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	W6959/2024/1
Applicant	MGM Bulk Pty Ltd
ACN	165 448 920
File number	DWERVT15183~30
Premises	Myalup Stage 3 North Mining Lease Mining Tenement M 70/1409 Shire of Waroona
Date of report	2 December 2024
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 W6959/2024/1 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 1 August 2024, MGM Bulk Pty Ltd (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 extract sand and limestone and undertake crushing and screening of extracted material at the premises which is located approximately 6 km southwest of Preston Beach within the Shire of Waroona.

Excavation activities at the premises will be undertaken within mining lease M70/1409 (Figure 1) on a staged basis from the southern boundary to the northern boundary, dependent upon materials encountered; however, the entire area contains mineable resources which will be processed over the life of the mine.

Sand will be excavated using a loader and will be stockpiled in designated areas according to the material's characteristics, with concrete sand and fill sand to be wet or dry screened on site as required. Once sand has been extracted from an area, exposed limestone will be deep ripped, and track rolled with a bulldozer and then stockpiled, where it will then be loaded onto trucks for transport offsite. Where crushing and screening of limestone material is required, a loader will move stockpiled limestone into a mobile crusher for reduction to a required size for transport offsite. It should be noted that no blasting is proposed as part of the extraction operations.

Sand and limestone will be excavated to a maximum depth of 3 m above the groundwater table within the Public Drinking Water Source Area (PDWSA) and 2 m above the groundwater table outside of the PDWSA. As such, no dewatering activities are proposed for this operation. The PDWSA relates to the Preston Beach Water Reserve which is shown in Figure 2.

Crushing and screening of sand and limestone will be conducted via a mobile screening and crushing unit to be set up on the pit floor during times when extraction is occurring. It is anticipated that a maximum of 250,000 tonnes per annum of limestone and sand will be crushed and screened.

Once all material is considered to have been extracted the site will be restored to include a natural soil profile and native vegetation as described within the approved Mine Closure Plan for M70/1409 and L70/227 which was approved by the Department of Mines, Industry Regulation and Safety on 20 November 2023.

The premises relates to the category and assessed production capacity under Schedule 1 of the *Environmental Protection Regulations 1987* (EP Regulations) which are defined in works approval W6959/2024/1. 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 W6959/2024/1.

Figure 1: Prescribed Premises boundary

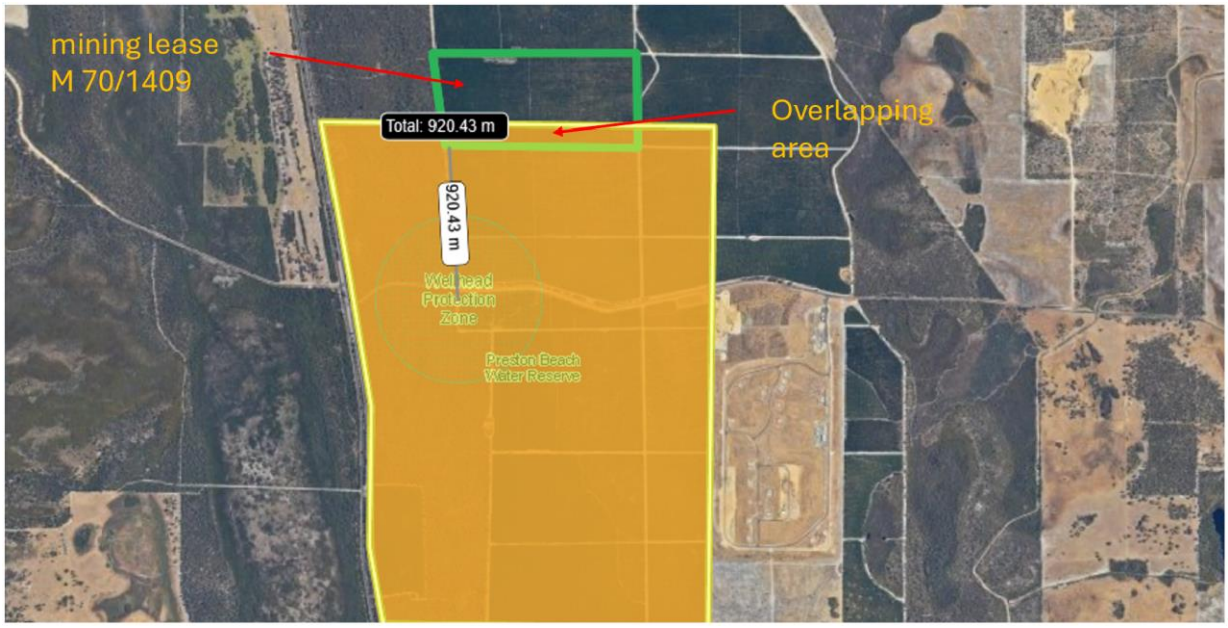

Figure 2 : Preston Beach Water Reserve and Well Head Protection Zone locations

2.3 Description of proposed activity

2.3.1 Construction

The proposed construction phase activities include the following works:

