

# **Decision Report**

# **Application for Works Approval**

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

Works Approval Number W6656/2022/1 Applicant Kimberley Quarry Pty Ltd ACN 093 519 638 File number DER2021/000705 **Premises** Walkaway Sand and Limestone Pits Certificate of Title Volume 1019 Folio 566 Certificate of Title Volume 1029 Folio 923 Certificate of Title Volume 1289 Folio 456 WALKAWAY WA 6528 As defined by the premises map and coordinates attached to the issued works approval Date of report 7 September 2022 Decision Works approval granted

### A/Manager, Resource Industries REGULATORY SERVICES

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 W6656/2022/1 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 <a href="https://dwer.wa.gov.au/regulatory-documents">https://dwer.wa.gov.au/regulatory-documents</a>.

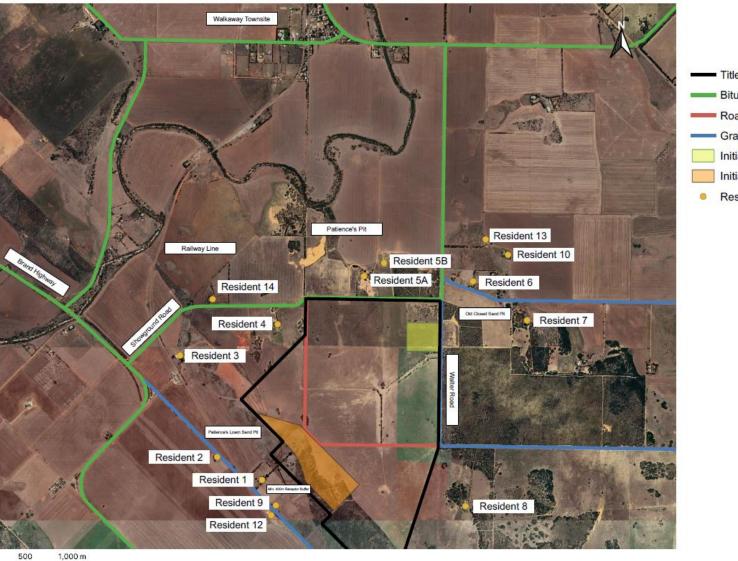
## 2.2 Application summary

On 6 December 2021, Kimberley Quarry 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 undertake construction works relating to the installation and operation of a mobile crushing and screening plant and associated infrastructure / equipment. The mobile plant and equipment are for required to facilitate the processing (crushing and screening) of sand and limestone at a new quarry (pit) at the premises (corner of Walter Road and Showground Road, Walkaway within the City of Greater Geraldton). The crushing and screening activities will occur within both the sand and limestone pits (Figure 1). The premises is approximately 28 km southeast of Geraldton.

The premises relates to category 70 (screening, of material) and the assessed production / design capacity under Schedule 1 of the *Environmental Protection Regulations 1987* (EP Regulations) which are defined in works approval W6656/2022/1.

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 outlined in works approval W6656/2022/1. The department's assessment includes a risk assessment of the emissions and discharges associated with the construction and operation of the proposed mobile crushing and screening plant.





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### Figure 1: Prescribed premises

Works Approval: W6656/2022/1

IR-T13 Decision report template (short) v3.0 (May 2021)

# 2.3 Overview of premises and operations

## 2.3.1 **Project summary**

The proposed sand and limestone pits have an estimated throughput of 20,000 tonnes per annum (tpa) of yellow sand and 20,000 tpa of limestone from the premises. A summary of the overall project outcomes is provided in Table 1.

#### Table 1: Project summary

	Sand Pit	Limestone Pit	
Total area of resource	35 hectares (ha)	33 ha	
Area of initial extraction	10.8 ha	40 ha	
Processing and stockpiles	1 ha	1 ha	
Estimated reserves	10 million tonnes (Mt)	5 Mt	
Initial extraction volume	2.5 Mt	2.5 Mt	
Life of project	20 years	20 years	
Maximum depth of extractions	Down to Reduced Level (RL) 20 metres (m)	Down to RL 30 m	
Dewatering requirements	None, all water will be retained for dust suppression		

### 2.3.2 Premises operations

During construction and operation, the mobile crushing and screening plant and associated machinery will be fitted with noise attenuation technology, including but not limited to mufflers and noise shielding. All machinery and equipment within the pit will be below the crest line. Noise management will be in accordance with the *Environmental Protection (Noise) Regulations 1997* (Noise Regulations).

Infrastructure / machinery that will be required for the prescribed premises activity includes:

- Mobile crushing and screening plant (e.g., Terex 883)
- Front end loader (FEL)
- Excavator
- Fuel service truck
- Haul trucks / road trains
- Water cart / tanker
- Portable ablution
- Portable site office / lunchroom (waste disposal in appropriate storage containers and removed from site to a licensed disposal facility).

#### Sand pit

The sand operation involves any overburden to be cleared and then piled into windrows around the perimeter of the quarry where required to act as noise and wind screening barriers. A FEL will dig the sand and feed it onto the mobile screening plant, where screened sand will then be loaded directly onto trucks for delivery or trammed out of the pit. Stockpiles will be located within the pit. There is no requirement for washing sand prior to loading onto the trucks.

It is estimated that the maximum depth of excavation for the sand pit is approximately RL 20.

