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1 Purpose of this Document

This decision document explains how DWER has assessed and determined the application and provides a record of DWER's decision-making process and how relevant factors have been taken into account. Stakeholders should note that this document is limited to DWER's assessment and decision making under Part V of the *Environmental Protection Act 1986*. Other approvals may be required for the proposal, and it is the proponent's responsibility to ensure they have all relevant approvals for their Premises.

2 Administrative summary

Administrative details		
Application type	Works Approval <input type="checkbox"/> New Licence <input checked="" type="checkbox"/> Licence amendment <input type="checkbox"/> Works Approval amendment <input type="checkbox"/>	
Activities that cause the premises to become prescribed premises	Category number	Assessed design capacity
	12: Screening etc. of material	60 000 tonnes per annual period
Application verified	Date: 3/10/2016	
Application fee paid	Date: 26/4/2017	
Works Approval has been complied with	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	
Compliance Certificate received	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	
Commercial-in-confidence claim	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Commercial-in-confidence claim outcome		
Is the proposal a Major Resource Project?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Was the proposal referred to the Environmental Protection Authority (EPA) under Part IV of the <i>Environmental Protection Act 1986</i> ?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Referral decision No: Managed under Part V <input type="checkbox"/>



		Assessed under Part IV <input type="checkbox"/>
Is the proposal subject to Ministerial Conditions?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Ministerial statement No: EPA Report No:
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the <i>Environmental Protection Act 1986</i>)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Department of Water consulted Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Is the Premises within an Environmental Protection Policy (EPP) Area: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If Yes include details of which EPP(s) here.		
<ul style="list-style-type: none"> <i>Environmental Protection (Kwinana) (Atmospheric Wastes) Policy and Regulations 1999</i> 		
Is the Premises subject to any EPP requirements? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If Yes, include details here, eg Site is subject to SO ₂ requirements of Kwinana EPP.		

3 Executive summary of proposal and assessment

Ashby D R & A I (Ashby) propose to operate a sand screening operation on Lot 11 Paganoni Rd, Karnup.

Up until late 2015, sand has been extracted from Lot 11 by Rocla Quarry Products Pty Ltd and trucked to the adjacent Lot 500 where it was screened under licence L6768/1997/8 (now in the name of Hanson Construction Materials Pty Ltd). In late 2015, Rocla ceased extracting sand from Lot 11. Ashby propose to continue the extraction and screening of sand on Lot 11. Ashby propose to screen up to 60 000 tonnes of fill sand material per annual period. The proposal is for a progressive screening process moving from the south of Lot 11 to the north, periodically moving the mobile screen to keep up with excavations.

The key environmental emissions for the proposal are dust and noise. The nearest sensitive receptors to the proposed operations are located approximately 300 meters to the east of Lot 11 in a semi-rural housing estate. Hours of operations will be restricted to 7am to 6pm, Monday to Saturday. No dewatering will be conducted to support extraction operations. Material will be excavated using a TCM 870 loader and screened using a mobile sand screener. Screened product will then be stockpiled and/or loaded onto trucks by a CAT 972G loader. Truck movement through the site is up to 6 vehicles per hour, mostly originating from the existing screening operations on the property to the immediate west of Lot 11.

Fugitive dust emissions from the construction and operation of the proposed activities will be managed via a number of commitments made by Ashby including the establishment of screening barriers and use of water carts.

Hanson's screening operations on the adjacent Lot 500 use Lot 11 as access for all vehicles onsite, meaning there is an existing, considerable amount of truck movements through Lot 11 on a daily basis. The Lot 11 proposal is not expected to significantly increase the number of truck movements in and out of the property, and associated noise, above that which is already occurring at the premises.



4 Decision table

All applications are assessed in line with the *Environmental Protection Act 1986*, the *Environmental Protection Regulations 1987* and DWER's Operational Procedure on Assessing Emissions and Discharges from Prescribed Premises. Where other references have been used in making the decision they are detailed in the decision document.

