Government of Western Australia
Department of Water and Environmental Regulation

Amendment Report

Application for Works Approval Amendment

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

Works Approval Number	W6322/2019/1
Works Approval Holder	IB Operations Pty Ltd
ACN	165 513 557
File Number	DER2019/000575
Premises	Iron Bridge Magnetite Project Mining Tenements M45/1226, M45/1244, L45/293, L45/294, L45/359, L45/360, L45/361, L45/364 and L45/367 MARBLE BAR WA 6760 As defined by the Premises maps attached to the Revised Works Approval
Date of Report	04 January 2024
Decision	Revised works approval granted

Sonya Poor

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A/MANAGER, RESOURCE INDUSTRIES
an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

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1. Decision summary

Works approval W6322/2019/1 is held by IB Operations Pty Ltd (works approval holder) for the Iron Bridge Magnetite Project (the Premises), located approximately 145 km south of Port Hedland.

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 works approval W6322/2019/1 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://dwer.wa.gov.au/regulatory-documents.

2.2 Amendment summary

On 13 July 2023, the works approval holder submitted an application to the department to amend works approval W6322/2019/1 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act). The following amendments related to Category 5 activities are being sought:

- Construction of embankment raises stages 1B and 2 at the Tailings Storage Facility 2 (TSF2) and the inclusion of scour pits;
- Amendment to TSF2 monitoring and sampling conditions; and
- Extend the expiration date of W6322 by an additional 36 months.

2.2.1 Overview of Premises

TSF2 Embankment raise Stage 1B and 2

TSF2 Stage 1 is divided into Stage 1A and 1B, with the Stage 1A civil works completed on 08 August 2022 with the construction of the Return Water Pond (RWP). Stage 1A tailings deposition is confined to the northern arm of TSF2.

Stage 1B was approved under works approval W6322/2019/1 on 24 April 2020; however, two minor design amendments have occurred to improve construction and allow continued operation of the TSF during the construction phases. The two minor design changes are:

- TSF2 Stage 2 design will comprise of a 3 m upstream bench to allow for the decant structure to operate whilst the construction phase is underway and reduce the risk of damage to the previous stage's Bituminous Geomembrane (BGM) liner.
- The downstream batter will be modified from 2:1 (H:V) to 1.75:1 (H:V) across all lifts post-Stage 1A to retain the same extent of the downstream footprint.

Stage 1B construction includes the southern embankment component and south decant completed to Stage 1 height (281.6 metres (m) Australian Height Datum (AHD)). This would provide TSF2 capacity at the southern valley arm when the sacrificial bund overtops as part of the Stage 1B deposition. A proposed emergency spillway would allow for the flow of the excess flood water downstream into the RWP. Stage 1B construction is scheduled to commence early 2024.

TSF2 Stage 2 main embankment will be raised to 292.2 m AHD using the downstream raise

method and the north and south decants will also be raised. Seepage and stability models in the Design Overview Report have been updated for Stages 3 to 7 to ensure the updated embankment configuration meets satisfactory Factors of Safety under static and post-seismic conditions.

TSF2 embankment raises will be constructed from rockfill fill with an upstream filter, cushion layer of sand and gravel size material, and an impermeable BGM liner. Subsequent stages 3 to 7 will be constructed as per the TSF Stage 2 design requirements, but approval for these stages will be sought in future licence amendments.

The TSF2 design for Stage 1B and 2 has been prepared to allow for construction to occur in parallel or separately.

The works approval holder has indicated that there have been no changes to the tailings material characterisation since the original works approval W6322/2019/1 was approved. However, the updated Stage 1B and 2 Design Overview Report prepared by ATC Williams (2023) has indicated that the average tailings production rate has increased from 28 million tonnes per annum (Mtpa) to 31 Mtpa. The 31 Mtpa tailings production rate is within the approved category 5 design capacity of 72 Mtpa under the works approval. This were determined by recent updated tailings production rates provided to ATC Williams (2022). The life of mine (LOM) has also changed from 20 years to 26 years. A review on the TSF2 water balance with an increased tailings production rate, indicated a slight increase in the bleed water rate from 0.26 cubic metres per second (m^3/s) to 0.28 m^3/s. It has been indicated that a slight increase would not affect the hydraulic performance of the decant systems and overall water balance, due to the gravity decant systems designed to transfer extreme rainfall downstream to the RWP with a capacity of up to 3 m^3/s.

Scour Pits

Scour pits have been proposed to be constructed along the tailings deposition pipeline at the indicative locations adjacent to the currently installed scour vales as shown in Figure 1. The purpose of the scour pits is to capture tailings in the event of a pipeline blockage or failure and to assist in ongoing maintenance of the pipeline. Design of each scour pit will take into consideration the topography and potential volume to retain. The pits will contain any tailings spillage until it has dried out for the material to be relocated back into the TSF. The works approval holder has stated that "*where the TSF is in close proximity to the tailings line and scour valve, with appropriate access and suitable topography, a scour pit will be redundant and instead a discharge line will run directly off the tailings line to deposit into the TSF."* Proposed controls for the scour pits are listed under section 3.1.1, Table 2 and risk assessed under section 3.2, Table 4.

Amendments to previous Conditions 22, 23, 24 and 28

Conditions 22 and 23 (amended as conditions 18 and 21)

Condition 22 (now condition 18) requires tailings characterisation testing and analysis, whilst condition 23 (now condition 21) requires monthly sampling for the composition for the tailings decant water from the TSF. The works approval holder has indicated that it is not expected for the tailings composition to vary from the TSF2 Stage 1 A sampling. Monthly tailings sampling would occur throughout the life of the TSF2 for ongoing geotechnical testing that includes, but not limited to Atterberg Limits and particle size distribution.

The works approval holder has requested that conditions 22 (now condition 18) and 23 (now condition 21) requirements are for TSF2 Stage 1A and not additional TSF2 lifts including Stage 1B and 2.

The department has no objection that conditions 22 (now condition 18) and 23 (now condition 21) requirements relate to TSF2 Stage 1A tailings characterisation analysis and monthly sampling. The department will amend the conditions to stipulate that analysis and monthly

sampling is for TSF2 Stage 1A tailings only.

Condition 24 (amended as condition 19)

The works approval holder has requested the inspection frequency under Table 10 (new Table 8) of W6322/2019/1 be amended from 'twice daily' to 'daily' inspections for both the tailings delivery and RWP water return pipelines to check pipeline integrity. Existing controls to manage potential leaks and spills are in place that include telemetry and flow meters. In addition, the works approval holder has indicated that a TSF team does not operate on a night shift and due to safety concerns pipelines would not be inspected at night.

Previous condition 28

The works approval holder has requested the following groundwater quality monitoring parameters to be removed from Table 12 under condition 28 of W6322/2019/1:

- Ammonia, NH_3;
- Total Kjeldahl Nitrogen, N;
- Total Nitrogen, TN;
- Total Phosphorus, TP;
- Reactive Phosphorus, P;
- Total CN;
- WAD CN;
- Chloride, Cl;
- Chromium, Cr;
- Fluoride, F;
- Magnesium, Mg; and
- Mercury, Hg.

However, after reviewing the 21-day draft package the works approval holder requested on 15 December 2023 the removal of this condition as the groundwater monitoring requirements were transferred to the current licence L8845/2014/1 during the last licence amendment issued on 29 August 2023.

