Government of Western Australia
Department of Water and Environmental Regulation

Licence

Licence Number	L9038/2017/1
Licence Holder	Menzies Quarries Pty Ltd
ACN	615 428 245
Registered business address	Suite 10, Level 2 3 Bookham St MORLEY WA 6062
File Number	DER2017/000224
Duration	12/01/2018 to 13/06/2022
Date of issue	12 January 2018
Prescribed Premises	Category 12 - Screening, etc Category 13 - Crushing of building material Category 62 - Solid waste depot
Premises	Mogumber Quarry and Waste Processing Facility 668 Mogumber-Yarrawindah Road MOGUMBER WA 6506 Legal description - Part of Lot 127 on Deposited Plan 35464 Certificate of Title Volume 1897 Folio 848 As defined by the coordinates in Schedule 1

This Licence is granted to the Licence Holder, subject to the following conditions, on 12 January 2018, by:

Date signed: 12 January 2018
Caron Goodbourn
A/Manager – Licensing (Process 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.

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
ACM	means asbestos containing material and has the meaning defined in the *Guidelines for Assessment, Remediation and Management of Asbestos Contaminated Sites, Western Australia*, (Department of Health, 2009).
ACN	Australian Company Number.
Annual Period	means a 12-month period commencing from 1 July until 30 June in the following year.
AS4964-2004	means Australian Standard 4964-2004: *Method for the qualitative identification of asbestos in bulk samples.*
Asbestos	means the asbestiform variety of mineral silicates belonging to the serpentine or amphibole groups of rock-forming minerals and includes actinolite, amosite, anthophyllite, chrysotile, crocidolite, tremolite and any mixture containing 2 or more of those.
Books	has the same meaning given to that term under the EP Act.
C&D Waste	refers to construction and demolition waste and has the meaning defined in the *Landfill Definitions.*
CEO	means Chief Executive Officer. CEO for the purposes of notification means: Director General Department Administering the *Environmental Protection Act 1986* Locked Bag 33 Cloisters Square PERTH WA 6850 info-der@dwer.wa.gov.au
Classified Load	means the classification of waste loads during acceptance and post acceptance based on the risk of waste material containing Asbestos or ACM and through visual inspection.
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).
Condition	means a condition to which this Licence is subject under s.62 of the

Term	Definition
	EP Act.
Department	means the department established under s.35 of the *Public Sector Management Act 1994* 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: (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.
DWER Asbestos Guidelines	means the document titled "Guidelines for managing asbestos at construction and demolition waste recycling facilities", published by the Department of Environment and Conservation, as amended from time to time.
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 *Environmental Protection Act 1986* (WA).
EP Regulations	means the *Environmental Protection Regulations 1987* (WA).
High Risk Loads	refers to loads classified as "high risk" in accordance with the DWER Asbestos Guidelines *Risk Classification Matrix* included in Attachment 1 of this Licence.
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.
Landfill Definitions	means the document titled "Landfill Waste Classification and Waste Definitions 1996" published by the Chief Executive Officer of the Department of Environment, as amended from time to time.

Term	Definition
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.
Low Risk Loads	refers to loads classified as “low risk” in the DWER Asbestos Guidelines *Risk Classification Matrix* included in Attachment 1 of this Licence.
Material Environmental Harm	has the same meaning given to that term under the EP Act.
NATA	means National Association of Testing Authorities.
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.
Product	refers to C&D Wastes which have undergone crushing, processing or screening to create a useable recycled product and which has been tested and conforms with the specifications of this Licence.
Raw Material	means material extracted from the ground (quarry) that is screened, washed, crushed, sized or separated.
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.
Works	refers to the Works described in Condition 23, at the locations shown in Schedule 1 of this Licence to be carried out at the Premises, subject to conditions

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 specified Emissions and 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**
Specified Emissions	
Fugitive dust	Subject to compliance with Conditions 2, 12 and 18
General Emissions (excluding Specified Emissions)	
Emissions which arise from the Primary Activities set out in Schedule 2	Emissions excluded from General Emissions are: • 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 *Protection (Unauthorised Discharges) Regulations 2004*.

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**
Dust Controls	
Water truck fitted with a minimum 15,000L water tank, high volume side and rear spray bars and hose.	• To be retained on-site with access to water at all times; • Operated to ensure that unsealed roads, operational surfaces and all Product and Waste stockpiles remain wetted down to prevent fugitive dust emissions; and • Operated to ensure targeted wetting occurs during tipping and when material handling such as reclaiming of waste from the stockpiles has the potential to generate fugitive dust.
Crushing and screening and stockpiling plant fitted with fixed water sprays or sprinklers	• All raw material processing operations are to be undertaken within the pit void; • When crushing and screening C&D Waste or stockpiling Product, all fixed equipment water sprays or sprinklers must be operational to mitigate the generation of fugitive dust from the processing and handling of Product and Waste when required; and • Water must be effectively delivered to Product and Waste and not be blown away by wind.
Reticulated sprinklers on Product and Waste stockpiles	• Series of sprinklers on top of Product and Waste stockpiles to supplement wetting by water truck sprays; and • (Subject to completion of Authorised Works specified in Condition 23. Effective from 01/07/2018).
All vehicles including trucks	Vehicle speeds limited to less than 20km/h throughout the Premises.
Water storage dam	Contain adequate water for dust mitigation (at least 50% full at all times).
Noise Controls	
Operation of 1 x excavator, 1 x impact crusher; 1 x screener and radial stacker/conveyor , 2 x front end loaders, 1 x bull dozer and delivery or dispatch trucks	• Only to be operational between the hours of 0700 to 1700 hours, Monday to Saturday; and • All raw material (gravel) processing operations are to be undertaken within the pit (quarry) void.

Throughput restrictions

3. The Licence Holder shall ensure that the crushing and screening of extracted gravel does not exceed 500,000 tonnes per Annual Period.

4. Subject to the stockpile management requirements in Conditions 17 and 18, the Licence Holder is permitted to accept and process up to 150,000 tonnes of C&D Waste per Annual Period.

