

# MINING PROPOSAL CHECKLIST

This checklist must be completed and included in the Mining Proposal after the title page.

The Mining Proposal checklist is designed to ensure that the proponent provides all required information and to enable fast and accurate assessment without the need for the assessing officer to seek further information or clarification. If critical issues have not been addressed in the mining proposal or the checklist information is found to be incorrect, assessment may be discontinued and the Mining Proposal returned.

For Mining Proposals where ODAC assistance is being sought, the checklist should be expanded to incorporate the requirements of the project definition document (see section 3.1 - Consultation and Project Scoping).

Please cross reference page numbers from the Mining proposal where appropriate.

Q No	Mining Proposal checklist	Y/N NA	Page No	Comments
<b>Public availability</b>				
1	Are you aware that this mining proposal is publicly available?	Y		
2	Is there any information in this mining proposal that should not be publicly available?	N		
3	If "No" to Q2, do you have any problem with the information contained in this mining proposal being publicly available?	N		
4	If "Yes" to Q2, has confidential information been submitted in a separate document/section?	NA		
5	Has the mining proposal been endorsed? See last page Checklist.	Y		
<b>Mining Proposal details</b>				
6	Have you included the tenement number(s), site name, proposal overview and date in the title page?	Y	Title Page	
7	Who authored the mining proposal? (Please include telephone number of author)	Trevor Ennis-John Ph: 6298 1094 E:trevor.ennis-john@kararamining.com.au		
8	State who to contact enquiries about the mining proposal	As above		
9	How many copies were submitted to DMP?	Hard copies = 0 Electronic = 1 (via EARS)		
10	Does this mining proposal support a lease application?	N		
11	Has a geological resource statement been included (refer section 4.3.2 of mining proposal guidelines)?	N		
12	Will more than 10 million tonnes of ore and waste be extracted per year? State total tonnage:	N/A		
13	Will more than two million tonnes of ore be processed be year? State total throughout.	N/A		
14	Is the mining proposal located on pre-1899 Crown Grant lands? (not subject to the Mining Act)	N		
15	Is the mining proposal located on reserve land? If "Yes" state reserve types	N		
16	Will the mining proposal occur within or affect a declared occupied townsite?	N		
17	Is the mining proposal within two km of the coastline or a Private Conservation Reserve?	N		
18	Is the mining proposal wholly or partially within a World Heritage Property, Biosphere Reserve, Heritage Site or Soil Reference Site.	N		
<b>Tenement Details</b>				
19	Are all mining operations within granted or applied for tenement boundaries?	Y		
20	Are you the tenement holder of all tenements?	Y		
21	If "No" at 20, do you have written authorisation from the tenement holder (s) to undertake the Mining proposal activities (Refer to section 4.2.1 of the Mining Proposal Guidelines)	N/A		
22	Is "Yes" at 21, is a copy of the authorisation contained within the mining proposal?	N/A		
23	Have you checked for compliance against tenement conditions?	Y	13	

Location and Site Layout Plans				
24	Have you included location plans showing tenement boundaries and mining operations?	Y	4	
25	Have you included site layout plans showing all mining operations and infrastructure in relation to tenement boundaries?	Y	4,6,9	
26	Have you included Area of Disturbance Tables for all tenements impacted by mining operations?	N/A		No disturbance required
Environmental Protection Act				
27	Does the mining proposal require referral under part four or the MOU? If 'Yes' describe why in space below:	N		
28	Has the EPA set a level of assessment? If yes state:	Y		MS805
29	Is a clearing permit required? If 'No' then explain why in space below?	N		
30	If 'Yes' at Q29 then has a permit been applied for?	N/A		
31	Is a works approval required by the DEC?	N		
32	Has a Works Approval been submitted to the DEC?	N/A		
33	<b>Stakeholder Consultation</b> - Have the following stakeholders been consulted? (use N/A if not relevant)			
	Shire?	Y		
	Pastoralist?	NA		
	DEC?	Y		
	Main Roads?	NA		
	Others? (specify):			
Environmental Assessment and Management				
34	Is the mining proposal wholly or partially within DEC managed areas?	Y		
35	If 'yes' at Q34 has DEC been consulted?	Y		
36	Is the mining proposal wholly or partially within a red book area or a bush forever site?	N		
37	Will the mining proposal impact upon a water resource area, water reserve, declared or proposed catchment, groundwater protection area, significant lake or wetland?	N		
38	Is a water or de-watering licence required?	N		
39	If 'Yes' at Q39 then has the licence(s) been applied for?	N/A		
40	Does the mining proposal include a new tailings storage or changes to existing tailings storage?	N		
41	Has AMD assessment been undertaken?	N		
42	Have flora and fauna checks been undertaken?	Y		
43	Are any rare species present?	N		
44	Has preliminary closure plan been included?	N	23	Mine closure manual previously approved for this area
45	Do you acknowledge that the hard copies and the CD contain identical information? (this is important for DMP's electronic records system)	N/A		

I hereby certify that to the best of my knowledge the above checklist accurately reflects the information contained within this Mining Proposal.

Name: Parveen Bauer Position: Principal Environmental Advisor

Signed:  Date: 4/7/2019

# **Karara Mining Limited**

Mining Proposal - Mobile Crushing Circuit

G59/38, M59/644

4 July 2019

## SYNOPSIS




This document has been prepared for installing and operating a Mobile Crushing Unit at the Karara minesite as part of the Karara Iron Ore Project.

