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	W6920/2024/1
Applicant	Mario Michelle Giacci
File number	DWERVT13704~83 & APP-0027498
Premises	292 Finn Road, Myalup WA Legal description – Lot 1794 on Deposited Plan 116610 As defined by the premises maps attached to the issued works approval
Date of report	3 April 2025
Decision	Works approval granted

MANAGER, RESOURCE INDUSTRIES
INDUSTRY REGULATION (STATE-WIDE DELIVERY)
an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

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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 W6920/2024/1 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 and overview of premises

On 18 March 2024, Mario Michelle Giacci (the applicant) applied for a works approval to the department under section 54 of the *Environmental Protection Act 1986* (EP Act). The premises is approximately 10 km north of Myalup.

The application is to undertake cconstruction of a category 12 mobile crushing and screening plant for the screening of sand and crushing of limestone. The equipment will be located within the extraction area on the floor of the quarry.

The works approval includes time limited operations (TLO) involving:

- The screening of sand and crushing of limestone extracted from the 9.17 ha area. Topsoil, overburden, sand and limestone will be stockpiled on site. Proposed maximum throughput capacity of 200,000 tonnes per annum. Hours of operation are 7:00am to 5:00pm Monday to Friday and 7:00 to 12:00pm on Saturdays. No activities to occur on Sunday or Public Holidays.

The premises relates to the category and assessed production / design capacity under Schedule 1 of the *Environmental Protection Regulations 1987* (EP Regulations) which are defined in works approval W6920/2024/1. The infrastructure and equipment relating to the premises category and any associated activities which the department has considered in line with *Guideline: Risk Assessments* (DWER 2020) are outlined in works approval W6920/2024/1.

2.3 Other approvals

The applicant has obtained an Extractive Industries Licence from the Shire of Harvey, expiring on the 11 October 2028.

The proposal was also referred to Part IV of the EP Act on the 02 June 2024 by a third-party. Whilst the Environmental Protection Authority (EPA) reviewed the proposal (named Limestone Quarry Lot 1794 Finn Rd Myalup) the Part V decision was placed on hold. On 3 February 2025 the EPA decided for the proposal to not be assessed under Part IV of the EP Act.

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: Proposed applicant controls

Emission	Sources	Potential pathways	Proposed controls
Construction			
Dust	Placement of crushing and screening and associated equipment Vehicle movements	Air / windborne pathway	Use of water carts as required.
Noise	Placement of crushing and screening and associated equipment Vehicle movements	Air / windborne pathway	Flashing lights instead of tonal reversing alarms on excavators/loaders.
Operation			
Dust	Crushing of material, vehicle movements, lift-off from stockpiles and/or stored product, earthworks etc.	Air / windborne pathway	Use of water trucks and water carts to water site on observation of dust lift. Topsoil stockpiles to be dampened and maintained less than 5 m high. Topsoil stripping shall not occur during forecasted winds in excess of 40 km/hr Transport of material via covered trucks or dampened prior to transport Apply speed restriction (30km/hr within site) Visual monitoring – no visible dust crossing the site boundary
Noise	Crushing and screening of material	Air / windborne pathway	Operating hours 7am to 5pm Monday to Friday, Saturdays 7am to 12pm. No activities on Sundays or public holidays. Overburden and topsoil will be used to form perimeter bunds to assist with noise screening. Ensure all machinery maintained to manufacturer's standard. Flashing lights instead of tonal reversing alarms on excavators/loaders.

Emission	Sources	Potential pathways	Proposed controls
			Speed restriction (30km/hr within site) All machinery and equipment shut off when not in use. Use of significant noise generating equipment or activities is simultaneously avoided.
Sediment laden stormwater	Crushing and screening of material	Infiltration and overland runoff	The porous nature of the sand means all excess water infiltrates. All stormwater runoff within extraction area will be fully retained within the depression basin created by the mining where water will infiltrate or evaporate. Surface water falling outside the pit will be diverted around the pit by perimeter bunds to the drainage system. Pit to contain capacity of surface water runoff produced within the excavation area from at least the two hour, 1 in 10 (10%) annual exceedance probability storm. When each section of the quarry is completed, it will be reformed and back filled, to ensure a separation of around 5 m between the final contours and maximum groundwater elevation.
Hydrocarbons	Spills and leaks during operation/re-fueling of machinery	Direct discharge and seepage to land	Spill kits and proper containment kept onsite.

