Amendment Report

Application for Licence Amendment

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

Licence Number	L8199/2007/2
Licence Holder	Chichester Metals Group Ltd
ACN	109 264 262
File Number	DER2013/001073-2
Premises	Cloudbreak Iron Ore Mine Mining Tenements M45/1126, M46/401, M46/404, M46/405, M46/356, M46/402, M46/410, M46/411, M46/357, M46/409, M46/453, M45/1128, M46/449, M46/452, M46/451, M46/454, M46/450, M45/1084, M45/1140, M45/1139, M45/1102, M45/1105, M45/1124, M45/1103, M45/1106, M45/1125, M45/1104, M45/1107, L46/48, L46/49, M45/1082, M45/1083, M45/1127, M45/1138, M45/1263, M46/403, M46/406, M46/407, M46/408, M46/409, M46/412, M46/413, M46/414, L46/52, L46/99, L46/46, L46/96, L46/64, L45/152, L46/47, L46/48, L46/51, L46/57, L46/62, L46/130 and Exploration Leases E45/2498, E46/590, E46/612, E45/2499, E45/2652, E45/2497 MULGA DOWNS WA 6751
Date of Report	1 April 2021
Decision	Revised licence granted

Alana Kidd

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Date: 2021.04.01 09:35:32 +08'00'

ALANA KIDD
MANAGER, RESOURCE INDUSTRIES

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

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1. Decision summary

Licence L8199/2007/2 is held by Chichester Metals Pty Ltd (Licence Holder) for the Cloudbreak Iron Ore Mine (the Premises), located on the Mining Tenements listed above and detailed in L9195/2007/2.

This Amendment Report documents the assessment of potential risks to the environment and public health as a result of emissions and discharges from the proposed changes outlined below, during construction and operation. As a result of this assessment, Revised Licence L8199/2007/2 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 25 January 2021, the Licence Holder submitted an application to the department to amend Licence L8199/2007/2 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act). The following amendments were sought:

- Construction and operation of an additional 81 reinjection bores; and
- Extension to the saline pipeline.

This amendment is limited only to changes to Category 6 activities in the Existing Licence. No changes to the aspects of the existing Licence relating to Category 5, 52, 54, 57, 64 and 73 have been requested by the Licence Holder.

The Licence has been reformatted into the current Licence template with conditions numbers modified.

2.3 Part IV of the EP Act

The EP Act Part IV approval granted via Ministerial Statements 899, 962 and 1010 is the primary regulatory mechanism which has authorised the dewatering abstraction and reinjection scheme at the Premises.

Requirements under EP Act Part V approvals

Condition 6 of MS 899 was recommended by the EPA to minimise the indirect impacts from mounding, drawdown, ponding and shadowing and monitor the vegetation to ensure the indirect impacts are not greater than those predicted. Condition 6-1 of MS 899 specifies: *"The proponent shall manage the proposal in a manner that ensure there is no adverse impact to conservation significant vegetation as a result of implementing this proposal, greater than:*
1. 315 hectares of Mulga vegetation;
2. 763 hectares to Samphire vegetation; and
3. 3 hectares to Coolibah/river Red Gum creekline vegetation, outside the Mine Envelope."

Condition 6-2 of MS 899 specifies that:
"Within ten months from the date of issue of this Statement, the proponent shall prepare a Vegetation Health Monitoring and Management Plan for the Project Area to verify and ensure that the requirements of 6-1 shall be met".

Trigger levels for management actions to prevent further impacts have been established under the Plan and in the event that a trigger is exceeded, the Licence Holder is required to report such findings to the Chief Executive Officer (CEO) of the EPA.

Condition 7 of MS 899 was recommended by the EPA to restrict groundwater mounding and drawdown at the fringe of the Fortescue Marsh to one metre to prevent impacts to groundwater dependant vegetation.

MS 962 amended Condition 7-1 of MS 899, specifying that:
The proponent shall manage the injection of surplus water to ensure that groundwater levels do not rise or drop by more than one metre at the fringe and within the Fortescue Marsh, from the baseline groundwater level, using a suitable network of bores at the fringe of the Fortescue Marsh as shown in Figure 2 and delineated by co-ordinates in Schedule 2, having regard for climatic trends and seasonal variation, unless prior written authorisation of the CEO has been received.

