Government of Western Australia
Department of Water and Environmental Regulation

Decision Report

Application for Works Approval

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

Works Approval Number	W3001/2025/1
Applicant	Pilbara Iron Pty Ltd
ACN	107 216 535
DWER internal number	APP-0029270
Premises	Arches North Strategic Laydown Legal description - Lot 63 on Deposited Plan 54397 Certificate of Title Volume LR3119 Folio 871 Lease I123390; and Miscellaneous licence L47/225 ROEBOURNE WA 6718 As defined by the coordinates in Schedule 2 of the works approval
Date of report	06 October 2025 **(FINAL)**
Decision	Works approval granted

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1. Decision summary

This decision report documents the assessment of potential risks to the environment and public health from emissions and discharges during the construction and operation of the premises. As a result of this assessment, works approval W3001/2025/1 has been granted.

2. Scope of assessment

2.1 Regulatory framework

In completing the assessment documented in this decision report, the Department of Water and Environmental Regulation (the department; DWER) 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 26 May 2025, the applicant submitted an application for a works approval to the department under section 54 of the *Environmental Protection Act 1986* (EP Act). The application is to undertake construction/mobilisation works in relation to the stockpiling of degraded railway ballast and crushing/screening of this material at the premises. Time limited operations were also proposed in advance of a future licence application/assessment.

The premises is located within Lot 63 on Plan 54397 (lease I123390) and Tenement L47/225. The north end of the premises boundary is located approximately 5.2 kilometres (km) south-west of the Roebourne town centre, located within the Pilbara Region of WA.

The premises relates to the categories and assessed production / design capacity under Schedule 1 of the *Environmental Protection Regulations 1987* (EP Regulations) which are defined in works approval W3001/2025/1.

2.3 Overview of premises

2.3.1 Operational aspects

Overview

Rio Tinto's integrated railway network (IRN) comprises approximately 1,980 km of heavy freight railway network for the transportation of iron ore from Rio Tinto's 17 mining operations in the Pilbara to numerous port facilities for export. Pilbara Iron Pty Ltd (the applicant), a member of the Rio Tinto Group, operates maintains and manages construction works associated with the IRN. The IRN currently incorporates eight mainlines, of which, one is the Deepdale Mainline (DDML). The DDML runs for approximately 236 km from Robe Valley mine site to Cape Lambert Port Operations.

The applicant applied for a Works Approval in relation to the activity area referred to as Arches North Strategic Laydown (premises / Arches North hereafter), located at approximately the 24-kilometre (km) mark on the DDML. Activities within the premises will include the stockpiling of railway material which has been removed from the IRN. The material will be put through a mobile crushing and screening plant within the premises. The crushing and screening activities are required to support the reuse of removed degraded ballast and rail civil material for repurposing within the IRN and the company's Pilbara Operations.

As the applicant undertakes ballast cleaning and rail renewal works across the IRN, degraded ballast/rail civil materials are removed from the track and from the rail formation. The entire IRN requires ballast cleaning/renewal to maintain safe operations and to extend the life of the asset. Ballast degradation occurs over time due to normal rail activities as edges of the ballast become

rounded and less effective. Thus, ballast renewal must occur, as required, throughout the life of the IRN.

The track renewal programme will at times also capture sub ballast capping material, which forms part of the rail formation. Track renewal programmes also include the removal and replacement of concrete sleepers, of which, may be temporary stockpiled at Arches North as required.

Material processed at the premises will be used for large rail renewal maintenance projects, resheeting of rail access road, rehabilitation, mine pit backfill, grade separation projects, mine haul road maintenance, track ramp construction and other Rio Tinto projects where the material has a use.

Stockpiling of offsite material – Category 61A

Prior to any degraded ballast or rail civil material being removed from the IRN the material is sampled at regular intervals and analysed by an accredited laboratory. Analytical results are reviewed to confirm the material is suitable for repurposing and stockpiling or whether the material poses an unacceptable environmental risk and is to be disposed of at an appropriate licenced facility.

Degraded material removed during emergency/urgent maintenance works will be placed in a segregation stockpile onsite pending sampling and analytical results.

The volume of degraded material to be stockpiled is approximately 820,000 tonnes, which reflects the facilities holding capacity and is not an annualised throughput volume. Approximately 30,000 (9,900 tonnes) of used concrete sleepers will also be temporarily stockpiled for reuse or disposal.

Stockpiling of degraded rail material allows for consolidation and control of this material in a strategic location rather than a multitude of smaller laydown areas across the network.

The stockpiling area is designed to incorporate the following:

- Typical slope angle of 3:1 or approximately 18 degrees, with multiple lifts;
- Area of approximately 8.9 hectares;
- A maximum height of 14 m above ground level;
- Material stockpile areas comprising:
    - Ballast stockpile;
    - Segregation stockpile;
    - Crushed rock product.
- An erosion resistant earthen bund at approximately 0.4 m in height surrounding the material stockpiles or at a height as per detailed engineering design determines; and
- Earthen sumps to collect any stockpile runoff and sediment following large rainfall events.