### **Disclaimer**

*"This document has been prepared by Karara Mining Limited for exclusive use ("the Purpose"). Use of this document other than for the Purpose is not permitted."*

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#### KARARA MINING LIMITED

REV	DESCRIPTION	ORIG	REVIEW	APPROVED	DATE
0	Final	 T Ennis-John	 P Bauer	 P Bauer	4-Jul-19

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## **1 SUMMARY AND COMMITMENTS**

Karara Mining Limited (KML) proposes to install and operate a mobile crushing circuit capable of crushing 450 tonnes per hour of magnetite ore to <50mm specification, for a total of 150,000 tonnes per month of product. The additional crusher is required to supplement the current approved permanent primary crusher in order to assist with maintaining existing production levels and throughput requirements.

The mobile crusher will be contained entirely within the existing Department of Mines, Industry Regulation and Safety (DMIRS) approved footprint (as per Mining Proposals Registration ID 24232, 26781 and 34319), and within the Environmental Protection Authority (EPA) approved footprint for Ministerial Statement 805 – Karara Iron Ore Project. No clearing of native vegetation will be required as part of this proposal, as all works will be conducted on previously approved cleared areas.

This mining proposal is to outline the design and operational detail in relation to the proposed mobile crusher and its operations, and to address potential environmental impacts and its management measures through the implementation of this proposal.

This proposal has been prepared to satisfy the requirements of Section 82A (2) of the *Mining Act 1978*. KML is aware that this mining proposal may be made publicly available. The content and the format of this document conforms to those recommended in the DMIRS Environmental Management Guidelines for Mining Proposals in WA (DMIRS 2006).

**2 BACKGROUND INFORMATION****2.1 Ownership**

KML is the operating company for Anshan Iron and Steel (Ansteel), owners of the Karara Iron Ore Project, which is the largest mining operation in the Mid-West region and one of only two operating magnetite mines in WA. AnSteel is listed as China's second largest, and the world's eighth largest, steel producer. KML head office (ACN 070 871 831) contact is:

Contact:	Mr. Peter Burton
	Manager Environment and Communities
Telephone:	08 6298 2449
Mobile:	0418 939 161
Email:	<a href="mailto:peter.burton@kararamining.com.au">peter.burton@kararamining.com.au</a>
Location:	Level 8, London House
	216 St Georges Terrace
	PERTH WA 6000
Postal address:	PO Box 7200, Cloisters Square
	Western Australia 685

Details of the tenements included in this mining proposal are provided in Table 1 and depicted in Figure 1.