MS 962 amended Condition 7-2 of MS 899, specifying that:
To verify that the requirements of Condition 7-1 are being met the proponent shall, to the requirements of the CEO:
1. undertake baseline monitoring at groundwater monitoring bores located on the fringe of the Fortescue Marsh and a control bore outside impacts areas within one month of the date of issue of this Statement for currently installed bores and as soon as is practicable for the new fringe bores and the control bore…
2. establish trigger groundwater levels at locations identified in Condition 7-2(1) having regard for climatic trends and seasonal variation; and
3. *monitor groundwater levels monthly at a minimum at locations identified in Condition 7- 2(1).*

MS 1010, published on 04 August 2015, which approved the increase in mine dewatering and reinjection to 150 GLpa, requires the Licence Holder to implement the increased rate of abstraction and reinjection subject to the implementation conditions in MS 899, as amended by the implementation agreement set out in MS 962.

Cloudbreak Groundwater Operating Strategy

The Licence Holder has developed the *Cloudbreak Groundwater Operating Strategy (CB-PHHY- 0009)* which supported the EP Act Part IV approval process. Key aspects of the Groundwater Operating Strategy (GWOS) relating to disposal of abstracted water are summarised below.

Brackish water disposal:

- Cloudbreak mine is typically operated with a deficit of brackish water supply, with non-dewatering sources making up the brackish deficit. Occasionally there may be brackish water surplus when dewatering is initiated at new mining areas and/or when ore processing is interrupted for maintenance shutdown. Brackish water surplus is disposed primarily via reinjection.
- Brackish injection areas are Hillside West, Hillside East and Lefthanders Injection borefields with reinjection typically targeting the Marra Mamba Formation.
- Other options for Brackish water disposal include storage in transfer ponds, transfer to Christmas Creek mine site or contingency discharge if reuse, injection, in-pit disposal and temporary storage options are unavailable or exhausted.

Saline water disposal:

- Cloudbreak is constantly operated with a saline water surplus. Water demand for saline water is low since it is only used for dust suppression in mining areas. Saline injection is undertaken between the southern limit of the resource area and the northern limit of the

Fortescue Marsh. The Oakover formation is the target aquifer of the injection. The Oakover formation is considered to have high transmissivity and aquifer storage due to the presence of calcrete and silcretes.

Trigger System

The GWOS has a defined 'Trigger Level Framework' to ensure management objectives specified in Ministerial Statement are maintained. A two-tiered trigger level system is used.

- **Class 1** trigger levels serve as an internal early warning for potential unexpected groundwater level, water quality and water chemistry changes which may require operational changes.
- **Class 2** trigger levels are aligned with unexpected groundwater level changes that may potentially impact upon the environment and future beneficial use of the aquifer which require operational changes. Class 2 triggers are based on regulatory requirements and are required to be reported.

Accordingly, internal 'Class 1' Trigger levels have been set to manage saline injection and brackish injection as below:

- Water table to be maintained 3m below ground level;
- Oakover formation to be maintained 0.5m below ground level; and
- Marra Mamba formation to be maintained 3m below ground level.

The GWOS notes that trigger levels in the Oakover aquifer have been set to pressure levels within the deep aquifer which will not adversely impact upon the shallow aquifer at locations defined in MS962. Following trigger values have been applied to Oakover monitoring locations in Zone B:

- Class 1 water level trigger values have been set at 0.5 mbgl;
- No Class 2 water level trigger values have been set as potential environmental impacts are managed through the watertable monitoring bores; and
- Class 1 water salinity trigger values have been proposed at 9,000 µS/cm where water quality is naturally <9,000 µS/cm.

The GWOS commits that Exceedance of Class 1 Trigger will be investigated by initiating hydrogeological assessment and changes to the water management system, including redirecting disposal to void mine pits and adjusting abstraction/ injection volumes in impacted area, will be implemented as necessary.

The scope of the EP Act Part V licence assessment is limited to assessment of impacts on groundwater quality associated with injection of groundwater.

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 *Guidance Statement: Risk Assessments* (DER 2017).

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 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	Drilling of new saline reinjection bores	Air/windborne pathway	Inform personnel of dust management responsibilities Minimise clearing and vegetation disturbance and conduct vegetation clearing in accordance with permits Implement dust suppression measures including the use of water carts, vehicle speed restrictions etc. Dust mitigation measures are to be implemented while earthworks are conducted
	Extension to the saline pipeline	Air/windborne pathway	
Noise	Drilling of new saline reinjection bores	Air/windborne pathway	Low noise plant and equipment will be used where practicable Noise emissions monitoring conducted on mobile plant where potential exceedance is identified Noise emissions reduction will be addressed through the maintenance process As necessary noise emissions monitoring conducted on fixed plant and noise and emissions reduction addressed through maintenance processes
	Extension to the saline pipeline	Air/windborne pathway	
Saline water	Dewatering of Bigge mining pits and Garden mining pits and reinjection to the Oakover aquifer	Direct discharge to aquifer	The Licence Holder has stated that additional saline water reinjected into the Oakover aquifer is unlikely to have any additional environmental impacts as the additional reinjection bores along the reinjection zone will assist in distributing the saline water over the length of the reinjection system and the water quality of the additional saline water abstracted from the Bigge mining pits and Garden mining pits is similar quality of the saline water currently reinjected into the Oakover aquifer.
	Dewatering of Bigge mining pits and Garden mining pits and reinjection to the Oakover aquifer	Direct discharge from pipeline rupture	The pipeline extension will be constructed aboveground but buried under roads and through creeks. Bunding along pipelines will have a buffer of seven hours. Saline injection bunds have an alarm to alert and indicate overflows. High risk saline pipelines are:

Emission	Sources	Potential pathways	Proposed controls
			• Either equipped with telemetry; • Equipped with automatic cut-outs in the event of a pipe failure; or • Provided with secondary containment sufficient to contain any spill for a period equal to the time between routine inspections.

3.1.2 Receptors

In accordance with the *Guidance Statement: Risk Assessment* (DER 2017), 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 *(Guidance Statement: Environmental Siting* (DER 2016)).

Table 2: Sensitive human and environmental receptors and distance from prescribed activity

Human receptors	Distance from prescribed activity
No significant residential receptors are located in the vicinity of the Premises. The nearest sensitive land uses include Marillana Homestead and Bamboo Springs.	Marillana Homestead located approximately 31.5 km from the Premises Bamboo Springs located approximately 34.8km from the Premises. *Town of Newman located approximately 120km from the Premises.*
Environmental receptors	**Distance from prescribed activity**
Surface water	The Fortescue Marsh which is listed in A Directory of Important Wetlands in Australia and also listed as a Priority 1, Priority Ecological Community (PEC) (PEC, 2017) is located approximately 2.3km south from the premises boundary. Broad scale flooding of the Fortescue Marsh occurs on a frequency of about one year in ten, with inundation persisting for three to six months (EPA Report 1429). Yintas (semi-permanent pools) are located along the northern shoreline of the Fortescue Marsh, with two of these having part of their catchment area within the Cloudbreak project area.
Livestock bores	There are five pastoral bores located within the premises boundary; these being Cooks bore, Moojarri bore, Muirs bore, Mulga bore and Nicks bore.
Groundwater	Groundwater in the project area is generally brackish (>500 mg/L TDS) and becomes increasingly saline towards the Fortescue Marsh and with depth

	(>100,000 mg/L TDS). Salinity increases with depth, with the upper tertiary detritals having a salinity of 1,000 to 2,000 mg/L TDS, Marra Mamba Formation reaching up to 6,000 mg/L TDS and the deeper Lower Marra Mamba and Wittenoom Formations having a salinity of 5,000 to 11,000 mg/L TDS. The Oakover Formation to the south of the resource area has monitored TDS of up to 150,000 mg/L (EPA Report 1429). The primary mechanisms for groundwater recharge in the area are infiltration recharge from direct rainfall and local stream flow on Marra Mamba Formation and Tertiary detritals/alluvium, infiltration recharged associated with ponding on the Fortescue Marsh and inflow from aquifers located to the north of the project area. The groundwater system beneath the Fortescue Marsh is considered to be a closed system with limited outflow to the west beneath the Goodardarie Hills.
Flora	Flora and vegetation surveys have identified seven priority flora species in and near the mining area, including *Eremophila spongiocarpa* (Priority 1), *Nicotiana heterantha* (Priority 1), *Gymnanthera cunninghamii* (Priority 3), *Phyllanthus aridus* (Priority 3), *Rostellulaira adscendens var. latifolia* (Priority 3), *Themeda asp*. Hamersley Station (Priority 3), *Eremophila youngii subsp*. Lepidota (Priority 4) and *Goodenia nuda* (Priority 4). There are no Threatened flora species pursuant to the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) or Declared Rare Flora (DRF) pursuant to the *Wildlife Conservation Act 1950* (WC Act) recorded with the survey area. Twenty-one vegetation communities have been mapped in the Cloudbreak survey area; none of these communities are considered to be Threatened Ecological Communities under the WC Act or the EPBC Act. Ecologically important vegetation communities have been identified within the survey area including Samphire *(Tecticornia sp.), Mulga (Acacia aneura*) and groundwater dependant vegetation Coolibah (*Eucalyptus victrix*) and River Red Gum (*Eucalyptus camaldulensis*).
Fauna	Fauna studies conducted within and adjacent to the project area recorded 25 species of conservation significance, including the Night Parrot (*Pezoporus occidentalis*), Greater Bilby (*Macrotis lagotis*), Pilbara Leaf-Noise Bat (*Rhinonicteris aurantia*) and Pilbara Olive Python (*Liasis olivaceua barroni*) which are listed under the EPBC Act. Stygofauna surveys conducted in the vicinity of the Cloudbreak area have identified 23 stygofauna species. Of these, two appear to be restricted to the vicinity of the proposal area.