- placement and mobilisation of screening plant and associated infrastructure (including vehicle movements):
  - mobile crusher (Tesab 10570 Jaw Crusher, Pegson 428 Trackpactor Impact Crusher, COBRA 290 / 290R Impact Crusher, or similar)
  - mobile screens (McCloskey S190, Terex Finlay 893, or similar)
  - stackers (Anaconda Radial Stockpiler, Trackstack 8042TSL Stackers, or similar)
  - articulated dump truck
  - articulated water cart
  - Caterpillar 980H loader, Caterpillar 980M loaders
  - dozer, and
  - excavator
- construction of stormwater management infrastructure.

2.3.2 Operations (including time limited operations)

The proposed sand screening operations (including time limited operations) activities includes the following:

- crushing and screening of limestone and sand
- handling and stockpiling of material including loading of material into trucks
- vehicle movements; and
- refueling (via refueling truck equipped with a spill kit and drip tray).

Operating hours are proposed to occur between 6 am and 6 pm Monday to Saturday.

Operations exclude Sundays and public holidays.

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 time limited 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 and mobilisation of screening plant and associated infrastructure (including vehicle movements)	Air / windborne pathway	• Water carts will be made available during construction to suppress fugitive dust emissions. • Wind fencing will be installed, and surface stabilisation will be undertaken during the construction period for the purposes of dust suppression where applicable. • All areas of disturbed land will be stabilised to ensure that the disturbed area exposed at any time is kept to a practical minimum. • Vehicle speed limits will be enforced onsite and designated roads will be utilised by heavy vehicles where possible.
Operation			
Dust	Screening, crushing, unloading, loading and storage of material Vehicle movements	Air/ windborne pathway	• Water trucks will be available on site to suppress visible dust emissions and reduce dust lift. • Dust suppression sprayers and sprinklers will be operated on the crushing and screening equipment and material stockpiles. • Stockpiles will be limited to the anticipated cubic volume/vehicle movement for cartage on the following operating day where possible to limit dust emission from

Emission	Sources	Potential pathways	Proposed controls
			materials storage. • Transport of material will be via covered trucks or dampened prior to transport to prevent dust lift during transport. • All areas of disturbed land will be stabilised to ensure that the disturbed area exposed at any time is kept to a practical minimum. • Vehicle speed limits will be enforced onsite and designated roads will be utilised by heavy vehicles where possible. • A complaints management system and reporting procedure will be maintained so that dust issues can be responded to in a timely manner.
Noise			• Regular review of meteorological data, specifically wind speed and direction, to guide decisions on quarrying activities. • Use machinery and equipment with minimal noise output levels. • Ensure all machinery is regularly serviced as per the equipment's maintenance schedule to minimise noise generation. • Where appropriate, all machinery and equipment will be shut off when not in use. • Use flashing lights/broadband alarms instead of tonal reversing alarms on excavators/loaders.
Sediment laden stormwater		Overland discharge	• All stormwater run-off from disturbed land will be contained on-site with the use of bunds initially to achieve effective removal of sediment and turbidity. • Any surface water falling outside of the pit will be diverted around the pit by perimeter bunds to a dedicated drainage system. • Diversion drains will be constructed around hardstand areas to divert clean water away from the site whilst containing any potentially sediment laden or contaminated surface waters within the work area.
Hydrocarbon discharge		Overland discharge	• Mobile refuelling of equipment and vehicles will be undertaken following set procedures to acceptably minimise the risk of spills. • Containment and bunding will be in place to contain any spills that may occur. (A) Any spills or leakages will be addressed in accordance with the applicant's

Emission	Sources	Potential pathways	Proposed controls
			'Hydrocarbon Spill Management Procedure'. • Spill kits containing appropriate equipment for control, containment and cleanup of hydrocarbon and chemical spills will be kept and maintained in appropriate locations onsite. • No vehicles or machinery will be serviced or cleaned within the Site.

