



Licence Number	L8549/2011/1
Licence Holder	Kimberley Metals Group Pty Ltd
ACN	114 123 572
File Number:	DER2014/001456-1
Premises	Ridges Iron Ore Project Mining Tenements M80/599, M80/600, L80/55 and G80/15 Great Northern Highway WA 6740
Date of Amendment	09 August 2019

Amendment

The Chief Executive Officer (CEO) of the Department of Water and Environmental Regulation (DWER) has amended the above Licence in accordance with section 59 of the *Environmental Protection Act 1986* (EP Act) as set out in this Amendment Notice. This Amendment Notice constitutes written notice of the amendment in accordance with section 59B(9) of the EP Act.

Alana Kidd

Manager, Resource Industries

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

Definitions and interpretation

Definitions

In this Amendment Notice, the terms in Table 1 have the meanings defined.

Table 1: Definitions

Term	Definition
ACN	Australian Company Number
Amendment Notice	refers to this document
Category/ Categories/ Cat.	categories of Prescribed Premises as set out in Schedule 1 of the EP Regulations
CEO	means Chief Executive Officer. CEO for the purposes of notification means: Director General Department Administering the <i>Environmental Protection Act 1986</i> Locked Bag 10 JOONDALUP DC WA 6919 info@dwer.wa.gov.au
Delegated Officer	an officer under section 20 of the EP Act
Department	means the department established under section 35 of the <i>Public Sector Management Act 1994</i> and designated as responsible for the administration of Part V, Division 3 of the EP Act.
DWER	Department of Water and Environmental Regulation
EP Act	<i>Environmental Protection Act 1986 (WA)</i>
EP Regulations	<i>Environmental Protection Regulations 1987 (WA)</i>
Existing Licence	The Licence issued under Part V, Division 3 of the EP Act and in force prior to the commencement of and during this Review
Licence Holder	Kimberley Metals Group Pty Ltd
mtpa	million tonnes per annum
Noise Regulations	<i>Environmental Protection (Noise) Regulations 1997 (WA)</i>
Prescribed Premises	has the same meaning given to that term under the EP Act.
Premises	refers to the premises to which this Decision Report applies, as specified at the front of this Decision Report.
Risk Event	as described in <i>Guidance Statement: Risk Assessment</i>

Amendment Notice

This amendment is made pursuant to section 59 of the *Environmental Protection Act 1986* (EP Act) to amend the Licence issued under the EP Act for a prescribed premises as set out below. This notice of amendment is given under section 59B(9) of the EP Act.

This notice is limited only to an amendment for Category 5. No changes to the aspects of the original Licence relating to Category 64 have been requested by the Licence Holder.

The following guidance statements have informed the decision made on this amendment:

- *Guidance Statement: Regulatory Principles (July 2015)*
- *Guidance Statement: Setting Conditions (October 2015)*
- *Guidance Statement: Licence Duration (August 2016)*
- *Guidance Statement: Decision Making (February 2017)*
- *Guidance Statement: Risk Assessment (February 2017)*
- *Guidance Statement: Environmental Siting (November 2016)*

Amendment description

Kimberley Metals Group (KMG) commenced mining haematite iron ore from the Ridges Iron Ore Project (RIOP) mine site located approximately 165 kilometres (km) south of Wyndham under licence L8549/2011/1. Ore from the RIOP mine site was hauled to the Barge Loading Facility (BLF) in Wyndham via road trains on the Great Northern Highway. Ore from the mine was stockpiled at the BLF located adjacent to Barytes Road in Wyndham then loaded onto a 1,200tph conveyor loading system into a barge to be transferred to a ship anchored in deeper water in the Cambridge Gulf.

On 6 February 2015 KMG placed the RIOP (which includes the BLF on a separate licence) on care and maintenance. During the RIOP/BLF care and maintenance period the following limitations were imposed:

- There will be no activities related to ore processing (i.e. screening and crushing of ore);
- There will be no haulage of ore within the RIOP, or from RIOP to the BLF;
- There will be no loading of ore or shipping activity at the BLF;
- There will be limited civil works occurring on site; and
- Site-wide maintenance and upkeep will be undertaken.