Material characteristics

The applicant outlines that background sampling and leachate testing of degraded ballast/rail civil material has been undertaken to understand its characteristics and any potential risks the material may pose to the environment.

Note - The Department assessed similar activities and issued Works Approval W6879/2024/1 to Pilbara Iron Pty Ltd on 22 April 2024 and Licence L9263/2020/1 on 29 April 2024. Both approvals relate to the recovery of ballast and other civil material from the IRN and crushing/screening of this material for reuse. Ballast characterisation information from W6879/2024/1 is incorporated in this assessment as it is considered to be similar material from

the same source (IRN).

The applicant has analysed samples of degraded ballast for Contaminants of Potential Concern (COPC) associated with 'railway yards and transport corridors' according to Appendix B of the *Guideline: Assessment and management of contaminated sites* (DWER, 2021). The results of ballast testing are provided in Appendix 1. A summary is provided below:

Total Concentrations

- *None of the samples showed asbestos concentrations above the laboratory Limit of Reporting (LOR), and visual inspections during sampling did not reveal any signs of asbestos.*
- *The concentrations of total Polycyclic Aromatic Hydrocarbons (PAHs) were below the uncontaminated fill guidelines*[1] *in all samples.*
- *Volatile TRH (>C6-C10) and BTEX-N compounds were below the uncontaminated fill guidelines*[1] *in all samples.*
- *Five samples recorded concentrations of TRH (>C16-C34) exceeding the uncontaminated fill guideline*[1] *of 300 mg/kg. The upper confidence limit (UCL95) of 141.6 mg/kg remained below the uncontaminated fill guideline. Note: the statistics were skewed by a single anomalous result, which was not representative of the dataset.*
- *Total concentrations of selected metals (copper, manganese and nickel) exceeded the corresponding maximum concentration (mg/kg) dry weight, outlined in the uncontaminated fill guidelines*[1].

Leachate Concentrations

- *Leachable concentrations of selected metals (chromium, cobalt, copper, lead, manganese, selenium, thallium and zinc) exceeded the ASLP deionised water (DI) leach uncontaminated fill guideline*[1] *concentrations.*
- *Leachable concentrations of the pesticides aldrin and dieldrin exceeded the ASLP leach guideline concentrations, with selected results also exceeding the Australian Drinking Water Guidelines (ADWG)* [2]*, by a factor of 10 and therefore equating to the NPUG*[3].
- *The leachable concentrations of selected metals exceeded the ADWG and the Freshwater Guideline (FWG*) [4]

[1] *Landfill Waste Classification and Waste Definitions 1996 (As Amended 2019) (DWER, 2019);*

[2] *Australian Drinking Water Guidelines 6, National Water Quality Management Strategy, 2011 (updated 2022) (ADWG,2011)*."

[3] *Contaminated site ground and surface water chemical screening guidelines, Department of Health, 2014 (DoH, 2014); and*

[4] *National Environmental Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) (NEPM,2013).*

Crushing and screening of material - Categories 12 and 13

The indicative mobile crushing and screening plant (MCSP) comprises the following:

1. Cone crusher;
2. Heavy duty first screen;
3. Final screen.

A Terex Finlay plant has been used for throughput calculations and work planning associated with the project. However, this specific make of plant is subject to change. If a different make is used, it will be of similar specification and with the same environmental controls.

The MCSP will be a standalone unit powered by self-contained diesel engines. Diesel refuelling will be supplied periodically by a rail service truck.

Equipment installation and infrastructure construction

The MCSP is preconfigured for use so the only modifications required during setup is the setting of the crusher aperture to deliver product of the required size; testing of dust suppression systems; and installing the screens required to produce materials of the desired size. During setup, dust suppression sprays will be tested to ensure functionality. The setup period will be completed within a month of mobilising the MCSP to site. Other activities such as boundary demarcation, earthen bund construction, and sump installation will also be undertaken at this time, preparing the area for crush and screen and stockpiling movements.

Crushing and screening process

The crushing and screening process and specifications are outlined below.

Initial screen - material will be fed into the initial screening unit via an excavator or front-end loader. The material will be pre-screened via the Heavy Duty Screen 883+ unit removing any foreign objects and over/undersize material. Estimated throughput is 200 tonnes per hour (TPH). All material will be reused.

Material crushing - material will be fed into the crushing unit via an excavator or front end loader. Material will then be crushed through a Cone Crusher unit - C1545S. The crusher throughput is determined mainly by how tight the cone is closed and this is determined by the feed material bulk density and the final product size, which will change depending on the target specification that material is being repurposed for. Given much of the civil material to be crushed is in excess of 40 mm the estimated throughput is a maximum of 200 TPH.

Final screen - the final screen will occur through the Incline Ascreeen 696 2- deck unit to ensure product size is as required depending on the reuse/repurposing of the material. The 696 screen can handle 400-500 TPH.