Expiration date extension

An extension to the works approval's expiration date is being sought for an additional 36 months. This is to allow for the construction of infrastructure under W6322/2019/1 and the submission of the associated compliance reports and then an amendment to licence application.

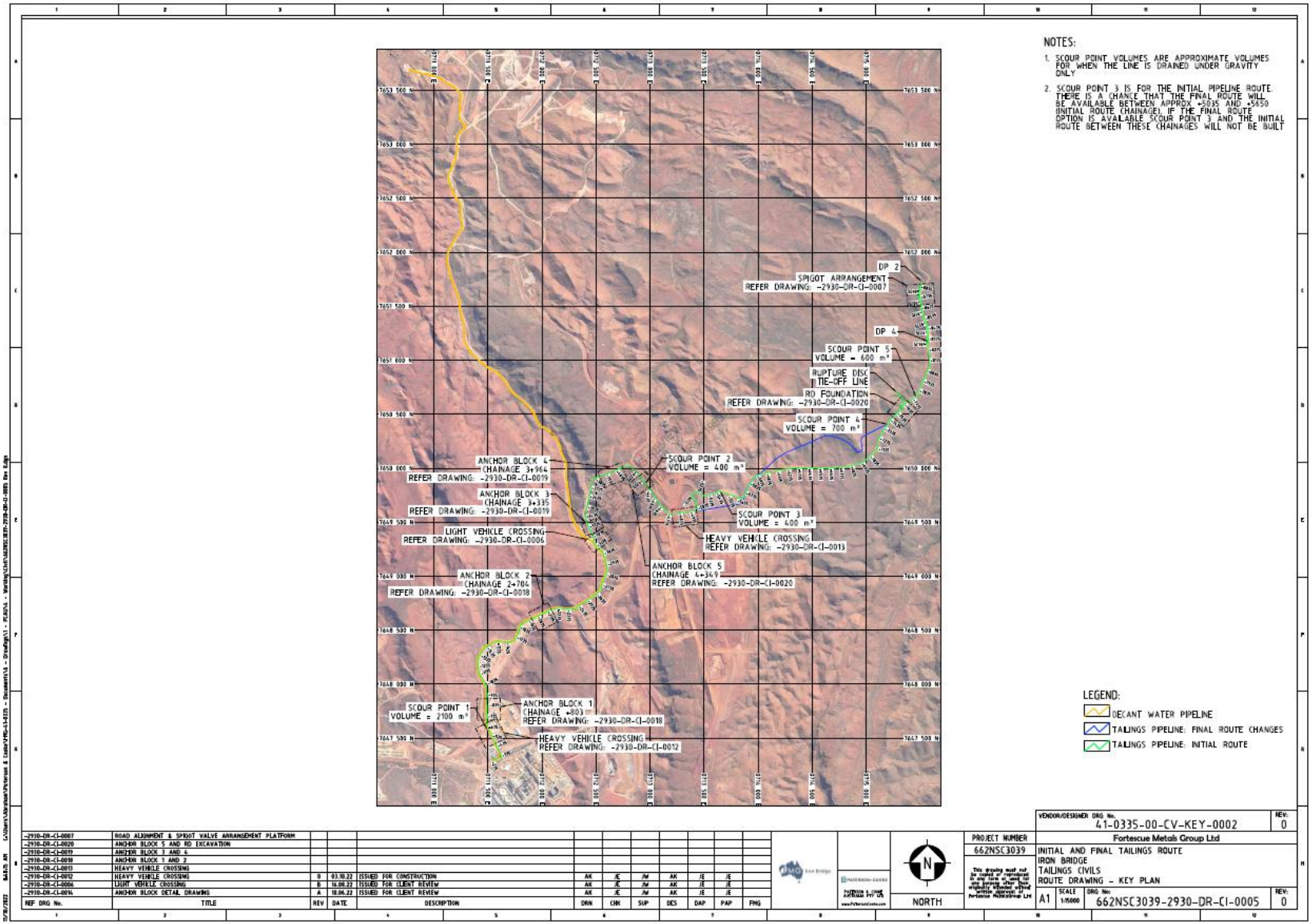

Figure 1: Indicative locations of scour pits

Works Approval: W6322/2019/1

2.3 Part IV of the EP Act

The Environmental Protection Authority (EPA) set a level of assessment for the Premises as Public Environmental Review. The subsequent EPA report (Assessment 1946) assessed impacts from an open cut iron ore mine (above ground), TSF, waste rock dump and borefield, water pipeline infrastructure, and a slurry pipeline connecting the mine to facilities in Port Hedland.

The EPA considered the following key environmental factors in their assessment:

- Flora and Vegetation;
- Terrestrial Fauna;
- Subterranean Fauna;
- Hydrological Processes and Inland Waters Environmental Quality; and
- Offsets – integrating factor.

Ministerial Statement (MS) 993 was issued based on the outcome of the assessment of the above environmental factors. Conditions of MS 993 included management of the mine, borefield, and linear infrastructure to avoid rare and priority flora and fauna species, threatened ecological communities, and to rescue trapped fauna within trenches associated with the construction of the linear infrastructure. Conditions also relate to ensuring there are no detrimental impacts to the water quality or hydrological regime of Site 12 Pool (Pilbara Olive Python habitat).

General impacts to vegetation that included dust emissions, product spills, management of contaminated stormwater, and groundwater impacts related to tailings storage and pipelines were assessed under the works approval W6322/2019/1, as these were not considered to be key environmental factors requiring evaluation by the EPA.

3. Risk assessment

The department assesses the risks of emissions from prescribed premises and identifies the potential source, pathway, and impact to receptors in accordance with the *Guideline: Risk assessments* (DWER 2020a).

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 time limited operation which have been considered in this amendment report are detailed in Table 1 below. Table 1 also details the proposed control measures the works approval holder has proposed to assist in controlling these emissions, where necessary.

Table 1: Works approval holder controls

Sources / Activities	Emissions	Potential pathways	Proposed controls
Construction			
Construction of stage 1B and 2 embankment lifts at the TSF2 Construction of scour pits Earthworks and vehicle movements	Dust	Air / windborne pathway	• conditions 1 and 2 under W6322/2019/1 relating to design and construction requirements apply • the works approval holder has stated that during construction, dust will be managed in accordance with the procedures set out in the *Dust Management Plan (IO-PL-EN-0001)*
	Hydrocarbon spills and leaks	Direct discharge	• conditions 1 and 2 under W6322/2019/1 relating to design and construction requirements apply • the works approval holder has stated that during construction, hydrocarbon spills and leaks will be managed in accordance with the procedures set out in the *Chemical and Hydrocarbon Management Plan (100-PL-EN-0011)* and *Environmental Spill Procedure (100-PR-EN-1069)*
	Stormwater runoff	Direct discharge	• conditions 1 and 2 under W6322/2019/1 relating to design and construction requirements apply • scour pits to be constructed and located at intervals and on the upstream side of the tailings pipeline embankment, where practicable to contain material in the event of a failure • scour pits constructed to have sufficient capacity to contain tailings, where possible from contingency discharge • external bunds constructed to reduce surface runoff interaction
Time Limited Operation			
Tailings surface dust lift-off	Dust lift-off from TSF surface transporting contaminants offsite	Air / windborne pathway	• condition 15 under W6322/2019/1 relating to operational requirements for the TSF2 Stage 1A and Stage 1B apply • the works approval holder has stated that during operation, dust will be managed in accordance with the procedures set out in the *Dust Management Plan (IO-PL-EN-0001)*

