



# Works Approval

## *Environmental Protection Act 1986, Part V*

**Works Approval Holder: Simon Osmond Robinson**

**Works Approval Number: W5961/2016/1**

Registered office: 60 Gordon Road East  
 OSBORNE PARK WA 6017

ACN: N/A

Premises address: Lot 60 Warner Glen Road  
 Forrest Grove WA 6286  
 Lot 60 on diagram 98676  
 as depicted in Schedule 1.

Issue date: Thursday, 28 July 2016

Commencement date: Monday, 01 August 2016

Expiry date: Monday, 19 July 2021

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	56 250 tonnes per annual period

**Conditions**

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

Date signed: 28 July 2016

.....  
**Tim Gentle**  
 Manager Licensing – Resource Industries  
 Officer delegated under section 20  
 of the *Environmental Protection Act 1986*



# 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 April until 31 March in the following year;

**'AS/NZS 3580.9.3'** means the Australian Standard AS 3580.9.3 *Methods for sampling and analysis of ambient air - Determination of suspended particulate matter - Total suspended particulate matter (TSP) - High volume sampler gravimetric method*;

**'AS/NZS 3580.9.6'** means the Australian Standard AS 3580.9.6 *Methods for sampling and analysis of ambient air - Determination of suspended particulate matter - PM<sub>10</sub> high volume sampler with size - selective inlet – Gravimetric method*;

**'AS/NZS 3580.9.8'** means the Australian Standard AS 3580.9.8 *Methods for sampling and analysis of ambient air - Determination of suspended particulate matter - PM<sub>10</sub> continuous direct mass method using tapered element oscillating microbalance analyser*;

**'AS/NZS 3580.10.1'** means the Australian Standard AS 3580.10.1 *Methods for sampling and analysis of ambient air - Determination of particulate matter – Deposited matter – Gravimetric method*;

**'CEO'** means Chief Executive Officer of the Department of Environment Regulation;

**'CEO'** for the purpose of correspondence means  
Chief Executive Officer  
Department Administering the Environmental Protection Act 1986  
Locked Bag 33  
CLOISTERS SQUARE WA 6850  
Email: [info@der.wa.gov.au](mailto:info@der.wa.gov.au);

**'clearing'** means any clearing of native vegetation as defined in the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004*;

**'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;

**'Site preparation'** means topsoil stripping, construction of a bund and installation of the crushing and screening equipment;

**'Works Approval'** means this Works Approval numbered W5961/2016/1 and issued under the Act; and

**'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:

<b>Table 1.2.1: Construction Requirements<sup>1</sup></b>		
<b>Document</b>	<b>Parts</b>	<b>Date of Document</b>
Works Approval Application Form	All, including Drawings and Appendices	14 January 2016
Works Approval Supporting Documentation Titled: Application for Gravel Extraction Industry Permit Lot 60 Warner Glen Road Forest Grove	All, including Drawings and Appendices	27 August 2015
Works Approval Supporting Documentation Titled: Additional Report to Support Gravel Extraction Application lot 60 Warner Glen Road – Forrest Grove (P215430; PTY/11335)	All, including Drawings and Appendices	8 December 2015
Works Approval Supporting Documentation Titled: Hydrological Assessment for 6 Cell Sites	All, including Drawings and Appendices	3 December 2015
Hydrogeological Assessment – H1 Level Lot 60 Warner Glen Road Forest Grove Proposed Gravel Extraction Application Augusta Margaret River Shire Reference – P215430 PTY11335	All, including Drawings and Appendices	8 December 2015
Works Approval Supporting Documentation Titled: Additional Report for Gravel Extraction Application. Lot 60 Warner Glen Road – Warner Glen (P215430; PTY/11335)	All	17 June 2016

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 is only authorised to undertake clearing in the areas approved to clear defined in Plan 7156/1 in Schedule 1 maps.