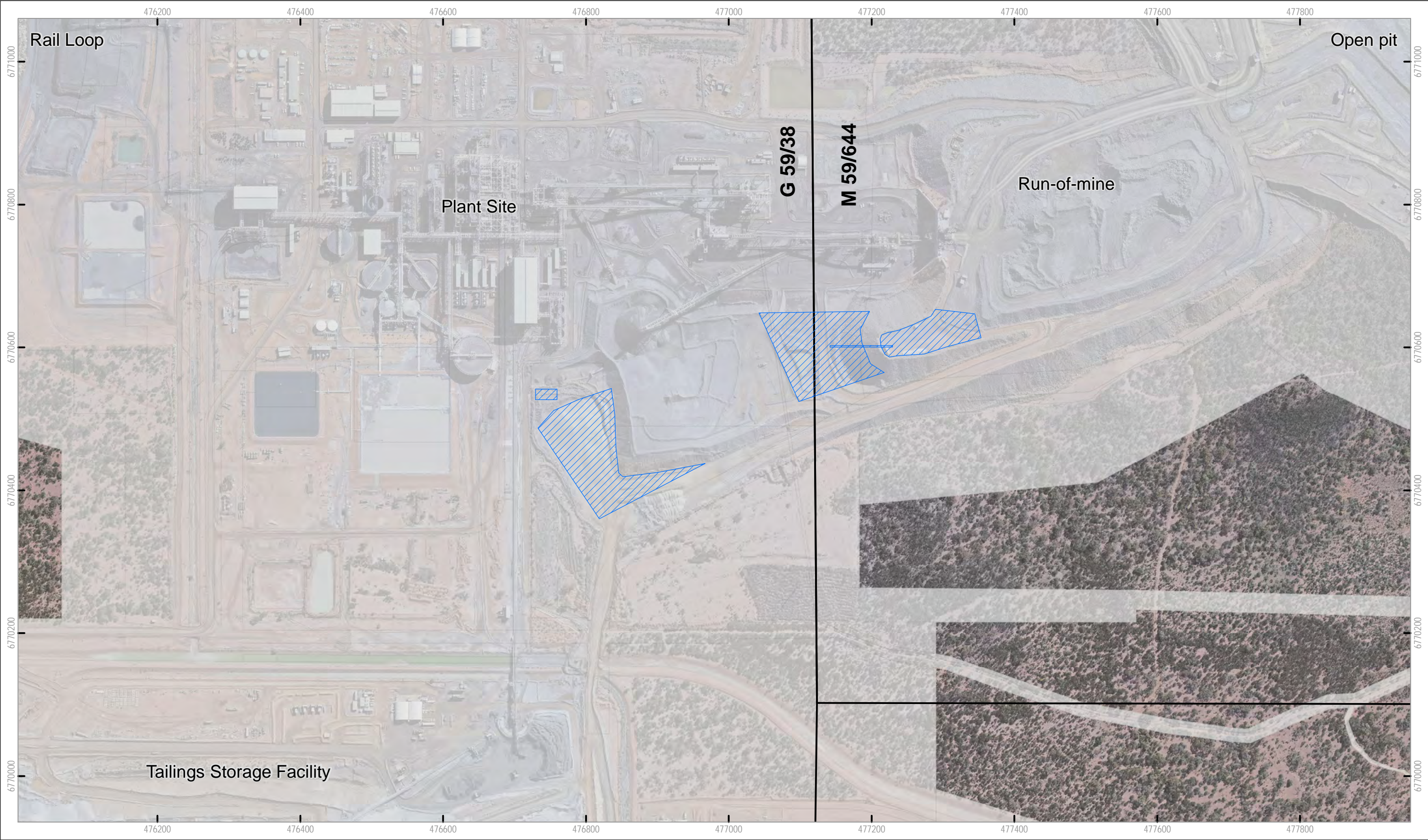


## MOBILE CRUSHING CIRCUIT - MINING PROPOSAL

**Table 1: Tenement Summary - Karara Iron Ore Project**

Tenement	Holder	Status	Expiry
<b>G59/38</b>	Karara Mining Limited	Live	28-Aug-29
<b>M59/644</b>	Karara Mining Limited	Live	9-Apr-27









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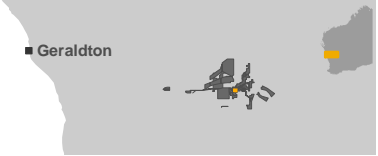
Figure 1  
**Mining Proposal - Tenements and Proposal Area**



**Legend**

-  Proposed Mobile Crusher and Associated Infrastructure
-  KML Granted Tenement
-  Approved Mining Proposal Area

  
0 200  
Meters  
1:5,000  
GDA 1994 MGA Zone 50



G:\Exploration\GIS\Maps\Approvals\201905 21 - Mining Proposal Karara Mobile Crusher Tenements and Proposal Area-TE-26Jun2019.mxd  
TS-APP-MP Mobile Crusher Tenements and Proposal Area-TE-26Jun2019



**2.2 Project Objectives, Location and Site Layout Plans**

The Karara Iron Ore Project (KIOP) is a magnetite mining and processing operation located 215 km east-southeast of Geraldton and 320 km north-northeast of Perth, within the Shire of Perenjori. The KIOP commenced in 2010 with a project life of at least 40 years, based upon an estimated magnetite reserve of 522 million tonnes. It currently consists of a single open cut pit, a beneficiation processing plant, accommodation facilities and a Linear Infrastructure Corridor (LIC) containing the raw water pipeline towards the Yandanooka borefield and access road to Morawa.

Ore mined from the Karara pit is processed via the beneficiation processing plant, which produces approximately eight million tonnes of magnetite concentrate per annum. Mine waste is stored within a single waste rock dump located to the northwest of the pit. The processing plant also produces approximately up to eighteen million tonnes per annum of both dry and wet tails, which are deposited in the Tailings Storage Facility (TSF), located to the south of the plant. Once processed, the magnetite final product is then transported via rail to the Geraldton Port for export.

This mining proposal is to allow for the addition of mobile crushing activities to supplement the existing crushing circuit. This addition is necessary to maintain existing production levels, operating concurrently with the current primary crusher. There will be no increase to approved throughput or current production levels. The mobile crusher will be sited adjacent to the current Crusher Ore Stockpile (COS) (Figure 2).

A detailed project description is provided in Section 4 of this mining proposal.






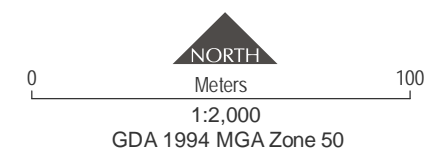
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Figure 2

## Mining Proposal - Proposed Mobile Crusher Layout

### Legend

 Proposed Mobile Crusher and Associated Infrastructure





**3 EXISTING ENVIRONMENT**

This section is not applicable to this proposal as all works will be located and conducted within previously cleared areas approved for disturbance through the following Mining Proposals:

- Karara Iron Ore Project Mining Proposal - Years 1 to 6 - M59/644, M59/645, G59/38, G59/39, L59/62, L59/74, L59/90 (Reg ID 24232) dated 12 October 2009 signed by Stephen Murdoch and retained on Department of Mines and Petroleum File No. E0259/200901; and
- Addendum to Mining Proposal Karara Iron Ore Project Mining Proposal - Years 1 to 6 (MP Reg ID 26781) dated 27 April 2010 signed by Aidan Kelly and retained on Department of Mines and Petroleum File No. E0238/200520
- Karara Mining Limited - Rothsay Water Pipeline Mining Proposal (Reg ID 34319) dated 13 July 2012 signed by Rhys Houlihan - Superintendent Approvals and retained on Department of Mines and Petroleum File No. EARS-MP-34319.