On 13 May 2019 KMG submitted an application to amend L8549/2011/1 to increase Category 5 back up to 2,000,000 tonnes per annum (this assessment is for the mine only). The increase in Category 5 is due to the project coming out of care and maintenance. In an email dated 21 June 2019, the Licence Holder requested to further increase Category 5 to 2,500,000 tonnes per annum.

In an email dated 19 June 2019, the Licence Holder provided the following list of 'like for like' infrastructure which will be re-mobilised on site to bring the project out of care and maintenance:

- Jaw Crusher / 500tph
- Cone Crusher / 400tph
- Sandvik QE440 Scalper / Screen 400tph

Power Generation:

- 75KL Self Bunded Fuel Tank
- 3 x 650KVA Diesel Generators to run the Camp, Workshop, Fuel Farm etc.

Figure 1 below illustrates the crusher layout and the location of dust control misters.

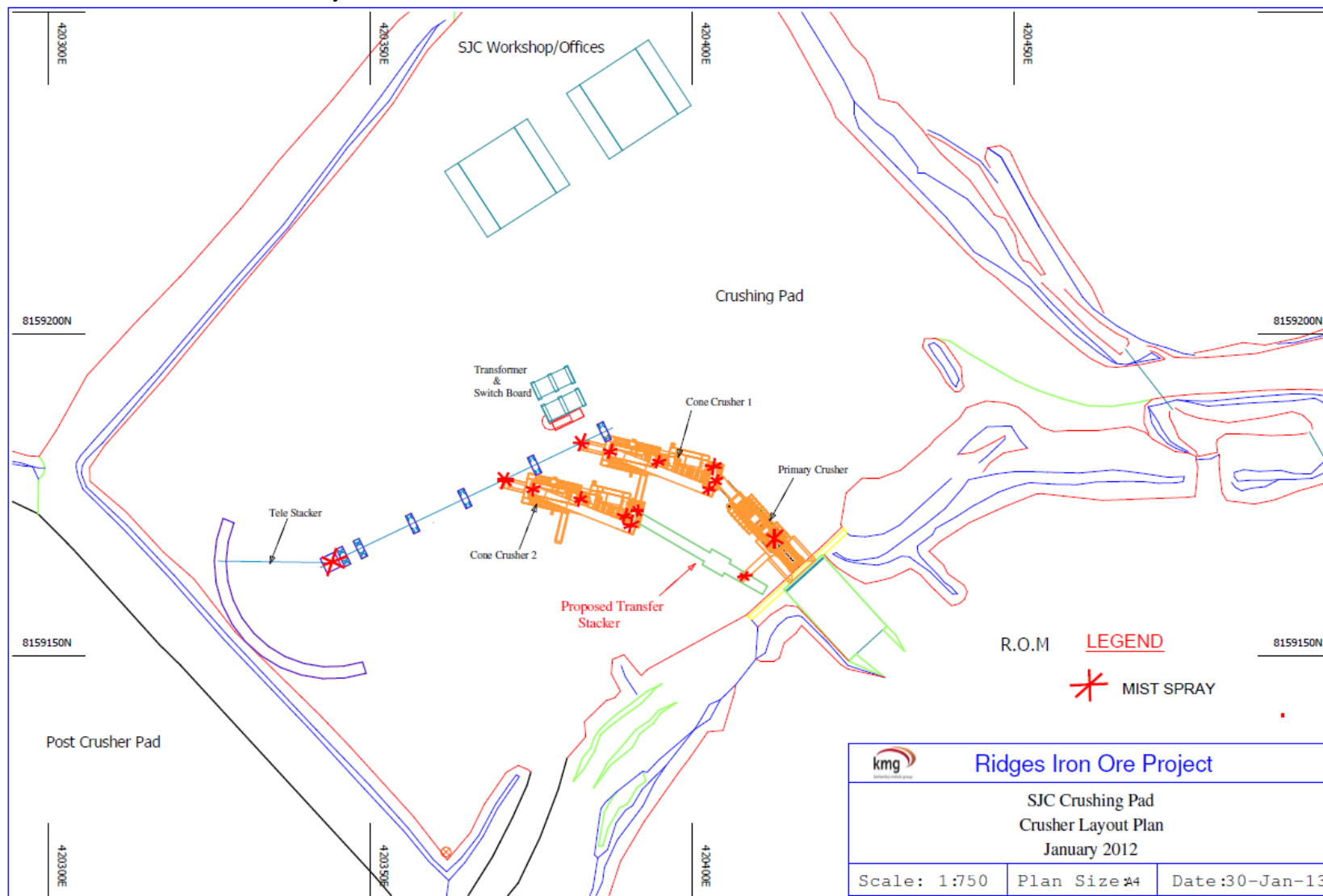


Figure 1. Crusher Layout Plan and location of mist sprays

Table 2 below outlines the proposed changes to the Licence.

Table 2: Proposed throughput changes

Category	Current throughput capacity	Proposed throughput capacity	Description of proposed amendment
5: Processing or beneficiation of metallic or non-metallic ore	50,000 tonnes per year	2,500,000 tonnes per year	Increase throughput associated with the project coming out of care and maintenance

Other approvals

The Licence Holder has provided the following information relating to other approvals as outlined in Table 3.

Table 3: Relevant approvals

Legislation	Number	Approval
<i>Environmental Protection Act 1986</i>	CPS 3793/2 – expires 30 June 2021	Clearing permit granted for the purpose of mineral production. Approves the clearing of 259.1 hectares of native vegetation.
<i>Right in Water and Irrigation Act 1914</i>	GWL172778/5 – Expires 26 November 2023	Licence to Take Water – Annual Water Entitlement 200,000kL for the purpose of dust suppression, mineral ore processing and mining camp purposes.

Amendment history

Table 4 provides the amendment history for L8549/2011/1.

Table 4: Licence amendments

Instrument	Issued	Amendment