## 2 Improvements

### 2.1 Improvement program

2.1.1 The Works Approval Holder shall complete the improvements in Table 2.1.1 by the date of completion in Table 2.1.1.

<b>Improvement reference</b>	<b>Improvement</b>	<b>Date of completion</b>
IR1	The Works Approval Holder shall submit and implement a plan to monitor the concentration of particulates in ambient air to assess background dust levels at the Premises prior to commencement of the works (minimum of one month) and submit the results to the CEO. The monitoring should be conducted in accordance with either AS/NZS 3580.9.3, AS/NZS 3580.9.6, AS/NZS 3580.9.8 or AS/NZS 3580.10.1.	After works approval issue and prior to ground disturbance.
IR2	Following completion of IR1, the Works Approval Holder shall monitor concentration of particulates in ambient air at the Premises during the site preparation works for the initial Cell (4 or any other chosen to be developed first) and submit the results to the CEO. The method of monitoring shall be the same as that employed for IR1.	Submit results at completion of site preparation works.

## 3 Information

### 3.1 Reporting

3.1.1 Works Approval Holder shall submit a compliance document to the CEO, following site preparation of the first cell as shown in the Premises map in Schedule 1.

3.1.2 The compliance document shall:

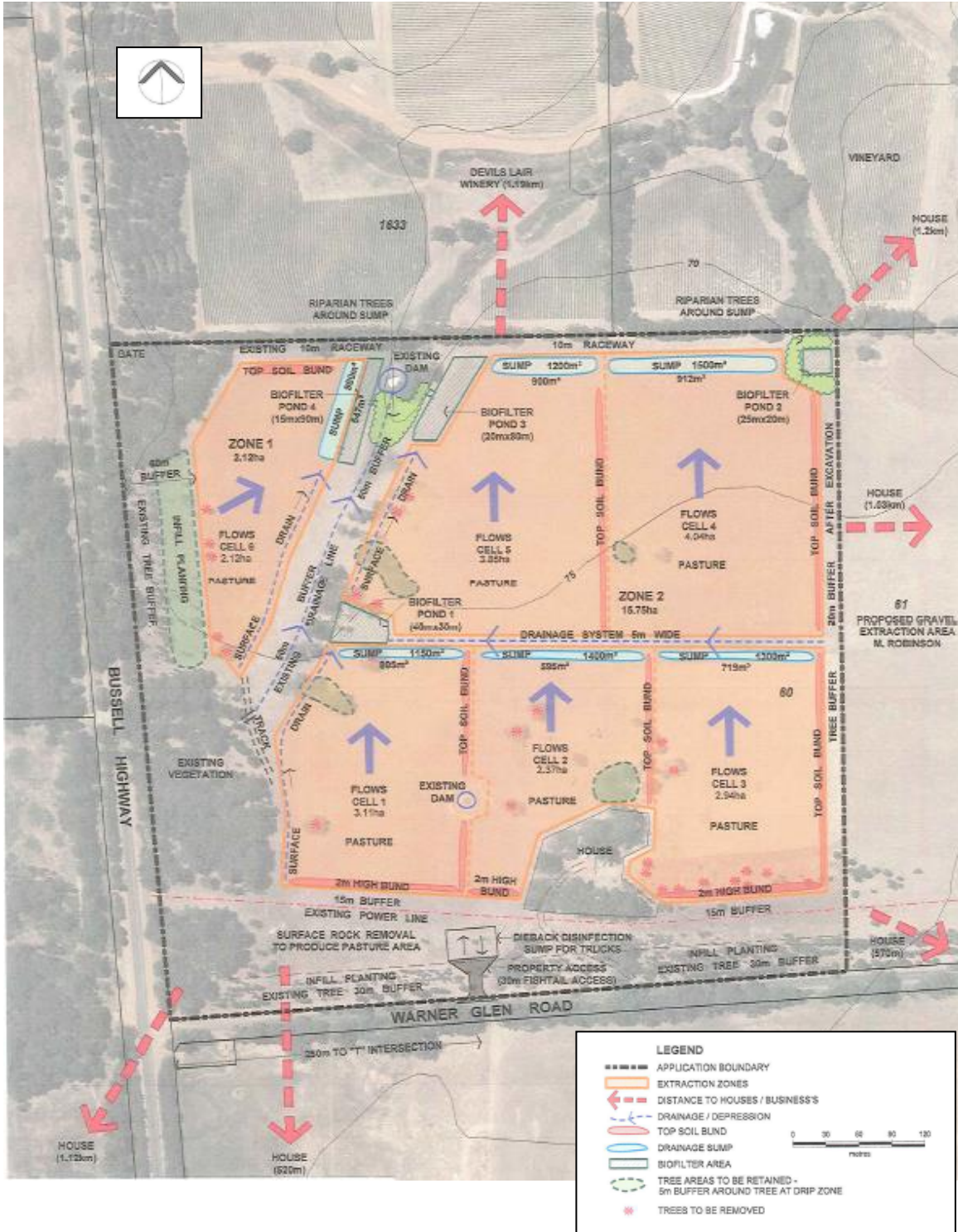
- (a) certify that the works were constructed in accordance with the conditions of the Works Approval; and
- (b) be signed by a person authorised to represent the Works Approval Holder and contain the printed name and position of that person within the company.