## 4 PROJECT DESCRIPTION

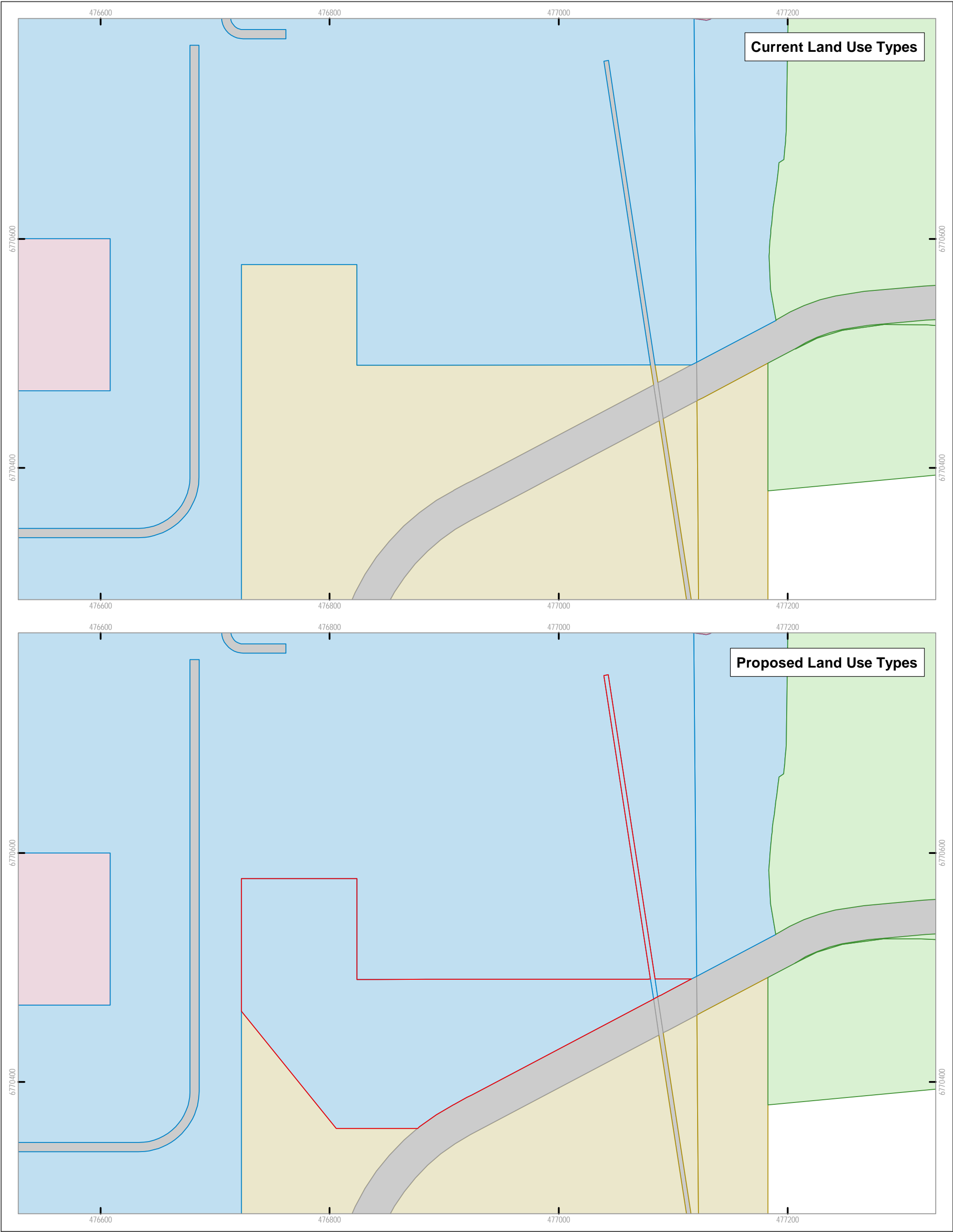
### 4.1 Area of Disturbance

There will be no new additional area of disturbance required for this mining proposal. This mining proposal footprint remains consistent with and within previously approved disturbance footprints under Mining Proposals Registration IDs 24232, 26781 and 34319, and the disturbance footprint permitted under Ministerial Statement 805, approved on 8<sup>th</sup> September 2009.

A change of current approved land use types is required to facilitate the proposal, as outlined in Table 2 and Figure 3. The proposed COS area is currently approved for 'topsoil stockpile' and requires a change of land use to 'plant site'. The area currently does not contain topsoil, and no topsoil relocation will be required for this proposal.

**Table 2: Tenement Summary - Karara Iron Ore Project**

Tenement	Holder	Status	Current Approved Mining Proposal Area (ha)	NEW Proposal Area (ha)
G59/38	KML	Live	0.114 (MP Reg.ID 34319 - Transport or infrastructure corridor)	0.114 No change to approved footprint area. <b>Change Project Element to Plant site</b>
G59/38	KML	Live	12.445 (MP Reg. ID 26781 - Topsoil stockpile)	12.445 No change to approved footprint area. <b>Change Project Element to Plant site</b>
G59/38	KML	Live	0.669 (MP Reg. ID 26781 - Plant site)	0.669 (No change) No project element change
M59/644	KML	Live	0.660 (MP Reg. ID 26781 - Run-of-mine pad)	0.660 (No change) No project element change
M59/644	KML	Live	0.706 (MP Reg. ID 26781 - Plant site)	0.706 (No change) No project element change



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Figure 3  
**Proposed Mining Proposal  
Land Use Changes**

**4.2 Proposed Mobile Crushing Circuit**

The high compressive strength and abrasive nature of the Karara magnetite ore has resulted in a design which incorporates one complete crushing circuit, consisting of 3 crushers and 2 screens. It will be capable of crushing 450 tonnes per hour of <50mm product, which equates to 150,000 tonnes per month.

The crushing process will involve the ore feed hauled directly either from the Karara pit or from the COS stockpile, using existing mining fleet, that is then transported to the mobile crushing circuit for the commencement of the process.