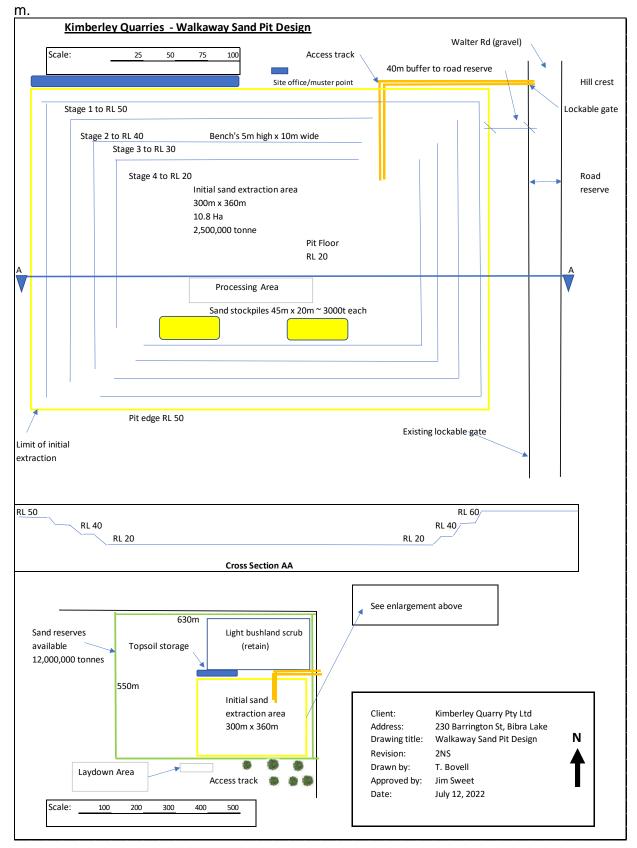
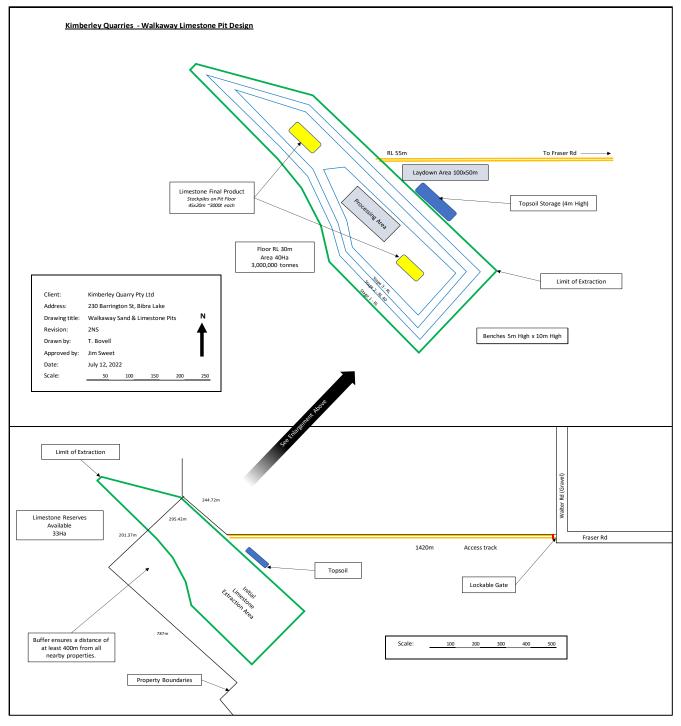


Figure 2: Sand pit layout

#### Limestone pit

The limestone operation involves any overburden to be cleared and then piled into windrows around the perimeter of the quarry where required to act as noise and wind screening barriers. Limestone rock will be extracted via a dozer and pushed down to a stockpile in preparation for crushing. Limestone will be fed through the jaw and cone crusher and screened to an appropriate size with no washing required. Crushed limestone product will be stockpiled for when it is required. Stockpile areas will be located within the pit as shown in Figure 3. The approximate size of the limestone will typically be 100-300 rip rap, -75 mm sub-base and -20mm basecourse. Haul road gradients will be maintained to the lowest practical angle to reduce truck noise and increase safety.



#### Figure 3: Limestone pit layout

# 3. Exclusions to the premises

The purpose of a works approval is to allow the department to assess the potential emissions and discharges during construction and operation of the premises. Note that any works approval or licence issued under Part V of the EP Act will only regulate emissions associated with the crushing and screening operation (such as dust, noise and contaminated stormwater). It does not extend to the environmental impacts of extracting the material from the ground or transport off-site. Emissions from the extractive activities will not be assessed or regulated under this works approval.

The extractive activities and associated emissions and discharges within the defined prescribed premises boundary shown in Schedule 1 of W6656/2022/1 is regulated by the City of Greater Geraldton (CoGG). The extractive activities on private land also requires approval under the *Planning and Development Act 2005.* An Extractive Industry Licence (EIL) from the CoGG was issued for the sand and limestone pits on 22 March 2021, where approval is valid for a period of 12 months from the date of determination. Renewal was granted on 29 March 2022.

The following should be noted:

- Environmental Protection (Unauthorised Discharge) Regulations 2004 prohibits the discharge of specific substances including but not limited to liquids with pH less than 4 or more than 10, petrol, diesel, other hydrocarbons, sediment, and engine coolant (as listed in Schedule 1 of the EP Regulations); and
- The extractive activities must also comply with the Noise Regulations.

## 4. 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. The risk assessment has been assessed between the distance from the sensitive receptors to the location of the nearest pit.

## 4.1 Source-pathways and receptors

#### 4.1.1 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 2 below. Table 2 also details the control measures the applicant has proposed to assist in controlling these emissions, where necessary.

## Table 2: Proposed applicant controls

Emission	Sources	Potential pathways	Proposed controls
Construction			
Dust	Site establishment works Installation and construction of: • mobile crushing and screening plant and associated equipment Vehicle movements	Air / windborne pathways	<ul> <li>General</li> <li>training programs on dust minimisation practices will be conducted</li> <li>buffers will be maintained from sensitive receptors (minimum 400 m)</li> <li>crushing and screening activities will occur behind natural barriers, landform, and vegetation such as: <ul> <li>overburden dumps to be used as wind screening barriers;</li> <li>existing landscape will be used as screening, wind breaks, and tree belts; and</li> <li>trees will be planted to form screening barriers</li> </ul> </li> <li>dust generating activities will be stopped until conditions improve, for example where water supply breakdown or during strong winds that negate the effect of dust management</li> <li>applicant will have a complaint's procedure that includes recording, investigation, action, and reporting from surrounding properties</li> </ul> <li>Plant processing <ul> <li>construction / installation activities will cease during strong winds that negate the effect of dust management and will recommence until conditions improve and compliance can be achieved</li> <li>equipment will be shut down when not in operation</li> <li>mobile and static plant will be provided with dust extraction, shielding or filtration systems or wetting down as appropriate</li> <li>mist spray reticulation will be maintained on the mobile plant</li> <li>water tanker will be maintained and used for dust suppression purposes at the premises.</li> </ul> </li> <li>Vehicles</li> <li>onsite water cart and/or sprinkler system to minimise dust emissions from vehicle movement</li> <li>hardstand surfaces will be maintained in good condition, with suitable grades, and speed limits will be in place</li>