# Schedule 1: Maps

## Premises map

The Premises location is shown in the maps below. The dashed black line depicts the Premises boundary and the orange filled area depicts the individual extractive industry cells.





Plan of approved areas to clear (Plan 7156/1)  
**Plan 7156/1**



<b>Legend</b>		 1:2,296 MGA94 Geocentric Datum of Australia 1984	
	Areas approved to clear		
	Roads	 James Widenbar ..... Date 17/7/2016 Officer with delegated authority under Section 20 of the Environmental Protection Act 1986	
	LGA		
	Cadastre		
Virtual Mosaic (LGATE-V001)		 GOVERNMENT OF WESTERN AUSTRALIA	





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## 1 Purpose of this Document

This decision document explains how DER has assessed and determined the application 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.

## 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	<b>Category number(s)</b> 12	<b>Assessed design capacity</b> 56,250 tonnes per annual period
Application verified	Date: 14/03/2016	
Application fee paid	Date: 29/04/2016	
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, eg Site is subject to SO <sub>2</sub> requirements of Kwinana EPP.	

### 3 Executive summary of proposal and assessment

Simon Osmond Robinson (Robinson) is the legal owner of Lot 60 on Diagram 98676 (Lot 60), Warner Glen Road in Forrest Grove and is seeking a works approval for a gravel extraction operation on this property. The Premises comprises 31.34 hectares (Ha) and has frontage to Warner Glen Road and Bussell Highway, approximately 6 kilometres south of Witchcliffe townsite and 10.4 kilometres west of the Leeuwin Naturaliste Ridge coastline. The quarry is to be located on an area of 18.34 ha where the extraction areas described as Zone 1 and Zone 2 or 6 cells, as depicted in Schedule 1 of the Works Approval.

The proposed gravel resource on Lot 60 is estimated as 264,096 tonnes (137,550 cubic metres) and will be extracted over the next 5 years at an average of 52,819 tonnes per year. The assessment is for an annual maximum of 56,250 tonnes per year and will be licensed for the term equivalent to the planning approval. Planning approval for extractive industry (gravel extraction) was granted by the Shire of Augusta Margaret River on 20 July 2016 for a period of 5 years.

The six excavation cells are located on the cleared areas of the property that contains paddock trees and remnant vegetation and clearing of native vegetation is required. There is a planted vegetation buffer on the south side of the property adjacent to Warner Glen Road reserve and an existing vegetation buffer adjacent to Bussell Highway. There is one creek line that flows through the property in a north easterly direction that contains an existing small soak dam. The soak dam will be used as part of the drainage plan for the gravel extraction cells. There is no vegetated wetland within any of the proposed gravel extraction zones and a 50 metre buffer is proposed by the proponent to be maintained from the creek lines. A Western Power line located adjacent to the southern boundary of the property will be the boundary of Zone 2 cells and provides a 15 metre buffer between the extraction area and Warner Glen Road. On average the excavation areas are located 60 metres from Warner Glen Road reserve and 40 to 110 metres from Bussell Highway.

Hours of operation are governed by the Shires planning approval and operations are only authorised Monday to Friday 7am to 5pm. A grader, bulldozer, scraper and front-end loader will work the site and gravel will be stockpiled no greater than 3 metres high near the screening plant and within the gravel extraction cell. One screening plant, with a maximum capacity of 250 tonnes per hour, will be based at the site and screening will be done in monthly campaigns during operational hours. The mechanical screening campaigns may be 50 hours per week over four and one half weeks at 250 tonnes per hour, totalling 56,250 tonnes per annum. Haulage trucks will operate Monday to Friday and will enter Warner Glen Road and head either north or south along Bussell Highway. Operation of trucks are restricted to between 9am and 5pm within the Shire planning approval with 16 truck movements authorised daily (8 in and 8 out). No vehicle machinery maintenance will be carried out on site, and no chemicals, fuel and oils will be stored at the Premises.

