



Application for Licence Amendment

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

Licence Number	L8845/2014/1
Licence Holder	IB Operations Pty Ltd
ACN	165 513 557
File Number	DER2014/002065
Premises	Iron Bridge Magnetite Project Mining Tenements M45/1226, L45/293, L45/294, L45/359, L45/360, L45/361, L45/364, and L45/367 MARBLE BAR WA 6760
Date of Report	21 July 2020
Decision	Revised licence granted

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An officer delegated by the CEO under section 20 of the EP Act

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1. Decision summary

Licence L8845/2014/1 is held by IB Operations Pty Ltd (the Licence Holder) for the Iron Bridge Magnetite Project (the Premises), located within Mining Tenements M45/1226, L45/293, L45/294, L45/359, L45/360, L45/361, L45/364, and L45/367, Marble Bar WA 6760.

This Amendment Report documents the assessment of potential risks to the environment and public health from proposed changes to the emissions and discharges during the construction and operation of the Premises. As a result of this assessment, Revised Licence L8845/2014/1 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://www.der.wa.gov.au>.

2.2 Application summary

On 22 May 2020, the Licence Holder applied to the department to amend Licence L8845/2014/1 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act).

This amendment is limited to the addition of a Category 77 concrete batching facility to the Existing Licence. No changes to the aspects of the existing Licence relating to Categories 5, 52 and 54 have been requested by the Licence Holder.

Table 1 below outlines the proposed changes to the existing Licence.

Table 1: Proposed design or throughput capacity changes

Category	Current throughput capacity	Proposed throughput capacity	Description of proposed amendment
77	N/A	217,000 tonnes per year	Manufacturing 100 tonnes or more per year of concrete or cement products at the Premises for use at places or premises other than the Premises triggers Category 77 under Schedule 1 of the Environmental Protection Regulations 1987 (EP Regulations)

Concrete will be produced on-site using two batching plants. It is anticipated that both plants will provide approximately 90,000m³ of concrete per year that will be used at the Premises (Iron Bridge), at Fortescue's Powerline Transmission Project and at other projects (as required).

Aggregate and sand required for concrete production will be transported to the Premises from a local quarry in Port Hedland (Turner River). The material will be moved by a Front End Loader (FEL) from the designated storage area within the Premises to the aggregate storage bins at the concrete batching facility. The concrete batching plants will weigh and mix each of the components to produce homogenous concrete.

All liquid waste from mess and ablution facilities at the concrete batching facility will be plumbed into existing effluent piping and transferred to the existing Category 54 wastewater treatment plant at the Premises for treatment.

All solid waste will be appropriately contained, stored and disposed of in line with the Licence Holder's Waste Management Plan (ref: 45-PLN- 0014) for the Premises.

The management of domestic wastewater and solid waste have not been considered further in this assessment.

The infrastructure and equipment relating to the Category 77 and associated activities which the department has considered in line with *Guidance Statement: Risk Assessments* (DER 2017) are outlined in Revised Licence L8845/2014/1.

2.3 Part IV of the EP Act

The Iron Bridge Magnetite Project was originally assessed by Public Environmental Review (PER) under Part IV of the EP Act. Ministerial Statement 993 was granted on 5 January 2015 for the implementation of the project.

2.4 Environmental Protection (Concrete Batching and Cement Product Manufacturing) Regulations 1998

The *Environmental Protection (Concrete Batching and Cement Product Manufacturing) Regulations 1998* (the Concrete Batching Regulations) apply to the proposed Category 77 activities at the Premises.

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 pathways during premises construction and operation, which have been considered in this Amendment Report, are detailed in Table 2 below.

Table 2 also details the control measures the Licence Holder has proposed to assist in controlling these emissions, where necessary. In addition to the proposed control measures detailed in Table 2, the Licence Holder has also confirmed that the concrete batching facility will be constructed and operated in accordance with the Concrete Batching Regulations.

