



Licence Number	L9063/2017/1
Licence Holder	Main Roads Western Australia
ACN	Not applicable
Registered business address	Waterloo Crescent EAST PERTH WA 6004
File Number	DER2017/000695
Duration	6/04/2018 to 5/04/2037
Date of issue	6/04/2018
Prescribed Premises	Category 12
Premises	Yaringa Quarry North West Coastal Highway Crown Reserve 38883 Lot 181 on deposited plan 185111, CLT or LR Volume 3148 Folio 674 Land ID 1957155, PIN 712788

This Licence is granted to the Licence Holder, subject to the following conditions, on 6 April 2018, by:

Date signed: 6 April 2018

Alana Kidd

Manager Licensing (Resource Industries)

an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

Explanatory notes

These explanatory notes do not form part of this Licence.

Defined terms

Definition of terms used in this Licence can be found at the start of this Licence. Terms which are defined have the first letter of each word capitalised throughout this Licence.

Department of Water and Environmental Regulation

The Department of Water and Environmental Regulation (DWER) is established under section 35 of the *Public Sector Management Act 1994* and designated as responsible for the administration of Part V, Division 3 of the *Environmental Protection Act 1986* (WA) (EP Act). The Department also monitors and audits compliance with licences, takes enforcement action and develops and implements licensing and industry regulation policy.

Licence

Section 56 of the EP Act provides that an occupier of Prescribed Premises commits an offence if Emissions are caused or increased, or permitted to be caused or increased, or Waste, noise, odour or electromagnetic radiation is altered, or permitted to be altered, from Prescribed Premises, except in accordance with a works approval or licence.

Categories of Prescribed Premises are defined in Schedule 1 of the *Environment Protection Regulations 1987* (WA) (EP Regulations).

This Licence does not authorise any activity which may be a breach of the requirements of another statutory authority including, but not limited to the following:

- conditions imposed by the Minister for Environment under Part IV of the EP Act;
- conditions imposed by DWER for the clearing of native vegetation under Part V, Division 2 of the EP Act;
- any requirements under the *Waste Avoidance and Resource Recovery Act 2007*;
- any requirements under the *Environmental Protection (Controlled Waste) Regulations 2004*; and
- any other requirements specified through State legislation.

It is the responsibility of the Licence Holder to ensure that any action or activity referred to in this Licence is permitted by, and is carried out in compliance with, other statutory requirements.

The Licence Holder must comply with the Licence. Contravening a Licence Condition is an offence under s.58 of the EP Act.

Responsibilities of a Licence Holder

Separate to the requirements of this Licence, general obligations of Licence Holders are set out in the EP Act and the regulations made under the EP Act. For example, the Licence Holder must comply with the following provisions of the EP Act:

- the duties of an occupier under section 61; and
- restrictions on making certain changes to Prescribed Premises unless the changes are in accordance with a works approval, Licence, closure notice or environmental protection notice (s.53).

Strict penalties apply for offences under the EP Act.

Reporting of incidents

The Licence Holder has a duty to report to DWER all discharges of waste that have caused or are likely to cause Pollution, Material Environmental Harm or Serious Environmental Harm, in accordance with s.72 of the EP Act.

Offences and defences

The EP Act and its regulations set out a number of offences, including:

- Offence of emitting an Unreasonable Emission from any Premises under s.49.
- Offence of causing Pollution under s.49.
- Offence of dumping Waste under s.49A.
- Offence of discharging Waste in circumstances likely to cause Pollution under s.50.
- Offence of causing Serious Environmental Harm (s.50A) or Material Environmental Harm (s.50B).
- Offence of causing Emissions which do not comply with prescribed standards (s.51).
- Offences relating to Emissions or Discharges under regulations prescribed under the EP Act, including materials discharged under the *Environmental Protection (Unauthorised Discharges) Regulations 2004 (WA)*.
- Offences relating to noise under the *Environmental Protection (Noise) Regulations 1997 (WA)*.

Section 53 of the EP Act provides that a Licence Holder commits an offence if Emissions are caused, or altered from a Prescribed Premises unless done in accordance with a Works Approval, Licence or the requirements of a Closure Notice or an Environmental Protection Notice.

Defences to certain offences may be available to a Licence Holder and these are set out in the EP Act. Section 74A(b)(iv) provides that it is a defence to an offence for causing Pollution, in respect of an Emission, or for causing Serious Environmental Harm or Material Environmental Harm, or for discharging or abandoning Waste in water to which the public has access, if the Licence Holder can prove that an Emission or Discharge occurred in accordance with a Licence.

This Licence specifies the Emissions and Discharges, and the limits and Conditions which must be satisfied in respect of Specified Emissions and Discharges, in order for the defence to offence provision to be available.

Authorised Emissions and Discharges

The Specified and General Emissions and Discharges from Primary Activities conducted on the Prescribed Premises are authorised to be conducted in accordance with the Conditions of this Licence.

Emissions and Discharges caused from other activities not related to the Primary Activities at the Premises have not been Conditioned in this Licence. Emissions and Discharges from other activities at the Premises are subject to the general provisions of the EP Act.

Amendment of licence

The Licence Holder can apply to amend the Conditions of this Licence under s.59 of the EP Act. An application form for this purpose is available from DWER.

The CEO may also amend the Conditions of this Licence at any time on the initiative of the CEO without an application being made.

Amendment Notices constitute written notice of the amendment in accordance with s.59B(9) of the EP Act.

Duration of Licence

The Licence will remain in force for the duration set out on the first page of this Licence or until it is surrendered, suspended or revoked in accordance with s.59A of the EP Act.

Suspension or revocation

The CEO may suspend or revoke this Licence in accordance with s.59A of the EP Act.

Fees

The Licence Holder must pay an annual licence fee. Late payment of annual licence fees may result in the licence ceasing to have effect. A licence that has ceased to have effect due to non-payment of annual licence fees continues to exist; however, it ceases to provide a defence to an offence under s.74A of the EP Act.

Late fees are a component of annual licence fees and should a Licence Holder fail to pay late fees within the time specified the licence will similarly cease to have effect.

Definitions and interpretation

Definitions

In this Licence, the terms in Table 1 have the meanings defined.

Table 1: Definitions

Term	Definition
ACN	Australian Company Number
Amendment Notice	means an amendment granted under s.59 of the EP Act in accordance with the procedure set out in s.59B of the EP Act.
Annual Period	means a 12 month period commencing from 1 July until 30 June.
Condition	means a condition to which this Licence is subject under s.62 of the EP Act.
Books	has the same meaning given to that term under the EP Act.
CEO	means Chief Executive Officer. CEO for the purposes of notification means: Director General Department Administering the <i>Environmental Protection Act 1986</i> Locked Bag 33 Cloisters Square PERTH WA 6850 info@dwer.wa.gov.au
Compliance Report	means a report in a format approved by the CEO as presented by the Licence Holder or as specified by the CEO (guidelines and templates may be available on the Department's website).
Department	means the department established under section 35 of the <i>Public Sector Management Act 1994</i> and designated as responsible for the administration of Part V, Division 3 of the EP Act.
Department Request	means a request for Books or other sources of information to be produced, made by an Inspector or the CEO to the Licence Holder in writing and sent to the Licence Holder's address for notifications, as described at the front of this Licence, in relation to: <ul style="list-style-type: none"> (a) compliance with the EP Act or this Licence; (b) the Books or other sources of information maintained in accordance with this Licence; or (c) the Books or other sources of information relating to Emissions from the Premises.
Discharge	has the same meaning given to that term under the EP Act.
DWER	Department of Water and Environmental Regulation.

Emission	has the same meaning given to that term under the EP Act.
Environmental Harm	has the same meaning given to that term under the EP Act.
EP Act	means the <i>Environmental Protection Act 1986</i> (WA).
EP Regulations	means the <i>Environmental Protection Regulations 1987</i> (WA).
Implementation Agreement or Decision	has the same meaning given to that term under the EP Act.
Inspector	means an inspector appointed by the CEO in accordance with s.88 of the EP Act.
Licence	refers to this document, which evidences the grant of a Licence by the CEO under s.57 of the EP Act, subject to the Conditions.
Licence Holder	refers to the occupier of the premises being the person to whom this Licence has been granted, as specified at the front of this Licence.
Material Environmental Harm	has the same meaning given to that term under the EP Act.
Pollution	has the same meaning given to that term under the EP Act.
Premises	refers to the premises to which this Licence applies, as specified at the front of this Licence and as shown on the map in Schedule 1 to this Licence.
Prescribed Premises	has the same meaning given to that term under the EP Act.
Primary Activities	refers to the Prescribed Premises activities listed on the front of this Licence as described in Schedule 2, at the locations shown in Schedule 1.
Reportable Event	means an exceedance above the target limit specified in Column 4 of Table 6, in Schedule 3.
Serious Environmental Harm	has the same meaning given to that term under the EP Act.
Unreasonable Emission	has the same meaning given to that term under the EP Act.
Waste	has the same meaning given to that term under the EP Act.

