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	L9207/2019/1
Licence Holder	Bardies Well Pty Ltd
ACN	152 566 633
Application Number	APP-0032772
File Number	INS-0002093
Premises	Bardies Well Quarry Mining Lease M47/226 and M47/293 Legal description – As defined by the premises map attached to the Revised Licence
Date of Report	28 May 2026
Decision	Revised licence granted

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1. Decision summary

Licence L9207/2019/1 is held by Bardies Well Pty Ltd (licence holder) for the Bardies Well Quarry (the premises), located at Mining Lease M47/226 and M47/293.

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 L9207/2019/1 has been granted.

The revised licence issued as a result of this amendment consolidates and supersedes the existing licence previously granted in relation to the premises. The revised licence has been granted in a new format with existing conditions being transferred, but not reassessed, to the new format.

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 Overview of premises and application summary

2.2.1 Premises overview

Bardies Well Pty Ltd is the holder of mining tenements M47/226 and M47/293. In May 2025, the company and its associated assets, including prescribed premises Licence L9207/2019/1, were acquired by Buckski Holdings Pty Ltd, trading as Brookdale Contracting.

The Bardies Well Quarry is located approximately 12 km southeast of Karratha within the Indigenous-owned Karratha Pastoral Lease. Access to the site is via the Water Corporation Harding Dam Access Road and existing station tracks. The quarry has operated since 1995 under a Notice of Intent (MP Reg ID 36942), supplying hard rock materials for civil infrastructure projects.

Mobile Concreting Solutions previously operated the quarry using two mobile crushing and screening plants under Licence L9207/2019/1 until operations ceased in March 2022, and the site was placed into care and maintenance. Approval to recommence mining was granted in May 2025 (Reg ID 129229), and Bardies Well Pty Ltd has since resumed screening hard rock material under the existing licence.

Existing infrastructure and equipment on site include a mobile crushing and screening plant, an open pit, haul roads, Run of Mine (ROM) and stockpile areas, a laydown area, and supporting facilities such as an office, workshop, refueling bay, generator pads, parking and ablution facilities. Hard rock quarrying activities, including blasting, also occur on the premises. The premises also undertakes bioremediation of hydrocarbon-contaminated soil from spill clean-ups associated with mining and processing activities. However, these activities are outside the scope of this amendment application.

2.2.2 Application summary

On 4 December 2025, the licence holder submitted an application to the department to amend Licence L9207/2019/1 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act). The following amendments are being sought:

- The addition of prescribed premises Category 13 to authorise the crushing of building

material, limited to concrete railway sleepers received from Rio Tinto and BHP Rail Networks in the Pilbara Region. The crushed material will be transported offsite for potential reuse in rail ballast applications.

- Amendment to the annual reporting period to align with the calendar year, with a reporting date of 20 February each year.

The original amendment application included mining tenement L47/546 as part of the prescribed premises boundary. However, following advice from the City of Karratha and the Department of Mines, Petroleum and Exploration, an extension of the prescribed premises boundary to include L47/546 will not be supported. Proposed activities located within mining tenement L47/546 were therefore removed from the scope of this amendment application.

This amendment is limited to the addition of prescribed premises Category 13. No changes are proposed to existing Category 12 activities. No new infrastructure or equipment is proposed, and all crushing and screening of concrete materials will utilise existing plant, with the process shown in Figure 1.

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

Table 1: Proposed throughput capacity changes

Category	Current throughput capacity	Proposed throughput capacity	Description of proposed amendment
13	N/A	50,000 tonnes per annual period	Authorise receipt and processing of building waste, limited to concrete railway sleepers, into recycled aggregate
12	350,000 tonnes	No change proposed	No change proposed

The Licence Holder considers the recycled concrete material to be a ‘product’ and not a ‘waste’. It remains the applicant’s responsibility to ensure that material meets any relevant reuse criteria and does not pose an unacceptable environmental risk.

