



Application for Works Approval

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

Works Approval Number	W6798/2023/1
Applicant	Hanson Construction Materials Pty Ltd
ACN	009 679 734
File number	DER2023/000265
Premises	Byford Hard Rock Quarry Lot 202 South Western Highway WHITBY WA 6213 Lot 202 on Deposited Plan 37006 As defined by Figure 1 in Schedule 1 of the works approval
Date of report	28 March 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 W6798/2023/1 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 13 April 2023, Hanson Construction Materials Pty Ltd (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 2.5 km west of the nearest town of Whitby.

The application is to undertake construction works relating to a 13.72 ha disposal and processing area, including crushing, sorting and stockpiling of concrete material (approximately 100,000 tonnes per year) sourced from the applicant's batch plants located across the Perth metropolitan area. The applicant proposes to use the existing screening and crushing plant and loaders in operation under licence L8432/2010/3 to sort and crush the concrete material. The applicant advises that the proposed reprocessing of concrete material into a saleable product prevents it otherwise going into landfill, in alignment with the objectives of the *Waste Avoidance and Resource Recovery Act 2007* (avoidance of waste).

Once processed, the concrete material will be stockpiled within the 13.72 ha solid waste (concrete) laydown and processing area. No other material will be accepted at the premises other than from Hanson's concrete operations.

The premises relates to category 13 crushing and screening activities listed under Schedule 1 of the *Environmental Protection Regulations 1987* (EP Regulations) for the assessed production capacity defined in works approval W6798/2023/1. 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 2020a) are also outlined in works approval W6798/2023/1.

In consideration of the department's *Factsheet – Assessing whether material is waste* (DWER 2018), the Delegated Officer has determined that the concrete material to be received at the premises is not 'waste'. The basis for this decision is that the concrete material is not 'unwanted', will be sourced from batching plants operated by the applicant and will be materially transformed into a saleable product at the premises.

2.3 Part IV of the EP Act

In 1992, approval was granted for the quarry, subject to conditions in Ministerial Statement 227. Activities regarding excavation, management and rehabilitation are undertaken in accordance with the Ministerial Statement which has no end date and is valid for the life of operations.

2.4 Other Approvals

The Shire of Serpentine Jarrahdale advised that the crushing equipment at the premises was approved in association with the hard rock quarry and production of concrete within the plant.

However, the existing Development Approval did not include the proposed crushing or stockpiling of concrete material associated with the applicant's batching plants.

On 23 March 2024, the applicant has provided evidence of a valid Development Approval for the premises.

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 2020a).

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 screen and associated equipment including vehicle movements (reversing beepers)	Air / windborne pathway	<ul style="list-style-type: none"> • 20 tonne water truck available for dust suppression • Haul roads regularly graded and watered as required in summer months • All crushers, screens and stockpiles are either sprayed with water or are enclosed
Noise			<ul style="list-style-type: none"> • All equipment is fitted with noise suppression and regularly maintained • Screening bunds and vegetation in place around perimeter of quarry • No proposed changes to buffer distances (as per L8432/2010/3) • Activities mainly limited to 6am to 6pm Monday to Saturday, excluding public holidays • Compliance with Noise Regulations
Operation			
Dust	Vehicle and machinery activity on disturbed ground	Air / windborne	<ul style="list-style-type: none"> • 20 tonne water truck available for dust suppression

Emission	Sources	Potential pathways	Proposed controls
	and unsealed roads Wind-driven dust lift-off from crushed concrete stockpiles Concrete crushing and screening	pathway	<ul style="list-style-type: none"> • Haul roads regularly graded and watered as required in summer months • All crushers, screens and stockpiles are either sprayed with water or are enclosed • Existing dust monitoring stations as per L8432/2010/3 – AQ1 and AQ3 located adjacent to the proposed solid waste laydown, processing and stockpile area. • Existing licence condition to manage fugitive emissions in accordance with the site's Environmental Management Plan (Part 5.3 Dust management)
Noise	Vehicle, machinery and plant operations	Air / windborne pathway	<ul style="list-style-type: none"> • All equipment is fitted with noise suppression and regularly maintained • Screening bunds and vegetation in place around perimeter of quarry • No proposed changes to buffer distances (as per L8432/2010/3) • Compliance with Noise Regulations • Existing licence condition to manage fugitive emissions in accordance with the site's Environmental Management Plan (Part 5.2 Noise management)
Sediment laden stormwater	Stockpiling, washing material	Overland runoff	<p>None</p> <ul style="list-style-type: none"> • Existing licence condition specifies the discharge point for drainage across the processing and stockpile area, which is collected via a sump and pipe system beneath the area. This system incorporates a series of sumps and 750 mm concrete pipes with a pipe outfall to a small dam to the northwest of the processing area.