The crush and screened material may also be blended with imported clean material ensuring specifications are met for various repurposing options.

Annual throughput

The annualised crush and screening volume is estimated at 820,000 tonnes per annum, which is primarily driven by the material handling and storage capacity limits of the laydown area.

Duration of operations

The MCSP is expected to be operating when required over the next 10 years to support the rail maintenance activities undertaken within the rail network.

2.4 Assessing whether a material is waste

The application indicates that Rio Tinto is treating degraded ballast or rail civil material as a ‘product’ as it has multiple reuse options across their operations.

The primary consideration in what regulatory requirements would apply for the reuse of rail ballast material is whether the material is considered ‘waste’ for the purposes of the EP Act and *Waste Avoidance and Resource Recovery Act 2007* (WARR Act).

There are a number of relevant factors that should be considered in an assessment of whether material is waste as identified in the *Fact Sheet: Assessing whether material is waste*. In accordance with this factsheet, burial and/or reuse waste may trigger prescribed premises categories as detailed in Schedule 1 of the EP Regulations.

The department recommends that if producers and end-users of certain materials are unsure of whether the material, they hold is waste or whether certain provisions in the legislation apply they should seek their own legal advice i.e. the department does not currently provide a determination on when a material ceases to be waste.

The assessment of this works approval application is limited to assessing related emissions and discharges from the proposed processing and recycling activities (and not with respect to providing an 'end of waste determination').

DWER considers that it is the responsibility of the person in possession of material to determine whether it is waste or not. Information to industry on how the department proposes to assess whether material is waste when exercising its powers and performing its functions under related legislation is outlined in the *Fact Sheet: Assessing whether material is waste*.

2.5 Part IV of the EP Act

On the 17 December 2012 Ministerial Statement 918 (MS 918) approved the *Cape Lambert to Emu Siding Rail Duplication, and Borrow Pits in Millstream Chichester National Park*. This includes the rail line and eastern deviation and associated infrastructure adjacent to the existing rail line from Cape Lambert to Emu Siding, along with seven borrow pits within Millstream Chichester National Park. The proposal area footprint incorporates the Arches North premises area.

Relevant information from EPA Report number 1408 (*Cape Lambert to Emu Siding Rail Duplication),* is outlined below.

EPA Report 1408 identified the key environmental factors to be:

1. Flora and vegetation; and,
2. Millstream Chichester National Park (note - The Millstream-Chichester National Park is not relevant to the Works Approval assessment as it is located approximately 40 kms south of the premises).

Vegetation units of conservation significance, including associated with Priority Ecological Communities, were identified within the MS 918 project area. Such vegetation would be impacted by clearing. The EPA stated that – "*given the extent of each vegetation type outside the project area, the EPA considers that the impact to the regional distribution of conservation significant vegetation types as a result of clearing associated with the proposal is not likely to be significant".*

The EPA also indicated that there is potential for flora and vegetation in the MS 918 project area to be impacted by increased dust emissions.

MS 918 authorises clearing of up to 2,145 hectares within Clearing Area A in the Rail Duplication Area as shown in Figure 3 of MS 918. This is understood to include the Arches North premises area.

MS 918 does not specify conditions in relation to dust emissions from the project.

The Works Approval has taken MS 918 into account and is consistent with MS 918 on the following grounds:

- Clearing of native vegetation required for Arches North is approved under MS 918;
- There are no conditions in relation to dust emissions under MS 918. Nonetheless, the Works Approval risk assessment has considered dust emissions from the premises as detailed in Section 3 of this report.

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 construction and operation which have been considered in this decision report are detailed in Table 1 below. Table 1 also details the control measures the applicant has proposed to assist in controlling these emissions, where necessary.

Table 1: Emissions, pathways and proposed controls

Sources	Emissions	Potential pathways	Applicant proposed controls
Construction			
Site preparation earthworks – construction of bund and sumps.	Noise	Conveyance in air and via wind	Compliance with *Environmental Protection (Noise) Regulations 1997*, where applicable. Application of Section 6 of the Australian Standard 2436- 1981 "Guide to Noise Control on Construction, Maintenance and Demolition Sites", where applicable.
	Dust		Use of water carts or dust reduction agents to dampen/bind vehicle tracks to reduce generation of dust emissions.
Operations (including time limited operations)			
Stockpiling of offsite material – Category 61A			
Stockpiling of the following: ▪ Unprocessed materials; ▪ Materials segregated for contaminant analysis; ▪ Processed materials.	Noise	Conveyance in air and via wind.	Planned day-time operations only. Compliance with *Environmental Protection (Noise) Regulations 1997*, where applicable. Application of Section 6 of the Australian Standard 2436- 1981 "Guide to Noise Control on Construction, Maintenance and Demolition Sites", where applicable.
	Dust		Regular inspection of stockpiles for dust production. Dust suppression via use of water or stabilising agents on stockpiles and trafficable areas. Control of vehicle movements/speeds.

