Government of Western Australia
Department of Water and Environmental Regulation

Amendment Report

Application for Licence Amendment

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

Licence Number	L6820/1993/12
Licence Holder	Robe River Mining Co. Pty Ltd
ACN	008 694 246
File Number	APP-0027558
Premises	Mesa J and K Iron Ore Mine FORTESCUE WA 6716 Legal description Being Mining Lease AML248SA – As defined in Figure 1, Schedule 1 of the Revised Licence
Date of Report	18/08/2025 **(FINAL)**
Proposed Decision	Revised licence granted

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1. Decision summary

Licence L6820/1993/12 is held by Robe River Mining Co. Pty Ltd (licence holder) for the Mesa J and K Iron Ore Mine (the premises), located within Mining Lease AML248SA.

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 operation of the premises. As a result of this assessment, revised licence L6820/1993/12 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 21 February 2025 the licence holder applied to amend licence L6820/1993/12 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act). The following amendments are being sought:

- Approval for ongoing tailings deposition into TSF3 (expanded under W6495/2021/1).
- Approval for ongoing tailings deposition into TSF8 East Cell (constructed under W6653/2022/1) – including raising the central dividing embankment.
- Replacing inaccessible monitoring bore MB16MEJ0003 with WB15MEJ001.
- Authorisation for the storage of up to 5000 tyres within the prescribed premises with a view to future recycling.
- Changes to reporting requirements.

The original application also addressed a managed aquifer recharge (MAR) trial near the prescribed premises. Further information provided during validation of the application clarified that as well as being outside the existing prescribed premises boundary, this activity does not meet the definition of any category in Schedule 1 of the Environmental Protection Regulations 1987, and so this aspect of the application was withdrawn by the applicant and will not be considered in this assessment. The MAR trial will be regulated under the *Rights in Water and Irrigation Act 1914*.

This amendment is limited only to changes to Category 5 activities, and addition of category 57. No changes to the aspects of the existing licence relating to Category 6, 12, 61A, 64 or 54 been assessed.

Table 1 below outlines the proposed changes to the existing licence

Table 1: Proposed production or design capacity changes

Category	Current production or design capacity	Proposed production or design capacity	Description of proposed amendment
Category 5: Processing or beneficiation of metallic or non-metallic ore	20,000,000 tonnes per year	No change	Ongoing operation of tailings storage facilities TSF3 and TSF8 (TLO completed). Raise of TSF8 (within original design, but

			not approved in W6653/2022/1 due to anticipated construction timeframes)
Category 57: Used tyre storage: general	Not on existing licence	5,000 tyres	Storage of tyres outside of landfill for the purpose of future recycling.

2.2.1 TSF3

Works approval W6495/2021/1 was issued in August 2021 to authorise the extension, re-commissioning and time limited operation of historic TSF 3. The environmental compliance report for the expansion works was submitted on 3 February 2023 and assessed as compliant with W6495/2021/1. Commissioning was undertaken for the TSF3 pipelines (commissioning report submitted 19 April 2023) and found to be compliant. Time limited operation was undertaken from 12 October 2023 to 10 October 2024. The TLO report showed that the tailings solids concentration was lower than assessed and vibrating wire piezometer VWP20 is unreliable.

A separate Environmental Compliance report was submitted on 11 February 2025 for the construction of the TSF3 emergency spillway. The embankment 4 and 11 lifts were not found to be required and were not constructed. Works Approval W6495/2021/1 has now expired, with all obligations having been fulfilled.

Works approval W6495/2021/1 (as amended) stated that tailings should be thickened to >40% by weight solids. However this has proved operationally difficult to manage, especially at low tailings volumes as the thickened tailings do not flow well through the pipes. In 2024, the tailings to TSF3 averaged 35.1% solids by weight. Operational strategies to increase average tailings concentrations include the creation of consistent thickener inventory, and reducing flushing. The licence holder has requested that the revised licence sets a target of at least 35% solids rather than 40% as per the works approval.

2.2.2 TSF8

TSF8 eastern cell stage 1 was constructed under works approval W6653/2022/1. The works approval also authorised a TSF8 western cell which has not yet been constructed and is currently undergoing redesign. The original plan was to alternate deposition between the eastern and western cells, but the licence holder is now proposing a longer period of deposition into the eastern cell while the western cell is redesigned and constructed, which is anticipated to be by February 2030. As the approved and constructed capacity of the existing cell will be exhausted in 2027, this requires a raising of the eastern cell.

Construction compliance documents were submitted for TSF8 eastern cell stage (early deposition and initial construction) to a height of 140.3m RL on the central dividing embankment (CDE) which is the western boundary of eastern cell. The other embankments have been constructed to a height of 156m RL except where existing features (topography or existing TSFs) exceed this elevation. Time limited operations was authorised for the TSF8 eastern cell stage 1.

Preliminary studies indicate that a raise of the CDE to 148.3 mRL would be sufficient to contain tailings until 2040, but the licence holder is seeking authorisation to construct the CDE to its full design height of 152 mRL, to minimise number of raises and simplify construction.

Monitoring bores MBTSF8a to MBTSF8d are located along the expected TSF8 seepage path toward Robe River. These were monitored bimonthly during time limited operation under the works approval. Existing TSF4 and TSF5 bores may also identify seepage from TSF8, as well as WB15MEJ001 (refer to section 2.2.3).

Proposed groundwater monitoring bores MBTSF8e and MBTSF8f are not yet constructed. These or alternatives will be considered in a future assessment of theTSF8 western cell, but

they are not required for operation of the eastern cell.

2.2.3 Changes to monitoring

In addition to the transfer of TSF3 and TSF8 monitoring to licence L6820/1993/12, the license holder has requested that TSF4 monitoring bore MB16MEJ0003 (existing bore) be replaced with WB15MEJ001 (replacement bore).