Emission	Sources	Potential pathways	Proposed controls
Noise			<ul> <li>noise management will be in accordance with the <i>Environmental Protection (Noise)</i> <i>Regulations 1997</i></li> <li>operating hours will occur between 7:00am to 5:00pm, Monday to Saturday, excluding public holidays and Sunday where clean up and maintenance will occur</li> <li>exposed features will be placed behind natural barriers and existing landform</li> <li>buffers will be maintained from sensitive receptors</li> <li>crushing and screening activities will occur behind natural barriers, landform, and vegetation such as: <ul> <li>overburden dumps to be used as wind screening barriers;</li> <li>existing landscape will be used as screening, wind breaks, and tree belts; and</li> <li>trees will be planted to form screening barriers</li> </ul> </li> <li>operation activities will be scheduled to minimise the likelihood of noise nuisance</li> <li>a site code will be implemented to outline requirements for operators and drivers. Training programs on noise minimisation practices will be conducted</li> <li>mobile plant will have the latest noise attenuation technology and will shut down when not in operation</li> <li>warning lights will be fitted on mobile equipment, instead of audible sirens or beepers, where possible</li> <li>applicant will have a complaint's procedure that includes recording, investigation, action, and reporting from surrounding properties</li> </ul>
Time-limited (	Operation and Operation		
Dust	Operating a mobile crushing and screening plant (i.e., crushing, screening, unloading/loading, and stockpiling of material) Vehicle movements, particularly road trucks	Air / windborne pathways	<ul> <li><u>General</u></li> <li>training programs on dust minimisation practices will be conducted</li> <li>buffers will be maintained from sensitive receptors (minimum 400 m)</li> <li>crushing and screening activities will occur behind natural barriers, landform, and vegetation such as:</li> </ul>

Emission	Sources	Potential pathways	Proposed controls
			<ul> <li>overburden dumps to be used as wind screening barriers;</li> </ul>
			- existing landscape will be used as screening, wind breaks, and tree belts; and
			<ul> <li>trees will be planted to form screening barriers</li> </ul>
			<ul> <li>dust generating activities will be stopped until conditions improve, for example where water supply breakdown or during strong winds that negate the effect of dust management</li> </ul>
			<ul> <li>applicant will have a complaint's procedure that includes recording, investigation, action, and reporting from surrounding properties</li> </ul>
			Plant processing
			<ul> <li>operation activities will be scheduled (e.g., vegetation, topsoil or overburden stripping on exposed ridgelines) at times when the materials are less likely to blow or during suitable wind conditions</li> </ul>
			<ul> <li>operations will cease during strong winds that negate the effect of dust management and will recommence until conditions improve and compliance can be achieved</li> </ul>
			there will be limited drop heights from conveyors and dump trucks
			equipment will be shut down when not in operation
			<ul> <li>mobile crusher and stockpiles will be situated at locations for the mitigation of dust and other potential impacts</li> </ul>
			• dust suppression units (for example Polo Citrus) will be operated during crushing of limestone
			all machinery within the pits will be below crest line to reduce dust generation
			<ul> <li>mobile and static plant will be provided with dust extraction, shielding or filtration systems or wetting down as appropriate</li> </ul>
			mist spray reticulation will be maintained on the mobile plant
			water tanker will be maintained on site during excavation
			Vehicles
			onsite water cart and/or sprinkler system to minimise dust emissions from vehicle movement
			hardstand surfaces will be maintained in good condition, with suitable grades, and speed limits     will be in place
			Stockpiles

Emission	Sources	Potential pathways	Proposed controls
			stockpiles will be wet down using a water cart to establish a crust on the outside of the stockpile;
			<ul> <li>stockpiles will be kept to a minimum and no greater than 4 m in height</li> </ul>
			• stockpiles will be located behind bunds, windbreaks, fencing or other screening barriers.
			<ul> <li>stockpiles will be in positions where dust lift off and wind speeds are minimal to become dust management issues.</li> </ul>
			<ul> <li>coarser products will be placed around fine materials to assist in wind protection and dust suppression of the finer products</li> </ul>
Noise			noise management will be in accordance with the Environmental Protection (Noise)     Regulations 1997
			<ul> <li>operating hours will occur between 7:00am to 5:00pm, Monday to Saturday, excluding Sunday where clean up and maintenance will occur</li> </ul>
			buffers will be maintained from sensitive receptors
			<ul> <li>operation in the limestone pit will start from the crest and move eastwards away from sensitive receptors, where the crest will have vegetation retained and act as a natural barrier</li> </ul>
			the crest from the limestone pit will be maintained to act as noise bund
			<ul> <li>crushing and screening activities will occur behind natural barriers, landform, and vegetation such as:</li> </ul>
			<ul> <li>overburden dumps to be used as wind screening barriers;</li> </ul>
			- existing landscape will be used as screening, wind breaks, and tree belts; and
			<ul> <li>trees will be planted to form screening barriers</li> </ul>
			operation activities will be scheduled to minimise the likelihood of noise nuisance
			<ul> <li>a site code will be implemented to outline requirements for operators and drivers. Training programs on noise minimisation practices will be conducted</li> </ul>
			• mobile plant will be maintained in good condition with efficient mufflers and noise shielding
			<ul> <li>equipment will have the latest noise attenuation technology and will shut down when not in operation</li> </ul>
			warning lights will be fitted on mobile equipment, instead of audible sirens or beepers, where

Emission	Sources	Potential pathways	Proposed controls
Direct spillage Discharge of contaminants to land	Operating a mobile crushing and screening plant (i.e., crushing, screening, unloading/loading, and stockpiling of material), Vehicle movements, particularly road trucks Maintenance of mobile plant, vehicles, and associated machinery Refuelling, accidental spillage, leaks, and equipment malfunction (e.g., lines bursting)	Direct discharges to land from leaks and spills potentially causing ecosystem disturbance/soil contamination	<ul> <li>possible</li> <li>all machinery within the pits will be below crest line to reduce noise levels</li> <li>hardstand surfaces will be maintained in good condition, with suitable grades, and speed limits will be in place</li> <li>applicant will have a complaint's procedure that includes recording, investigation, action, and reporting from surrounding properties</li> <li>appropriate maintenance will be undertaken on vehicles, mobile plant, and associated machinery to minimise spillage</li> <li>regular inspections and maintenance of fuel, oil and hydraulic fluids in storages and lines will be carried out for wear and faults</li> <li>significant repairs on equipment will be done off Premises</li> <li>a service truck will cart fuel and oil to the Premises but will not be stored on site.</li> <li>applicant will have an approved serviced portable ablution</li> <li>any spillages will be cleaned up using an FEL to remove contaminated soil and disposed of via truck to the approved landfill site. In an event of a spill or adverse incident, activities will be stopped in that area until it has been resolved</li> <li>spill containment and protocol will be recorded, investigated and remediated</li> <li>waste storage containers will be sealed to prevent rainfall from entering and causing overflow</li> <li>waste oil and other fluids will be transported off site and disposed of at an authorised landfill site</li> </ul>
Sediment laden and / or contaminated stormwater to surface water and / or groundwater		Overland runoff causing contamination of surface water and/or groundwater	<ul> <li>stormwater will be directed away from the crushing and screening activities</li> <li>potentially contaminated stormwater will be directed to a collection sump in the pit to allow wastewater to soak away in porous sand</li> <li>any clean surface water / stormwater in the sand pit will percolate through the porous sand</li> <li>any clean surface water in the limestone pit will collect in a sump and soak away</li> </ul>