5. The Licence Holder must monitor and record the volumes of incoming and outgoing Waste, outgoing Products and raw materials processed at the Premises for the parameter stipulated in Column 1 of Table 4, using the units specified in Column 2 of Table 4 at the frequency specified in Column 3 of Table 4.

Table 4: Monitoring of inputs and outputs

Column 1	**Column 2**	**Column 3**
Parameter	**Units**	**Frequency**
Waste Inputs – C&D Waste	Tonnes – as measured by certified load scales on trucks	Each load arriving at the Premises.
Waste Outputs – Waste type as defined in the Landfill Definitions	Tonnes – as measured by certified load scales on wheel loaders	Each load leaving or rejected from the Premises.
Product Outputs – Road base ; Recycled sand	Tonnes – as measured by certified load scales on wheel loaders	Each load leaving the Premises.
Raw material (gravel) crushing and screening	Tonnes processed - as measured by number of hours crushing undertaken multiplied by tonnes per hour capacity of crushing equipment	Daily when processing

Waste type restrictions and waste classification

6. The Licence Holder must only accept C&D Waste onto the Premises for storage, sorting or crushing within the C&D Waste Area as defined by the C&D Waste Area boundary in Schedule 1.

7. Waste must not be accepted onto the Premises where:

(a) it contains visible Asbestos or ACM, inspected and classified in accordance with Condition 9; or

(b) where the Licence Holder has not obtained a signed declaration from the supplier of the source material with each delivery that:

(i) sets out the details of the Waste source, carrier, registration number of the vehicle and the date of delivery;

(ii) sets out the Waste type and volume being delivered; and

(iii) warrants that the load does not contain any Asbestos or ACM.

8. The Licence Holder must maintain a clearly visible sign specifying “no Asbestos” at the entry to the Premises.

9. The Licence Holder must visually inspect all loads of Waste when they arrive at the Premises, prior to unloading, to determine the risk of a load containing Asbestos or ACM and each load shall be classified in accordance with the risk classification procedure outlined in Attachment 1 (Classified Load).

10. Where the visual inspection identifies that Waste is not permitted by the Licence, the Licence Holder must:

    (a) reject the Waste for acceptance; and
    (b) record the details of the Waste source, Waste carrier, registration number of the vehicle and the date of rejection; and
    (c) maintain accurate and auditable records of all rejected loads on the Premises.

Acceptance and unloading inspection

11. Upon acceptance of Waste the Licence Holder must direct each Classified Load to an unloading area within the defined C&D Waste Area for further inspection and must not be mixed with other Waste prior to inspection.

12. At the unloading area, the Licence Holder must keep all stockpiles of Waste wetted down throughout the inspection process using the Infrastructure specified in Row 1 of Column 1 in Table 3 of Condition 2. The Licence Holder must visually inspect loads classified as Low Risk Loads, while the material is being unloaded to determine whether any Asbestos can be identified.

13. If Asbestos is suspected or identified, the load must be reclassified as a High Risk Load and the Licence Holder must implement the High Risk Load procedure set out in Attachment 2.

14. High Risk Loads must be visually inspected and handled in accordance with the procedure set out in Attachment 2.

15. The Licence Holder must maintain accurate and auditable records of all loads that have been inspected and suspected or found to contain Asbestos. Those records must show the source and originating site and actions taken to address the issue with the source customer.

16. The Licence Holder must continue to visually inspect Waste on the Premises at all stages of the storage, sorting and screening process. Suspect Asbestos identified at any stage of the process must be handled in accordance with the procedure set out in Attachment 2 and records maintained in accordance with Condition 15.

Stockpile management

17. In addition to the unloading area specified in Condition 11, the Licence Holder must:

    (a) maintain Waste material within the C&D Waste Area in at least three separate stockpile areas for unprocessed Waste, Products tested for ACM and Products awaiting testing for ACM generally in accordance with the C&D Waste Area Layout Plan set out in Schedule 1;

    (b) products tested for ACM and Products awaiting testing for ACM must be clearly separated by a minimum 3 metre distance OR clearly delineated and separated with impermeable barriers; and

    (c) clearly visible and legible signage must be erected on individual stockpiles to clearly identify and delineate tested Products, untested Products and unprocessed Waste.

18. The Licence Holder must ensure that:

(a) all stockpiles of unprocessed C&D Waste on the Premises do not exceed 8 metres in height at any point from the base of the stockpile;

(b) all Product stockpiles (recycled sand or roadbase) do not exceed 8 metres in height at any point from the base of the stockpile;

(c) all other sorted and separated wastes are temporarily stored in skip bins generally in accordance with the C&D Waste Area Layout Plan set out in Schedule 1, awaiting off-site disposal;

(d) all stockpiles related to the receipt and processing of C&D Waste are retained within the boundary of the C&D Waste Area as defined by the boundary coordinates in Table 8 in Schedule 1: and

(e) all stockpiles of processed Raw Material are to be kept no higher than the top of the pit or quarry walls

Product testing and supply

19. The Licence Holder must ensure that testing of all Products is undertaken in accordance with the Product testing procedures specified in Schedule 3.

20. The Licence Holder must ensure that Products are only supplied to customers that have been tested in accordance with Condition 19 and shown to conform to the product specification of 0.001% Asbestos weight for weight (w/w) for Asbestos content (in any form) within any recycled products.

21. The Licence Holder must maintain accurate and auditable records of all Asbestos Product testing undertaken in accordance with Condition 19. These records must include:

(a) details of the sample size;
(b) a statement of Limit of Detection of the analysis;
(c) results in relation to Asbestos detected (positive result exceeding the 0.001% w/w limit) or not;
(d) description of any Asbestos detected; and
(e) an estimate of the concentration of Asbestos detected if practical to do so.

Authorised works

22. The Licence Holder must locate the Works generally in accordance with the Plans in Schedule 1.

23. The Licence Holder must install and undertake the Works for the infrastructure and equipment:

(a) specified in Column 1 of Table 5;

(b) to the requirements specified in Column 2 of Table 5; and

(c) complete all Works specified in Column 1 of Table 5 by 30 June 2018.