Sources / Activities	Emissions	Potential pathways	Proposed controls
Discharge of tailings and return water from pipeline leak / rupture	Tailings and decant return water	Direct discharge and overland flow	• conditions 15, 16, 17 and 19 under W6322/2019/1 relating to operational requirements, authorised discharge points, water balance and inspection of infrastructure apply
Increased capacity at the TSF2 for the storage of tailings material	Increased seepage of tailings material through the TSF2 embankment and foundation base	Infiltration via soil to groundwater	• conditions 15, 17, 18 and 19 under W6322/2019/1 relating to operational requirements, water balance and inspection of infrastructure apply • groundwater monitoring controls exist under the current licence L8845/2014/1
	Tailings	Direct discharge from overtopping of the TSF2 embankment	• conditions 15, 16, 17, 19 and 20 under W6322/2019/1 relating to operational requirements, authorised discharge points, water balance, inspection of infrastructure and monitoring at the RWP emergency spillway during discharge apply
Use of scour pits	Tailings	Direct discharge and overland flow	• maintain the integrity of the external bunds to reduce surface water interaction • tailings once dried out must be removed from the scour pits following a scouring event, as soon as practicable • any tailings spill that occurs on undisturbed ground in the process of scouring must be cleaned-up

3.1.2 Receptors

In accordance with the *Guideline: Risk assessments* (DWER 2020a), the Delegated Officer has excluded employees, visitors, and contractors of the works approval 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 environmental receptors that may be impacted as a result of activities upon or emission and discharges from the prescribed premises *(Guideline: Environmental siting* (DWER 2020b)).

Table 2: Environmental receptors and distance from prescribed activity

Environmental receptors	Distance from prescribed activity
Threatened and / or Priority Flora 1. *Quoya zonalis* Threatened 2. *Pityrodia* sp. Marble Bar P1 3. *Bulbostylis burbidgeae* P4	Conservation significant flora occur within the Premises. Managed under MS 993, refer to section 2.3. *Quoya zonalis* will be managed under MS 993 in conjunction with DBCA.
Threatened and / or Priority Fauna 1. Pilbara leaf-nosed bat (*Rhinonicteris aurantia (Pilbara))* Vulnerable 2. Pilbara olive python (*Liasis olivaceus barroni*) Vunerable 3. Northern quoll (*Dasyurus hallucatus*) Endangered 4. Ghost bat (*Macroderma gigas*) Vulnerable **5.** Long-tailed dunnart (*Sminthopsis longicauda*) P4	Conservation significant fauna occur within the Premises. Conservation significant fauna, in particular, Pilbara leaf-nosed bat, Northern quoll, and Pilbara olive python will be managed under MS 993, refer to section 2.3.
Schedule 3 fauna habitat surveyed	Approximately 2.8 km east of the Premises boundary. Managed under MS 993, refer to section 2.3.
***Rights in Water and Irrigation Act 1914* (RiWI Act)** Pilbara Groundwater Area Pilbara Surface Water Area	Premises occurs within both areas.
Groundwater	Groundwater in the valley floor area of the TSF occurs at depths typically ranging from 2.3 m to 6.6 m with an inferred hydraulic gradient of 1:100 towards the north-west. Groundwater salinity within the exploration and production bores is relatively low (fresh) to brackish ranging between 300 mg/L and 3,500 mg/L.
Surface water Lost Boys creek Cockatoo Creek Chinnamon Creek and other unnamed ephemeral creeks which eventually flow into the Turner River	Turner River approximately 3 km northeast of the Premises. Chinnamon Creek immediately north of the Premises. Lost Boys Creek is to the north of the proposed mine pit, within the area required for the TSF that flows into the Turner River via Chinnamon Creek. Cockatoo Creek which roughly parallels the mine access road and flows into the Turner River just south of Pincunah Waterhole. Numerous unnamed creek lines cross the Premises.

Environmental receptors	Distance from prescribed activity
Aboriginal and other heritage sites NJA22-044 (Water Source, Mythological, Artefact Scatter, Quarry)	Site within the Premises.
Other significant sites Site 12 Pool Cave 13 (Chateau Cave)	Site 12 Pool is approximately 500 m east of the Premises boundary. Specifically, the western boundary of the Site 12 Pool exclusion zone is 20 m east of the Premises boundary and 900 m east of a proposed waste rock landform. Cave 13 is within the Premises and is utilised by the Pilbara leaf-nosed bat. Both sites are managed under MS 993, condition 10 relates to Cave 13 and condition 12 relates to Site 12. Refer to section 2.3 for further assessment.

3.2 Risk ratings

Risk ratings have been assessed in accordance with the *Guideline: Risk Assessments* (DWER 2020a) 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 works approval 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 works approval holder's proposed controls to be critical to maintaining an acceptable level of risk, these will be incorporated into the works approval as regulatory controls.

Additional regulatory controls may be imposed where the works approval 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 works approval W6322/2019/1 that accompanies this amendment report authorises construction and time limited operations. The conditions in the revised works approval have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

An amendment to licence L8845/2014/1 is required following the time limited operational phase authorised under the works approval to authorise emissions associated with the ongoing operation of the Premises. A risk assessment for the operational phase has been included in this amendment report, however licence conditions will not be finalised until the department assesses the licence application.

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	Works approval holder's controls sufficient?	Conditions[2] of works approval	Justification for additional regulatory controls
Source/Activities	**Potential emission**	**Potential pathways and impact**	**Receptors**	**Works Approval Holder's controls**				
Construction								
Construction of stage 1B and 2 embankment lifts at the TSF2 Construction of scour pits Earthworks and vehicle movements	Dust	Air/windborne pathway causing impacts to health and amenity	Soil Surface water – nearby creeks Nearby vegetation Threatened and priority flora	Refer to Section 3.1	C = Slight L = Unlikely **Low Risk**	Y	Conditions 1, 2, 3, 4, 5, and 6	N/A
	Hydrocarbon spills and leaks	Direct discharge causing contamination to soils, nearby creeks, and reduced vegetation health		Refer to Section 3.1	C = Slight L = Possible **Low Risk**	Y	Conditions 1, 2, 3, 4, 5, and 6	N/A
	Stormwater runoff			Refer to Section 3.1	C = Slight L = Unlikely **Low Risk**	Y	Conditions **1**, **2**, 3, 4, 5, and 6	**Condition 1:** inclusion of the construction and design requirements for scour pits. **Condition 2:** inclusion of the construction and design requirements for TSF2 Stage 2.
Time Limited Operation								
Tailings surface dust lift-off	Dust lift-off from TSF transporting contaminants	Air/windborne pathway causing impacts to health and amenity Potential impact to vegetation health and impacts to surface water quality	Nearby vegetation Surface water – nearby creeks Nearby fauna	Refer to Section 3.1	C = Slight L = Unlikely **Low Risk**	Y	Conditions 15, 24 and 25	N/A