DECISION TABLE			
Licence section	Condition number L = Licence	Justification (Including risk description & decision methodology where relevant)	Reference documents
General conditions	L – no conditions	No conditions are required on the licence for General conditions.	N/A
Premises operation	L – no conditions	No conditions are required on the licence for premises operation.	N/A
Emissions general	L – no conditions	No conditions are required on the licence.	N/A
Point source emissions to air including monitoring	L – no conditions	Operation No point source emissions to air are expected during operations, therefore no conditions are specified in this section.	Application supporting documentation
Point source emissions to surface water including monitoring	L – no conditions	Operation No point source emissions to surface water are expected during operations, therefore no conditions are specified in this section.	Application supporting documentation
Point source emissions to groundwater including monitoring	L – no conditions	Operation No point source emissions to groundwater are expected during operations, therefore no conditions are specified in this section.	Application supporting documentation
Emissions to land including monitoring	L – no conditions	Operation No emissions to land are expected during operations, therefore no conditions are specified in this section.	Application supporting documentation



DECISION TABLE

Licence section	Condition number L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
Fugitive emissions	L – no conditions	DWER's assessment and decision making are detailed in Appendix A.	Application supporting documentation <i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i>
Odour	L – no conditions	Operation This proposal to excavate and screen sand does not involve the generation of odorous emissions and therefore no conditions for odour are required in the Licence.	Application supporting documentation
Noise	L – no conditions	Operation DWER's assessment and decision making are detailed in Appendix B.	Application supporting documentation <i>Environmental Protection (Noise) Regulations 1997</i>
Monitoring general	L – no conditions	Operation There is no technical monitoring or sampling required under the Licence, and as such no general monitoring conditions (sampling standards, definition of sampling rates, CEMS monitoring, etc.) are recommended for inclusion.	N/A
Monitoring of inputs and outputs	L – no conditions	Operation There is no monitoring of inputs and outputs required for the proposal. Therefore, no condition is included in the or Licence for such monitoring.	N/A
Process monitoring	L – no conditions	Operation There is no process monitoring required for the Licence.	N/A
Ambient quality	L – no conditions	Operation There is no ambient quality monitoring required for the Licence.	N/A



DECISION TABLE

Licence section	Condition number L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
monitoring			
Meteorological monitoring	L – no conditions	Operation There is no meteorological monitoring required for the proposal. Therefore, no condition is included in the licence for such monitoring.	N/A
Improvements	L – no conditions	Operation There are no improvement conditions required for the Licence.	N/A
Information	L2.1 to 2.3	Operation As there will be conditions for the monitoring of inputs and outputs in the licence, conditions will be included requiring the preparation of an Annual Environmental Report should also include a Compliance Report, summary of complaints and monthly volumes of material processed.	N/A
Licence Duration	N/A	The Licence will be issued in line with the Development Approval from the City of Rockingham.	City of Rockingham Extractive Industry Licence number AD17/43125.



5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
22/8/2016	Application advertised in West Australian (or other relevant newspaper)	No comments received.	N/A
28/11/2016	Comments sought from City of Rockingham	City of Rockingham reply on 15/12/2017 that the proponent will need Development Approval from the City before an EP Act Licence is issued.	Application for Works Approval and Licence put on hold until Development Approval from City of Rockingham has been granted. Development Approval for Lot 11 granted on 26/7/2017.
27/2/2017	Proponent sent a copy of draft instrument	No comments received.	N/A



6 Risk Assessment

Note: This matrix is taken from the DWER Corporate Policy Statement No. 07 - Operational Risk Management

Table 1: Emissions Risk Matrix

Likelihood	Consequence				
	Slight	Minor	Moderate	Major	Severe
Almost Certain	Medium	High	High	Extreme	Extreme
Likely	Medium	Medium	High	High	Extreme
Possible	Low	Medium	Medium	High	Extreme
Unlikely	Low	Medium	Medium	Medium	High
Rare	Low	Low	Medium	Medium	High



Appendix A

Fugitive dust emissions

Emission Description

Emission: Dust generated during operation is likely to be caused by sand mining and screening, vehicle movements and general activities on site. Dust is also anticipated to be greatest during the months of spring and summer when rainfall is lowest and conditions are driest.

Impact: If not managed appropriately, dust emissions can impact amenity and human health. Residential receptors are located within the recommended separation distance of 1,000 m from operations, the nearest approximately 330 meters to the east of Lot 11. Buffering the sensitive receptors and operations on Lot 11 is Lot 10, a vacant, vegetated parcel of land approximately 300m width. A desktop assessment of Lot 10 found no additional sensitive environmental factors.

Controls: The Proponent's dust management plan includes the following measures:

- Maintaining a buffer onsite between the operational areas and the eastern site boundary;
- Creating overburden screens;
- Minimising the operational areas to a single working area at all times;
- Limiting site access to one designated haul road which will be graded regularly;
- Requiring trucks to cover loads at all times; and
- Utilizing a water cart to wet down operational areas to prevent dust from generating.

