



# Environmental Protection Authority

EPA REFERRAL  
FORM  
Proponent

## Referral of a Proposal to the Environmental Protection Authority under Section 38(1) of the Environmental Protection Act. Referral by the Proponent

### PURPOSE OF THIS FORM

Section 38(1) of the *Environmental Protection Act 1986* provides that where a development proposal is likely to have a significant effect on the environment, a proponent may refer the proposal to the Environmental Protection Authority (EPA) for a decision on whether or not it requires assessment under the Act.

A referral to the EPA by a proponent under Section 38(1) must be made on this form. A request for consideration by the EPA of the likely environmental impacts of a proposal will not be treated as a referral until all information requested by this form has been provided.

Before completing this form, proponents are encouraged to familiarise themselves with the EPA's *General Guide for Referral of Proposals to the EPA under section 38(1) of the EP Act 1986* (accessed at the EPA's website at [www.epa.wa.gov.au](http://www.epa.wa.gov.au) or by contacting the EPA on 6467 5419).

Proponents need to complete Parts A and B of the form by marking the appropriate boxes and providing explanatory or additional information where requested. Part B should be completed based on information known to the proponent. Only those sections of Part B that are pertinent to the proposal need to be completed. If space is insufficient, attach additional pages. Where information is contained in a report that is to be submitted with the referral form, the proponent may complete sections of the form by referring to the pertinent section of the report.

Proponents are encouraged to attach any other environmental information they consider may be relevant to the EPA for making a decision on whether or not to assess the proposal, and, if it is to be assessed, the level of assessment. In general, referrals should contain information on the potential environmental impacts of the proposal, the proposed management mechanisms to be implemented to minimise and mitigate for these impacts, and how the principles of the EP Act have been addressed by the proposal.

In addition to providing a hard copy of referral documentation, proponents are also requested to provide an electronic copy of the referral document, noting that section 39(2) of the EP Act provides for a proponent to request that matters of a confidential nature not be kept on the public record. If confidential matters are included in the referral, proponents are requested to identify the confidential information at this stage of the process, specifically request that it be treated as confidential, and submit the confidential information in a separate hard copy attachment to the referral document. The electronic copy of the referral should be identical to the hard copy of the referral document, excluding any confidential attachment.

You may need to contact government agencies or local authorities to obtain information required by this form. A list of key agencies and their contact details is provided in Attachment 1.

Where the EPA decides that a proposal will be assessed at the level of Public Environmental Review or Environmental Review and Management Programme, it will also require the proponent to prepare an Environmental Scoping Document (refer *Environmental Impact Assessment (Part IV Division 1) Administrative Procedures 2002*).

Proponents should also be aware of the need to determine their obligations under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The EPBC Act is separate legislation to the Environmental Protection Act and it identifies a number of matters of national environmental significance which are subject to assessment and approval by the Commonwealth. The matters identified as triggers for the Commonwealth assessment and approval regime are World Heritage properties, Ramsar wetlands, nationally threatened species and ecological communities, migratory species, Commonwealth marine areas, and nuclear actions (refer to the Department of Environment and Water Resources website at [www.environment.gov.au](http://www.environment.gov.au)). Questions in this referral form that may be relevant to matters of national environmental significance are marked with a #.

## PART A - PROPONENT AND PROPOSAL INFORMATION

### 1. PROPONENT DETAILS, PROPOSAL DESCRIPTION AND LOCATION

#### 1.1 Proponent information

- Proposal title  
Extractive Industry Mining – Lot 6 Banksia Road and Lots 300 and 301 Boomerang Road Oldbury
- Name of the Shire in which the proposal is located  
Shire of Serpentine-Jarrahdale
- Name of proponent (Person or entity proposing to implement the proposal)  
Rocla Quarry Products
- Names of Joint Venture entities (if applicable)  
Not Applicable
- Address of proponent  
130 Fauntleroy Avenue  
Redcliffe WA 6104
- Key contact for the proposal  
Mr Vern Newton  
Resource & Development Manager  
Rocla Quarry Products (W.A.)  
Ph: (08) 9475 2512  
Mobile 0418 908 069  
Fax: (08) 9477 2633  
Email: Vern.Newton@rocla.com.au
- Does the proponent own the land on which the proposal is to be established? If not, what other arrangements have been established to access the land?

Rocla is the proponent for this EIL Application. Rocla owns Lot 6, with the ownership of the two remaining lots (that form this EIL Application) are detailed below:

- Lot 300 is owned by Raymond Tilbury.
- Lot 301 is owned by Kenneth and Lorette Ditchfield.

Rocla has entered into an agreement with the above landowners to extract the sand resource from these lots.

- Is rezoning of any land required before the proposal can be implemented?

(please tick)

Yes

If yes, please provide details.

No

- Is approval required from any Commonwealth or State Government agency or Local Authority for any part of the proposal?