The excavation cells shall be created by removing 100mm of topsoil and stockpiled in 2 metre high noise bunds to the south and to the east in Zone 2. Each cell shall have a stormwater sump constructed at the boundary of each cell down gradient towards the creek line and a drainage system created during excavation of the gravel resource. The size of these sedimentation sumps will meet



the necessary retention to store a 39mm 2 hour, 1 in 10 rainfall intensity duration, as identified in the Hydrogeological assessment referenced P215430, PTY11335 and included within the Works Approval application.

The mechanical screening, when operating in cells 3 and 4, shall be undertaken to maximise the separation distance between the screening plant and the dwelling directly south of the cells. This will have the effect of minimising nuisance noise emissions to the closest sensitive receptor (>500m). The onsite dwelling is derelict and therefore unoccupied. The other nearby receptors are greater than 630 metres from the prescribed activity. The location of the screening plant is also screened from Bussell Highway and Warner Glen Road by a 20 metre vegetation buffer.

The Premises is located within the Leeuwin Naturaliste Ridge and Augusta sub-area of the Blackwood Groundwater Area and within the Blackwood River catchments. The proposed project area is outside of any Public Drinking Water Supply Area. A minor, perennial watercourse is located on the Premises. Surficial groundwater is estimated to be very shallow between 2 to 5 metres below natural ground level dependent upon hydraulic conditions. No dewatering will be conducted to support extraction operations.

The main emissions associated with the excavation and screening of gravel are considered to be fugitive dust, noise, discharges to land due to hydrocarbon spills and contaminated stormwater.

Conditions of the Works Approval and subsequent operating licence have been assessed in Table 4. Clearing of native vegetation has also been assessed as part of this Works Approval application.





DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L = Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p><i>Controls:</i> The proponent has committed to the following measures to reduce or prevent environmental impacts from hydrocarbon and chemicals:</p> <ul style="list-style-type: none"> <li>• No chemicals shall be stored on site;</li> <li>• Any refuelling of vehicles will be from a “snap on snap off” mobile refuelling vehicle;</li> <li>• No servicing or maintenance will be conducted on site;</li> <li>• Spill kits will be available and spills cleaned and disposed of immediately;</li> <li>• Truck wash-down bay on site to employ oil water separator, with waste oil removed offsite; and</li> <li>• Liquid wastes will all be removed from site for disposal.</li> </ul> <p><u>Risk Assessment</u>  <i>Consequence:</i> Insignificant  <i>Likelihood:</i> Unlikely  <i>Risk Rating:</i> Low</p> <p><u>Regulatory Controls</u>            Nil, it is the occupiers responsibility to ensure that they comply with relevant legislative requirements for secondary activities such as the storage and handling of environmentally hazardous materials. Unauthorised discharges of environmentally hazardous materials are subject to the provisions of the <i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i>.</p> <p><u>Residual Risk</u>  <i>Consequence:</i> Insignificant  <i>Likelihood:</i> Unlikely  <i>Risk Rating:</i> Low</p>	



<b>DECISION TABLE</b>			
<b>Works Approval / Licence section</b>	<b>Condition number W = Works Approval L = Licence</b>	<b>Justification (including risk description &amp; decision methodology where relevant)</b>	<b>Reference documents</b>
<b>Premises operation</b>	W – no conditions  L – conditions	DER’s assessment and decision making are detailed in Appendix B.	Application supporting documentation  <i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i>  Shire of Augusta Margaret River Planning Approval/Consent No. P215430.
<b>Emissions general</b>	W & L – no conditions	No limits will be set in the Works Approval or licence and therefore no conditions regarding recording and investigation of exceedances of limits required.	NA
<b>Point source emissions to air including monitoring</b>	W & L – no conditions	<b>Construction and Operation</b> There are no point source emissions to air during construction or operation and therefore no conditions are required in the Works Approval or licence.	Application supporting documentation
<b>Point source emissions to surface water including monitoring</b>	W & L – no conditions	<b>Construction and Operation</b> The proposal does not involve point source emissions to surface water during construction or operation and therefore no conditions are required in the Works Approval or licence.	Application supporting documentation
<b>Point source</b>	W & L – no conditions	<b>Construction and Operation</b>	Application supporting



