Decision Report

Application for Licence

Division 3, Part V *Environmental Protection Act 1986*

Licence Number	L9194/2019/1
Applicant	BCP Contractors Pty Ltd
ACN	602 859 405
REGISTERED OFFICE	19 Cable Sands Road YALYALUP WA 6280
File Number	DER2019/000139
Premises	BCP Contractors Hopetoun Quarry 319 Steeredale Road Lot 73 on Plan 2241603 Steeredale Road HOPETOUN WA 6348 Legal description – Lot 73 on Plan 2241603 Certificate of Title 1287-204 Oldfield Location 73
Date of Report	8 March 2019
Status of Report	Final

Overview of premises

The Hopetoun quarry site is located approximately 32 km south of Ravensthorpe and 8 km north north west of the Hopetoun townsite depicted by the yellow pin in Figure 2. BCP Contractors Pty Ltd (BCP) has an access agreement with the landowner to extract granite rock from within the northern part of Lot 319 Steeredale Road, north of John Forrest Road.

The deposit covers an area of ~ 3.0 ha and is situated within a cleared agricultural productive paddock though extraction will occur over 1 hectare staged extraction cells.

The granite material will be used exclusively for public works associated with the Hamersley Drive - Culham Inlet reconstruction project to repair a nearby public road following flood damage. Rock material from this quarry will not be used for any other project.

The screening plant is a static 'Grizzly' screen separator which sorts, separates and classify the rock according to size. The Grizzly design includes heavy steel bars that are laid down in a grid pattern that allows small rocks to go through and the larger rocks pass over the grid. Figure 1 indicates the front end loader operations and Grizzly screen separator design.

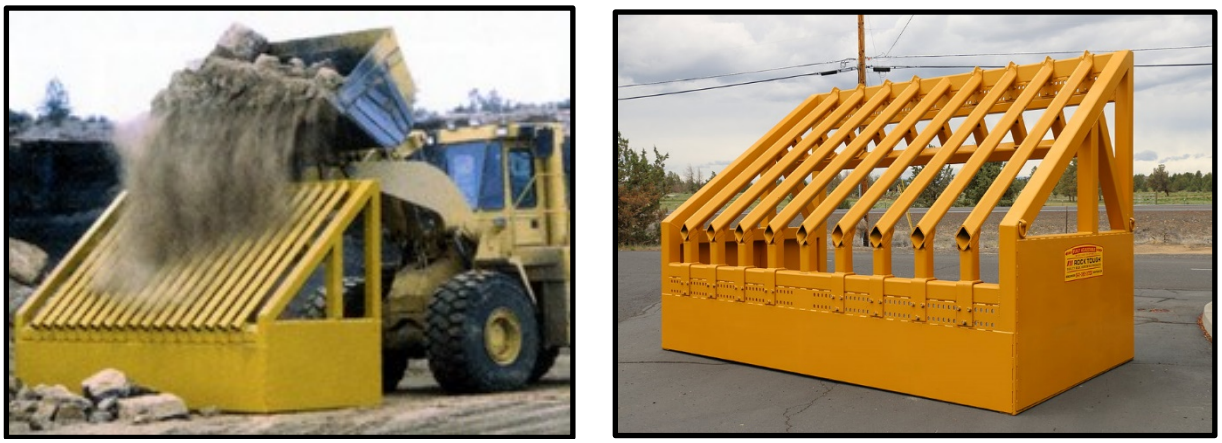


Figure 1: Photos of the Grizzly screen in operation

The life of the screening project is estimated to be about 6 months commencing November 2018.

Prescribed Premises Category

The Applicant has applied to licence this operations as a category 12 prescribed premises as described in Section 1 of the *Environmental Protection Regulations 1987* (EP Regulations) where a licence to operate the 'Grizzly' screen is required.

Table 1: Prescribed Premises Categories

Classification of Premises	Description	Approved Premises production or design capacity or throughput
Category 12	Screening etc. of material: premises (other than premises within category 5 or 8) on which material extracted from aid the ground is screened, washed, crushed, ground, milled, sized or separated.	Greater than 50,000 tonnes per annum (tpa) up to 100,000 tpa.