Ore will be fed into the mobile crushing circuit via a CAT 980M Loader. The proposed mobile crushing circuit consists of:

- I. Metso LT120 Jaw Crusher x 1
- II. Metso LT300HP Cone Crusher x 2
- III. Metso ST2.8 Scalping Screen x 1
- IV. Metso ST4.8 Screen x 1

The circuit includes conveyors between each stage of the crushing circuit, between crushers and screens. The proposed crushing circuit process flow is detailed in Figure 4.

These conveyors are open, with spray nozzles fitted at appropriate locations to reduce dust emissions as far as practicable.

The main environmental risk from the operation of the mobile crushing circuit will be the generation and emission of dust as a result of the ore crushing activity. The impact to the environment from the potential dust emissions is expected to be minimal due to the benefit of the location of the mobile crushing circuit in relation to the surrounding environment, as well as the environmental controls to be implemented. The impacts of the mobile crushing activities are consistent with the existing impacts from the approved fixed primary crusher, Mining Proposals Registration IDs 24232 and 26781.

KML will implement dust control measures within the mobile crushing circuit through the use of specifically located spray nozzles on the crushing plant, focussed primarily on the jaw and cone crushers, being the primary sources of dust emissions. The spray nozzles will be in constant operation when the mobile crusher is in use. Sprays will also be set up on the conveyors, between the crushers and the screens, as these are not enclosed. Wetting down



**MOBILE CRUSHING CIRCUIT - MINING PROPOSAL**

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of the feedstock and product stockpile with water cart cannons will continue to occur as per current practices. There is no increase to water consumption expected.

In addition, KML will continue to implement existing approved dust management measures in accordance with the KML Dust Management Plan CORP-EN-PLN-1010, which includes the following key management measures:

- Water trucks are to be fitted with either sprays or trickle bar systems to prevent saline water or dust suppressant overspray affecting surrounding ecosystems. Water trucks shall be used in heavy traffic areas, on unsealed and haul roads.
- Material drop heights between loaders and trucks and from trucks or other machinery to stockpiles will be reduced, as far as practicable within operating limits, to minimise dust creation.
- Crusher feedstock shall be sprayed prior to manual feed into mobile crushers when operational.
- Vehicle speeds and movements to be managed through the Safety Plan - Traffic Management Plan (CORP-HS-PLN-1008) that controls traffic speeds, restriction to designated roads with off road driving prohibited on site.
- Roads shall be maintained and graded as required to minimise dust generation.
- Native vegetation shall be retained as far as practicable, to minimize dust lift-off and be used as a wind break.