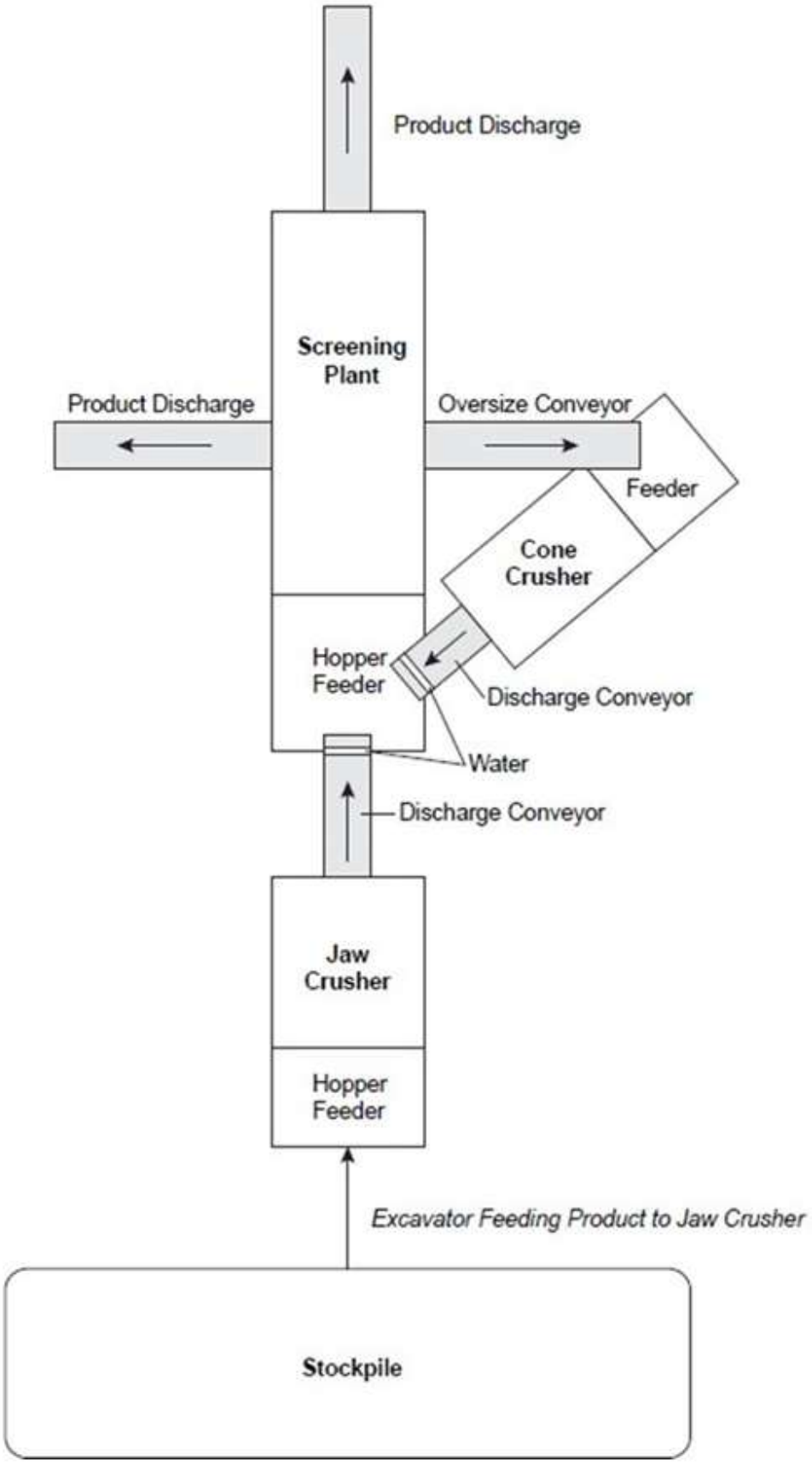

Figure 1: Crushing and screening process flow diagram

2.3 Assessing whether material is a waste

A key consideration in determining regulatory requirements for the reuse of crushed railway sleeper material is whether the material is considered 'waste' under the EP Act and the *Waste Avoidance and Resource Recovery Act 2007* (WARR Act). The department's Fact Sheet: Assessing whether material is waste outlines a number of factors relevant when determining the status of a material. Where material is considered waste, its burial, storage or reuse may trigger prescribed premises categories under Schedule 1 of the *Environmental Protection Regulations 1987*.

The department's position is that producers and end-users must make their own determination as to whether material is waste and should seek their own legal advice if uncertain. The department does not currently provide determinations on when a waste-derived material ceases to be waste.

DWER is developing a legislative framework for waste-derived materials, intended to clarify when materials derived from waste (particularly those applied to land in significant quantities) cease to trigger licensing and levy obligations. Further information is available in the Waste not, want not Discussion Paper.

2.4 Material characteristics

Railway yards and transport corridors are recognised as potentially contaminated land uses under the *Guideline – Assessment and management of contaminated sites*, due to historical handling of fuels, oils, lubricants, herbicides, pesticides, and metal-bearing particulates associated with rail operations. Concrete railway sleepers sourced from these environments may therefore contain surface-adsorbed contaminants from their long service life in the rail corridor. In addition, the concrete itself may contain inherent trace metals and metalloids originating from the raw materials used in its manufacture.

When concrete sleepers are crushed to produce recycled aggregate, the substantial increase in exposed surface area alters the way contaminants may leach or mobilise into the environment (Engelson *et al*., 2017).

Contaminant release from crushed concrete sleepers can occur through two primary mechanisms:

1. Leaching of soluble contaminants from the crushed aggregate and finer fractions during rainfall events; and
2. Mobilisation of contaminants bound to fine particulates, which may be transported offsite in sediment-laden runoff.

Aged concrete can contain metals and metalloids that form oxyanions in solution, and research has demonstrated that long-term weathering followed by crushing can increase the leachability of certain constituents, particularly vanadium and hexavalent chromium.

In addition to inorganic contaminants, organic compounds with low solubility, including organochlorine pesticides and polycyclic aromatic hydrocarbons (PAHs), may be retained within the fine waste fraction generated during crushing. As these fines are more readily mobilised during rainfall events, a clear management approach for waste-fine handling, storage, and disposal is necessary to minimise environmental risk.

The Department of Health (DoH) advises that asbestos risk associated with concrete railway sleepers is considered low, as sleepers are largely impermeable and any historic exposure from asbestos-containing brake linings is unlikely to have resulted in fibre infiltration into the concrete. Dust generated during crushing activities may contain respirable crystalline silica, but these risks are appropriately managed under occupational health and safety requirements when dust suppression and worker protection measures are implemented.

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.

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
Dust	Crushing and screening of concrete sleepers, vehicle movements on unsealed surfaces, and lift-off from waste stockpiles, recycled output and product stockpiles	Air/windborne pathway	• Dust suppression sprays and extractors on mobile equipment • Water cart used extensively on site for all dust management through the regular watering of all access haul roads, stockpiles and hardstands as required. • Dust Management Plan • No vegetation removal is required. • Waste stockpiles will be periodically wetted during windy periods. • Application of speed limits within the quarry area and access roads. • Monthly visual inspection of haul roads and access tracks to assess vegetation conditions.
Noise	Operation of crushing and screening plant; operation of mobile plant, ancillary equipment and diesel generators	Air/windborne pathway	• Activities are a minimum of 8 km from the nearest human receptor (Karratha Industrial Estate). • Equipment will be maintained as per manufacturer's specifications. • All mobile crushing and screening plant is enclosed to provide acoustic screening.

