



## Application for Licence Amendment

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

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<b>Licence Number</b>	L5275/1972/12
<b>Licence Holder</b>	Pilbara Iron Company (Services) Pty Ltd
<b>ACN</b>	107 210 248
<b>File Number</b>	APP-0027906
<b>Premises</b>	Greater Paraburdoo Iron Ore Operations AML70/246, AML70/4, AG70/4, AG70/14 and L47/326 ROCKLEA WA 6751  As defined by the coordinates in Schedule 2 of the Revised Licence  As defined by the Premises maps attached to the Revised Licence
<b>Date of Report</b>	03/09/2025 (FINAL)
<b>Proposed Decision</b>	Revised licence granted

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# 1. Decision summary

Licence L5275/1972/12 is held by Pilbara Iron Company (Services) Pty Ltd (Licence Holder) for the Greater Paraburdoo Iron Ore Operations (the Premises), located at AML70/246, AML70/4, AG70/4, AG70/14 and L47/326 ROCKLEA WA 6751.

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 L5275/1972/12 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 11 March 2025, the Licence Holder submitted an application to the department to amend Licence L5275/1972/12 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act). The following amendments are being sought:

- Add Tailings Storage Facility (TSF) TSF1N Cell Raise (approved and constructed under W6421/2020/1) to the licence to allow ongoing operations;
- Add the Heavy Vehicle Refuelling Facility (HVRF) (approved and constructed under W6643/2021/1) to the licence to allow for ongoing operation and increase associated Category 73 limit from 6,578 cubic metres in aggregate to 7,653 cubic metres;
- Removal of decommissioned temporary bulk refuelling facilities namely the Western Range (Qbirt) fuel facility 1 and the Western Range (CPB) fuel facility 2 from the licence;
- Amendment to Condition 3, Table 2 operational requirements to capture altered TSF1N spigot arrangement (inclusion of wording to allow pipelines and spigots anywhere within or around the perimeter of the TSF); and
- Add category 57 to allow for the storage of up to 5,000 tyres.

This amendment is limited only to changes to Categories 5, 57 and 73 activities from the Existing Licence. No changes to the aspects of the existing Licence relating to Categories 6, 12, 52, 54, 64 and 85 have been requested by the Licence Holder.

Table 1 below outlines the proposed changes to the existing Licence

**Table 1: Proposed design or throughput capacity changes**

Category	Current design throughput capacity	Proposed design throughput capacity	Description of proposed amendment
5	30,000,000 tonnes per annual period	30,000,000 tonnes per annual period	Add TSF1N Cell Raise (approved and constructed under W6421/2020/1) to the licence to allow ongoing operations.  Amendment to Condition 3, Table 2 operational

Category	Current design throughput capacity	Proposed design throughput capacity	Description of proposed amendment
			requirements to capture altered TSF1N spigot arrangement (inclusion of wording to allow pipelines and spigots anywhere within or around the perimeter of the TSF).
6	800,000 tonnes per annual period	N/A	N/A
12	10,000,000 tonnes or more per annual period	N/A	N/A
52	127.5 MW	N/A	N/A
54	400 cubic metres per day	N/A	N/A
57	0	5,000 tyres	Add category 57 to allow for the storage of up to 5,000 tyres.
64	34,000 tonnes per annual period	N/A	N/A
73	6,578 cubic metres in aggregate	7,653 cubic metres in aggregate	Add the HVRF (approved and constructed under W6643/2021/1) to the licence to allow for ongoing operation and increase associated Category 73 limit from 6,578 cubic metres in aggregate to 7,653 cubic metres.
85	24 cubic metres per day	N/A	N/A

### 2.2.1 TSF1N Cell Raise

An upstream wall raise of the TSF1 Northern Cell embankment has been completed under Works Approval W6421/2020/1 to provide an additional storage capacity of 4.7 million cubic metres. The TSF1 Northern Cell lift involved the following:

- Raise of the confining embankments by 2 m from RL 371 m Australian Height Datum (AHD) to RL 373 m AHD by upstream construction method. Upgrade of the decant system, comprising of the replacement of the siphon decant system with a skid/trailer mounting pump system;
- Ramp construction from the decant access way to the tailings surface to position a decant pump; and
- Relocation of the existing access road around the eastern perimeter along the natural topography or raised in its current location.