L8549/2011/1	03/01/2013	Amendment Notice Increase Category 5 capacity Administrative changes
L8549/2011/1	12/11/2015	Amendment Notice Reduce Category 5 capacity due to care and maintenance status
L8549/2011/1	14/05/2019	Amendment Notice1 Extend the expiry date from 5 June 2019 to 22 July 2031
L8549/2011/1	09/08/2019	Amendment Notice 2 Increase Category 5 throughput to 2,500,000 tonnes per year to reflect the mine coming out of care and maintenance

Location and receptors

Table 5 below lists the relevant sensitive land uses in the vicinity of the Prescribed Premises which may be receptors relevant to the proposed amendment.

Table 5: Receptors and distance from activity boundary

Residential and sensitive premises	Distance from Prescribed Premises
Argyle Diamond Mine village	20km
Doon Doon Roadhouse	35km

Table 6 below lists the relevant environmental receptors in the vicinity of the Prescribed Premises which may be receptors relevant to the proposed amendment.

Table 6: Environmental receptors and distance from activity boundary

Environmental receptors	Distance from Prescribed Premises
Priority 1 ecological community – Plant assemblages on vertical sandstone surfaces	Within the Premise boundary. Approximately 1.3km north east of the ROM pad.
Priority 3 ecological community – Kimberley vegetation association 833	13.5km south east of Premise boundary
Lake Argyle and Lake Kununurra Ramsar wetland	30km west of Premise boundary
Minor, non-perennial watercourses	Numerous within Premise boundary

Proposed Applicant Controls

The applicant has proposed the following controls to be adopted during construction and operations:

Dust:

The Licence Holder has a Dust Management Plan (2015) for the site which will be reinstated once the mine comes out of care and maintenance. The Dust Management Plan outlines activities that are likely to generate dust and key management actions that will be taken to minimise dust impacts, including;

- Operate a water cart during windy conditions; and
- Maintain sprinkler systems.

The Dust Management Plan also makes commitments regarding inspections and monitoring.