Risk Event					Risk rating[1] C = consequence L = likelihood	Works approval holder's controls sufficient?	Conditions[2] of works approval	Justification for additional regulatory controls
Source/Activities	**Potential emission**	**Potential pathways and impact**	**Receptors**	**Works Approval Holder's controls**				
Discharge of tailings and return water from pipeline leak / rupture	Tailings and decant return water	Direct discharges to land and overland flow Potential impact to vegetation health due to increased chemicals, metals from tailings. Impacts to soil from contamination and erosion (sedimentation and scouring).	Soil Surface water – nearby creeks Nearby vegetation Threatened and priority flora	Refer to Section 3.1	C = Minor L = Possible **Medium Risk**	Y	Conditions 12, 13, 14, 15, 16, 17, 19, 24, and 25	N/A
Increased capacity at TSF2 for the storage of tailings material	Increased seepage of tailings material through the TSF2 embankment foundation and base	Infiltration via soil to groundwater causing impacts on groundwater quality and levels Impacts on vegetation due to waterlogging and increased chemicals, metals, nutrients from tailings Impacts on surface water due to discharge into nearby creeks	Soil Surface water – nearby creeks Groundwater Nearby vegetation Threatened and priority flora	Refer to Section 3.1	C = Moderate L = Possible **Medium Risk**	Y	Conditions 12, 13, 14, **15**, 16, 17, 19, 21, 24, and 25	**Condition 15:** inclusion of operational requirements for TSF2 Stage 2
	Tailings	Direct discharge from overtopping of the TSF2 embankment Detrimental	Soil Surface water – nearby creeks	Refer to Section 3.1	C = Minor L = Unlikely **Medium Risk**	Y	Conditions 12, 13, 14, **15**, 16, 17, 18, 19, 20, 22, 23, 24 and 25	**Condition 15:** inclusion of operational requirements for TSF2 Stage 2

Risk Event					Risk rating[1] C = consequence L = likelihood	Works approval holder's controls sufficient?	Conditions[2] of works approval	Justification for additional regulatory controls
Source/Activities	**Potential emission**	**Potential pathways and impact**	**Receptors**	**Works Approval Holder's controls**				
		impacts on nearby surface water / groundwater and impacts to vegetation health Impacts to soil from contamination and erosion (sedimentation and scouring)	Groundwater Nearby vegetation Threatened and priority flora					
Use of scour pits	Tailings	Direct discharge and overland flow from overtopping of the scour pits Detrimental impacts on nearby surface water / groundwater and impacts to vegetation health Impacts to soil from contamination and erosion (sedimentation and scouring)	Soil Surface water – nearby creeks Groundwater Nearby vegetation Threatened and priority flora	Refer to Section 3.1	C = Minor L = Unlikely **Medium Risk**	Y	Conditions 12, 13, 14, **15**, 24, and 25	**Condition 15:** inclusion of operational requirements for scour pits

Note 1: Consequence ratings, likelihood ratings and risk descriptions are detailed in the *Guideline: Risk assessments* (DWER 2020a).

Note 2: Proposed Works Approval 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
Department of Mines, Industry Regulation and Safety (DMIRS) advised of proposal on 10 August 2023	DMIRS replied on 10 November 2023 advising that they have no concerns on the geotechnical aspects of the TSF raises and scour pits, namely the stability of the raise and appropriateness of materials.	N/A
Works approval holder was provided with draft amendment on 22 November 2023	The works approval holder has provided comments that are summarised in Appendix 1.	The department's response to the works approval holder's comments are provided in Appendix 1.

5. Conclusion

Based on the assessment in this amendment report, the Delegated Officer has determined that a revised works approval 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 works approval as part of the amendment process.

Table 5: Summary of works approval amendments

Condition no.	Proposed amendments
Cover page	Amended expiration date from 27/04/2024 to 27/04/2027.
1, Table 1	Removal of groundwater monitoring bores as they have been constructed and under the current licence L8845/2014/1. Inclusion on the design and construction requirements for scour pits. Removal of OPF supporting infrastructure, refer to Appendix 1 for explanation.
2, Table 2	Inclusion of design requirement for TSF – Stage 1B, downstream batter slope as 1.75(H):1(V). Inclusion of design and constructions requirements for TSF – Stage 2.
3, Table 3 (previous condition)	Removal of condition related to the design, construction, and installation of groundwater monitoring wells. They have been constructed and under the current Licence L8845/2014/1. Condition is now redundant.
3 to 6	Renumbering of previous conditions 4 to 7 as condition 3 was removed.
8 and 9 (previous conditions)	Removal of groundwater monitoring wells report condition as report has been submitted and deemed compliant. Wells are under the current Licence L8845/2014/1. Conditions are now redundant.

Condition no.	Proposed amendments
8, Table 3 (current condition)	Amended commissioning period from ’10 calendar months in aggregate’ to ’10 calendar months for each item of infrastructure’. Refer to Appendix 1 for explanation.
13(a)	Amended part of the condition to indicate where infrastructure is not authorised to undertake environmental commissioning but requires the submission of a Critical Containment Infrastructure Report as required by condition 5.
14(b)	Inclusion of the following wording, “*if one is granted before the end of the period specified in condition 14(a)”* to ensure infrastructure constructed and commissioned under the works approval is transferred onto the current licence L8845/2014/1 during time limited operations. Time limited operations period extended from 180 to 360 calendar days, refer to Appendix 1 for explanation.
Tables 3 to 10	Renumbered from Tables 4 to 14, as previous Tables 3, 7 and 10 were removed.
Table 5	Inclusion of operational requirements for TSF2 Stage 2 and scour pits. Removal of item 2 – groundwater bores as monitoring requirements were transferred on the licence L8845/2014/1. Amended tailings production from 7.975 Mt (wet) of tailings per quarter to 31.9 Mt (wet) of tailings per annum. Refer to Appendix 1 for explanation.
Table 6	Discharge point L3 was renamed from ‘Contaminated Water Storage Ponds’ to ‘OPF sediment pond indicative location’. Previous items 2 and 4 were removed from the table as they were transferred to the licence L8845/2014/1. Refer to Appendix 1 for explanation.
18	Rewording of the condition, refer to Appendix 1 for explanation.
Table 8	Amendment to inspection frequency from ’twice daily’ to ‘daily’ for the tailings delivery and RWP water return pipelines.
Table 9	Removal of discharge points L2: OWS and L4: Groundwater monitoring bores as these were transferred onto the licence L8845/2014/1. Discharge point L3 was renamed from ‘Contaminated Water Storage Ponds’ to ‘OPF sediment pond indicative location’. Refer to Appendix 1 for explanation.
21	Inclusion of the wording “*for TSF2 Stage 1A tailings decant water only”* to indicate the condition is related only to TSF2 Stage 1A tailings decant water.
17 to 23	Renumbering of previous condition 21 to 27 as conditions were removed.
Table 9	Removal of discharge points L2: OWS and L4: Groundwater monitoring bores as these were transferred onto the licence L8845/2014/1. Discharge point L3 was renamed from ‘Contaminated Water Storage Ponds’ to ‘OPF sediment pond indicative location’. Refer to Appendix 1 for explanation.
28 (previous condition)	Removed condition as groundwater monitoring requirements have been transferred to the licence L8845/2014/1. Refer to Appendix 1 for explanation.
29 and 30 (previous	Conditions removed as duplicate to previous conditions 26 and 27.