Category 12 screening etc. of material is listed in schedule 1 to the EP Regulations relates to the activities of processing materials extracted from the ground by either screening, washing, crushing, grinding, milling, mechanical sizing or separation.. The prescribed category threshold is greater than 50,000 tpa. The 'Grizzly' screen plant will have a design capacity production rate of 50 tonnes per hour or 137,500 tonnes per annum.

As the application is to process up to 100,000 tpa of material, a licence will be issued given the potential emissions to the receiving environment or potential impacts upon public health.

Mining, free digging, excavating, quarrying, and blasting do not constitute screening etc. of material and therefore do not fall within scope of Category 12. The processing area will contain the screening plant and therefore will form the category 12 prescribed premises that will be assessed in this **Decision Report.**

Description of proposed operations

Approximately 100,000 tonnes of granitic rock material will be processed over the Grizzly screen during the life of this project.

The John Forrest Road granite quarry hours of operation will be 7:00am to 6:00pm Monday to Friday only. Granite material will be drill and blasted by a qualified subcontractor who will transport the explosives to site. The blasted granite will be removed using an excavator and put over the 'Grizzly' screen. Any undersize granite material that falls through the Grizzly will placed in a dedicated undersize pile using a front-end loader. The material that rolls over the Grizzly will be picked up by the front end loader and located to a dedicated size stockpile. The materials from the different piles then get loaded by front end loader onto trucks and transported to the project site. No waste products will be generated in the process and all the granite material will be used on Culham Inlet road reconstruction.

Water will be sprayed using a water truck over the granite rock extraction area, materials stockpiles and access-way to minimise dust generation caused by haulage traffic. No chemical additives or reagents will be required, and thus a tailings dam is not required. If washing of the material occurs then wash water will be sourced from local farm dams and the process water recycled and reused on site.

There is no permanent infrastructure nor accommodation buildings onsite other than a shelter/workshop for the front-end loader. There is a portable ablutions on site that will be serviced by a local contractor.

There will be no permanent fuel storage on site as all fuelling activities will conducted with the use of a mobile fit for purpose tanker. All hydrocarbon waste is removed from site and disposed of at an approved hydrocarbon waste facility, or other approved facility.

All other waste/rubbish will be removed from site and taken to an approved landfill site. The screening operation will be continuous until the road reconstruction project has been completed. The static 'Grizzly' screen and mechanical equipment will be decommissioned and removed from the site after the project has been completed. No waste storage or waste disposal is permitted to occur at the Premises.

Stormwater management will consist of diverting all runoff from undisturbed areas away from the 'Grizzly' screen operations using cut-off bunds or by-pass drains. Potentially contaminated storm water from within the operational areas and as a result of screening operations or dust suppression activities, will be confined by the embankments of the pit excavation and a small detention pond allowing the water to soak through the soil profile therefore reducing potential turbid water discharges to the environment.

The Licence holder has implemented a Noise, Dust, Blast, Dieback, Rehabilitation and Drainage Management Plan required by the material supply contract with the Shire for the project.

The main emissions from the screening operation will be **fugitive dust** and **nuisance noise** from machinery and screening by the Grizzly, plus **contaminated storm water**.

The infrastructure and equipment utilised at the Premises are outlined in the table 2 below and the Hopetoun quarry layout is shown in Figure 4.

Table 2: BCP Contractors Pty Ltd Infrastructure

Ref	Infrastructure and Equipment Prescribed Activity (Category 12)	Site Layout Plan Reference (Figure 1)
1	1 x Static Grizzly Screen Separator	Screening plant
2	Run of Mine working area	Working area
3	1 x Blast hole drill rig	N/A – mobile equipment
4	1 x Komatsu PC300 30 Tonne Excavator, 1x Hyundai 32 Tonne Excavator and 1 x Sumitomo SH300 30 Tonne Excavator	
5	1 x Caterpillar 966 front end loader and 1 x Komatsu 470 front end loader	
6	Four-wheeled drive utility and machinery service vehicle	
7	1 x Water truck	