Table 5: Authorised Works requirements table

Column 1	**Column 2**
Infrastructure/equipment	**Requirements (design and construction)**

Stormwater catchment dam	Dimensions: 28m by 24m by 5m deep Constructed from compacted in –situ (engineered) soils Located as shown in Site Plan in Schedule 1
Reticulated sprinkler system to C&D Waste stockpiles	Piped water reticulation system running from the stormwater catchment dam to the C&D Waste Area connecting to a sprinkler system capable of applying water to C&D Waste stockpiles.
Pump/generator to transfer water from the dam via reticulation to the sprinkler system	**Pump with discharge capacity of 60m^3/hr, run by 7HP petrol engine generator.**

24. The Licence Holder must not depart from the requirements specified in Column 2 of Table 5 except:

(a) where such departure does not increase risks to public health, public amenity or the environment; and

(b) all other Conditions in this Licence are still satisfied.

25. Within 30 days of completion of the Works specified in Column 1 of Table 5, the Licence Holder must provide to the CEO a report to include the following:

(a) Submission of photographic evidence, confirming each item of infrastructure or component of infrastructure specified in Column 1 of Table 5 has been constructed or installed with no material defects and to the requirements specified in Column 2 of Table 5; and

(b) Submission of an updated site planmapping any changes to the northern boundary of the Premises resulting from the new dam construction, including provision of all new relevant GPS coordinates to correctly define the Premises boundary

26. Where a departure from the requirements specified in Column 2 of Table 5 occurs, the Licence Holder must provide to the CEO a description of, and explanation for, all such departures.

Record-keeping

27. 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 maintenance of infrastructure required to ensure that it is kept in good working order in accordance with Condition 2 of this Licence;

(c) record keeping undertaken in accordance with Conditions 5, 7(b),10, 15 and 21 of this Licence;

(d) complaints received under Condition 28 of this Licence; and

(e) any Material Change.

In addition, the Books must:

(f) be legible;

(g) if amended, be amended in such a way that the original and subsequent amendments remain legible and are capable of retrieval;

(h) be retained for at least 5 years from the date the Books were made; and

(i) be available to be produced to an Inspector or the CEO.

28. 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.

29. The Licence Holder must submit to the CEO, within 60 days of the end of the Annual Period, an Annual Environmental Report for the preceding Annual Period satisfying the requirements of Table 6:

Table 6: Annual Reporting Requirements

Condition (s)	Requirements
5, Table 4	A tabulated summary of monthly and cumulative totals of all parameters monitored in accordance with Column 1 of Table 4 (tonnes), to include details of any relevant conversion factors that have been applied.
28	Complaints – a summary of all records and actions taken in response to complaints.

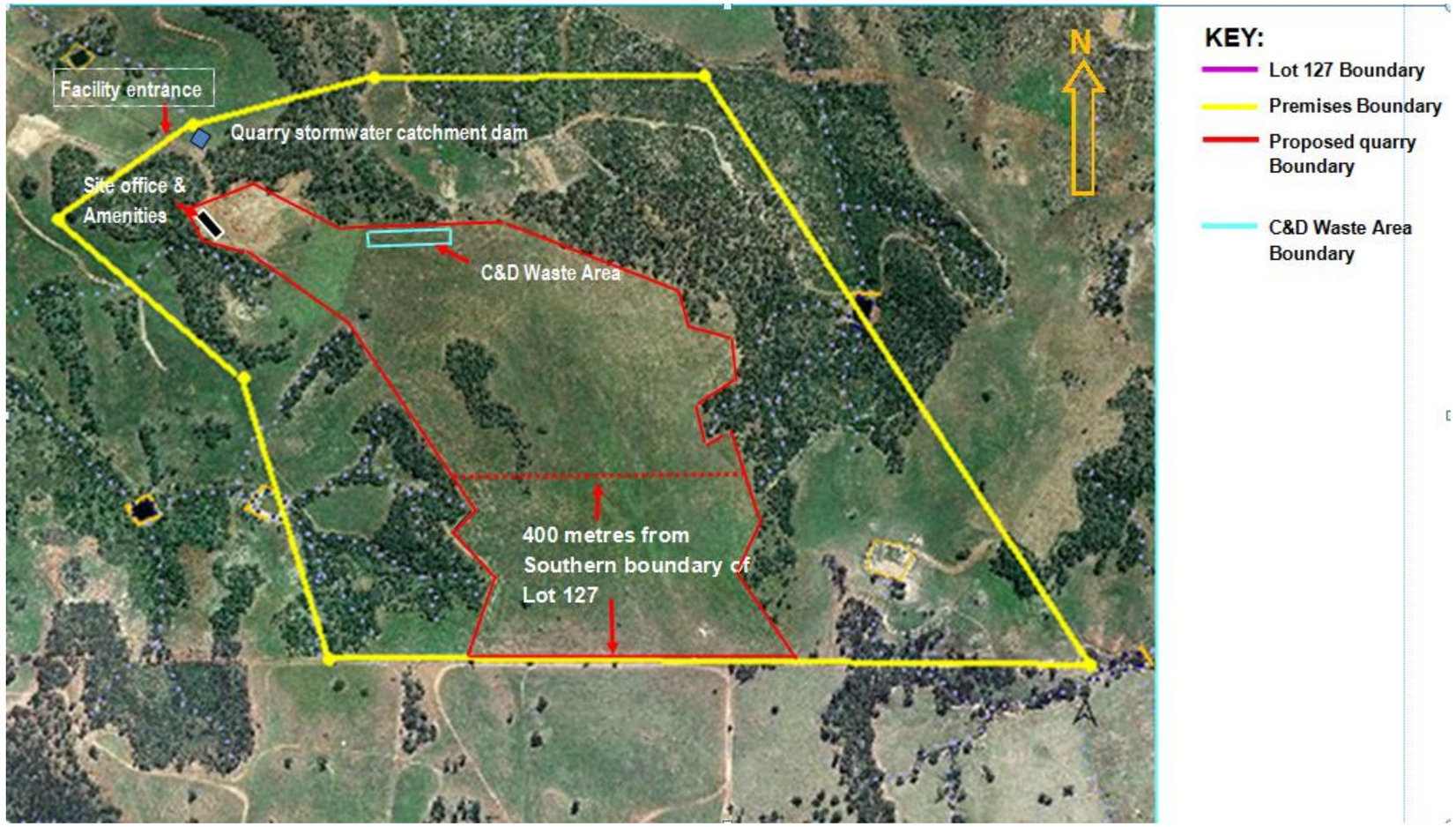
30. The Licence Holder must submit to the CEO, within 60 days of the end of the Annual Period, a Compliance Report indicating the extent to which the Licence Holder has complied with the Conditions in this Licence for the preceding Annual Period.