Hydrogeology:
Cloudbreak mine is located in the foothills of the Chichester ranges where the primary aquifer is the Marra Mamba Formation (MMF).Partially saturated porous media exists within saturated Tertiary sediments overlying the MMF and structurally controlled aquifer zones underlie the MMF within the Jeerinah Formation.

The saline injection borefield is located between the CDB and the Fortescue Marsh where the Oakover formation (part of the Tertiary sedimentary package) is the primary aquifer. The Oakover formation is overlain by a clay dominated sequence which acts as a confining layer between the Oakover Formation and groundwater occurrence within the overlying alluvial sequence.

Based on the water quality distribution and beneficial use considerations, two classes of groundwater quality are defined for the purpose of groundwater management:

Brackish water (≤6,000 milligrams per litre (mg/L) total dissolved solids (TDS)) occurs in shallow aquifer zones within the mineralised Marra Mamba Formation (MMF) and overlying Tertiary Detritals sediments located on the upper slopes of the Chichester Range.

Saline – hypersaline water (≥6,000 mg/L to 150,000 mg/L TDS). The aquifer within the Oakover Formation, which overlies the MMF to the south of the resource area, is entirely of saline quality.

Figure 1 shows the distance to sensitive receptors.

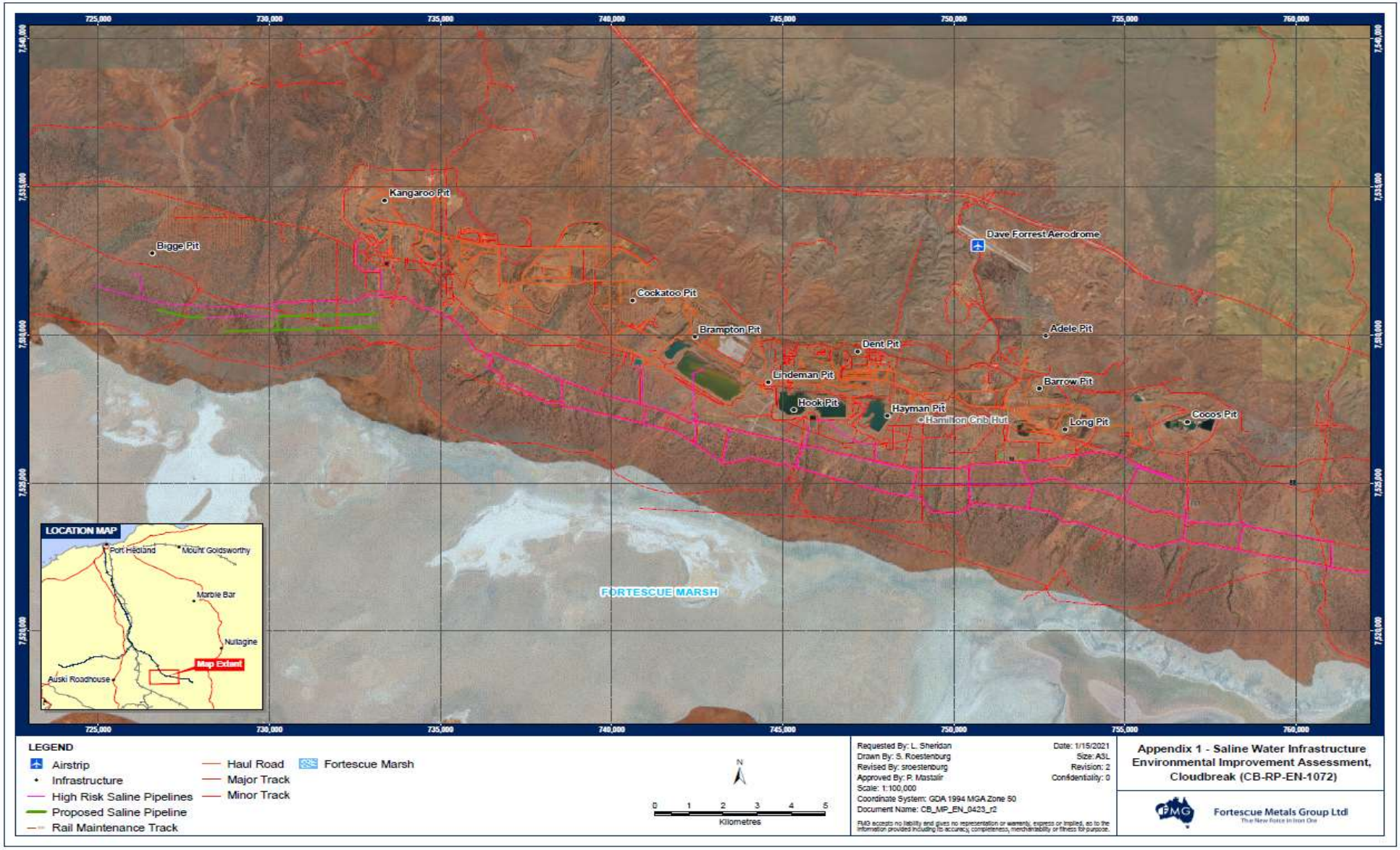

Figure 1: Distance to sensitive receptors

3.2 Risk ratings

Risk ratings have been assessed in accordance with the *Guidance Statement: Risk Assessments* (DER 2017) for those emission sources which are proposed to change and takes into account potential source-pathway and receptor linkages as identified in Section 3.1. Where linkages are in-complete they have not been considered further in the risk assessment.

Where the Licence Holder has proposed mitigation measures/controls (as detailed in Section 3.1), these have been considered when determining the final risk rating. Where the Delegated Officer considers the Licence Holder's proposed controls to be critical to maintaining an acceptable level of risk, these will be incorporated into the licence as regulatory controls.

Additional regulatory controls may be imposed where the Licence Holder's controls are not deemed sufficient. Where this is the case the need for additional controls will be documented and justified in Table 3.

The Revised Licence L8199/2007/2 that accompanies this Amendment Report authorises emissions associated with the operation of the Premises i.e. saline reinjection 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**				
Operation								