The existing bore is within the footprint of TSF8, and has been grouted to prevent it becoming a seepage pathway to groundwater. The new bore is located approximately 400m north west of the existing bore, adjacent to the north west corner of TSF8 eastern cell.

The new bore was constructed in 2015 to monitor seepage from TSF4. A bore log was provided to the department on 4 July 2025. The collar elevation is recorded as 538 mRL, to the top of casing (TOC). The vertical distance between the surveyed collar elevation and ground level is approximately 0.35 meters.

The amendment application shows results of monitoring which was undertaken in both bores for an overlap sampling period comprising August and September 2024. The location of the replacement bore, remaining TSF4 monitoring bores and proposed TSF8 monitoring bores are shown in Figure 1. The replacement bore location is considered acceptable.

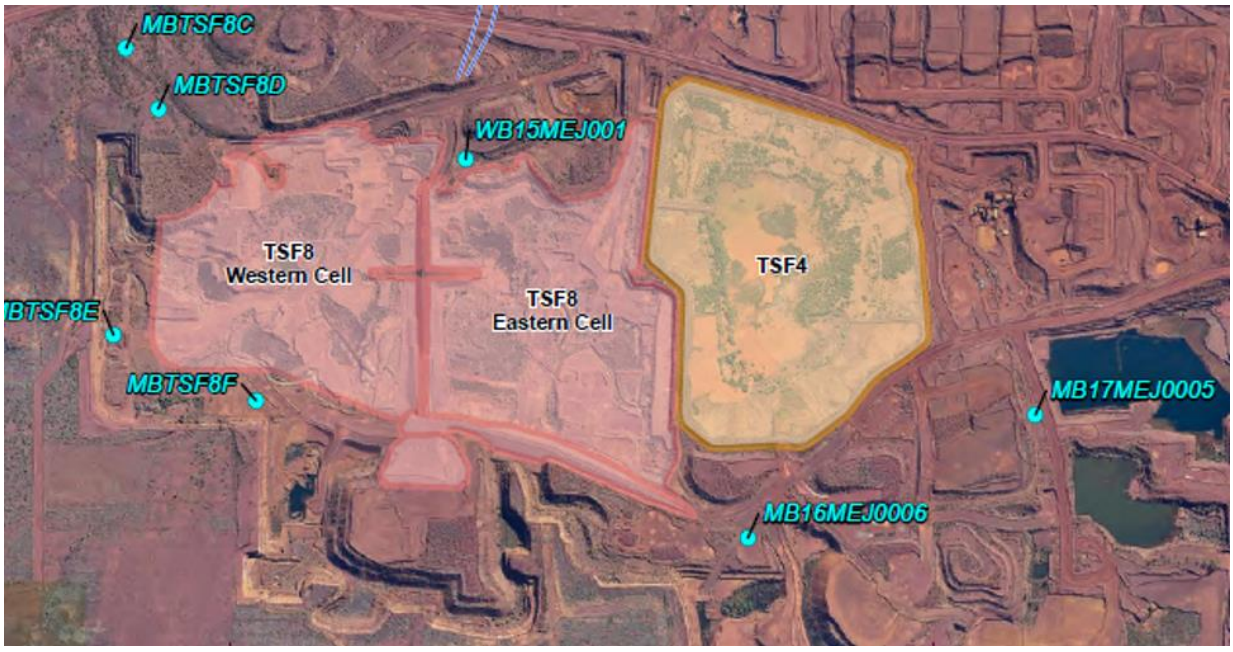

Figure 1: Location of TSF4 and TSF8 groundwater monitoring bores

2.2.4 Changes to annual reporting requirements

In existing condition 25 (annual report requirements - condition 26 in revised licence), for condition 21 (water monitoring) the existing licence requires “all monitoring data in tabulated and graphical form”. The licence holder has identified that this results in a large volume of graphs with zero values with adds bulk but not meaning to the report. The amendment requested is to require all monitoring data *for each monitoring bore for those parameters resulting in exceedances* presented in tabulated and graphical form.

The Delegated Officer agrees that reducing the required graphs is desirable. As condition 21 does not include limits (therefore ‘exceedance’ is undefined), and the purpose of a graph is to identify trends, the proposed wording is not accepted. Instead, graphs will be required where the values are above the detection level of the analysis.

2.2.5 Tyre storage (Category 57)

The License holder currently buries used tyres in existing approved landfills within the premises, but is exploring opportunities to store used tyres outside of landfills so that they are easily accessible for recycling when facilities become available. The application is to store up to 5000 used tyres.

The licence application states that tyres will be stored in accordance with *Guidance Note: GN02: Bulk storage of rubber tyres including shredded and crumbed tyres* (DFES July 2023).

No specific location is proposed, instead the licence holder seeks authorisation to construct tyre storage facilities anywhere within the prescribed premises that is not an Environmentally Sensitive Area.

2.3 Part IV of the EP Act

The existing Mesa J Iron Ore Development was assessed by the Environment Protection Authority (EPA) and approved under Ministerial Statement (MS) 1141 in July 2020.

MS 1141 states the implementation of the Revised Proposal shall ensure that there is no irreversible impact to the health of the Robe River pools, Robe River and Jimmawurrada Creek ecosystems, including associated riparian vegetation, due to groundwater abstraction and / or discharge of surplus water.

There have been no changes to the ministerial statement since the issue of W6495/2021/1 (for expansion of TSF3) or W6653/2022/1 (for TSF8). Requirements of MS 1141 are not re-assessed in this amendment report and are not duplicated as conditions in the revised licence

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 2020).

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 operation which have been considered in this Amendment Report are detailed in Table 2 below. Table 2 also details the proposed control measures the licence holder has proposed to assist in controlling these emissions, where necessary.