Tailings composition summary is provided below:

- Tailings slurry comprised 37% solids w/w;
- Non-Acid Forming (NAF) with a Net Acid Producing Potential (NAPP) of -4 kg H<sub>2</sub>SO<sub>4</sub>/t indicating an excess neutralising capacity;
- Multi-element analysis for the tailings were screened against the Guideline: Assessment and management of contaminated sites (DER 2014). Screening identified exceedance for the Ecological Investigation Levels for Chromium, Manganese and Phosphorus, typical of iron ore tailings; and
- Analysis for supernatant liquor were screened against the water quality objectives from Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC ARMCANZ 2000) for Livestock and Australian Drinking Water Guidelines (NHMRC NRMCC 2011). The screening identified exceedance for the Total Dissolved Solids (TDS), Chloride and Sodium. The identified exceedance for the water quality objectives for TDS, Chloride and Sodium is typical of iron ore supernatant liquor that is been concentrated due to evaporation and is typical of elevated salinity.

Environmental Construction Report submitted to DWER on 26 August 2022 with compliance letter provided 06 October 2022.

Environmental Commissioning Report submitted to DWER on 21 June 2024 with compliance letter provided 18 July 2024.

Tailings is delivered to TSF1 Northern Cell using the existing tailings deposition pipeline from the processing plant to the TSF1 facility. This pipeline is currently operational and will continue to operate to supply both the TSF1 Northern and Southern Cells. Within the TSF1 Northern Cell a new perimeter pipeline has been installed downstream of the existing tailings deposition pipeline to allow tailings deposition along the embankment walls.

This deposition is conducted in a coordinated manner to manage the decant pond around the central decant structure. The decant system feeds water into the return water sump. From this sump, decant water is pumped using the existing return water transfer pipeline to the process water tank prior to use in the processing circuit.

LEAF testing is required as part of the Works Approval W6421/2020/1, however, the final report has yet to be provided. This requirement will be included as a condition on the Amended Licence.

### 2.2.2 HVRF

HVRF including six, 200 KL diesel storage tanks and associated infrastructure such as piping and pumps have been constructed under Works Approval W6643/2021/1.

Environmental Construction Report submitted to DWER on 11 June 2024 with compliance letter provided on 28 June 2024.

Environmental Commissioning Report submitted to DWER on 09 July 2024 with compliance letter provided on 16 July 2024.

### 2.2.3 Removal of decommissioned temporary bulk refuelling facilities namely the Western Range (Qbirt) fuel facility 1 and the Western Range (CPB) fuel facility 2

The Licence Holder has requested to remove the Western Range (Qbirt) fuel facility 1 and the Western Range (CPB) fuel facility 2 from the licence. Both facilities have been decommissioned, demobilised, and the areas rehabilitated as per the compliance requirements.

This is an administrative change and, therefore, has not been further assessed.

### 2.2.4 TSF1N spigot arrangement

Mining Proposal REG ID 114961 allows the stockpiling of tailings on the TSF1N. The tailings have now been mined/relocated from the southern portion of TSF North Cell, and stockpiled on the eastern portion of TSF North Cell.

To effectively manage the TSF, the location of discharge infrastructure will need to be relocated to sit within the TSF itself, on the western side.

The proposed operational changes associated with modifications to TSF1N spigot arrangements and tailings delivery do not alter the emission or risk profile. This is an administrative change and, therefore, has not been further assessed.

### 2.2.5 Tyre storage

The Licence Holder is requesting to store up to 5,000 tyres onsite. Tyres will be stored in accordance with *Environmental Protection Act 1986*, *Waste Avoidance, Resource Recovery Act 2007*, *Environmental Protection Regulations 1987* - Part 6, Schedule 1 and Schedule 5 and *Environmental Protection (Controlled Waste) Regulations 2004*, as well as the storage practices specified in the Department of Fire and Emergency Services (DFES) Guidance Note: GN02 Bulk Storage of Rubber Tyres Including Shredded and Crumbed Tyres.

## 2.3 Part IV of the EP Act

The Greater Paraburdoo Iron Ore Hub Proposal was referred to the EPA under Section 38, of the EP Act on 2 November 2018 (Assessment No. 2189) and was determined to be assessed at the level of Public Environmental Review (PER). The EPA identified the following preliminary environmental factors relevant to the Proposal:

- Flora and vegetation;
- Terrestrial fauna;
- Subterranean fauna;
- Inland waters; and
- Social surroundings.

Ministerial Statement 1195 was issued 05 August 2022.