3.1.2 Receptors

In accordance with the *Guideline: Risk Assessment* (DWER 2020a), 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 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 2020b)).

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

Human receptors	Approximate distance from prescribed activity
Tumbulgum Farm	800 m to the southwest of the proposed activity area
Residential dwellings	1.3 km north of the proposed activity area 2.6 km west of the proposed activity area
<p>Cardup Brook – Mythological Aboriginal Site and Heritage Place:</p> <p>A minor non-perennial watercourse that travels east to west</p>	1.6 km north of the prescribed premises boundary
Environmental receptors	Distance from prescribed activity
<p>Serpentine Groundwater Area (proclaimed under <i>Rights in Water and Irrigation Act 1914</i>)</p> <p>Groundwater is fresh to marginal with 500 – 1000 Total Dissolved Solids (TDS)</p>	<p>There are no shallow groundwater aquifers underlying the premises, which is situated on a tight, low permeability granite basement.</p> <p>Local aquifers comprise alluvial sediments in valleys that are perched on top of the granite basement or in sediments west of the operations and South Western Highway.</p>
<p>Ephemeral creek</p> <p>Commences on the northern edges of the pit draining in a south-east to north-west direction. From there the creek travels through the centre of the site on the northern side of the haul road, contained in a cut watercourse around the eastern edge of the works area.</p> <p>It then drains into and beneath the processing and stockpile area where it is piped to the northwest of the operation to exit at the northwestern edge of the stockpile area.</p> <p>A second ephemeral creek runs to the north and east of the operations and flows in response to storm events and heavy winter rainfall. It is isolated from quarrying and processing operations and lies up gradient from them.</p>	<p>One ephemeral creek runs through the premises and is piped beneath the processing and stockpile area.</p>
<p>DBCA Legislated Tenure – Jarrahdale State Forest, Darling Range Regional Park.</p>	<p>Adjacent to prescribed premises to the east.</p>
<p>Bush forever site 354</p>	<p>750m west of the proposed activities</p>
<p>Threatened ecological communities:</p> <p>Banksia Dominated Woodlands of the Swan Coastal Plain IBRA Region</p>	<p>750m west of the proposed activities</p>
<p>Threatened ecological communities:</p>	<p>750m west of the proposed activities</p>

Banksia 7tenuate and/or Eucalyptus marginata woodlands of the eastern side of the Swan Coastal Plain	
<p>Threatened Fauna:</p> <ul style="list-style-type: none"> - <i>Calyptorhynchus banksii naso</i> (forest red-tailed black cockatoo) - <i>Calyptorhynchus latirostris</i> (Carnaby's cockatoo) - <i>Calyptorhynchus baudinii</i> (Baudin's cockatoo) 	Sighted within a 1km radius of the prescribed premises

