



# Decision Document

## *Environmental Protection Act 1986, Part V*

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**Proponent:** B. & J. Catalano Pty Ltd

**Works Approval:** W5709/2014/1

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**Registered office:** 2 South Western Highway  
BRUNSWICK JUNCTION WA 6224

**ACN:** 008 961 975

**Premises address:** Shenton Ridge Gravel Quarry  
Coalfields Road  
ROELANDS WA 6226  
Being part Lot 501 on Plan 26892 and Lot 21 on Plan 10674

**Issue date:** Thursday, 31 March 2016

**Commencement date:** Monday, 4 April 2016

**Expiry date:** Tuesday, 27 October 2020

### **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 and that the Works Approval and its conditions will ensure that an appropriate level of environmental protection is provided.

Decision Document prepared by: Neville Welsh/Rachel Vukmirovic  
Licensing Officers

Decision Document authorised by: Tim Gentle  
Manager (Resources Industries)  
Delegated Officer



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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>	<b>Assessed design capacity</b>
	12: Screening, etc. of material	156,000 tonnes per annual period
Application verified	Date: 17/07/2014	
Application fee paid	Date: 14/08/2014	
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 checked="" 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"/>		
Is the Premises subject to any EPP requirements? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		

### 3 Executive summary of proposal and assessment

B. & J. Catalano Pty Ltd (Catalano) owns Lot 21 and Lot 501 (Shenton Ridge) Coalfield Highway located near Roelands, approximately 25 km east of Bunbury. Historically, Shenton Ridge completed stages 1 to 5 of the gravel quarry authorised by the Shire of Harvey’s (Shire) planning consent and Extractive Industry Licence (EIL) issued 29 July 2009 that expired on 22 September 2014.

In November 2014, Catalano commenced the planning consent and EIL approvals process to expand operations to complete stages 7 to 14 on Shenton Ridge.

A Works Approval application was submitted to DER on 15 May 2014 and fee paid on 14 August 2014. The application was subsequently amended in August 2015 to quarry stages 7 to 11 only. The proposal to extract gravel from stages 7 to 11 occupies an area of 30 hectares (ha) on Lot 501 and approximately 6 ha on the adjoining Lot 21 and is the subject of this risk assessment. Shenton Ridge quarry has been assessed at a production throughput of 156,000 tonnes per annum being 82,000 cubic metres of gravel per year. The maximum screening plant design capability is 3,500 tonnes per day.

The Shire planning consent was granted on 27 October 2015 for a period of 5 years. For consistency, this Works Approval will be issued to Catalano for the same timeframe as the Shire of Harvey planning consent. Following construction and validation of works completed under this Works Approval, the licence (L8877/2015/1) will be granted to authorise operation of stages 7-11 with each stage being authorised only upon receipt of compliance certificates.

The Works Approval authorises the activities of perimeter bund construction of each stage, water detention basin construction, drainage channels construction, gravel screening plant mobilisation and positioning, plus gravel stockpile area construction including bunding.

Licence L8877/2015/1 will authorise gravel screening operations to a maximum of 156,000 tonnes per annum. It is expected that the gravel extraction activities may result in lowering of natural ground by between 1 to 1.5 metres. Gravel stockpiles will not exceed 9 metres in height and the machinery used on site during the screening campaign will include a D10 Bulldozer, Parker 4230 Crusher, Finlay Screen, Striker 25m Stacker, 2 caterpillar front end loaders, Caterpillar generator set and a Caterpillar 322 Excavator. Screened gravel material will be temporarily stockpiled on site, prior to being hauled by truck from the Premises. Interceptor contours, banks and drains will be constructed during operation and closure of each stage, to acceptable standards, as part of the rehabilitation planning approved by the planning approval granted by the Shire of Harvey.

The primary environmental risks associated with this Works Approval are the discharge of potentially contaminated stormwater, nuisance noise emissions and fugitive dust.

This Works Approval and future licence will be issued to Catalano consistent with the planning consent issued by the Shire of Harvey and expiring on 27 October 2020.

The applicant is aware of their obligation to comply with the *Environmental Protection (Noise) Regulations 1997* and the general provisions of the Act during construction and operation.

Conditions of the Works Approval and future licence have been assessed in table 4.