Lot 11 has previously been excavated and there is an operational screening plant to the immediate west of Lot 11 (Hanson). DWER does not have any record of previous complaints or incidents regarding dust originating from this site or surrounding operations. Provided that the Applicant's effective dust management measures, such as those proposed by the Applicant, are implemented, the proposed activities on Lot 11 are should not significantly add to existing dust levels in the surrounding areas.

Risk Assessment

Consequence: The Delegated Officer has determined that the impact of fugitive dust emissions will have low level impacts. Therefore, the Delegated Officer considers the consequence to be **minor**.

Likelihood: The Delegated officer has determined the likelihood of fugitive dust emissions impacting sensitive receptors from Lot 11 to be minimal and may only occur in exceptional circumstances where control measures fail and weather conditions are extreme. Therefore, the Delegated Officer considers the consequence to be **unlikely**.

Overall Risk: The Delegated Officer has compared the consequence and likelihood ratings described above through the Risk Rating Matrix (Table 1) and determined that the overall risk of fugitive dust emissions from the premises to be **medium**.

Regulatory Controls

Licence condition 2.2 will be added to the licence requiring proactive management of fugitive dust emissions, including the measures proposed by the Applicant.



Appendix B

Noise emissions

The proponent intends on operating the sand mining and screening within the hours of 7am to 6pm, Monday to Saturday as outlined in their Extractive Industry Licence issued by the City of Rockingham and allowed by the Environmental Protection Regulations 1987. The proponent has commissioned Lloyd George Acoustics to conduct noise modelling of the operations to determine impacts to surrounding sensitive receptors.

The proponent intends on using a progressive approach to quarrying with sand excavation commencing in the northern part of Lot 11 and progressively moving southwards. The screening plant will be moved as excavation moves southwards.

Two separate scenarios were modelled for noise impacts:

- Scenario 1 shows the impacts expected at the start of operations focusing on activities at the northern parts of Lot 11.
- Scenario 2 focuses on the southern parts of Lot 11 where the proposed activities will finish.

Noise modelling was initially undertaken using two noise sensitive receptors as focus points for receiving noise levels, 203 Paganoni Road and 44 Swallow Hill Court.

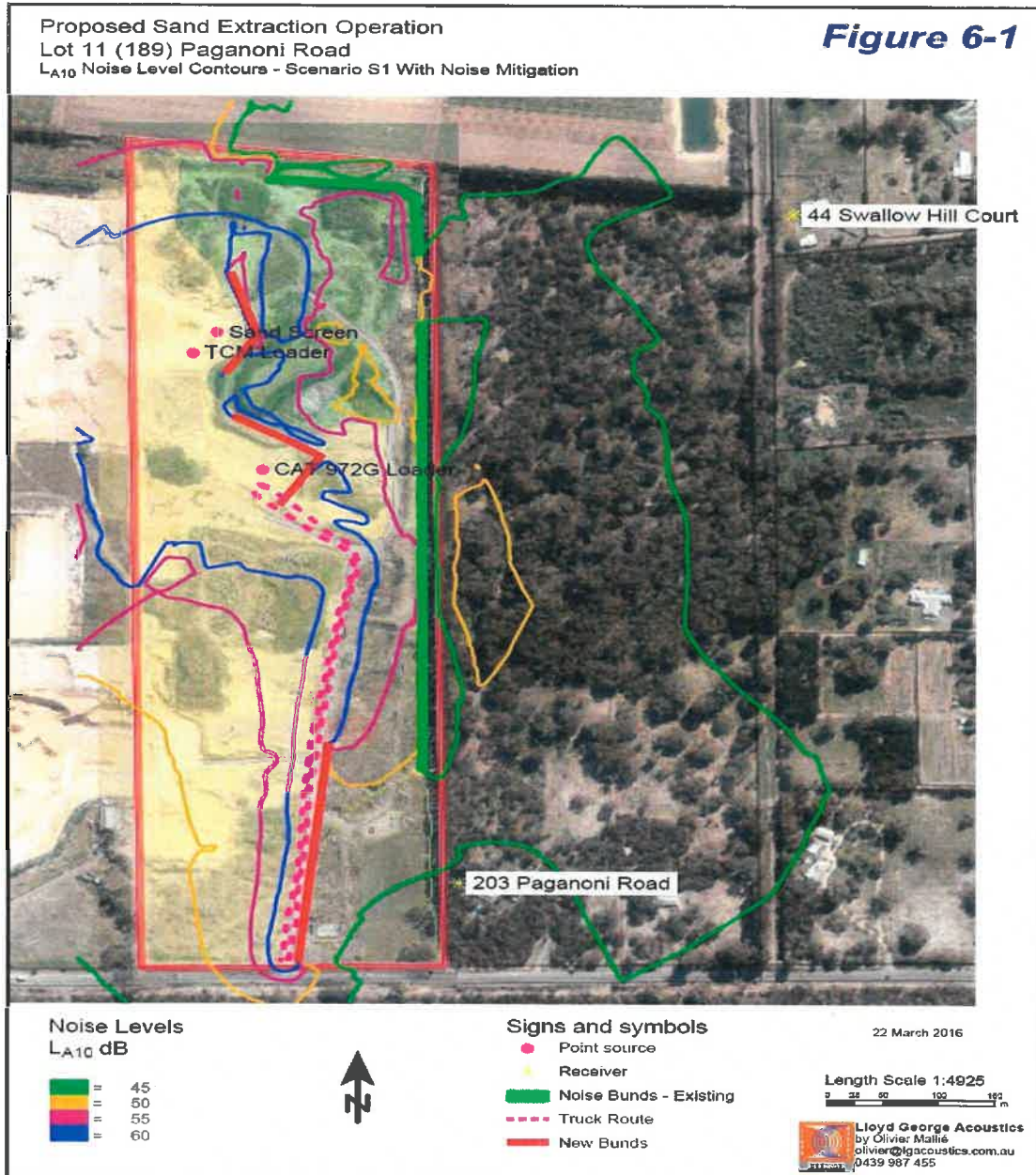
Noise emissions for the two scenarios were modelled based on the equipment shown in the table below.