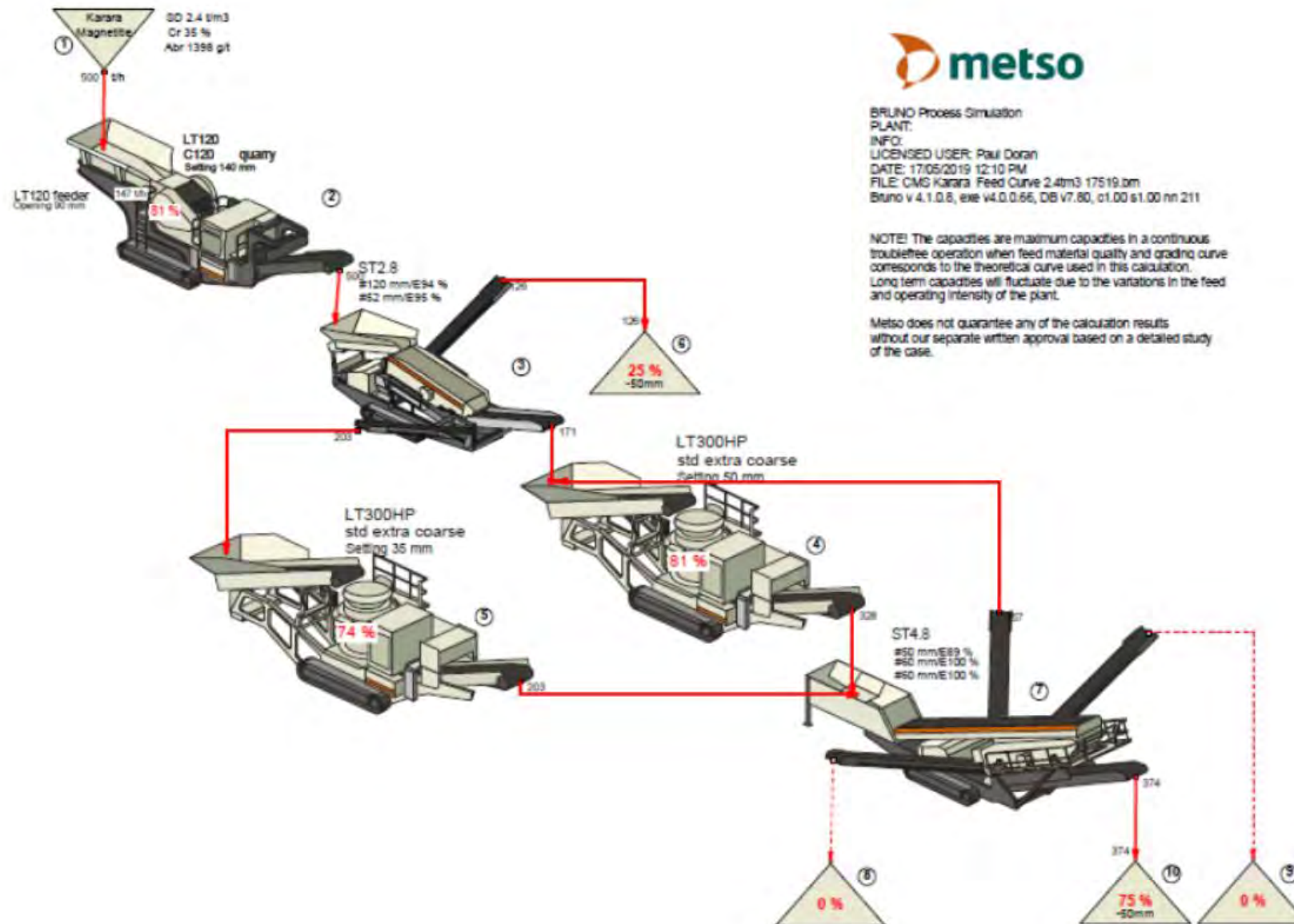


Figure 4 – Process Flow Diagram

### **4.3 Contractor Facilities**

An office, crib facilities and workshop will be established at the proposed crushing location. Approximately 16 contractors will be engaged to support the project, which is expected to run for a minimum of two years. The mobile crushing circuit will also continue to be available throughout the life of mine in the event that there is any malfunction or unplanned shutdown of the fixed primary crusher in order to maintain processing throughput.

The workshop will support minor servicing and component replacement works and will consist of two sea containers connected by a domed roof, as well as a lined workshop floor to prevent land contamination. Contractors will be required to comply with the KML Storage and Use of Hazardous Substances Standard CORP-HS-STD-1042 and Environmental Management Plan CORP-ENPLN- 1020.

### **4.4 Resource Requirements**

The mobile crushing unit is expected to require minimal resources, such as water and diesel fuel, in order to operate.

Water will be required for dust suppression purposes in order to minimise the generation and emission of potential dust during crushing activities. It will be sourced from 2 x 14,000L water tanks and pumped to the crushing plant. Approximately 868kL per month is required, and will be sourced from existing approved Department of Water and Environmental Regulation (DWER) groundwater abstraction bores, with the quantities required not expected to require any additional increase to groundwater allocation limits.

Water used for dust suppression will be primarily fresh water sourced from the Yandanooka aquifer, however provision has been made to utilise saline water, if necessary. The proposal area is located over 100m away from the nearest vegetated area, with potential impacts of saline water run off or overspray on native vegetation expected to be nil. KML manages the impacts of saline water on vegetation health through the Flora and Vegetation Health Monitoring Plan CORP-EN-PLN-1012, which has been reviewed and endorsed by DWER.

Diesel fuel will be used to meet its power requirements and will be supplied through a mobile fuel truck from the existing approved onsite bulk fuel storage facility. No additional fuel storage is proposed. Other lubricants or oils required to service the plant will similarly be stored at existing approved storage locations at the minor workshop for the mobile crushing circuit. All existing fuel and hydrocarbon storage facilities are bunded and managed as per the KML

**MOBILE CRUSHING CIRCUIT - MINING PROPOSAL**

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Storage and Use of Hazardous Substances Standard CORP-HS-STD-1042 and Environmental Management Plan CORP-ENPLN- 1020.

#### **4.5 Compliance with Legislation and Other Approvals**

There are no changes to or potential risk of KML maintaining compliance with legislation and other approvals as part of this mining proposal.

This section is consistent with details as previously provided in the approved Mining Proposals:

- Karara Iron Ore Project Mining Proposal - Years 1 to 6 - M59/644, M59/645, G59/38, G59/39, L59/62, L59/74, L59/90 (Reg ID 24232) dated 12 October 2009 signed by Stephen Murdoch and retained on Department of Mines and Petroleum File No. E0259/200901; and
- Addendum to Mining Proposal Karara Iron Ore Project Mining Proposal - Years 1 to 6 (MP Reg ID 26781) dated 27 April 2010 signed by Aidan Kelly and retained on Department of Mines and Petroleum File No. E0238/200520
- Karara Mining Limited - Rothsay Water Pipeline Mining Proposal (Reg ID 34319) dated 13 July 2012 signed by Rhys Houlihan - Superintendent Approvals and retained on Department of Mines and Petroleum File No. EARS-MP-34319.

The proposal footprint has been formally assessed and approved by the Environmental Protection Authority (EPA) under Ministerial Statement No. 805. This proposal occurs entirely within the approved MS805 boundary, on tenements G59/38 and M59/644. KML has reviewed the relevant tenement conditions and the installation and operation of this facility will be consistent and compliant with all tenement conditions (refer to Table 3).

An amendment to KML's Part V Environmental Licence will be required for the proposed mobile crushing unit and its associated activities. This approval will be sought with DWER and occurring concurrently with this mining proposal process.

