



Mr David Lynch  
Spinifex Crushing and Screening Services Pty Ltd  
16 Anthony Street  
ALBANY WA 6330

Dear Mr Lynch

**ENVIRONMENTAL PROTECTION ACT 1986: WORKS APPROVAL GRANTED**

**Premises**

Wandena Quarry  
Lot 500 on Deposited Plan 56200  
WALEBING WA  
**Works Approval Number: W5580/2014/1**

A works approval under the *Environmental Protection Act 1986* (the Act) has been granted for the above premises. The Department of Environment Regulation will advertise the issuing of this works approval in the public notices section of *The West Australian* newspaper.

The works approval includes attached conditions. Under section 55(1) of the Act, it is an offence to contravene a condition of a works approval. This offence carries a penalty of up to \$125,000 and a daily penalty of up to \$25,000

In accordance with section 102(1)(c) of the Act, you have 21 days to appeal the conditions of the works approval. Under section 102(3)(a) of the Act, any other person may also appeal the conditions of the works approval. To lodge an appeal contact the Office of the Appeals Convenor on 6467 5190 or by email at [admin@appealsconvenor.wa.gov.au](mailto:admin@appealsconvenor.wa.gov.au).

Emissions from the premises that are the subject of a works approval are not authorised until or unless a licence is issued or unless the emissions are in accordance with the works approval and while that works approval is in force. If you have any queries regarding the above information, please contact Steve Checker on 9964 0901.

Yours sincerely

Danielle Eyre  
Officer delegated under section 20  
of the *Environmental Protection Act 1986*

13/3/2014

enc: *Environmental Protection Act 1986* Works Approval W5580/2014/1



# Works Approval

## *Environmental Protection Act 1986, Part V*

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**Works Approval Holder:** Spinifex Crushing &  
Screening Services Pty Ltd

**Works Approval Number:** W5580/2014/1

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**Registered office:** 16 Anthony Street  
ALBANY WA 6330

**ACN:** 135 324 551

**Premises address:** Wandena Quarry  
The Midlands Road  
WALEBING WA 6510  
Being Lot 500 on Deposited Plan 56200 as depicted in Schedule 1

**Issue date:** Thursday, 13 March 2014

**Commencement date:** Monday, 17 March 2014


**Expiry date:** Saturday, 16 March 2019

The following category/s from the *Environmental Protection Regulations 1987* cause this Premises to be a prescribed premises for the purposes of the *Environmental Protection Act 1986*:

Category number	Category description	Category production or design capacity	Approved premises production or design capacity
12	Screening etc. of material: premises (other than premises within category 5 or 8) on which material extracted from the ground is screened, washed, crushed, ground, milled, sized or separated.	50 000 tonnes or more per year	500 000 tonnes per annual period

### Conditions

This Works Approval is subject to the conditions set out in the attached pages.

  
.....  
Officer delegated under section 20  
of the *Environmental Protection Act 1986*

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# Works Approval Conditions

## 1 General

### 1.1 Interpretation

1.1.1 In the Works Approval, definitions from the *Environmental Protection Act 1986* apply unless the contrary intention appears.

1.1.2 In the Works Approval, unless the contrary intention appears:

**'Act'** means the *Environmental Protection Act 1986*;

**'annual period'** means the inclusive period from 1 January until 31 December in the same year;

**'code of practice for the storage and handling of dangerous goods'** means document titled "Storage and handling of dangerous goods: Code of Practice" published by the Department of Mines and Petroleum, as amended from time to time;

**'dangerous goods'** has the meaning defined in the *Dangerous Goods Safety (Storage and Handling of Non-explosives) Regulations 2007*;

**'Director'** means Director, Environmental Regulation Division of the Department of Environment Regulation for and on behalf of the Chief Executive Officer as delegated under section 20 of the Act;

**'Director'** for the purpose of correspondence means:  
Regional Leader, Industry Regulation, Midwest Region  
Department of Environment Regulation  
PO Box 72  
GERALDTON WA 6531  
Telephone: (08) 9964 0901  
Facsimile: (08) 9921 5713  
Email: GeraldtonIR@der.wa.gov.au;

**'environmentally hazardous material'** means material (either solid or liquid raw materials, materials in the process of manufacture, manufactured products, products used in the manufacturing process, by-products and waste) which if discharged into the environment from or within the premises may cause pollution or environmental harm. Note: Environmentally hazardous materials include dangerous goods where they are stored in quantities below placard quantities. The storage of dangerous goods above placard quantities is regulated by the Department of Mines and Petroleum;

**'Premises'** means the area defined in the Premises Map in Schedule 1 and listed as the Premises address on page 1 of the Works Approval;

**'Schedule 1'** means Schedule 1 of this Works Approval unless otherwise stated;

**'Works Approval'** means this Works Approval numbered W5580/2014/1 and issued under the Act;

**'Works Approval Holder'** means the person or organisation named as the Works Approval Holder on page 1 of the Works Approval;



1.1.3 Any reference to an Australian or other standard in the Works Approval means the relevant parts of the standard in force from time to time during the term of this Works Approval.