31. 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

Site Plan

The Premises are shown in the map below. The yellow line depicts the boundary to the Premises. The light blue line depicts the boundary to the C&D Waste Area



Premises boundary

The Premises boundary is defined by the coordinates in Table 7.

Table 7: Premises boundary coordinates

Easting	Northing
416299	6565645
416134	6566214
415815	6566521
416365	6566817
416942	6566821
417618	6565645

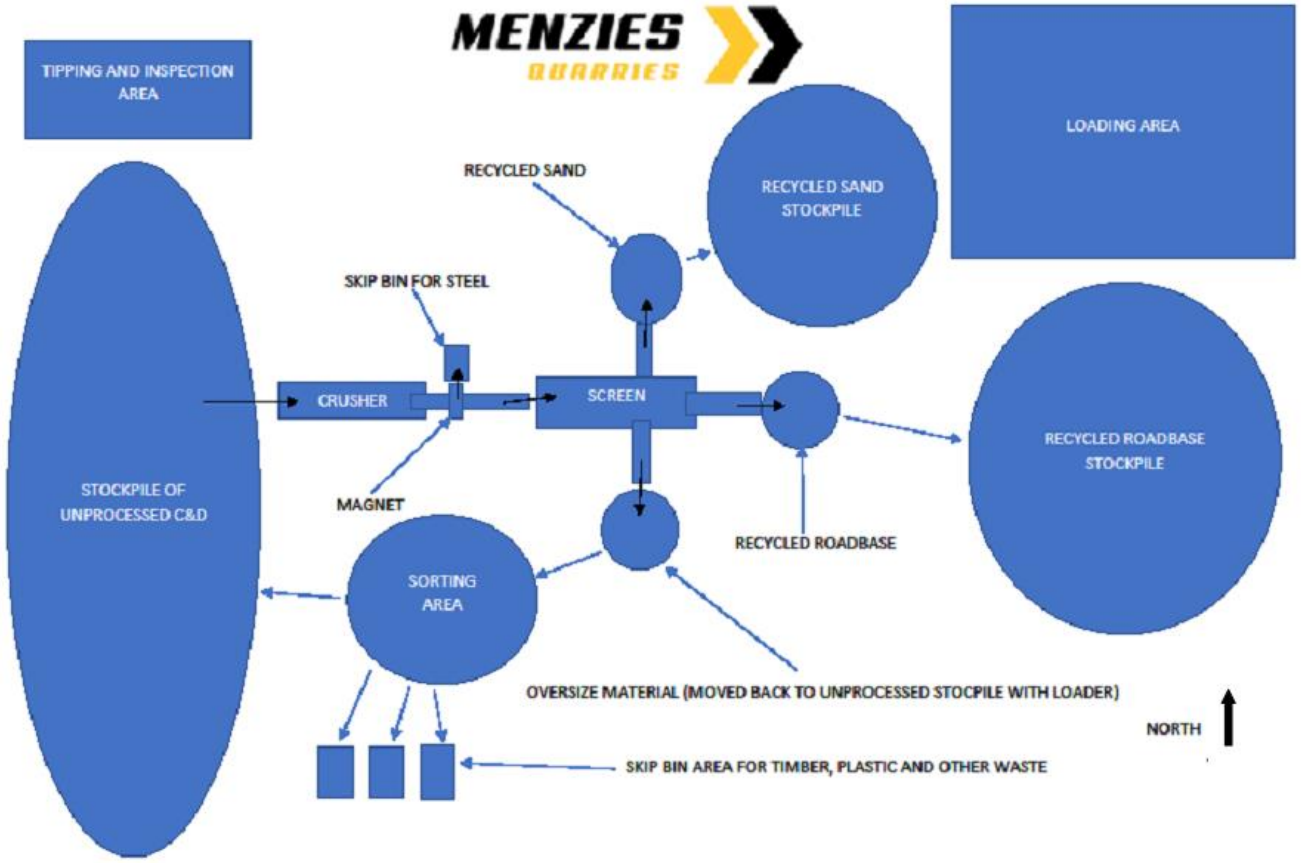
C&D Waste Area Boundary

The boundary of the C&D Waste acceptance , processing and storage area is defined by the coordinates in Table 8.

Table 8: C&D Waste Area boundary coordinates

Easting	Northing
416358.038	6566484.287
416348.934	6566514.200
416506.301	6566505.696
416509.656	6566468.222

C&D Waste Area Layout Plan



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 9.

Table 9: Primary Activities

Primary Activity	Activity undertaken at Menzies Quarry	Approved Premises production or design capacity
Category 12 - Screening, etc.	*Gravel and sand excavated from the onsite quarry crushed and screened for separation and sizing of extracted raw materials*	*Not more than 500,000 tonnes per Annual Period*
Category 13 – Crushing of building material	*Receiving C&D waste from external suppliers. Separated waste building or demolition material (e.g. bricks and concrete) is crushed and screened to produce recycled products for off-site sale.*	*Not more than 150,000 tonnes per Annual Period*
Category 62 – Solid waste depot	*Sorting and storage of C&D waste into separated waste materials stockpiles or bins including; concrete and bricks for crushing; and waste metals and minor quantities of other waste associated with C&D waste (e.g. paper/cardboard, plastics and wood) temporarily stored prior to off-site disposal.*	

Infrastructure and equipment

The Primary Activity infrastructure and equipment situated on the Premises is listed in Table 10.