Condition no.	Proposed amendments
condition)	
24 to 28 (current conditions)	Renumbering of conditions 24 to 28, as conditions 28 to 31 were removed.
Figure 17 and 18	Inclusion of figures related to location and design of the scour pits.
Figure 19 to 24	Inclusion of figures related to TSF Stage 2 – location, general arrangement, and construction plans.
-	Renumbering of conditions and table numbers within condition and table text throughout the works approval.

References

1. ATC Williams Pty Ltd (ATC Williams) 2023, *Iron Bridge Project North Star Magnetite – Stage 1B & 2 Design Overview Report*, report prepared for Fortescue Metal Group Ltd.
2. Department of Environment Regulation (DER) 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
3. Department of Water and Environmental Regulation (DWER) 2020a, *Guideline: Risk Assessments*, Perth, Western Australia.
4. DWER 2020b, *Guideline: Environmental Siting*, Perth, Western Australia.

Appendix 1: Summary of works approval holder's comments on risk assessment and draft conditions

Condition	Summary of works approval holder's comment	Department's response
Works approval		
Cover page – premises details	IBO acknowledges the discrepancy relating to mining tenements specified in the works approval, licence L8845/2014/1 and application form. This clerical error incorrectly missed tenements M 45/1244 and L47/460 from the application. Therefore, IBO has updated the premises details and requests that these two tenements be included and listed in the works approval W6322/2019/1. IBO requests for the **inclusion of the following additional tenements**, in **bold text** below. Iron Bridge Magnetite Project Mining Tenements M45/1226, **M45/1244,** L45/293, L45/294, L45/359, L45/360, L45/361, L45/364, L45/367 and **L47/460** MARBLE BAR WA 6760 Please refer to Figure 1A - Prescribed Premise Overview 662NS_0000_MP_EN_0313_001_r0 to be used as Schedule 1 map.	The department will include the following missed tenement M45/1244. L47/460 has not been included as the mining tenement does not occur within the prescribed premises boundary.
Condition 1, Table 1	A phone discussion with DWER on the 21st of February 2023, discussed and agreed that the OPF supporting infrastructures listed under Table 1 of the works approval, should not be listed within the works approval. IBO agrees with this DWER initiated suggestion, given that the OPF supporting infrastructure has no monitoring obligations during time limited operations. Therefore, IBO requests that the OPF supporting infrastructure items are not listed in Table 1 of the works approval. IBO requests for the **removal of the OPF supporting infrastructure**, as highlighted in **bold text** below. ~~**OPF supporting infrastructure to comprise the following:**~~	The department has removed the OPF supporting infrastructure. The department notes that the following OPF supporting infrastructure has been constructed and an environmental compliance report (ECR) has been submitted: • Heavy Vehicle Workshop • Heavy Vehicle Tyre change • Heavy Vehicle welding workshop • Lubricant Storage Facilities

Condition	Summary of works approval holder's comment	Department's response
	~~**a) Light and Heavy Vehicle Workshops**~~ ~~**b) Heavy Vehicle Tyre change**~~ ~~**c) Heavy Vehicle welding workshop**~~ ~~**d) Fixed Plant Workshop**~~ ~~**e) Fixed Plant Welding Workshop**~~ ~~**f) Lubricant Storage Facilities**~~ ~~**g) Light and Heavy Vehicle Wash Bays**~~ ~~**h) Refuelling Facilities**~~ ~~**i) Warehouse**~~ ~~**j) Administration Building and crib room.**~~	• Heavy Vehicle Wash Bay • Refuelling Facilities • Warehouse • Administration Building and crib room. The remaining infrastructure is yet to be constructed: • Light Vehicle Workshop • Light Vehicle Wash Bay • Fixed Plant Workshop • Fixed Plant Welding Workshop. The department does not require submission of ECRs for the remaining infrastructure.
Condition 2, Table 2	**Item number 4 – TSF – Stage 2** The gravity decant structure referred to in this condition will be constructed earlier during the approved Stage 1B. In this TSF Stage 2, construction works will only be related to the height increase of the facility and subsequently the height of the approved gravity decant structure. The reference to the gravity decant structure design and construction components is thus not applicable. Similarly, the Vibrating Wire Piezometers (VWP) are not planned to be installed in Stage 2 as it is not applicable. Therefore, IBO requests that the above requirements are removed from the approval instrument. IBO requests the following changes to Table 2, Item 4, TSF - Stage 2 as indicated in **Bold Text** • Main embankments A to D to RL 292.2 m, utilising the downstream raise method • Construct a new west embankment A to provide confinement at the south-west of the TSF • Downstream batter slope must be constructed to 1.75(H):1(V) with the inclusion of the upstream Bench, to maintain the same extent of the downstream footprint	The department has removed the requested dot points based on the works approval holder's justification.

Condition	Summary of works approval holder's comment	Department's response
	• North and south decant systems will be raised to Stage 2 elevation, constructed on embankments A and C • Embankments are made from local borrow, mine waste rock and plant dry rejects, which are not classified as PAF • BGM liner covering upstream face of embankments (impermeable) • ~~**1 gravity decant structure designed to ensure and maximise gravity decant via inverted box culverts with segmented stoplogs on top, directed to an outfall pipe constructed through main embankment C**~~ • ~~**Minimum 1 set of VWP in the foundation of TSF Main Embankment C, comprised of minimum 3 VWP's located within the embankment footprint**~~ • Freeboard designed to store the run-off of a 1:100 AEP, 72 hr storm and the 400 mm decant pond depth • Spillway capacity 1:100,000 AEP with flow and erosion control installed, spillway directed to the RWP • Distribution pipeline and two spigots (if different to Stage 1B).	
Condition 4	IBO requests the reinstatement of the existing (crossed out) condition back onto the works approval to ensure consistency across all Fortescue Ltd Operational Site Licences approved by DWER. This reinstatement will provide operational flexibility, including minor revisions to design and construction requirements to be undertaken (dependant on nil material changes and nil increase of risk to the environment due the revision). This is on the provision that all other conditions are satisfied, as detailed in the Environmental Compliance Report. IBO believes that the reinstatement of this standard phrase into the works approval will still achieve the intended outcomes of this condition: *'4 (d) where an item of infrastructure has been certified as not being located or constructed, or does not comply with the corresponding requirements, the works approval holder must correct the non-compliant or defective works, prior to re-certifying, or provide to the CEO a description of, and explanation for, any departures from the requirements specified in Table 1 that do not require relocation or rectification and do not constitute a material defect along with the Environmental Compliance Report'*	Based on the works approval holder's justification, the department will retain condition 4(d).
Condition 6	IBO notes that providing the 'as-constructed' permeability of the embankments is not considered standard practice, and rather density is utilised as the measure. The construction specifications as required under Condition 6, will specify a minimum density of the	The department has removed condition 6(c).

