacts of dust.
Operation								
Source: <ul style="list-style-type: none">Operation of the screening and crushing plant Activities: <ul style="list-style-type: none">Vehicle movements on unsealed roads;Uploading, loading and stockpiling of road base and stemming material	Dust	Pathway: air / windborne pathway Impact: smothering of vegetation	Native vegetation Ecologically significant flora, fauna, PEC and Karara Rangeland Park.	Refer to Section 3.1.1	C = Minor L = Unlikely Medium Risk	Y	Updated Condition 16: operational requirements	As the machinery and the stockpiles will be located on the WRD, and the expected duration of operations is 12 months, the impact of dust emissions on receptors is considered to be minor. The requirement to use a water truck to reduce dust emissions has been conditioned on the licence which will adequately manage this risk. Additionally, the MS 805 (section 6) requires the Licence Holder to monitor and manage impacts of dust.

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			
Source: <ul style="list-style-type: none"> Spills and leakage from vehicles and mining machinery onto land Activities: <ul style="list-style-type: none"> Contaminated stormwater runoff from WRD 	Hydrocarbons (e.g. hydraulic oil or diesel) and chemicals	Pathway: stormwater runoff from WRD Impact: contamination of surface water and adjacent vegetation	Native vegetation Ecologically significant flora, PEC and Karara Rangeland Park.	Refer to Section 3.1.1	C = Slight L = Unlikely Low Risk	Y	N/A	The risk of contaminated stormwater is considered to be low as the plant will be located on the WRD and the Licence Holder has stated that there are existing surface water drainage features constructed on the WRD for the purpose of diverting water away from landfill trenches. The risk of contaminated stormwater impacting receptors is low and no additional regulatory controls will be required to mitigate this risk. <i>The Environmental Protection (Unauthorised Discharges) Regulations 2004</i> apply.
Source: <ul style="list-style-type: none"> Product stockpiles Activities: <ul style="list-style-type: none"> Contaminated stormwater runoff from WRD 	Sediment laden stormwater							
Source: <ul style="list-style-type: none"> Saline water source Activities: <ul style="list-style-type: none"> Use of saline water for dust suppression 	Saline water	Pathway: overspray or runoff from dust suppression operations Impact: impacts to native vegetation and surface water lines	Ephemeral creek line – along north-west edge of WRD.		C = Slight L = Unlikely Low Risk			Although the Licence Holder has stated that the water used for dust suppression for this proposed activity will be primarily sourced from the freshwater aquifer, they will use saline water if necessary. Due to the activity occurring on the footprint of the WRD, the Delegated Officer has considered the risk to be low and that additional regulatory controls are not required. MS 805 (section 6), the Licence Holder is required to monitor and manage the impacts of saline water used for dust control.

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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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 9 November 2022.	Comments received by Licence Holder on 11 November 2022. Refer to Appendix 1: Summary of Licence Holder's comments on risk assessment and draft conditions	Refer to Appendix 1: Summary of Licence Holder's comments on risk assessment and draft conditions

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
-	Changes to cover page to include addition of Category 12 activities.
-	Changes to Instrument log to include current amendment.
New Condition 12,13,14	Addition of construction/installation requirements for the new proposed mobile crusher and submission requirements for associated compliance document.
Table 5	Addition of Infrastructure table for proposed mobile crusher.
Updated Condition 15, Table 7	Addition of row to include production limit for Category 12 activities.
Updated Condition 16, Table 8	Updated table to include the Category 12 mobile crushing plant with operational requirements.
Figure 9	Addition of new Figure of new proposed mobile crushing plant for Category 12 activities.

Table 6: Consolidation of licence conditions in this amendment

Existing condition	Condition summary	Revised licence condition	Conversion notes
Figures 9 – 12	-	Figures 10 – 13	Updated figure numbering to accommodate for addition of new Figure.

Existing condition	Condition summary	Revised licence condition	Conversion notes
Table 5 – 17	-	Table 6 – 18	Updated table numbering to accommodate for addition of new table.
Conditions 12 – 33	-	Condition 15 – 36	Updated condition numbering to accommodate for addition of new conditions.
Throughout licence	-	Updated from “shall” to “must”	Revised licence formatting.

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

Condition	Summary of Licence Holder's comment	Department's response
Cover page – Category throughput	Licence Holder has requested to increase the assessed production / design capacity for Category 12 activities from 300, 000 to 400, 000 tonnes per year.	The department notes that throughput is indicative of risk and the increase may change the rating, however due to a short operational expectancy and no nearby human receptors, this is unlikely and therefore the requested change has been accepted.
Condition 12, Table 5	Licence Holder has requested to include a secondary crusher in the details for the crushing activities to support the jaw crusher to allow finer crushing activities for the production of stemming material.	The department notes that the secondary crusher is required to produce the finer material, and that raw material will be processed firstly by the jaw crusher and then the secondary crusher. This change is accepted as it is unlikely to alter the risks associated with the activity (due to no nearby sensitive receptors). Table 9 will be updated to include this change.