Table 2: Licence holder controls

Emission	Sources	Potential pathways	Proposed controls
Firefighting water from tyre storage area	Tyre fire	Direct runoff	Stored in accordance with *Guidance Note: GN02 Bulk Storage of Rubber Tyres Including Shredded and Crumbed Tyres* (DFES, 2023, including: • External tyre storage areas will be level, clear of vegetation, rubbish and other combustible material to mitigate the risk

Emission	Sources	Potential pathways	Proposed controls
			of fire. • Tyre storage (number of tyres in stacks, height of stacks, separation distances between stacks) will be designed to limit the extent of spread of an established fire. • Firefighting resources and water supply will be available to be able to extinguish an established fire in stored tyres.
Dust	Dust lift-off from TSF 3 or TSF 8 surface, or from construction earthworks	Air / windborne pathway Impacts to health, amenity, and vegetation health	Existing dust controls will continue to be implemented.
Spillage of tailings and decant return water	Pipeline leak or rupture	Direct discharges to land and infiltration to soil	Tailings delivery pipelines will be: • carbon steel, with the carbon steel sections supported on precast concrete plinths at a nominal spacing of 12 m. • beyond the extents of the carbon steel sections, the pipes will be high-density polyethylene (HDPE), which will be equipped with tees, valves and spigots at maximum 48 m centres to allow for deposition into TSFs. • contained within defined bunded pipeline corridors to contain pipeline leaks and provided with dump ponds at strategic locations for containment of undetected pipe leaks. • telemetry system installed to monitor pressure deviations and provide early warning of leaks. Return water pipeline will be: • HDPE • contained in a pipeline corridor • equipped with pressure sensing and telemetry to activate alarms if a leak were to occur. Daily visual inspections of the integrity of tailings delivery and return water pipelines. The dewatering pipelines will be: • constructed of HDPE • contained in a pipe corridor • fitted with pressure sensors and

Emission	Sources	Potential pathways	Proposed controls
			telemetry.

Seepage containing metals, metalloids, residual flocculant seeping in groundwater / surface water and lateral seepage to receptors	Deposition of tailings in TSF3 and TSF8	Seepage and infiltration via Channel Iron Deposits (CID) in the geology, matrix flow through the vadose zone, and subsurface impacting the quality and ecology surface water / groundwater	• A tailings thickener will be used to reduce the amount of water reporting to TSF3. Tailings to TSF 8 will be thickened except where maintenance activities preclude it.
			• The decant pond for TSF3 will be maintained as far away as reasonably possible from the identified CID pathway and Robe River.
			• The decant pond for TSF8 will be located centrally
			• The decant pond depth and extent will be minimised.
			• Groundwater and seepage interception system consisting of:
			  ○ blanket drain;
			  ○ collection trenches and sumps;
			  ○ dewatering trenches and sumps; and
			  ○ dewatering pipelines.
			• The Nitrate Management Plan will be implemented, and recovery bores utilised if required
			• Transfer of tailings deposition to TSF8 that is further away from Robe River, as soon as practicable

Tailings or tailings water (likely mixed with rainwater) containing metals, metalloids, residual flocculant	Overtopping of TSF3 or TSF8	Discharge of tailings water to land, run off and seepage to surface and groundwater	• Freeboard of 0.5 m above the 1:100 AEP 72-hour event maintained. • Decant pumping system to facilitate removal of water. • Decanted water will be returned directly to PP2 for reuse in processing via the return water pipeline. • Daily visual inspections of the integrity of the perimeter embankments and freeboard.

3.1.2 Receptors

In accordance with the *Guideline: Risk assessments* (DWER 2020), 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 *(Guideline: Environmental siting* (DWER 2020)).

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

Environmental receptors	Distance from prescribed activity
Rights in Water and Irrigation Act 1914 - Proclaimed Areas	The premises is located within the Pilbara Groundwater and Surface Water Areas
Public Drinking Water Source Area (PDWSA)	The Priority 1 Bungaroo Creek Water Reserve PDWSA is located within the premises and its boundary slightly overlaps with TSF8. The TSF8 is located approximately 6 km down hydraulic gradient of the nearest wellhead protection zone.
Threatened Ecological Communities (TECs)	The following TECs overlap the with the TSFs • Priority 1 – Subterranean invertebrate community of pisolitic hills in the Pilbara (Robe Valley Pisolitic Hills); and • Priority 1 – Subterranean invertebrate communities of mesas in the Robe Valley region (Robe Valley Mesas).
Priority Ecological Communities (PECs) as shown in Figure 2.	The following PECs overlap activities related to this amendment: • Priority 1 – Subterranean invertebrate community of pisolitic hills in the Pilbara (Robe Valley Pisolitic Hills); and • Priority 1 – Subterranean invertebrate communities of mesas in the Robe Valley region (Robe Valley Mesas).
Surface water bodies as shown in Figure 3.	The Robe River passes approximately 3.5 km north of TSF8 and 500m north of TSF3. It is ephemeral and supports permanent springs and pools. Robe River/Robe River pools are used for drinking, cooking, swimming purposes by traditional owners and other visitors. Regional groundwater flows at the premises are north and north-west towards Robe River.