1.1.4 Any reference to a guideline or code of practice in the Works Approval means the current version of the guideline or code of practice in force from time to time, and shall include any amendments or replacements to that guidelines or code of practice made during the term of this Works Approval.

**1.2 General conditions**

1.2.1 The Works Approval Holder shall construct the works in accordance with the documentation detailed in Table 1.2.1:

Table 1.2.1: Construction Requirements <sup>1</sup>		
Document	Parts	Date of Document
Works Approval Application Form	All	5 December 2013
Wandena Quarry Project: Works Approval Application	All, including Drawings and Appendices	November 2013

Note 1: Where the details and commitments of the documents listed in condition 1.2.1 are inconsistent with any other condition of this works approval, the conditions of this works approval shall prevail.

1.2.2 The Works Approval Holder, except where storage is prescribed in section 1.3, shall ensure that environmentally hazardous materials are stored in accordance with the code of practice for the storage and handling of dangerous goods.

**1.3 Premises operation**

There are no specified conditions relating to Premises operation in this section.

**2 Emissions**

There are no specified conditions relating to emissions in this section.

**3 Monitoring**

There are no specified conditions relating to monitoring in this section.

**4 Improvements**

There are no specified conditions relating to improvements in this section.

**5 Information**

**5.1 Reporting**

5.1.1 The Works Approval Holder shall submit a compliance document to the Director, following the construction of the works and prior to commissioning of the same.

5.1.2 The compliance document shall:

- (a) certify that the works were constructed in accordance with the conditions of the works approval;
- (b) be signed by a person authorised to represent the Works Approval Holder and contain the printed name and position of that person within the company.