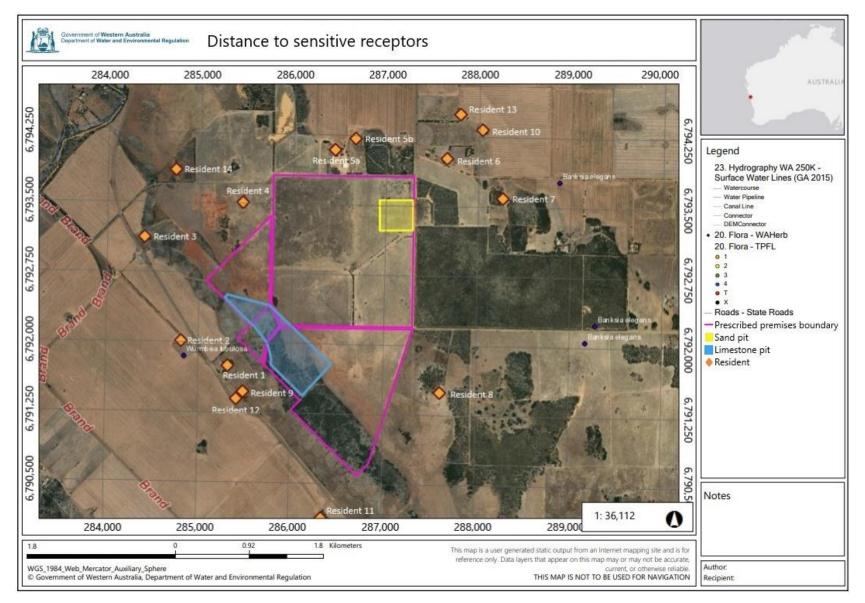
### 4.1.2 Receptors

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 3 and Figure 4 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 2020b)).

 Table 3: Sensitive human and environmental receptors and distance from prescribed activity

Human receptors	Distance from prescribed activity
Resident 1	Is approximately 400 m southwest of the premises from the proposed limestone pit boundary.
Resident 2	Is approximately 620 m west of the premises from the proposed limestone pit boundary.
Resident 3	Is approximately 1.2 km north from the proposed limestone pit boundary.
Resident 4	Is approximately 900 m southwest of the premises from the proposed limestone pit boundary.
Resident 5	Is approximately 500 m northwest of the premises from the proposed sand pit boundary.
Resident 6	Is approximately 550 m northeast of the premises from the proposed sand pit boundary.
Resident 7	Is approximately 1 km east of the premises from the proposed sand pit boundary.
Resident 8	Is approximately 1.3 km southeast of the premises from the proposed limestone pit boundary.
Resident 9	Is approximately 420 m southwest of the premises from the proposed limestone pit boundary.
Resident 10	Is approximately 1 km west of the premises from the proposed sand pit boundary.
Resident 11	Is approximately 2 km southwest of the premises from the proposed limestone pit boundary.
Resident 12	Is approximately 520 m southwest of the premises from the proposed limestone pit boundary.
Resident 13	Is approximately 1.1 km north-west of the premises from the proposed sand pit boundary.
Resident 14	Is approximately 1.5 km northwest of the premises from the proposed limestone pit boundary.
Environmental receptors	Distance from prescribed activity
Threatened / Priority flora species	<ol> <li>Wurmbea tubulosa T – approximately 600 m west of the Premises from the proposed limestone pit boundary.</li> <li>Banksia elegans P4 - approximately 1.5 km west of the premises from the proposed sand pit boundary.</li> </ol>
RIWI Act 1914 – Surface Water Areas and Irrigation Districts	Greenough River and tributaries catchment area within the prescribed premises.
RIWI Act 1914 – Groundwater Areas	Arrowsmith Groundwater area within the prescribed premises.
Groundwater	The groundwater depth within the premises boundary is estimated to be reduce level (RL) 20 m.



#### Figure 4: Distance to sensitive receptors

## 4.1.3 Wind direction and strength

The nearest Bureau of Meteorology (BOM) weather monitoring station is located at Geraldton (station number 008051) approximately 21 km north-northeast of the prescribed premises boundary (BOM 2022).

During summer, wind direction comes from a south to south-easterly direction in the morning then a south-southwesterly in the afternoon (Figure 5). During winter, northeasterly winds with a small part from the north occur in the mornings and becomes variable in the afternoon with a slight westerly predominance. The mean annual wind speed ranges from 18.8 kilometres per hour (km/h) to 24.2 km/h during the day. Minimum mean wind speed can be observed during the winter whereas the maximum wind speed can be observed during the summer as depicted in Figure 6.