Transfer of saline water along pipelines from the Bigge mining pits and Garden mining pits	Saline water discharged from the pipelines	Direct discharges from the pipelines from ruptures	Ecologically important vegetation communities	Refer to Section 3.1.1	C = Moderate L = Possible **Medium Risk**	Y	Condition 2 requires pipelines to be: (a) either equipped with telemetry; or (b) equipped with automatic cut-outs in the event of a pipe failure; or (c) provided with secondary containment sufficient to contain any spill for a period equal to the time between routine inspections. Condition 4, Table 3 Inspection of infrastructure requires that saline injection infrastructure (transfer ponds and pipelines) are inspected daily for visual integrity. **Condition 9, Table 6 Infrastructure requirements amended for the Bigge and Garden mining pits saline injection bores and pipeline extension.** **Condition 9, Table 6 Infrastructure**	**Condition 9, Table 6 Provided the Bigge and Garden mining pits pipelines are constructed correctly, the environmental risk is reduced so included as Infrastructure requirements.** **Condition 29, Table 17** **Compliance is required for the Bigge and Garden mining pits saline injection bores and pipeline extension.**

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**				
							requirements for Bigge and Garden mining pits pipelines: **(a) either equipped with telemetry; or** **(b) equipped with automatic cut-outs in the event of a pipe failure; or** **(c) provided with secondary containment sufficient to contain any spill for a period equal to the time between routine inspections.** **Condition 29, Table 17 Notification requirements amended to include the Bigge and Garden mining pits injection bores and pipeline extension.**	
Reinjection of abstracted saline water from the dewatering of the Bigge mining pits and Garden mining pits	Saline water	Direct discharge	Contamination, modifications to aquifer	Refer to Section 3.1.1	C = Moderate L = Possible **Medium Risk**	Y	**Condition 13, Table 9 Point source emissions to groundwater amended to add in the 81 new saline injection bores** Condition 22, Table 15 includes ambient groundwater monitoring requirements to identify potential impacts to groundwater quality and	**Condition 13, Table 9 Saline injection bores included.** **Condition 29, Table 17 Compliance is required for the Bigge and Garden mining pits saline injection bores and pipeline extension.**

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				
							levels as a result of reinjection of mine dewatering water. Condition 26, Table 16 requires the Licence Holder to report the results of monitoring in the AER for review. **Condition 29, Table 17 Notification requirements amended to include the Bigge and Garden mining pits saline injection bores and pipeline extension.**	

Note 1: Consequence ratings, likelihood ratings and risk descriptions are detailed in the *Guidance Statement: Risk Assessments* (DER 2017).

Note 2: Proposed Licence Holder's controls are depicted by standard text. **Bold and underline text** depicts additional regulatory controls imposed by department.