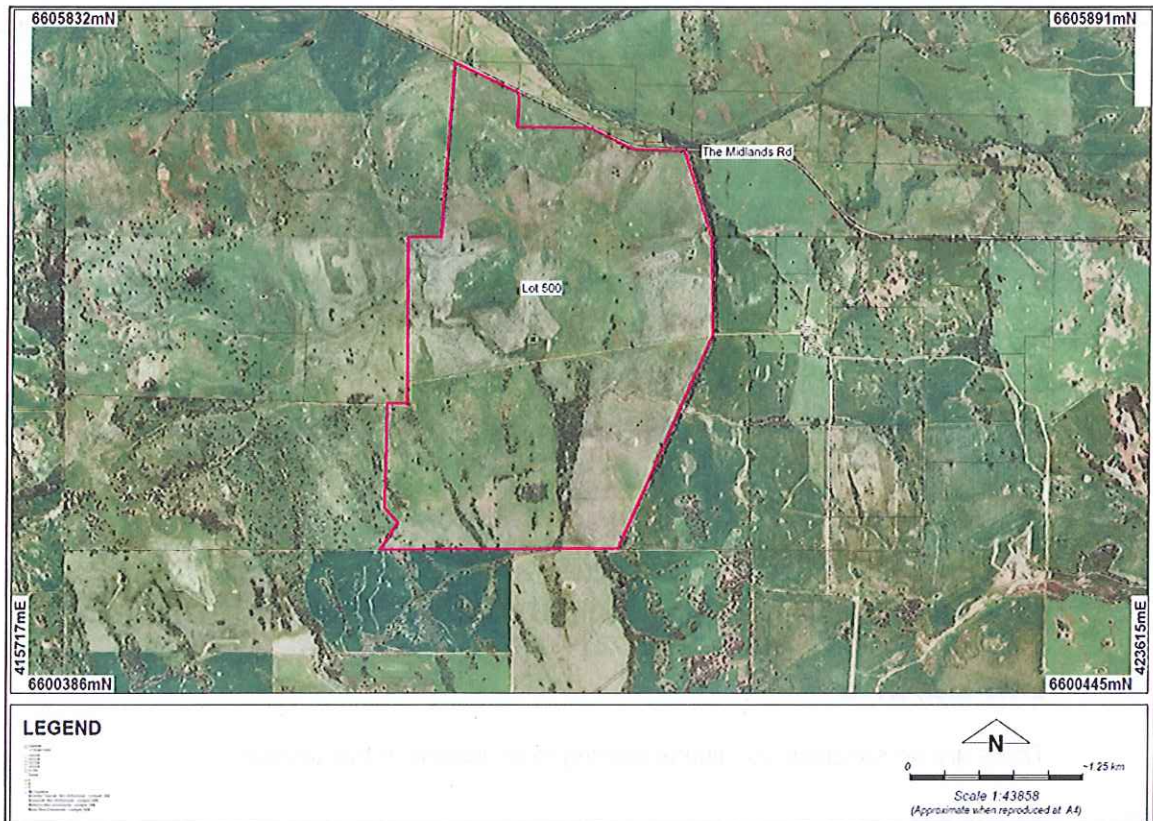




## Schedule 1: Maps

### Premises map

The Premises is shown in the map below. The pink line depicts the Premises boundary.





# Decision Document

## *Environmental Protection Act 1986, Part V*

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**Proponent:**                    **Spinifex Crushing & Screening  
Services Pty Ltd**

**Works Approval:**    **W5580/2014/1**

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**Registered office:**    16 Anthony Street  
ALBANY WA 6330

**ACN:**                        135 324 551

**Premises address:**    Wandena Quarry  
The Midlands Road  
WALEBING WA 6510  
Being Lot 500 on Deposited Plan 56200 as depicted in Schedule 1

**Issue date:**                Thursday, 13 March 2014

**Commencement date:**   Monday, 17 March 2014

**Expiry date:**                Saturday, 16 March 2019

### **Decision**

Based on the assessment detailed in this document the Department of Environment Regulation (DER) has decided to issue a works approval. DER considers that in reaching this decision, it has taken into account all relevant considerations.

Decision Document prepared and authorised by:    Steve Checker  
A/Regional Leader





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## 1 Purpose of this Document

This decision document explains how DER has assessed and determined the application for a works approval or licence, and provides a record of DER's decision-making process and how relevant factors have been taken into account. Stakeholders should note that this document is limited to DER'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.

### Works approval and licence conditions

DER has three types of conditions that may be imposed on works approvals and licences. They are as follows;

#### Standard conditions (SC)

DER has standard conditions that are imposed on all works approvals and licences regardless of the activities undertaken on the Premises and the information provided in the application. These are included as the following conditions on works approvals and licences:

Works approval conditions: 1.1.1-1.1.4, 1.2.1, 1.2.2, 5.1.1 and 5.1.2.

Licence conditions: 1.1.1-1.1.4, 1.2.1-1.2.4, 5.1.1-5.1.4 and 5.2.1.

For such conditions, justification within the Decision Document is not provided.

#### Optional standard conditions (OSC)

In the interests of regulatory consistency DER has a set of optional standard conditions that can be imposed on works approvals and licences. DER will include optional standard conditions as necessary, and are likely to constitute the majority of conditions in any licence. The inclusion of any optional standard conditions is justified in Section 4 of this document.

#### Non standard conditions (NSC)

Where the proposed activities require conditions outside the standard conditions suite DER will impose one or more non-standard conditions. These include both premises and sector specific conditions, and are likely to occur within few licences. Where used, justification for the application of these conditions will be included in Section 4.



## 2 Administrative summary

Administrative details		
Application type	Works Approval <input checked="" type="checkbox"/>	
	New Licence <input type="checkbox"/>	
	Licence amendment <input type="checkbox"/>	
	Works Approval amendment <input type="checkbox"/>	
Activities that cause the premises to become prescribed premises	Category number(s)	Assessed design capacity
	12	500,000 tonnes per annual period
Application verified	Date: 7/1/2014	
Application fee paid	Date: 13/1/2014	
Works Approval has been complied with	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	
Compliance Certificate received	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" 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 type="checkbox"/>
Is the Premises within an Environmental Protection Policy (EPP) Area	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
If Yes include details of which EPP(s) here.		
Is the Premises subject to any EPP requirements?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
If Yes, include details here, egg Site is subject to SO <sub>2</sub> requirements of Kwinana EPP.		





### 3 Executive summary of proposal

Spinifex Crushing and Screening Services Pty Ltd ('Spinifex') seeks approval to process quarry material from a magmatic and grano-diorite resource located near Walebing in the Shire of Moora using a mobile crushing and screening plant situated within the project area. The proposed quarrying will use standard drill and blast, load and haul techniques. The primary intent of this operation is to quarry roadbase material for the upgrading of the Great Northern Highway between New Norcia and Wubin.