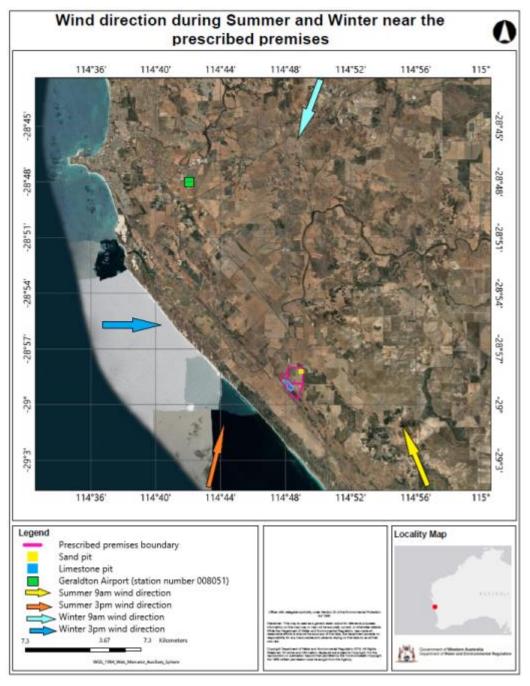


Figure 5: Wind direction during Summer and Winter near the prescribed premises

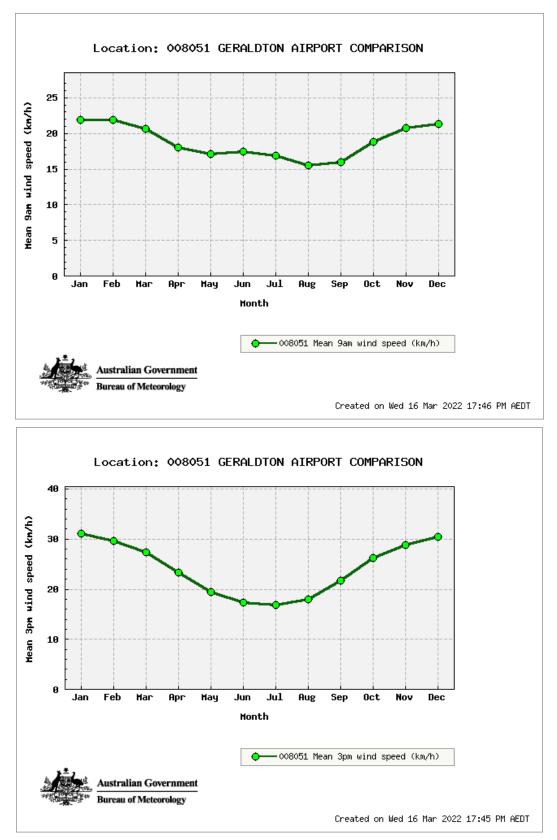


Figure 6: Mean wind speed (BoM station No: 008051 – Geraldton Airport comparison)

# 4.2 Risk ratings

Risk ratings have been assessed in accordance with the *Guideline: Risk Assessments* (DWER 2020a) for each identified emission source and takes into account potential source-pathway and receptor linkages as identified in Section 4.1. 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 4.1), 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 4.

Works approval W6656/2022/1 that accompanies this decision report authorises construction, time-limited operation, and operation. The conditions in the issued works approval, as outlined in Table 4 have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

A licence or registration is required following the time-limited operational phase authorised under the works approval to authorise emissions associated with the ongoing operation of the premises. A risk assessment for the operational phase has been included in this decision report, however licence conditions or a registration will not be finalised until the department assesses the licence or registration application.

# Table 4: Risk assessment of potential emissions and discharges from the premises during construction, time-limited operation, and operation

Risk events			Risk rating <sup>1</sup>					
Sources / activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls	C = consequence L = likelihood	Applicant controls sufficient?	Conditions <sup>2</sup> of works approval	Justification for additional regulatory controls
Construction			•					
Site establishment works Installation and construction of: • mobile crushing and screening plant and associated equipment • site office and	Dust	Air/windborne pathway causing impacts to health and amenity Smothering causing reduced photosynthetic	Residences 400 m and 520 m southwest and 620 m from the prescribed premises boundary nearest to the limestone pit Residences 500 m northwest and 550 m northeast from the prescribed premises boundary nearest to the sand pit Nearby vegetation	Refer to Section 4.1	C = Minor L = Possible <b>Medium Risk</b>	Y	Condition 1, Table 1 – Design and construction / installation requirements Condition 6, Table 2 – Operational requirements (Dust Controls) and <u>10</u>	In addition to conditioning the Applicant's controls, the department has included an additional control in relation to dust emissions: The applicant must ensure that during construction, time- limited operation, and operation that no visible dust from crushing and screening activities crosses the boundary of the premises.
associated infrastructure Vehicle movements	Noise	vegetation and impact to air quality		Refer to Section 4.1	C = Slight L = Possible <b>Medium Risk</b>	Y	Condition 1, Table 1 – Design and construction / installation requirements Condition 6, Table 2 – Operational requirements (Noise Controls) and <b>9</b>	In addition to conditioning the Applicant's controls, the department has included an additional control in relation to noise emissions: The applicant must ensure that during construction, time- limited operation, and operation that operating times are between 7:00am to

Risk events		Risk rating <sup>1</sup>			Justification for			
Sources / activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls	C = consequence L = likelihood	Applicant controls sufficient?	Conditions <sup>2</sup> of works approval	additional regulatory controls
								5:00am Monday to Saturday at the premises.
Time-limited Operation and O	peration							
Operating a mobile crushing and screening plant (i.e., crushing, screening, unloading/loading, and stockpiling of material), Vehicle movements	Dust	Air / windborne pathway causing impacts to health and amenity Smothering causing reduced photosynthetic functions of vegetation and impact to air quality	Residences 400 m and 520 m southwest and 620 m from the prescribed premises boundary nearest to the limestone pit Residences 500 m northwest and 550 m northeast from the prescribed premises boundary nearest to the sand pit Nearby vegetation	Refer to Section 4.1	C = Moderate L = Possible <b>Medium Risk</b>	Y	Condition 6, Table 2 – Operational requirements (Dust Controls) and <u>10</u>	In addition to conditioning the Applicant's controls, the department has included an additional control in relation to dust emissions: The applicant must ensure that during construction, time- limited operation, and operation that no visible dust crosses the boundary of the premises.
	Noise	Air / windborne pathway causing impacts to health and amenity	Residences 400 m and 520 m southwest and 620 m from the prescribed premises boundary nearest to the limestone pit	Refer to Section 3.1 – Table 2	C = Moderate L = Possible <b>Medium Risk</b>	Y	Condition 9, Table 2 – Operational requirements (Noise Controls) and <u>9</u>	In addition to conditioning the Applicant's controls, the department has included an additional control in relation to noise emissions: The applicant must ensure that during construction, time-