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 (22 March 2021)	Licence Holder provided comments on 25 March 2021 Refer to Appendix 1	Licence Holder provided comments on 25 March 2021 Refer to Appendix 1

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

Existing condition	Condition summary	Revised licence condition	Conversion notes
N/A	Contents	N/A	Deleted as per current licensing format.
N/A	Introduction	N/A	Deleted as per current licensing format.
N/A	Licence history	Licence history	Administrative changes.
1.1.1	Interpretation	Interpretation	Updated as per current licensing format.
1.1.2	Definitions	Definitions	Moved to the back of the Licence, now Table 18.
1.1.3	Australian or other standard	Interpretation	Condition deleted and now included in the updated 'Interpretation' section as per current licensing format.
1.1.4	Reference to code of practice	Interpretation	Condition deleted and now included in the updated 'Interpretation' section as per current licensing format.
1.2.1	Pipelines	2	Condition number changed only.
1.2.2, Table 1.2.1	Containment infrastructure	3, Table 2	Condition and table numbers changed only.
1.2.3, Table 1.2.2	Inspection of infrastructure	4, Table 3	Condition and table numbers changed only.
1.2.4	Annual water balance	5	Condition number changed only.

1.2.5, Table 1.2.3	Management of waste	6, Table 4	Condition and table numbers changed only.
1.2.6, Table 1.2.4	Cover requirements	7, Table 5	Condition and table numbers changed only.
1.2.7	Windblown waste	8	Condition number changed only.
1.2.8, Table 1.2.5	Production or design capacity limits	1, Table 1	Condition number changed only.
1.2.9, Table 1.2.6	Infrastructure requirements	9, Table 6	Addition of new Saline Reinjection Bores SRP238, SRP239, SRP240, SRP241, SRP242, SRP243, SRP244, SRP245, SRP246, SRP247, SRP248, SRP249, SRP250, SRP251, SRP252, SRP253, SRP254, SRP255, SRP256, SRP257, SRP258, SRP259, SRP260, SRP261, SRP262, SRP263, SRP264, SRP265, SRP266, SRP267, SRP268, SRP269, SRP270, SRP271, SRP272, SRP273, SRP274, SRP275, SRP276, SRP277, SRP278, SRP279, SRP280, SRP281, SRP282, SRP283, SRP284, SRP285, SRP286, SRP287, SRP288, SRP289, SRP290, SRP291, SRP292, SRP293, SRP294, SRP295, SRP296, SRP297, SRP298, SRP299, SRP300, SRP301, SRP302, SRP303, SRP304, SRP305, SRP306, SRP307, SRP308, SRP309, SRP310, SRP311, SRP312, SRP313, SRP314, SRP315, SRP316, SRP317, SRP 318 Bigge and Garden mining pits pipelines included with the following requirements: (a) either equipped with telemetry; or (b) equipped with automatic cut-outs in the event of a pipe failure; or (c) provided with secondary containment sufficient to contain any spill for a period equal to the time between routine inspections.
1.2.10	Operating infrastructure following compliance documents	10	Condition and table numbers changed only.
2.1.1, Table 2.1.1	Emission points to air	11, Table 7	Condition and table numbers changed only.
2.2.1, Table 2.2.1	Point source emissions to surface water	12, Table 8	Condition and table numbers changed only.
2.3.1, Table 2.3.1	Point source emissions to groundwater	13, Table 9	Addition of new emission points SRP238, SRP239, SRP240, SRP241, SRP242, SRP243, SRP244, SRP245, SRP246, SRP247, SRP248, SRP249, SRP250, SRP251, SRP252, SRP253, SRP254, SRP255, SRP256, SRP257, SRP258, SRP259, SRP260, SRP261, SRP262, SRP263, SRP264, SRP265,