Surface water:

The Licence Holder has provided the following information regarding the management of surface water:

- Adequately sized culverts will be installed where necessary to avoid interruption of waterways. Culverts inspected prior to and post wet season to ensure clear water passage.
- Stockpiles located to avoid impeding on critical surface drainage lines.
- Should evidence of adverse wind or water erosion present on topsoil stockpiles, prompt mitigation measures will be implemented to ensure the stability of the stockpiles.
- Areas of compacted soils and previously disturbed areas that are no longer required will be progressively ripped and re-contoured in order to promote seed germination.
- Run-off from disturbed areas will be contained or directed to appropriately constructed sediment traps prior to entering natural drainage lines.

Hydrocarbons:

The Licence Holder (KMG, 2019) provides the following information regarding the management of hydrocarbons:

- Storage of hydrocarbons to be in accordance with AS/NZS 1940:2004.
- Hydrocarbons in un-bunded vessels will be stored within a low permeability bund designed to contain not less than 110% of the volume of the largest storage vessel, or at least 25% of the total volume of substances stored in the compound, whichever is greater.
- The bund will be designed such that jetting from any storage vessel is contained within the compound.
- The capacity of the bund must be maintained at all times i.e. pump out trapped rain water.
- All hydrocarbons will be stored in containers fit for purpose. Storage vessels must be waterproof and display clear labelling specific to their contents.
- Appropriate firefighting equipment will be supplied and be easily accessible at storage locations.
- Above ground pipe work will be utilised whenever possible.
- Hydrocarbon spill kits are located at the workshop area and fuel farm. Mobile kits are available for remote use.
- Routine inspections of hydrocarbon storage areas, go-lines, service bays and workshops will be undertaken by the Environmental Officer.

Risk assessment

Tables 7 and 8 below describe the Risk Events associated with the amendment consistent with the *Guidance Statement: Risk Assessments*. Both tables identify whether the emissions present a material risk to public health or the environment, requiring regulatory controls.

Table 7: Risk assessment for proposed amendments during construction

Risk Event						Consequence rating	Likelihood rating	Risk	Reasoning
Source/Activities		Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts				
Cat 5 Processing or beneficiation of metallic or non-metallic ore	Placement of crusher and screener, and vehicle movements	Dust	Terrestrial ecosystems	Air: Transport through air	Human health impacts, amenity Smothering of vegetation	N/A	N/A	N/A	Emissions from dust and noise will be minimal as the plant is mobile and in effect will only be 'bolted together' once it is delivered on site. Located on already disturbed areas.
		Noise	Residential: Argyle Diamond Mine village	Air: Transport through air	Human health impacts	N/A	N/A	N/A	Any potential dust emissions can be regulated by section 49 of the EP Act. The provisions of the Noise Regulations are also applicable.

Table 8: Risk assessment for proposed amendments during operation

Risk Event						Consequence rating	Likelihood rating	Risk	Reasoning
Source/Activities		Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts				
Cat 5 Processing or beneficiation of metallic or non-metallic ore	Operation of processing plant	Dust: associated with material storage, conveyors, screening plant, increased vehicle movement and front end loaders.	Residential: Argyle Diamond Mine village Terrestrial ecosystems/native vegetation	Air: Particulate matter arising from the processing of ore.	Health and amenity impacts Adverse impacts to the health and survival of vegetation	Minor	Possible Licence holder has a dust management plan and will undertake regular inspections and monitoring.	Medium	The Delegated Officer determined that the distance to the nearest residential receptor is too great for dust impacts to occur. It has been determined that there is a medium risk of dust impacting terrestrial ecosystems/native vegetation within the vicinity of the processing plant. Dust suppression systems exist on equipment to minimize dust at transfer and discharge points as depicted in Figure 1 above.