## 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
<b>TSF1N Cell Raise</b>			
Iron ore tailings with elevations in Chromium, Manganese and Phosphorus	Spillage of tailings through leaks, pipeline ruptures or failures	Direct discharges	<ul style="list-style-type: none"> <li>Existing HDPE lined carbon steel pipe, approximately 3.2 km long which ties into the TSF perimeter pipelines;</li> <li>Flow meter installed at the end of the pipeline to provide leak detection capabilities;</li> <li>Sumps in low areas along the pipeline route to contain spillages;</li> <li>Daily tailings deposition and return water transfer pipelines;</li> <li>TSF perimeter piepleins Installed downstream of the existing tailings deposition pipeline;</li> <li>Existing high density polyethylene (HDPE) lined carbon steel pipe which will tie into the TSF perimeter pipelines;</li> <li>An existing flow meter installed at the processing plant. A second flow meter will be installed at the end of the pipeline to provide leak detection capabilities;</li> <li>The current system's control has sensors to halt pumping if a sudden pressure drop is detected. Leak detection for this project has been added to the system;</li> <li>Sumps in low areas along the pipeline route to contain spillages;</li> <li>Wear assessment of the pipeline undertaken on a regular basis;</li> <li>DN355 PN10 HDPE pipe for the first 2,660 m before an air and vacuum release valve, where the water flows under gravity for the remaining 3,200 m in a DN250 PN8 HDPE pipe to the process water tank;</li> <li>Flow meter installed at the pump station;</li> <li>Pressure transmitters included at the pump station;</li> <li>Sumps in low areas along the pipeline route to contain spillages; and</li> <li>Wear assessment of the pipeline undertaken on a regular basis.</li> </ul>

Emission	Sources	Potential pathways	Proposed controls
			<p>Return water pipeline:</p> <ul style="list-style-type: none"> <li>• DN355 PN10 HDPE pipe for the first 2,660 m;</li> <li>• Before an air and vacuum release valve, where the water flows under gravity for the remaining;</li> <li>• 3,200 m in a DN250 PN8 HDPE pipe to the process water tank;</li> <li>• Flow meter installed at the pump station;</li> <li>• Pressure transmitters are included at the pump station; and</li> <li>• Sumps in low areas along the pipeline route to contain spillages.</li> </ul>
	Overtopping of the TSF	Direct discharges over the embankments	<ul style="list-style-type: none"> <li>• Contain inflows from a 1:100 Annual Exceedance Probability, 72 hour flood duration;</li> <li>• Embankment of RL 373 m AHD;</li> <li>• Maintaining a minimum total freeboard of 500 mm;</li> <li>• Decant rate of 180,000 m<sup>3</sup>/month to 222,000 m<sup>3</sup>/month;</li> <li>• Decant rate sufficient to manage water; and</li> <li>• Daily inspections to confirm required freeboard capacity is available.</li> </ul>
	Tailings seepage	Infiltration through the base and embankments of the TSF	<ul style="list-style-type: none"> <li>• Decant pond located in the centre of the Northern Cell;</li> <li>• Decant pond radius of 300 m (distance to embankment 650 m; distance to exclusion zone 450 m);</li> <li>• Embankment wall stability monitoring program using installed piezometers and/or vibrating piezometers;</li> <li>• Decant system comprises of a duty/standby pump arrangement centrally located on a permanent decant causeway;</li> <li>• Decant system allows for remote radio operation of the pumps and fuel capacity to allow at a minimum 7 days continued operation of the pumps at full load for storm events;</li> <li>• Decant rate of 180,000 m<sup>3</sup>/month to 222,000 m<sup>3</sup>/month;</li> </ul>



Emission	Sources	Potential pathways	Proposed controls
			<ul style="list-style-type: none"> <li>Decant rate sufficient to manage water; and</li> <li>Groundwater quality monitoring program.</li> </ul>
<b>HVRF</b>			
Hydrocarbons	Fuel from the HVRF	Direct discharges from leaks / spills	<ul style="list-style-type: none"> <li>Vehicle refuelling to occur over concrete hardstand;</li> <li>Potentially contaminated surface water to be collected in sumps and directed to the oily water collection and treatment system;</li> <li>Potentially contaminated surface water to be treated to achieve a total recoverable hydrocarbon concentration below 15mg/L;</li> <li>Spill response equipment available for use;</li> <li>Located where the vertical distance between the facility and the groundwater level is more than 10 m;</li> <li>Fuel storage tanks will be designed and constructed to AS 1940-2004: The storage and handling of flammable and combustible liquids;</li> <li>Fuel storage tanks will be above ground and self-bunded;</li> <li>Concrete hardstand will be installed where there is potential for hydrocarbon spills;</li> <li>Potentially contaminated surface water will be collected in sumps and directed to the oily water collection and treatment system. The oily water treatment system will be designed to achieve a total recoverable hydrocarbon concentration below 15 mg/L in treated water;</li> <li>Management structures (bundling / secondary containment) will be installed to ensure any spills are contained; and</li> <li>Automatic cut off valves to be located at the heavy mobile equipment dispenser.</li> </ul>
<b>Tyre Storage</b>			
Dark smoke	Tyre fire	Air/windborne pathway	DFES Guidance Note: GN02 Bulk Storage of Rubber Tyres Including Shredded and Crumbed Tyres), to mitigate the risk of fire