<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	If yes, complete the table below, naming all Agencies and Local Authorities from which any approval is required and identify the approval required.
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Agency/Authority	Approval required
EPA	Approval for the extractive industry under Section 38 of the EP Act
Shire of Serpentine-Jarrahdale's	Approval of the Extractive Industry Licence and Development Application
Department of Environmental Regulation (Native Vegetation Branch)	Approval of a Purpose Permit clearing application
Commonwealth Department of Environment	Approval of the sand extraction proposal under the <i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act).

- If yes above, have you lodged any of the necessary applications or have you discussed the proposal with any person(s) at the Agency or Local Authority?

Yes

No

If yes, name all Agencies and Local Authorities for which applications have been submitted or with whom the proposal has been discussed.

- Office of the Environmental Protection Authority (OEPA)
- Department of Environmental Regulation
- Department of Planning
- Shire of Serpentine-Jarrahdale
- Department of Mining and Petroleum
- Commonwealth Department of Environment

- What is the current land use on the property, and the extent (area in hectares) of the property?

The total project area is 32.32 ha. The land is currently used for rural purposes. A portion of the project area is has a recreational motorbike / cart track.

## 1.2 Location information

Location information, in accordance with the format and specifications set out below, is required information to accompany a referral. A request for consideration by the EPA of likely environmental impacts without appropriate spatial data is not considered to be a referral and will not be subject to environmental impact assessment until the referral is complete.

□ Provide proposal location details in the following two ways:

a) Electronic spatial data

GIS or CAD on CD, depicting the proposal extent, geo-referenced and conforming to the following parameters:

- datum: GDA94
- projection: Geographic (latitude/longitude) or Map Grid of Australia (MGA)
- format: Arcview shapefile, Arcinfo coverages, Microstation or AutoCAD.

AND

b) Maps and/or directions

Any maps or diagrams of the proposal, together with the following directions:

- for urban areas: street address, lot number, the suburb and nearest road intersection;
- for remote localities: the nearest town, together with distance and direction from that town to the proposal site.

*Please also attach the following map/plans, clearly showing the location of the development in its regional and local context.*

❖ **Locality plan – Broad Scale**

Provide a locality plan (preferably superimposed on an aerial photograph) to identify:

- proposed development site and any associated infrastructure
- main roads
- urban centres
- wetlands and watercourses
- remnant native vegetation
- adjoining land uses (including recreation)
- sensitive marine areas

❖ **Site Plan – Proposal Details**

Provide a site plan to scale and indicate the location of:

- lot boundaries
- road frontages
- extent of the proposed development area
- extent of the proposed buffer area (if applicable)

❖ **Site Plan – Existing Environment**

Provide a site plan to scale (the same scale as above) and indicate the location of:

- lot boundaries
- road frontages

- any information required to be shown from Section 2 of this form
- extent of native vegetation of the site (the extent of overlap between the proposed development area and the area of native vegetation must be highlighted)
- extent of hydrological features on the site (this includes wetlands, watercourses, creek lines, seasonal creeks and artificial drainage lines)
- sensitive marine areas

The key figures included as part of the Extractive Industry Licence provided to the EPA are:

- Figure 1: Site Location – Regional
- Figure 2: Site Location – Local
- Figure 3: Topography
- Figure 4: Soils and Geology
- Figure 5: Acid Sulfate Soils
- Figure 6: Geomorphic Wetland Mapping
- Figure 7: Groundwater Contours
- Figure 8: Vegetation Complexes
- Figure 9: Heddle Vegetation Complex mapping
- Figure 10: Vegetation Condition
- Figure 11: Excavation Area, Proposed Buffers and Ecological Corridor
- Figure 12: Staged Excavation Plan

### 1.3 Proposal Description *(Please attach extra pages where necessary)*

#### Project Summary

Project Component	Proposal Characteristic
<b>Excavation</b>	
Total area of project site (Lots 6, 300 and 301)	32.32 ha
Total area of mining footprint	15.2 ha
Total disturbance area	15.2 ha (11.2 ha has remnant vegetation)
Life of the project	Approximately 10 years
Dewatering requirements	Nil
Maximum depth of excavation	18 metres AHD
<b>Processing</b>	
Sand	Dry screening of sand only
Water requirements	Nil
<b>Infrastructure</b>	
Fuel storage	5,000 Litre above ground (self-bunded) tank
<b>Transport</b>	
Truck movements	Variable but approximately 2–4 per hour
<b>Workforce</b>	

Project Component	Proposal Characteristic
Hours of operation	7.00 am to 5.00 pm Monday–Saturday. Some operations may occur on a Sunday for major infrastructure project(s) if required by project demand

The resource will be extracted through a staged mining process. Following each stage, the area will be rehabilitated back to *Banksia* spp and *Eucalyptus marginata* woodland.