<b>DECISION TABLE</b>			
<b>Works Approval / Licence section</b>	<b>Condition number W = Works Approval L= Licence</b>	<b>Justification (including risk description &amp; decision methodology where relevant)</b>	<b>Reference documents</b>
<b>emissions to groundwater including monitoring</b>		The proposal does not involve point source emissions to groundwater during construction or operation and therefore no conditions are required in the Works Approval or licence.	documentation
<b>Emissions to land including monitoring</b>	W & L – no conditions	<b>Construction and Operation</b> The proposal does not involve emissions to land during construction or operation and therefore no conditions are required in the Works Approval or licence.	Application supporting documentation
<b>Fugitive emissions</b>	W.2.1.1  L - conditions	DER's assessment and decision making are detailed in Appendix C.	Application supporting documentation  <i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i>  Shire of Augusta Margaret River Planning Approval/Consent No. P215430.
<b>Odour</b>	W & L – no conditions	<b>Construction and operation</b> This proposal to excavate and screen gravel does not involve the generation of odorous emissions and therefore no conditions for odour are required in the Works Approval or licence.	Application supporting documentation
<b>Noise</b>	W & L – no conditions	<b>Construction</b> Construction activities must be undertaken in accordance with the <i>Environmental Protection (Noise) Regulations 1997</i> . The applicant is aware of the construction activity requirements.  <b>Operation</b>	Application supporting documentation  <i>Environmental Protection (Noise) Regulations 1997</i>



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p><u>Emission Description</u>  <i>Emission:</i> The operation of mechanical screen and mobile equipment generates noise.  <i>Impact:</i> Noise can impact the comfort and amenity of the public.  <i>Controls:</i> The nearest sensitive receptor is a domicile located south of Lot 60 a distance of approximately 520 metres and 570 metres south east from the boundary of working cell. The onsite dwelling is derelict and therefore unoccupied. The other four surrounding sensitive receptors are between 1030 to 1200 metres from the gravel extraction activities. Prevailing winds are from the South and from the East. 2m high noise bunds plus vegetation screens will be constructed on the southern boundary of Zone 2. Noise monitoring will be undertaken at the boundary of the property should nuisance noise be experienced.            The project is non continuous and small scale.            The proponent has committed to maintaining mechanical equipment in good working order.            Additionally, Shire planning approval restricts the hours of operation to between 7am to 5pm Monday to Friday only</p> <p><u>Risk Assessment</u>  <i>Consequence:</i> Minor  <i>Likelihood:</i> Unlikely  <i>Risk Rating:</i> Moderate</p> <p><u>Regulatory Controls</u>            The <i>Environmental Protection (Noise) Regulations 1997</i> apply assigned noise levels at the nearest sensitive premises.            The risk of noise emissions is considered adequately regulated under the <i>Environmental Protection (Noise) Regulations 1997</i> and no</p>	Shire of Augusta Margaret River Planning Approval/Consent No. P215430.



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L = Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p>further conditions are specified.</p> <p><u>Residual Risk</u>  <i>Consequence:</i> Minor  <i>Likelihood:</i> Unlikely  <i>Risk Rating:</i> Moderate</p>	
<b>Monitoring general</b>	W & L – no conditions	<p><b>Construction</b>            There is no technical monitoring or sampling required under the Works Approval, and as such no general monitoring conditions (sampling standards, definition of sampling rates, CEMS monitoring, etc.) are recommended for inclusion on the Works Approval.</p> <p><b>Operation</b>            Technical monitoring and sampling conditions may be applied to the licence if applicable.</p>	NA
<b>Monitoring of inputs and outputs</b>	W & L – no conditions	<p><b>Construction and Operation</b>            There is no monitoring of inputs and outputs required for the proposal. Therefore, no condition is included in the works approval or licence for such monitoring.</p>	NA
<b>Process monitoring</b>	W – no conditions  L - conditions	<p><b>Construction</b>            There is no process monitoring required for the Works Approval.</p> <p><b>Operation</b>            The simplicity of the crushing process means that the monitoring of material processed is sufficient. A limit will be placed on the processing of raw material in the licence, therefore it is considered appropriate that a monitoring condition be included for the quantities (weights) of material processed to be included on the licence.</p>	NA
<b>Ambient</b>	W2.1.1	<b>Construction and Operation</b>	NA