Emission	Sources	Potential pathways	Proposed controls
			<p>and to be able to contain and extinguish an established fire in stored tyres, including:</p> <ul style="list-style-type: none"> <li>• External tyre storage areas will be level, clear of vegetation, rubbish and other combustible material to mitigate the risk of fire;</li> <li>• 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; and</li> <li>• Firefighting resources and water supply will be available to be able to extinguish an established fire.</li> </ul>

### 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**

Human receptors	Distance from prescribed activity
Residents located in Paraburdoo Townsite	<p>Approximately 7 km to the north-east of the prescribed premise boundary.</p> <p>These receptors have been screened out of the risk assessment due to separation distance.</p>
Environmental receptors	Distance from prescribed activity
<p><b>Environmentally Sensitive Areas (ESA)</b></p> <p><u>HVRF</u></p> <p>One ESA - the State threatened flora species, <i>Aluta quadrata</i> (T) population, occurs within the prescribed premises. This species is found on the edge of creek beds, base of cliffs, rocky crevices, near crest of ridge.</p>	<p><u>HVRF</u></p> <p>The <i>A. quadrata</i> population at Western Range is ~900 m north north-west of the HVRF.</p>
<p><b>Threatened Ecological Communities (TEC)</b></p> <p>There are no TECs or PECs recorded within the prescribed premises boundary. The closest PEC is the Priority 3 <i>Wona Land System Basalt upland gilgai plains supporting</i></p>	<p>The P3 PEC is &lt;10 km north of the prescribed premises.</p>

<p><i>Roebourne Plains grass and Mitchell grass tussock grasslands, minor hard spinifex grasslands or annual grasslands/herbfields.</i></p>	
<p><b>Threatened and/or priority flora</b></p> <p><u>HVRF</u></p> <p>A State threatened flora species, <i>Aluta quadrata</i> (T) population occurs within the prescribed premises. This species is found on the edge of creek beds, base of cliffs, rocky crevices, near crest of ridge. The Licensee has recognized <i>Aluta quadrata</i> as a key environmental value since the species was identified at Western Range in 2009.</p> <p>TSF</p> <p>The Project area is heavily disturbed, and no Threatened/Priority Ecological Communities, Declared Rare Flora, or Priority flora species were recorded with the proposed work area.</p> <p>There were two priority species listed (Table 11-1), <i>Hibiscus campanulatus</i> (P1) and <i>Ptilotus trichocephalus</i> (P4) recorded in the proposed project area.</p> <p><i>Hibiscus campanulatus</i> has a known range of approximately 50 km and <i>Ptilotus trichocephalus</i> a known range of approximately 277 km in NatureMap (DBCA 1998 - 2019).</p>	<p><u>HVRF</u></p> <p>The <i>A. quadrata</i> population at Western Range is ~900 m north north-west of the HVRF</p> <p><u>TSF</u></p> <p><i>Hibiscus campanulatus</i> and <i>Ptilotus trichocephalus</i> at least 1 km from Northern Cell boundary.</p>
<p><b>Threatened and/or priority fauna</b></p> <p><u>HVRF</u></p> <p>Conservation significant species recorded within the prescribed premises include:</p> <ul style="list-style-type: none"> <li>• Ghost Bat (Vulnerable under the EPBC Act and BC Act);</li> <li>• Pilbara Leaf-nosed Bat (Vulnerable under the EPBC Act and BC Act);</li> <li>• Northern Quoll (Endangered under the EPBC Act and BC Act);</li> <li>• Pilbara Olive Python (Vulnerable under the EPBC Act and BC Act);</li> <li>• Grey Falcon (Vulnerable under the BC Act);</li> <li>• Common Sandpiper (Migratory under EPBC Act and International Agreement under the BC Act); and</li> <li>• Western Pebble-mound Mouse (Priority 4).</li> </ul> <p>Ghost Bat</p>	<p><u>HVRF</u></p> <p>The nearest significant Ghost Bat cave (Cave 18) is 1 km north of the HVRF.</p> <p><u>TSF</u></p> <p>Common Sandpiper (<i>Actitis hypoleucos</i>), listed under the EPBC Act and the WC Act Schedule 5, has been recorded on the TSF1.</p>