Table 10: Infrastructure and equipment

	Infrastructure	Site Plan Reference
	Prescribed Activity Category 12	
Screening of extracted raw material to separate out gravel & sand fractions. Crushing of larger, bulk gravel prior to screening. Blending and stockpiling of raw materials for off-site sale.		
1	Komatsu PC 300 Excavator (fitted with rock breaker and bucket attachments)	Variable location as quarrying activity proceeds

	Infrastructure	Site Plan Reference
2	Mobile Striker 1112 impact crusher	
3	Mobile Striker SC 207 (double deck) screen	
4	Striker 24M Conveyor for material stockpiling	
5	Komatsu 320 front end loader	
6	Caterpillar 966H front end loader	
7	Caterpillar D9T Bull Dozer	
8	Reticulated sprinklers/sprays to crusher and screen	N/A
9	Storage/stockpile area for processed sand and gravel	Variable location as quarrying activity proceeds
10	Storm water storage dam –24m x 28m x 5m to supply water for dust suppression	Site Plan in Schedule 1
	Prescribed Activity Categories 13 and 62	
The acceptance, sorting and temporary storage of C&D Waste prior to further processing and disposal off-site. Crushing and screening of separated waste materials (cement products and bricks) using mobile plant and stockpiling of final product for off-site sale.		
1	A compacted gravel hardstand for the receipt, sorting, processing, storage and stockpiling of C&D Waste	Site Plan and location defined by the boundary coordinates in Table 8 in Schedule 1
2	Komatsu PC 300 Excavator (fitted with rock breaker and bucket attachments)	Site Plan and C&D Waste Area Layout Plan in Schedule 1 **Note:** Same excavator and mobile crushing, screening and stockpiling equipment as used for raw material (gravel) extraction and processing but temporarily re-located to the C&D Waste Area for the crushing and screening of C&D Waste.
3	Mobile Striker 1112 impact crusher	
4	Mobile Striker SC 207 (double deck) screen	
5	Striker 24M Conveyor for material stockpiling	
6	Komatsu 320 front end loader	
7	Caterpillar 966H front end loader	
8	Caterpillar D9T Bull Dozer	
9	Reticulated sprinklers/sprays to crusher and screen	N/A
10	Picking / sorting station	C&D Waste Area Layout Plan in Schedule 1
11	15 m^3 metal storage bins (uncovered) for sorted and separated steel and other metals	
12	10m^3 metal storage bins (optional shade cloth coverings) for separated plastics, timbers or other wastes not to be crushed and screened	
13	A lidded storage bin, labelled and used for recovered or separated Asbestos or ACM storage only.	

	Infrastructure	Site Plan Reference
14	Temporary storage/stockpile area for bricks and cement to undergo crushing and screening	
15	Stockpile area for processed waste material for off-site sale/ off-site re-use	
16	Reticulated sprinklers/sprays to waste and product stockpiles	N/A
	Directly related activities	
Water and fuel supplies and infrastructure for water use in dust suppression. Site security and facilities at entrance/exit point.		
1	Water truck – 15,000 litre capacity with on board pump & equipment for filling and dispensing of water for dust suppression.	N/A
2	Existing surface water storage dams x 3 for dust suppression.	Site Plan in Schedule 1
3	Lockable gates at facility entrance sufficiently secure so as to prevent unauthorised access.	N/A

Site layout

The Primary Activity infrastructure and equipment is set out on the Premises in accordance with the site layout specified on the Site Plan and the C&D Waste Area Layout Plan in Schedule 1.

Schedule 3: Asbestos Monitoring and Testing

Product testing and supply

The testing procedures detailed in this attachment have application to the three main recycled products:

1. Recycled drainage rock 20-27mm;
2. Recycled sand, screened to <10mm; and
3. Recycled road-base, <19mm.

Stockpile inspection and sampling

- No sampling is required for recycled drainage rock, other than to determine by laboratory analysis if necessary whether a suspect fragment is Asbestos.
- For recycled road-base and screened sand, sampling is necessary and must be spread evenly over the whole stockpile surface or samples may be taken at regular intervals (as per conveyor sampling) during construction of the stockpile. Suspect ACM or areas must be targeted for sampling.
- Sampling of road base and screened sand products must occur at a minimum rate of 40 locations per 4000 tonnes or 14 samples per 1000m^3 of Product.

Conveyor sampling

- Sampling of road base and screened sand Products must occur at a minimum rate of 1 sample per 70m^3 of a Product output. Suspect ACM or areas must be targeted for sampling.

Sample treatment

- Each sample collected must be at least 10 litres in volume and then be divided into 2 size fractions (>7mm and <7mm) in the field by sieving through a 7mm screen or spread out for inspection on a contrasting colour fabric. The >7mm fraction should be examined for any suspect ACM and this be retained to calculate the level of contamination.
- The <7mm fraction will need to be a minimum 500 ml, be wetted, and submitted for laboratory analysis. This sample size is considered necessary to improve the limit of detection for Asbestos in the analysis procedure.

Sample analysis method

- **>7mm sample fractions –**
    - Asbestos concentrations (ACM and Asbestos) should be calculated in accordance with the methods detailed in section 4.1.7 of Department of Health, 2009, Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia. Averaging Asbestos levels across the stockpile is not appropriate and Asbestos levels within each sample should be reported.
- **<7mm sample fractions**
    - Each <7mm sample fraction must be analysed for Asbestos and ACM.
    - Asbestos analysis must be undertaken by an independent NATA certified laboratory and comply with *Australian Standard Method for the Qualitative*

Identification of asbestos in bulk samples (AS4964-2004) or be demonstrated to be able to achieve the equivalent level of results to this Australian Standard.

AS4964-2004 is currently the only method in Australia that has NATA certification; however the practicable level of detection for this standard polarized light microscopy method (PLM) and dispersion staining (DS) is 0.01%w/w. It is possible however, to measure Asbestos contamination at or lower than 0.001% w/w where an increased sample size is used, however DWER recognises that any reporting of concentrations below 0.01%w/w will be outside the conditions set by NATA.