Table 2: Licence Holder controls

Emission	Sources	Potential pathways	Proposed controls
Dust	Construction activities (placement of plant and equipment), cement silos, stockpiles and movement/haulage of material	Air/windborne pathway	<p>Each of the aggregate storage bins will be fitted with a dedicated spray water system. The spray water system for each bin will consist of 2 x 180° arc sprinklers, one on each side of the bin walls. The combined trajectory of the four sprinklers will be sufficient to cover the entire stockpile area with spray water and will assist in minimising any dust emissions.</p> <p>In addition, intermittent wetting of the stockpiles will minimise the water content of the aggregates entering the feed hopper while maintaining sufficient evaporative cooling.</p> <p>The Concrete Batching Regulations specify controls for dust, including:</p> <p>Regulation 3. Minimisation of dust.</p> <p>Regulation 4. Control of dust from trafficable area.</p> <p>Regulation 5. Storage of aggregate and sand.</p> <p>Regulation 6. Storage of cement.</p> <p>Regulation 7. Air cleaning system for cement storage silo.</p> <p>Regulation 8. Level indicator system or relief valve for cement storage silo.</p> <p>Regulation 9. Movement of materials on premises and loading of agitators.</p> <p>Regulation 10. Cement product manufacturing premises to be cleaned.</p>
Noise and vibration	Construction activities (placement of plant and equipment), vehicle movements, tipping of materials and operation of batch plants	Air/windborne pathway	<p>The operation of the concrete batching facility is not expected to contribute to long term or excessive noise emissions over and above the emissions anticipated from existing and future construction activities at the Premises.</p> <p>The Environmental Protection (Noise) Regulations 1997 apply.</p>
Wash water; potentially contaminated stormwater	Concrete batching and truck washout	<p>Overland flow to ephemeral creeks</p> <p>Seepage through soil and to groundwater</p>	<p>None specified.</p> <p>The Concrete Batching Regulations specify controls for wastewater:</p> <p>Regulation 11. Control of wastewater.</p> <p>Regulation 12. Slurry pits, settling ponds, silt traps and oil interceptors.</p>

Emission	Sources	Potential pathways	Proposed controls
Hydrocarbon spills and leaks	Chemical and hydrocarbon storage	Direct spill to land Seepage through soil to groundwater	Chemical or diesel storage facilities developed on-site to support the facility will be constructed and implemented in accordance with the management measures contained in the Licence Holder's Chemical and Hydrocarbon Management Plan (100-PL-EN-0011) and the Chemical and Hydrocarbon Storage Procedure (45-PR-EN-0015). Any chemical or hydrocarbon spills will be managed in accordance with the measures identified in the Licence Holder's Chemical and Hydrocarbon Spills Procedure (45-PR-EN-0014).

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 3 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 3: Sensitive human and environmental receptors and distance from prescribed activity

Human receptors	Distance from prescribed activity
Atlas Iron Limited Abydos Ore Project	Approximately 6 km northeast of the Premises
Residential premises	No residential receptors identified within a 10 km radius of the Premises
BHP Billiton Iron Ore Pty Ltd Turner Camp	Approximately 18.5 km south-west of the Premises

Environmental receptors	Distance from prescribed activity
Turner River	Approximately 20 km downstream of the Premises
Ephemeral creeks which flow into the Turner River Note: drainage lines in the region are ephemeral in nature and generally only flow for short durations following significant rainfall events	Within Premises boundary
Groundwater Note: salinity within the exploration and production bores drilled on the Premises is relatively low (fresh) to moderately brackish ranging between 300 mg/L and 1,750 mg/L and potentially suitable as stock drinking water	Depth to groundwater below the Premises is understood to be 5 to 20 metres below ground level (mbgl)
<i>Rights in Water and Irrigation Act 1914</i> (RIWI Act) Pilbara Groundwater Area	Premises is within the proclaimed area
RIWI Act Pilbara Surface Water Area	Premises is within the proclaimed area
Threatened Ecological Communities (TEC) and Priority Ecological Communities (PEC)	Closest TEC or PEC is more than 100 km from the Premises
Threatened or Priority flora	No Threatened or Priority Flora have been reported within the Premises boundary or within 3 km of the Premises
Conservation significant fauna	Pilbara Leaf-nosed Bat, Northern Quoll and Pilbara Olive Python have been identified in the area

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 incomplete, they have not been considered further in the risk assessment.

Where the Licence Holder has proposed mitigation measures/controls (as detailed in Section 3.1), these have been considered when determining the final risk rating. Where the Delegated Officer considers the Licence Holder's proposed controls to be critical to maintaining an acceptable level of risk, these will be incorporated into the Revised 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 4.

The Revised Licence L8845/2014/1 that accompanies this Amendment Report authorises emissions associated with the operation of the Premises, i.e. emission associated with the construction and operation of the Category 77 concrete batching facility.