<p>Out of the 18 Ghost Bat caves recorded in the prescribed premises, nine are considered significant including one confirmed maternal roost, three potential maternity roosts with regular use, two confirmed diurnal roosts and two potential diurnal roosts.</p> <p>Pilbara Leaf-nosed Bats (PLNB)</p> <p>One permanent colony of at least 400 to 600 individuals been identified in the vicinity of Gardagarli (also known as Ratty Springs roost), this is the only known PLNB maternity roost within the prescribed premises.</p> <p><u>TSF</u></p> <p>No conservation listed fauna has been recorded or are considered likely to occur within the Project area.</p> <p>Only one fauna species of conservation significance, the Common Sandpiper (<i>Actitis hypoleucos</i>), listed under the EPBC Act and the WC Act Schedule 5, has been recorded on the TSF1.</p>	
<p><b>Rivers, lakes, oceans and other bodies of surface water, etc.</b></p> <p><u>HVRF</u></p> <p>There are a number of ephemeral surface water features surrounding the Proposal, these include:</p> <ul style="list-style-type: none"> <li>• Seven Mile Creek</li> <li>• Pirraburdu Creek</li> <li>• Six Mile Creek – western end of the prescribed premises</li> </ul> <p>Gardagarli is a significant semi-permanent surface water feature at Western Range.</p> <p>Ephemeral surface water fed gorge pools also occur at:</p> <ul style="list-style-type: none"> <li>• 24East, 32-37East and 42East gorges within the existing Eastern Range operations</li> <li>• eight additional ephemeral pools in two gorges identified within the undeveloped portion of the prescribed premises east of Eastern Range.</li> <li>• Three potentially persistent surface water fed pools at Western Range.</li> <li>• Ephemeral surface water fed gorge pools at Western Range and Eastern Range will be affected by varying</li> </ul>	<p><u>HVRF</u></p> <p>Gardagarli is located 7.5 km east of the HVRF.</p> <p><u>TSF</u></p> <p>Ranging from 3 – 7 km away</p>

<p>degrees by reduced inflows and sedimentation as a result of changes to landforms and surface water catchments. However, the three surface water fed gorge pools that currently hold persistent water are predicted to retain persistent water post mining.</p> <p><b>TSF</b></p> <p>There are a number of surface water bodies surrounding the project area, these include:</p> <ul style="list-style-type: none"> <li>• Turee Creek – 3 km to the south east</li> <li>• Seven mile creek – 3 km to the west north west</li> <li>• Pirraburdu Creek – 5 km to the north west</li> <li>• Bellary Creek – 7 km to the north east</li> <li>• Tableland Creek – 7 km to the north east</li> <li>• • Two Ephemeral creeks – both flowing to the west of the TSF.</li> </ul>	
<p><b>Pirraburdu Creek</b></p> <p><u>HVRF and TSF</u></p> <p>The Licensee recognises Pirraburdu Creek as holding particularly high environmental and cultural heritage value. This watercourse hosts Gardargarli (also known as Ratty Springs or Johnny's Gorge), which is a significant semi-permanent surface water feature in the prescribed premises. It provides an important water source and foraging habitat for local fauna - including PLNB which occupy a maternity roost adjacent to Gardargarli. This is the only Pilbara Leaf-nosed Bat roost in the Premises. The pools around Gardargarli are also suitable foraging habitat for Ghost Bats and other significant species. Pirraburdu Creek also provides alluvial habitat for stygofauna and hosts riparian vegetation including groundwater dependent ecosystems.</p>	<p><u>HVRF</u></p> <p>The HVRF is more than 6 km from the Pirraburdu creek.</p> <p><u>TSF</u></p> <p>5 km to the north west</p>
<p><b>Public Drinking Water Source Area (PDWSA)</b></p> <p>No PDWSAs are located within the premises boundary. The nearest PDWSA is the Priority 1 Paraburdoo Water Reserve.</p> <p>Groundwater flow at Paraburdoo is generally in a southerly direction – away from the PDWSA.</p>	<p>4.5 km to the northeast of the prescribed premises boundary</p>
<p><b>Groundwater</b></p>	<p>The Premises is located within the Proclaimed Pilbara Groundwater and Surface Water Areas. Depth to</p>