Interpretation

In this Licence:

- (a) the words 'including', 'includes' and 'include' will be read as if followed by the words 'without limitation';
- (b) where any word or phrase is given a defined meaning, any other part of speech or other grammatical form of that word or phrase has a corresponding meaning;
- (c) where tables are used in a Condition, each row in a table constitutes a separate Condition;
- (d) any reference to an Australian or other standard, guideline or code of practice in this Licence means the version of the standard, guideline or code of practice in force at the time of granting of this Licence and includes any amendments to the standard, guideline or code of practice which may occur from time to time during the course of the Licence; and
- (e) unless specified otherwise, any reference to a section of an Act refers to that section of the EP Act.

Conditions

Emissions

1. The Licence Holder must not cause any Emissions from the Primary Activities on the Premises except for general Emissions described in Column 1 of Table 2 subject to the exclusions, limitations or requirements specified in Column 2 of Table 2.

Table 2: Authorised Emissions table

Column 1	Column 2
Emission type	Exclusions/Limitations/Requirements
General Emissions (excluding Specified Emissions)	
Emissions which: <ul style="list-style-type: none">• arise from the Primary Activities set out in Schedule 2	Emissions excluded from General Emissions are: <ul style="list-style-type: none">• Unreasonable Emissions; or• Emissions that result in, or are likely to result in, Pollution, Material Environmental Harm or Serious Environmental Harm; or• Discharges of Waste in circumstances likely to cause Pollution; or• Emissions that result, or are likely to result in, the Discharge or abandonment of Waste in water to which the public has access; or• Emissions or Discharges which do not comply with an Approved Policy; or• Emissions or Discharges which do not comply with a prescribed standard; or• Emissions or Discharges which do not comply with the conditions in an Implementation Agreement or Decision; or• Emissions or Discharges the subject of offences under regulations prescribed under the EP Act, including materials discharged under the Environmental <i>Protection (Unauthorised Discharges) Regulations 2004</i>.

Infrastructure and equipment

2. The Licence Holder must ensure that the infrastructure and equipment specified in Column 1 of Table 3 is maintained in good working order and operated in accordance with the requirements specified in Column 2 of Table 3.

Table 3: Infrastructure and equipment controls table

Column 1	Column 2
Site infrastructure and equipment	Operational requirements
Crushing and screening plant	A mobile truck is to be used to spray water to manage dust emissions on the access roads, laydown areas, stockpiles and verges of sealed roads.
Drainage management	Silt traps are to be constructed and maintained to contain a 1 in 20 year rain event on site during operations.
Hydrocarbon management (Fuel and oil storage, and refueling servicing and maintenance and spill response)	<p>Fuel and oils to be stored in accordance with Australian standards in self-bunded fuel tanks.</p> <p>Engine and hydraulic oils to be stored in the service truck and not on the ground.</p> <p>Fuel and oil to be stored at least 100m from watercourses.</p> <p>No refueling is to take place within 100m of any watercourses.</p> <p>Waste oils, filters and other materials to be disposed appropriately off site.</p> <p>Site Personnel are to be trained in the use of fire suppressing equipment.</p> <p>Spill management equipment to be available near fuel storage areas.</p> <p>Spills to be contained immediately and removed within 24 hours to minimise potential for contamination.</p>

Record-keeping

3. The Licence Holder must maintain accurate and auditable Books including the following records, information, reports and data required by this Licence:
- (a) the calculation of fees payable in respect of this Licence;
 - (b) the works conducted in accordance with Condition 2 of this Licence;
 - (c) the maintenance of infrastructure required to ensure that it is kept in good working order in accordance with Condition 2 of this Licence;
 - (d) complaints received under Condition 4 of this Licence;
- In addition, the Books must:
- (e) be legible;

- (f) if amended, be amended in such a way that the original and subsequent amendments remain legible and are capable of retrieval;
 - (g) be retained for at least 3 years from the date the Books were made; and
 - (h) be available to be produced to an Inspector or the CEO.
- 4.** The Licence Holder must record the number and details of any complaints received by the Licence Holder relating to its obligations under this Licence and its compliance with Part V of the EP Act at the Premises, and any action taken by the Licence Holder in response to the complaint. Details of complaints must include:
- (a) an accurate record of the concerns or issues raised, for example a copy of any written complaint or a written note of any verbal complaints made;
 - (b) the name and contact details of the complainant, if provided by the complainant;
 - (c) the date of the complaint; and
 - (d) the details and dates of the actions taken by the Licence Holder in response to the complaints.
- 5.** The Licence Holder must submit to the CEO, no later than 31 August, a Compliance Report indicating the extent to which the Licence Holder has complied with the Conditions in this Licence for the preceding Annual Period.
- 6.** The Licence Holder must comply with a Department Request, within 14 days from the date of the Department Request or such other period as agreed to by the Inspector or the CEO.

Schedule 1: Maps

Premises map

The Premises are shown in the map below.

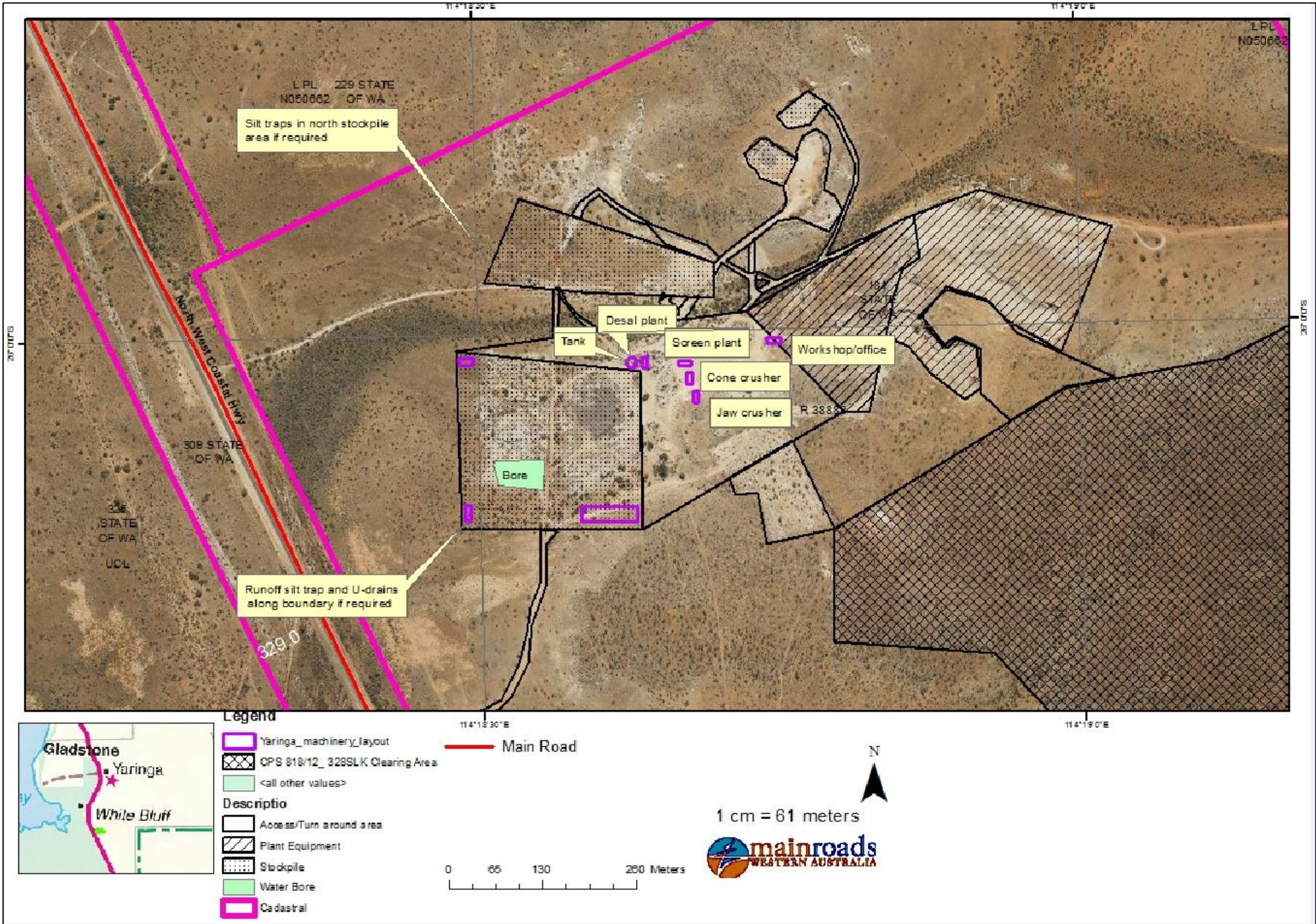


Figure 1: site layout

Schedule 2: Primary Activities

At the time of assessment, Emissions and Discharges from the following Primary Activities were considered in the determination of the risk and related Conditions for the Premises.