Figure 2: Location of Property

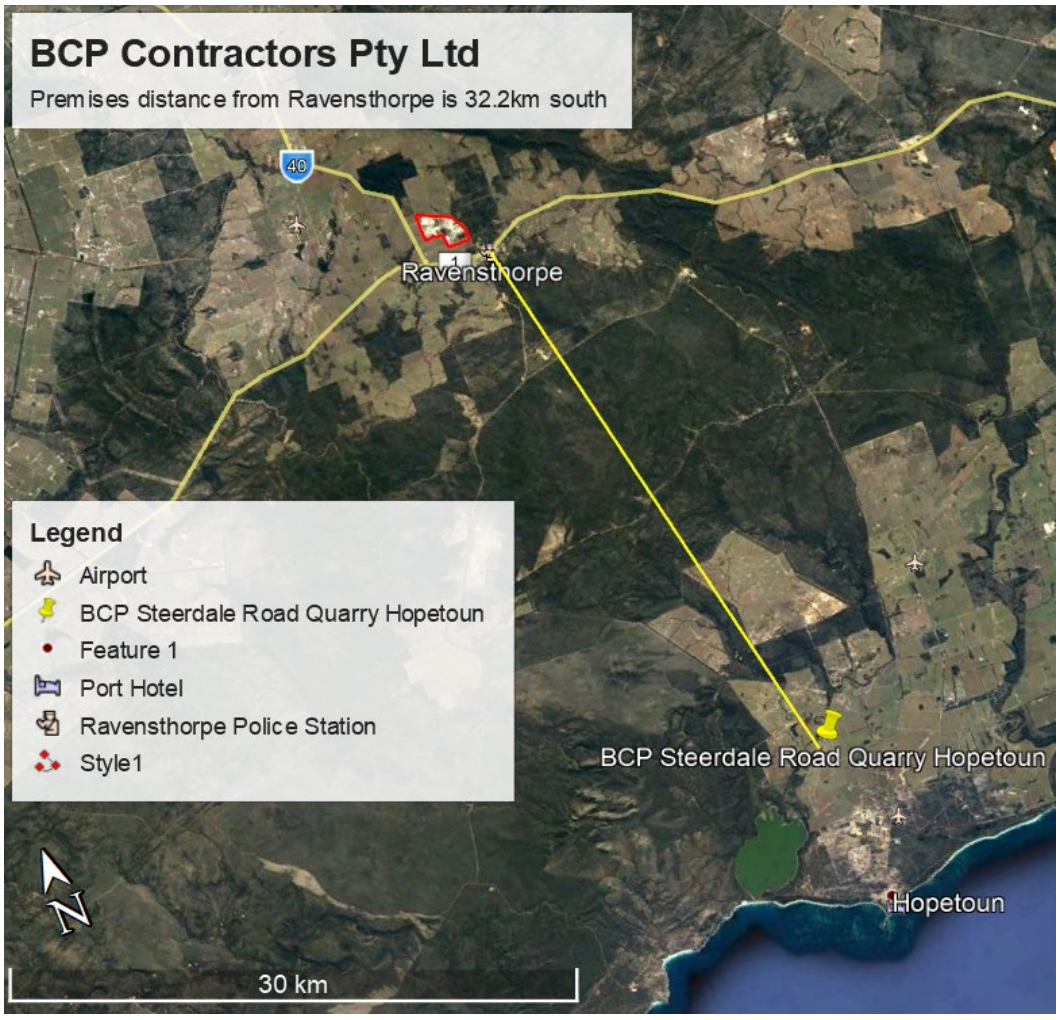