The project area is a greenfields site with no previous mining history. Mining will occur on a campaign basis depending upon commercial demand, with an expected annual startup production of up to 250,000 tonnes per year and a maximum capacity of 500,000 tonnes per year.

The project is located approximately 4 kilometres west of Walebing along the Midlands Road and situated on Lot 500 on DP 56200, which is owned by the Angepena Pastoral Company Pty Ltd (Tony and Judy Snell). Lot 500 is zoned for General Agriculture according to the Shire of Moora Town Planning Scheme.

The Wandena project will consist of the quarry; a ROM, crushing/screening and stockpiling area and an office and amenities area. Operational areas are expected to shift according to operational requirements. Figure 1 indicates the area (shown in pink) within which the mobile plant and associated infrastructure will be located over the life of mine.

Soils in the project area are generally shallow and stony and there are extensive areas without soil cover. Soil cover increases downslope as would be expected of an ancient erosional landscape.

There are no significant water permanent bodies within the project area. An ephemeral creek/river system lies approximately 1km to the west of the project area. Investigations have shown that there is no permanent sub-surface water that this proposal would likely impact on. The underlying rock is igneous and the fracture systems common to that rock type, which sometimes contain water, were found to be dry. The proponent has put down 19 holes to 6m into rock over about 15 hectares in the project area without finding even a perched water table on top of the rock.

The resource will be quarried using standard drill and blast techniques, with the resulting quarry product treated in a mobile crushing and screening plant, to produce product according to commercial demand. It is anticipated that minimal product will be stockpiled on site as the intent is to only produce material as and when commercial demand requires.

The nature of the topography and the material indicates that a bench system would be best employed. The typical bench in this material is approximately 6m in height with sloping walls for stability, with excavation mirroring the current 'bowl' shape of the southern facing hillside and moving back into the resource.

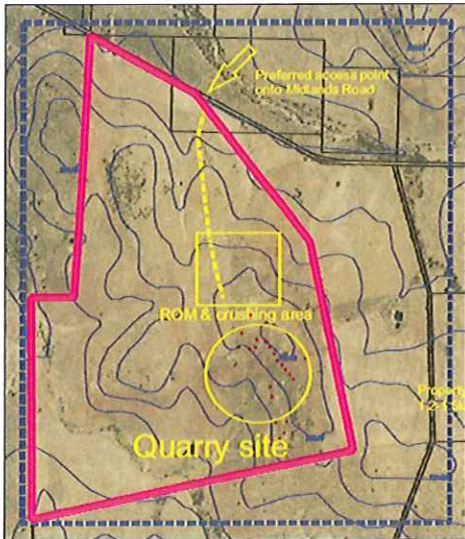
A waste rock dump will not be required on site as all products will be utilised. The materials to be quarried are essentially chemically inert and do not contain any sulfides, or other soluble materials, that are likely to cause harm or damage to the environment. As no sulfides will be present in the walls of the quarry and no waste rock will remain on-site, there is no potential for Acid Rock Drainage (ARD) or neutral metalliferous impacts to occur.

The crushing/screening plant, being mobile, will be changeable according to commercial demand. Spinifex intends to design and mobilise each circuit according to customer demand but would normally involve a primary trommel screen or similar, jaw and cone crushers, in addition to screens of various sizes and capacities.



It is anticipated that material will be moved from the quarry to the screening plant using a combination of wheel loaders and off road trucks. Material will be moved offsite by either single semi-trailer or double road trains depending upon final destination.

Figure 1: Proposed operational area







## 4 Decision table

All applications are assessed under the *Environmental Protection Act 1986*, the *Environmental Protection Regulations 1987*, and the risk matrix attached to this Decision Document in Section 6. Where other references have been used in making the decision they are detailed in the decision table.