## 4 Decision table

All applications are assessed in line with the *Environmental Protection Act 1986*, the *Environmental Protection Regulations 1987* and DER'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			
Works Approval / Licence section	Condition number W = Works Approval L = Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
General conditions	W1.2.2	<p><b>Construction</b></p> <p><u>Emission Description</u>  <i>Emission:</i> Discharge of potentially contaminated stormwater from the screening plant reports to perimeter bunds directing flows to individual stage detention basins that infiltrate to groundwater. The stormwater passed through the operating screening plant may become contaminated with hydrocarbons plus contain screened fines or sediment that infiltrate to groundwater.  <i>Impact:</i> A reduction of groundwater quality from hydrocarbons and fine sediments in local groundwater supplies. Contamination of onsite surface water systems, including Resource Enhancement Wetlands and impact on downstream users. A community dam is located 5 km downstream and is used for potable water supply.  <i>Controls:</i> Perimeter bunds, bunding of operational areas and detention basins must be constructed prior to operations commencing. Detention basins are designed to infiltrate water into the ground to reduce risk of flow discharges from the operational areas. Gravel extraction ceases when laterite caprock is intersected. Detention basins are to be designed to capture as a minimum 2 hours runoff resulting from a 10-year interval storm event.</p> <p><u>Risk Assessment</u>  <i>Consequence:</i> Moderate.  <i>Likelihood:</i> Possible.  <i>Risk Rating:</i> Moderate.</p> <p><u>Regulatory Controls</u>            The Works Approval application does not sufficiently address the risk of detention basin construction intercepting groundwater. Condition W1.2.2 has been added to the Works Approval to specify minimum infrastructure requirements of the detention basins, to include a minimum separation of 2 m to the maximum seasonal groundwater table. The Surface Water</p>	Works Approval application supporting documentation.



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L = Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p>and Groundwater Management Plan does not adequately address the risks to onsite surface water systems and downstream users. Resource Enhancement Wetlands are located on the premises and 5km downstream is a community dam used for potable water supply. Construction requirements on the condition require detention basin design to capture runoff from a two hours runoff resulting from a 10-year return interval storm event. An increased capacity detention basin for stage 7 is included in the improvement condition IR2 in the Works Approval.</p> <p><u>Residual Risk</u> <i>Consequence:</i> Moderate. <i>Likelihood:</i> Unlikely. <i>Risk Rating:</i> Moderate.</p>	
	L – conditions	<p><b>Operation</b> <u>Emission Description</u> <i>Emission:</i> Screened fines that contaminate stormwater become suspended and highly mobile fine particles (&lt;2 microns) that could potentially be discharged during heavy rainfall and an overflow of detention basins. <i>Impact:</i> The discharge of fines particles into the environment can result in a reduction to surface water quality and subsequently local stream and waterways ecology. Seepage into the shallow groundwater table will occur due to the unlined design of the perimeter bund and detention basin, however excess stormwater may cause detention basin discharges. A community dam is located 5 km downstream and is used for potable water supply. Erosion due to increased turbidity of stormwater runoff. <i>Controls:</i> Water from the screening plant will be discharged into detention basins within each stage which are designed to maximise settlement and allow infiltration to groundwater. The detention basins are to be designed to capture as a minimum 2 hours runoff resulting from a 10-year interval storm event. Excess stormwater from stages 8, 9, 10 and 11 is to be further directed to an existing detention pond positioned between stages 8, 9 and 10 on the east. A buffer of 100 metres (m) is to be maintained around the wetlands. No unmanaged stormwater run-off will be allowed to flow into the buffer zone.</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Moderate.</p>	