Table 3-2 Source Sound Power Levels

Description	Octave Band Centre Frequency (Hz)								Overall dB(A)
	31.5	63	125	250	500	1k	2k	4k	
<i>Proposed Sand Extraction Operations</i>									
TCM 870 Loader	117	125	117	104	102	104	101	94	109
CAT 972G Loader	114	123	116	115	110	112	108	101	115
D8 Dozer	125	112	111	108	110	103	101	99	110
Sand Screen	113	109	111	107	105	105	105	104	111
Trucks, average L_{Aeq}	113	108	103	99	97	97	94	91	101

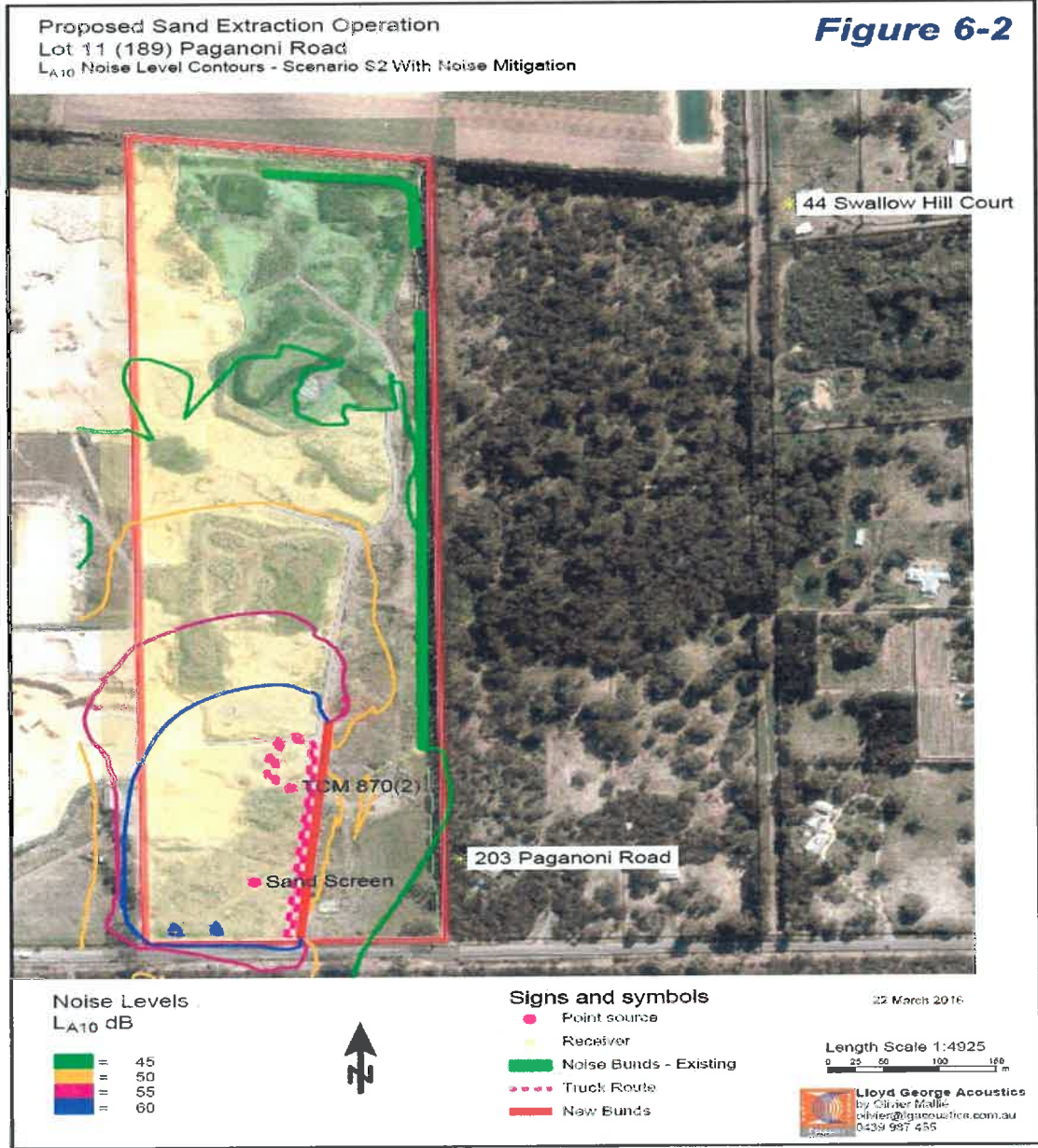


Noise contour modelling for scenario 1 is shown below in figure 6.1. The nearest noise sensitive premise is deemed to be 44 Swallow Hill Court.





Noise contour modelling for scenario 2 is shown below in figure 6.2. The nearest noise sensitive premise is deemed to be 203 Paganoni Road.





Emission Description

Emission: Noise emissions from operations on Lot 11.

Impact: Noise can impact the comfort and amenity of the public.

Modelling predicts the activities will see an exceedance of noise levels at the nearest sensitive receptor when operations are at Scenario 1, at 44 Swallow Hill Ct. The exceedance is predicted to be 9 dB using worst-case weather conditions, 1 dB when noise mitigating actions are implemented.

Modelling predicts the activities will see an exceedance of noise levels at the nearest sensitive receptor when operations are at Scenario 2, at 203 Paganoni Road. The exceedance is predicted to be 7 dB using worst-case weather conditions, 3 dB when noise mitigating actions are implemented.

Controls: Noise abatement is required to comply with the *Environmental Protection (Noise)*

Regulations 1997. The following noise mitigation activities are required for the proponent to meet the assigned noise levels;