DECISION TABLE				
Works Approval / Licence section	Condition number W = Works Approval L = Licence	OSC or NSC	Justification (including risk description & decision methodology where relevant)	Reference documents
<b>General conditions</b>	W – no conditions L1.2.1 – L1.2.5; 1.3	NSC	<p><b>Construction and Operation</b>  <i>Emission Significance - 1</i>  <i>Socio-political context - No concern or interest.</i>  <i>Risk Assessment - D – licence conditions</i></p> <p>Fuel to onsite plant will be provided by an 8,000 litre service truck which will be refuelled daily in Moora. Only minor amounts of hydrocarbons will be stored onsite. Maximum volumes will be similar to a normal farming operation and generally consist of 1 or 2 drums (220L) of engine oil, a 220L drum of grease, and approximately 10-15 drums (20L) of various specialist oils</p> <p>Drains around crusher and stockpile areas will be maintained to prevent uncontrolled runoff during periods of heavy rainfall. Water will be collected in a settling pond and used for dust suppression as and when necessary. The settling pond will be located at the base of the hill to capture any runoff from the crusher and stockpile area. Regular inspections of the pond will be undertaken to ensure it maintains adequate freeboard.</p> <p>Erosion prevention measures will be taken on any disturbed watershed surfaces. These will include contour ripping of slopes, diversion bunds, spoon drains and rock armouring.</p>	<p>Application supporting documentation</p> <p>Environmental Protection (Unauthorised Discharges) Regulations, 2004.</p>



**DECISION TABLE**

Works Approval / Licence section	Condition number W = Works Approval L = Licence	OSC or NSC	Justification (including risk description & decision methodology where relevant)	Reference documents
Emissions general	N/A	N/A	No additional general conditions are required in the works approval, and standard hydrocarbon and stormwater management conditions will be applied to the operating licence. No general emission conditions are proposed for the licence or works approval	N/A
Point source emissions to air including monitoring	W2 and 3 L2.2 and L3.2	N/A	<b>Operation and Construction</b> <i>Emission Significance - 1</i> <i>Socio-political context - No concern or interest.</i> <i>Risk Assessment - E - other management mechanisms</i>  No significant point source air emissions are expected from the construction or operation of the mobile plant. Gas emissions from the project comprise relatively minor exhaust emissions from the crushing/screening plant and from a mobile 25-40kva diesel generator as required to the office and crib rooms.  No specified conditions relating to air emissions are proposed for this project.	Environmental Protection (Unauthorised Discharges) Regulations, 2004.  Application supporting documentation
Point source emissions to surface water including monitoring	W2.3 L2.3	N/A	<b>Operation and Construction</b> <i>Emission Significance - 1</i> <i>Socio-political context - No concern or interest</i> <i>Risk Assessment - E - no regulation, other management mechanisms</i>  There are no lakes, rivers or other significant water bodies within the project area. Emissions to surface water are not expected.	Application supporting documentation
Point source emissions to groundwater including	N/A	N/A	<b>Operation and Construction</b> <i>Emission Significance - 1</i> <i>Socio-political context - No concern or interest.</i>	Application supporting documentation





DECISION TABLE				
Works Approval / Licence section	Condition number W = Works Approval L = Licence	OSC or NSC	Justification (including risk description & decision methodology where relevant)	Reference documents
monitoring			<i>Risk Assessment</i> – E – other management mechanisms  No emissions to groundwater are expected from the construction or operation of the mobile plant.	
Emissions to land including monitoring	N/A		<b>Operation and Construction</b> <i>Emission Significance</i> - 1 <i>Socio-political context</i> - No concern or interest. <i>Risk Assessment</i> – E – other management mechanisms  No significant emissions to land are expected from the construction or operation of the mobile plant. All processed material is intended to be used. There will be no waste rock dump required or tailings produced.  Minor amounts of incidental wastes generated by staff onsite will be transported to the Moora landfill as required.	Application supporting documentation
Fugitive emissions	W – no conditions L 2.6.1 – 2.6.3	N/A	<b>Operation and Construction</b> <i>Emission Significance</i> - 2 <i>Socio-political context</i> - No concern or interest. <i>Risk Assessment</i> – E – other management mechanisms  Dust will be generated from blasting, heavy earthmoving vehicles, light vehicle movements, the crushing/screening plant and from product stockpiles.  Dust will be controlled onsite by <ul style="list-style-type: none"> <li>• water trucks on the haul roads;</li> <li>• sprinklers on stockpiles;</li> <li>• minimal stockpiling onsite (on a commercial demand basis)</li> </ul>	Application supporting documentation