<b>DECISION TABLE</b>			
<b>Works Approval / Licence section</b>	<b>Condition number W = Works Approval L= Licence</b>	<b>Justification (including risk description &amp; decision methodology where relevant)</b>	<b>Reference documents</b>
<b>quality monitoring</b>		<p>Improvement condition W2.1.1 has been added to the Works Approval to require monitoring of particulates in ambient air prior to construction and during construction. Dependent on results, additional controls may be required to be implemented prior to operations. Monitoring may also be required as part of the Licence conditions.</p> <p>The inclusion of this condition is justified in the fugitive emissions section of table 4.</p>	
<b>Meteorological monitoring</b>	W & L – no conditions	<p><b>Construction and Operation</b> There is no meteorological monitoring required for the proposal. Therefore, no condition is included in the Works Approval or licence for such monitoring.</p>	NA
<b>Improvements</b>	W2.1.1	<p><b>Construction and Operation</b> Improvement condition W2.1.1 has been added to the Works Approval to require monitoring of particulates in ambient air prior to construction and during construction. Dependent on results, additional controls may be required to be implemented prior to operations. Monitoring may also be required as part of the Licence conditions.</p> <p>The inclusion of this condition is justified in the fugitive emissions section of table 4.</p>	NA
<b>Information</b>	W2.1.1 and W2.1.2  L - conditions	<p><b>Construction and commissioning</b> Conditions W2.1.1 and W2.1.2 require submission of compliance documents certifying works are constructed in accordance with the conditions of the Works Approval.</p> <p><b>Operation</b> As there will be conditions for the monitoring of inputs and outputs in</p>	N/A



<b>DECISION TABLE</b>			
<b>Works Approval / Licence section</b>	<b>Condition number W = Works Approval L= Licence</b>	<b>Justification (including risk description &amp; decision methodology where relevant)</b>	<b>Reference documents</b>
		the licence, it is recommended that conditions for the preparation of an Annual Environmental Report should also include an Annual Audit Compliance Report, summary of complaints and monthly volumes of material extracted.	
<b>Works Approval Duration</b>	NA	The Works Approval will be issued in line with the planning approval from the Shire of Augusta Margaret River if granted. Planning approval commenced 20 July 2016 and is granted for 5 years. The Works Approval will therefore have an expiry date of 19 July 2016.	Shire of Augusta Margaret River Planning Approval/Consent No. P215430.



## 5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
9/05/2016	Application advertised in the West Australian newspaper	No submissions received.	N/A
27/6/2016	Proponent sent a copy of draft instrument	Comments received 21 July 2016, no changes requested.	N/A
12/07/2016	Proponent sent a copy of amended draft instrument incorporating clearing of native vegetation		