Risk Event						Consequence rating	Likelihood rating	Risk	Reasoning
Source/Activities		Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts				
		Noise: associated with crushing and screening activities	Residential: Argyle Diamond Mine village	Air: Noise generated by the operation of equipment	Health and amenity impacts	N/A	N/A	N/A	The Delegated Officer determined that the distance to the nearest residential receptor is too great for noise impacts to occur. The provisions of the Noise Regulations are also applicable.
		Sedimentation of surface water	Surface water (numerous minor, non-perennial watercourses occur within the premise boundary)	Via overland flow following storm events	Sedimentation; Contamination of surface water	Minor	Unlikely	Medium	During ongoing operation of the processing facility, high/frequent rainfall events and subsequent surface water flow may mobilise materials (gravel/soil/sediment) from the processing facility area, however applicant controls should mitigate the consequence and likelihood of events (sediment traps on runoff, locating stockpiles away from drainage lines). The watercourses located within the vicinity of the processing area (the receptors) are minor, non-perennial watercourses.
		Hydrocarbon (fuel and oil) spills from machinery	Terrestrial ecosystems Soils Groundwater	Direct discharge	Soil and groundwater contamination	Minor	Unlikely Due to proposed applicant controls	Medium	The Delegated Officer has determined that there is a medium risk of soils and groundwater becoming contaminated from hydrocarbon spills. Regulation of any spillages from refueling are covered by the <i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i> .

Decision

The Delegated Officer determined that the recommissioning of crushing and screening machinery has a medium risk to the environment due to impacts from dust. It was determined that this level of risk is acceptable subject to the inclusion of condition 1.3.7 below.

The licence has also been updated to increase groundwater monitoring requirements associated with Category 64 (Class II or III putrescible landfill site). Two monitoring bores were removed from requirements during care and maintenance (RMB01 and RMB06) since they were not accessible whilst earthen bunds were blocking access to the site. The Licence Holder has advised that these bores are now, and will continue to be accessible for monitoring. Monitoring requirements for bores RMB01 and RMB06 have been reinstated on the licence. During care and maintenance the monitoring frequency was reduced from quarterly (SWL, EC, pH, TDS) or six-monthly (TRH, hydrocarbons, metals etc.) to annually. Groundwater monitoring frequency has been increased as per the rates shown in Table 2.4.1 below. A number of groundwater monitoring parameters have been removed in line with current practice for landfills of this size.

The Delegated has determined to grant the amendment, allowing the project to come out of care and maintenance subject to increased groundwater monitoring requirements and dust controls. The conditions can be reviewed as needed as with Annual Reporting data.

Licence Holder's comments

The Licence Holder was provided with the draft Amendment Notice on 6 August 2019. In an email dated 7 August 2019 the Licence Holder requested to waive the 21 day notification period.

Amendment

1. The Prescribed Premises category as shown on the front page of the Licence is amended by the deletion of the text shown in strikethrough and the insertion of the text shown in bold underline below.

Prescribed premises category

Schedule 1 of the *Environmental Protection Regulations 1987*

Category number	Category description	Category production or design capacity	Approved premises production or design capacity
05	Processing or beneficiation of metallic or non-metallic ore	50 000 tonnes or more per year	50 000 <u>2 500 000</u> tonnes per day
64	Class II Putrescible landfill	20 tonnes or more per year	125 tonnes per year

2. Condition 1.1.2 is amended by the insertion of the text below shown in bold underline and the deletion of the text shown in strikethrough:

'Annual Audit Compliance Report' means a report in a format approved by the CEO as presented by the Licensee or as specified by the CEO (guidelines and templates may be available on the Department's website);

'CEO' means Chief Executive Officer of the Department of **Water and Environmental** Regulation;

'CEO' for the purpose of correspondence means;

Chief Executive Officer **Director General**
Department Administering the Environmental Protection Act 1986
Locked Bag 33 10
CLOISTERS SQUARE WA 6850
JOONDALUP WA 6919
Email: ~~info@der.wa.gov.au~~ **info@dwer.wa.gov.au**

3. Condition 1.3.6 and Table 1.3.3 of the Licence is amended by the deletion of the text shown in strikethrough below and the insertion of the bold text shown in underline below:

1.3.1 The Licensee shall ensure the limits specified in Table 1.3.3 are not exceeded.

Table 1.3.3 Production or design capacity limits		
Category ¹	Category description ¹	Premises production or design capacity limit
5	Processing or beneficiation of metallic or non-metallic ore	50,000 <u>2,500,000</u> tonnes of ore per annual period

Note 1: *Environmental Protection Regulations 1987*, Schedule 1.