Emission	Sources	Potential pathways	Proposed controls
Contaminated contact stormwater containing sediment, hydrocarbons, metals and metalloids	Crushing and screening of concrete sleepers; storage and stockpiling of concrete sleepers, crushed concrete and fine materials	Overland runoff and seepage to soils and groundwater	• Runoff from operational areas is diverted into catch sumps within quarry environs. • Crushing and screening of materials and stockpiling of materials/products will occur on a hardstand area. • Hardstands are constructed with compacted crushed rock stocks from the quarry and are elevated, levelled and bunded. • Stormwater runoff will be contained within the hardstand pad, with stormwater overflow directed to a stormwater sump within the hardstand. • Chemical characterisation of recycled aggregate to confirm contaminant concentrations are consistent with safe use in railway infrastructure environments.
Hydrocarbon spills	Storage, handling and refuelling of diesel and other hydrocarbons used to fuel plant and equipment on site	Overland runoff Seepage to soils and groundwater	• Bioremediation pad established for contaminated soil remediation. • Lubricants and waste oil will be contained within portable bunding. • All refueling and vehicle maintenance will occur within a bunded area sufficiently large enough to prevent uncontrolled releases into drainage lines. • Spill kits will be available at mobile plant locations, at the refueling area and in-service vehicles and staff will be trained in the proper use of the kits.

Emission	Sources	Potential pathways	Proposed controls
Asbestos fibres	Crushing and screening of concrete sleepers; disturbance or handling of waste or recycled outputs containing asbestos contamination	Air/windborne pathway	• The crushing and screening plants will ensure that the dust suppression water sprays are always maintained to an operational standard. • Stormwater collected in stormwater sump will be used for dust suppression. • There will be continuous visual checks for dust emissions and processing will cease if dust cannot be controlled. • An Asbestos Management Plan is in place for the premises. • Incoming loads will be inspected for asbestos. • If any suspected contamination in material is identified then the material will be isolated immediately for further investigation. • Crushed concrete product will be tested for asbestos. • Stockpiles will be managed to a size of approximately 4,000 tonnes to ensure ease of sampling.
Asbestos fibres released from recycled concrete aggregate	Use, handling or disturbance of recycled concrete aggregate derived from concrete railway sleepers during placement or maintenance in railway infrastructure applications	Airborne dispersion of asbestos fibres during handling or disturbance of recycled aggregate, resulting in potential inhalation by workers or other persons at the reuse site	• Recycled outputs are subject to systematic asbestos testing prior to supply, with sampling undertaken at a frequency of 40 samples per 4,000 tonnes of crushed concrete (≤7 mm fraction); • All asbestos testing is undertaken by a NATA-accredited laboratory in accordance with AS 4964-2004; • Recycled outputs must comply with an asbestos contamination limit of less than 0.001% w/w (in any form) prior to supply or reuse; and • Recycled outputs are restricted to supply for railway infrastructure applications
Release of metals, metalloids, or other contaminants from recycled concrete aggregates	Placement and use of recycled concrete aggregate as railway ballast or sub-base material within the railway corridor	Leaching and runoff from recycled aggregate during rainfall	• Restriction of reuse to railway infrastructure applications only within the same railway corridor from which they came (like-for-like use). • Chemical characterisation of recycled aggregate to confirm contaminant concentrations are consistent with safe use in railway infrastructure environments.

Emission	Sources	Potential pathways	Proposed controls
Respirable crystalline silica	Crushing and screening of material, storage of material	Air/windborne pathway	• The crushing and screening plants will ensure that the dust suppression water sprays are always maintained to an operational standard. • Stormwater collected in stormwater sump will be used for dust suppression. • There will be continuous visual checks for dust emissions and processing will cease if dust cannot be controlled.

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 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
Residential premises	11.7 km north-west of the precribed premises boundary.
Rural dwellings	Approximately 9 km north-west of the prescribed premises boundary
Karratha Industrial Estate Workers and visitors	Appx. 7 km north-west of the prescribed premises boundary
Environmental receptors	**Distance from prescribed activity**
Fauna Northern Quoll Western Pebble Mound Mouse	Identified within the premises boundary
Underlying groundwater (non-potable purposes) The Project area lies within the Pilbara Groundwater Allocation Plan (DOW 2013). Groundwater in the area is limited, occurring within Cainozoic sediments north of the quarry and fractured Archean–Proterozoic basement rocks of the Regal Formation, recharged by rainfall and streamflow infiltration. The dolerite basement rock is largely impermeable (Bardies Well Quarry 2025)	The Bardies Well Quarry PPL 9207/2019/1 Category 13 Amendment Support Document (Bardies Well Quarry 2025) indicates that underlying groundwater occurs at an average depth exceeding 20 m

Nickol River (Ephemeral)	Approximately 2.5 km east of the prescribed premises boundary
Nickol Bay	Approximately 12 km north from the premises boundary
Lulu Creek	Approximately 7.4 km north of the prescribed premises boundary
Ephemeral creek **(Flora and fauna habitat)**	Located between mining tenements M47/226 and M47/293
Cultural receptors	**Distance from prescribed activity**
Aboriginal heritage sites NAC2307 NCA01 and NAC2307-NCA02	Identified approximately 500 m north of the prescribed premises boundary