## PART B - ENVIRONMENTAL IMPACTS AND MANAGEMENT COMMITMENTS

### 2. ENVIRONMENTAL IMPACTS

Describe the impacts of the proposal on the following elements of the environment, through the questions below:

- (i) flora and vegetation #;
- (ii) fauna #;
- (iii) rivers, creeks, wetlands and estuaries;
- (iv) significant areas and/ or land features;
- (v) coastal zone areas;
- (vi) marine areas and biota #;
- (vii) water supply and drainage catchments;
- (viii) pollution;
- (ix) greenhouse gas emissions;
- (x) contamination;
- (xi) social surroundings; and
- (xii) risk.

These features should be shown on the site plan, where appropriate)

For all information, please indicate:

- (a) the source of the information; and
- (b) the currency of the information.

#### 2.1 Flora and Vegetation

- Do you propose to clear any native flora and vegetation as a part of this proposal?

(A proposal to clear native vegetation may require a clearing permit under Part V of the EP Act (*Environmental Protection (Clearing of Native Vegetation) Regulations 2004*). Please contact the Department of Environment and Conservation (DEC) for more information.

(please tick)

Yes

***If yes, complete the rest of this section***

No

***If no, go to the next section***

- How much vegetation are you proposing to clear (in hectares)?

The proposed purpose permit clearing area boundary is 15.2 ha with the actual remnant native vegetation clearing area is 11.6 ha.

- Have you submitted an application to clear native vegetation to the DEC (unless you are exempt from such a requirement)?

Yes       No      **If yes**, on what date and to which office was the application submitted of the DEC?

A Purpose Permit clearing application was submitted the DER Native Vegetation Conservation Branch 8 March 2012.

Are you aware of any recent flora surveys carried out over the area to be disturbed by this proposal?

Yes       No      **If yes**, please attach a copy of any related survey reports and provide the date and name of persons / companies involved in the survey/s. (If no, please do not arrange to have any biological surveys conducted prior to consulting with the DEC.)

In consultation with the DER, it was decided that the likelihood of any TECs being present on site was minimal. As an outcome of this, a Level 2 Flora and Vegetation assessment, in line with Guidance Statement 51 (GS51) (EPA, 2004) was not required. Therefore, even though survey work was of Level 2 standard, the report that was required was Level 1.

Has a search of DEC records for known occurrences of rare or priority flora or threatened ecological communities been conducted for the site? #

Yes       No      If you are proposing to clear native vegetation for any part of your proposal, a search of DEC records of known occurrences of rare or priority flora and threatened ecological communities will be required. Please contact DEC for more information.

Are there any known occurrences of rare or priority flora or threatened ecological communities on the site? #

Yes       No      **If yes**, please indicate which species or communities are involved and provide copies of any correspondence with DEC regarding these matters.

As part of the DER's assessment of Rocla's purpose permit clearing application, the DPaW has characterised the L120 Resource Enhancement Wetland, to the south of the clearing application on Lot 7, as a Tumulus or Mound Spring. Tumulus Springs (organic mound springs) on the Swan Coastal Plain are classified as a Critically Endangered Threatened Ecological Community (TEC).

The Tumulus Springs community is located at its closest point approximately 80 m from the boundary of the proposed clearing area.

If located within the Perth Metropolitan Region, is the proposed development within or adjacent to a listed Bush Forever Site? (You will need to contact the Bush Forever Office, at the Department for Planning and Infrastructure)

Yes       No      **If yes**, please indicate which Bush Forever site is affected (site number and name of site where appropriate).

What is the condition of the vegetation at the site?

The condition of the vegetation in the project area ranges from Very Good to Completely Degraded however approximately 69% of the vegetation was rated Good–Degraded to Completely Degraded. The condition of the vegetation in the area proposed for clearing ranges from Very Good to Completely Degraded however less than 50% of the vegetation was rated Good or better





- Quenda (Priority 4).

#### Black Cockatoos

The proposed area contains suitable foraging habitat for Carnaby's and red-tailed black cockatoos. Rocla and Kings Park Botanic Gardens and Parks Authority intend to undertake staged Banksia woodland restoration in cleared areas. Clearing of Banksia woodlands will result in a temporary reduction in available foraging habitat for the Carnaby's and red-tailed black cockatoos, however, restoration of the site post-mining will result in a net increase Banksia woodland species density and increase future foraging habitat within the local area.

#### Rainbow Bee-eater

Rainbow bee-eaters are common throughout most of Australia and are highly migratory, wintering in the north of Australia, and offshore islands, including New Guinea. This species is not restricted for nesting habitat in the Perth region, as they will build nesting tunnels in sandy slopes in a variety of areas, including disturbed sites.

This species is more likely to utilise the vegetation associated with nearby wetland areas. This area is within the proposed 11.6 ha ecological corridor which is proposed to be protected via conservation covenant by Rocla.