Condition	Summary of works approval holder's comment	Department's response
	embankment material. Quality control / quality assurance records, as per standard practice, will document conformance and be provided to DWER within the construction compliance report. IBO requests Condition 6 (c) be removed or amended to replace permeability with density as indicated in **Bold Text** - "as-constructed ~~**permeability**~~ **density** of the embankments"	
Condition 8, Table 3	The commissioning of individual items of infrastructure is expected to take longer than 10 calendar months, and an extension of 24 mths is required. The extension to the authorised commissioning period will provide operational flexibility and ensure that the timeframes specified on the works approval are achievable, practical, and realistic, thus reducing the risk of any potential non-compliance. Therefore, IBO requests for an extension to the authorised commissioning period. IBO requests an **extension of the duration of the authorised commissioning period**, as shown in **bold text** below. For a period not exceeding ~~10~~ **24** calendar months in aggregate.	The department does not agree with extending the commissioning period to 24 months; however, the authorised commissioning duration has been changed to - 'For a period not exceeding 10 calendar months for each item of infrastructure'
Condition 13	IBO considers the wording 'not authorised' as unclear and ambiguous. To provide clarity and maintain consistency across all Fortescue Ltd Operational Site Licences approved by DWER, an amendment to the wording is required to meet the purpose and intended outcomes. Therefore, IBO requests for the replacement of the word authorised with the corrected word of 'required'. IBO requests for the **minor rephrasing of the wording** in the condition, as shown in **bold text** below. ~~16~~ The works approval holder may only commence time limited operations for an item of critical containment infrastructure identified in condition 2: (a) where the infrastructure ~~does require~~ is not ~~**authorised**~~ **required** to undertake environmental commissioning, the ~~Environmental Commissioning~~ Critical Containment Infrastructure Report for that item of infrastructure as required by condition 10 ~~13~~ has been submitted to the CEO; and (b) where the CEO has notified the works approval holder that the Critical Containment Infrastructure Report for that item of infrastructure as required by condition 5 ~~6~~ meets the requirements of that condition; or (c) where at least 45 business days have passed after the Critical Containment Infrastructure Report for that item of infrastructure as required by condition 5 ~~6~~ has been submitted to the CEO.	The department has retained the wording 'not authorised' as this is the current standard condition related to time limited operations commencement, especially where some infrastructure is not authorised to undertake commissioning.

Condition	Summary of works approval holder's comment	Department's response
Condition 14	IBO requests an extension to the duration period of time limited operations, from the approved 180 calendar days to a proposed 360 calendar days. IBO is currently operating the TSF 1A and under TLO and has been for a period of 293 days. Commissioning requires the incremental ramp up of tailings production, through its individual supporting infrastructures, until steady state can be achieved. As a component of commissioning IBO is depositing tailings into the TSF 1A which is under TLO. IBO has not yet achieved a steady state. As individual components of the TSF facility are at differing phases of construction, commissioning and TLO, IBO proposes to transfer all components as detailed in table 2, Item 2 to the Iron Bridge Operating licence once all components are in Time Limited Operations phase. This extension request to the duration of time limited operations will facilitate; (a) timeframes authorised for time limited operations to be realistic and achievable, (b) enable sufficient time for the preparation, submission, and assessment of a licence to operate the application prior to the end of time limited operations and, (c) reduce the administrative burden and costliness associated with the preparation, submission, and assessment of an application for the extension of the time limited operations timeframe. IBO requests for the **extension of duration of time limited operations period**, as shown in **bold text** below. ~~17~~ The works approval holder may conduct time limited operations for an item of infrastructure specified in condition 15 ~~18~~ (as applicable): a) for a period not exceeding ~~**180**~~ **360** calendar days from the day the works approval holder meets the requirements of condition 12 ~~15~~ or 13 ~~16~~ for that item of infrastructure; or until such time as a licence for that item of infrastructure is granted in accordance with Part V of the Environmental Protection Act 1986, if one is granted before the end of the period specified in condition 14(a).	The department has amended the duration of time limited operations period from 180 calendar days to 360 calendar days. The department has retained the wording 'if one is granted before the end of the period specified in condition 14(a)' as this is part of the standard time limited operations condition.
Condition 15, Table 5	To align with mine planning and to ensure the operation is not restricted on a quarterly basis, IBO requests the tailings acceptance per quarter is adjusted to per annum. This will allow for some flexibility within the operation and allow for differing ore types and blends to be tested through the plant while still maintaining the annual throughput. IBO seeks an amendment to the wording and numerical change to this condition.	The department has amended the tailings production from 7.975 Mt (wet) of tailings per quarter to 31.9 Mt (wet) of tailings per annum. The department has also removed item 2 related to groundwater bores as condition 25 has been removed, see response below.

Condition	Summary of works approval holder's comment	Department's response
	IBO requests the following changes to Table 5, Item 4, TSF - Stage 1A, 1B and Stage 2 as highlighted in **Bold Text**. • Can accept up to ~~**7.975**~~ **31.9 Mt** (wet) of tailings per ~~**quarter**~~ **annum** • Record volumes of wet tailings produced during time limited operation • Freeboard of 1:100 AEP, 72 hour rainfall event and normal operating (decant) pond depth of 400 mm (for Stage 1B and Stage 2) • Water balance • Regular inspections	
Condition 16, Table 6	IBO notes that item 2 (treated water from the OWS) and item 4 (seepage downstream of the RWP and TSF) has been transferred and included in the Iron Bridge Mine Licence L8845/2014/1. This item is not relevant to this approval. IBO requests the L3 discharge point referenced in Table 6 to be updated to reflect the amended site naming convention. In addition, the removal of items 2 and 4 within Table 6 of this works approval.	The department has amended Table 6 to remove items 2 and 4 and will rename the discharge point under item 3 from 'Contaminated Water Storage Ponds' to 'OPF sediment pond indicative location'.

<table>
<tr><th>Condition</th><th>Summary of works approval holder’s comment</th><th>Department’s response</th></tr>
<tr><td></td><td>
<table>
<tr><th></th><th>Emission</th><th>Discharge point</th><th>Discharge point locatic</th></tr>
<tr><td>1.</td><td>Water from sedimentation basins or sediment traps</td><td>L1: basins/traps</td><td>Figure 3 in Schedule 1</td></tr>
<tr><td><s>2.</s></td><td><s>Treated water from the OWS</s></td><td><s>L2: OWS</s></td><td><s>Figure 3 in Schedule 1</s></td></tr>
<tr><td>3.</td><td>Contaminated Water</td><td>L3: <s>Contaminated Water Storage Ponds</s>

OPF sediment pond indicative location</td><td>Figure 3 in Schedule 1</td></tr>
<tr><td><s>4.</s></td><td><s>Seepage downstream of the RWP and TSF</s></td><td><s>L4: Groundwater monitoring bores</s></td><td><s>Figure 12 in Schedule 1</s></td></tr>
<tr><td>5.</td><td>RWP decant water</td><td>L5: RWP emergency spillway</td><td>Figure 14 in Schedule 1</td></tr>
</table>
</td><td></td></tr>
<tr><td>Condition 17, Table 7 (previous)</td><td>IBO notes that the L2: OWS discharge point, mentioned in Condition, 17 Table 7 of the approval instrument has been transferred and included in the Iron Bridge Mine Licence L8845/2014/1. This item is not relevant to this approval.

Therefore, IBO requests that Condition 17, Table 7 is removed from the approval instrument.

Fortescue requests for the removal of Condition 17 and Condition 17, Table 7, as shown in bold text below.