Sources	Emissions	Potential pathways	Applicant proposed controls
	Sediment, hydrocarbons, metals, pesticides	Seasonal storm events resulting in – 1) Mobilisation of contaminants from source material; 2) Sediment/ contaminant runoff from the premises; 3) Infiltration of contaminants into groundwater	Earthen bunds to keep surface water runoff within the premises and prevent ingress of stormwater into the premises. Earthen sumps to retain runoff from the premises following rain events. Stockpiles located at least 350 m away from drainage lines.
	Asbestos	Wind induced lift-off from material stockpiles. Seasonal storm events resulting in mobilisation of asbestos fibres from source material.	Material is tested for asbestos prior to removal from the rail network (*where possible*). Material removed (from the IRN) during emergency/urgent maintenance works will be placed in a segregation stockpile onsite pending sampling and analytical results. Earthen bunds to keep surface water runoff within the premises and prevent ingress of stormwater into the premises Earthen sumps to retain runoff from the premises following rain events. Stockpiles located at least 350 m away from drainage lines.
Crushing and screening of material - Categories 12 and 13			
Crushing and screening of materials	Noise	Conveyance in air and via wind.	Planned day-time operations only. Compliance with *Environmental Protection (Noise) Regulations 1997*, where applicable. Application of Section 6 of the Australian Standard 2436- 1981 "Guide to Noise Control on Construction, Maintenance and Demolition Sites", where applicable.
	Dust, asbestos	Conveyance in air and via wind.	Material is tested for asbestos prior to removal from the rail network (*where possible*). Dust suppression via use of water or stabilising agents on stockpiles and trafficable areas. The MCSP will be fitted with a hose and water sprays for dust suppression, including dust covers should they be required.

Sources	Emissions	Potential pathways	Applicant proposed controls
			Use of angle-adjustable stockpiling conveyors to minimise drop heights.
	Light	Conveyance through air	Planned day-time operations only.
	Plant process water or wash water – metals, hydrocarbons, pesticides, asbestos	Direct discharge to land	Any runoff will be retained onsite via bunds and diverted into sumps for evaporation. Plant located at least 350 m away from drainage lines.
		Infiltration to groundwater (metals, hydrocarbons, pesticides)	Depth to groundwater is estimated to be 8 m below ground level (mbgl) to 14 mbgl based on a nearby bore.
General operation of trucks and MCSP	Hydrocarbons	Emissions from long term operation of machinery/plant – direct to soil and then mobilised following seasonal storm events.	Visual inspection of plant daily for leaks. Earthen bunds to keep surface water runoff within the premises and prevent ingress of stormwater into the premises. Earthen sumps to retain runoff from the premises following rain events.
Refuelling of trucks and MCSP on site	Fuels/ hydrocarbons	Significant spill during refueling.	Field-based machinery refuelling from mobile fuel trucks. Refuelling trucks fitted with dry brake coupler (won't allow fuel until its locked in place), pressure valve regulators and over fill protection. Spill kit and drip pads used during refuelling. Spill response procedure and equipment. Any hydraulic spills from burst hydraulic hoses or minor hydrocarbon spills will be cleaned up and contaminated soil bagged for removal from site to an appropriately licensed facility. Premises earthen bund and sumps for additional containment capability.

3.1.2 Receptors

In accordance with the *Guideline: Risk Assessment* (DWER 2020), the Delegated Officer has excluded the applicant's employees, visitors, and contractors from its assessment. Protection of these parties often involves different exposure risks and prevention strategies, and is provided for under other state legislation.

Table 2 below provides a summary of potential human and environmental receptors that may be impacted as a result of activities upon or emission and discharges from the prescribed

premises *(Guideline: Environmental Siting* (DWER 2020)).

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

Human receptors	**Distance from prescribed activity**
None identified	Not applicable. (closest is Roebourne ~4.7km northeast)
Environmental receptors	**Distance from prescribed activity**
Site soils	Within premises.
Ephemeral watercourses (within Pilbara Surface Water Area)	Minor creek approx. 280 m north-east and downgradient. Minor creek approx. 790 m south-east and downgradient.
Groundwater (within Pilbara-Fractured Rock region / Pilbara Groundwater Area)	Based on RTIO bores 600-800 m from the site depth to groundwater may range between 8 m to 14 mbgl. Unconfined alluvial or fractured rock aquifers in the area.
Priority Ecological Community (PEC) (Priority 3) - Horseflat Land System of the Roebourne Plains.	Premises is within the PEC area. PEC area surrounds the premises.

3.2 Risk ratings

Risk ratings have been assessed in accordance with the *Guideline: Risk Assessments* (DWER 2020) for each identified emission source and takes into account potential source-pathway and receptor linkages as identified in Section 3.1. Where linkages are in-complete they have not been considered further in the risk assessment.

Where the applicant 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 applicant'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 applicant's controls are not deemed sufficient. Where this is the case the need for additional controls is documented and justified in Table 3.