#### Quenda

It is possible the quenda may utilise the Banksia woodlands in the proposed clearing application area however this species is more likely to utilise the riparian and wetland vegetation in the southern portion of the project area. Quenda's prefer dense scrubby, often swampy, vegetation with dense cover up to one metre high. Quendas will thrive in more open habitat subject to exotic predator control. On the Swan Coastal Plain, quendas are more often associated with wetland area. The Oldbury sand extraction site proposes to protect the preferred quenda habitat (if present) in the ecological corridor area.

The southern portion of the site which totals 11.6 ha will be reserved as an ecological corridor.

#### Western Brush Wallaby

The western brush wallaby, a medium sized macropod, is a grazer found primarily in open forest and woodland. While no western brush wallaby were observed in Lots 6, 300 and 301 it may potentially use or transition through the project area.

Western brush wallaby is not protected under legislation but is listed as a Priority 4 species by the DEC, which means it is a species in need of monitoring.

Clearing and restoration of Banksia woodland vegetation will occur on a staged basis. The aim of the restoration program is to have a net increase in Banksia woodland species density and increase future fauna habitat within the local area.

### **2.3 Rivers, Creeks, Wetlands and Estuaries**

- Will the development occur within 200m of a river, creek, wetland or estuary?  
 (please tick)       Yes      ***If yes, complete the rest of this section***  
     No      ***If no, go to the next section***

- Will the development result in the clearing of vegetation within the 200 m zone?  
 Yes       No      ***If yes, please describe the extent of the expected impact.***

A search of DEC's Geomorphic Wetlands Database (Landgate 2009) indicates that the majority of the site is not classified as a wetland. However, a small portion of land located in the south-west corner of Lot 6 and part Lot 300 is categorised as a Resource Enhancement Wetland (REW: UFI14705). Also, a portion of a Multiple Use (MUW: UFI 14409) categorised wetland extends into the lower corner of Lots 300 and 301.

The proposed area for sand extraction will be located outside the minimum required 50 m buffer from both the REW and the MUW.

RPS finalised a numerical groundwater model to estimate the potential increase in water levels due to clearing of vegetation at the proposed sand quarry within Lot 6 Banksia Road and Lots 300 and 301 Boomerang Road, Oldbury. The purpose of the model is to specifically investigate the impact of clearing vegetation upon the hydrogeology of the wetland including increase in recharge and water logging.

- Groundwater modelling predicts the average annual maximum increase in groundwater levels at the L120 Wetland of about 0.15 m to occur after a 10 year period. This equates to about 1.5 cm per year, which is less than the generic Ecological Water Requirements "low impact" water level change for wetlands provided by Froend and Loomes (2004). After 10 years of excavation with revegetation, the groundwater level is predicted to decrease and result in no net change in levels at the wetland after another 10 years. As such, the water level changes are predicted to be temporary. This prediction is conservative as it does not include the controlling effects of open drains in the area.
  - The investigations indicate the hydrology in the area of the wetland is significantly controlled by anthropogenic factors including a railway embankment and open drains that intercept groundwater and are at a lower elevation than the L120 Wetland. These factors are expected to minimise and control any groundwater level increases in the vicinity of the wetlands that are associated with the proposed excavation. This is particularly the case in the winter months when the drains remove water away from the system to the east and control groundwater levels.
  - A species-specific risk analysis of groundwater dependent vegetation in the L120 Wetland calculated an acceptable risk of impact to the L120 Wetland from sand quarrying activities. This is the lowest of the five possible risk categories, namely: acceptable, low, moderate, high and extreme.
  - Despite the conclusions of the modelling and the on-site investigations, several contingency measures have been established should the water level in the L120 Wetland be considered unacceptably high in the future. These include:
    - ensuring open drains in the immediate vicinity are not blocked and allow free transmission of water, by contacting Water Corporation as the regulatory agency responsible for drain performance
    - the planting of phreatophytes
    - the abstraction of groundwater at the site.
- Will the development result in the filling or excavation of a river, creek, wetland or estuary?  
 Yes       No      **If yes,** please describe the extent of the expected impact.
- Will the development result in the impoundment of a river, creek, wetland or estuary?  
 Yes       No      **If yes,** please describe the extent of the expected impact.
- Will the development result in draining to a river, creek, wetland or estuary?  
 Yes       No      **If yes,** please describe the extent of the expected impact.
- Are you aware if the proposal will impact on a river, creek, wetland or estuary (or its buffer) within one of the following categories? (please tick)



Yes       No      **If yes**, please describe the extent of the expected impact.

## 2.6 **Marine Areas and Biota**

- Is the development likely to impact on an area of sensitive benthic communities, such as seagrasses, coral reefs or mangroves?  
 Yes       No      **If yes**, please describe the extent of the expected impact.
- Is the development likely to impact on marine conservation reserves or areas recommended for reservation (as described in *A Representative Marine Reserve System for Western Australia*, CALM, 1994)?  
 Yes       No      **If yes**, please describe the extent of the expected impact.
- Is the development likely to impact on marine areas used extensively for recreation or for commercial fishing activities?  
 Yes       No      **If yes**, please describe the extent of the expected impact, and provide any written advice from relevant agencies (e.g. Fisheries WA).