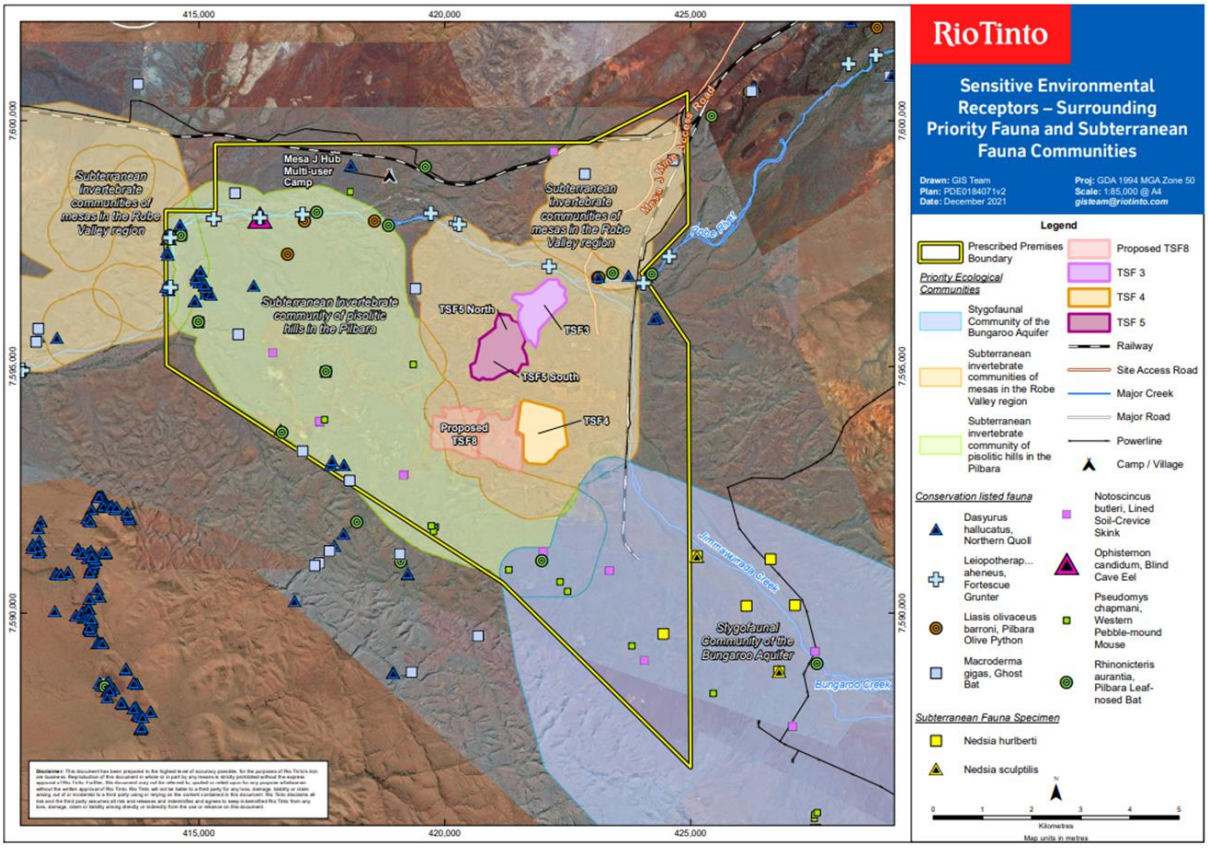

Figure 2: Location of sensitive receptors

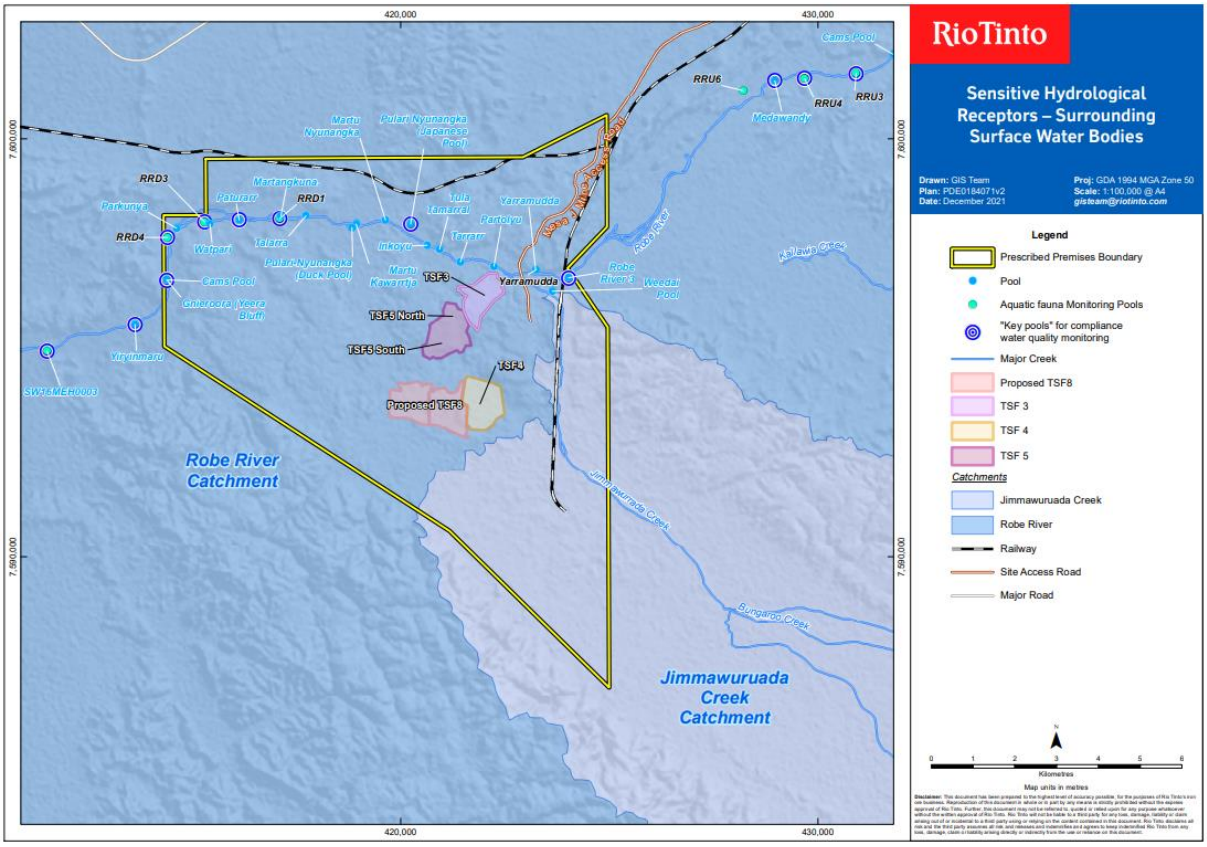

Figure 3: Location of surface water bodies

3.2 Risk ratings

Risk ratings have been assessed in accordance with the *Guideline: Risk Assessments* (DWER 2020) 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 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 L6820/1993/12 that accompanies this Amendment Report authorises emissions associated with the operation of the premises.