The Primary Activities are listed in Table 4:

Table 4: Primary Activities

Primary Activity	Premises production or design capacity
Category 12 – Screening etc. of material: Premises (other than Premises within Category 5 or 8) on which material extracted from the ground is screened, washed, crushed, ground, milled, sized or separated	499,000 tonnes per annual period

Infrastructure and equipment

The Primary Activity infrastructure and equipment situated on the Premises is listed in Table 5.

Table 5: Infrastructure and equipment

Infrastructure and equipment	Plan reference
Crushing and screening plant	As shown in Figure 1 of Schedule 1
Drainage management	As shown in Figure 1 of Schedule 1

Site layout

The Primary Activity infrastructure and equipment is set out on the Premises in accordance with the site layout specified on the Premises map in Schedule 1.



Decision Report

Application for Licence

Division 3, Part V *Environmental Protection Act 1986*

Licence Number L9063/2017/1

Applicant Main Roads Western Australia

ACN Not applicable

File Number DER2017/000695

Premises Yaringa Quarry
North West Coastal Highway
Crown Reserve 38883
Lot 181 on Deposited Plan 185111, CLT or LR Volume 3148
Folio 674.
Land ID 1957155, PIN 712788

Date of Report 6 April 2018

Status of Report Final

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1. Definitions of terms and acronyms

In this Decision Report, the terms in Table 1 have the meanings defined.

Table 1: Definitions

Term	Definition
AACR	Annual Audit Compliance Report
ACN	Australian Company Number
AER	Annual Environment Report
Category/ Categories/ Cat.	categories of Prescribed Premises as set out in Schedule 1 of the EP Regulations
CS Act	<i>Contaminated Sites Act 2003 (WA)</i>
Decision Report	refers to this document.
Delegated Officer	an officer under section 20 of the EP Act.
Department	means the department established under section 35 of the <i>Public Sector Management Act 1994</i> and designated as responsible for the administration of Part V, Division 3 of the EP Act.
DWER	<p>Department of Water and Environmental Regulation</p> <p>As of 1 July 2017, the Department of Environment Regulation (DER), the Office of the Environmental Protection Authority (OEPA) and the Department of Water (DoW) amalgamated to form the Department of Water and Environmental Regulation (DWER).</p> <p>DWER was established under section 35 of the <i>Public Sector Management Act 1994</i> and is responsible for the administration of the <i>Environmental Protection Act 1986</i> along with other legislation.</p>
DBCA	Department of Biodiversity, Conservation and Attractions
EMP	Environmental Management Plan
EPA	Environmental Protection Authority
EP Act	<i>Environmental Protection Act 1986 (WA)</i>
EP Regulations	<i>Environmental Protection Regulations 1987 (WA)</i>
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999 (Cth.)</i>
Existing Licence	The Licence issued under Part V, Division 3 of the EP Act and in force prior to the commencement of, and during this Review
kVA	kilovoltamp

Licence Holder	Main Roads Western Australia
Minister	the Minister responsible for the EP Act and associated regulations
Noise Regulations	<i>Environmental Protection (Noise) Regulations 1997 (WA)</i>
NWCH	North West Coastal Highway
Occupier	has the same meaning given to that term under the EP Act.
OEPA	Office of the Environment Protection Authority
Prescribed Premises	has the same meaning given to that term under the EP Act.
PEIA	Preliminary Environmental Impact Assessment
Premises	refers to the premises to which this Decision Report applies, as specified at the front of this Decision Report
Primary Activities	as defined in Schedule 2 of the Revised Licence
Risk Event	As described in <i>Guidance Statement: Risk Assessment</i>
RIWI Act	<i>Rights in Water and Irrigation Act 1914</i>
µg/m ³	micrograms per cubic metre
µg/L	micrograms per litre

2. Purpose and scope of assessment

An application for a concurrent works approval and licence was submitted by Main Roads Western Australia (the Applicant) for a gravel crushing and screening facility on 11 May 2017. The application triggers a prescribed premises category (number 12) in accordance with Schedule 1 Part 1 of the EP Regulations. Works Approval W6059/2017/1 was subsequently issued to the Applicant on 22 September 2017 for the construction phase of the project. A compliance report was submitted by the applicant on 22 February 2018 that confirmed the project had been constructed in accordance with Works Approval. This Decision Report assesses emissions and discharges associated with the operation of the prescribed premises. Table 2 lists the Prescribed Premises category that has been applied for.

Table 2: 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 the ground is screened, washed, crushed, ground, milled, sized or separated	499,000 tonnes per annual period

2.1 Application details

Table 3 lists the documents submitted during the assessment process.

Table 3: Documents and information submitted during the assessment process

Document/information description	Date received
<p>Application package comprising:</p> <ul style="list-style-type: none"> • Yaringa quarry works approval application form • Attachment 1-Yaringa Quarry Vertices co-ordinates • Attachment 2-Yaringa Quarry Proposed Premises Map • Attachment 3A-Yaringa Quarry Estimated road building production program • Attachment 3B-Yaringa Clearing Area • Attachment 3-Key Plant and Equipment Nov 2016 • Attachment 3-Process Flowchart • Attachment 3-Proposed layout of machinery on site • Attachment 3-Yaringa Stockpile Layout Plan • Attachment 7-Nearest sensitive receiver from project area • Attachment 7-Siting and location Yaringa Quarry • Attachment 7-Yaringa Quarry Proximity to Hamelin Pool and Shark Bay • Attachment 10-Fee Calculator Outputs • Attachment 11-Yaringa Quarry PEIA and EMP • Biological Survey • List of attachments Yaringa Quarry 	11 May 2017
Supporting information: Responses to DER request for more information	7 June 2017

Supporting information: Additional responses to response to DER request for more information	24 July 2017
Supporting information: Responses to requests for information	9 August 2017
Supporting information: Prescribed premises design threshold	9 August 2017
Construction compliance report	22 February 2018

3. Background

The Applicant is recommencing use of a quarry that has been in use since 1975 and most recently in 2003. While the applicant has advised that activities at the Premises have complied with requirements applicable at the time, no previous Works Approval or Licence has been issued for the premises, with the exception of W6059/2017/1.

The Premises lies within Crown Reserve 38883 adjacent to the North West Coastal Highway in the Shire of Carnarvon lying approximately 6km east of the nearest part of the world heritage site of Shark Bay and 11km east of Hamelin Pool.

The purpose of the quarry is to supply crushed road building material to enable upgrade of a 55km section of the North West Coastal Highway (NWCH), and thereby enable passage of triple road trains of 53.5 meters (m) in length. The Applicant has advised that the Premises is the only source of road building material over a 400km stretch of NWCH and is likely to be used for ongoing maintenance every five years.

The project involves the construction of a circuit of mobile crushing and screening machines to produce gravel of various size specifications as well as re-establishing access tracks and hard stands to stockpile the product until required for use and after it has been processed.

4. Overview of Premises

4.1 Operational aspects

A mobile crushing and screening plant will be used to process approximately 1 million tonnes of road building material. The applicant expects the works to take place over five years commencing in financial year 17/18. Material requirements in the first year are expected to be 360,000 tonnes and 166,000 tonnes thereafter. Material may, however, be extracted over three years, commencing in financial year 17/18 with 360,000 tonnes in the first year and 332,000 tonnes in each of the following two years. Ongoing maintenance is expected to require sourcing of approximately 60,000 tonnes of material every five years. Actual operational periods will depend on the availability of finance, with only finance for the first stage currently committed. The applicant's expected schedule is shown in Table 4.

Table 4: Proposed gravel extraction rates and schedule

	Financial year					
	17/18	Year 2	Year 3	Year 4	Year 5	Total
Material requirement – five year option (tonnes)	360,000	166,000	166,000	166,000	166,000	1,024,000
Material requirement – three year option (tonnes)	360,000	332,000	332,000	-	-	1,024,000

Project operations will take place on a campaign basis of approximately 20 weeks each year. The project will involve making gravel of two size fractions, being less than 22mm for base-course usage and less than 75mm for sub-base course usage.