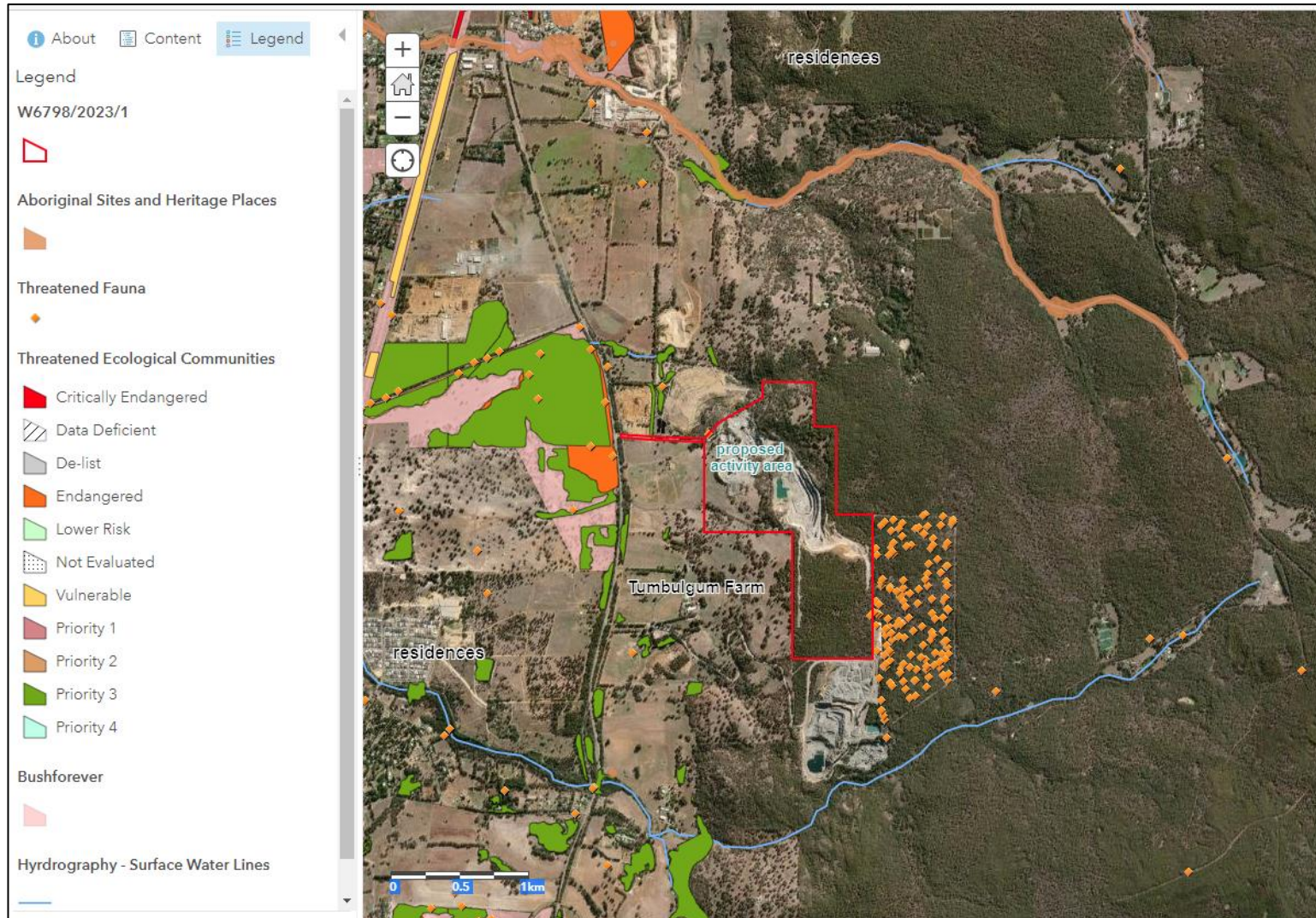


Figure 1: Distance to sensitive receptors

3.2 Risk ratings

Risk ratings have been assessed in accordance with the *Guideline: Risk Assessments* (DWER 2020a) 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 W6798/2023/1 that accompanies this decision report authorises construction and time-limited operations (TLO). 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 TLO phase authorised under the works approval to authorise emissions associated with the ongoing operation of the premises i.e. crushing, screening and storing activities associated with category 13 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)	Dust	Air / windborne pathway causing impacts to health and amenity	Tumbulgum Farm 800m southwest Residences 1.3km north and 2.6km west Threatened fauna	Refer to Section 3.1	C = Moderate L = Unlikely Medium Risk	N	<u>Condition 1, 2 and 3 – design and construction requirements and reporting, including crushing and screening equipment fitted with dust suppression sprays</u>	As the applicant is proposing to use the existing crushing and screening plant, the Delegated Officer has specified that an audit is undertaken of the relevant infrastructure and equipment to ensure controls are fit for purpose prior to the commencement of concrete processing activities.
	Noise			Refer to Section 3.1	C = Minor L = Unlikely Low Risk	Y	N/A	N/A
Operation (including TLO)								
Concrete crushing and screening	Dust	Air / windborne pathway causing impacts to vegetation health and amenity	Tumbulgum Farm 800m southwest Residences 1.3km north and 2.6km west Native vegetation (including within TEC and Bush forever site 354)	Refer to Section 3.1	C = Moderate L = Possible Medium Risk	Y	Condition 4, 5 and 6 – infrastructure operational requirements during TLO Condition 7 and 8 – TLO compliance reporting	N/A
	Noise	Air pathway causing impacts to amenity	Tumbulgum Farm 800m southwest Residences 1.3km north and 2.6km west	Refer to Section 3.1	C = Minor L = Unlikely Low Risk	Y	Condition 6 – restricted TLO operating hours	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				
			Threatened fauna (cockatoos)					
Additional vehicle and machinery activity on disturbed ground and unsealed roads	Dust	Air / windborne pathway causing impacts to vegetation health and amenity	Tumbulgum Farm 800m southwest Residences 1.3km north and 2.6km west Native vegetation (including within TEC and Bush forever site 354)	Refer to Section 3.1	C = Moderate L = Unlikely Medium Risk	Y	N/A	N/A
	Noise	Air pathway causing impacts to amenity	Tumbulgum Farm 800m southwest Residences 1.3km north and 2.6km west Threatened fauna	Refer to Section 3.1	C = Minor L = Unlikely Low Risk	Y	N/A	N/A