Works approval W3001/2025/1 that accompanies this decision report authorises construction and time-limited operations only. The conditions in the issued works approval, as outlined in Table 3 have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

A licence 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 decision report, however licence conditions will not be finalised until the department assesses the licence application.

Table 3: Risk assessment for potential emissions and discharges from the premises during construction and operation

Risk events					Risk rating [1] C = consequence L = likelihood	Applicant controls sufficient?	Conditions [2] of works approval	Justification for additional regulatory controls / DWER comments
Sources / activities	**Potential emission**	**Potential pathways**	**Receptors and impact**	**Applicant controls**				
Construction								
Site preparation earthworks – construction of laydown areas, bund and sumps.	Dust (general)	Air/windborne pathway causing impacts to the environment	Receptors PEC noted in Table 2 Impact Potential impact on PEC ecosystem health (in vicinity of premises)	Refer to Table 1	C = Minor L = Rare **Low Risk**	Yes	N/A	The applicant has indicated that the plant is preconfigured for use so the only modification required during setup is the setting of the crusher aperture to deliver product of the required size, testing of dust suppression systems, and installing the screens required to produce materials of the desired size. During setup, dust suppression sprays will be tested to ensure functionality. The setup period will be completed within a month of mobilising the crushing and screening plant to site. The applicant has also committed to using of water carts or dust reduction agents to dampen/bind vehicle tracks to reduce generation of dust emissions. Given the short duration of the 'construction' works no regulatory controls have been imposed in the works approval. Premises operations are also subject to the requirements of the *Environmental Protection (Unauthorised Discharge) Regulations 2004*.
	Sediment laden and / or contaminated stormwater	Surface run-off	Potential degradation of land and/or impacts to ephemeral drainage lines/ creeks)	None listed	C = Minor L = Rare **Low Risk**	N/A	N/A	
Operation (including time-limited-operations) **Stockpiling of offsite material – Category 61A**								
Stockpiling of the following: ▪ Unprocessed materials. ▪ Materials segregated for contaminant analysis. ▪ Processed materials.	Dust (general)	Air/windborne pathway causing impacts to the environment (wind induced lift-off from material stockpiles)	Receptors PEC noted in Table 2 Impact Potential impact on PEC ecosystem health (in vicinity of premises)	Refer to Table 1	C = Minor L = Unlikely **Medium Risk**	Yes	Condition 1 – Infrastructure design/construction requirements Conditions 6 - Material stockpile dust suppression measures Condition 7 – Material acceptance specifications for the premises	Additional regulatory controls – N/A.

Risk events					Risk rating [1] C = consequence L = likelihood	Applicant controls sufficient?	Conditions [2] of works approval	Justification for additional regulatory controls / DWER comments
Sources / activities	**Potential emission**	**Potential pathways**	**Receptors and impact**	**Applicant controls**				
	Asbestos fibre	Air/windborne pathway causing impacts to the environment (wind induced lift-off from material stockpiles)	Receptor Site soils Surrounding soils and land Impact Soil contamination	Refer to Table 1	C = Moderate L = Unlikely **Medium risk**	No	Condition 6 – Material stockpile dust suppression measures **Conditions 7 and 8 - Material acceptance specifications including limit relevant to asbestos concentrations** **Condition 9 – Material inputs and outputs monitoring** **Condition 11 – Time limited operations report to include asbestos sampling/testing report** **Condition 12 – Records of asbestos sampling/testing and offsite disposal facility**	The applicant indicates that as materials are tested for asbestos prior to transport to the premises - that there is no potential impact. However, material removed from the IRN during urgent works is not intended to be tested prior to transport to the premises and will be placed in the segregation stockpiles at the premises. While asbestos has NOT been detected in material characterisation testing (refer to section 2.3.1 of this report) the Delegated Officer is adopting a precautionary approach in relation to potential asbestos emissions at the premises. Additional controls/conditions are required to manage the determined risk.
	Sediment Hydrocarbons, metals, pesticides, asbestos Hydrocarbons, metals, pesticides	Seasonal storm events resulting in – 1) leaching or mobilisation of contaminants from source material; and, 2) sediment/ contaminant runoff from the premises	Receptors Site soils and ephemeral watercourses in vicinity PEC noted in Table 2 Impact Soil degradation or contamination Impact on watercourse water quality and sediments Potential impact on PEC ecosystem health (in vicinity of premises)	Refer to Table 1	C = Moderate L = Unlikely **Medium risk**	Yes	Condition 1 – Infrastructure design/construction requirements Conditions 6 - Infrastructure operational requirements	Additional regulatory controls – N/A. Premises operations are also subject to the requirements of the *Environmental Protection (Unauthorised Discharge) Regulations 2004*.
		Seasonal storm events resulting in leaching of contaminants from source material and infiltration to groundwater (in long term)	Receptor Groundwater Impact Groundwater quality degradation	Refer to Table 1	C = Minor L = Unlikely **Medium risk**	Yes	Condition 7 – Material acceptance specifications for the premises	Additional regulatory controls – N/A.
Operation (including time-limited-operations) **Crushing and screening of material - Categories 12 and 13**								
Crushing and screening of material	Dust (general)	Air/windborne pathway causing impacts to the environment (Dust from mechanical crushing/screening activities)	Receptors PEC noted in Table 2 Impact Potential impact on PEC ecosystem health (in vicinity of premises)	Refer to Table 1	C = Minor L = Unlikely **Medium Risk**	Yes	Condition 1 – MCSP design requirements Conditions 6 – MCSP dust suppression/mitigation measures Condition 7 – Material acceptance specifications for the premises	Additional regulatory controls – N/A.