Clearing

The application involves clearing of a total of 87.933 Hectares (Ha) of native vegetation, of which approval to clear 59.933 Ha has been granted under the *Environmental Protection Act 1986* (EP Act) through clearing permit CPS818/12. Approval to clear the remaining 28 Ha was granted through WA6059/2017/1 as shown in Figure 1.

Excavation and Storage

Excavation will occur to a depth of 6m using explosives and excavators. Explosives will not be stored on site but brought in for use as required. The Applicant does not expect to encounter groundwater during the excavation as none was located in test drilling to a depth of 8m by the Applicant.

The excavated material will be stored in stockpiles on existing hard stands that will be graded to flow with natural contours and not significantly divert or impede drainage other than to collect and settle out sediment in silt traps. The stockpiled material will then be crushed and screened to produce material up to sub-base gravel less than 75mm and base-course gravel of less than 22mm as shown in the process diagram in Figure 2. Any surplus material will be placed in two existing quarry pits on the north eastern side of the mesa ridge line and then graded and battered to meet Main Roads specifications for redundant pits. Post mining rehabilitation will be undertaken to meet Main Roads revegetation guidelines.

Fuel

Fuel is stored in a 50kL self bunded fuel tank with refuelling and servicing undertaken at least 100m from watercourses. Daily fuel usage in vehicles and equipment is expected to be 8000L/day. Energy for the project administration and office facilities is obtained from a 40kVA diesel generator consuming 100L / day. Site layout is shown in Figure 3.

Accommodation, operational hours and waste management

Project staff are accommodated offsite at the Overlander or Wooramel roadhouses, with operational hours being between 7am to 7pm Monday to Saturday. Waste from the Premises, including sewage, is removed for offsite disposal by licensed contractors.

Groundwater Licence and dust management

The Applicant holds a groundwater licence (GWL183831) which grants approval to extract 250,000kL per year of groundwater. This will be used for dust suppression including watering of unsealed roads, verges of sealed roads, laydown areas, stockpiles, truck loads, benches, conveyor belts and transfer points. Other dust management measures involve speed restrictions and minimising clearing and transport distances.

Stormwater

Silt traps are at low points of the stockpile and have been designed to be large enough to contain rainfall from a 1 in 10 year event for two hours based on data from the Bureau of Meteorology (BOM) during construction and a 1 in 20 year event during operations. The locations are shown in Figure 3.



Figure 1: Vegetation clearing areas

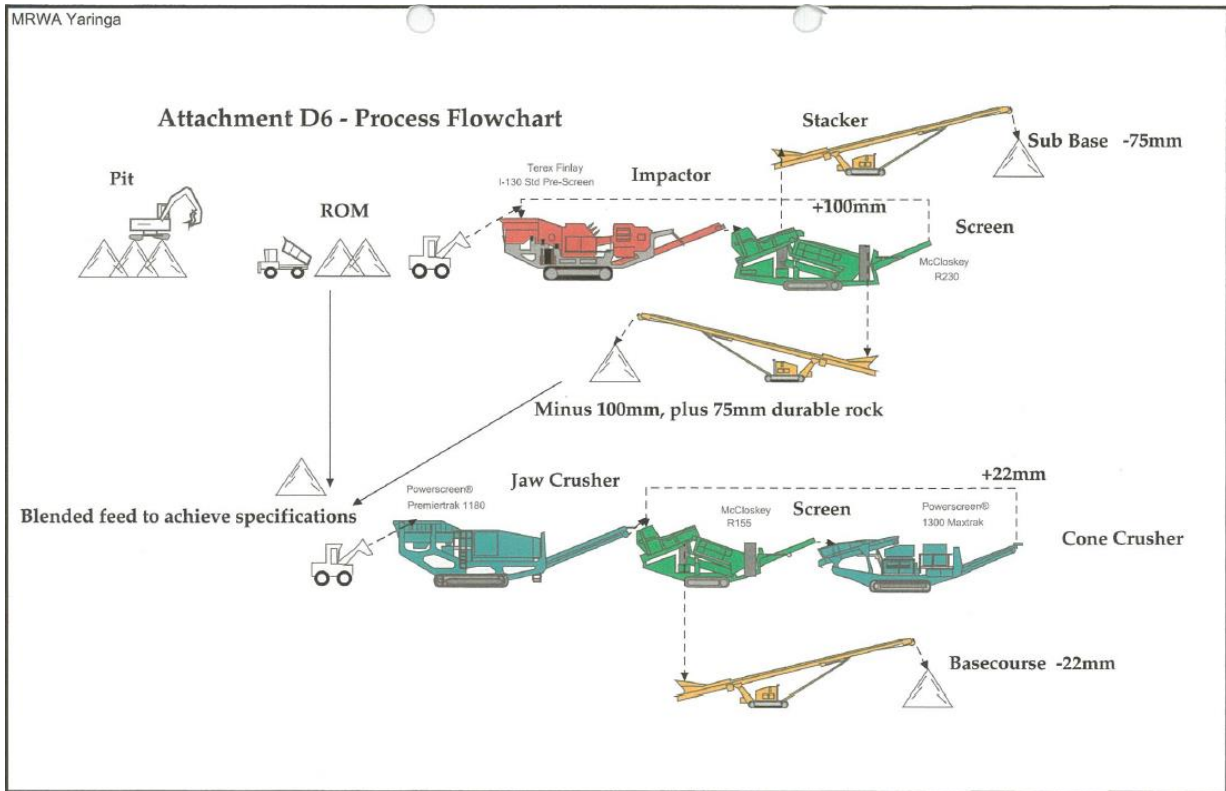


Figure 2: Process flowchart

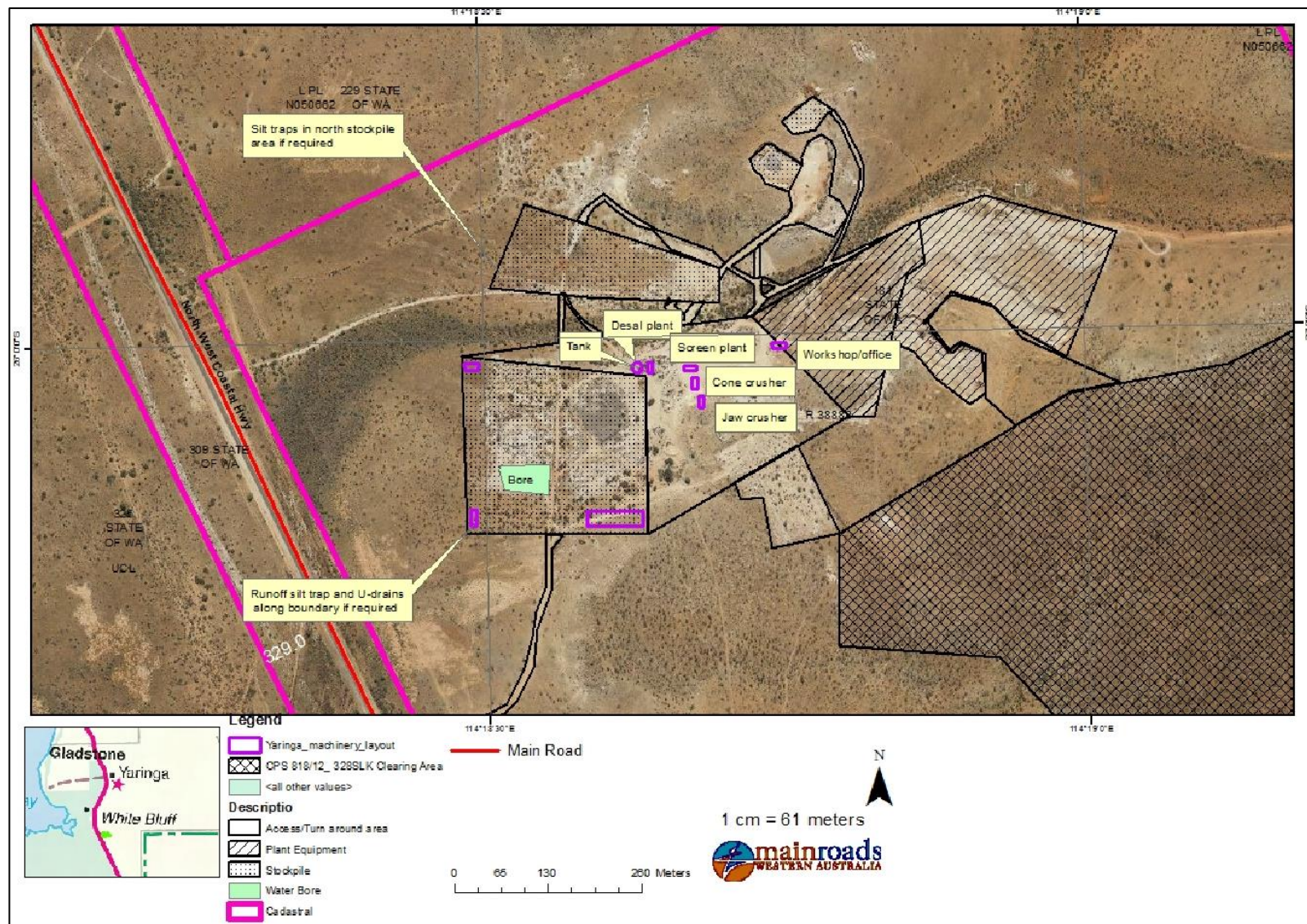


Figure 3: site layout

4.2 Infrastructure

The infrastructure, as it relates to Category 12 activities, is detailed in Table 5 and with reference to the Site Plan.