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 and Figure 1 below provides a summary of potential human and environmental receptors that may be impacted because 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
<u>Residential receptors:</u> 1. 255 Finn Road, MYALUP 6220 2. LOT 3618 ON DEPOSITED PLAN 251474 3. LOT 3617 ON DEPOSITED PLAN 251472 4. 52 Schofield Road, MYALUP 6220	All located within 1.5km of the proposed premises. Distance of structures from extractive activity area: 1. 530m south 2. 845m, 862m south, and 1125m southwest

5. 19 Schofield Road, MYALUP 6220 6. 105 Finn Road, MYALUP 6220	3. 1275m south west 4. 1.75km east 5. 1.8km east 6. 2km south east
Aboriginal and heritage sites: Lake Preston (place ID: 5614), Artefacts / Scatter	550m west of proposed premises boundary.
Environmental receptors	**Distance from prescribed activity**
Geomorphic Wetlands – Swan Coastal Plain Conservation (wetlands which support a high level of attributes and functions for preservation): 1. Yalgorup Lakes System, WGS UFI: 15480 - 3267.7 ha Resource enhancement (wetlands which may have been modified or degraded, but still support substantial attributes and functions, and may have the potential to be restored or rehabilitated to conservation category): 2. WGS UFI: 1204 Sumpland classification, basin landform, resource enhancement – 17.5 ha Multiple use (wetlands with few remaining important attributes and functions): 3. WGS UFI: 1203, Sumpland - 99 ha 4. WGS UFI: 1199, Dampland – 2.7 ha 5. WGS UFI: 1200, Dampland– 5.4 ha 6. WGS UFI: 1197, Dampland– 66.8 ha 7. WGS UFI: 9275, Dampland – 0.7 ha 8. WGS UFI: 7388, Dampland – 0.6 ha	1. 570m west 2. Adjacent to northern border and 190m east 3. Adjacent to northern border and 100m east 4. 600m southwest 5. 625m southwest 6. 600m north 7. 900m northwest 8. 890m northeast
Threatened Ecological Communities (TECs): 11 areas of Tuart (Eucalyptus gomphocephala) woodlands and forests of the Swan Coastal Plain – priority 3. (IDs: 125815, 126362, 125729, 125812, 125813, 125727, 125816, 126363, 125728, 125726, 126361)	within 1km buffer of premises. In particular 125812, 125813 and 125728 are directly adjacent to western boundary of premises. 125727 is directly adjacent to southern boundary of premises.
Threatened fauna: 1. Calidris ruficollis (red-necked stint) 2. Phascogale tapoatafa wambenger (south-western brush-tailed phascogale, wambenger)	Reported sightings: 1. 860m west in vegetation around lake Preston 2. 400m west in vegetation surrounding lake
Surface water - drainage No surface drainage due to permeable and porous nature of the sand. No surface drainage from the excavation site[2].	Surface water - drainage 1. 600m north Screened out of risk assessment due to distance and no pathway for emissions identified.

1. One minor surface water line located on internal mapping software. Therefore, screened out of risk assessment. <u>Surface water bodies</u> 2. Lake Preston 3. Kooallup Lagoon 4. Unnamed surface water (ID: 62085)	Surface water bodies 2. 600m west 3. Directly adjacent eastern boundary 4. 900m north
<u>Groundwater:</u> South West Coastal Groundwater Area TDS: 500 – 1000 Superficial and Leederville aquifers. Superficial is mainly uncontained and shallow, containing freshwater resting on saline groundwater. It is connected to the underlying Leederville aquifer. Drainage infiltrates into underlying groundwater at deeper levels of the superficial aquifer, flow is towards the west[1]. Nearest groundwater monitoring bore Lake Clifton D2, 850m from southeast corner of proposed premises indicates maximum groundwater elevations in last 10 years ranged from 0.186m AHD to 0.866 AHD. Highest groundwater at the pit is approximately 1m AHD[1].	Underlying the proposed premises.