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 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 of tyre storage								
Tyre storage	Discharge of contaminated firefighting fluids	Direct runoff impacting surrounding vegetation or contaminating surface water or groundwater	Soil and vegetation Robe River and pools Bungaroo Creek Water Reserve PDWSA	Refer to Section 3.1.1	C = Moderate L = Unlikely **Medium Risk**	N	Amended condition 7 – specifications for tyre storage – **includes not within Bungaroo Creek Water Reserve PDWA or within 1km of the Robe River, and containment of fire water** **Condition 26 – review and risk assessment of tyre storage in AER**	Additional siting specification added to protect sensitive receptors. Containment of fire water required because the department has not assessed the discharge of treated or untreated fire water on the premises Specifications are consistent with licence holder commitments to operate in accordance with the *DFES Guidance Note: GN02*. Review of tyre storage in AER is required because the licence holder has requested extra flexibility to design their tyre storage not fully in accordance with *DFES Guidance Note: GN02*.
Operation of TSF3								
Pipelines to new towers	Tailings containing metals, metalloids and residual flocculant	Direct discharge from rupture of pipelines causing contamination	Soils	Refer to Section 3.1.1	C = Moderate L = Unlikely **Medium Risk**	Y	Condition 3, Table 2 includes pipeline inspections	

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**				
	discharging to land							
Deposition of tailings into TSF3	Tailings water containing metals, metalloids and residual flocculant seeping into groundwater/ surface water	Seepage and infiltration through subsurface impacting the quality and ecology of surface water/groundwater; Potential adverse health impacts as Robe River pools	PDWA, surface water (Robe River, Pools), groundwater	Refer to Section 3.1.1	C = Major L = Likely **High Risk**	N	Condition 3, Table 2 - minimum solids content of tailings, and decant pond management to minimise northward seepage. Condition 21, Table 5 – groundwater and supernatant water monitoring Condition 24 - water balance **Condition 25 – TSF audit** **Condition 26 – results compared with ANZG 95% level of species protection**	Since the premises is not subject to the Mining Act, an annual TSF audit report is required. Comparison with water quality standard required for TSF monitoring points due to the proximity of TSF3 to the Robe River. Consistent with W6495/2021/1. License holder commitment to apply to other TSFs too. Refer to section 3.3 for detailed consideration of works approval conditions.
	Overtopping	Discharge of waste fines outside of the containment infrastructure	Soils and vegetation	Refer to Section 3.1.1	C = Slight L= Possible **Low risk**	Y	Condition 3, Table 2 includes minimum freeboard requirement. Operational freeboard to be determined by license holder to maintain this freeboard in the event of significant rainfall events.	Provided the freeboard is maintained, it is unlikely that the TSF will overtop.
Construction of TSF8 central dividing embankment raise								
Construction activities associated with TSF8 and vehicle movement	Dust	Air / windborne pathway causing impacts to vegetation health due to dust	PECs Fauna	Refer to Section 3.1.1	C = Slight L= Possible **Low risk**	Y	N/A	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**				
		deposition leading to reduced ability for photosynthesis and smothering Impacts on faunal habitats which represent shelter, foraging and dispersal						
	Noise	Airborne noise which may disrupt nocturnal foraging behaviour	Fauna	Refer to Section 3.1.1	C = Slight L= Unlikely **Low risk**	Y	N/A	N/A
Operation of TSF8								
Extended deposition of tailings into TSF8 Eastern cell	Tailings seepage containing metals, metalloids and residual flocculant	Seepage from the TSF potentially contaminating the soil and impacting on the water quality of the groundwater	Priority 1 PDWSA Bungaroo Creek Water Reserve Groundwater	Refer to Section 3.1.1	C = Moderate L = Possible **Medium Risk** Refer to section 3.5	N	Condition 3 - operational requirements (TSF8 added) **including deposition limit of 148mRL** Condition 21 – water monitoring (TSF8 added) (22, 23 monitoring requirements also apply) **Existing condition 24 (water balance) extended to TSF8.** **Condition 25 – TSF audit**	A water balance is required to allow calculation of seepage volumes. A temporary deposition limit of 148m RL introduced to minimise the extended deposition into TSF8 eastern cell which may reduce consolidation and increase seepage. Consistent with licence holder planned schedule. Since the premises is not subject to the Mining Act, an annual TSF audit report is required. Refer to section 3.4 for detailed consideration of

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**				
								works approval conditions.
	Overtopping of tailings or tailings water	Direct discharges to land and infiltration to soil resulting in contamination	Priority 1 PDWSA Bungaroo Creek Water Reserve PECs	Refer to Section 3.1.1	C = Moderate L = Rare **Medium Risk**	Y	Condition 3 – freeboard requirements	N/A
Tailings delivery and return water pipelines	Spillage of tailings and decant return water through leaks, pipeline ruptures or failure	Direct discharges to land and infiltration to soil resulting in contamination	Priority 1 PDWSA Bungaroo Creek Water Reserve PECs		C = Minor L = Unlikely **Medium Risk**	Y	Condition 3 – pipeline inspections, spill cleanup	N/A