Table 5 lists infrastructure associated with each prescribed premises category.

Table 5: Crushing and screening facility Category 12 infrastructure

	Infrastructure
	Prescribed Activity Category 12
A crushing and screening plant will process approximately 1.02million tonnes of road building material from Reserve 38883 over three to five years in campaigns of approximately 10 weeks. It will involve drilling and blasting to excavate material, followed by crushing and screening. Approximately 60,000 tonnes will be sourced every five years thereafter for ongoing maintenance.	
1	Terex finlay horizontal shaft impact crusher
2	Premier track jaw crusher 1100x800
3	McCloskey Screen R155
4	Kleeman Screen MS21
5	Pegson cone crusher 1300
6	Wheel loader Komatsu WA 320
7	Wheel loader Komatsu WA 500
8	2 x Wheel loader Komatsu WA 600
9	Komatsu 85 tonne excavator
10	Volvo 48 tonne excavator
11	Komatsu 45 tonne excavator with rock breaker
312	Komatsu 465 dump truck
13	Komatsu 405 dump truck
14	Cat D9T dozer
15	John Deer 872D grader
16	BHB Linmac crane
17	Isuzu 18,-000 water truck
Directly related activities	
18	Generator
19	Isuzu service truck
20	Atlas Copco rock drill

	Infrastructure
21	Site office / lunch room / Ablution block

4.3 Exclusions to the Premises

Additional activities that will be undertaken by the applicant that are not within the scope of this assessment include:

- Extraction of gravel, including the use of blasting, and transport off-site.
- Clearing of native vegetation as approved by clearing permit CPS818/12 and under W6059/2017/1.
- Site rehabilitation after cessation of quarrying.
- Groundwater abstraction is regulated under the *Rights and Water Irrigation Act 1914* (RIWI Act) and therefore does not form part of this assessment.
- Onsite power generation for administration functions will be provided using a 40KVa diesel generator consuming 100L/day. This will be below levels that will trigger Prescribed Premises categories 52 and 87, and therefore does not form part of this assessment.
- Administration and office functions.
- Sewage management. Effluent produced will be removed for offsite disposal and therefore does not form part of this assessment.
- Fuel storage. Fuel will be stored in a 50kL self bunded fuel tank, which is below the threshold for regulation a Category 73 Prescribed Premises and therefore not part of this assessment.

5. Legislative context

Table 6 summarises approvals relevant to the assessment.

Table 6: Relevant approvals and tenure

Legislation	Number	Approval Holder	Approval
<i>Rights in Water and Irrigation Act 1914</i>	GWL 183831	Main Roads Western Australia	Approval to take up to 250,000kL water per year.
<i>Environmental Protection Act 1986</i>	CPS 818/12	Commissioner of Main Roads Western Australia	Existing Approval to clear 59.933Ha of Crown Reserve 83338

5.1 Part IV of the EP Act

The proposal has not been referred to Part IV and is not subject to conditions under Part IV of the EP Act. The Delegated Officer has determined that no referral is necessary on the basis of the low environmental risk.

5.2 Contaminated sites

The site is not listed on DWER's Contaminated Sites Database.

5.3 Other relevant approvals

5.3.1 Federal Legislation

The proposal has not been referred or assessed under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth). The Delegated Officer has determined that no

referral is necessary on the basis of the low environmental risk.

5.4 Part V of the EP Act

5.4.1 Applicable regulations, standards and guidelines

The overarching legislative framework of this assessment is the EP Act and EP Regulations. DWER guidance statements that inform this assessment are:

- *Guidance Statement: Regulatory Principles (July 2015)*
- *Guidance Statement: Publication of Annual Audit Compliance Reports (May 2016)*
- *Guidance Statement: Setting Conditions (August 2016)*
- *Guidance Statement: Licence Duration (August 2016)*
- *Guidance Statement: Environmental Siting (November 2016)*
- *Guidance Statement: Land Use Planning (February 2017)*
- *Guidance Statement: Decision Making (February 2017)*
- *Guidance Statement: Risk Assessments (February 2017)*

5.4.2 Clearing

Clearing of a total of 87.933 Ha has been approved by DWER for the premises, with 59.933 Ha approved under clearing permit 818/12 and a further 28 Ha under Works Approval W6059/2017/1, with these locations shown in Figure 1.

6. Consultation

The Application was advertised in *The West Australian* newspaper on 3 June 2017 for a comment period ending on 24 July 2017. No comments were received.

Letters inviting comment on the Application were sent to DBCA, Shire of Carnarvon and former Department of Water on 3 June 2017 for a comment period ending on 24 July 2017. No comments were received from the Shire or former Department of Water.

The DBCA advised that the Premises is located directly to the east of the Yaringa Pastoral lease, a portion of which is managed by the DBCA for conservation purposes. The DBCA also advised that the lease area exhibits a high degree of biodiversity and acts as a buffer to the Shark Bay World Heritage area and Hamelin Pool Marine Nature Reserve. The DBCA recommended the following:

1. Emissions and discharges from soil erosion, particularly sediment transport from surface flow, should be contained onsite to avoid downstream impacts in the proposed Yaringa Reserve. Clearing of the creekline should be avoided to assist in surface stabilisation.
2. The environmental management plan does not address weeds, surface run-off and drainage. These should be included, particularly to address weed spread via the creekline.
3. Impacts to the priority 3 species (*Acacia sclerosperma* subsp. *glaucescens* and *Acacia drepanophylla*) to be avoided where possible and a close out report indicating the number of plants taken as a result be provided to the DBCA, Shark Bay district. Both species are to be included in rehabilitation plans if possible. *A. drepanophylla* is locally common but regionally restricted, while *A. sclerosperma* is common within its range.

Recommendations 1 and 2 are addressed in sections 8 and 9 of this report dealing with risk assessment and regulatory controls. Recommendation 3 is outside of the scope of this assessment to address. The applicant has, however, been requested to have consideration of this request.

7. Location and siting

7.1 Siting context

The premises is located in crown reserve 38883, approximately 140km south of Carnarvon adjacent to North West Coastal Highway. It is approximately 6km east of the nearest part of the world heritage site of Shark Bay and 11km east of Hamelin Pool.

7.2 Residential and sensitive Premises

The distances to residential and sensitive receptors are detailed in Table 7.

Table 7: Receptors and distance from activity boundary

Sensitive Land Uses	Distance from Prescribed Activity
Residential Premises – Yaringa Homestead	5.9km north of the Premises

7.3 Specified ecosystems

Specified ecosystems are areas of high conservation value and special significance that may

be impacted as a result of activities at or Emissions and Discharges from the Premises. The distances to specified ecosystems are shown in Table 8. Table 8 also identifies the distances to other relevant ecosystem values which do not fit the definition of a specified ecosystem, and has been modified to align with the *Guidance Statement: Environmental Siting*.