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>Likelihood:</i> Possible. <i>Risk Rating:</i> Moderate.</p> <p><u>Regulatory Controls</u> A condition will be included in the licence to ensure that the licensee adheres to the Stormwater Management Plan that is a requirement of IR2 in works approval W5709/2014/1. A condition specifying the capacity of the detention basins to detain runoff from a minimum of two hours runoff resulting from a 10-year return interval storm event will be applied. Overflow discharge from stages 8-11 detention basins to the existing detention pond is only authorised when the capacity of the detention basins is exhausted. The existing detention pond discharges to a perennial watercourse on site that flows through a series of wetlands. These wetlands do not have conservation status. It is expected that sufficient settlement of solids will occur through these systems. Ambient monitoring conditions will be set for pH and Total Suspended Solids at the end of the system. A limit of 30 mg/L will be set in the licence that will have associated management actions if breached. These management actions are to be submitted as part of the revised Stormwater Management Plan.</p> <p><u>Residual Risk</u> <i>Consequence:</i> Minor. <i>Likelihood:</i> Unlikely. <i>Risk Rating:</i> Moderate.</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>
	L – no conditions	<p><b>Operation</b>  <u>Emission Description</u>  <i>Emission:</i> Contamination of stormwater with hydrocarbons from operational areas.  <i>Impact:</i> The discharge of contaminated stormwater into the environment can result in a reduction in the quality of fresh surface water in local waterways and onsite wetlands.  <i>Controls:</i> A 100 m buffer will be maintained around the wetlands. There will be no on-site storage of hydrocarbons or chemicals. Plant will be refuelled each morning using a mobile refuelling vehicle equipped with a “snap-on, snap-off, fast fill and auto shut-off” facility. A hydrocarbon spill response procedure will be implemented during construction and operation.</p> <p><u>Risk Assessment</u>  <i>Consequence:</i> Minor.  <i>Likelihood:</i> Rare.  <i>Risk Rating:</i> Low.</p> <p><u>Regulatory Controls</u>            Nil.</p> <p><u>Residual Risk</u>  <i>Consequence:</i> Minor.  <i>Likelihood:</i> Rare.  <i>Risk Rating:</i> Low.</p>	
<b>Premises operation</b>	W – no conditions	<p><b>Construction</b>            There are no specific conditions relating to premises operation in this section.</p>	N/A
	L – conditions	<p><b>Operation</b>            A condition will be added to the licence to set premises production capacity limits.</p>	Works Approval application supporting documentation.
<b>Emissions general</b>	W & L – no conditions	<p><b>Construction &amp; Operation</b>            There are no specific conditions relating to emissions general in this section.</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>
<b>Point source emissions to air including monitoring</b>	W & L – no conditions	<b>Construction &amp; Operation</b> There are no point source emissions to air proposed in the application.	N/A
<b>Point source emissions to surface water including monitoring</b>	W & L - no conditions	<b>Construction &amp; Operation</b> There are no point source emissions to surface water proposed in the application.	N/A
<b>Point source emissions to groundwater including monitoring</b>	W & L – no conditions	<b>Construction &amp; Operation</b> There are no point source emissions to groundwater proposed during construction works.	N/A
<b>Emissions to land including monitoring</b>	W – no conditions	<b>Construction &amp; Operation</b> Emissions to land are not proposed, expected or authorised from the Premises during construction or operation of stages 7 to 11. No specified conditions relating to emissions to land or the monitoring of these emissions are required to be added to the Works Approval or licence.	N/A





DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L = Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
Fugitive emissions	W – no conditions	<p><b>Construction</b></p> <p><u>Emission Description</u>  <i>Emission:</i> Fugitive dust generated during construction activities.  <i>Impact:</i> Nuisance dust emissions.  <i>Controls:</i> A Dust Management Plan details dust suppression methods and operational measures to manage dust. Dust is not expected to be a significant issue in the construction phase.</p> <p><u>Risk Assessment</u>  <i>Consequence:</i> Minor.  <i>Likelihood:</i> Rare.  <i>Risk Rating:</i> Low.</p> <p><u>Regulatory Controls</u>            Nil.</p> <p><u>Residual Risk</u>  <i>Consequence:</i> Minor.  <i>Likelihood:</i> Rare.  <i>Risk Rating:</i> Low.</p>	Works Approval application supporting documentation.
	L – conditions	<p><b>Operation</b></p> <p><u>Emission Description</u>  <i>Emission:</i> Fugitive dust at unknown concentration, generated during screening operations.  <i>Impact:</i> Dust emissions can be harmful to human health and the environment. Elevated Total Suspended Particulates (TSP) levels can impact ambient environmental quality resulting in amenity impacts and can smother vegetation. Small particles (PM<sub>10</sub> or PM<sub>2.5</sub>) can impact upon human health. There are two receptors (residential premises) within 1000m of the extraction stages and a major highway within 60m. Stages 9, 10 and 11 do not meet the recommended separation distance of 1000m.  <i>Controls:</i> A Dust Management Plan details dust suppression methods that include visual inspection of site and access roads for dust generation that is moving off site and the halting of operations if the wind is blowing strongly in the direction of Coalfields Road. Water cart</p>	Works Approval application supporting documentation.