	<p>groundwater is more than 10 mbgl.</p> <p>Paraburdoo area: The depth to groundwater is approximately 5 m below ground level (mbgl) in the Seven Mile Creek alluvial aquifer (Rio Tinto, 2021). In the vicinity of the proposed Camp WWTP, groundwater is between 10-20 mbgl (Rio Tinto, 2023).</p>
Cultural receptors	Distance from prescribed activity
<p><b>Aboriginal and other heritage sites</b></p> <p><u>HVRF</u></p> <p>Sites of special significance include:</p> <ul style="list-style-type: none"> <li>• Garrabagarrangu (ID: 19444: Red Ochre Quarry) which is located on the south side of the Western Range near the 36W deposit.</li> <li>• Gardagarli (ID: 7287; also known as Johnny's Gorge and Ratty Springs) in Pirraburdu Creek is also a culturally important site to the Yinhawangka People.</li> <li>• Water sources identified as being highly significant to the Yinhawangka People.</li> </ul> <p><u>TSF</u></p> <p>Heritage surveys (archaeological and ethnographic) have been conducted in conjunction with the Yinhawangka Traditional Owner group over large portions of the Project area since 2001 with key sites of significance identified within the premises.</p>	<p><u>HVRF</u></p> <p>Garrabagarrangu is located 1.6 km north east of the HVRF.</p> <p><u>TSF</u></p> <p>There are three sites within the Waste Dump boundary, PB08-11, PARA-A-02B and PB03-13.</p>

## 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 L5275/1972/12 that accompanies this Amendment Report authorises emissions associated with the operation of the Premises i.e. Category 5, 57 and 73 activities.

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 operations

Risk Event					Risk rating <sup>1</sup> C = consequence L = likelihood	Licence Holder's controls sufficient?	Conditions <sup>2</sup> of licence	Justification for additional regulatory controls
Source/Activities	Potential emission	Potential pathways and impact	Receptors	Licence Holder's controls				
Operations								
TSF1N Cell Raise								
Spillage of tailings through leaks, pipeline ruptures or failures	Iron ore tailings with elevations in Chromium, Manganese and Phosphorus	Direct discharges	Soils, vegetation	Refer to Section 3.1	C = Moderate L = Unlikely <b>Medium Risk</b>	Y	Condition 4, Table 2: Operational requirements includes pipeline controls  Condition 5, Table 3 Tailings characterization parameters requires LEAF testing and report for the upstream wall raise of TSF1 Northern Cell	N/A
Overtopping of the TSF		Direct discharges over the embankments	Soils, vegetation	Refer to Section 3.1	C = Moderate L = Unlikely <b>Medium Risk</b>	Y	Condition 4, Table 2: Operational requirements includes freeboard controls  Condition 5, Table 3 Tailings characterization parameters requires LEAF testing and report for the upstream wall raise of TSF1 Northern Cell  Condition 10 has freeboard controls	N/A
Tailings seepage		Infiltration though the base and embankments of the TSF	Groundwater	Refer to Section 3.1	C = Moderate L = Possible <b>Medium Risk</b>	Y	Condition 5, Table 3 Tailings characterization parameters requires LEAF testing and report for the upstream wall raise of TSF1 Northern Cell  Condition 9 has interception drain for seepage	N/A
HVRF								
Fuel from the HVRF	Hydrocarbons	Direct discharges	Soils, groundwater	Refer to	C = Minor	Y	Condition 4, Table 2:	N/A

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Risk Event					Risk rating <sup>1</sup> C = consequence L = likelihood	Licence Holder's controls sufficient?	Conditions <sup>2</sup> of licence	Justification for additional regulatory controls
Source/Activities	Potential emission	Potential pathways and impact	Receptors	Licence Holder's controls				
		from leaks / spills		Section 3.1	L = Unlikely <b>Medium Risk</b>		Operational requirements includes HVRF controls	
<b>Tyre Storage</b>								
Tyre fire	Dark smoke	Air/windborne pathway	Vegetation	Refer to Section 3.1	C = Moderate L = Rare <b>Medium Risk</b>	Y	Condition 4, Table 2: Operational requirements includes tyre storage controls	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.