4. The Licence is amended by the insertion of the following Condition 1.3.7:

1.3.7 The Licence Holder must ensure that crushing and screening equipment is fitted with mist sprays at the transfer points as depicted in Schedule 1 (Map of dust control mist sprays), and that these sprays are operated when the crusher and screener is in use and the sprays are maintained with no material defects.

5. Condition 2.4.1 and Table 2.4.1 of the Licence are amended by the deletion of the text shown in strikethrough below and the insertion of the bold text shown in underline below:

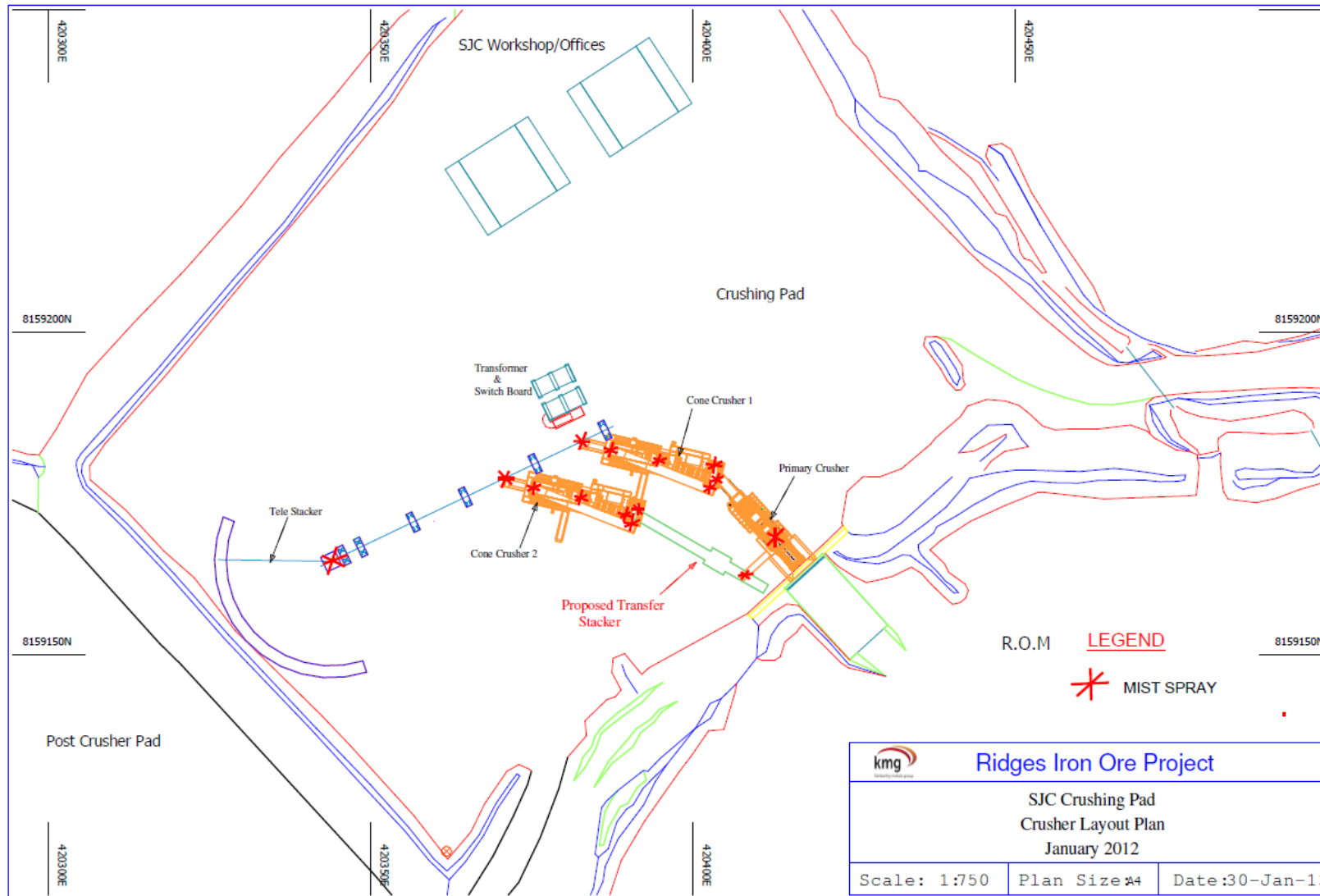
2.4.1 The Licensee shall undertake the monitoring in Table 2.4.1 according to the specifications in that table.