Risk events					Risk rating [1] C = consequence L = likelihood	Applicant controls sufficient?	Conditions [2] of works approval	Justification for additional regulatory controls / DWER comments
Sources / activities	**Potential emission**	**Potential pathways**	**Receptors and impact**	**Applicant controls**				
	Asbestos fibre	Air/windborne pathway causing impacts to the environment (Asbestos fibre release from mechanical crushing/screening activities)	Receptor Site soils Surrounding soils and land Impact Soil contamination	Refer to Table 1	C = Moderate L = Unlikely **Medium risk**	No	Condition 1 – MCSP design requirements Conditions 6 – MCSP dust suppression/mitigation measures **Conditions 7 and 8 – Material acceptance specifications including limit relevant to asbestos concentrations** **Condition 9 – Material inputs and outputs monitoring** **Condition 11 – Time limited operations report to include asbestos sampling/testing report** **Condition 12 – Records of asbestos sampling/testing and offsite disposal facility**	While asbestos has NOT been detected in material characterisation testing (refer to section 2.3.1 of this report) the Delegated Officer is adopting a precautionary approach in relation to potential asbestos emissions at the premises. Additional controls/conditions are required to manage the determined risk.
	Plant process water or wash water – metals, hydrocarbons, pesticides, asbestos	Direct discharge to land Contaminant runoff following seasonal storms	Receptors Site soils and ephemeral watercourses in vicinity PEC noted in Table 2 Impact Soil degradation or contamination Impact on watercourse water quality and sediments Potential impact on PEC ecosystem health (in vicinity of premises)	Refer to Table 1	C = Minor L = Unlikely **Medium risk**	Yes	Condition 1 – Infrastructure design/construction requirements Conditions 6 - Infrastructure operational requirements	Additional regulatory controls – N/A. Premises operations are also subject to the requirements of the *Environmental Protection (Unauthorised Discharge) Regulations 2004*.
		Downward infiltration through soil	Receptors Groundwater Impact Groundwater quality degradation	Refer to Table 1	C = Minor L = Unlikely **Medium risk**	Yes	N/A	
General operation of trucks and MCSP	Fuels/ hydrocarbons	Emissions from long term operation of machinery/plant – direct to soil and then mobilised following seasonal storm events.	Receptors Site soils Groundwater Ephemeral creeks in vicinity Impact Soil and groundwater quality degradation Degradation of water quality in creeks (when flowing)	Refer to Table 1	C = Minor L = Possible **Medium risk**	Yes	Condition 1 – Infrastructure design/construction requirements Conditions 6 - Infrastructure operational requirements	Additional regulatory controls – N/A. Premises operations are also subject to the requirements of the *Environmental Protection (Unauthorised Discharge) Regulations 2004*.
			Receptor PEC noted in Table 2		C = Minor L = Rare			

Risk events					Risk rating [1] C = consequence L = likelihood	Applicant controls sufficient?	Conditions [2] of works approval	Justification for additional regulatory controls / DWER comments
Sources / activities	**Potential emission**	**Potential pathways**	**Receptors and impact**	**Applicant controls**				
			Impact Potential impact on ecosystem health in vicinity of premises		**Low risk**			
Refuelling of trucks and MCSP on site	Fuels/ hydrocarbons	Significant spill during refueling	Receptors Site soils Groundwater Impact Soil and groundwater quality degradation or contamination	Refer to Table 1	C = Moderate L = Unlikely **Medium risk**	Yes	Condition 6 - Infrastructure operational requirements	Additional regulatory controls – N/A. Premises operations are also subject to the requirements of the *Environmental Protection (Unauthorised Discharge) Regulations 2004*.