## 4. Consultation

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

**Table 5: Consultation**

Consultation method	Comments received	Department response
Licence Holder was provided with draft amendment on 20 August 2025	Comments received on 26 August 2025 Refer to Appendix 1	Comments received on 26 August 2025 Refer to Appendix 1

## 5. Conclusion

Based on the assessment in this Amendment Report, the Delegated Officer has determined that a Revised Licence will be granted, subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

### 5.1 Summary of amendments

Table 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
Front page	Addition of Category 57 for used tyre storage.
4, Table 2	Modifying 371 m up to 373 m for the Main Embankment of the TSF.
	Inclusion of spillways installed to prevent overtopping for Spillway Capacity.
	Modifications to the Tailings Deposition Pipeline operational requirements.
	Modifications to the Return Water Pipeline operational requirements.
	Removal of the temporary bulk refueling facilities as this is no longer required.
	Addition of the HVRF operational requirements.
	Addition of the tyre storage operational requirements.
5, Table 3	Transfer of LEAF testing provision of results report across from Works Approval W6421/2020/1.
10	Modification of the freeboard to 500 mm.
Schedule 1: Maps	Updating the prescribed premises boundary map to include HVRF and tyre storage.
	Updating the surface water monitoring points map to include the HVRF discharge point.

## 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. Pilbara Iron Company (Services) Pty Ltd, L5275/1972/12 – Greater Paraburdoo Iron Ore Operations– Licence Amendment Application 11 March 2025 (APP-0027906 – Supporting Documentation).
5. Pilbara Iron Company (Services) Pty Ltd, RE: [External] APP-0027906 -APPLICATION FOR AN AMENDMENT TO LICENCE (L5275/1972/12) - REQUEST FOR FURTHER INFORMATION 14 July 2025 (APP-0027906 – RFI reply).
6. Pilbara Iron Company (Services) Pty Ltd, RE: [External] APP-0027906 -APPLICATION FOR AN AMENDMENT TO LICENCE (L5275/1972/12) - REQUEST FOR FURTHER INFORMATION 24 July 2025 (APP-0027906 – LEAF testing report information).
7. Pilbara Iron Company (Services) Pty Ltd, RE: [External] APP-0027906 -APPLICATION FOR AN AMENDMENT TO LICENCE (L5275/1972/12) - REQUEST FOR FURTHER INFORMATION 13 August 2025 (APP-0027906 – further LEAF testing report information).
8. Pilbara Iron Company (Services) Pty Ltd, RE: [External] APP-0027906 -APPLICATION FOR AN AMENDMENT TO LICENCE (L5275/1972/12) - REQUEST FOR FURTHER INFORMATION 19 August 2025 (APP-0027906 – TLO queries).
9. Pilbara Iron Company (Services) Pty Ltd, RE: [External] APP-0027906 -APPLICATION FOR AN AMENDMENT TO LICENCE (L5275/1972/12) - REQUEST FOR FURTHER INFORMATION 19 August 2025 (APP-0027906 – further TLO queries).
10. Pilbara Iron Company (Services) Pty Ltd, RE: [External] FW: APP-0027906 - NOTICE UNDER SECTION 59(B) - REGARDING PROPOSED AMENDMENT TO LICENCE L5275/1972/12 20 August 2025 (APP-0027906 – reply to 21 days letter).
11. Pilbara Iron Company (Services) Pty Ltd, RE: [External] FW: APP-0027906 - NOTICE UNDER SECTION 59(B) - REGARDING PROPOSED AMENDMENT TO LICENCE L5275/1972/12 26 August 2025 (APP-0027906 – additional reply to 21 days letter).
12. Pilbara Iron Company (Services) Pty Ltd, RE: [External] FW: APP-0027906 - NOTICE UNDER SECTION 59(B) - REGARDING PROPOSED AMENDMENT TO LICENCE L5275/1972/12 29 August 2025 (APP-0027906 – maps provided).

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

Condition	Summary of Licence Holder's comment	Department's response
2, Table 1	<p><del>Class II Inert Construction</del> <b>Putrescible Landfill Facility</b></p> <p>The Licensee can confirm that the two landfills in L5275/1972/12 (Table 1) are identified as:</p> <ul style="list-style-type: none"> <li>- Class II Putrescible Landfill</li> <li>- Subsequent Landfill Facility - Waste Dump/Backfilled Pit (Inert and Putrescible)</li> </ul> <p>The licensee notes that there is duplication within the design and construction requirements of both the Class II Putrescible Landfill and Subsequent Landfill Facility nominated in L5275/1972/12 (Table 1). To streamline the Licence and to clearly define the requirements, the Licensee requests the adoption of the proposed layout as shown in Table 2 below. The requested alterations would include the following:</p> <ul style="list-style-type: none"> <li>• Consolidation of the itemised requirements so that they are relevant to both landfills under construction and subsequent landfills hereafter.</li> <li>• Removal of duplicate requirements.</li> <li>• Removal of Schedule 1 Figure 9 (design of Class II Putrescible Landfill) as the plan doesn't assist with mitigating environmental risk. Instead, the requirements for landfills are best described and managed within L5275/1972/12 (Table 1).</li> </ul> <p>This approach aligns with established regulatory practices across similar operations in the Pilbara, supports future waste management demands, enhances practical waste management planning, ensures compliance (without the need for future licence amendments) and that environmental risks are appropriately managed.</p>	<p>Modification to name as requested.</p> <p>Other requested modifications have been adopted, and requirements have been consolidated where appropriate; the exception being that the design of the 'Class II Putrescible Landfill' still needs to adhere to the layout depicted in Figure 8.</p>
4, Table 2	<p>Tailing Deposition Pipeline</p> <p>Spigot spaced <del>at 40 to</del> <b>no more than</b> 80m intervals around or within the</p>	Updated as requested.