## 6 Risk Assessment

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

**Table 1: Emissions Risk Matrix**

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



# Appendix A

Government of Western Australia Department of Environment Regulation		Clearing Assessment Report	
<b>1. Application details</b>			
<b>1.1. Permit application details</b>			
Permit application No.:	7156/1 W5961/2016/1		
Permit type:	Works approval		
<b>1.2. Applicant details</b>			
Applicant's name:	Mr Simon Osmond Robinson		
<b>1.3. Property details</b>			
Property:	LOT 60 ON DIAGRAM 98676, FOREST GROVE		
Local Government Authority:	AUGUSTA-MARGARET RIVER, SHIRE OF		
DER Region:	Greater Swan		
DPaW District:	BLACKWOOD		
Localities:	FOREST GROVE		
<b>1.4. Application</b>			
Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
	22	Mechanical Removal	Extractive industry
<b>2. Site Information</b>			
<b>2.1. Existing environment and information</b>			
<i>2.1.1. Description of the native vegetation under application</i>			
<b>Vegetation Description</b>	<b>Clearing Description</b>	<b>Vegetation Condition</b>	<b>Comment</b>
Beard vegetation association 1 is described as Tall forest; karri ( <i>Eucalyptus diversicolor</i> ) (Shepherd et al, 2001).	The clearing of 22 native trees is for the purpose of gravel extraction.	Completely Degraded; No longer intact, completely/almost completely without native species (Keighery, 1994).	The condition and structure of the vegetation under application was determined via aerial imagery.
Mattiske vegetation C1 Complex consists of Open to tall open forest of <i>Eucalyptus marginata</i> subsp. <i>marginata</i> - <i>Corymbia calophylla</i> - <i>Banksia grandis</i> on lateritic uplands in the hyperhumid zone (Mattiske and Havel, 1998).			
Mattiske vegetation Cw1 complex consists of Mixture of open forest to woodland of <i>Eucalyptus diversicolor</i> - <i>Corymbia calophylla</i> and woodland of <i>Eucalyptus marginata</i> subsp. <i>marginata</i> 24 - <i>Corymbia calophylla</i> on slopes and low woodland of <i>Melaleuca preissiana</i> - <i>Banksia littoralis</i> on depressions in the hyperhumid zone (Mattiske and Havel, 1998).			
<b>3. Assessment of application against clearing principles</b>			
<b>Comments</b>	The application for a works approval includes the proposed clearing of 22 native trees within Lot 60 on Diagram 98676, Forest Grove, for the purpose of gravel extraction.		
	Consideration has been given to impacts relating to biodiversity, significant fauna habitat, rare flora, threatened ecological communities, remnant vegetation values, wetlands, watercourses, land degradation, conservation areas, surface water quality, groundwater quality, and flooding. The assessment has found that the proposed clearing is not likely to be at variance to any of the clearing principles.		
<b>Methodology</b>	GIS Databases: - Hydrology, linear - IBRA Australia - Parks and Wildlife Tenure - Groundwater salinity, statewide - Soils, statewide - Pre-European Vegetation - SAC Bio Datasets Accessed July 2016		
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#### Planning instruments and other relevant matters.

**Comments** The clearing under application falls within the Blackwood Groundwater Area proclaimed under the Rights in Water and Irrigation Act 1914 which means any groundwater use would require a licence from the Department of Water (DoW).

DoW (2016) has raised concern over the risk of stormwater run-off and associated sedimentation from the proposed end landuse to downstream surface water values. DoW (2016) has recommended that a detailed Stormwater Management Plan and a Hydrogeological Assessment to determine local groundwater conditions of the site be developed should approval for extractive industry proceed.

No Aboriginal Sites of Significance have been mapped within the application area.

No public submissions have been received in relation to this application.

Planning approval from the Shire of Augusta Margaret River for the proposed land use is required and at date of assessment has not been obtained.

**Methodology** References:  
DoW (2016)

#### 4. Recommendation

##### Recommendation

An assessment of the environmental impacts of the clearing of 22 native trees has been undertaken in accordance with DER's Regulatory Principles and the Delegated Officer considers that the proposed clearing is unlikely to cause environmental harm. Section 62(1) of the *Environmental Protection Act 1986* provides for conditions to be placed on a works approval to mitigate environmental harm. The Delegated officer advises no conditions are required for the proposed clearing.

The Delegated Officer notes that planning approval from the Shire of Augusta Margaret River for the proposed land use is required and remains outstanding. Prior to a decision on the proposed clearing, evidence of planning approval from the Shire should be provided by the applicant.

##### Reviewed and endorsed by

James Widenbar  
A/SENIOR MANAGER  
CLEARING REGULATION

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

11 July 2016

#### 5. References

- DoW (2016) Proposed Extractive Industry (Gravel) – Lot 60 Warner Glen Road, Forest Grove. South West Land Use Planning. Department of Water (DER Ref: A1048882).
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Mattiske, E.M. and Havel, J.J. (1998) Vegetation Complexes of the South-west Forest Region of Western Australia. Maps and report prepared as part of the Regional Forest Agreement, Western Australia for the Department of Conservation and Land Management and Environment Australia.
- Shepherd, D.P., Beeston, G.R. and Hopkins, A.J.M. (2001) Native Vegetation in Western Australia, Extent, Type and Status. Resource Management Technical Report 249. Department of Agriculture, Western Australia.



## Appendix B

### Premises Operation

#### Construction and Operation

##### Emission Description

*Emission:* Suspended solids and/or screened fines that contaminate stormwater become suspended, and highly mobile fines particles (<2 microns) that could potentially be discharged during heavy rainfall.

*Impact:* The discharge of suspended/fines particles into the environment can result in a reduction to surface water quality and subsequently local stream and waterways ecology. A winery dam is located approximately 3 km downstream.