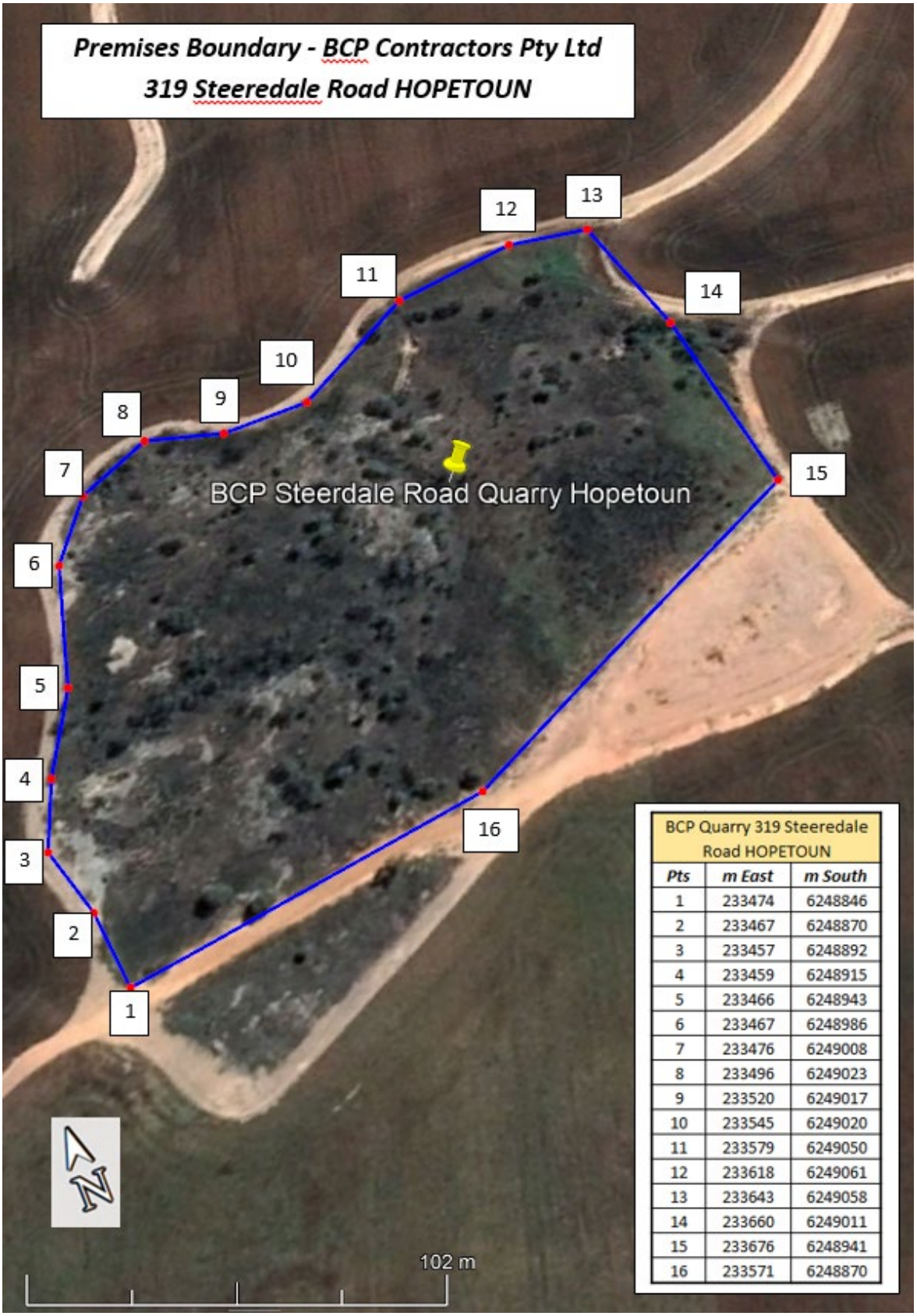