Risk events		Risk rating <sup>1</sup>			has different and f			
Sources / activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls	C = consequence L = likelihood	Applicant controls sufficient?	Conditions <sup>2</sup> of works approval	Justification for additional regulatory controls
			Residences 500 m northwest and 550 m northeast from the prescribed premises boundary nearest to the sand pit					limited operation, and operation that operating times are between 7:00am to 5:00am Monday to Saturday at the premises.
	Silica dioxide	Air/windborne pathway causing impacts to health and amenity	Residences 400 m and 520 m southwest and 620 m from the prescribed premises boundary nearest to the limestone pit Residences 500 m northwest and 550 m northeast from the prescribed premises boundary nearest to the sand pit	No applicant controls were proposed	C = Major L = Rare <b>Medium Risk</b>	Ν	Condition 1, Table 1 – Design and construction / installation requirements Condition 6, Table 2 – Operational requirements (Dust Controls) and <u>10</u>	Safe work Australia (SWA) has identified that about 2% of silica (crystalline form of silicon dioxide) is contained in limestone material and the workplace exposure standard in Australia is 0.05 mg/m <sup>3</sup> for respirable crystalline silica (SWA 2022). Proposed regulatory controls for dust will assist in the reduction of dust generation and respirable silica exposure.
Operating a mobile crushing and screening plant (i.e., crushing, screening, unloading/loading, and stockpiling of material Vehicle movements, Maintenance of mobile plant,	Direct spillage Discharge of contaminants to land Leakage from mobile plant	Seepage/spillage potentially causing ecosystem disturbance/soil contamination	Nearby vegetation and fauna Soil Surface water	Refer to Section 4.1	C = Slight L = Rare <b>Low Risk</b>	Y	No regulatory controls imposed. The general provisions of the EP Act and <i>Environmental</i> <i>Protection (Unauthorised</i> <i>Discharges) Regulations</i>	N/A

Risk events		Risk rating <sup>1</sup>	Annlisont		Justification for			
Sources / activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls	C = consequence L = likelihood	Applicant controls sufficient?	Conditions <sup>2</sup> of works approval	additional regulatory controls
vehicles, and associated machinery	and equipment		Groundwater				2004 apply.	
Refuelling, accidental spillage, leaks, and equipment malfunction (e.g., lines bursting)	Sediment laden and / or contaminated stormwater to surface water and / or groundwater	Seepage causing contamination of surface water and/or groundwater		Refer to Section 3.1 – Table 2	C = Slight L = Rare Low Risk	Y	Condition 6, Table 2 – Operational requirements (Discharge of Sediment Laden and/or Stormwater Controls)	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.

# 5. 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 on 28 March 2022	None received	N/A
Local Government Authority was advised of proposal on 23 March 2022	City of Greater Geraldton replied on 28 March 2022 stating they have no objection to the proposal if the applicant complies with the conditions of Development Approval TP20/173 granted by CoGG on 22 March 2021.	N/A
Department of Mines, Industry Regulation and Safety (DMIRS) was advised of proposal 23 March 2022	DMIRS replied on 5 April 2022 stating that: "as this appears to be an extractive industry, with the City of Greater Geraldton granting an extractive industry license TP20/173 on 22 March 2021. As such, there is no active mining tenure and no mining activities approved under the Mining Act 1978. Therefore DMIRS is not considered to have a direct interest in these mining activities."	N/A
Surrounding residences were advised of proposal on 23 March 2022	Comments are summarised in Appendix 1.	Department's response is provided in Appendix 1.
Applicant was provided with draft documents on 18 August 2022	Comments are summarised in Appendix 2.	Department's response is provided in Appendix 2.

# 6. 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. Bureau of Meteorology (BOM) 2022, *Climate Data Online Geraldton (Station Number 008050)*, Access: <u>http://www.bom.gov.au/climate/data/?ref=ftr</u> 16 March 2022.
- 2. City of Greater Geraldton (CoGG) 2021, *Development Approval No: TP20/173, 22 March 2022*, Geraldton, Western Australia.
- 3. Department of Environment Regulation (DER) 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
- 4. Department of Industry and Resources (DOIR) 1997, *Guideline on Safety Bund Walls Around Abandoned Open Pit Mines*, Perth, Western Australia.
- 5. Department of Water and Environmental Regulation (DWER) 2020a, *Guideline: Risk Assessments*, Perth, Western Australia.
- 6. DWER 2020b, Guideline: Environmental Siting, Perth, Western Australia.
- 7. Safe Work Australia (2022), Working with silica and silica containing products Guidance material, February 2022, Canberra, Australia.

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# **Appendix 1: Summary of stakeholder comments**

Submitter	Key area of concern	Summary of stakeholder comments	Response
1a, 1b, 5	Amenity concerns	Concerns on how the applicant will protect the amenity of the properties near the limestone pit and what risk assessment has been taken to prevent damage to properties.	See Table 5 for a risk assessment and works approval conditions 1, 4, 6, 9, 10 and 11 with respect to concerns regarding amenity concerns.
		The nearest residence is under current assessment to be added to the Municipal inventory of heritage places due to historical value.	The City of Greater Geraldton (CoGG) Development Approval (Approval no. TP20/173) regulates amenity concerns as indicated under conditions 8, 10, 11, and 12 (CoGG 2021).
1a	Distance to sensitive receptors	Concerns on the distance of the limestone pit from a residence 260 m away, where sand and limestone activities are recommended to be at least 500 to 1000 m from sensitive land uses.	See Table 5 for a risk assessment and works approval conditions 1, 4, 6, 9, 10 and 11 with respect to concerns regarding distance to sensitive receptors.
			The Department has conducted a risk assessment in accordance with its Regulatory Framework and determined that the risk of emissions can be managed with the Applicant's controls conditioned.
1a, 1b, 2, 3, 4, 5, 6	Consultation	Concerns that consultation was not made by the applicant with all residents that may be impacted by the prescribed activities, where it appears only one resident was contacted.	The Department encourages thorough consultation by Applicants with stakeholders in relation to applications under Part V of the EP Act.
			The Department engages with direct interest stakeholders as part of its risk assessment of all applications for works approval / licence.
2, 4, 6	Transport route and safety	Concerns over the transport route that will be used by the trucks transporting the sand and limestone and potential safety risks for	The Department does not regulate transport and road safety.
		nearby properties and road usage.	The Department requested evidence that the applicant liaised with Main Roads Western Australia (MRWA) regarding the proposed transport route.
			The applicant is waiting on a formal response from MRWA on transport route use.