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

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

3.3 TSF3 – detailed consideration of W6495/2021/1 conditions

The TSF operation risk assessment from W6495/2021/1 has been reviewed in sections 3.1 and 3.2. The works approval controls have been reviewed and modified as follows for transfer to the licence in this amendment:

- TSF3 operational requirements from Table 3 of W6495/2021/1 are added to Table 2 of the revised licence, unless covered elsewhere in licence conditions.
- All monitoring bores listed for TSF3 in Table 4 of W6495/2021/1 are added to Table 6 in condition 21 of the licence.
    - All monthly or bimonthly groundwater monitoring required by the works approval will be required quarterly (SWL, pH, EC) or annually (TDS, chemistry) under the licence, consistent with the monitoring frequencies for existing groundwater monitoring bores. The Delegated Officer considers that the higher frequency monitoring during TLO gives sufficient baseline data.
    - The chemical analyte suite required bimonthly under the works approval has been reviewed and compared to the suite required for groundwater samples under the existing licence.
        - Major ions – the list on the current licence and works approval W6495/2021/1 are identical except fluoride is required under the works approval. Since no decant water analysis has been provided to date, the Delegated Officer has added fluoride to the licence analyte suite. (Administrative change: ions listed in alphabetical order and spelled out in full as per application)
        - Metals / metalloids – The suite requested in the amendment application contains all analytes listed on the current licence, plus some additional. It contains all analytes listed on W6495/2021/1 except for Si and Sn. The Delegated Officer has added these to the licence analyte suite.
    - Acrylamide is required as per both the current licence and W6495/2021/1.
    - The application proposes Total Nitrogen (as per current licence) and Nitrate. The Delegated Officer considers this an acceptable alternative to the Nitrate, Nitrite and Ammonia required under W6495/2021/1.
- The requirement from condition 12 of W6495/2021/1 to compare monitoring results with the 95% level of species protection - ANZG 2018 criteria is transferred to condition 26 (annual reporting) of the licence.
- Consistent with the decision report for works approval W6495/2021/1, condition 25 is added in this amendment for an annual TSF audit report on technical aspects on the TSF design and management since the premises is not subject to the *Mining Act 1978*. As well as the requirements specified in this condition, published guidance for TSF audits under the *Mining Act 1978* should be used in the preparation of this TSF audit.
- The VWP monitoring will not be transferred to the revised licence to avoid regulatory duplication. TSF stability is primarily regulated under the *Mines Safety and Inspection Act 1994*. Piezometric data will be included in the TSF audit condition referenced above.

3.4 TSF8 - detailed consideration of W6653/2022/1 conditions

The TSF8 risk assessment from W6653/2022/1 has been reviewed in sections 3.1 and 3.2. The works approval controls have been reviewed and modified as follows for transfer to the licence in this amendment:

- TSF8 operational requirements from Table 7 and Table 8 of W6653/2022/1 are added to Table 2 of the revised licence.
- TSF8 added to condition 24 for water balance
- MBTSF8a to MBTSF8d added to Table 5 in condition 21 of the licence. Of note:
    - Analyte monitoring frequencies will match those on the existing licence. More frequent baseline during TLO is sufficient.
    - Major ions, metals and metalloids – all on W6653/2022/1 are in the requested analyte list except Fluoride (Fl) and Strontium (Sr). Strontium was identified as a potential contaminant of concern in the W6653/2022/1 assessment. Since no decant water analysis has been provided to date, the Delegated Officer has added these to the licence analyte suite.
    - Acrylamide is required as per both the current licence and W6495/2021/1.
    - The application proposes Total Nitrogen and Nitrate. The Delegated Officer considers this an acceptable alternative to the Nitrate, Nitrite and Ammonia required under W6495/2021/1.
- Consistent with the decision report for works approval W6495/2021/1, condition 25 is added in this amendment for an annual TSF audit report on technical aspects on the TSF design and management since the premises is not subject to the *Mining Act 1978*. As well as the requirements specified in this condition, published guidance for TSF audits under the *Mining Act 1978* should be used in the preparation of this TSF audit.
- The VWP monitoring will not be transferred to the revised licence to avoid regulatory duplication. TSF stability is primarily regulated under the *Mines Safety and Inspection Act 1994*. Piezometric data will however be reported in the TSF audit condition referenced above.

3.5 Detailed risk assessment for deposition beyond 140 mRL into TSF8 eastern cell before construction of the western cell

This assessment is limited to the increased height of deposition into the TSF8 eastern cell (consistent with the TSF design but not authorised under the works approval due to planned timeframes) and the scheduling change to deposit longer term into the eastern cell rather than alternating with the western cell from the early stages. Extended deposition solely into TSF8 eastern cell may reduce consolidation and increase seepage, but such impact is not expected to change the previously assessed seepage risk for TSF8. There is no pervious material layer in the 'dividing embankment' to direct seepage to the seepage collection trench, but the northern seepage management system has been installed in the eastern cell as designed.

Further raising of the central dividing embankment CDE (the lowest embankment of the eastern cell) without the confining pressure of tailings in the western cell changes means the stability of the CDE as a (temporary) external embankment needs to be reconsidered. The Delegated Officer notes that the department has no regulatory role in assessing the safely aspects of embankment stability. To support the rotation of deposition between cells which improves tailings consolidation as well as minimising differential between the tailings level either side of the CDE, the Delegated Officer will impose a temporary depositional limit for the eastern cell of 148 mRL. This limit will allow deposition to the eastern cell until the western cell is available. Construction however will be authorised to the design height of 152 mRL as requested. This improves stability and increases seepage risk through the embankment as due to the downstream construction method proposed, the higher construction height will make the CDE thicker.