Figure 3: Hopetoun quarry premises boundary



BCP Quarry 319 Steeredale Road HOPETOUN		
Pts	*m East*	*m South*
1	233474	6248846
2	233467	6248870
3	233457	6248892
4	233459	6248915
5	233466	6248943
6	233467	6248986
7	233476	6249008
8	233496	6249023
9	233520	6249017
10	233545	6249020
11	233579	6249050
12	233618	6249061
13	233643	6249058
14	233660	6249011
15	233676	6248941
16	233571	6248870

Figure 4: Hopetoun quarry layout

Exclusions to the Premises

The following matters are outside the scope of this assessment and have not been considered within the risk assessment detailed in this Decision Report:

- maintenance areas and mechanical workshops;
- weighbridges, equipment storage areas, wash down bays, and,
- administration areas, staff rooms and abolition buildings.

The Licence is related to Category 12 activities only and does not offer the defence to offence provisions in the EP Act (see s74, s74A and s74B) relating to emissions or environmental impacts arising from non-Prescribed Activities, including those referenced above.

Environmental siting

The property is zoned as ‘agricultural’ under the Regional Scheme and as ‘general farming’ under the Shire of Ravensthorpe Town Planning Scheme. The site is predominantly surrounded by open pastures. DWER records indicate no other Prescribed Premises is located within 5 kilometres of the site.

Table 4: Residential and sensitive receivers and distance from activity boundary

Residential and sensitive receivers	Distance from Prescribed Premises
R1 to R16 residential domicile	All receptors are greater than 2,400m from the boundary of the Premises.

No specified ecosystems or areas of high conservation value have been identified in proximity that may be directly impacted from activities at the Premises.

The distance to closest sensitive receptors is shown in Figure 4 below.