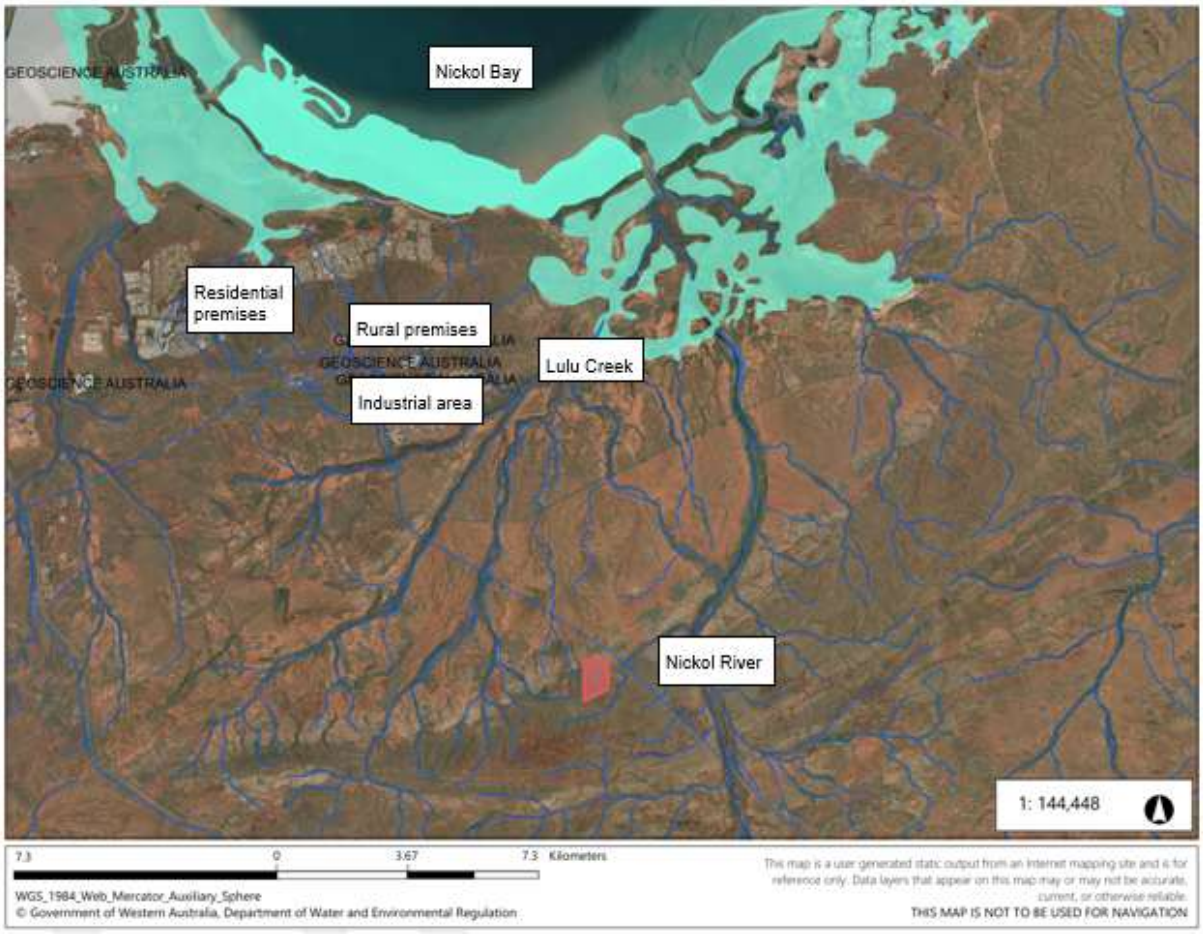

Figure 2: Distance to sensitive receptors (prescribed premises boundary shown in red)

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 L9207/2019/1 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/ DWER comments
Source/Activities	**Potential emission**	**Potential pathways and impact**	**Receptors**	**Licence holder's controls**				
Crushing and screening of concrete sleepers; vehicle movements on unsealed surfaces; wind lift-off from waste, recycled output and product stockpiles	Dust	**Pathway:** Air/windborne pathway **Impact:** Health and amenity	Residential premises Karratha Industrial Estate workers and visitors	Refer to Section 3.1	C = Minor L = Rare **Low Risk**	Y	Conditions 1, 9, 11 and 12	The Delegated Officer considers that dust emissions are unlikely to impact residential receptors or off-site industrial workers due to the substantial separation distance. Dust risks are localised and managed through operational controls.
Crushing and screening of concrete sleepers; vehicle movements on unsealed surfaces; wind lift-off from waste, recycled output and product stockpiles	Dust	**Pathway:** Air/windborne pathway **Impact:** Dust deposition on flora, leading to reduced photosynthesis and plant stress	Flora within and adjacent to the premises	Refer to Section 3.1	C = Minor L = Possible **Medium Risk**	Y	Conditions 1, 9, 11 and 12	Dust deposition effects on vegetation are expected to be minor and localised. Controls including dust suppression, stockpile wetting and operational management reduce the likelihood of sustained vegetation stress.

Risk Event					Risk rating[1] C = consequence L = likelihood	Licence holder's controls sufficient?	Conditions[2] of licence	Justification for additional regulatory controls/ DWER comments
Source/Activities	**Potential emission**	**Potential pathways and impact**	**Receptors**	**Licence holder's controls**				
Crushing and screening of concrete sleepers; disturbance or handling of waste or recycled outputs containing asbestos contamination	Asbestos fibres	**Pathway:** Air/windborne pathway **Impact:** Health	Residential premises Karratha Industrial Estate workers and visitors	Refer to Section 3.1	C = Severe L = Rare **High Risk**	N	Conditions 2, 3, 4, 5, 7, 8, 9, 10, 11 and 12 **Conditions 1, 4**	Asbestos fibre emissions represent a high-consequence but low-likelihood risk. While exposure to airborne asbestos is associated with serious and irreversible health impacts and therefore attracts a Severe consequence rating, concrete railway sleepers are generally considered unlikely to contain asbestos, as they are largely impermeable and any historic exposure from asbestos-containing rail components is unlikely to have resulted in fibre incorporation into the concrete matrix. The Delegated Officer considers the licence holder's controls sufficient to mitigate asbestos-related risks, and these controls have been incorporated as conditions of the licence. Additional conditions have been imposed to manage non-conforming wastes, including requirements for a designated quarantine area, defined timeframes for removal of non-conforming material from the premises, and the separation and clear delineation of stockpiles. These measures ensure that materials identified as non-conforming or awaiting asbestos testing and analytical results are isolated from recycled outputs and extracted raw materials, thereby reducing the risk of cross-contamination and inadvertent processing or reuse of unsuitable material.