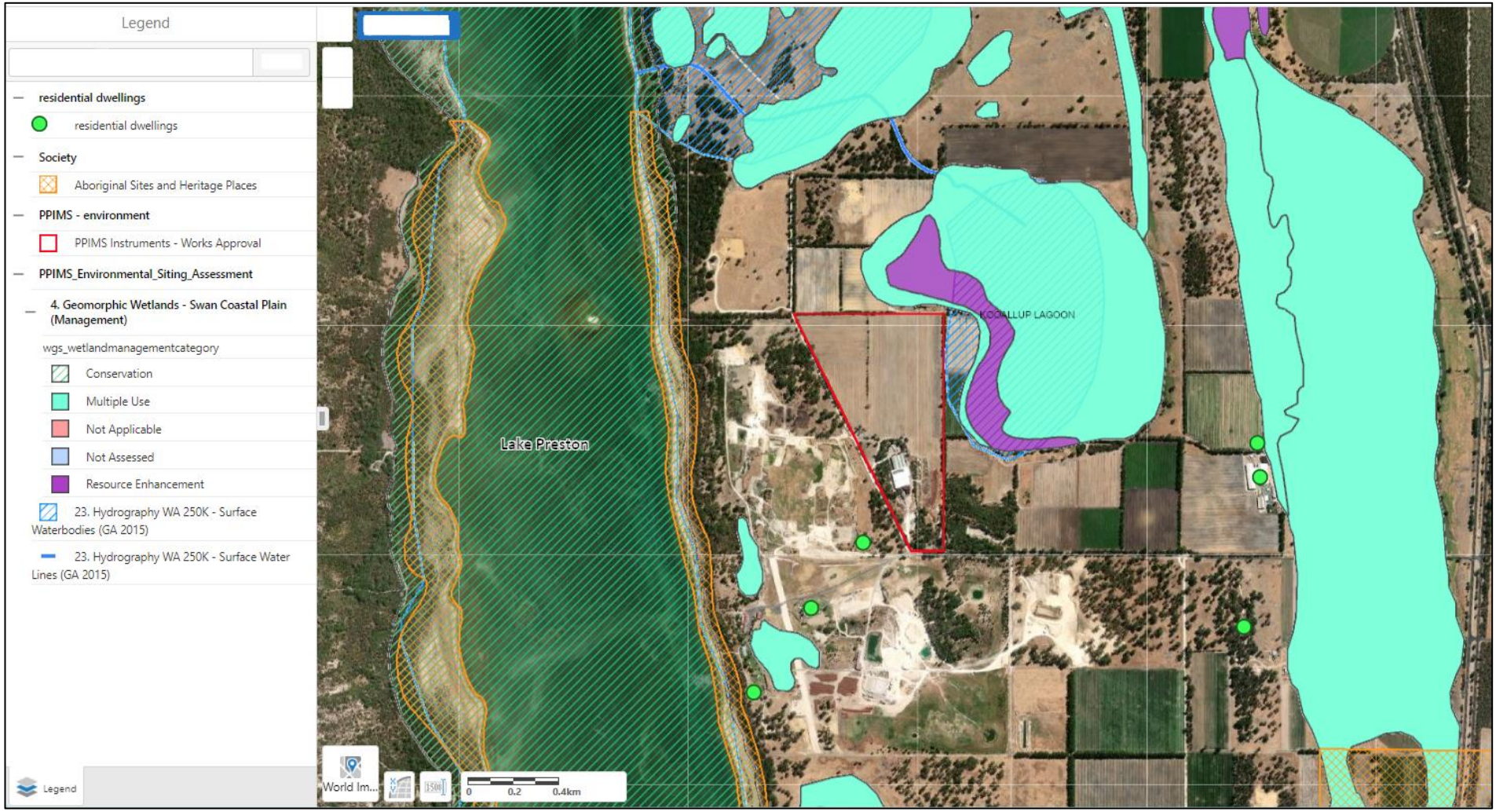

Figure 1: Distance to sensitive receptors

3.2 Risk ratings

Risk ratings have been assessed in accordance with the *Guideline: Risk Assessments* (DWER 2020) for each identified emission source and considers 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 will be documented and justified in Table 3.

Works approval W6920/2024/1 that accompanies this decision report authorises construction and time-limited operations. 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 i.e. category 12 activities. 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 of 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
Sources / activities	**Potential emission**	**Potential pathways and impact**	**Receptors**	**Applicant controls**				
Construction								
Placement of screen and associated equipment including vehicle movements (reversing beepers). Bund construction	Dust	Air / windborne pathway causing impacts to health and amenity	Residential receptors Native vegetation/TECs	Refer to Section 3.1	C = Minor L = Unlikely **Low Risk**	Y	Condition 1 - construction	N/A
	Noise			Refer to Section 3.1	C = Moderate L = Unlikely **Medium Risk**	Y	Condition 1 - construction	N/A
Operation (including time-limited-operations operations)								
Screening, crushing, unloading, loading and storage of material Vehicle movements	Dust	Air / windborne pathway causing impacts to health and amenity	Residential receptors Native vegetation/TECs	Refer to Section 3.1	C = Moderate L = Unlikely **Medium Risk**	Y	Condition 1 – construction Condition 6 – TLO Condition 7 – no visible dust crosses premises Condition 8 – manage dust generation Condition 9 – hours of operation	N/A
	Noise	Air / windborne pathway causing impacts to health and amenity	Residential receptors	Refer to Section 3.1	C = Moderate L = Unlikely **Medium Risk**	Y	Condition 1 – construction Condition 6 – TLO Condition 9 – hours of operation	See Section 3.3.1
	Sediment laden stormwater	Overland runoff potentially causing ecosystem disturbance or impacting surface water quality	Surface water Wetlands Native vegetation/TECs Groundwater Aboriginal heritage site	Refer to Section 3.1	C = Moderate L = Unlikely **Medium Risk**	Y	Condition 1 – construction Condition 6 – TLO.	N/A

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.