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 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 receptors and distance from prescribed activity

Human receptors	Distance from prescribed activity
Farmhouse	This is the closest sensitive human receptor, and it is located approximately 1.4 km northwest of the site. The location of the farmhouse in relation to the prescribed premises boundary is illustrated in Figure 1.
Environmental receptors	**Distance from prescribed activity**
Threatened Ecological Communities	The site is located adjacent to an area of critically endangered Tuart Woodlands. The proposed operations are mobile and as such, the precise distance from the operations to the Tuart Woodlands will vary over time as operations are relocated across the site.
State Forest	The premises is located within State Forest 16.
Adjacent Vegetation	Vegetation adjacent to the premises includes the above-mentioned Tuart Woodlands which is located to the west. The remainder of the vegetation surrounding the premises has been identified as pine plantation.
Carnaby's Cockatoo	There are confirmed sightings of Carnaby's Cockatoo located in the Tuart Woodland to the west and within 400 m of the premises. This is only noted due to the conservation significance of the species, however, there appear to be no risks of the proposed activities on Carnaby Cockatoos as there are no known Carnaby nesting site located within the premises. **The Delegated Officer has excluded this from the risk assessment due to the nature of the emissions being considered to have negligible impact on the Carnaby Cockatoo**

	and its habitat.
Groundwater	Based on the supporting information provided, depth to groundwater ranges from 15 m in the western end of the site to 44 m at the eastern end. The southern portion of the premises is situated within the Priority 1 Preston Beach Water Reserve which is used as a public drinking water source for the Preston Beach Community.

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 licence 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 W6959/2024/1 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: Crushing and screening 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 and mobilisation of screening plant and associated infrastructure (including vehicle movements)	Dust	Air/windborne pathway impacting TEC health	Adjacent vegetation including State Forest and critically endangered Tuart Woodlands	Refer to Section 3.1.1	C = Slight L = Unlikely **Low Risk**	Y	Condition 1, Table 1	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 ecosystem health	Adjacent vegetation including State Forest and critically endangered Tuart Woodlands	Refer to Section 3.1.1	C = Slight L = Unlikely **Low Risk**	Y	Condition 6, Table 2	N/A
	Noise		Farmhouse	Refer to Section 3.1.1	C = Slight L = Unlikely **Low Risk**	Y	Condition 6, Table 2	A farmhouse approximately 1.4 km from the site has been identified and the applicant has proposed operating hours to occur between 6 am and 6 pm Monday to Saturday. This will be conditioned to maintain minimal noise related issues. Operations exclude Sundays and public holidays.
	Sediment laden stormwater	Overland runoff potentially causing ecosystem disturbance or impacting ground water quality	Adjacent vegetation including State Forest and critically endangered Tuart Woodlands Groundwater	Refer to Section 3.1.1	C = Minor L = Unlikely **Medium Risk**	Y	Condition 6, Table 2	N/A

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**				
	Hydrocarbon discharged	Overland discharge and seepage into groundwater	Adjacent vegetation including State Forest and critically endangered Tuart Woodlands Groundwater, Priority 1 Preston Beach Water Reserve	Refer to Section 3.1.1	C = Moderate L = Unlikely **Medium Risk**	Y	Condition 6, Table 2	Refueling to be undertaken outside of the P1 public drinking water source protection area in accordance with Water Quality Protection Note 25