## 2.7 **Water Supply and Drainage Catchments**

- Are you in a proclaimed or proposed groundwater or surface water protection area?  
(You may need to contact the Department of Water (DoW) for more information on the requirements for your location, including the requirement for licences for water abstraction. Also, refer to the DoW website)  
 Yes       No      **If yes**, please describe what category of area.
- Are you in an existing or proposed Underground Water Supply and Pollution Control area?  
(You may need to contact the DoW for more information on the requirements for your location, including the requirement for licences for water abstraction. Also, refer to the DoW website)  
 Yes       No      **If yes**, please describe what category of area.
- Are you in a Public Drinking Water Supply Area (PDWSA)?  
(You may need to contact the DoW for more information or refer to the DoW website. A proposal to clear vegetation within a PDWSA requires approval from DoW.)  
 Yes       No      **If yes**, please describe what category of area.
- Is there sufficient water available for the proposal?  
(Please consult with the DoW as to whether approvals are required to source water as you propose. Where necessary, please provide a letter of intent from the DoW)  
 Yes       No      (please tick)

- Will the proposal require drainage of the land?  
 Yes       No      **If yes**, how is the site to be drained and will the drainage be connected to an existing Local Authority or Water Corporation drainage system? Please provide details.
- Is there a water requirement for the construction and/ or operation of this proposal?  
 (please tick)       Yes      **If yes, complete the rest of this section**  
     No      **If no, go to the next section**
- What is the water requirement for the construction and operation of this proposal, in kl/year?  
 Water may be required for dust suppression during construction activities; the estimated volume is 5,000kl.
- What is the proposed source of water for the proposal? (eg dam, bore, surface water etc.)  
 Lot 6 Banksia Road currently has a groundwater bore access. It is proposed to apply to the DoW for an additional 5,000kl groundwater abstraction licence. For your information, the Shire of Serpentine-Jarrahdale has requested if approved by the DoW, that Rocla position a bore near the road boundary so the Shire can access the bore for fire protection at the completion of Rocla extraction and land Banksia woodland restoration works.  
 If no groundwater allocation is available Rocla will:
- Negotiate an allocation from another licence holder to transfer a 5,000kl water allocation to the Oldbury site; or
  - Utilise Rocla's existing groundwater abstraction licence (groundwater licence 101759) at Lot 569 and 1263 Baldivis Road. Rocla proposes to transport the required water for dust suppression purposes from this site.

## 2.8 Pollution

- Is there likely to be any discharge of pollutants from this development, such as noise, vibration, gaseous emissions, dust, liquid effluent, solid waste or other pollutants?  
 (please tick)       Yes      **If yes, complete the rest of this section**  
     No      **If no, go to the next section**
- Is the proposal a prescribed premise, under the Environmental Protection Regulations?  
 (Refer to the EPA *General Guide for Referral of Proposals to the EPA under section 38(1) of the EP Act 1986* for more information)  
 Yes       No      **If yes**, please describe what category of prescribed premise.
- Will the proposal result in gaseous emissions to air?  
 Yes       No      **If yes**, please briefly describe.  
 Minor levels of gaseous emissions are anticipated from construction equipment during the sand extraction works. In addition vehicle movements associated with the transporting the sand will also produce gaseous emissions.

- Have you done any modelling or analysis to demonstrate that air quality standards will be met, including consideration of cumulative impacts from other emission sources?  
 Yes       No      **If yes**, please briefly describe.
- Will the proposal result in liquid effluent discharge?  
 Yes       No      **If yes**, please briefly describe the nature, concentrations and receiving environment.
- If there is likely to be discharges to a watercourse or marine environment, has any analysis been done to demonstrate that the State Water Quality Management Strategy or other appropriate standards will be able to be met?  
 Yes       No      **If yes**, please describe.
- Will the proposal produce or result in solid wastes?  
 Yes       No      **If yes**, please briefly describe the nature, concentrations and disposal location/ method.
- Will the proposal result in significant off-site noise emissions?  
 Yes       No      **If yes**, please briefly describe.

The proposal will result in temporarily elevated noise emissions, primarily during excavation Stages 3 and 5.

Lloyd George Acoustics were commissioned to assess and predict the likely noise impacts from the proposed sand mining and compare the results against the *Environmental Protection (Noise) Regulations 1997*.

The acoustic assessment was inclusive of the following key assumptions:

- The quarry plant will consist of a mobile screen and front-end loader.
- Trucks will arrive on site via Boomerang Road and will be loaded with sand.

The quarry floor will be at an RL (finished ground level) of 18 mAHD and will start from the south east corner of the site working towards the north-west corner. Three phases have been assessed. These being:

Phase 1 – Quarry face in south-east corner.

Phase 2 – Quarry face at middle of site.

Phase 3 – Quarry face at north-west of site (final).