Risk Event					Risk rating[1] C = consequence L = likelihood	Licence holder's controls sufficient?	Conditions[2] of licence	Justification for additional regulatory controls/ DWER comments
Source/Activities	**Potential emission**	**Potential pathways and impact**	**Receptors**	**Licence holder's controls**				
Crushing and screening of concrete sleepers; handling and disturbance of crushed concrete materials and stockpiles	Respirable crystalline silica	**Pathway:** Air/windborne pathway **Impact:** Health	Residential premises Karratha Industrial Estate workers and visitors	Refer to Section 3.1	C = Severe L = Rare **High Risk**	Y	Conditions 1, 9, 11 and 12	Respirable crystalline silica emissions represent a high-consequence but low-likelihood risk, as exposure to respirable silica dust is associated with serious and irreversible health effects, warranting a Severe consequence rating. Risks associated with respirable crystalline silica generated during crushing and screening of concrete materials are appropriately managed through occupational health and safety controls, including dust suppression measures and worker protection practices. The licence holder's controls are considered adequate to mitigate this risk and have been incorporated into the licence.
Operation of crushing and screening plant; operation of mobile plant, ancillary equipment and diesel generators	Noise	**Pathway:** Air/windborne pathway **Impact:** Health and amenity	Residential premises Karratha Industrial Estate workers and visitors	Refer to Section 3.1	C = Slight L = Rare **Low Risk**	Y	Condition 1	The Delegated Officer considers that noise emissions are unlikely to impact residential receptors or off-site industrial workers due to the substantial separation distance.

Risk Event					Risk rating[1] C = consequence L = likelihood	Licence holder's controls sufficient?	Conditions[2] of licence	Justification for additional regulatory controls/ DWER comments
Source/Activities	**Potential emission**	**Potential pathways and impact**	**Receptors**	**Licence holder's controls**				
Crushing and screening of concrete sleepers; storage and stockpiling of concrete sleepers, crushed concrete and fine materials	Contaminated contact stormwater containing sediment, hydrocarbons, metals and metalloids	**Pathway:** Overland runoff **Impact:** Ecosystem disturbance or impact to surface water quality	Nickol River and minor surface water lines Beneficial uses of groundwater	Refer to Section 3.1	C = Moderate L = Unlikely **Medium Risk**	N	Condition 1 **Conditions 6, 13**	The Delegated Officer considers that the licence holder's existing controls are generally sufficient to manage risks associated with contaminated contact stormwater, noting underlying groundwater is of limited extent, occurs at depths greater than 20 m, and is underlain by largely impermeable dolerite basement geology. Engineered hardstands, bunding and stormwater retention infrastructure substantially limit the potential for off-site impacts. However, as contaminated contact stormwater and fine particulate matter represent a plausible off-site transport pathway if not appropriately managed, additional regulatory controls have been imposed requiring the containment and on-site management of contact stormwater and the containment of fine particulate matter within bunded hardstand areas. These conditions are considered necessary to further reduce the likelihood of off-site impacts.

Risk Event					Risk rating[1] C = consequence L = likelihood	Licence holder's controls sufficient?	Conditions[2] of licence	Justification for additional regulatory controls/ DWER comments
Source/Activities	**Potential emission**	**Potential pathways and impact**	**Receptors**	**Licence holder's controls**				
Storage, handling and refuelling of diesel and other hydrocarbons used to fuel plant and equipment on site	Hydrocarbon spills	**Pathway:** Overland runoff and Seepage to soils and groundwater **Impact:** Ecosystem disturbance or impact to surface/ground water quality	Nickol River and minor surface water lines Beneficial uses of groundwater	Refer to Section 3.1	C = Moderate L = Unlikely **Medium Risk**	Y	Condition 1	The Delegated Officer considers the licence holder's controls to be sufficient to mitigate risks associated with hydrocarbon spills, and these controls have been incorporated as conditions of the licence where appropriate.
Use, handling or disturbance of recycled concrete aggregate derived from concrete railway sleepers during placement or maintenance in railway infrastructure applications	Asbestos fibres released from recycled concrete aggregate	Airborne dispersion of asbestos fibres during handling or disturbance of recycled aggregate, resulting in potential inhalation by workers or other persons at the reuse site	Users of the recycled product	Refer to Section 3.1	C = Severe L = Rare **High Risk**	Y	Conditions 2, 3, 7, 8 **Condition 4, 5**	The Delegated Officer notes that exposure to airborne asbestos fibres may result in serious health impacts if released during handling or disturbance. While concrete railway sleepers are generally considered unlikely to contain asbestos, systematic testing and application of a stringent asbestos contamination threshold provide assurance that the likelihood of exposure is low. Additional requirements for the isolation and timely removal of any non-conforming waste further reduce the potential for asbestos exposure.