Submitter	Key area of concern	Summary of stakeholder comments	Response
			The CoGG Development Approval (Approval no. TP20/173) regulates the transport route as indicated under conditions 6, 9, and 13 (CoGG 2021).
1a, 1b, 4, 5	Water Usage	Concerns over water usage, in particular if groundwater from a local bore will be used, where water will be sourced for water carts, and outline how additional water will be sourced should additional dust suppression be required. Comment on what measures will be taken to prevent potential groundwater contamination and if there are any groundwater bores nearby and if these will be monitored.	See Table 5 for a risk assessment and works approval conditions 1 and 6 with respect to controls for preventing contamination of stormwater. The applicant has indicated crushing and screening activities will preferably occur during winter to minimise water requirements for dust suppression. All water collecting in the pits will be reused for dust suppression. Water may also need to be carted to site for dust suppression purposes. Water extraction is regulated under the <i>Rights in Water and Irrigation Act 1914</i> . Should a groundwater abstraction be required the Applicant will need to ensure a licence to take water is in place. Applicant has sufficient controls to prevent and mitigate potential for groundwater contamination during construction / operation of screening plant.
1a, 1b	Noise	Concerns over how the machinery and screening plant will have reduced noise levels to comply with WH&S, the specific regulations referred to for the machinery and the noise created during limestone extraction. Comment on what mechanisms will be in place to control noise and the extractive method for limestone if there will be blasting and drilling.	<ul> <li>See Table 5 for a risk assessment and works approval conditions 1, 4, 9, and 11 related to controls to be implemented to manage noise emissions.</li> <li>Noise concerns are also regulated under the CoGG Development Approval (Approval no. TP20/173) under conditions 5, 7, 8, 11, and 12 (CoGG 2021).</li> </ul>
1a, 1b, 3, 4, 5	Dust	<ul> <li>Concerns over the control of dust generation from the following:</li> <li>screening and crushing plant, bare faces of the pit, pit floors, and stockpiles;</li> <li>where the area of the prescribed activity has average winds speeds of 26 km/hr;</li> <li>when the pits are not in use; and</li> <li>dust and sand swept onto the properties and impact to health and safety of biproduct if it enters the nearby rainwater tanks.</li> </ul>	See Table 5 for a risk assessment and works approval conditions 1, 4, 10 and 11 relating to controls implemented to manage dust emissions. Dust concerns are also regulated under the CoGG Development Approval (Approval no. TP20/173) under conditions 8 and 10 (CoGG 2021).

Submitter	Key area of concern	Summary of stakeholder comments	Response
		Comment on whether there will be ongoing dust monitoring and if an erosion study has been carried out.	
1a, 1b, 5	Health risk and siliona dioxide in dust	Concerns over potential health risks from the extracted materials, in particular is there silica dioxide in the limestone dust and if there is, what are the proposed dust emission management and risk assessment. Specify the permissible level that would be applied to the nearby properties (NEPM) and proposed monitoring processes.	Safe work Australia (SWA) has identified that about 2 % of silica (crystalline form of silicon dioxide) is contained in limestone material and the workplace exposure standard in Australia is 0.05 mg/m3 for respirable crystalline silica (SWA 2022). The regulatory controls imposed on the works approval for management of dust emissions will ensure the reduction of dust generation and therefore, respirable silica exposure. Applicant has indicated that testing for the presence and amount of silicon dioxide would be undertaken several metres bgl for a representative sample and once works approval has been granted, which will ensure workplace exposure standard for respirable crystalline silica can be complied with. The NEPM does not specify standards for Silicon dioxide levels in ambient air.
1a, 1b, 4	Dust and noise management plans	Concerns over whether the dust and noise management plans are fit for purpose relating to frequency of limestone / sand cartage and equipment utilised.	See Table 5 for a risk assessment and works approval conditions 1, 4, 6, 9, 10, 11 and 12 with respect to concerns regarding dust and noise management plans. Dust and noise management plans were required for the the CoGG Development Approval (Approval no. TP20/173) under conditions 10 and 11 (CoGG 2021).
1a, 1b, 2, 3, 4, 5, 6	Extraction and operation activities	Comment on the proposed extraction method for limestone, the size of the limestone product, and measure to manage environmental impacts e.g., potential high pH runoff. Concerns over extractive method for the limestone quarry if it requires drilling, blasting, ripped or chemical extraction. Applicant to confirm if all limestone will be crushed, screened, and washed on site.	See Table 5 for a risk assessment and works approval conditions 1, 4, 6, 9, 10 and 11 with respect to concerns regarding dust, noise and stormwater controls. Extraction activities are regulated under the CoGG Development Approval (Approval no. TP20/173) under conditions 5, 14, and 15 (CoGG 2021).

# **Appendix 2: Summary of applicant's comments**

Condition	Summary of applicant's comment	Department's response				
Decision Report						
2.2 Application Summary. Figure 1: Prescribed Premises	Revised figure attached.	Updated figure.				
2.3.1 Project Summary. Table 1: Project Summary	Initial limestone extraction area is confirmed as 40Ha. Revised Limestone reserves now 2.5mt (was 3.0mt).	Updated limestone reserve from 3.0 to 2.5 mt.				
4.1.1 Emissions & Controls. Table 2: Proposed Applicant Controls	Stormwater is unlikely to be contaminated but if so, will be directed into sump in the pit to allow wastewater to soak away in porous sand.	The department has incorporated that wastewater will be directed into the sump in the pit.				
4.1.2 Receptors. Table 3: Sensitive human and environmental receptors and distance from prescribed premises boundary	Groundwater table in the area estimated to be at RL 20m.	Updated the table to include groundwater depth.				
Works Approval						
6. Time limited operations requirements. Table 2: Infrastructure and equipment requirements during time limited operations (Dust controls)	Minimum buffer to closest sensitive receptor (resident 1) is 400 m. Even greater distances for all other receptors.	Updated to include the 400 m buffer.				
6. Time limited operations requirements. Table 2: Infrastructure and equipment requirements during time limited operations (Noise controls)	Minimum buffer to closest sensitive receptor (resident 1) is 400 m. Even greater distances for all other receptors.	Updated to include the 400 m buffer.				
		The department has updated the following controls as per the applicant's response:				
6. Time limited operations requirements. Table 2: Infrastructure and equipment requirements during time limited operations (Discharge of sediment laden and/or stormwater controls)	Stormwater to be directed into sump in the pit to allow wastewater to soak away in porous sand. Stormwater is unlikely to be contaminated but if so, will end up in the same in-pit sump.	<ul> <li>stormwater to be diverted around the premises and away from the processing and stockpile areas, directed into the sump in the pit to allow wastewater to soak away in porous sand</li> <li>potentially contaminated stormwater</li> </ul>				

Condition	Summary of applicant	t's comment	Department's response
			to be retained or premises and diverted to a sump in the pit
Schedule 2: Sand & Limestone Pit Bounda	aries		
	Easting	Northing	
	287299	6793236	
Table 4: Sand Pit Boundary	286927	6793235	Updated table 4 with the correct coordinates.
	286924	6793549	
	287301	6793552	
	Easting	Northing	
	286424	6791733	
	286147	6791435	
	285814	6791762	
	285805	6791795	
	285794	6791844	
	285772	6791909	
Table 5: Limestone Pit Boundary	285752	6791957	Updated table 5 with the correct coordinates.
	285723	6792012	
	285687	6792071	
	285615	6792150	
	285559	6792197	
	285266	6792480	
	285294	6792503	
	285744	6792382	