Therefore, to determine whether recycled products meet the product specifications for Asbestos content, samples must be a minimum of 500mL in size. Licence Holders must adopt one of the following analytical approaches:

1. Detected/non-detected – where any quantity of Asbestos is detected by the PLM method it must be assumed, without further analysis, to be in concentrations above the product specification limit of 0.001%w/w. A weight of evidence approach may be adopted i.e. the frequency and occurrence of other positive results in the stockpile can be taken into account to determine whether the stockpile being assessed is considered to meet the product specification or not; or
2. Where any quantity of Asbestos is detected by the PLM method, the sample is subject to further testing in the form of a semi-quantitative method with a lower level of detection for Asbestos. Either of the following methods are considered acceptable by DWER:
    1 The extraction and weighing of fibre bundles or fibre cement material from the total sample; and
    2 Measuring the width and length (i.e. volume) of individual fibre by Phase Contrast Microscopy (PCM) and calculating the weight of fibres in the extracted sub-sample.

Interpreting inspection and sampling results

- If the visual inspection, sieve sample or analytical results identify Asbestos above or possibly above the 0.001%w/w criteria, then that stockpile or product process should be deemed potentially contaminated and considered for off-site disposal as Asbestos waste, or subject to further actions to remediate it or to demonstrate its acceptability by further assessment. A record should be made of the decision-making and action taken (e.g. off-site disposal, further assessment undertaken etc.) in relation to that stockpile.
- In addition to the above, where Asbestos is identified above or possibly above the 0.001%w/w criteria, an investigation into the likely cause for the presence of Asbestos in the Product should be undertaken and measures implemented to prevent a reoccurrence. A record of the investigation and its findings together with the details of any preventative measures implemented at the site should be made.

(Derived from Section 4.3 of the DWER Asbestos Guidelines, pages 15 - 20)

Attachment 1 – Asbestos Risk Classification Procedure

To determine the risk of an incoming load containing Asbestos, the gatehouse operator should establish:

- The source of the load including the site location and if possible, the age of any building or structure from which the Waste originated;
- The content/Waste types within the load; and
- The type of load.

Where the source of the load can clearly be determined to be a building or structure constructed after 1990 then the load can be considered to represent a low risk of Asbestos contamination. Where the Waste originates from a building constructed before 1990 or there is uncertainty over this issue, the risks associated with Asbestos in the load must be established in line with the Risk Classification Matrix below.

Risk Classification Matrix			
	Type of load		
Material Type	**Commercial**	**Public, utes, cars and trailers***	**Skip bins**
Clean Concrete (without formwork)	Low	High	High
Clean Brick	Low	High	High
Clean Bitumen / Asphalt	Low	High	High
Mixed Construction waste	High	High	High
Mixed Demolition waste	High	High	High

* if it is possible to view the entire load of incoming C & D material (eg a small trailer with a shallow load, then consideration may be given to classifying these loads as low risk

(Risk Matrix Classification *adapted from WorkSafe Victoria 2006 and WMAA 2009*)

(Derived from Section 3.3 of the DWER Asbestos Guidelines, pages 10 – 11)

Attachment 2 – High Risk Load Procedure

- High Risk Loads must be unloaded and spread over a sufficiently large area to enable a comprehensive visual inspection of all sides of the material to be undertaken.
- If Asbestos is suspected or detected, the load must be isolated, kept wet and once appropriately contained in accordance with the *Environmental Protection (Controlled Waste) Regulations 2004,* redirected to an appropriately authorised disposal facility.
- Where suspect ACM is identified within a load and is not capable of being easily removed by hand, the load must be rejected and should be isolated, kept wet and once appropriately contained be redirected to an appropriately authorised disposal facility.
- Where suspected ACM fragments capable of being easily removed by hand are identified in a load, the suspect ACM must be removed from the load and either:
    1. Appropriately isolated and covered for Asbestos testing. If testing of representative samples confirms the material is ACM it must be redirected to an appropriately authorised disposal facility. If testing confirms the material is not ACM the Waste can be added to the stockpile awaiting further processing; OR
    2. Assumed to be ACM and redirected to an appropriately authorised disposal facility.

3 All suspected or assumed ACM must be segregated. Material must be clearly labelled, kept secure and sufficiently contained to prevent the release of Asbestos including windblown fibres.

4 Once all suspected or assumed ACM has been removed from a load in line with the above procedure, the residual Waste can be added to the stockpile for further processing.

5 Records must be kept to ensure that the process from receipt of C&D material to the completion of the unloading procedure is auditable and that any loads found to contain suspect Asbestos will be traced back to the customer and originating site.

(Derived from Section 4.3 of the DWER Asbestos Guidelines, page 12)

Decision Report

Application for Licence

Division 3, Part V *Environmental Protection Act 1986*

Licence Number	L9038/2017/1
Applicant	Menzies Quarries Pty Ltd
ACN	615 428 245
File Number	DER2017/000224
Premises	Mogumber Quarry & Waste Processing Facility Lot 668 Mogumber-Yarrawindah Road MOGUMBER WA 6506 Legal description - Part of Lot 127 on Deposited Plan 35464 Certificate of Title Volume 1897 Folio 848 As defined by the coordinates in Schedule 1 of the Licence
Date of Report	12 January 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
ACN	Australian Company Number
AER	Annual Environment Report
Applicant	Menzies Quarries Pty Ltd
C&D Waste	refers to construction and demolition waste and has the meaning defined in the *Landfill Definitions*
Category/ Categories/ Cat.	Categories of Prescribed Premises as set out in Schedule 1 of the EP Regulations
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).
Decision Report	refers to this document.
Delegated Officer	an officer under section 20 of the EP Act.
DWER	Department of Water and Environmental Regulation 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). DWER was established under section 35 of the *Public Sector Management Act 1994* and is responsible for the administration of the *Environmental Protection Act 1986* along with other legislation.
DWER Asbestos Guidelines	means the document titled "Guidelines for managing asbestos at construction and demolition waste recycling facilities", published by the Department of Environment and Conservation, as amended from time to time.
EP Act	*Environmental Protection Act 1986* (WA)
EP Regulations	*Environmental Protection Regulations 1987* (WA)
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999* (Cth)
f/ml	fibres per millilitre