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

Note 2: Proposed applicant 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	Summary of comments received	Department response
Application advertised within DWER website on 3 July 2025	No comments received.	N/A.
Application referred to City of Karratha for comment on 10 July 2025	The City of Karratha (the City) has reviewed the proposal and provides the following comments and considerations: It should be noted that the proposal is within Lot 56 On Deposited Plan 248915, is freehold land, not under a pastoral lease as suggested in the supporting documentation. The proposed prescribed premises proposes access from Cherratta Rd which is a road maintained and managed by the City of Karratha, not a Mt Welcome Pastoral Station Access track as suggested in the supporting documentation. <u>Impacts to Road Network (Cherratta Road)</u> The proposed prescribed premises are accessed via Cherratta Road, which is maintained and managed by the City. As such, the following considerations should be addressed: • The City requests confirmation of expected vehicle movements, including frequency and load types, to assess potential wear and tear on Cherratta Road. • The City may seek contributions or agreements for ongoing maintenance if the proposal results in increased heavy vehicle traffic. <u>Site Rehabilitation and Monitoring</u> • Temporary Nature of Operations: If the crushing and screening plant is mobile and temporary, the City recommends conditions requiring site rehabilitation upon completion of activities. • Regular environmental monitoring and reporting should be required to ensure compliance with approval conditions. <u>Community and Stakeholder Engagement</u> • The City encourages the licensee to engage with nearby stakeholders and residents, to ensure transparency and address any concerns related to the proposed activities.	<u>Land tenure</u> The applicant has specified that the land description for the premises is Lot 63 on Deposited Plan 54397 subject to a leasehold interest (Lease I123390) and miscellaneous licence 47/225 (tenement L47/225). The Department has verified that the land description is correct and the applicant is a legal occupier of the premises. Department records also indicate that a portion of the premises boundary transects with Lot 56 on deposited plan 248915 which is understood to be a crown allotment. The Delegated Officer considers that the land description nominated by the applicant is sufficient and has verified that the applicant is a legal occupier of the premises. <u>Impacts to Road Network (Cherratta Road)</u> The Delegated Officer encourages the applicant to liaise with the City of Karratha (or vice versa) in relation to potential impacts to Cherratta Road and maintenance requirements. <u>Site Rehabilitation</u> MS 918 authorises clearing of up to 2,145 hectares within Clearing Area A in the Rail Duplication Area as shown in Figure 3 of MS 918. This is understood to include the Arches North premises area. MS 918 specifies conditions in relation to rehabilitation within the rail duplication area. <u>Compliance with approval conditions</u> Following grant of the works approval, the Department will assess compliance with the works approval conditions prior to the grant of a corresponding licence for the premises. Annual and periodic compliance audits may also be carried-out by the Department once the premises is subject to a Part V licence. Any non-compliance matters will addressed in accordance with the Departments Compliance and Enforcement Policy (https://www.wa.gov.au/government/publications/dwer-compliance-and-enforcement-policy) <u>Stakeholder engagement</u> The Delegated Officer determined that the application required public advertising and referral to the City of Karratha. The outcomes of this consultation are noted in this report.
Draft decision report and works approval issued to the applicant for comment on 3 September 2025	Applicant provided comments on 25 September 2025. <u>Condition 1 Table 1 – item 1 (Segregated railway ballast stockpile)</u> Applicant requested that word ‘for’ be replaced with ‘including’. The word change demonstrates the current process, which includes sampling and analytical analysis for a wide range of determinants, one of which is asbestos. b) Segregated railway ballast awaiting sampling and analysis (~~for~~ **including** asbestos).	The Department has updated Conditions 1 and 6 to reflect the change in wording. Noting that the works approval only requires this material to be analysed for asbestos.
	Condition 8 requires the applicant to ensure that railway ballast and rail civil material imported to the premises does not exceed the contamination limit of 0.001% w/w for asbestos. <u>Condition 9</u> Applicant proposed that given the requirements of condition 8, that draft condition 9 be removed. Condition 9 requires the applicant to ensure the asbestos content of	Condition 8 requires the applicant to ensure that railway ballast and rail civil material does not exceed the contamination limit of 0.001% w/w for asbestos. In addition, Conditions 11 and 12 requires the applicant to maintain records of all asbestos testing and provide a testing report to the Department. These conditions form part of the suite of conditions to manage asbestos related risks assessed for the premises (as detailed in Section 3.2 of this report).

	crushed/screened material (originating from railway ballast material and rail civil material) does not exceed the contamination limit of 0.001% w/w for asbestos.	Considering that imported railway ballast and rail civil material must not exceed the specified limit of 0.001% w/w for asbestos and material exceeding this limit is to be removed from the processing circuit (and the premises), additional testing of crushed/screened material is deemed superfluous. Therefore, condition 9 has been omitted from the works approval, including references to condition 9.
	<u>Condition 13</u> Draft condition 13 requires the applicant to maintain records of all asbestos testing undertaken in accordance with conditions 8 and 9. Applicant proposed removal of the reference to condition 9 as per the proposed removal of condition 9 noted above.	
	Revised premises layout map provided as requested.	The applicant submitted a revised premises layout map which better illustrates the separate material stockpile areas for - railway ballast; segregated material; and crushed/screened material. The submitted map legend included a **duplicate** reference to segregated/crushed rock material which is not reflected in the map. This **duplicate** reference in the legend has been erased by the Department as it is deemed redundant.

5. Conclusion

Based on the assessment in this decision report, the delegated officer has determined that a works approval will be granted, subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

References

Australian Drinking Water Guidelines 6, National Water Quality Management Strategy, 2011 (updated 2022).