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**Table 3: Review of Relevant Tenement Conditions**

Condition	Text	Start Date	Relevance to Proposal
G59/38, C.2  M59/644, C.8	The lessee submitting a plan of proposed operations and measures to safeguard the environment to the Director, Environment, DoIR for assessment and written approval prior to commencing any development or construction.	29/08/2008  10/04/2006	As described within this mining proposal.
G59/38, C.6  M59/644, C.5	Unless the written approval of the Environmental Officer, DoIR is first obtained, the use of drilling rigs, scrapers, graders, bulldozers, backhoes or other mechanised equipment for surface disturbance or the excavation of costeans is prohibited. Following approval, all topsoil being removed ahead of mining operations and separately stockpiled for replacement after backfilling and/or completion of operations.	12/11/2008  10/04/2006	As described within this proposal; no clearing works are required and all topsoil has been previously removed and stockpiled.
G59/38, C.8	The development and operation of the project being carried out in such a manner so as to create the minimum	4/12/2009  28/08/2009	As described within this proposal; no clearing works are required

**MOBILE CRUSHING CIRCUIT - MINING PROPOSAL**

Condition	Text	Start Date	Relevance to Proposal
M59/644, C.19	practicable disturbance to the existing vegetation and natural landform.		
G59/38, C.9 M59/644, C.20	All topsoil being removed ahead of all mining operations from sites such as pit areas, waste disposal areas, ore stockpile areas, pipeline, haul roads and new access roads and being stockpiled for later respreading or immediately respread as rehabilitation progresses.	4/12/2009 28/08/2009	As described within this proposal; no clearing works are required and all topsoil has been previously removed and stockpiled.
G59/38, C.11 M59/644, C.22	All rubbish and scrap is to be progressively disposed of in a suitable manner.	4/12/2009 04/12/2009	KML maintains an Environmental Waste Management Plan CORP-EN-PLN-1013 that outlines waste management over operations. Waste from crib facilities, office and workshop shall be managed in accordance with this procedure.
G59/38, C.12 M59/644, C.23	Any alteration or expansion of operations within the lease boundaries beyond that outlined in the above document(s) not commencing until a plan of operations and a programme to safeguard the environment are submitted	4/12/2009 30/09/2014	As described within this mining proposal.

**MOBILE CRUSHING CIRCUIT - MINING PROPOSAL**

Condition	Text	Start Date	Relevance to Proposal
	to the Director, Environment, DMP for his assessment and until his written approval to proceed has been obtained.		
G59/38, C.20  M59/644, C.27	The Lessee taking all reasonable measures to prevent or minimise the generation of dust from all materials handling operations, stockpiles, open areas and transport activities, to the satisfaction of an Environmental Officer, DMP.	10/06/2011  27/11/2012	Dust sprays shall be installed on the mobile crushing circuit as described in Section 4.2, and stockpiles shall be wetted down with water cannons.  KML maintains an internal Dust Management Plan CORP-EN-PLN-1010 that outlines all relevant dust mitigation measures to be undertaken. In addition, KML undertakes dust monitoring with respect to environmental impact as outlined in the internal procedure Dust Monitoring CORP-EN-PRO-1005.
M59/644, C.24	By the completion of operations, all waste dumps, stockpiles, tailings storage facilities and other disturbed areas must be progressively rehabilitated to form safe, stable, non-polluting landforms which are integrated with the surrounding landscape and support self-sustaining, functional ecosystems comprising native local provenance	04/12/2009	There are no changes presented to the current DMIRS approved 2014 Mine Closure Plan (MCP).  The 2014 MCP is currently being updated and will be submitted in August 2019.

**MOBILE CRUSHING CIRCUIT - MINING PROPOSAL**

Condition	Text	Start Date	Relevance to Proposal
	species to the satisfaction of an Environmental Officer, Department of Mines and Petroleum (DMP).		
M59/644, C.29	On the completion of operations or progressively when possible, all waste dumps, tailings storage facilities, stockpiles or other mining related landforms must be rehabilitated to form safe, stable, non-polluting structures which are integrated with the surrounding landscape and support self-sustaining, functional ecosystems comprising suitable, local provenance species or alternative agreed outcome to the satisfaction of the Executive Director, Environment Division, DMP.	30/09/2014	There are no changes presented to the current DMIRS approved 2014 Mine Closure Plan (MCP).  The 2014 MCP is currently being updated and will be submitted in August 2019.
M59/644, C.25	Placement of waste material must be such that the final footprint after rehabilitation will not be impacted upon by pit wall subsidence and zone of instability.	04/12/2009	All proposed disturbance footprints outlined in this mining proposal are located entirely outside of the zone of instability of Karara Open Pit.
M59/644, C.28	Where saline water is used for dust suppression, all reasonable measures being taken to avoid any detrimental effects to surrounding vegetation and topsoil stockpiles.	30/09/2014	KML maintains an internal Dust Management Plan CORP-EN-PLN-1010 that outlines dust suppression measures to be adhered to within the processing area. Fresh water shall primarily be used for dust



**MOBILE CRUSHING CIRCUIT - MINING PROPOSAL**

Condition	Text	Start Date	Relevance to Proposal
			suppression within this area. The use of saline water may be required, however the nearest surrounding vegetation is located over 100m to the south. Any potential runoff will be minimised through the existing approved footprint and windrows to assist with containment.

**5 ENVIRONMENTAL IMPACTS AND MANAGEMENT**

KML has completed a full risk assessment for the installation and operation of the proposed mobile crushing unit and identified there will be no new nor additional environmental risks or impacts. These are detailed in Table 4, and includes the management control measures that will be implemented to mitigate or minimize these risks and impacts.

KML commits to these works being undertaken in accordance with KML's Environmental Management Plan CORP-EN-PLN-1020.