			SRP266, SRP267, SRP268, SRP269, SRP270, SRP271, SRP272, SRP273, SRP274, SRP275, SRP276, SRP277, SRP278, SRP279, SRP280, SRP281, SRP282, SRP283, SRP284, SRP285, SRP286, SRP287, SRP288, SRP289, SRP290, SRP291, SRP292, SRP293, SRP294, SRP295, SRP296, SRP297, SRP298, SRP299, SRP300, SRP301, SRP302, SRP303, SRP304, SRP305, SRP306, SRP307, SRP308, SRP309, SRP310, SRP311, SRP312, SRP313, SRP314, SRP315, SRP316, SRP317, SRP 318
2.4.1, Table 2.4.1	Emissions to land	14, Table 10	Condition and table numbers changed only.
3.1.1	Sampling methods	15	Condition number changed only.
3.1.2	Monitoring frequency	16	Condition number changed only.
3.1.3	Calibration	17	Condition number changed only.
3.2.1, Table 3.2.1	Monitoring of point source emissions to surface water	18, Table 11	Condition and table numbers changed only.
3.3.1, Table 3.3.1	Monitoring of point source emissions to groundwater	19, Table 12	Condition and table numbers changed only.
3.4.1, Table 3.4.1	Monitoring of emissions to land	20, Table 13	Condition and table numbers changed only.
3.5.1, Table 3.5.1	Process monitoring	21, Table 14	Condition and table numbers changed only.
3.6.1, Table 3.6.1	Monitoring of ambient groundwater quality	22, Table 15	Condition and table numbers changed only.
4.1.1	Maintaining books	23	Condition numbers changed only.
4.1.2	Maintaining books	24	Condition numbers changed only.
4.1.3	Complaints	25	Condition number changed only.
4.2.1, Table 4.2.1	AER	26, Table 16	Condition and table numbers changed only.
4.2.2	AER monitoring	27	Condition number changed only.
4.2.3	AACR	28	Condition number changed only.
4.3.1, Table 4.3.1	Notification requirements	29, Table 17	Amended to include Compliance Report for the Bigge and Garden mining pits saline injections bores and pipeline extension.
Schedule 1: Maps	Premises Maps	Schedule 1: Maps	Figure 5, Figure 6, Figure 7 and Figure 8 updated.

Appendix 1: Summary of Licence Holder's comments on risk assessment and draft conditions

Condition	Summary of Licence Holder's comment	Department's response
Condition 10	Need to include reference to the new "Bigge and Garden mining pits saline injection bores and pipeline extension"	Updated as requested.
Condition 13, Table 9	SRP208, SR209, SR210, SRP211, SRP212 is repeated twice in the list of existing injection bores.	Updated as requested.
Condition 13, Table 9	Also include the 81st injection bore (SRP 318) in the list of proposed bores in yellow which is shown in the map of injection bores at the back of the licence. This was an administrative error in the Application and should have been 81 bores, instead of the 80 bores listed. Please update any instances in the licence from 80 to 81 injection bores.	Updated as requested.
Condition 23(b)	Should refer to Condition 9, not Condition 10	Updated as requested.
Condition 29, Table 17 (second row):	Should refer to Condition 9, not Condition 10	Updated as requested.
Condition 29, Table 17 (second row, point (a))	Should refer to Condition 9 Table 6, not Condition 10	Updated as requested.
Condition 29, Table 17 (second row, point (b))	Remove typographical error – this will in effect remove point (d) which was not in the previous licence	Updated as requested.
Condition 29, Table 17 (fifth row, "calibration report")	This notification requirement has no relevance anymore – the previous licence (version 16 Dec 2020) removed Condition 3.1.4, which this condition previously referred to. It should have been removed at that time. Condition 17 requires the Licence Holder to calibrate the equipment, and Table 17 requires the Licence Holder to notify DWER of a calibration report "as soon as practicable", but in a format that is "none specified". Licence Holder previously only had to notify DWER if calibration could not be practicably met, "via a report comprising details of	Updated as requested.

Condition	Summary of Licence Holder's comment	Department's response
	any modifications to the methods" of calibration (this would be the subject of the report). Now it reads Licence Holder to report ASAP for each calibration event (which could be hundreds of calibration events where a handheld EC meter is used) which is not the intention of this condition.	
Schedule 1: Maps, Map 4 of 4	Saline injection bores – there were no changes to this map 4 of 4 as part of the licence amendment but please see attached Map 4 of 4.	Updated as requested.

Appendix 2: Application validation summary

SECTION 1: APPLICATION SUMMARY					
Application type					
Works approval	☐				
Licence	☐	Relevant works approval number:		None	☐
		Has the works approval been complied with?		Yes ☐ No ☐	
		Has time limited operations under the works approval demonstrated acceptable operations?		Yes ☐ No ☐ N/A ☐	
		Environmental Compliance Report / Critical Containment Infrastructure Report submitted?		Yes ☐ No ☐	
		Date Report received:			
Renewal	☐	Current licence number:			
Amendment to works approval	☐	Current works approval number:			
Amendment to licence	☒	Current licence number:	L8199/2007/2		
		Relevant works approval number:		N/A	☐
Registration	☐	Current works approval number:		None	☐
Date application received		25 January 2021			
Applicant and Premises details					
Applicant name/s (full legal name/s)		Chichester Metals Pty Ltd			
Premises name		Cloudbreak Iron Ore Mine			
Premises location		Cloudbreak Iron Ore Mine Mining Tenements M45/1126, M46/401, M46/404, M46/405, M46/356, M46/402, M46/410, M46/411, M46/357, M46/409, M46/453, M45/1128, M46/449, M46/452, M46/451, M46/454, M46/450, M45/1084, 45/1140, M45/1139, M45/1102, M45/1105, M45/1124, M45/1103, M45/1106, M45/1125, M45/1104, M45/1107, L46/48, L46/49, M45/1082, 45/1083, M45/1127, M45/1138, M45/1263, M46/403, M46/406, M46/407, M46/408, M46/409, M46/412, M46/413, M46/414, L46/52, L46/99, L46/46, L46/96, L46/64, L45/152, L46/47, L46/48, L46/51, L46/57, L46/62, L46/130 and Exploration Leases E45/2498, E46/590, E46/612, E45/2499, E45/2652, E45/2497 MULGA DOWNS WA 6751			
Local Government Authority		Shire of East Pilbara			
Application documents					
HPCM file reference number:		DWERDT405667			
Key application documents (additional to application form):		Cover Letter			