Department of Health 2014, *Contaminated site ground and surface water chemical screening guidelines.*

Department of Environment Regulation (DER) 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.

Department of Water and Environmental Regulation (DWER) 2019, *Landfill Waste Classification and Waste Definitions 1996 (As Amended 2019)*, Perth WA.

DWER 2020, *Guideline: Environmental Siting*, Perth, Western Australia.

DWER 2020, *Guideline: Risk Assessments*, Perth, Western Australia.

DWER 2021, *Guideline: Assessment and management of contaminated sites,* Joondalup WA.

Environmental Protection Authority 2011, *Report 1408 - Rio Tinto Iron Ore, Cape Lambert to Emu Siding Rail Duplication - Report and recommendations of the Environmental Protection Authority.*

National Environmental Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013).

Western Australian Minister for Environment & Water 2012, *Statement 918 - statement that a proposal may be implemented (pursuant to the provisions of the Environmental Protection Act 1986 - Cape Lambert to Emu Siding Rail Duplication and Borrow Pits in Millstream Chichester National Park.* Published on 18 December 2012.

Environmental Protection Authority 2011, *Report 1408 - Rio Tinto Iron Ore, Cape Lambert to Emu Siding Rail Duplication - Report and recommendations of the Environmental Protection Authority.*

Appendix 1: Ballast analysis results

Table 5: Ballast analysis results – total concentrations

Analyte	Min Conc. (mg/kg)	Max Conc. (mg/kg)	Mean + 1 Std Dev (mg/kg)	UCL95 (mg/kg)
Asbestos (FA/AF)	<0.001 %w/w	<0.001 %w/w	NA	NA
Antimony	<5	18	3.46	2.81
Arsenic	2.3	36	8.32	4.69
Barium	20	1370	203.80	108.41
Beryllium	<1	1.7	0.80	0.59
Cadmium	<0.1	1.5	0.51	0.22
Chromium	6.2	690	186.61	92.10
Cobalt	2	73	16.41	10.09
Copper	<1.0	167	43.10	25.52
Lead	<5	93	14.95	8.90
Manganese	180	2350	1082.27	830.38
Mercury	<0.1	0.43	0.06	0.05
Molybdenum	<1.0	17	1.89	1.09
Nickel	3	230	57.96	28.14
Silver	<1.0	1	1.04	0.82
Tin	<1.0	7.2	3.46	2.81
Vanadium	2.2	140	44.99	28.58
Zinc	<5	253	36.09	22.52
Selenium	<0.20	0.5	0.57	0.41
Thallium	<0.1	1.1	0.20	0.11
Uranium	0.1	1.4	0.70	0.55
Trivalent Chromium	6.1	708	192.75	96.34
Hexavalent Chromium	<0.5	13	0.73	0.35
Aldrin	<0.05	<0.10	NA	NA
Dieldrin	<0.05	14	1.195	0.267
Aldrin + Dieldrin	<0.05	14	1.43	0.35
Sum of BTEX	<0.2	<0.2	NA	NA
Total PAHs	<0.025	31.9	1.81	0.37
TRH >C16 – C34**	50	35,200	1,202	141.6

** TRH was detected above the laboratory LOR in 14 samples, of which 5 samples recorded concentrations above the uncontaminated fill guidelines

Table 6: Ballast analysis results – Australian Standard Leaching Procedure (Leachate) concentrations

Analyte	Min Conc. (µg/L)	Max Conc. (µg/L)	Mean + 1 Std Dev (µg/L)	UCL95 (µg/L)
Trivalent Chromium	<0.0010	1.66	0.1718	0.0499
Hexavalent Chromium	<0.0010	0.05	0.0248	0.0090
Antimony	<0.0010	0.0031	0.0006	0.0004
Arsenic	<0.0002	0.0055	0.0014	0.0008
Cadmium	<0.00005	0.0016	0.00014	0.00006
Cobalt	<0.0001	0.0549	0.0113	0.0052
Copper	<0.0005	0.14	0.0278	0.0133
Lead	<0.0001	0.0869	0.0147	0.0065
Manganese	<0.0005	1.78	0.6656	0.3366
Mercury	<0.000050	0.0002	0.000029	0.000022
Molybdenum	<0.0001	0.0233	0.0019	0.0008
Nickel	<0.0005	0.56	0.0575	0.0189
Selenium	<0.0002	0.0015	0.0004	0.0002
Silver	<0.00001	0.00014	0.00009	0.00005
Thallium	<0.00002	0.00065	0.00014	0.00007
Uranium	<0.00005	0.00204	0.00068	0.00038
Zinc	<0.001	0.487	0.0553	0.0221
Aldrin	0.0005	0.024	0.0018	0.0007
Dieldrin	<0.001	20.9	2.231	0.554
Aldrin + Dieldrin	<0.002	20.9	2.23	0.557
Aldrin	0.0005	0.024	0.0018	0.0007