Risk Event					Risk rating[1] C = consequence L = likelihood	Licence holder's controls sufficient?	Conditions[2] of licence	Justification for additional regulatory controls/ DWER comments
Source/Activities	**Potential emission**	**Potential pathways and impact**	**Receptors**	**Licence holder's controls**				
Placement and use of recycled concrete aggregate as railway ballast or sub-base material within the railway corridor	Potential release of metals, metalloids, or other contaminants from recycled concrete aggregates used in railway infrastructure applications	Leaching and runoff from recycled aggregate during rainfall events, with potential migration to surrounding soils, surface water or groundwater at the reuse site	Surrounding soils, surface water or groundwater at the reuse site	Refer to Section 3.1	C = Moderate L = Possible **Medium Risk**	Y	Condition 8	The Delegated Officer notes that the recycled concrete aggregate is proposed to be reused as ballast or sub-base material within active railway infrastructure. This represents reuse within a transport infrastructure setting that is consistent with the material's original service environment and does not constitute a sensitive land-use setting such as residential, conservation or potable water supply areas. While the release of metals or metalloids from recycled aggregate through leaching or runoff during rainfall events is a plausible pathway, railway corridors are established operational environments designed to accommodate ballast materials, drainage and ongoing maintenance activities. With reuse limited to railway infrastructure applications and material quality controls applied prior to supply, the licence holder's controls are considered sufficient to manage the identified pathway and limit the potential for adverse impacts to surrounding soils, surface water or groundwater.

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
Application advertised on the department's website (5 February 2026)	None received	N/A
Local Government Authority advised of proposal (5 February 2026)	The City of Karratha responded on 12 February 2026 and raised no objection to the proposed amendment to Licence L9207/2019/1. However, the City sought clarification regarding matters relating to tenure, land-use compatibility and third-party assets, including whether the proposed amendment involved an extension of the prescribed premises boundary to include Miscellaneous Licence L47/546. The City also noted the presence of heritage and planning considerations and advised that consultation with relevant stakeholders, including the Department of Planning, Lands and Heritage and the Water Corporation, may be required.	The department confirms that the current prescribed premises boundary no longer includes tenement L47/546. The potential extension was referenced in the referral letter as the applicant had initially proposed to undertake crushing and screening on that tenement. Following advice from the City of Karratha and confirmation from the Department of Mines, Petroleum and Exploration that L47/546 is authorised only for storage or transportation of minerals or mineral concentrate, the applicant was advised that crushing and screening activities cannot be authorised on that tenement. Accordingly, the amendment assessment has been limited to activities within Mining Leases M47/226 and M47/293 only. DWER also consulted the Department of Planning, Lands and Heritage and the Water Corporation as direct-interest stakeholders.
Department of Mines, Petroleum and Exploration (DMPE) advised of proposal (5 February 2026)	DMPE advised on 3 April 2026 that the crushing and screening activities would not be permitted on Miscellaneous Licence L47/546.	The department confirms that the current prescribed premises boundary no longer includes tenement L47/546.

Department of Planning Lands and Heritage (DPLH), Aboriginal Sites advised of proposal (5 February 2026)	DPLH advised on 19 March that stone artefacts NAC2307-NCA01 and NAC2307-NCA02 have been recorded within mining tenement L47/546. While information regarding these places has been received by DPLH, the sites have not yet been formally actioned and are not currently displayed on the Aboriginal Cultural Heritage Information System (ACHIS). DPLH advised that Ngarluma Traditional Owners are referenced as knowledge holders for the recorded places and noted that further information may be obtained through Terra Rosa Consulting or the Ngarluma Aboriginal Corporation. DPLH also advised that the proponent remains subject to obligations under the *Aboriginal Heritage Act 1972* and should seek advice from DPLH prior to the commencement of any works, as approvals under that Act may be required.	The department contacted the Ngarluma Aboriginal Corporation on 23 March 2026 to advise of the proposed amendment and seek comment. No response was received at the time of finalising this report. As L47/546 is not included within the amended prescribed premises boundary, no licensed activities are authorised on that tenement. The licence holder remains responsible for complying with obligations under the *Aboriginal Heritage Act 1972* and for obtaining any necessary approvals prior to undertaking activities on other tenements.
Department of Health (DoH) advised of proposal on 9 February 2026	DoH advised that, provided the materials are strictly limited to concrete railway sleepers, the risk of asbestos contamination is considered low and acceptable from a public health perspective. DoH noted that while historical use of asbestos brake linings may have resulted in minor surface contamination, concrete sleepers are largely impermeable, and any fibres would likely have dispersed. DoH also advised that respirable crystalline silica generated during crushing would not pose a public health risk if dust is managed in accordance with occupational health and safety requirements.	The department notes the advice provided by the Department of Health and has considered this advice in the risk assessment for the proposed amendment. Measures relating to the management of potential asbestos contamination and dust emissions have been incorporated into the assessment and licence conditions to ensure risks to public health are appropriately managed.
Water Corporation advised of proposal (5 March 2026)	None received	N/A
Ngarluma Aboriginal Corporation advised of proposal (23 March 2026)	None received	N/A
Licence holder was provided with draft amendment on 22 April 2026	The licence holder advised that they were satisfied with the draft licence conditions and wished for the licence to be issued on 26 May 2026.	N/A