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p>application over dust prone areas to reduce dust lift-off. Crushing and stockpiling activities located in topographic low points with stockpiles arranged such that wind breaks are created to further shield sensitive receptors.</p> <p><u>Risk Assessment</u>  <i>Consequence:</i> Moderate.  <i>Likelihood:</i> Possible.  <i>Risk Rating:</i> Moderate.</p> <p><u>Regulatory Controls</u>            The risk of fugitive dust emissions from screening operations causing amenity impacts is deemed to be moderate in consideration of the distance to receptors. The existing Dust Management Plan does not sufficiently address the risk to residences 4 and 5 and operational stages 9, 10 and 11 do not meet the recommended separation distance of 1000m. As such, conditions will be added to the licence to require the licensee to undertake dust monitoring at the boundary of the premises. The condition will be included in the ambient quality monitoring section of the licence. In the event of verified complaints, a requirement for stricter dust monitoring and management may be applied to the licence via an amendment.</p> <p><u>Residual Risk</u>  <i>Consequence:</i> Moderate.  <i>Likelihood:</i> Unlikely.  <i>Risk Rating:</i> Moderate.</p>	
Odour	W & L – no conditions	<p><b>Construction &amp; Operation</b>            Odour is not expected from construction or operation of the wet-screening plant. No specified conditions relating to odour emissions or the monitoring of these emissions are required to be added to the Works Approval or licence.</p>	N/A



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
Noise	W – no conditions	<p><b>Construction</b></p> <p>No significant noise emissions are expected during the construction and set up of the wet-screening plant. Construction activities will be minimal and undertaken during normal working hours, with noise emissions expected to be similar to existing operations. However DER is not aware of any noise complaints from the existing operation. No specified conditions relating to noise emissions are required to be added to the Works Approval.</p>	<p><i>Environmental Protection (Noise) Regulations 1997</i> (Noise Regulations)</p> <p>Application supporting documentation</p>
	L – conditions	<p><b>Operation</b></p> <p><u>Emission Description</u>  <i>Emission:</i> Noise emissions generated by operation of the screening plant, truck movements and heavy machinery during normal working hours.  <i>Impact:</i> Annoyance, nuisance to nearby sensitive receptors (residences). Two residences are located within 1000m.  <i>Controls:</i> Limiting operations to normal working hours. An assessment was conducted by Lloyd George Acoustics which detailed the predicted noise levels for residence 4 and residence 5. The report stated that the predicted noise level for residence 4 is 34 dB and 31 dB for stage 9 and 10 respectively. Predicted noise levels for residence 5 would be 28 dB and 31 dB for stages 9 and 10 respectively. For the purposes of modelling it has been assumed that all of the equipment will be operating simultaneously. However, tonality is likely to be present if only one item of plant is operating (e.g. the loader or dozer). In these circumstances, the adjusted level for the loudest item of plant would be 39 dB (34+5) for stage 9 operations and 36 dB (31+5) for stage 10 operations. These values are still below the assigned levels of 45 dB for noise sensitive premises during the operating times of 0700 to 1900 hours Monday to Saturday.</p> <p><u>Risk Assessment</u>  <i>Consequence:</i> Minor.  <i>Likelihood:</i> Rare.  <i>Risk Rating:</i> Low.</p> <p><u>Regulatory Controls</u>            DER’s review of the noise assessment for the gravel quarry confirms that the risk of noise emissions impacting on nearby receptors is not considered significant enough to warrant site specific conditions on the licence. Noise emissions can be adequately regulated through the</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>
		provisions of the Noise Regulations.  <u>Residual Risk</u> <i>Consequence</i> : Minor. <i>Likelihood</i> : Rare. <i>Risk Rating</i> : Low.	
<b>Monitoring general</b>	W – no conditions	<b>Construction</b> Monitoring is not required during construction of the wet-screening plant; therefore no specified conditions relating to general monitoring are required on the Works Approval.	N/A
	L – conditions	<b>Operation</b> No additional general monitoring conditions are required on the licence other than the standard NATA accreditation, monitoring timeframes and calibration requirements.	Works Approval application supporting documentation.
<b>Monitoring of inputs and outputs</b>	W & L – no conditions	<b>Construction &amp; Operation</b> Monitoring of inputs and outputs is not required to adequately manage emissions during construction or operation of the wet-screening plant. No specified conditions relating to monitoring of inputs and outputs are required to be added to the Works Approval or licence.	N/A
<b>Process monitoring</b>	W & L – no conditions	<b>Construction &amp; Operation</b> Process monitoring is not required to adequately manage emissions during construction or operation of the wet-screening plant. No specified conditions relating to process monitoring are required to be added to the Works Approval or licence.	N/A
<b>Ambient quality monitoring</b>	W – no conditions	<b>Construction</b> Ambient quality monitoring is not required during construction or operation of the wet-screening plant. No specified conditions relating to ambient quality monitoring are required to be added to the Works Approval.	N/A
	L – conditions	<b>Operation</b> Continuous monitoring of dust at the boundary of the premises is to be included in the Licence. The risk assessment has been undertaken in the fugitive emission sections of this document.  Ambient surface water monitoring has been included in the licence to assess the levels of Total	Works Approval application supporting documentation.