The conditions in the Revised Licence have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

Table 4. Risk assessment of potential emissions and discharges from the Premises during construction and operation

Risk Event					Risk rating ¹ C = consequence L = likelihood	Licence Holder's controls sufficient?	Conditions ² of Licence	Justification for additional regulatory controls
Source/Activities	Potential emission	Potential pathways and impact	Receptors	Licence Holder's controls				
Construction and operation								
Construction activities (placement of plant and equipment), cement silos, stockpiles and movement/haulage of material	Dust	Air/windborne pathway and deposition causing amenity impacts and impacts to native vegetation health	Mining operation 6 km from Premises Surrounding native vegetation	Refer to Section 3.1.1	C = Slight L = Rare Low Risk	Y	Conditions 5.1.1, 5.2.1 and 5.2.2 The following Concrete Batching Regulations apply: Regulation 3. Minimisation of dust. Regulation 4. Control of dust from trafficable area Regulation 5. Storage of aggregate and sand Regulation 6. Storage of cement Regulation 7. Air cleaning system for cement storage silo Regulation 8. Level indicator system or relief valve for cement storage silo Regulation 9. Movement of materials on premises and loading of agitators Regulation 10. Cement product manufacturing premises to be cleaned	N/A

Risk Event					Risk rating ¹ C = consequence L = likelihood	Licence Holder's controls sufficient?	Conditions ² of Licence	Justification for additional regulatory controls
Source/Activities	Potential emission	Potential pathways and impact	Receptors	Licence Holder's controls				
Construction activities (placement of plant and equipment), vehicle movements, tipping of materials and operation of concrete batching plants	Noise and vibration	Air and ground pathways causing amenity impacts and disturbance to fauna	Mining operation 6 km from Premises Fauna	Refer to Section 3.1.1	C = Slight L = Rare Low Risk	Y	N/A <i>The Environmental Protection (Noise) Regulations 1997 apply.</i>	N/A
Concrete batching and truck washout	Wash water; potentially contaminated stormwater (sediment-laden/high pH)	Overland flow to ephemeral creeks causing surface water quality impacts Seepage through soil to groundwater impacting water quality	Surface water (Turner River) Groundwater	Refer to Section 3.1.1	C = Minor L = Unlikely Medium Risk	Y	Conditions 5.1.1, 5.2.1 and 5.2.2 The following Concrete Batching Regulations apply: Regulation 11. Control of wastewater Regulation 12. Slurry pits, settling ponds, silt traps and oil interceptors	N/A
Fuel storage and refueling of plant and vehicles	Spill or leak of hydrocarbons	Overland flow to ephemeral creeks causing surface water quality impacts Seepage through soil and to groundwater causing contamination and impacting water quality	Surface water Soil and groundwater	Refer to Section 3.1.1	C = Slight L = Unlikely Low Risk	Y	N/A	N/A

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 the department.

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4. Consultation

Table 5 provides a summary of the consultation undertaken by the department.

Table 5: Consultation

Consultation method	Comments received	Department response
Licence Holder provided with draft amendment on 10 July 2020.	On 16 July 2020, the Licence Holder requested additional wording in the introduction section of the licence – premises description and licence summary – to clarify that concrete will be utilised at the Premises (Iron Bridge Magnetite Project), Fortescue's Powerline Transmission Project and at other projects (as required).	The Delegated Officer updated the section.

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 6 provides a summary of the proposed amendments and will act as a record of implemented changes. All proposed changes have been incorporated into the Revised Licence as part of the amendment process.

Table 6: Summary of licence amendments

Condition no.	Proposed amendments
5.1.1, 5.1.2, 5.1.3, 5.2.1, 5.2.2, 5.2.3, 5.2.4	Deletion of existing works conditions relating to the construction, construction compliance and commissioning of the stage 2 sewage treatment system. The commissioning report required by condition 5.2.4 was submitted to the department on 9 July 2020.
-	Category 77 Concrete batching or cement products manufacturing added to the list of prescribed premises categories authorised at the Premises.
5.1.1	Inclusion of new condition specifying the infrastructure and equipment associated with the concrete batching facility.
5.2.1	Inclusion of new condition requiring the Licence Holder to prepare and submit an Environmental Compliance Report for the construction and installation of the infrastructure and equipment associated with the concrete batching facility.
5.2.2	Inclusion of new condition specifying the content of the Environmental Compliance Report required by Condition 5.2.1.
Schedule 1	Inclusion of new maps showing the location and layout of the concrete batching facility.

References

1. Department of Environment Regulation (DER) 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
2. Department of Environment Regulation (DER) 2016, *Guidance Statement: Environmental Siting*, Perth, Western Australia.
3. Department of Environment Regulation (DER) 2017, *Guidance Statement: Risk Assessments*, Perth, Western Australia.