Stockpiling crushed concrete material	Dust	Air / windborne pathway causing impacts to vegetation health and amenity	Tumbulgum Farm 800m southwest Residences 1.3km north and 2.6km west Native vegetation (including within TEC and Bush forever site 354)	Refer to Section 3.1	C = Moderate L = Unlikely Medium Risk	Y	Condition 6 – dust operating requirements for TLO	N/A
	Sediment laden stormwater	Overland runoff and infiltration potentially causing ecosystem disturbance or impacting surface water quality	Down gradient native vegetation Ephemeral creek running through premises	Refer to Section 3.1	C = Minor L = Unlikely Low Risk	Y	N/A	N/A

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

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
Application advertised on the department's website on 02/05/2023	No comment received	N/A
Local Government Authority Shire of Serpentine-Jarrahdale advised of proposal on 04/05/2023	Comments received on 23/05/2023: Crushing or stockpiling of building material associated with the batching plant are not included in existing Development Approvals. The crushing equipment on site was approved in association with the hard rock quarry. The proposal therefore requires an application for development approval from the Shire prior to the activities commencing.	Decision on granting works approval will be dependent on the applicant providing evidence of outstanding LGA approvals.
Ransberg – Adjacent premises (Tumbulgum Farm) advised of proposal on 04/05/2023	No comment received	N/A
Applicant was provided with draft documents on 18/07/2023. On 16/01/2024, the department asked the applicant about the stormwater management agreement with the neighbouring site that is no longer operational.	Comments received 16/01/2024: the neighbouring site was closed pre-2018 and there are no 'agreement' documents on file. Applicant provided LGA approval on 23/03/2024.	With the 'agreement' no longer valid, the applicant will be required to submit an amendment application for licence L8432/2010/3 with a revised stormwater management strategy. The final works approval will be granted, however reference to the discharge of stormwater off-site will be removed so it does not contradict any potential revisions to stormwater conditions on the licence.

5. Conclusion

Based on the assessment in this decision report, the Delegated Officer has determined that works approval W6798/2023/1 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) 2018, *Factsheet – Assessing whether material is waste*, available at: <https://www.wa.gov.au/government/publications/assessing-whether-material-waste>
3. Department of Water and Environmental Regulation (DWER) 2020a, *Guideline: Risk Assessments*, Perth, Western Australia.
4. Department of Water and Environmental Regulation (DWER) 2020b, *Guideline: Environmental Siting*, Perth, Western Australia.
5. RPS 2020, *2020 Stormwater Management Plan – Addendum – Washdown Water Management Plan*, West Perth, Western Australia.