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

<table>
<tr><th>Condition no.</th><th>Proposed amendments</th></tr>
<tr><td>1</td><td>Previously condition 2. Amendments highlighted in yellow.
Table 1: Infrastructure and equipment requirements
<table>
<tr><th></th><th>Site infrastructure and equipment</th><th>Operational requirement</th><th>Infrastructure location</th></tr>
<tr><td>1.</td><td>Jaw crushers and screens (fitted with water sprays and sprinklers):
• 2 mobile crushing units LT3054 and LT3054:
➢ XA750 jaw crusher;
➢ Person 1300 cone crusher;
• QA440 sand screen</td><td>a) Dust suppression sprays to be maintained on crushers and screens;
b) Dust shields and covers to be maintained on conveyors and transfer points; and
c) Noise attenuation barriers must be installed around motors and maintained in position. ~~Barriers installed around motors will act as noise barriers.~~
d) Equipment must be located on a bunded hardstand area that is graded and bunded to direct all runoff to a stormwater retention sump.</td><td>At the location labelled “Crushing and Screening Equipment and Concrete Stockpile Area” shown in Schedule 1, Figure 1</td></tr>
<tr><td>2.</td><td>Water storage and reticulation for dust suppression such as tanks, pipes etc.</td><td>a) The processing area must be graded to direct uncontaminated stormwater away from the processing area. Potentially contaminated stormwater must drain to sediment pond/s and/or sumps.
b) Sediment control measures (such as silt fences, grading, bunding, gabions etc.) must be maintained to direct sediment laden stormwater from entering the ephemeral creek.</td><td>Within the prescribed premises boundary shown in Schedule 1, Figure 1</td></tr>
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</table>

	Site infrastructure and equipment	**Operational requirement**	**Infrastructure location**
3.	Concrete stockpile area and product stockpile area (recycled materials and extracted raw material)	a) Bunding and/or gabions to be maintained around stockpiles to retain sediment. b) Separate and clearly delineated stockpile areas are to be maintained for: i. Extracted raw material. ii. Inert Waste Type 1 (concrete). iii. Recycled outputs. iv. Segregated material awaiting sampling and analytical results. c) Stockpiles of Inert Waste Type 1 (concrete) and recycled outputs must be located on a hardstand designed and constructed to divert all leachate runoff from stockpiles to a stormwater retention sump for collection.	As depicted in Schedule 1, Figure 1
4.	Stormwater and sediment control infrastructure	a) Sediment pond/s and/or sediment sumps must be maintained to contain sediment laden stormwater. b) Sediment control measures (such as silt fences, bunding, gabions etc) must be maintained to direct sediment laden stormwater to the sediment pond/s and/or sumps and prevent it from leaving the site or entering the ephemeral creek.	
5.	50,000 L diesel storage tank	a) Must be self-bunded and maintained in a condition that prevents leakage, spillage or loss of containment. ~~Self-bunded tank maintained.~~	Within the prescribed premises boundary shown in Schedule 1, Figure 1
6.	Quarantine area for non-conforming waste	a) Must comprise of a pad of low permeability ($1x10^{-9}$) or a sealed bottom container designed to temporarily hold non-conforming waste and to prevent the release to the environment of any emissions that may arise from the waste. b) Must be signed and marked Quarantine Storage Area Only.	As depicted in Schedule 1, Figure 1

2, Table 2

Addition of a condition for waste acceptance, authorising acceptance of the concrete railway sleepers.

Waste acceptance

2. The licence holder must only accept onto the premises waste of a type that:

(a) does not exceed the rate at which that waste is received; and

(b) meets the relevant acceptance specification,

as set out in Table 2.

Table 2: Waste acceptance criteria

	Waste type	**Rate at which waste is received**	**Acceptance specification**
1.	Inert Waste Type 1 (Concrete sleepers)	50,000 tonnes per annual period	i) Limited to concrete railway sleepers only. ii) Must not contain, or be suspected of containing, asbestos or ACM.

<table>
<tr><td>3 - 5</td><td>Conditions added to specify actions to be taken when waste does not meet the waste acceptance criteria.

3. Where waste does not meet the waste acceptance criteria set out in condition 2 the licence holder must:
(a) reject the waste; and
(b) record the details of the:
(i) waste (type and description);
(ii) source of the waste load;
(iii) name of the waste carrier;
(iv) registration number of the delivery vehicle; and
(v) date that the waste load was rejected; and
(c) maintain accurate and auditable records of all waste loads rejected from the premises.

4. The licence holder must ensure that where unloaded waste does not meet the waste acceptance criteria set out in condition 2, it is removed from the premises by a delivery vehicle or, where that is not possible, collected and stored in a clearly signposted quarantine storage area or container and removed to an appropriately authorised facility within 7 days of unloading.

5. Where the licence holder identifies that a presented or unloaded waste load contains asbestos and/or ACM, the licence holder must treat that entire load as though it did not meet the waste acceptance criteria set out in condition 2.</td></tr>
<tr><td>6</td><td>Condition added with specifications for processing the concrete sleepers.

6. The licence holder must ensure that the waste types specified in Table 3 are only subjected to the corresponding processes, subject to the corresponding process limits and/or specifications.

Table 3: Waste processing requirements
<table><tr><th></th><th>Waste type</th><th>Processes</th><th>Process limits and/or specifications</th></tr><tr><td>1.</td><td>Inert Waste Type 1</td><td>Handling, crushing, screening and storage</td><td>a) All waste must be either be:
i. processed to generate recycled outputs that may be classified as a product once all applicable product criteria and testing requirements are met; or
ii. managed and disposed of as a waste at an appropriately authorised facility.
b) No more than 50,000 tonnes must be processed per annual period.
c) Stockpiles must be wetted prior to and during crushing and screening to minimise dust emissions.
d) Crushing and screening activities must be managed to ensure that all fine particulate matter is contained within the bunded hardstand area and does not discharge beyond that area.
e) Residual wastes generated during processing must be collected and stored in a container and removed to an appropriately authorised facility within four weeks of generation.</td></tr></table></td></tr>
<tr><td>7-8</td><td>Conditions added for Recycled output testing.