Table 8: Environmental values

Specified ecosystems	Distance from the Premises
Ramsar Sites in Western Australia	The nearest Ramsar site is approximately 220km to the north
Important wetlands – Western Australia	The world heritage area of Shark Bay east lies 5km to the west with Hamelin Pool 11km to the west
Department of Biodiversity, Conservation and Attractions Managed Lands and Waters	<p>DBCA managed lands nearby include:</p> <ul style="list-style-type: none"> • Hamelin pool marine nature reserve (10.5km west) • Shark bay marine park (6.9km north west) • Sedimentary deposits reserve (3km west) <p>Unnamed reserve (directly adjacent to the premises west of North West Coastal Highway)</p>
Fish Habitat Protection Zones	The nearest fish habitat protection zone is approximately 140km to the north
Threatened Ecological Communities and Priority Ecological Communities	The premises lies within the buffer of a priority 4 threatened ecological community
Biological component	Distance from the Premises
Threatened/Priority Flora	<p>DWERs clearing assessment report noted that a total of six priority flora species have been mapped within the local area. The closest records are the Priority 2 species <i>Scaevola chrysopogon</i> and the Priority 3 species <i>Acacia sclerosperma subsp. glaucescens</i>, both mapped approximately 820 metres from the application area.</p> <p>The DBCA has also advised that the Priority 3 species <i>Acacia drepanophylla</i> is locally common, but regionally restricted.</p> <p>The Applicant has advised that 61 plants of <i>A. sclerosperma subsp. Glaucescens</i> have been identified on site.</p>
Threatened/Priority Fauna	<p>The DWERs GIS database contains the following data on threatened / priority fauna:</p> <ul style="list-style-type: none"> • A schedule 6 fauna species ((fauna that is of special conservation needs as conservation dependent fauna) 3km to the north west • A schedule 6 fauna species (other specially protected fauna) 11km to the west

7.4 Groundwater and water sources

The distances to groundwater and water sources are shown in Table 9.

Table 9: Groundwater and water sources

Groundwater and water sources	Distance from Premises	Environmental value
Public drinking water source areas	150 km to the north	Water is used for potable purposes

Major watercourses/waterbodies	The premises is intersected by a drainage water course identified as minor and non-permanent by the DWER GIS datasets. These lead towards Shark Bay	The watercourse is linked to the marine ecosystem
Groundwater	<p>The applicant has stated that drilling to a depth of 8m did not encounter any groundwater. This is 2m deeper than expected excavation levels. The applicant has also stated that some minor levels of perched ground water may be encountered owing to the nature of the target material.</p> <p>The premises lies within an area subject to the Carnarvon Artesian Basin Water Management plan and the Exmouth Groundwater Sub-Area Groundwater Allocation Plan.</p>	Water from the resource is used for potable, pastoral, commercial and other purposes

7.5 Soil type

Table 10 details soil types and characteristics relevant to the assessment.

Table 10: Soil and sub-soil characteristics

Groundwater and water sources	Distance from Premises	Environmental Value
Soil type classification	The premises overlies soil type classification DD20 which are described as low plains with residuals of tertiary limestone forming hills and mesas to 50 ft high. Chief soils of the plains are brown calcareous earths (Gc1.21 and Gc1.22) with shallow calcareous loams (Um1.3) on limestone. Soils of the residual ridges are probably calcareous loams (Um1.3).	No identified significance consistent with the DWERs environmental siting guideline
Acid sulfate soil risk	DWER GIS mapping shows the site to have a moderate to low risk of acid sulphate soils, extending west to Shark Bay. The nearest high to moderate risk acid sulphate soil location is 9km to the south-west adjacent to Hamelin Pool.	The land and waters to the west of the premises are part the DBCA conservation estate and a world heritage area.

7.6 Other site characteristics

The locations of other receptors are shown in Table 11.

Table 11: Other landscape features, relevant factors or receptors

Other receptors or areas of concern	Location
Telstra repeater station	0.7km north of the premises, adjacent to NWCH

7.7 Meteorology

The nearest BOM meteorology station is at Hamelin Pool, 45 km south-west of the Premises. Average annual rainfall there is 210.4mm, mainly occurring in the winter months of May to August, where monthly rainfall varies between 21.1 to 47mm. The number of days with more than 1mm of rainfall in this period varies between 3.0 to 4.8mm.

8. Risk assessment

8.1 Determination of emission, pathway and receptor

In undertaking its risk assessment, DWER will identify all potential emissions pathways and potential receptors to establish whether there is a Risk Event which requires detailed risk assessment. To establish a Risk Event there must be an emission, a receptor which may be exposed to that emission through an identified actual or likely pathway, and a potential adverse effect to the receptor from exposure to that emission. Where there is no actual or likely pathway and/or no receptor, the emission will be screened out and will not be considered as a Risk Event. In addition, where an emission has an actual or likely pathway and a receptor which may be adversely impacted, but that emission is regulated through other mechanisms such as Part IV of the EP Act, that emission will not be risk assessed further and will be screened out. The identification of the sources, pathways and receptors to determine Risk Events are set out in Table 12 below.

Table 12: Identification of emissions, pathway and receptors during operation

Risk Events						Continue to detailed risk assessment	Reasoning
Sources/Activities		Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts		
Category 12 – Screening of Material etc.	Vehicle movements on unsealed access roads; crushing, screening of raw material, dust lift off from stockpiles and as a result of moving material and vehicle loading.	Dust	<p>Nearest residence (Yaringa Homestead) located 5.9km north of the Premises.</p> <p>North West Coastal Highway, directly adjacent to the west of the Premises</p> <p>Ecosystems adjacent to storage area including Shark Bay World Heritage (11km west) and nature reserves (directly adjacent), and a minor non-permanent drainage watercourse on site.</p>	Air / wind dispersion	Amenity and potential suppression of photosynthetic and respiratory functions.	No	<p>To manage dust impacts the Applicant uses a water cart for spraying off unsealed roads, verges of sealed roads, laydown areas, stockpiles, truck loads, benches, conveyor belts and transfer points. Other dust management measures involve speed restrictions and minimising clearing and transport distances.</p> <p>The Delegated Officer considers that the separation distance to the sensitive receptors is a sufficient buffer to prevent dust impacts. The short duration of the activity (21 days) has also been noted.</p> <p>The Delegated Officer considers that Section 49 of the <i>Environmental Protection Act 1986</i> and the <i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i> are sufficient to regulate dust emissions during operation.</p>

Risk Events						Continue to detailed risk assessment	Reasoning
Sources/Activities		Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts		
		Noise	Nearest residence located 5.9km north of the Premises. North West Coastal Highway, directly adjacent to the west of the Premises	Air	Amenity	No	The Delegated Officer considers that the separation distance to the sensitive receptors is a sufficient buffer to prevent noise impacts. The provisions of the <i>Environmental Protection (Noise) Regulations 1997</i> are also applicable.
	Sediment and weed laden water	Sediment and weed transport off site	North West Coastal Highway, directly adjacent to the west of the Premises Ecosystems adjacent to storage area including Shark Bay World Heritage (11km west) and nature reserves (directly adjacent), and a minor non-permanent drainage watercourse on site.	Direct discharge and overland flow	Soil contamination inhibiting vegetation growth and survival. Weed transport. Health impacts to fauna	Yes	See section 8.4
	Bulk fuel storage and refuelling	Breach of containment or spill causing hydrocarbon discharge to land	North West Coastal Highway, directly adjacent to the west of the Premises Ecosystems adjacent to storage area including Shark Bay World Heritage (11km west) and nature reserves (directly adjacent), and a minor non-permanent drainage watercourse on site.	Direct discharge	Soil and water contamination inhibiting vegetation growth and survival and health impacts to fauna	Yes	See section 8.5

8.2 Consequence and likelihood of risk events

A risk rating will be determined for risk events in accordance with the risk rating matrix set out in Table 14 below.

Table 13: Risk rating matrix

Likelihood	Consequence				
	Slight	Minor	Moderate	Major	Severe
Almost certain	Medium	High	High	Extreme	Extreme
Likely	Medium	Medium	High	High	Extreme
Possible	Low	Medium	Medium	High	Extreme
Unlikely	Low	Medium	Medium	Medium	High
Rare	Low	Low	Medium	Medium	High

DWER will undertake an assessment of the consequence and likelihood of the Risk Event in accordance with Table 15 below.