*Controls:* Stormwater within each cell will be directed to engineered sumps within each cell, with the outlet from each sump designed to flow into a grassed spillway channel (bio-filter system consisting of reeds/rushes). This system is to be designed to maximise settlement and the absorption of nutrients. The sumps are to be designed to capture as a minimum 2 hours runoff resulting from a 10-year interval storm event. The discharge from biofilter systems within cells 1, 2, 3, 5, and 6 are directed towards an existing dam within the property boundary on the north-west side between cells 5 and 6. Overflow from the dam flows to the north from the Premises. The biofilter pond located within cell 4 will have a piped outlet that will deliver flow to the broad shallow depression located in the north east corner of Lot 60. This flow will then proceed along the depression through the boundary fence of Lot 60 and into Lot 61 and enter the main drainage line where an existing small soak dam is located. The Works Approval holder has obtained permission for the flow to be directed over into the property boundary into Lot 61.

##### Risk Assessment

*Consequence:* Minor

*Likelihood:* Unlikely

*Risk Rating:* Moderate

##### Regulatory controls

Nil conditions have been applied to the Works Approval. There will be restricted cleared areas due to extraction being limited to one cell at a time by the Shire's planning approval therefore reducing the likelihood of contamination of stormwater with sediments.

A premises operation condition will be included in the Licence that stipulates that the sumps and associated infrastructure be maintained to capture a minimum of two hours runoff from a 10 year interval storm event. Any discharge of contaminated stormwater will be further regulated under the *Environmental Protection (Unauthorised Discharges) Regulations 2004*.

##### Residual Risk

*Consequence:* Minor

*Likelihood:* Unlikely

*Risk Rating:* Moderate



## Appendix C

### Fugitive emissions

#### Construction and Operation

The proposal involves site preparation, then extraction, mechanical screening and transportation of gravel which generates fugitive dust.

#### Emission Description

*Emission:* Generation of fugitive dust from site preparation, excavation, screening and from trafficable areas.

*Impact:* Dust can interfere with the health, comfort and amenity of the public. It also has the potential to smother and impact the health of nearby vegetation.

*Controls:* The Premises is in a location where the nearest sensitive land use is a residence located approximately 500m to the south of cell 1 and approximately 500m to the south-east of cell 3. All other dwellings are located more than 1km from the Premises. The proponent has committed to implement the following measures:

- Planning works to expose less than 2 hectares at any one time (stripping small sections at a time to expose the gravel – 0.5 ha per section of the cell site);
- 2m high bunds along the southern section of the gravel excavation areas;
- Topsoil bunds on the northern boundary of cell 6 (opposite winery vines);
- Tree lined buffer area on the southern boundary between the fence and the power line site;
- Water carts and sprinklers on stockpiles;
- Limit traffic to haul roads and hardstands;
- Visual inspections to occur during operations to monitor dust impacts to neighbours;
- All haulage trucks to be tarped when leaving site;
- Use dust screens around boundaries. – shade cloth;
- Provide gravel hard stands for high traffic areas – site office;
- Use hydro seeding to stabilize area that would be left bare for extended periods; and
- Stock piles to be left ripped to reduce wind velocity over piles.

Additionally, the Shire's planning approval outlines dust minimisation practices that should be implemented:

- Stockpiles of processed material will be sprayed with water and compacted as required.
- Green belts will be used to augment the adjoining road reserve in reducing wind- speed through the pit-operations and to assist with trapping any resulting dust.
- Completed sections of the pit will be rehabilitated as soon as practicable to reduce the area of open ground and help reduce wind speed.
- The top soil/root layer will not be removed until immediately prior to the commencement of gravel rock extraction.
- Covering of loads before leaving property.
- Stabilisation of areas completed over summer (when vegetation stabilisation is impracticable) is to be achieved by spreading mulch.
- Induction of employees and contractors includes awareness of dust generation and management measures.
- Complaint response procedure.

#### Risk Assessment

*Consequence:* Minor

*Likelihood:* Possible

*Risk Rating:* Moderate



Regulatory Controls

Improvement condition W2.1.1 has been added to the Works Approval to require monitoring of particulates in ambient air prior to construction and during construction. Fugitive dust monitoring results will guide any additional controls that may be required to be implemented prior to operations commencing. Monitoring of ambient dust may also be required as part of the licence conditions.

Residual Risk

*Consequence:* Minor

*Likelihood:* Possible

*Risk Rating:* Moderate