<s>20 During time limited operations, the works approval holder must ensure that the emissions from the discharge point listed in Table 7 8 do not exceed the corresponding limit when monitored in accordance with condition 16 19.</s></td><td>The department has confirmed that the OWS discharge point and corresponding limit condition is under licence L8845/2014/1.

The department has removed previous condition 17 and Table 7 as part of this amendment.</td></tr>
</table>

<table>
<tr><th>Condition</th><th>Summary of works approval holder’s comment</th><th>Department’s response</th></tr>
<tr><td></td><td>
<table>
<tr><td></td><td><s>Discharge point</s></td><td><s>Parameter</s></td><td><s>Limit</s></td></tr>
<tr><td><s>1.</s></td><td><s>L2: OWS</s></td><td><s>Total Reportable Hydrocarbons</s></td><td><s>15 mg/L</s></td></tr>
</table>
</td><td></td></tr>
<tr><td>Condition 19
(now 18)</td><td>IBO notes that the existing wording in Condition 19 is operationally challenging and a potential a source of non-compliance.

It is unfeasible for at least 40 individual representative tailings samples to be collected and analysed, all within 60 days due to extenuating factors outside of IBOs control, including not limited to potential lags in the receipt of lab turnaround times.

Therefore, to provide practical operational flexibility that is achievable, IBO requests for the rephrasing of the wording in the condition to clearly state that at least 40 individual representative tailings samples are to be collected in 60 days, excluding reference to submission and analysis.

The results will be provided timely after the tailings samples have been sufficiently analysed.</td><td>The department has updated the wording of this condition as follows:

“During time limited operations and within 60 days of tailings deposition to the TSF commencing, the works approval holder must collect at least 40 individual representative tailings samples from TSF2 Stage 1A tailings, including pore water for disposal characterisation studies / investigations to determine the likely behaviour of elements under a range of leaching conditions, and may include, but not be limited to:

(a) testing using the LEAF 1313 pH-dependent leaching test coupled with geochemical modelling (US EPA, 2017); and

(b) geotechnical characterisation of tailings including: particle size distribution, volume of solids, settling test (drained and undrained), air drying test and hydraulic conductivity of the same tailings tested in 18 (a); and

(c) the contaminants listed in Table 7.

All test results shall be collated and provided in a report to the CEO no more than 60 days after sample results become available.”</td></tr>
<tr><td>Condition 20

(now 21)</td><td>IBO notes the wording is misleading as decant water is 'from' the TSF (to the RWP) not 'to the TSF'.

<s>23</s> During time limited operations, the <s>W</s>works <s>A</s>approval <s>H</s>holder shall sample monthly the composition of the tailings decant water (if available) <s>to</s> from the TSF for the parameters in Table 8 <s>9</s>. A minimum of 5 samples shall be analysed for TSF2 Stage 1A tailings decant water only.</td><td>The department has updated this condition.</td></tr>
</table>

<table>
<tr><th>Condition</th><th>Summary of works approval holder's comment</th><th>Department's response</th></tr>
<tr><td>Condition 22, Table 10

(now 20, Table 9)</td><td>IBO notes that the L2: OWS discharge point and L4: Groundwater monitoring bores, mentioned in Condition 22, Table 10 of the approval instrument have been transferred and included in the Iron Bridge Mine Licence L8845/2014/1. These items are not relevant to this approval.

In addition L3 discharge point referenced in Table 10 is requested to be updated to reflect the amended site naming convention to 'L3 OPF sediment pond indicative location'.
<table>
<tr><th>Discharge point</th><th>Monitoring location</th><th>Parameter</th><th>Frequency</th><th>Averagi period</th></tr>
<tr><td>L1: Basins/ traps</td><td>Discharge point at basins/traps</td><td>Total Suspended Solids</td><td>During discharge</td><td>Spot sample</td></tr>
<tr><td>~~L2: OWS~~</td><td>~~OWS~~</td><td>~~Total Reportable Hydrocarbons~~</td><td>~~Monthly~~</td><td>~~Spot sample~~</td></tr>
<tr><td>L3: ~~Contaminated Water Storage Ponds~~ OPF sediment pond indicative location</td><td>Contaminated Water Storage Ponds overflow</td><td>Total Reportable Hydrocarbons</td><td>During discharge (when overflowing)</td><td>Spot sample</td></tr>
<tr><td>~~L4: Groundwater monitoring bores~~</td><td>~~Groundwater monitoring bores downstream of the RWP and TSF~~</td><td>~~Groundwater level~~</td><td>~~Monthly~~</td><td>~~Spot sample~~</td></tr>
<tr><td>L5: RWP emergency spillway</td><td>At RWP emergency spillway</td><td>Quality and estimate of volume</td><td>During discharge</td><td>Spot sample</td></tr>
</table></td><td>The department has confirmed that the OWS discharge point and groundwater bores are on licence L8845/2014/1 and has removed them from Table 9.

The department will rename the discharge point under item 3 from 'Contaminated Water Storage Ponds' to 'OPF sediment pond indicative location'.</td></tr>
<tr><td>Condition 25, Table 11 (previous)</td><td>Groundwater was monitored during time limited operations as per the requirements specified in Table 11.

Condition 25 (and Table 11) is now redundant since undertaking and completing this item.

Therefore, IBO requests that Condition 25, Table 11 be removed from the approval instrument.</td><td>The department has removed condition 25 and Table 11, as groundwater monitoring has been undertaken during time limited operations and is now undertaken under licence L8845/2014/1.</td></tr>
</table>

Condition	Summary of works approval holder's comment	Department's response
	Fortescue requests for the **removal of Condition 25 and Condition 25, Table 11**, as highlighted in **bold text** below. ~~**28 The works approval holder must monitor the groundwater during time limited operations for concentrations of the identified parameters in accordance with Table 11 12**~~	
Condition 26 (previous)	IBO notes that the results of all monitoring activity were recorded as per condition 25 of the approval instrument. Condition 26 is now redundant since undertaking and completing this item. Therefore, IBO requests that Condition 26 be removed from the approval instrument. Fortescue requests for the **removal of Condition 26**, as highlighted in **bold text** below. ~~**29 The works approval holder must record the results of all monitoring activity required by condition 25 28.**~~	The department has removed condition 26 as groundwater monitoring is undertaken under licence L8845/2014/1.
Condition 27 (previous)	IBO notes that the results of all monitoring activity were recorded as per condition 25 of the approval instrument. Condition 27 is now redundant since undertaking and completing this item. Therefore, IBO requests that Condition 27 be removed from the approval instrument. Fortescue requests for the **removal of Condition 27**, as highlighted in **bold text** below. ~~**31 The works approval holder must ensure that, for sampling required by condition 25 27:**~~ ~~**(a) all water samples are collected and preserved in accordance with AS/NZS 5667.1;**~~ ~~**(b) all groundwater sampling is conducted in accordance with AS/NZS 5667.11 as amended from time to time; and**~~ ~~**(c) all laboratory samples are submitted to and tested by a laboratory with current NATA accreditation for the parameters being measured, unless indicated otherwise in Table 11 12**~~	The department has removed condition 27 as groundwater monitoring and the associated sampling requirements is undertaken under licence L8845/2014/1.
Condition 28 (now 24)	IBO requests for the removal of the second part of the additional sentence provided in condition 28. The additional sentence… "or 60 calendar days before the expiration date of the works approval, whichever is the sooner" appears to distort the intent and meaning of the entire condition, thus making the condition unclear and difficult to implement. To prevent any ambiguity, IBO requests for the rewording of the condition to only refer to the submission of the time limited operations report within 60 calendar days of the completion of time limited operations.	The department has retained the sentence 'or 60 calendar days before the expiration date of the works approval, whichever is the sooner', as this is a standard time limited operation reporting condition.