- Sand screen to always be operated in the bottom of the pit at the eastern-most pit face;
- Loading of sand into trucks to be undertaken in the pit;
- Noise bunds to the east of the operating pit, at least 2 meters above the top of the sand screen;
- Dozer D8 not to be operated at the same time as the loaders to reduce combined noise impacts; and
- Limit the number of trucks entering the site (for Lot 11 operations only) to a maximum of 1 per hour.

Consequence: The Delegated Officer has determined that the impact of noise emissions will have low level off-site impacts, as indicated by noise modelling predicting a 3dB exceedance during normal operating conditions and a 9dB exceedance in worst-case weather conditions. Therefore, the Delegated Officer considers the consequence to be **moderate**.

Likelihood: Taking into account the noise modelling predicting a 1dB excess at the nearest sensitive receptor under normal operating conditions, the Delegated Officer considers the likelihood of noise emissions to occur to be **likely**.

Overall Risk: The Delegated Officer has compared the consequence and likelihood ratings described above through the Risk Rating Matrix (Table 1) and determined that the overall risk of noise emissions from the premises to be **high**.

Regulatory Controls

The *Environmental Protection (Noise) Regulations 1997* apply assigned noise levels at the nearest sensitive premises. Noise modelling is predicting that even with the noise mitigating activities, there is a potential for noise to exceed the assigned levels at the nearest noise sensitive premises (residences).