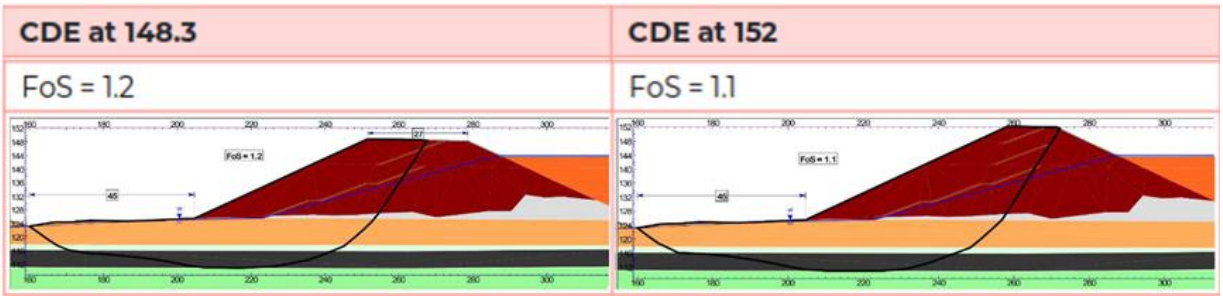

Figure 4: Modelling based on tailings elevation for June 2029: 143.5 mRL

The embankment raise and change of deposition sequence does not alter the risk assessed in the works approval. **Moderate** environmental impacts from seepage are **possible**. This results in a risk rating of **medium**.

4. Consultation

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

Table 5: Consultation

Consultation method	Comments received	Department response
Advice sought from the Department of Jobs, Tourism, Science and Innovation (JTSI) on regulation under the *Iron Ore (Robe River) Agreement Act 1964* (SAA)	Clause 7AC SAA requires submission of Annual Environmental Reports on the measures taken for the protection and management of the environment including the investigations, research and monitoring carried out in assessing these measures. No specific requirements for a TSF technical audit or piezometer monitoring.	Advice considered in the setting of conditions for TSF audit.
Licence holder was provided with initial draft amendment on 23 July 2025.	Refer to Appendix 1	Refer to Appendix 1
Licence holder was provided with second draft amendment on 13 August 2025.	Coordinates for TSF8 monitoring bores provided. No further comments.	Noted. Coordinates inserted in Schedule 2.

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 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
Throughout	Administrative changes – additional headings added for clarity, Tables renumbered from Table 3 (inserted). Conditions renumbered from condition 25.
Cover	• Updated file number • premises description updated to reference Figure 1 not coordinates (previous reference incorrect) • category 57 (used tyre storage) added – limit of 5,000 tyres
2	• Construction authorisation for central dividing embankment raise to 152m • Clarification added that new landfills are authorised for construction within the premises boundary, subject to the siting conditions in column 2 of Table 1.

3	• TSF8 eastern cell added
	• Deposition to TSF5 is not authorised - deposition has ceased due to seepage issues and application states that it is not planned to recommence.
	• Operational requirements updated to incorporate requirements from W6495/2021/1 (TSF3) and W6653/2022/1 (TSF8), however:
	  ○ Tailings solids target of greater than 35% accepted as the previous target of 40% has not been achievable in spite of operational improvements
	  ○ Freeboard requirement has been reworded to be outcomes based, with guidance for operational freeboard level
	  ○ All inspection requirements grouped together
	  ○ Temporary deposition limit of 148 mRL added
	  ○ More flexibility added for return water use – but no new discharge points have been assessed.
	• Administrative update – corrected inert type 1 (and 2) waste to inert waste type 1 (and 2) as per landfill definitions, and definitions on licence
	• Additional potential landfill locations acknowledged.

7	Updated to allow for storage of tyres as well as disposal by burying, which is moved to the table but not reassessed.
8	Records also required for stored tyres
20	ANZECC (2000) updated to ANZG 2018. This change is administrative since the definition on the existing licence references the latest version, and ANZECC (2000) was superseded by ANZG 2018.
21	Groundwater sites

	• Bore numbering updated • TSF8 bores added • Inaccessible MB16MEJ0003 replaced with WB15MEJ001 • Analyte lists updated as discussed in section 2.2.1 and 2.2.2 Supernatant water • TSF8 added • Removed the word 'thickened' for clarity – applies if any tailings are received
24	• TSF8 added • Clarified that evaporation rate used in water balance must be actual, not be assumed to be pan evaporation – consistent with works approval • % solid content added
New condition 25	• Annual TSF audit – required since the premises is not on tenure regulated under the *Mining Act 1978* (Mining Act). The licence holder should refer to published guidance about TSF audits under the Mining Act for guidance.
Former conditions 25 on	• renumbered

26 (formerly 25)	• Condition 3
	  ○ Requirement to report tonnes not volumes (consistent with category definitions)
	  ○ Clarification that updated landfill figures are required in the AER, not the licence by amendment
	• Condition 7 – a review of tyres storage including risk assessment
	• Condition 8 - Reporting on tyre disposal and storage added – for disposal this was previously required by condition 8 but missed from this table.
	• Condition 21 - Data required in graphical form only where the results exceed the detection limit
	• Condition 21
	  ○ Data required in graphical form only where the results exceed the detection limit.
	  ○ Requirement for groundwater monitoring results to be compared to ANZG (2018) default guideline values (DGVs) for 95% species protection.