Figure 4: Closest sensitive receptors to the BCP quarry at Hopetoun

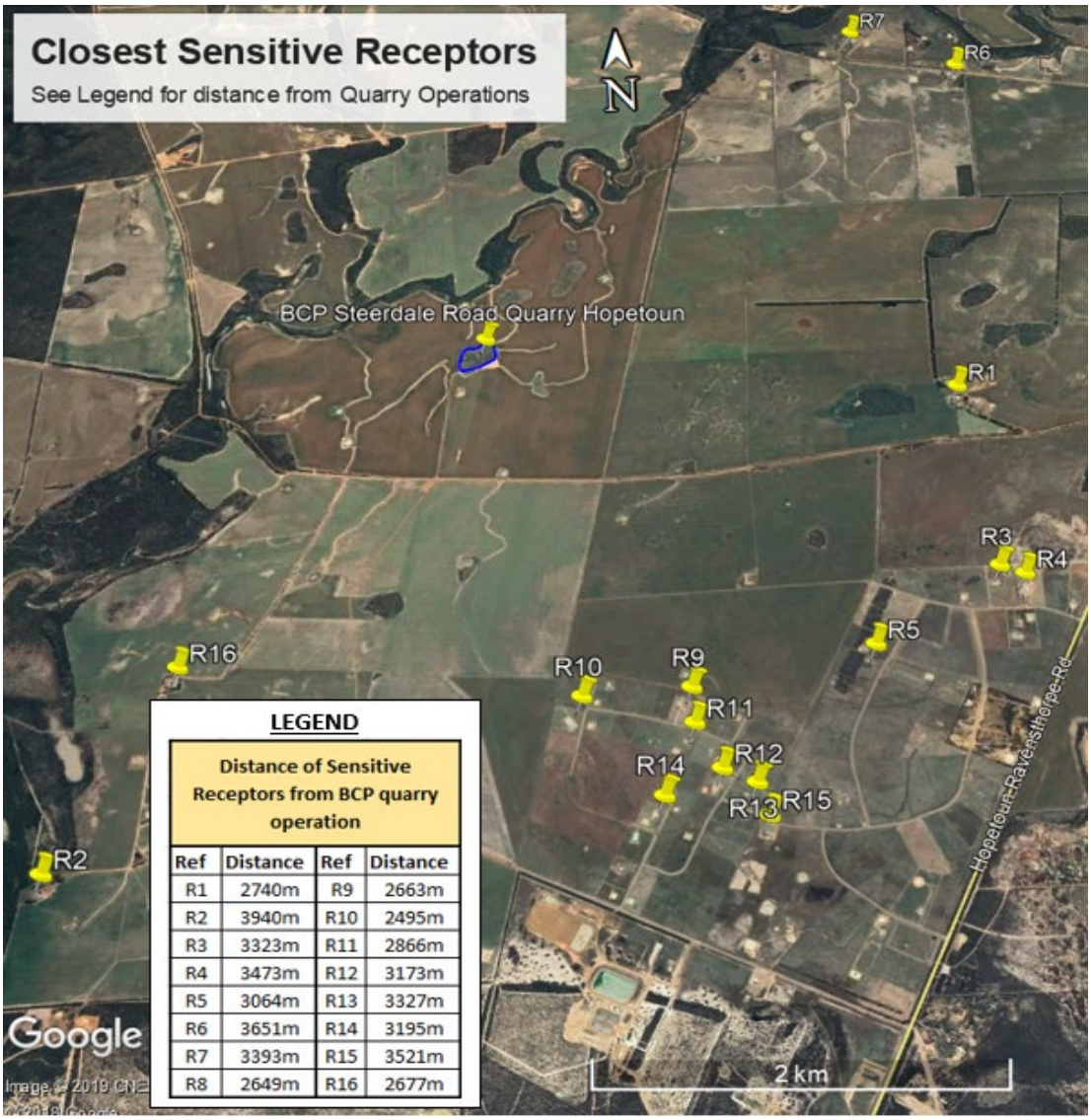


Table 5: Environmental receptors and distance from activity boundary

Groundwater and water sources	Distance from Premises	Environmental value
Groundwater	Natural ground level at the site is approximately 15 mAHD and the aquifer is located in sandier coastal sediments at depth approximately 8 mAHD, being 7 metres below ground level[1]	Beneficial users of groundwater Salinity is estimated between 250 and 500 mg/L[1]
Surface Water	The Steere River lies directly north of the quarry some 280 metres and flows directly west into Culham Inlet.	Water quality of Steere River is typically around 1500mg/L TDS and drains to groundwater. Captured runoff from rainfall provide stock water from paddock dams.

Geomorphic wetlands – Culham Inlet	Approximately 1,000m west and north west of the Premises	Bush Forever site, supports a seasonal conservation category wetland and associated native vegetation and fauna
Flora and Fauna	The land surrounding the site is pasture cleared of vegetation.	Very little value of terrestrial flora and fauna species left in pasture lands.

Note 1: Sourced from the Statewide Groundwater database (DoW, 2004).

Emission sources, pathways and receptors

Emissions

The potential for emissions to impact on sensitive receptors has been assessed in accordance with the Department's Risk Framework. The key emissions considered in this report are **fugitive dust, nuisance noise** and **contaminated stormwater** from activities including screening equipment placement and use plus, vehicle movements during operations.

The Applicant has proposed measures to assist in controlling these emissions, where necessary. The control measures have been considered when undertaking the risk assessment detailed in the Risk Assessment section of this report.

A prescribed premises category 12 Licence under Part V of the EP Act will be required to authorise emissions associated with the operation of the premises i.e. screening and related activities, including vehicle movements, excavation, loading and unloading and storage of materials. A risk assessment for the operational phase has been included in this Decision Report, where terms and conditions will be finalised in the assessment of this licence application.

Receptors

Risk is assessed as a combination of emission sources, the proximity and sensitivity of receptors to those emission sources and any pathways that can allow the emission to reach and potentially harm the receptor. Table 4 and 5 plus Figure 4 provides a summary of human and environmental receptors in proximity to the Premises and the risk assessment table 7 considers these receptors in the context of emissions and potential pathways.

Pathways

As fugitive dust and noise are considered potential emissions, the prevailing wind direction has been considered. Using information available on the Bureau of Meteorology's website (February 2019), the closest available weather station for climate data is Hopetoun (No. 009961). Based on the climate data for Hopetoun station (January 1996 to February 2019), the prevailing wind direction is southerly to south easterly and the design rainfall Intensity, Frequency and Duration (IFD) for a 2 hour, 1 in 10 year event is 14.4 mm and the mean rainfall per year is 496.3 mm.

Sediment movements from surface run-off across the site may cause an increase in suspended solids in the Steere River catchment, resulting in turbidity and sedimentation. Contamination may also occur if sediments come into contact with contaminants and/or natural processes result in pH changes, releases of naturally occurring substances such as heavy metals or other geochemical changes. These pathways have been considered in the risk assessment table 7.