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	Comments received	Department response
DWER Water Source Protection Planning, advised of proposal on 20 September 2024	The proposed activity is in P1 area and approximately 920 m north of a known Well Head Protection Zone (WHPZ). The Department's Water Source Protection Planning provided a response on 26/09/2024 and advised the following: • Consistent with Water Quality Protection Note 25 (WQPN 25), refuelling should be undertaken outside of the P1 public drinking water source protection area, and this should be reflected in the licence. • According to WQPN 25, there are several conditions of planning approval that are consistent with crushing and screening operations where they are located outside of a protection zone. These conditions have been provided to the Department in the response from Water Source Protection Planning.	The Delegated Officer has considered the comments provided by Water Source Protection Planning, particularly the risk to the P1 area posed by the activity. In response, a condition will be placed on the instrument to reflect the need for refuelling to be undertaken outside of the P1 public drinking water source protection area in accordance with WQPN 25. The associated map provided by Water Source Protection Planning showing the P1 boundary and location of the WHPZ will also be included in the instrument.
Conservation Council of Western Australia (CCWA), advised of proposal on 24 September 2024	The CCWA provided a response on 16/10/2024 and provided the following comments: <u>The Proposal will result in the clearing of potential black cockatoo forage</u> • The site contains pine plantation, which is a good source of forage for black cockatoos. • The DCCEEW Recovery Plan for Carnaby's Cockatoo (**CC**) (2013) notes that the loss of foraging habitat in the non-breeding range of CC, including pine plantations, is a significant threat to the species. Accordingly, the loss of maturing pine plantation in the Proposal area will result in a threat to CC. • Rehabilitation activities for the Proposal will produce a significant delay in the availability of mature and suitable forage sources for CC which will result in an additional threat to black cockatoos that are reliant on coast forage sources. • The cumulative impact from the removal of further forage sources in the area also requires careful evaluation. The Myalup area is being increasingly industrialised, resulting in the clearing and fragmentation of black cockatoo habitat, producing further loss of forage, roosting and breeding sites, and risking a loss of east-west connectivity.	The Delegated Officer acknowledges the potential contribution to cumulative impacts to Carnaby's Cockatoo foraging habitat that the proposal presents. However, the site is subject to an approved clearing permit application (CPS 10419/1) and the Delegated Officer notes that rehabilitation is proposed to be undertaken on a staged basis and in accordance with the Closure Plan approved by DEMIRS. Considering the above, the Delegated Officer considers the proposed clearing and rehabilitation to fall outside of the scope of this application.
	<u>The Proposal will risk the mobilisation of acid sulphate soils (ASS)</u> • CCWA notes that the excavations have the potential to intersect with ASS. • With conservation category wetlands 1 km west of the site and 1.2 km east of the site and with the protective filtration capacity of the limestone and sand removed from the excavation,	In the application, the applicant states the following: "Potential impacts associated with ASS are expected to be low given the presence of Spearwood Sands and limestone within the Site. Furthermore, as the proposed activities will not disturb the ground below the maximum water table it is unlikely that any ASS, if present, will be exposed or disturbed." The Delegated Officer notes that the proposed sand and limestone extraction will be limited to a

	groundwater and nearby wetlands will be at risk from contamination by any mobilised ASS. • CCWA argues that the risk from ASS to groundwater and nearby wetlands should be more carefully evaluated.	maximum depth of 3 metres above the groundwater table within the Public Drinking Water Source Area (PDWSA) and 2 metres above the groundwater table outside of the PDWSA. As such, the Delegated Officer does not consider there to be a risk of wetland contamination as a result of mobilisation of ASS due to proposed excavation activities. In addition, this assessment is for the crushing and screening of limestone and is limited to emissions and discharges from that activity.
	<u>The Proposal will risk polluting a public drinking water source</u> • The Proposal site is partly within a Priority 1 public drinking water source area. • Water resources could be further impacted by the removal of vegetation, the removal of sand and limestone, the increased risk from agricultural by-products from nearby agricultural premises reaching the water table, and a risk from leachate from any remedial inputs (e.g., new soils, waste) reaching waterways. • The Proposal will put at risk from pollution and site degradation, a Priority 1 public drinking water supply, in addition to conservation category wetlands and groundwater dependent ecosystems, and, therefore, is not in alignment with the *DWER Water quality protection note 25.* • CCWA believes that the Proposal should be further reviewed under Part IV of the EPA Act to more adequately assess the risks to a P1 water supply.	The Delegated Officer notes that the site is located partially within a Priority 1 Public Drinking Water Source Area (PDWSA). The Department sought comment from Water Source Protection Planning who advised that refuelling is to occur outside of the P1 PDWSA in accordance with Water Quality Protection Note 25. This has been addressed through a condition on the Works Approval requiring refuelling to occur exclusively outside of the P1 PDWSA. It should be noted that neither the applicant nor DWER consider this a significant proposal under Part IV of the EP Act, however, any third-party may lodge a proposal with EPA should there be reasonable concern.
Applicant was provided with draft documents on 13 November 2024	The applicant provided the following list of equipment to include in the Works Approval: • Caterpillar 980M Loaders • McCloskey S190 Screener • Terex Finlay 893 Screener • Tesab 10570 Jaw Crusher • Pegson 428 Trackpactor Impact Crusher • Trackstack 8042TSL Stackers	The Delegated Officer notes the equipment and has included it in the Condition 1, Table 1 of the Works Approval.

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. Department of Environment Regulation (DER) 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
2. Department of Water and Environmental Regulation (DWER) 2020, *Guideline: Environmental Siting*, Perth, Western Australia.
3. DWER 2020, *Guideline: Risk Assessments*, Perth, Western Australia.
4. DWER 2021, *Water Quality Protection Note 25*, Perth, Western Australia
5. Department of Climate Change, Energy, the Environment and Water (DCCEEW) 2013,

Carnaby's Cockatoo (Calyptorhynchus latirostris) Recovery Plan, Perth, Western Australia.