The key conclusions from the Lloyd George acoustic assessment include:

During the initial phase of the operations (phase 1), the operations are far enough away from the noise sensitive receivers to achieve compliance with the Regulations during the daytime period.

The critical time is during the middle of the pit life (Stages 3 and 5). At this stage, assuming the quarry face runs straight across the site, the barrier effect from the quarry walls is insufficient to achieve compliance with the Regulations and an exceedance of up to 5 dB is likely during downwind conditions.

As the quarry moves into the final phases (Stages 6 and 7), the walls of the quarry are high enough for the barrier effect to achieve compliance with the Regulations during the daytime period.

To comply with the Noise Regulations during the daytime period, a 5 dB reduction is required to the overall noise level in particular when the project reaches the middle Stages 3 and 5.

To achieve this, Rocla is committed to constructing a temporary east-west earth bund wall at an average of RL of 25 m at the top of the bund for the middle Stages 3 and 5. The profile of the wall will be enclosed on three sides congruent with the recommendations from Lloyd George acoustic assessment.

There are a number of further management actions that will be undertaken to minimise noise generation. The general management actions are summarised below.

- Comply with the *Environmental Protection (Noise) Regulations 1997*.
- Retain and establish vegetation between the mine site and the adjacent land holdings to provide a physical separation barrier between mine site activities and adjacent noise sensitive premises.
- Maintain a minimum 150 m separation barrier between the excavation area within Lot 6 and the dwelling within Lot 36, and excavation works in Lot 301 and the dwellings within Lot 30.
- Design the excavation to provide enhanced landform and constructed noise screening (i.e. bunds). This would include constructing an east-west earth bund wall along at an average of RL of 25 m for the middle stage 3 and 5.
- Maintain noise suppression devices in good condition on all operational machinery.
- Shut down equipment when not in use.
- Operate machinery within the designated hours of operation, 7:00 am to 5:00 pm, Monday to Saturday. Some operation may occur on a Sunday if required by project demand.
- Schedule activities to minimise the likelihood of noise nuisance.
- Use the dedicated transport route.
- Record and follow up any complaints received regarding noise disturbance immediately to minimise the cause, to the greatest possible extent.

- Does the proposal have the potential to generate off-site, air quality impacts, dust, odour or another pollutant that may affect the amenity of residents and other "sensitive premises" such as schools and hospitals (proposals in this category may include intensive agriculture, aquaculture, marinas, mines and quarries etc.)?

Yes

No

**If yes**, please describe and provide the distance to residences and other "sensitive premises".

Rocla commits to a dust monitoring program as outlined below:

It is proposed that Rocla monitors dust using a peak monitoring station within the operational area at the commencement of Stage 1 and establish a neighbourhood station near the north-

eastern boundary (closest to Lot 30 the nearest sensitive resident) to measure levels of suspended particulates for the source and near the closest receptor (Lot 30) for an initial three month period to determine the actual nature of the dust impact (if any).

After the three month monitoring period Rocla will undertake an assessment of the dust information, compare the data to the NEPM criteria and determine if required further monitoring requirements and dust management practices on site.

Key dust management measures are detailed below:

#### Dust from Traffic on Unsealed Roads

- Minimise the width and length of internal roads.
- Restrict vehicle movements to defined roads and operational areas.

#### Avoiding disturbance of non-operational areas of the site.

- Use of water as appropriate to wet down roads and trafficked areas.
- Use of dust suppressants where appropriate (either mixed with water to enhance dust suppression and vegetation cover, or applied periodically to specific areas).
- Limit the speed of vehicles on the site.
- Maintain haul road surface in a good condition and with suitable grades.
- Enforce all vehicles leaving the site are required to have covered loads.

#### Dust from Operational and Non-operational Areas of the Site

- Extract topsoil extracted in months and conditions which minimise the potential for dust generation.
- Use of water carts to dampen dust prone areas.
- Establish screening vegetation and/or ground cover on non-operational areas and finished sand extraction stages as soon as practicable.
- Apply of surface treatments (e.g. mulch, ground cover) to stabilise any bare areas which might be prone to wind erosion.
- Minimise the area disturbed or open at any one time, as far as practicable.
- Define 'no go' buffer areas of the site to avoid any unnecessary disturbance of stabilised surfaces or vehicle traffic.
- Cease operational activities until conditions improve and compliance can be achieved.
- Push overburden dumps into positions where they can form screening barriers (i.e. bunds) and at specific locations screening trees will be planted.
- Use screening fencing along Lot 6, 300 and 301 boundary.

- If the proposal has a residential component or involves "sensitive premises", is it located near a land use that may discharge a pollutant?



Yes

No

Not Applicable

**If yes, please describe and provide the distance to the potential pollution source**

The proposed sand extraction operation has the potential to affect immediate landowners located within Lots 36 Banksia Road and Lots 30 and 1121 Boomerang Road. Consequently, appropriate and specific management actions are required to ensure that the environmental risk associated with sand extraction works adjacent to noise and dust sensitive dwellings is undertaken to minimise potential detrimental impacts.