Appendix 2: Application validation summary

SECTION 1: APPLICATION SUMMARY				
Application type				
Amendment to licence	<input checked="" type="checkbox"/>	Current licence number:	L8721/2013/2	
		Relevant works approval number:		N/A <input type="checkbox"/>
Date application received		21 September 2022		
Applicant and Premises details				
Applicant name/s (full legal name/s)		Karara Mining Limited (KML) (070 871 831)		
Premises name		Karara Minesite Beneficiation Plant		
Premises location		M59/721, M59/644, M59/645, G59/38, Miscellaneous licence L59/99, L59/109 Perenjori WA 6620		
Local Government Authority		Shire of Perenjori		
Application documents				
HPCM file reference number:		2012/008499-1~11		
Key application documents (additional to application form):		<i>Supporting documentation:</i> <ul style="list-style-type: none"> - Infrastructure premises map - WRD Mobile Crusher layout map - Environmental Risk Assessment for WRD mobile crushing unit operations 		
Scope of application/assessment				
Summary of proposed activities or changes to existing operations.		<u>Licence amendment</u> Install and operate an additional mobile crushing unit for stemming and road base materials to be used at the mine site. <ul style="list-style-type: none"> - Proposed mobile crusher will be placed on current Waste Rock Dump (WRD) = 430m RL with total area of 8,000m³ - Will consist of: one jaw crusher, one diesel hydraulic truck, screening (stemming materials between 8-22mm, and road base material between 10-50mm) - Produce approx. 350 t/hr, total production capacity of 300,000 t of feedstock/12 months. - No clearing of native vegetation – all construction on the WRD - Will operate on intermittent base depending on production with an expected operation period of 12 months. - Materials hauled to WRD using mining fleet then fed into crusher by loader, then products will be stockpiled by loader. No conveyors are proposed to be installed for the operations. 		

	<ul style="list-style-type: none"> - No sprayers on the proposed mobile crusher for dust suppression, but water truck will be used to wet down of the feedstock - Approx. 8,640kL of water per month will be required for dust suppression (if crusher is operating continuously) – water sourced from existing GW abstraction bores – this volume is not expected to increase the allocation limit. Water will be primarily fresh water sourced from Yandanooka aquifer – provisions to use saline water if necessary. - There will also be appropriate surface water drainage features have been constructed on the WRD - No hydrocarbons stored at work areas (mobile fuel truck will service mobile crusher) - Nearest sensitive noise receptor is Karara homestead located approx. 10km from WRD. Mobile crusher will only run during dayshift, potential impact of noise emissions from proposed crushing operations on sensitive receptors is expected to be negligible.
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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 5: processing or beneficiation of metallic or non-metallic ore	30, 000, 000 tonnes per year	
Category 6: mine dewatering	573, 600 tonnes per year	
Category 12: crushing and screening	300,000 tonnes per year	300,000 tonnes per year
Category 54: sewage facility	600 cubic metres per day	
Category 64: Class II or III putrescible landfill	5,000 tonnes per year	

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 checked="" type="checkbox"/>
Does the applicant hold any existing Part IV Ministerial Statements relevant to the application?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Ministerial statement No: MS 805 EPA Report No: 1651

Has the proposal been referred and/or assessed under the EPBC Act?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Reference No: <i>Note: The Karara Iron Ore Project has previously been approved under EPBC Act (EPBC 2006/3017)</i>
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 checked="" type="checkbox"/> - G59/38 – Expiry: 28/08/29 Mining lease / tenement <input checked="" type="checkbox"/> - M59/721 – Expiry: 15/07/29 - M59/644 – Expiry: 09/04/27 - M59/645 – Expiry: 09/04/27 Other evidence <input checked="" type="checkbox"/> - L59/99 – Expiry: 09/03/31 - L59/109 – Expiry: 18/09/31
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? <i>Approvals granted under Part IV of the EP Act and MS 805 applies to this site</i>
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: N/A No clearing is proposed. <i>Note: clearing approved under MS805</i>
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 <i>No clearing is proposed.</i>
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: Licence/permit No: GWL171229: 1,000, 000 KL
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: Type: Has Regulatory Services (Water) been consulted? Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Regional office: <i>Note: Premises lies on top of Gascoyne Proclaimed Groundwater Area</i>

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 <u>WQPN 25</u>)? 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</i> , <i>Environmental Protection (Controlled Waste) Regulations 2004</i> , <i>State Agreement Act xxxx</i>)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<i>Rights in Water and Irrigation Act 1914</i> <i>Mining Act 1987 – REG ID 28370</i> <i>Environmental Protection Biodiversity Act 1999</i>
Is the Premises within an Environmental Protection Policy (EPP) Area?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Is the Premises subject to any EPP requirements?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Is the Premises a known or suspected contaminated site under the <i>Contaminated Sites Act 2003</i> ?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Classification: N/A Date of classification: N/A