Term	Definition
Issued Licence	refers to the issued Licence in Attachment 1
Landfill Definitions	means the document titled 'Landfill Waste Classification and Waste Definitions 1996' published by the Chief Executive Officer of the Department of Environment as amended from time to time
Licence Holder	Menzies Quarries Pty Ltd
NEPM	National Environmental Protection Measure
Noise Regulations	*Environmental Protection (Noise) Regulations 1997* (WA)
Occupier	has the same meaning given to that term under the EP Act.
PM	Particulate Matter
PM_{10}	used to describe particulate matter that is smaller than 10 microns (µm) in diameter
Premises	refers to the premises to which this Decision Report applies, as specified at the front of this Decision Report
Prescribed Premises	has the same meaning given to that term under the EP Act.
Product/Products	refers to C&D Wastes which have undergone crushing, processing or screening to create a useable recycled product.
Primary Activities	as defined in Schedule 2 of the Issued Licence
Risk Event	as described in *Guidance Statement: Risk Assessment*
UDR	*Environmental Protection (Unauthorised Discharges) Regulations 2004* (WA)
$\mu g/m^3$	micrograms per cubic metre
WDM	Waste Derived Materials

2. Purpose and scope of assessment

On 8 February 2017 Menzies Quarries Pty Ltd (the Applicant) applied for a concurrent Works Approval and Licence to construct and operate an existing gravel and sand quarry and a waste management and waste processing facility (Application) at Lot 688 Mogumber-Yarrawindah Road, Mogumber, being part of Lot 127 on deposited plan 35464, Mogumber (Premises).

The Issued Works Approval was for the installation of various portable and/or mobile infrastructure and equipment, a compacted hardstand area for the receipt, storage and processing of C&D Waste and a stormwater storage dam. The Issued Works Approval did not authorise the clearing of any native vegetation. The Applicant submitted Works Approval compliance documentation on 19 November 2017, with further information provided on 9 December 2017 and 21 December 2017.

This Decision Report presents an assessment of potential environmental and public health risks from emissions and discharges from the Premises during both construction and operation from the existing and proposed prescribed activities on the Premises in accordance with the Department's Guidance Statement: Risk Assessment. The advice of relevant Government agencies has also been considered as part of the assessment.

2.1 Application details

The Applicant is seeking approval to construct and operate a facility with material extraction and waste receipt and processing activities as follows:

- crushing and screening of extracted gravel up to 500,000 tonnes per year with an estimated 20 years lifespan of gravel extraction;
- a solid waste depot to accept up to 150,000 tonnes per year of C&D Waste, including concrete, bricks, timber, plastics and steel, for separating, processing and temporarily storing prior to off-site sale or disposal; and
- crushing of building material: cement based products and bricks are to be crushed and screened (sized) to produce a range of products including sand, road base, manufactured fill and other Waste Derived Materials (WDM) for off-site sale.

The Premises includes an existing gravel quarry with gravel screening operations in the northwest corner of the Premises, which have been operated by the Applicant in accordance with an 'Agreement for gravel extraction and payment of road maintenance charge' issued by the Shire of Victoria Plains on 14 December 2016. This agreement permitted the Applicant to extract gravel for local works only within the Shire of Victoria Plains up to approximately 46,000 tonnes. The term of this agreement expired on 19 May 2017. The recent screening and crushing of quarried raw materials is understood to total more than 50,000 tonnes per year and was constructed and undertaken without a works approval, licence or registration.

Table 2 lists the documents submitted during the assessment process.

Table 2: Documents and information submitted during the assessment process

Document/information description	Date received
Application Form completed as a Concurrent Works Approval / Licence application	8 February 2017
Menzies Quarries Pty Ltd Works and Licence Approval Application, Annexure 1: Supporting documentation, Rev 1, including: Mogumber Designed Area.pdf; Mogumber Survey – Model.pdf and Mogumber Survey.dwg.pdf	
Menzies Quarries Pty Ltd – Excavation and Rehabilitation Management Plan. Lot 668 Mogumber-Yarrawindah Rd, Mogumber	
Shire of Victoria Plains Extractive Industry Licence application – Menzies Quarries	
Email correspondence – response to DWER request for further information	31 March 2017
Email correspondence – response to request for further information, included a request by the Applicant to exclude the composting component of the application	8 June 2017
Email correspondence – response to request for further information including provision of an updated site plan	13 June 2017
2 x email correspondence: 1. Dust Management Plan and Asbestos Management Plan attached; *and* 2. Menzies Quarries resolutions – June 2017 (documenting Shire of Victoria Plains council resolutions from 14 June 2017 regarding planning approval and conditions)	20 June 2017
2 x email correspondence providing requested detail on the C&D Waste processing infrastructure including the operational and storage areas, GPS coordinates for the C&D Waste area and correction to a GPS coordinate for the Prescribed Premises boundary	22 and 23 June 2017
Email correspondence with Shire of Victoria Plains Planning Approval attached	7 July 2017
Assignment & Variation of Lease – Lease and gravel quarrying agreement 668 Mogumber-Yarawindah Road, Mogumber. Montrose Marinus Driessen, Menzies Civil Australia Pty Ltd and Menzies Quarries Pty Ltd	31 July 2017
Works Approval (W6038/2017/1) compliance documentation	19 November 2017
	9 December 2017
	21 December 2017
Email correspondence - response to updated Decision Report and Licence and requested confirmation details	11 January 2018

3. Background

Table 3 lists the prescribed premises categories that have been applied for.