Initially a 50 m buffer will be maintained from the sand excavation area in the northern portion of Lots 6, 300 and Lot 301. This also incorporates the Shire of Serpentine–Jarrahdale's provisions of a minimum 20 m mining buffer from the boundary of the proposed mining lot. This would facilitate the planting and establishment of screening vegetation and maintain a buffer of approximately 150–280 m from the existing dwellings in Lots 30, 1121 and 33.

A three month dust monitoring program incorporating dust readings from the operational source (peak monitoring station) and nearest to Lot 30, i.e. along the northern boundary of Lot 301 will be carried out at the commencement of Stage 1 to monitor potential dust travelling north to Lot 30 and 1121 Boomerang Road.

It is noted that Lot 33 has significant existing vegetation extending westward (approximately 200 m) from the dwellings to the boundary of Lot 301.

A minimum 150 m buffer will be delineated as a 'no go area' and maintained throughout the sand excavation works from the dwelling located within Lots 36.

If the findings of the Stage 1 three month dust monitoring program demonstrate that dust emanating from the operational area is an issue Rocla will at the commencement of Stage 3 excavation works will position a peak air quality monitoring station within the operational area and a neighbourhood monitoring station located at the western boundary of the excavation area to measure levels of suspended particulates for a three month period to determine the actual nature of the dust impact (if any) through measuring dust levels upon the receptor within Lot 36 Banksia Road.

## 2.9 **Greenhouse Gas Emissions**

- Is this proposal likely to result in substantial greenhouse gas emissions (greater than 100 000 tonnes per annum of carbon dioxide equivalent emissions)?

Yes

No

**If yes, please provide an estimate of the annual gross emissions in absolute and in carbon dioxide equivalent figures.**

- Further, if yes, please describe proposed measures to minimise emissions, and any sink enhancement actions proposed to offset emissions.

## 2.10 **Contamination**

- Has the property on which the proposal is to be located been used in the past for activities which may have caused soil or groundwater contamination?

Yes

No

Unsure

**If yes, please describe.**

- Has any assessment been done for soil or groundwater contamination on the site?  
 Yes       No      **If yes, please describe.**
  
- Has the site been registered as a contaminated site under the Contaminated Sites Act 2003? (on finalisation of the CS Regulations and proclamation of the CS Act)  
 Yes       No      **If yes, please describe.**

**2.11 Social Surroundings**

- Is the proposal on a property which contains or is near a site of Aboriginal ethnographic or archaeological significance that may be disturbed?  
 Yes       No       Unsure      **If yes, please describe.**
  
- Is the proposal on a property which contains or is near a site of high public interest (for example, a major recreation area or natural scenic feature)?  
 Yes       No      **If yes, please describe.**
  
- Will the proposal result in or require substantial transport of goods, which may affect the amenity of the local area?  
 Yes       No      **If yes, please describe.**

**2.12 Risk**

- Is the proposal located near a hazardous industrial plant or high-pressure gas pipeline?  
 Yes       No      **If yes, please describe.**
  
- Does the proposal have the potential to generate off-site risk?  
 Yes       No      **If yes, will the proposal be a major hazardous facility regulated under the *Explosives and Dangerous Goods Act*?**

**3. MANAGEMENT**

**3.1 Principles of Environmental Protection**

- Have you considered how your project gives attention to the following Principles, as set out in section 4A of the EP Act? (For information on the Principles of Environmental Protection, please see EPA Position Statement No. 7, available on the EPA web.)
  1. The precautionary principle.  Yes       No
  2. The principle of intergenerational equity.  Yes       No
  3. The principle of the conservation of biological diversity and ecological integrity.  Yes       No

4. Principles relating to improved valuation, pricing and incentive mechanisms.  Yes  No
5. The principle of waste minimisation.  Yes  No

- Is the proposal consistent with the EPA's Position Statements (available on the EPA web)?  
 Yes  No

### 3.2 Management Commitments

- How has the proposal been developed to avoid, minimise and manage potential impacts? Please describe any specific commitments you make as the proponent to minimising the potential environmental impacts of this development.

Extensive work has been undertaken to avoid and minimise the potential impact of the proposed sand excavation area on the surrounding natural environment.