Table 14: Risk criteria table

Likelihood		Consequence		
The following criteria has been used to determine the likelihood of the Risk Event occurring.		The following criteria has been used to determine the consequences of a Risk Event occurring:		
			Environment	Public health* and amenity (such as air and water quality, noise, and odour)
Almost Certain	The risk event is expected to occur in most circumstances	Severe	<ul style="list-style-type: none"> onsite impacts: catastrophic offsite impacts local scale: high level or above offsite impacts wider scale: mid-level or above Mid to long-term or permanent impact to an area of high conservation value or special significance[^] Specific Consequence Criteria (for environment) are significantly exceeded 	<ul style="list-style-type: none"> Loss of life Adverse health effects: high level or ongoing medical treatment Specific Consequence Criteria (for public health) are significantly exceeded Local scale impacts: permanent loss of amenity
Likely	The risk event will probably occur in most circumstances	Major	<ul style="list-style-type: none"> onsite impacts: high level offsite impacts local scale: mid-level offsite impacts wider scale: low level Short-term impact to an area of high conservation value or special significance[^] Specific Consequence Criteria (for environment) are exceeded 	<ul style="list-style-type: none"> Adverse health effects: mid-level or frequent medical treatment Specific Consequence Criteria (for public health) are exceeded Local scale impacts: high level impact to amenity
Possible	The risk event could occur at some time	Moderate	<ul style="list-style-type: none"> onsite impacts: mid-level offsite impacts local scale: low level offsite impacts wider scale: minimal Specific Consequence Criteria (for environment) are at risk of not being met 	<ul style="list-style-type: none"> Adverse health effects: low level or occasional medical treatment Specific Consequence Criteria (for public health) are at risk of not being met Local scale impacts: mid-level impact to amenity
Unlikely	The risk event will probably not occur in most circumstances	Minor	<ul style="list-style-type: none"> onsite impacts: low level offsite impacts local scale: minimal offsite impacts wider scale: not detectable Specific Consequence Criteria (for environment) likely to be met 	<ul style="list-style-type: none"> Specific Consequence Criteria (for public health) are likely to be met Local scale impacts: low level impact to amenity
Rare	The risk event may only occur in exceptional circumstances	Slight	<ul style="list-style-type: none"> onsite impact: minimal Specific Consequence Criteria (for environment) met 	<ul style="list-style-type: none"> Local scale: minimal to amenity Specific Consequence Criteria (for public health) met

[^] Determination of areas of high conservation value or special significance should be informed by the *Guidance Statement: Environmental Siting*.

* In applying public health criteria, DWER may have regard to the Department of Health's *Health Risk Assessment (Scoping) Guidelines*.

"onsite" means within the Prescribed Premises boundary.

8.3 Acceptability and treatment of Risk Event

DWER will determine the acceptability and treatment of Risk Events in accordance with the Risk treatment table 16 below.

Table 15: Risk treatment table

Rating of Risk Event	Acceptability	Treatment
Extreme	Unacceptable.	Risk Event will not be tolerated. DWER may refuse application.
High	May be acceptable. Subject to multiple regulatory controls.	Risk Event may be tolerated and may be subject to multiple regulatory controls. This may include both outcome-based and management conditions.
Medium	Acceptable, generally subject to regulatory controls.	Risk Event is tolerable and is likely to be subject to some regulatory controls. A preference for outcome-based conditions where practical and appropriate will be applied.
Low	Acceptable, generally not controlled.	Risk Event is acceptable and will generally not be subject to regulatory controls.

8.4 Risk Assessment – Sediment and weed transport off site

8.4.1 Description of the sediment and weed transport off site Risk Event

Rain events may cause sediment and weed laden water emissions to be transported off-site to adjacent land including land identified and managed for its conservation value. These include the former Yaringa pastoral lease, which is directly adjacent to North-West Coastal Highway and the World Heritage Area of Shark Bay. The sediment may cause soil contamination inhibiting vegetation growth and survival and health impacts to fauna.

8.4.2 Identification and general characterisation of emission

A characterisation of the emission has not been provided by the Applicant. However, water emissions off site are likely to contain suspended particulates from the crushing and screening operations and hydrocarbons from leaks and spills as well as transport of weeds. The emissions would occur following significant rainfall events, particularly through existing drainage channels which lead through the former Yaringa Pastoral station to Shark Bay World Heritage Area.

8.4.3 Description of potential adverse impact from the emission

Adverse impacts from the emission are likely to include soil contamination (from sediment and hydrocarbons) that directly cover vegetation inhibiting growth and contaminate soil causing health impacts to fauna. The sediment laden water may also transport weeds providing a pathway for their proliferation. The non-permanent watercourse running through the Premises flows into the former Yaringa pastoral station and the Shark Bay World Heritage Area providing opportunity for transport of weeds and sediment laden water.

8.4.4 Criteria for assessment

The DBCA has requested that all emissions and discharges are contained on site, particularly with regard to surface water flow that has the potential to transport sediment in the proposed Yaringa reserve and that clearing of the fringing vegetation of creek running through the Premises should be avoided. The DBCA also requested that strategies for weed hygiene management be included in the Applicant's environmental management plan.

8.4.5 Applicant controls

This assessment has reviewed the controls set out in Table 16 below.

Table 16: Applicant's proposed controls for the sediment transport off site Risk Event

Site infrastructure	Description	Controls	Reference to Works Approval plan (Attachment 1)
Silt traps at low points on Premises boundary, drainage	Water collection points used to detain water and enable settling of particulate material and retention of weeds and hydrocarbons.	Designed to contain a 1 in 20 year event during operations	Figure 1, Site layout

8.4.6 Key findings

The Delegated Officer has reviewed the information regarding the weed and sediment transport off site Risk Event and has found:

1. The Premises is directly adjacent to the former Yaringa pastoral reserve, which forms a buffer to the Shark Bay World Heritage Area. The Yaringa reserve has been proposed for addition to the conservation estate.
2. The non-permanent drainage watercourse running through the Premises flows through the adjoining former Yaringa pastoral station to the Shark Bay World Heritage Area, providing a pathway for sediment, pollutant and weed transport.
3. Impacts from sediment discharge are likely to include soil contamination, vegetation growth inhibition, transport of weeds and health impacts to fauna.
4. The DBCA has requested that emissions from the Premises be contained on-site, vegetation clearing around creek lines be avoided and weed hygiene management strategies be implemented.

8.4.7 Consequence

If sediment transport off site occurs, the Delegated Officer has determined that the impacts of soil contamination inhibiting vegetation growth and survival and health impacts to fauna will be minimal off site impacts that are not detectable at a wider scale. Therefore, the Delegated Officer considers the consequence of sediment transport off site to be **Minor**.

8.4.8 Likelihood of Risk Event

The Delegated Officer has determined that the likelihood of sediment transport off site occurring could occur at some time. Therefore, the Delegated Officer considers the likelihood of the Risk Event to be **possible**.

8.4.9 Overall rating of the sediment transport off site risk event

The Delegated Officer has compared the consequence and likelihood ratings described above with the risk rating matrix (Table 18) and determined that the overall rating for the risk of sediment transport off site is **Medium**.

8.5 Risk Assessment – Breach of containment causing hydrocarbon discharge to land

8.5.1 Description of the breach of containment causing hydrocarbon discharge to land Risk Event

A breach of hydrocarbon containment or spill event may result in discharge to land from fuel use, storage or refuelling. The applicant plans to store and use up to 50kL of fuel on site in a self-bunded container as well as oils and lubricants in a service vehicle.

8.5.2 Identification and general characterisation of emission

Hydrocarbon emissions would be unplanned accidental events of varying magnitudes and durations. The Applicant has stated that fuel will be stored in a 50kL self bunded container.

8.5.3 Description of potential adverse impact from the emission

Hydrocarbon emissions could cause soil and water contamination by direct contact and affect the growth of vegetation as well as cause health impacts to fauna. The non-permanent watercourse running through the Premises flows into the former Yaringa pastoral station and the Shark Bay World Heritage Area, providing opportunity for transport of the hydrocarbon emissions. While the groundwater resource in the broader region is used for potable, pastoral and commercial purposes, the nearest public drinking water resource is 150km away.

8.5.4 Criteria for assessment

The *National Environment Protection (Assessment of Site Contamination) Measure 1999*.

8.5.5 Applicant controls

This assessment has reviewed the controls set out in Table 17 below.

Table 17: Applicant's proposed controls for the breach of containment causing hydrocarbon discharge to land Risk Event

Description	Control	Reference to Licence plan (Schedule 1)
Fuel and oil storage	Fuel to be stored in a 50kL self-bunded fuel tank	Figure 1, Site layout
	Engine and hydraulic oils (approximately 300L of each type) will be stored in the service truck and not on the ground	
	Stored in accordance with Australian standards	
	Stored at least 100m from watercourses	
Refuelling, servicing and maintenance	Refuelling to take place at least 100m from any watercourses	
	No wash down of vehicles will occur	

Description	Control	Reference to Licence plan (Schedule 1)
	Waste oils, filters and other materials etc to be disposed off site.	
	Plant and equipment to inspected regularly and servicing to be undertake on schedule.	
Spill and emergency response	Personnel trained in the use of fire suppressing equipment	
	Spill management equipment to be available near fuel storage areas	
	Spills to be contained immediately and removed within 24 hours to minimise potential for contamination	
	Spills to be reported in accordance with legal requirements	

8.5.6 Key findings

The Delegated Officer has reviewed the information regarding the Breach of containment causing hydrocarbon discharge to land Risk Event and has found:

1. Up to 50kL of fuel may be stored on site as well as oils and lubricants.
2. The non-permanent drainage course in the Premises represents a transport medium for any spilled hydrocarbons.
3. Fuel storage is limited to 50kL in self bunded containers, to Australian Standards, with storage and refuelling to take place at least 100m from the watercourse and spill management equipment available.