3.3 Detailed risk assessment

3.3.1 Noise Emissions

The proposed works have the potential for noise emissions to impact sensitive residential receptors nearby. Residential receptors are identified on Figure 1.

The EPA's *Guidance for the Assessment of Environmental Factors – Separation Distances Between Industrial and Sensitive Land Uses* set a case-by-case buffer for extractive sites that this processing limestone comes under. With three sensitive receptors within 1000m (Figure 1), the closest at 530m, a detailed noise impact assessment was warranted, leading to the applicant's Environmental Noise Assessment Report (Lloyd George Acoustics 2021).

The report outlined the source sound power levels from machinery and activities, with the highest sound pressure level predicted to be 114 dB from the Mobile Crusher. The report used predictive noise modelling and found that all noise-sensitive receivers comply with the *Environmental Protection (Noise) Regulations 1997* within typical operating hours (7am to 7pm Monday to Friday, Saturdays 7am to 1pm), without needing further noise mitigation. However, it recommended to minimize noise impacts where practicable including placing stockpiles to provide acoustic screening to the residents of the south.

The department found the report's modelling acceptable but noted it misclassified the land type for the closest receptor, incorrectly inflating noise levels. LGA calculated 57 dB(A) at R1, while ENB found 50 dB(A). With a +5 dB tonality penalty, predicted levels for Stage 1 of sand and limestone extraction were 51 dB(A) and 52 dB(A), slightly exceeding the assigned 50 dB(A). Ultimately, ENB agreed that the risk of potential noise exceedance is not high, but suggested design noise controls for the sand and limestone extraction at State 1, such as a earth bund or stockpiles placed in between the crusher/screen and R1.

The applicant's noise management controls (section 3.1.1) are considered adequate to manage noise emissions and has been considered in the department's final risk rating of medium with consequence of moderate, and likelihood of unlikely.

4. Consultation

Table 4 provides a summary of the consultation undertaken by the department.

Table 4: Consultation

Consultation method	Comments received	Department response
Application advertised on the department's website on 06/05/2024	Urban Bushland Council WA provided comments on 27/05/2024: 1. Recommends flora and vegetation and fauna surveys be done for this proposal to establish the vegetation species and the species of fauna using the habitat relating to this proposal 2. A clearing permit application may be needed	1. The works approval assessment has considered the impact to flora and fauna from the proposed activities and is outlined in section 3.1.2. The department determined that the information available was sufficient to determine the risk and assign controls and that no additional surveys were required. 2-3. These activities fall within the scope of the Native Vegetation Regulation (NVR) branch at the department, who processes vegetation clearing applications. These are therefore issues that do not require

	3. All trees and understory, even if non-native, be retained	conditioning or assessment under this works approval. Resource industries sought internal advice from NVR regarding the comments. NVR advised: *Under section 51C of the Environmental Protection Act 1986 (EP Act), clearing of native vegetation is an offence unless:* • *it is undertaken under the authority of a clearing permit* • *it is done after the person has received notice under Section 51DA(5) that a clearing permit is not required* • *the clearing is subject to an exemption* *Based on the information provided, the vegetation proposed to be cleared comprises planted non-native species and does not meet the definition of 'native vegetation' as specified under the EP Act. Given this, the proposal is unlikely to require a clearing permit and, consequently, exemptions from requiring a clearing permit are not applicable.* *While a clearing permit may not be required under the EP Act, requirements contained in other legislation may apply.*
Local Government Authority – Shire of Harvey advised of proposal on 10/05/2024.	No comments received.	N/A
Residential addresses advised of proposal via mail dated 10/05/2024: – 255 Finn Road, MYALUP WA 6220 – 52 Schofield Road MYALUP WA 6220 – 105 Finn Road MYALUP WA 6220	No comments received.	N/A
Applicant was provided with draft documents on 1/04/2025.	On the 1/04/2025, waived the comment period.	N/A

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

1. Accendo 2023, Water Management Plan Lot 1794 Finn Road, Myalup. Western Australia.
2. Accendo 2024, Works Approval Application Lot 1794 Finn Road, Myalup. Western Australia.
3. Department of Environment Regulation (DER) 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
4. Department of Water and Environmental Regulation (DWER) 2020, *Guideline: Environmental Siting*, Perth, Western Australia.
5. Department of Biodiversity, Conservation and Attractions 2017, *A methodology for the evaluation of wetlands on the Swan Coastal Plain,* Perth, Western Australia.
6. DWER 2020, *Guideline: Risk Assessments*, Perth, Western Australia.
7. Environmental Protection Authority (EPA) 2005, *Guidance for the Assessment of Environmental Factors – Separation Distances Between Industrial and Sensitive Land Uses,* Western Australia.