29 (formerly 28)	Administrative correction – 29(c) references condition 2 only.
Definitions	'Act' removed ('EP Act' used in all cases – already in definitions) 'ANZECC 2000' replaced with 'ANZG 2018' 'DFES Guidance Note: GN02' added 'Environmentally sensitive area' added
Schedule 1	• Figure 3 (monitoring locations) updated • Figure 4 caption updated • Figure 6 added – design of TSF8 central dividing embankment raise
Schedule 2	• Administrative change – retitled as monitoring bore coordinates (previously incorrectly stated as premises boundary coordinates) in schedule heading and table heading • MB16ME0003 replaced with WB15MEJ001 • Corrections to bore notation – no change to coordinates • TSF 8 bores added

References

1. Department of Environment Regulation (DER) 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
2. Department of Water and Environmental Regulation (DWER) 2020, *Guideline: Environmental Siting*, Perth, Western Australia.
3. DWER 2020, *Guideline: Risk Assessments*, Perth, Western Australia.
4. Department of Fire and Emergency Services (DFES) 2023, *Guidance Note: GN02: Bulk storage of rubber tyres including shredded and crumbed tyres*, Perth, Western Australia
5. Department of Mines, Industry Regulation and Safety (2017), *Tailings storage facility audit – guide*, Perth, Western Australia

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

Condition	Summary of licence holder's comment	Department's response
3 (Table 2)	Draft proposed to remove inactive TSF 5. Licence holder requested that although deposition is not planned to recommence on TSF5, it be retained on the licence to support closure requirements	Removing TSF5 as an active facility does not preclude the use of tailings material in closure. However it is acceptable to retain the TSF on the licence as requested by the license holder; an additional operational requirement is added to Table 2 stating that tailings shall not be deposited into TSF5.
	Specify 'average annual concentration' rather than 'average concentration'.	Accepted.
	Remove requirement for TSF3 deposition to occur at the northern end, specifying only the location of the decant pond.	Accepted. Environmental objective still met.
	Instead of specifying depth of decant pond, specify 'maintain at a depth of at least 1.5m below the spillway invert level.	The depth of decant pond was included in W6653/2022/1 as a licence holder commitment, primarily as a TSF water management measure. However other operational requirements (including management to minimise pond size) are sufficient. Proposed change accepted.
	Changes to description of return water – less prescriptive	Accepted. Note that no additional discharges have been assessed.
7 (Table 3)	Requested less prescriptive tyre storage conditions, citing larger tyres, lower fire risk due to setting and additional vegetation clearing requirements to comply with DFES guidance.	Accepted, but requirement added in table 7 (condition 26) to review the tyre storage design and execution and present this within the annual environmental report.
	Clarifying that firefighting equipment will be available on the prescribed premises, not necessarily within the tyre storage area.	Accepted. This was the intent of the draft condition, but clarification supported.
	Requested remove the requirement for fire water to be removed by a licenced carrier as a contaminated waste.	Modified condition proposed requiring fire water to be contained to avoid discharge to environment. The licence holder will determine how to do this. Treatment options proposed such as putting through existing water treatment plants have not been assessed in this amendment and may require additional approvals it they result in new or altered emissions or discharges.
21 (Table 6)	Electrical conductivity required quarterly for monitoring bores.	Accepted.
	Hardness changed to Alkalinity.	Accepted.
	Removal of NO_3 - the elemental symbol for nitrate from the monitoring parameter 'Total Nitrogen' at TSF and WWTP monitoring sites	Administrative correction accepted.

Condition	Summary of licence holder's comment	Department's response
	pH and EC authorised for in-field non-NATA accredited analysis for all Table 6.	Accepted.
	Requesting specification that no sample is required if bore is dry.	Accepted.
24	Requesting that TSF5 remain in this condition	Accepted as per licence holder request. Refer to row 1 of this table. Administrative only as this condition only applies when depositing tailings, and that is not currently authorised for TSF5.
25	Licence holder states that while not required to do so, they have agreed to adopt the Department of Mines, Petroleum and Energy (DMPE) annual audit requirements for tailings storage facilities. The Mesa J TSF Annual Audit Report for each calendar year is submitted to DMPE in the first half of the following year. They propose to submit this same report to DWER in compliance with condition 25.	Accepted. Due date set as 30 June for the preceding calendar year.
26	The License holder requests confirmation that the 'volumes' referenced in Table 7 should be reported in tonnes per year, consistent with the relevant Category production or design capacity, noting that 'volume' refers to the area something occupies (measured in cubic meters – m³ or litres – L) rather than its weight (measured in tonnes).	• Noted that the requests for volumes do not align with units used to define categories in the *Environmental Protection Regulations 1987*. • For water, the department generally considers 1m^3 approximately equals 1 tonne hence accepting water volumes in m^3 or kL. This wording will be retained, while acknowledging that kL does not actually denote volume. • For ore and landfill, reporting in tonnes to align with the category definition is preferred. The Delegated Officer has therefore updated these from 'volume' to 'tonnes'.
	For conditions 20, 22 and 23, only require graphs if results are above the detection limit.	Accepted.
	Compare monitoring for all TSFs (not just TSF3) to the ANZG (2018) default guideline values (DGVs) for 95% species protection	Exceeds requirements in the draft condition. Accepted as licence holder commitment.
2 / 26 / Schedule 1 Figure 4.	Request modifications to landfill conditions to allow new landfills within the prescribed premises, subject to siting requirements in condition 2.	Acknowledge that the intent of the amendment dated 1 June 2023 was to allow new landfills within the prescribed premises boundary, subject to siting requirements in condition 2. • Updates made to condition 2 location column. • Definition of environmentally sensitive areas added for clarity. • Condition 26 updated to clarify that updated landfill figures are required in the AER, not that a licence amendment is required.

Condition	Summary of licence holder's comment	Department's response
		• Caption of Figure 4 altered to only reference existing landfill. Suggested footnote about subsequent landfills not required as this is separately addressed in condition 2.
Schedule 2	Updates to bore numbers, order of listing, description of which TSFs some relate to.	Acceptable, consistent with conditions. No change to coordinates. TSF8 bores were missed from this schedule – added.
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Section 5.1	Changes to reflect that TSF5 is not being removed from the licence	Accepted – see comment above under condition 3.
Section 3.3 and 3.4	Licence holder accepts the additions to the analyte suite.	Noted. Query removed.