8.5.7 Consequence

If a breach of containment causing hydrocarbon discharge to land occurs, the Delegated Officer has determined that the impact of soil and water contamination inhibiting vegetation growth and survival and health impacts to fauna will be low level on site impacts, with minimal off site impacts that are not detectable at a broader scale. Therefore, the Delegated Officer considers the consequence of a breach of hydrocarbon containment or spill causing a discharge to land to be **Minor**.

8.5.8 Likelihood of Risk Event

The Delegated Officer has determined that the likelihood of a breach of containment causing hydrocarbon discharge to land occurring may only occur in exceptional circumstances. Therefore, the Delegated Officer considers the likelihood of the Risk Event to be **rare**.

8.5.9 Overall rating of the breach of containment causing hydrocarbon discharge to land Risk Event

The Delegated Officer has compared the consequence and likelihood ratings described above with the risk rating matrix (Table 19) and determined that the overall rating for the breach of containment causing hydrocarbon discharge to land is **low**.

8.6 Summary of acceptability and treatment of Risk Events

A summary of the risk assessment and the acceptability or unacceptability of the risk events set out above, with the appropriate treatment and control, are set out in Table 18 below. Controls are described further in section 9.

Table 18: Risk assessment summary

	Description of Risk Event			Applicant controls	Risk rating	Acceptability with controls (conditions on instrument)
	Emission	Source	Pathway/ Receptor (Impact)			
1.	Weed and sediment transport off site	Rain events collecting sediment, weeds and hydrocarbons from disturbed areas	Transport by water along drainage channels. Possible inhibition of vegetation growth, spreading of weeds and soil contamination	Silt traps designed to contain a 1 in 10 year 2 hour rain event on site during construction and 1 in 20 year event during operations	Major consequence Possible likelihood Medium Risk	Acceptable subject to proponent controls
2	Hydrocarbon discharge to land	Breach of containment / spills	Direct contact with ground and possible transport along drainage channels. Soil and water contamination	Fuel storage in self bunded container to Australian standards at least 100m from watercourses. Oil stored in service truck. Refuelling at least 100m from watercourses. No vehicle washdowns. Waste disposed of off site. Spill equipment available. Spills to be contained immediately and removed offsite within 24 hours.	Slight consequence Rare likelihood Low Risk	Acceptable subject to proponent controls

9. Regulatory controls

A summary of regulatory controls determined to be appropriate for the Risk Event is set out in Table 19. The risks are set out in the assessment in section 8 and the controls are detailed in this section. DWER will determine controls having regard to the adequacy of controls proposed by the Applicant. The conditions of the Licence will be set to give effect to the determined regulatory controls.

Table 19: Summary of regulatory controls to be applied

		Controls (references are to sections below, setting out details of controls)	
		Infrastructure and equipment	Spill management
Risk Items (see risk analysis in section 8)	1. Sediment and weed transport off site	•	
	2. Hydrocarbon discharge to land	•	•

9.1 Licence controls

A summary of controls determined to be appropriate for the Risk Events follows in this section. Controls are set with regard to the adequacy of controls proposed by the Applicant. The conditions for the Licence will be set to give effect to the determined regulatory controls.

9.1.1 Infrastructure and equipment

The following environmental controls, infrastructure and equipment should be maintained and operated onsite:

1. Silt traps to be installed to contain a 1 in 20 year 2 hour rain event during construction
2. Fuel to be stored in a 50kL self-bunded fuel tank in accordance with Australian Standards and at least 100m from any watercourses.
3. Engine and hydraulic oils to be stored in the service truck and not on the ground.

9.1.2 Spill management

The following environmental controls, infrastructure and equipment should be maintained and operated onsite for spill management:

1. Refuelling to take place at least 100m from any watercourses.
2. No wash down of vehicles to take place.
3. Waste oils, filters and other materials etc. to be disposed of off site.

4. Plant and equipment to be inspected regularly and servicing to be undertake on schedule.
5. Site Personnel trained in the use of fire suppressing equipment.
6. Spill management equipment to be available near fuel storage areas.
7. Spills to be contained immediately and removed within 24 hours to minimise potential for contamination.
8. Spills to be reported in accordance with legal requirements.

10. Determination of Licence conditions

The conditions in the Licence in Attachment 1 have been determined in accordance with the *Guidance Statement: Setting Conditions*. Table 20 provides a summary of the conditions to be applied to this Licence.

Table 20: Summary of conditions to be applied

Condition Ref	Grounds
Emissions Condition 1	This condition is valid, risk-based and consistent with the EP Act.
Infrastructure and equipment Condition 2	This condition is valid, risk-based and contains appropriate controls.
Record Keeping Conditions 3 -6	These conditions are valid and are necessary administration and reporting requirements to ensure compliance.

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 Licence under the EP Act.

11. Applicant's comments

The Applicant was provided with the draft Decision Report and draft Licence instrument on 15 March 2018. The Applicant responded on 22 March 2018. The Applicant had no comments and waived the comment period.

12. 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).

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

Alana Kidd

Manager Licensing - Resource Industries
Delegated Officer under section 20
of the *Environmental Protection Act 1986*

Appendix 1: Key documents

	Document title	Availability
1.	Yaringa quarry works approval application form	DWER records (A1428258)
2.	Attachment 1-Yaringa Quarry Vertices co-ordinates	DWER records (A142851)
3.	Attachment 2-Yaringa Quarry Proposed Premises Map	DWER records (A1428252)
4.	Attachment 3A-Yaringa Quarry Estimated road building production program	DWER records (A1428250)
5.	Attachment 3B-Yaringa Clearing Area	DWER records (A1428254)
6.	Attachment 3-Key Plant and Equipment Nov 2016	DWER records (A1428256)
7.	Attachment 3-Process Flowchart	DWER records (A1428259)
8.	Attachment 3-Proposed layout of machinery on site	DWER records (A1428262)
9.	Attachment 3-Yaringa Stockpile Layout Plan	DWER records (A1428248)
10.	Attachment 7-Nearest sensitive receiver from project area	DWER records (A1428247)
11.	Attachment 7-Siting and location Yaringa Quarry	DWER records (A1428257)
12.	Attachment 7-Yaringa Quarry Proximity to Hamelin Pool and Shark Bay	DWER records (A1428257)
13.	Attachment 10-Fee Calculator Outputs	DWER records (A1428263)
14.	Attachment 11-Yaringa Quarry Preliminary Environmental Impact Assessment (PEIA) and Environmental Management Plan (EMP)	DWER records (A1428261)
15.	Gascoyne Strategic Material Areas – Southern Biological Survey	DWER records (A1428253)
16.	List of attachments Yaringa Quarry	DWER records (A1428249)
17.	Supporting information: Response to DER request for more information	DWER records (A1466680)
18.	Supporting information: Additional responses to response to DER request for more information	DWER records (A1485603)
19.	Supporting information: Responses to requests for information	DWER records (A1503105)

20.	Supporting information: Prescribed premises design threshold	DWER records (A1503104)
21.	CPS 818/12 Main Roads WA Statewide Purpose Permit	Accessed at https://cps.der.wa.gov.au/
22.	Bureau of Meteorology, Intensity, Frequency, Duration (Rainfall)	Accessed at http://www.bom.gov.au/water/designRainfalls/ifd/index.shtml
23.	DBCA comments on the Application	DWER records (A1491469)
24.	National Environment Protection (Assessment of Site Contamination) Measure 1999	Available at http://www.nepc.gov.au/
25.	DWER, 2017, Clearing Assessment Report, Clearing Permit Application 7744/1	DWER Records (A1526569)
26.	Construction compliance report	DWER Records (A1621522)
27.	DWER, July 2015. <i>Guidance Statement: Regulatory principles</i> . Department of Environment Regulation, Perth.	accessed at www.dwer.wa.gov.au
28.	DWER, August 2016. <i>Guidance Statement: Setting conditions</i> . Department of Environment Regulation, Perth.	
29.	DWER, November 2016. <i>Environmental Siting</i> . Department of Environment Regulation, Perth.	
30.	DWER, February 2017. <i>Guidance Statement: Land Use Planning</i> Department of Environment Regulation, Perth.	
31.	DWER, February 2017. <i>Guidance Statement: Decision Making</i> . Department of Environment Regulation, Perth.	
32.	DWER, February 2017. <i>Guidance Statement: Risk Assessments</i> . Department of Environment Regulation, Perth.	

Attachment 1: Licence L9063/2017/1