**Table 4: Risk Assessment**

Reference	Aspect	Project Phase	Identified Hazard (Description)	Hazard Outcome (Unwanted Event)	Inherent Risk (Rank)	HIGHER CONTROLS Elimination, Substitution or Engineering	Administrative or PPE	Residual Risk (Rank)	Procedure Reference (KML & Contract Partner)
1.01	Dust	Operation	Dust generated by crushing, grinding, stockpiling, transporting and loading of raw and processed material.	Impact to surrounding ecosystem, visual amenity, community complaints	MEDIUM (8)	Dust suppression systems installed within the mobile crusher circuit.	No human or environmental sensitive receptors within the area.  Dust suppression of feedstock and product stockpiles via sprinklers.  Dust suppression on access roads and ROM area.  Dust Management to be in line with Dust Management Plan CORP-EN-PLN-1010.	LOW (2)	KML: Operational Environmental Management Plan (CORP-EN-PLN-1020)  KML: Dust Management Plan (CORP-EN-PLN-1010)  KML: Dust Management and Monitoring Procedure (CORP-EN-PRO-1005)
1.02	Surface Water	Operations (incl. progressive Rehabilitation)	Failure to contain any potential contaminated surface water.  Failure to divert surrounding natural surface water drainage.	Offsite impacts to surrounding native vegetation, erosion.  Contaminant transport (breach of unauthorised discharge regs)  Flooding and damage of adjacent infrastructure.  Project delays.	MEDIUM (8)	All mobile crushing infrastructure located within existing surface water drainage network.	Surface water management and operations as per Environmental Procedure - Surface Water Management CORP-EN-PRO- 1011.  Hydrocarbon contaminated stormwater will be kept separate from other water sources	LOW (4)	KML: Operational Environmental Management Plan (CORP-EN-PLN-1020)  KML: Surface Water Management (CORP-EN-PRO-1011)

**MOBILE CRUSHING CIRCUIT - MINING PROPOSAL**

<b>1.03</b>	Hydrocarbons	Operations	<p>Hydrocarbon spillage resulting from a failure of mobile crushing unit.</p> <p>Spills from environmentally hazardous chemicals from storage areas, crushing circuit and conveyors during handling and transfer (accidents and malfunction).</p>	Impacts to land, surface water and surrounding native vegetation.	<b>MEDIUM (8)</b>	<p>All chemicals shall be stored in containment bunds, sea containers or chemical cabinets as appropriate for the volume and nature of the chemicals.</p>	<p>All hydrocarbons to be stored within bunding that meets Dangerous Goods Safety Act 2004.</p> <p>Appropriate handling and disposal of hydrocarbons as per Storage and Use of Hazardous Substances Standard CORP-HS-STD-1042 and Environmental Waste Management Plan CORP-ENPLN- 1014.</p> <p>Spill management equipment appropriate to the volume and type of hydrocarbons or chemicals being stored shall always be available, clearly labelled at the mobile crushing unit's workshop.</p>	<b>LOW (4)</b>	<p>Storage and Use of Hazardous Substances Standard CORP-HS-STD-1042</p> <p>Environmental Waste Management Plan CORP-ENPLN- 1014</p>
<b>1.04</b>	Noise	Operation	Noise generated by crushing operations and processing equipment.		<b>LOW (4)</b>		No sensitive receptors within the area.	<b>LOW (4)</b>	
<b>1.05</b>	Water	Operations	Use of saline water for dust suppression impacting the surrounding environment	Impacts to nearby native vegetation (~100m distance)	<b>MEDIUM (8)</b>	<p>All infrastructure located within existing surface water drainage infrastructure areas</p>	<p>Operations located away from surrounding native vegetation (&gt;100m).</p> <p>Use of saline water for dust suppression to be conducted in accordance with Dust Management Plan CORP-EN-PLN-1010.</p>	<b>LOW (4)</b>	<p>Dust Management Plan CORP-EN-PLN-1010</p> <p>Flora and Vegetation Health Monitoring Plan CORP-EN-PLN-1012</p>

**6 SOCIAL IMPACTS**

Not applicable

**7 MINE CLOSURE**

There are no changes required to the current DMIRS approved Mine Closure Plan, including post-mining land use and rehabilitation, as part of this mining proposal.

The disturbance footprint associated with the mobile crushing unit and its feed and product stockpiles will be located within the existing operational mining footprint for a minimum of two years, with provision to support the fixed primary crusher in the event of any unplanned maintenance or malfunctions. It is therefore expected that decommissioning will only occur at the end of operations when all processing activities have ceased.

All decommissioning and closure works shall be conducted in accordance with the DMIRS approved Mine Closure Plan at the time. Decommissioning works shall include the removal of all infrastructure and embankments, therefore no ongoing management of surface water or other environmental aspects is required.

This section is consistent with details as previously provided in the approved Mining Proposals:

- Karara Iron Ore Project Mining Proposal - Years 1 to 6 - M59/644, M59/645, G59/38, G59/39, L59/62, L59/74, L59/90 (Reg ID 24232) dated 12 October 2009 signed by Stephen Murdoch and retained on Department of Mines and Petroleum File No. E0259/200901; and
- Addendum to Mining Proposal Karara Iron Ore Project Mining Proposal - Years 1 to 6 (MP Reg ID 26781) dated 27 April 2010 signed by Aidan Kelly and retained on Department of Mines and Petroleum File No. E0238/200520
- Karara Mining Limited - Rothsay Water Pipeline Mining Proposal (Reg ID 34319) dated 13 July 2012 signed by Rhys Houlihan - Superintendent Approvals and retained on Department of Mines and Petroleum File No. EARS-MP-34319.