Legislative context and other approvals

The overarching legislative framework of this assessment is the EP Act and EP Regulations.

The guidance statements which inform this assessment are:

- *Guidance Statement: Regulatory Principles (July 2015)*;
- *Guidance Statement: Setting Conditions (October 2015)*;
- *Guidance Statement: Licence Duration (August 2016)*;
- *Guidance Statement: Decision Making (February 2017)*; and
- *Guidance Statement: Risk Assessment (February 2017).*

Other than placement of screening equipment and associated machinery, demountable building and a portable toilet, no other works are proposed under this application.

Approvals relevant to the premises are outlined in the table below.

Table 6: Relevant approvals

Legislation	Details
Planning and Development Act 2005	Section 6 of the Planning and Development Act 2005 (WA) contain a concession allowing the taking of materials from the land for the purpose of public works within Local Government areas.
Environmental Protection (Noise) Regulations 1997	Blasting operations and nuisance noise limits for this operation are limited by the requirements of the Noise Regulations.

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Risk assessment

Table 7: Identification of emissions, pathway and receptors during operation

Risk ratings have been assessed for each key emission source and take into account potential source-pathway-receptor linkages. The mitigation measures / controls proposed by the Applicant have been considered in determining the risk rating. Emissions during operation have been assessed and the licence that accompanies this report authorizes operation of the Premises.

Risk Event				Consequence rating*	Likelihood rating*	Risk**	Reasoning	Regulatory controls (refer to conditions of the granted instrument)
Source/Activities	Potential emissions	Potential receptors, pathway and impact	Applicant controls					
Excavation activities 'Grizzly' screen activities Unloading, loading and storage of material Vehicle movements	Dust	Air/windborne pathway causing impacts to native vegetation and water quality within the Steere River Catchment	Wetting down processing areas, roads and stockpiles using water truck with spray bars and water cannons. Shot rock will be wet down prior to blasting events. Speed limits restricted for machinery operating at the 'Grizzly' screen. Hours of Operations limited to 7:00am to 6:00pm Monday to Friday Implementation of the Dust Management Plan	Minor	Unlikely	Low	The Steere River is located greater than 280 metres from the Premises boundary. The implementation of the Dust Management Plan will ensure dust emissions are unlikely to be generated during operations. The proposed controls are expected to be sufficient at mitigating dust emissions during operations.	The Applicant has implemented operational hours between 7:00am to 6:00pm Monday to Friday during the life of this project. The daily operational hours will be used as a condition of the licence. The Dust and Noise Management plans implemented by the Applicant provide adequate controls. The Noise Regulations operate as a prescribed standard under the EP Act. In addition, the Applicant must take all reasonable measures to prevent or control noise emissions under s51(b) of the EP Act, even if they comply with the Noise Regulations. DWER therefore considers dust and noise is adequately addressed by the Applicant's controls and the inclusion of an operational hour's condition in the licence.
	Noise	Air/windborne pathway causing impacts to health and amenity of closest human receptors (freehold landowner) located greater than 2.4 km from prescribed operations.	Equipment and machinery fitted with mufflers and baffles and routinely maintained. 'Grizzly' screen located in base of the pit. Hours of Operations limited to 7:00am to 6:00pm Monday to Friday Implement of the Noise Management Plan				The closest human receptors is located greater than 2.4 km from the prescribed activities and is not in the direction of the prevailing wind. The proposed controls are expected to be sufficient to mitigating noise emissions during operations.	