**DECISION TABLE**

Works Approval / Licence section	Condition number W = Works Approval L = Licence	OSC or NSC	Justification (including risk description & decision methodology where relevant)	Reference documents
			<ul style="list-style-type: none"> <li>• shields and covers on conveyors;</li> <li>• sprinklers on transfer conveyors;</li> <li>• sheeting of roadways with crushed rock;</li> <li>• 50 km/hr maximum speed limit for all vehicles; and</li> <li>• minimisation of unnecessary movement of vehicles.</li> </ul> <p>The separation distance of 3.2 km to the nearest offsite residence is considered adequate to mitigate dust impacts. Standard dust management conditions will be applied to the operating licence.</p>	
<b>Odour</b>	N/A	N/A	<p><b>Operation and Construction</b>  <i>Emission Significance - 1</i>  <i>Socio-political context - No concern or interest.</i>  <i>Risk Assessment - E - other management mechanisms</i></p>	N/A
<b>Noise</b>	N/A	N/A	<p>There are no significant odour emissions expected from this project.</p> <p><b>Operation and Construction</b>  <i>Emission Significance - 2</i>  <i>Socio-political context - No concern or interest.</i>  <i>Risk Assessment - E - other management mechanisms</i></p> <p>Noise from quarrying activities will primarily be derived from the operation of the crushing plant and associated heavy vehicle movements. The quarry itself will be orientated away from residences, towards the south west.</p> <p>The crushing and screening area will be on top of the hill to the north east of the quarry. The closest residences offsite are 3.2km to the west northwest and 3.9km to the northwest. These separation distances are considered adequate to mitigate potential noise impacts. The project is expected to comply with the <i>Environmental</i></p>	<p>Application supporting documentation</p> <p><i>Environmental Protection (Noise) Regulations 1987.</i></p>





**DECISION TABLE**

Works Approval / Licence section	Condition number W = Works Approval L = Licence	OSC or NSC	Justification (including risk description & decision methodology where relevant)	Reference documents
			<i>Protection (Noise) Regulations 1987.</i>	
Monitoring general	N/A	N/A	No specified noise conditions are proposed for this project. No specified general monitoring conditions are proposed for this project.	N/A
Monitoring of inputs and outputs	W – N/A L3.6	N/A	It is proposed that a condition is incorporated into the operating license for the reporting of annual crusher and screening throughput.	N/A
Process monitoring	N/A	N/A	No specified process monitoring conditions are proposed for this project.	N/A
Ambient quality monitoring	N/A	N/A	No specified ambient quality monitoring conditions are proposed for this project.	N/A
Meteorological monitoring	N/A	N/A	No specified meteorological monitoring conditions are proposed for this project.	N/A
Improvements	N/A	N/A	No specified improvement conditions are proposed for this project.	N/A
Information	N/A	N/A	No specified information conditions are proposed for this project.	N/A



## 5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
10/2/2014	Application advertised in West Australian (or other relevant newspaper)	None	N/A
10/3/2014	Proponent sent a copy of draft instrument	None	N/A





## 6. Emissions and discharges risk assessment framework

Note: These matrix are taken from the DEC Officer's Guide to Emissions and Discharges Risk Assessment (2006).

**Table 3: Measures of Significance of Emissions**

Emissions as a percentage of the relevant emission or ambient standard		Worst Case Operating Conditions (95 <sup>th</sup> Percentile)			
		>100%	50 – 100%	20 – 50%	<20%*
Normal Operating Conditions (50 <sup>th</sup> Percentile)	>100%	5	N/A	N/A	N/A
	50 – 100%	4	3	N/A	N/A
	20 – 50%	4	3	2	N/A
	<20%*	3	3	2	1

\*For reliable technology, this figure could increase to 30%

**Table 4: Socio-Political Context of Each Regulated Emission**

		Relative proximity of the interested party with regards to the emission				
		Immediately Adjacent	Adjacent	Nearby	Distant	Isolated
Level of Community Interest or Concern*	5	High	High	Medium High	Medium	Low
	4	High	High	Medium High	Medium	Low
	3	Medium High	Medium High	Medium	Low	No
	2	Low	Low	Low	Low	No
	1	No	No	No	No	No

Note: These examples are not exclusive and professional judgement is needed to evaluate each specific case

\*This is determined by DER using the *Officer's Guide to Emissions and Discharges Risk Assessment* (2006).

**Table 5: Emissions Risk Reduction Matrix**

		Significance of Emissions				
		5	4	3	2	1
Socio-Political Context	High	A	A	B	C	D
	Medium High	A	A	B	C	D
	Medium	A	B	B	D	E
	Low	A	B	C	D	E
	No	B	C	D	E	E

### PRIORITY MATRIX ACTION DESCRIPTORS

A = Do not allow (fix)

B = licence condition (setting limits + EMPs - short timeframes)(setting targets optional)

C = licence condition (setting targets + EMPs - longer timeframes)

D= EIPs, other management mechanisms/licence conditions (monitoring/reporting)/other regulatory tools

E = No regulation, other management mechanisms