	Licence Amendment Supporting Document
Scope of application/assessment	
Summary of proposed activities or changes to existing operations.	Licence amendment Construction of additional saline injection bores and extension of the saline injection pipeline to assist in an anticipated increase in saline water injection from the proposed Phase 2 dewatering of new Bigge and Garden mining pits.

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)
5 Processing or beneficiation of metallic or non-metallic ore	50,000,000 tonnes per Annual Period	50,000,000 tonnes per Annual Period
6 Mine dewatering	Maximum of 150,000,000 tonnes per Annual Period (reinjected)	Maximum of 150,000,000 tonnes per Annual Period (reinjected)
52 Electric power generation	50.6 megawatts	50.6 megawatts
54 Sewage facility	694.5 cubic metres per day	694.5 cubic metres per day
57 Used tyre storage	2,000 tyres	2,000 tyres
64 Class II putrescible landfill site	10,000 tonnes per Annual Period	10,000 tonnes per Annual Period
73 Bulk storage of chemicals, etc.	7,700.5 cubic metres	7,700.5 cubic metres

Legislative context and other approvals

Has the applicant referred, or do they intend to refer, their proposal to the EPA under Part IV of the EP Act as a significant proposal?	Yes ☐ No ☒	Referral decision No: Managed under Part V ☐ Assessed under Part IV ☐
Does the applicant hold any existing Part IV Ministerial Statements relevant to the application?	Yes ☒ No ☐	Ministerial statement No: 721, 899, 962, 1010 EPA Report No: 1216, 1429, 1498, 1547
Has the proposal been referred and/or assessed under the EPBC Act?	Yes ☒ No ☐	Reference No: EPBC 2005/2205 & 2010/5696
Has the applicant demonstrated occupancy (proof of occupier status)?	Yes ☒ No ☐	Certificate of title ☐ General lease ☐ Expiry: Mining lease / tenement ☐ Expiry: Other evidence ☐ Expiry:

Has the applicant obtained all relevant planning approvals?	Yes ☒ No ☐ N/A ☐	Approval: Expiry date: If N/A explain why?
Has the applicant applied for, or have an existing EP Act clearing permit in relation to this proposal?	Yes ☒ No ☐	CPS No: Ministerial 899
Has the applicant applied for, or have an existing CAWS Act clearing licence in relation to this proposal?	Yes ☐ No ☒	Application reference No: N/A Licence/permit No: N/A
Has the applicant applied for, or have an existing RIWI Act licence or permit in relation to this proposal?	Yes ☒ No ☐	Application reference No: Licence/permit No: Provided in Groundwater documents
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the EP Act)?	Yes ☐ No ☒	Name: N/A Type: N/A Has Regulatory Services (Water) been consulted? Yes ☐ No ☐ N/A ☒ Regional office: N/A
Is the Premises situated in a Public Drinking Water Source Area (PDWSA)?	Yes ☐ No ☒	Name: N/A Priority: N/A Are the proposed activities/ landuse compatible with the PDWSA (refer to WQPN 25)? Yes ☐ No ☐ N/A ☒
Is the Premises subject to any other Acts or subsidiary regulations (e.g. *Dangerous Goods Safety Act 2004, Environmental Protection (Controlled Waste) Regulations 2004, State Agreement Act xxxx*)	Yes ☒ No ☐	*Dangerous Goods Safety Act 2004* *Environmental Protection (Controlled Waste) Regulations 2004* *Iron Ore (FMG Chichester Pty Ltd) Agreement Act 2006*
Is the Premises within an Environmental Protection Policy (EPP) Area?	Yes ☐ No ☒	N/A
Is the Premises subject to any EPP requirements?	Yes ☐ No ☒	N/A

Is the Premises a known or suspected contaminated site under the *Contaminated Sites Act 2003*?	Yes ☐ No ☒	Classification: Acid Sulphate Soil Date of classification: N/A