Risk Event				Consequence rating*	Likelihood rating*	Risk**	Reasoning	Regulatory controls (refer to conditions of the granted instrument)
Source/Activities	Potential emissions	Potential receptors, pathway and impact	Applicant controls					
Processing and storage of material	Sediment	Overland runoff causing impacts to surface water quality of Steere River Catchment from an increase in of suspended solids resulting in turbidity and sedimentation and associated riparian flora and fauna.	Wetting down processing areas, roads and stockpiles using water truck with spray bars and water cannons. Given the low mean annual rainfall in this locality runoff will be at a minimum. Surface water directed to detention sumps within Premises designed to capture a 1 in 10 year 2 hour rainfall event (14.4 mm). Cut-off bunds surrounding processing and materials stockpile areas Implement of the Drainage Management Plan	Minor	Unlikely	Low	Applicant controls are suitable for limiting sediment release and runoff. The Premises design will ensure surface water runoff is directed to detention sumps that are adequately sized to contain the runoff. All collected surface water is contained on the Premises boundary, and either reused when required or evaporated when in abundance. Mean annual rainfall is 496.3 mm per year with evaporation greater than 1000mm. DWER therefore considers off-site impacts from contaminated storm water would only occur in exceptional circumstances.	The Drainage Management plans implemented by the Applicant provide adequate control of contaminated storm water at the Premises. The operations occur in a locality where annual evaporation is greater than double the annual rainfall and given the project has a limited timeframe, then contaminated storm water is unlikely to escape the Premises. No sediment condition required in the licence.

**Consequence ratings, likelihood ratings and risk descriptions are detailed in the Department's Guidance Statement: Risk Assessments (February 2017)*

Consultation

Table 8: Public Authority and Direct Interest comments

Public Authority	Comment
Shire of Ravensthorpe *Acting Chief Executive Officer*	The Shire provided the following comments from its Planning contractor on 20 February 2019: *There are no planning issues with this proposal as the development was exempted under Section 6 of the Planning and Development Act 2005 and as such Development Approval is not required.* *If the use extends beyond the public works, the exemption would cease and development approval would be required.*
Direct Interest	**Comment**
Oldfield Location 73 *Landowner*	The landowner of Oldfield Location 73 provided the following comments by telephone on 27 February 2019: *The agreement between the Applicant and the Landowner is operating well and is happy to continue with the land access agreement dated 20 November 2018.*

The Applicant advises they have consulted with neighbouring properties following receipt of their concerns regarding dust generated by the haulage truck movements traversing John Forrest Road which have since been addressed. There has been no other submissions or objections raised by other interested parties during the advertising period.

The Applicant was provided with the draft Decision Report and draft Licence on 6 March 2019. The Applicant provided comments confirming the licensed production throughput is 100,000 tpa which was confirmed within this Decision Report.

Conclusion

This assessment of the risks of activities on the premises has been undertaken with due consideration of a number of factors, including the documents and policies specified in this decision report (summarised in Appendix 1).

This assessment was also informed by a site inspection by DWER on 19 February 2019.

Based on this assessment, it has been determined that the Licence will be granted subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

DWER notes that it may review the appropriateness and adequacy of controls at any time and that, following a review, DWER may initiate amendments to the approval under the EP Act.

Tim Gentle
MANAGER – RESOURCE INDUSTRIES
REGULATORY SERVICES

Delegated Officer
Under section 20 of the *Environmental Protection Act 1986*

Appendix 1: L9194/2019/1

Appendix 2: Key documents

Document title	In text ref	Availability
BCP Contractors Pty Ltd – Licence application dated 11 February 2019	Application	DWER records (A1764242)
BCP Contractors Pty Ltd – Licence application supplementary documents.	Supporting Documents	DWER record (A1764241)
BCP Contractors response to questions via email dated 19 February 2019.	Supplementary information	DWER record (A1768481)
DER, July 2015. *Guidance Statement: Regulatory principles.* Department of Environment Regulation, Perth.	DER, 2015a	accessed at www.dwer.wa.gov.au
DER, October 2015. *Guidance Statement: Setting Conditions.* Department of Environment Regulation, Perth.	DER, 2015b	
DER, August 2016. *Guidance Statement: Licence Duration.* Department of Environment Regulation, Perth.	DER, 2016	
DER, February 2017. *Guidance Statement: Risk Assessments*. Department of Environment Regulation, Perth.	DER, 2017a	
DER, February 2017. *Guidance Statement: Decision Making*. Department of Environment Regulation, Perth.	DER, 2017b	