Condition	Summary of Licence Holder's comment	Department's response
	<p>perimeter of the facility.</p> <p>The licensee acknowledges that DWER has amended the requirement to allow for the construction of spigots within the perimeter of the facility. Further to the initial amendment request, the Licensee would like to further refine the condition to optimise tailings deposition by removing the minimum spacing of spigots. The gained flexibility of spigot spacing (&lt;40m) will allow for adaptive management during operation, and ultimately provide more capacity for tailings storage, improved manage the beach slopes and importantly, maintain the decant pond to minimising seepage.</p>	
4, Table 2	<p>Return Water Pipeline</p> <p><del>Return water sump to store return decant water.</del></p> <p>In most cases, return water reports to the return water sump prior to being pumped to the process plant. Although the case, in situations where there is a significant volume of good quality water in the decant, the return water is sent directly to the process plant, bypassing the returns water sump. To ensure optimal use of returns water and to minimise the reliance of make up water from other sources, the Licensee requests that the proposed condition is removed. No additional environmental risk is envisioned by removing this condition as the water circuit from the decant to the Process is contained irrespective of the sump utilisation.</p>	Updated requirement as follows: 'Return water sump to store return decant water, if required'.
4, Table 2	<p>Temporary bulk refuelling facilities</p> <p><del>The temporary bulk refuelling facilities are:</del></p> <p><del>Western Range (QBirt) fuel facility 1 (140 m3);</del></p> <p><del>Western Range (CPB) fuel facility 2 (165 m3); and</del></p> <p><del>Camp fuel facility (370 m3).</del></p> <p><del>Vehicle refuelling to occur over areas lined with high density polyethylene</del></p> <p>The Licensee requests the removal of all temporary bulk refuelling facilities from L5275/1972/12 as temporary bulk refuelling is no longer required at the Paraburdoo Operation.</p> <p>The following items can be removed:</p> <ul style="list-style-type: none"> <li>- The operational requirements in L5275/1972/12 (Table 2) Site infrastructure and equipment).</li> </ul>	Updated as requested.

Condition	Summary of Licence Holder's comment	Department's response
	- Figure 7 (Location of temporary refuelling facilities).	
4, Table 2	<p>Heavy Vehicle Refuelling Facility (HVRF)</p> <p><del>Potentially contaminated surface water to be treated to achieve a total recoverable hydrocarbon concentration below 30 mg/L</del></p> <p><b>Condition 18, Table 6, Column 1 – Surface Water Discharge Sites.</b></p> <p><b>- HVRF Oily Water Discharge</b></p> <p>The Licensee requests that the requirement to meet a TRH threshold of 30 mg/L be removed from the Licence, as it does not pertain to a monitoring function and is susceptible to exceedance due to variability in water quality under specific operational conditions.</p> <p>Instead, the Licensee proposes a more suitable approach to managing the performance of the HVRF oily water separation system, ultimately achieving optimal discharge water quality. The Licensee will commit to quarterly monitoring of the HVRF discharge and provide the DWER with water quality data, within the environmental report, on an annual basis. This will enable the performance of the facility to be assessed over time and allow the Licensee to provide explanatory notes that account for any observed declines in water quality.</p> <p>The suggested approach aligns with requirements that support the management of other discharge points associated with L5275/1972/12, including the light vehicle washdown</p>	<p>Not updated as requested.</p> <p>Works Approval W6643/2021/1 required that the HVRF oily water collection and treatment system must be designed to achieve a total recoverable hydrocarbon concentration below 15 mg/L in treated water.</p> <p>In the supporting documentation for this licence amendment, the Licence Holder committed to continuing to achieve the 30 mg/L limit required under Condition 14 of Licence L5275/1972/12.</p>