<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>
		Suspended Solids. A limit of 30 mg/L has been applied and associated management actions will be included in the revised Surface Water Management Plan, subject of IR2 in works approval W5709/2014/1.	
<b>Meteorological monitoring</b>	W no conditions	<b>Construction</b> Meteorological monitoring is not required during construction of the screening plant. No specified conditions relating to meteorological monitoring are required to be added to the Works Approval.	N/A
	L – conditions	<b>Operation</b> Meteorological monitoring conditions are required during operation for interpretation of monitoring data, in particular wind strength and direction with respect to identifying likely sources of dust.	
<b>Improvements</b>	W2.1.1-2.1.2	<b>Construction</b> An improvement condition (IR1) has been set that requires a revised Dust Management Plan (DMP). The Dust Management Plan submitted with the application supporting documentation has not sufficiently addressed the risk to the closest sensitive receptors as detailed above. Two residences are located within 1000m of the operational stages. Dust monitoring is a requirement of the licence and the DMP it to detail a dust monitoring program with associated triggers and management actions.  An improvement condition (IR2) has also been included in the Works Approval to require the Works Approval Holder to submit a Stormwater Management Plan that has detailed schematics of the stormwater infrastructure to demonstrate that a minimum storage capacity will be provided to adequately capture runoff from a 2 hour, 10 year rainfall event. An increased capacity for stage 7 is required as there is no contingency for when the stormwater storage capacity is exhausted.	N/A
	L – no conditions	<b>Operation</b> No improvement conditions have been included in the licence.	
<b>Information</b>	W – conditions	<b>Construction &amp; Operation</b> No additional reporting conditions are required to be added to the Works Approval other than	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 submission of compliance documents for stages 7, 8, 9, 10 and 11.	
	L – conditions	No additional reporting conditions are required on the licence other than the minimum record keeping, annual reporting and notification requirements.	N/A
<b>Works Approval Duration</b>	N/A	The expiry of the Works Approval will be consistent with the planning consent issued by the Shire of Harvey to expire on 27 October 2020.	DER Guidance Statement: <i>Licence duration</i> (November 2015)



## 5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
28/08/2014	Application referred to public authorities	<p>The Shire of Harvey requested advice on the following matters;</p> <ul style="list-style-type: none"><li>• Fugitive dust management; and,</li><li>• Nuisance noise emissions.</li></ul> <p>The Department of Water expressed concerns with the;</p> <ul style="list-style-type: none"><li>• potential for impacts to the quality of the receiving groundwater from contamination with hydrocarbon;</li><li>• the risks of increased turbidity and salinity to groundwater through sediment (fines) and concentration of salts both at the screening plant and in the detention basins;</li><li>• the construction of detention basins that intercept groundwater; and</li><li>• the design of detention basins to prevent overflow causing erosion and highly turbid waters entering waterways.</li></ul>	<p>Noise and fugitive dust emissions are regulated under the general provisions of the Environmental Protection Act. Two sensitive receptors are located within 1000m of stages 9, 10 and 11.</p> <p>Conditions have been added to the Works Approval to require a minimum 2 m separation to groundwater at the base of the detention basins for each stage.</p> <p>Surface Water and Groundwater management plan reviewed by DoW and advice provided to DER about suitability of management principles and preliminary design. Technical specifications requested as an improvement condition in this Works Approval that will be conditioned by the licence.</p>
27/10/2014	Application advertised in West Australian newspaper	Nil comments received.	N/A
30/03/2016	Proponent sent a copy of final draft instrument	Minor changes are proposed to the boundaries of stages 9,10 and 11 to increase the buffer for residence 5 and to manage the impact of dust emissions on residence 4.	A revised Dust Management Plan is required to be submitted in accordance with improvement condition IR1 of the Works Approval. Proposed changes to stage boundaries to manage operational dust impacts will be managed through the licence.





## 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