Condition	Summary of works approval holder's comment	Department's response
	Fortescue requests for the **removal of the additional wording in the condition**, as highlighted in **bold text** below. ~~**32**~~ The works approval holder must submit to the CEO a report on the time limited operations within 60 calendar days of the completion date of time limited operations ~~**or 60 calendar days before the expiration date of the works approval, whichever is the sooner.**~~	
Schedule 1 maps: Figure 1 Map of the boundary of the prescribed premises	IBO has noted a minor administrative error in Figure 1 depicting the boundary of the prescribed premises. Figure 1 is inaccurate and depicts the TSF area, rather than the entire prescribed premises boundary. IBO requests Figure 1A (as provided in the application) to be included to depict the entire prescribed premises boundary. IBO requests for the **insertion of the Figure 1A map** depicting the prescribed premises boundary, as highlighted in **bold text** below. **Figure 1: Revised map of the boundary of the prescribed premises**	The department suggests that the figure under the licence L8845/2014/1, figure 1 as a more suitable prescribed premises boundary map for the works approval. The updated figure provided as part of the 21-day draft comments is inferring that the prescribed premises boundary includes the 'concentrate and return pipeline' corridor up Port Hedland, which is not the approved prescribed premises boundary. In addition, the prescribed premises boundary on the updated figure differs to that of the approved prescribed premises boundary under the licence and includes the airport.
Amendment Report		
Section 2.2 Overview of Premises	**[APPLICANT TO ADVISE OF THESE CHANGES AS THESE ARE NOT CLEAR IN THE APPLICATION SUPPORTING DOCUMENTATION]**. IBO notes the confusion this has may have caused and provides clarification of the two minor design changes, in accordance with the works approval supporting document; 1. Stage 2 and subsequent height raises will include a 3 m upstream bench to facilitate the decant structure's operation during the construction phase and to minimise the risk of damage to the previous stage's Bituminous Geomembrane (BGM) liner, and; 2. The downstream batter has been modified to 1.75:1 (H: V) from 2:1 (H:V) across all lifts post Stage 1A.	The department has included the two minor design changes under section 2.2.
Amendments to previous Conditions 22, 23, 24 and 28	**[APPLICANT TO PROVIDE A TIMEFRAME WHEN THIS MONTHLY TAILINGS SAMPLING WILL BE COMPLETED]** In accordance with Condition 22 of W6322/2019/1, IBO completed two sampling events with the last sample submitted for analysis 29/11/2023.	The department notes water sampling is yet to commence and that the monthly sampling would occur throughout the life of the TSF2 for ongoing geotechnical testing.

Condition	Summary of works approval holder's comment	Department's response
	IBO notes Condition 23 wording is currently misleading as decant water is 'from' the TSF (to the RWP) not 'to the TSF'. Water sampling is to commence in the upcoming weeks, and will continue to do so at a monthly frequency, however at present there has not been any water available to do so.	

Appendix 2: Application validation summary

SECTION 1: APPLICATION SUMMARY			
Application type			
Amendment to Works Approval	☒	Current Works Approval number:	W6322/2019/1
Date application received		13/07/2023	
Applicant and Premises details			
Applicant name/s (full legal name/s)		IB Operations Pty Ltd	
Premises name		Iron Bridge Operation – North Star Magnetite (Iron Bridge Magnetite Project on WA)	
Premises location		L45/293, L45/294, L45/317, L45/318, L45/319, M45/1226, and M45/1244	
Local Government Authority		Shire of East Pilbara	
Application documents			
HPCM file reference number:		DER2019/000575~5	
Key application documents (additional to application form):		Attachment 1A Occupier Status Attachment 1B – ASIC Company Extract Attachment 1C – Environmental Protection Act 1986 Legal Authority (4) Attachment 3 – Application-form-category-checklist-(tailings-storage-facilities) Iron Bridge TSF2 Attachment 3B W6322 Amendment TSF Final Attachment 4 Rainfall and TSF water balance Figure 1A Prescribed Premise Overview 662NS_0000_MP_EN_0313_001_r0 Figure 1B Prescribed Premise TSF 662NS_0000_MP_EN_0313_002_r0 Figure 2 Drainage Lines and Monitoring bores 662NS_0000_MP_EN_0313_003_r1 Figure 3 TSF Lift Design Figure 4 Indicative Locations of Scour Pits Figure 5 Indicative Scour Pit Design Appendix 1 Consult Table	
Scope of application/assessment			
Summary of proposed activities or changes to existing operations.		The amendment is for the following: • construction of embankment raises stages 1B and 2 for Tailings Storage Facility 2 (TSF2) and the inclusion of scour pits; • amendment to TSF2 monitoring and sampling conditions; and • extend the expiration date of W6322/2019/1 by a further 36 months.	

Category number/s (activities that cause the premises to become prescribed premises)

Table 1: Prescribed premises categories

Prescribed premises category and description	Assessed production or design capacity	Proposed changes to the production or design capacity (amendments only)
Category 5: Processing or beneficiation of metallic or non-metallic ore	72 million tonnes per annum	No change

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: N/A 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: 993 EPA Report No: 1514
Has the proposal been referred and/or assessed under the EPBC Act?	Yes ☒ No ☐	Reference No: EPBC 2012/6689
Has the applicant demonstrated occupancy (proof of occupier status)?	Yes ☒ No ☐	Mining lease / tenement ☒ Expiry: L45/294 Exp: 19/11/2035 L45/293 Exp: 12/10/2035 M45/1244 Exp: 21/05/2035 M45/1226 Exp: 30/10/2033 L45/319 Exp: 12/04/2038 L45/318 Exp: 25/02/2036 L45/317 Exp: 07/12/2036
Has the applicant obtained all relevant planning approvals?	Yes ☐ No ☐ N/A ☒	Developed on *Mining Act 1978* tenure. Mining Proposal RegID 93044
Has the applicant applied for, or have an existing EP Act clearing permit in relation to this proposal?	Yes ☐ No ☒	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 ☐ No ☒	Application reference No: N/A Licence/permit No: CAW203155 (1)
Has the applicant applied for, or have an existing RIWI Act licence or permit in relation to this proposal?	Yes ☐ No ☒	Application reference No: N/A Licence/permit No: GWL 179289

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: Proclaimed Groundwater Area/Surface Water Area Has Regulatory Services (Water) been consulted? Yes ☐ No ☐ N/A ☒ Regional office: North West
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 ☐	*Mining Act 1978*
Is the Premises within an Environmental Protection Policy (EPP) Area?	Yes ☐ No ☒	
Is the Premises subject to any EPP requirements?	Yes ☐ No ☒	
Is the Premises a known or suspected contaminated site under the *Contaminated Sites Act 2003*?	Yes ☐ No ☒	Classification: N/A Date of classification: N/A