# Appendix 3: Application validation summary

SECTION 1: APPLICATION SUMMARY					
Application type					
Works approval	$\boxtimes$				
		Relevant works approval number:		None	
		Has the works appro with?	oval been complied	Yes □	No 🗆
Licence		Has time limited operations under the works approval demonstrated acceptable operations?		Yes □	No 🗆 N/A 🗆
		Environmental Compliance Report submitted?		Yes □	No 🗆
		Date Report received:			
Renewal		Current licence number:			
Amendment to works approval		Current works approval number:			
Amendment to line noo		Current licence number:			
Amendment to licence		Relevant works approval number:		N/A	
Registration		Current works approval number:		None	
Date application received		6 December 2021			
Applicant and Premises details					
Applicant name/s (full legal name/s)		Kimberley Quarry Pty Ltd Trading as 'Kimberley Quarries'			
Premises name	Walkaway Sand and Limestone Pits				

	Walter Rd (Corner Showground Rd), Walkaway (Geraldton)		
	The sand pit will be known as the Walkaway Sand Pit. Certificate of Title details: Lot 1 Diagram 29739 Location 2667 Volume 1289 Folio 456 Area 244.50Ha		
Premises location	The Limestone pit will be known as the Walkaway Limestone Pit Certificate of Title details: Location 2690 Volume 1029 Folio 923 Area 165.706Ha Certificate of Title details: Location 2350 Volume 1019 Folio 566 Area 42.968Ha		
Local Government Authority	City of Greater Geraldton		
Application documents			
HPCM file reference number:	DER2021/000705		
Key application documents (additional to application form):	<ul> <li>Attachment 1A – Approval for Development from Landowner</li> <li>Attachment 1B – KQ Company Statement 2020</li> <li>Attachment 1C – KQ Authorised Rep</li> <li>Attachment 2 – Walkaway Sand &amp; Limestone – Location and Surrounding Residences</li> <li>Attachment 3A – Walkaway Sand &amp; Limestone Pit DA Mining Proposal Rev 2</li> <li>Attachment 3D – Walkaway Sand &amp; Limestone Pit Designs KQ Aug 2020</li> <li>Attachment 8 – Walkaway nearest residences</li> <li>Attachment 9 – Licence Fees calculator</li> </ul>		
Scope of application/assessment			
Summary of proposed activities or changes to existing operations.	Installation and operation of a mobile crushing and screening plant and associated infrastructure/equipment for the establishment of a new sand and limestone pits at Walkaway in the City of Greater Geraldton. The estimated amount to be screened is 20,000 tonnes per annum (tpa) of yellow sand and limestone for the construction market.		

Category number/s (activities that cause the premises to become prescribed premises) Table 1: Prescribed premises categories					
		posed production or design acity		Proposed changes to the production or design capacity (amendments only)	
		000 tpa of yellow sand 000 tpa of limestone		N/A	
Legislative context and other approvals	6				
Has the applicant referred, or do they intend to refer, their proposal to the EPA under Part IV of the EP Act as a significant proposal?		Yes 🗆	No 🛛	Referral decision No: N/A Managed under Part V □ Assessed under Part IV □	
Does the applicant hold any existing Part IV Ministerial Statements relevant to the application?		Yes 🗆	No 🗵	Ministerial statement No: N/A EPA Report No: N/A	
Has the proposal been referred and/or assessed under the EPBC Act?		Yes □	No 🗵	Reference No: N/A	
Has the applicant demonstrated occupancy (proof of occupier status)		Yes 🖂	No 🗆	Certificate of title ⊠ Lot 1 – Volume 1289 /Folio 456 Location 2690 – Volume 1029 / Folio 923 Location 2350 – Volume 1019 / Folio 566	
Has the applicant obtained all relevant planning approvals?		Yes ⊠	No 🗆 N/A 🗆	Approval: 22 March 2021 A63644 & TP20/173	
Has the applicant applied for, or have an existing EP Act clearing permit in relation to this proposal?		Yes ⊠	No 🗆	CPS No: N/A Currently applying for a clearing permit.	
Has the applicant applied for, or have an existing CAWS Act clearing licence in relation to this proposal?		Yes 🗆	No 🛛	Application reference No: N/A Licence/permit No: N/A	
Has the applicant applied for, or have an existing RIWI Act licence or permit in relation to this proposal?		Yes 🗆	No 🗵	Application reference No: N/A Licence/permit No: N/A	

		Name: N/A
		Type: N/A
		Has Regulatory Services (Water) been consulted?
		Yes □ No □ N/A ⊠
Does the proposal involve a discharge of	Yes 🗆 No 🗵	Regional office: N/A
waste into a designated area (as defined in section 57 of the EP Act)?	Yes ∟ No ⊠	Note: Sand and Limestone pits occur within the <i>Greenough River</i> <i>and Tributaries Catchment Area</i> (RIWI Act 1914 – Surface Water Areas and Irrigation Districts) and <i>Arrowsmith Groundwater Area</i> (RIWI Act 1914 – Groundwater Areas)
		Name: N/A
		Priority: N/A
Is the Premises situated in a Public	Yes □ No ⊠	Are the proposed activities/ landuse compatible with the PDWSA (refer to <u>WQPN 25</u> )?
Drinking Water Source Area (PDWSA)?		Yes 🗆 No 🗆 N/A 🗵
		Note: the nearest PDWSA is about 14.5 km south-east from the prescribed area known as the Allanooka-Dongara Water Reserve
Is the Premises subject to any other Acts or subsidiary regulations (e.g. Dangerous Goods Safety Act 2004, Environmental Protection (Controlled Waste) Regulations 2004, State Agreement Act xxxx)	Yes ⊠ No □	30,000 litre portable, self-bunded, and above-ground fuel tank will remain on site.
Is the Premises within an Environmental Protection Policy (EPP) Area?	Yes 🗆 No 🛛	
Is the Premises subject to any EPP requirements?	Yes 🗆 No 🛛	
Is the Premises a known or suspected contaminated site under the <i>Contaminated Sites Act 2003</i> ?	Yes 🗆 No 🛛	Classification: N/A Date of classification: N/A