Table 2.4.1: Monitoring of ambient groundwater quality				
Monitoring point reference and location	Parameter	Units	Averaging period <u>Sampling method</u>	Frequency
RMB04, RMB07	Standing water level	mbgl	Spot sample	Annually <u>June and December</u>
	Electrical Conductivity ¹	µs/cm		
	pH ¹	-		
	Total Dissolved Solids	mg/L	<u>Spot sample</u>	<u>June and December</u>
	Total Recoverable Hydrocarbons (TRH)	<u>mg/L</u>		
	Petroleum Hydrocarbons:			
	C6–C9			
	C10–C14			
	C15–C28			
	C29–C36			
	Hardness (as equivalent CaCO ₃)			
	Total Alkalinity (as CaCO ₃)			
	Total Nitrogen (TN)			
	Total Phosphorus (TP)			
	Bicarbonate (HCO ₃)			
	Carbonate (CO ₃)			
	Nitrite (NO ₂)			
	Sulphate (SO ₄)			
	Hydroxide (OH)			
	Aluminium (Al)			
	Arsenic (As)			
	Barium (Ba)			
	Boron (B)			
	Cadmium (Cd)			
	Calcium (Ca)			
	Chromium (Cr)			
	Cobalt (Co)			
	Copper (Cu)			
	Iron (Fe)			
	Lead (Pb)			
	Magnesium (Mg)			
	Manganese (Mn)			
	Mercury (Hg)			
	Molybdenum (Mo)			
	Nickel (Ni)			
	Potassium (K)			
	Selenium (Se)			
	Sodium (Na)			
	Vanadium (V)			
	Zinc (Zn)			

Note 1: In-field non-NATA accredited analysis permitted.

- Schedule 1 is amended by the addition of the map below depicting the location of dust control sprays.

Map of dust control mist sprays



7. Schedule 2 of the Licence is amended by the deletion of the Annual Audit Compliance Report Proforma.

Appendix 1: Key documents

	Document title	In text ref	Availability
1	Licence L8549/2011/1	L8549/2011/1	accessed at www.dwer.wa.gov.au
2	Licence L8549/2011/1 Licence Amendment 03/01/2013	n/a	DWER records (A596308)
3	Licence L8549/2011/1 Licence Amendment 12/11/2015	n/a	DWER records (A1004081)
4	Kimberley Metals Group – L8549/2011/1 Licence Amendment application – 13 May 2019	n/a	DWER records (A1788105)
5	Email of 19 June 2019 providing an infrastructure list	n/a	DWER records (A1798389)
6	Email of 21 June 2019 requesting to increase Category 5 design capacity to 2.5mtpa	n/a	DWER records (A1799006)
7	Email of 12 July 2019 providing addition information regarding emission controls, inclusive of a Dust Management Plan.	n/a	DWER records (A1805526)
8	DER, July 2015. <i>Guidance Statement: Regulatory principles.</i> Department of Environment Regulation, Perth.	n/a	accessed at www.dwer.wa.gov.au
9	DER, October 2015. <i>Guidance Statement: Setting conditions.</i> Department of Environment Regulation, Perth.	n/a	
10	DER, November 2016. <i>Guidance Statement: Risk Assessments.</i> Department of Environment Regulation, Perth.	n/a	
11	DER, November 2016. <i>Guidance Statement: Decision Making.</i> Department of Environment Regulation, Perth.	n/a	