Appendix 1: Application validation summary

SECTION 1: APPLICATION SUMMARY					
Application type					
Works approval	<input type="checkbox"/>				
Licence	<input type="checkbox"/>	Relevant works approval number:		None	<input type="checkbox"/>
		Has the works approval been complied with?		Yes <input type="checkbox"/> No <input type="checkbox"/>	
		Has time limited operations under the works approval demonstrated acceptable operations?		Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	
		Environmental Compliance Report / Critical Containment Infrastructure Report submitted?		Yes <input type="checkbox"/> No <input type="checkbox"/>	
		Date Report received:			
Renewal	<input type="checkbox"/>	Current licence number:			
Amendment to works approval	<input type="checkbox"/>	Current works approval number:			
Amendment to licence	<input checked="" type="checkbox"/>	Current licence number:	L8845/2014/1		
		Relevant works approval number:		N/A	<input checked="" type="checkbox"/>
Registration	<input type="checkbox"/>	Current works approval number:		None	<input type="checkbox"/>
Date application received		22/05/2020			
Applicant and Premises details					
Applicant name/s (full legal name/s)		Iron Bridge Operations Pty Ltd			
Premises name		Iron Bridge Magnetite Project			
Premises location		Mining Tenements: <ul style="list-style-type: none"> • M45/1226 • L45/293 • L45/294 • L45/359 • L45/360 • L45/361 • L45/364 • L45/367 			
Local Government Authority		Shire of East Pilbara			

Application documents								
HPCM file reference number:	2014/002065							
Key application documents (additional to application form):	1. Iron Bridge. <i>Iron Bridge (L8845/2014/1) Licence Amendment Supporting Document – Concrete Batching Plant Facility.</i> Report 662NS-6470-AP-EN-001: Rev 0. 18 May 2020.							
Scope of application/assessment								
Summary of proposed activities or changes to existing operations.	Operation of Category 77 concrete batching plant batch to supply concrete (from the Premises) to Fortescue's Powerline Transmission Project, and also to the Iron Bridge Project.							
Category number/s (activities that cause the premises to become prescribed premises) Table 1: Prescribed premises categories <table border="1"> <thead> <tr> <th>Prescribed premises category and description</th> <th>Proposed production or design capacity</th> <th>Proposed changes to the production or design capacity (amendments only)</th> </tr> </thead> <tbody> <tr> <td>Category 77: Concrete batching or cement products manufacturing</td> <td>217,000 tonnes of concrete per year</td> <td></td> </tr> </tbody> </table>			Prescribed premises category and description	Proposed production or design capacity	Proposed changes to the production or design capacity (amendments only)	Category 77: Concrete batching or cement products manufacturing	217,000 tonnes of concrete per year	
Prescribed premises category and description	Proposed production or design capacity	Proposed changes to the production or design capacity (amendments only)						
Category 77: Concrete batching or cement products manufacturing	217,000 tonnes of concrete per year							
Legislative context and other approvals								
Has the applicant referred, or do they intend to refer, their proposal to the EPA under Part IV of the EP Act as a significant proposal?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Referral decision No: Managed under Part V <input type="checkbox"/> Assessed under Part IV <input type="checkbox"/>						
Does the applicant hold any existing Part IV Ministerial Statements relevant to the application?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Ministerial statement No: 993 EPA Report No: 1514						
Has the proposal been referred and/or assessed under the EPBC Act?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Reference No: N/A						
Has the applicant demonstrated occupancy (proof of occupier status)?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Certificate of title <input type="checkbox"/> General lease <input type="checkbox"/> Expiry: Mining lease / tenement <input type="checkbox"/> Expiry: Other evidence <input checked="" type="checkbox"/> Expiry: Existing Licence 7 June 2036						
Has the applicant obtained all relevant planning approvals?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	Approval: Expiry date: If N/A explain why? Not required for active mine site						

Has the applicant applied for, or have an existing EP Act clearing permit in relation to this proposal?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	CPS No: N/A No clearing is proposed.
Has the applicant applied for, or have an existing CAWS Act clearing licence in relation to this proposal?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Application reference No: N/A Licence/permit No: N/A No clearing is proposed.
Has the applicant applied for, or have an existing RIWI Act licence or permit in relation to this proposal?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Application reference No: Licence/permit No: Licence / permit not required.
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the EP Act)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Name: N/A Type: N/A Has Regulatory Services (Water) been consulted? Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Regional office:
Is the Premises situated in a Public Drinking Water Source Area (PDWSA)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Name: N/A Priority: N/A Are the proposed activities/ land use compatible with the PDWSA (refer to WQPN 25)? Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
Is the Premises subject to any other Acts or subsidiary regulations (e.g. <i>Dangerous Goods Safety Act 2004</i> , <i>Environmental Protection (Controlled Waste) Regulations 2004</i> , <i>State Agreement Act xxxx</i>)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Environmental Protection (Concrete Batching and Cement Product Manufacturing) Regulations 1998 Environmental Protection (Noise) Regulations 1997
Is the Premises within an Environmental Protection Policy (EPP) Area?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Is the Premises subject to any EPP requirements?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Is the Premises a known or suspected contaminated site under the <i>Contaminated Sites Act 2003</i> ?	Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	Classification: N/A Date of classification: N/A