The management of potential impacts associated with the sand extraction proposal is detailed in the following reports:

- Application for Development Approval
- Extractive Industry Licence Report – details the key management actions
- Groundwater Modelling Assessment Report
- Lloyd George Noise Assessment Report
- Environmental Offset Strategy
- Hydrology Management Strategy Plan - Lot 6 Banksia Road and Lots 300 and 301 Boomerang Road, Oldbury

### 3.3 Consultation

- Has public consultation taken place (such as with other government agencies, community groups or neighbours), or is it intended that consultation shall take place?  
 Yes  No **If yes, please list those consulted and attach comments or summarise response on a separate sheet.**

Public consultation has occurred both informally and formally with the following stakeholders:

- Commonwealth Department of Environment
- DoW
- DER (Native Vegetation Conservation Branch)
- Department of Parks and Wildlife
- Shire of Serpentine-Jarrahdale
- Local residents

## CHECKLIST AND DECLARATION

Before you submit this form, have you:	<u>YES</u>	<u>NO</u>
Completed all the questions on this form?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Have you attached any extra information, such as:		
Site plans?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Detailed explanations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Comments obtained during consultation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Have you included any electronic information, such as:		
A CD of the referral and documentation, in PDF format, excluding any confidential information?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
A CD of the spatial data?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Any other relevant information?	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Following a review of the information presented in this form, please consider the following question. (Your response is Optional)

DO YOU CONSIDER THE PROPOSAL REQUIRES FORMAL ENVIRONMENTAL IMPACT ASSESSMENT?  
(Information on the levels of environmental impact assessment is available on the EPA website at [www.epa.wa.gov.au](http://www.epa.wa.gov.au))

YES                       NO                       NOT SURE

IF YES, WHAT LEVEL OF ASSESSMENT?

ASSESSMENT ON REFERRAL INFORMATION

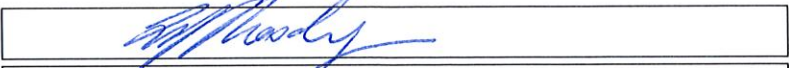
ENVIRONMENTAL PROTECTION STATEMENT

PUBLIC ENVIRONMENTAL REVIEW

ENVIRONMENTAL REVIEW AND MANAGEMENT PROGRAMME

STRATEGIC ENVIRONMENTAL ASSESSMENT

I, LISA-JANE MOODY (full name) declare that I have completed all of the questions in this form and attached the requested information and declare that the information contained in this form is, to my knowledge, true and not misleading.

Signature 

Name LISA - JANE MOODY

Position Resource + Development Coordinator

Date 17/10/13

**Environmental Protection Authority**

Level 8, The Atrium  
168 St Georges Tce  
PERTH WA 6000

**Please mail completed referrals to:**

Postal address:  
Locked Bag 33  
CLOISTERS SQUARE WA 6850  
Website: [www.epa.wa.gov.au](http://www.epa.wa.gov.au)

**Office of the EPA**

Level 8, The Atrium  
168 St Georges Tce  
PERTH WA 6000

Telephone: (08) 6467 5000  
Facsimile :(08) 6467 5562  
Website: [www.epa.wa.gov.au](http://www.epa.wa.gov.au)

Contact details for the head offices of the primary agencies involved in development proposals follow. You may need to contact your relevant district or regional office (details of all State Government agencies are available on the website of the Department of the Premier and Cabinet, [www.dpc.wa.gov.au](http://www.dpc.wa.gov.au)). You will also need to contact your Local Government Authority in the first instance. For some proposals, consultation with or referral to Commonwealth agencies may be required.

**Department of Environment and Conservation**

The Atrium  
168 St Georges Tce  
Perth WA 6000

**For Licensing and Clearing Permits under Part V -**

Telephone: (08) 6467 5000  
Website: [www.dec.wa.gov.au](http://www.dec.wa.gov.au)

**Department of Water**

The Atrium  
168 St Georges Terrace  
Perth WA 6000

Telephone: (08) 6364 7600  
Website: [www.water.wa.gov.au](http://www.water.wa.gov.au)

**Department of Mines & Petroleum**

Mineral House  
100 Plain St  
East Perth WA 6004

Telephone: (08) 9222 3333  
Website: [www.dmp.wa.gov.au](http://www.dmp.wa.gov.au)

**Department of State Development**

1 Adelaide Terrace  
EAST PERTH WA 6004

Telephone: (08) 9222 0555  
Webste: [www.dsd.wa.gov.au](http://www.dsd.wa.gov.au)

**Department of Fisheries**

3<sup>rd</sup> floor, SGIO Atrium  
168 St George's Terrace  
Perth WA 6000

Telephone: (08) 9482 7333  
Website: [www.wa.gov.au/westfish](http://www.wa.gov.au/westfish)

**Department of Planning (including Bush Forever Office)**

Albert Facey House  
469 Wellington Street  
Perth WA 6000

Telephone: (08) 9264 7777  
Telephone: 1800 626 477 (Bush Forever Office)  
Website: [www.planning.wa.gov.au](http://www.planning.wa.gov.au)

**Department of Indigenous Affairs**

Level 1, 197 St George's Terrace  
PERTH WA 6000

Telephone: (08) 9235 8000  
Website: [www.dia.wa.gov.au](http://www.dia.wa.gov.au)

**Health Department of Western Australia**

189 Royal St  
EAST PERTH WA 6004

Telephone: (08) 9222 4222  
Website: [www.health.wa.gov.au](http://www.health.wa.gov.au)