Recycled output testing
7. The licence holder must ensure that testing of all recycled outputs generated from concrete railway sleepers is undertaken in accordance with the product testing procedures specified in Schedule 2.
8. The licence holder must ensure that recycled outputs originating from recovered concrete railway sleepers:
(a) comply with the asbestos contamination limit of 0.001% w/w (in any form), as determined in accordance with Schedule 2;
(b) are not supplied, transferred, or used unless compliance with condition 8(a) has been demonstrated and the material otherwise meets the definition of product under this licence; and
(c) are only supplied for use in railway infrastructure applications.</td></tr>
</table>

<table>
<tr><td>9-12</td><td>Conditions added for the management of dust from the premises.

Dust emissions
9. The licence holder must maintain an adequate water supply to the following plant and equipment to facilitate dust suppression:
(a) fixed water sprays on all crushes and screeners; and
(b) water cart.
10. The licence holder must ensure that waste and recycled output stockpiles are maintained in a damp state to prevent dust lift off.
11. The licence holder must regularly wet down unsealed roads and trafficable areas to prevent dust lift-off.
12. The licence holder must ensure that outputs are adequately wetted prior to being removed from the premises to prevent dust emissions during loading and transport.</td></tr>
<tr><td>13</td><td>Condition added for management of stormwater emissions.

Stormwater emissions
13. The licence holder must ensure that stormwater that has come into contact with waste or recycled outputs is contained and managed on the premises and does not discharge beyond the premises boundary.</td></tr>
<tr><td>14</td><td>Condition added for monitoring of inputs and outputs from the premises.

Inputs and outputs
14. The licence holder must measure and record the quantities of materials specified in Table 5 at the frequency specified in Table 5.
Table 5: Monitoring of inputs and outputs from concrete sleeper recycling operations
<table><tr><th>Material type</th><th>Unit</th><th>Frequency</th></tr><tr><td>Inert Waste Type 1 (concrete sleepers)</td><td>Tonnes</td><td>Each load arriving at the premises</td></tr><tr><td>Recycled outputs</td><td>Tonnes</td><td>Each load leaving the premises</td></tr><tr><td>Rejects (materials disposed of offsite to a suitably licensed facility)</td><td>Tonnes</td><td>Each load leaving or rejected from the premises</td></tr><tr><td>Waste fines (suspended particles within the Stormwater Retention Sump disposed of offsite to a suitably licensed facility)</td><td>Tonnes</td><td>Each load leaving the premises</td></tr></table></td></tr>
<tr><td>18 (previously 5)</td><td>Due date for Annual Audit Compliance Report changed from 30 November each year to 20 February each year.</td></tr>
<tr><td>19</td><td>Addition of biennial reporting requirements for the processing of concrete railway sleepers.

19. The licence holder must:
(a) prepare an Environmental Report that provides information in accordance with Table 6 for the preceding two annual periods, and
(b) submit that Environmental Report to the CEO by 20 February 2028 and biennially thereafter.
Table 6: Environmental reporting requirements
<table><tr><th>Condition</th><th>Requirement</th></tr><tr><td>14</td><td>Monitoring of inputs and outputs including summary of:
(a) waste types and quantities;
(b) wastes that were accepted at the premises, and
(c) removed and rejected loads in the reporting year.</td></tr><tr><td>8</td><td>A summary of recycled output testing and monitoring results, including the following information:
(a) the total number of samples collected;
(b) the number of samples that complied with the asbestos contamination limit;
(c) the number of samples that did not comply with the asbestos contamination limit;
(d) the outcome of any investigations or actions taken in response to non-compliant recycled outputs or stockpiles; and
(e) field sampling records and laboratory certificates for any samples that did not conform to the asbestos contamination limit.</td></tr><tr><td>15</td><td>A summary of complaints, including the information required to be recorded by the condition.</td></tr></table></td></tr>
</table>

Table 9	Addition of definitions for: •ACM •Appropriately authorised facility •AS 4964 •Asbestos •Biennially •Damp •DWER Asbestos Guidelines •Hardstand •Inert Wase Type 1Landfill Definitions •NATA •Product •Quarantined storage area or container •Recycled output •Residual wastes •Special Waste Type 1 Removal of redundant definitions: •Unreasonable emission •Serious environmental harm •Reportable event •Primary activities •Pollution •Material environmental harm •Material change •Implementation Agreement of Decision •Environmental harm •Amendment notice
Schedule 1	Premises map updated
Schedule 2	Addition of asbestos monitoring and testing procedures

Table 7: Consolidation of licence conditions in this amendment

Existing condition	Condition summary	Revised licence condition	Conversion notes
N/A	Explanatory notes	N/A	Redundant. Revised to current licensing format.
1, Table 2	Authorised Emissions table	N/A	Redundant condition. Revised to current licensing format.
3	Record-keeping Maintenance of auditable books	16	Revised to current licensing format.

Existing condition	Condition summary	Revised licence condition	Conversion notes
4	Record-keeping Complaints	15	Revised to current licensing format.
Schedule 2, Table 4	Primary Activities	N/A	Revised to current licensing format. Moved to front of licence.
Schedule 2, Table 5	Infrastructure and equipment	1, Table 1	Revised to current licensing format. Merged with Table 2 to create the infrastructure and equipment table in Condition 1 of the new licence.

References

1. Bardies Well Quarry 2025, *207/2019/1 Amendment Application: Crushing and Screening Category 13, Bardies Well Quarry – M47/226, M47/293 and L47/546*, Port Hedland 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. Engelson, C.J., van der Sloot, H.A. and Petkovic, G., 2017. Long-term leaching from recycled concrete aggregates applied as a sub-base material in road construction. *Science of the Total Environment*, 587-588, 94-101.
5. DWER 2021, *Guideline: Assessment and management of contaminated sites*, Perth, Western Australia