Table 3: Prescribed Premises Categories

Classification of Premises	Description	*Approved Premises production or design capacity or throughput*
Category 12	Screening, etc	Not more than 500,000 tonnes per year
Category 13	Crushing of building material	Not more than 150,000 tonnes per year
Category 62	Solid waste depot:	

4. Overview of Premises

4.1 Operational aspects

The existing infrastructure at the Premises includes an unsealed gravel access road from Mogumber-Yarrawindah Road entering the northwest Premises boundary and extending to the existing gravel quarry in the northwest corner, 3 surface water catchment dams and fences along the southern and eastern quarry boundaries and along the western and northern boundaries of the Lot (Lot 127).

Existing operational equipment and infrastructure already on-site for gravel quarrying and processing operations includes:

- 2 x front end loaders;
- 1 x impact crusher and double deck screen;
- 1 x excavator (fitted with rock breaker and bucket);
- 1 x bull dozer; and
- a 10,000 litre self-bunded fuel storage facility.

The Applicant intends to operate the gravel/sand quarrying activity for up to 20 years commencing at the north western end moving gradually southeast towards the southern boundary of the Premises. The Applicant proposes to crush and screen up to 500,000 tonnes per year of extracted material (though expected production is 250,000 tonnes per year), noting that much of the extracted material only requires screening to separate out the gravel and sand fractions.

In addition, the Applicant intends to accept and process C&D Waste predominantly received from its own business activities, as well as commercially contracted suppliers, for sorting and then crushing and screening to produce a range of WDM products such as sand, road base and manufactured fill for sale. The remainder of the sorted and separated materials (including metals, timber and plastics) will be temporarily stored prior to off-site disposal.

The Applicant proposes to operate during the following hours:

0600 hours to 1700 hours Monday to Saturday, (with no machinery operating before 0700 hours) and will be closed Sundays and public holidays.

The Premises occupies approximately 135 hectares of the total Lot 127 area of 685 hectares

and is located centrally within the lot, but aligning with the central section of its' southern boundary (refer to Figure1). The quarry and waste processing operational areas occupy approximately 46 hectares of the 135 hectare total Premises area, which incorporates a substantial buffer of mostly cleared agricultural land and /or remnant vegetation around the western, northern and eastern perimeters.

The scope of works authorised in the Issued Works Approval (W6038/2017/1 included the following:

- Install signage at the facility entrance, a transportable site office / workshop and amenities block;
- Construct a compacted gravel hardstand (170m by 30m) for C&D Waste receipt, processing and storage activities;
- Construct a stormwater catchment dam (for dust mitigation purposes) in the NW corner of the existing quarry area; and
- Install piped reticulation and sprinklers for dust mitigation in material handling and storage areas.

4.2 Infrastructure

The Mogumber Quarry and Waste Processing Facility equipment and infrastructure, as it relates to Category 12, 13, and 62 activities, is detailed in Table 4 and with reference to the site plans in Figures 2 and 3 below (and attached in the Issued Works Approval).

Table 4 lists infrastructure associated with each Prescribed Premises Category.

Table 4: Mogumber Quarry and Waste Processing Facility Category 12, 13 and 62 infrastructure (from Application)

	Infrastructure	**Site Plan Reference**
	Prescribed Activity Category 12	
Screening of extracted raw material to separate out gravel & sand fractions. Crushing of larger, bulk gravel prior to screening. Blending and stockpiling of materials for off-site sale.		
1	Komatsu PC 300 Excavator (fitted with rock breaker and bucket attachments)	Variable location as quarrying activity proceeds
2	Mobile Striker 1112 impact crusher	
3	Mobile Striker SC 207 (double deck) screen	
4	Striker 24M Conveyor for material stockpiling	
5	Komatsu 320 front end loader	
6	Caterpillar 966H front end loader	
7	Caterpillar D9T Bull Dozer	
8	Reticulated sprinklers/sprays to crusher and screen (dust control)	N/A
9	Storage/stockpile area for processed sand and gravel	Variable location as quarrying activity proceeds
10	Storm water storage dam –24m x 28m x 5m deep to capture,	Site Plan, Figure 2

	Infrastructure	Site Plan Reference
	hold and supply water for dust suppression	
	Prescribed Activity Categories 13 and 62	
The acceptance, sorting, processing and temporary storage of C&D Waste prior to disposal off-site. Crushing and screening of separated waste materials (cement products and bricks) using mobile plant and stockpiling of final product for off-site sale.		
1	A 170 m by 30 m compacted gravel hardstand for the receipt, sorting, processing, storage and stockpiling of C&D Waste	Site Plans, Figures 2 & 3- C&D Waste Area Boundary
2	Komatsu PC 300 Excavator (fitted with rock breaker and bucket attachments)	Solid Waste Depot / C&D Waste Area Layout Plan, Figure 3 **Note:** Same excavator and mobile crushing, screening and stockpiling equipment as used for quarrying but temporarily re-located to the C&D Waste facility as required from time to time.
3	Mobile Striker 1112 impact crusher	
4	Mobile Striker SC 207 (double deck) screen	
5	Striker 24M Conveyor for material stockpiling	
6	Komatsu 320 front end loader	
7	Caterpillar 966H front end loader	
8	Caterpillar D9T Bull Dozer	
9	Reticulated sprinklers/sprays to crusher and screen (dust control)	N/A
10	Picking / sorting station	Solid Waste Depot / C&D Waste Area Layout Plan, Figure 3
11	15 m^3 metal storage bins (uncovered) for sorted and separated steel and other metals	
12	10m^3 metal storage bins (optional shade cloth coverings) for separated plastics, timbers or other wastes not to be crushed and screened	
13	Temporary storage/stockpile area for bricks and cement to undergo crushing and screening	
14	Stockpile area for processed waste material for off-site sale/ off-site re-use	
	Directly related activities	
Water and infrastructure for water use in dust suppression. Site security and facilities at entrance/exit point.		
1	Water truck – 15,000 litre capacity with on board pump & equipment for filling and dispensing of water	N/A
2	Existing surface water storage dams x 3	Figure 2 Site Plan
3	Pump and generator to transfer water from the dam via reticulation to the sprinkler system	N/A
4	Lockable gates at facility entrance sufficiently secure so as	N/A

	Infrastructure	Site Plan Reference
	to prevent unauthorised access.	

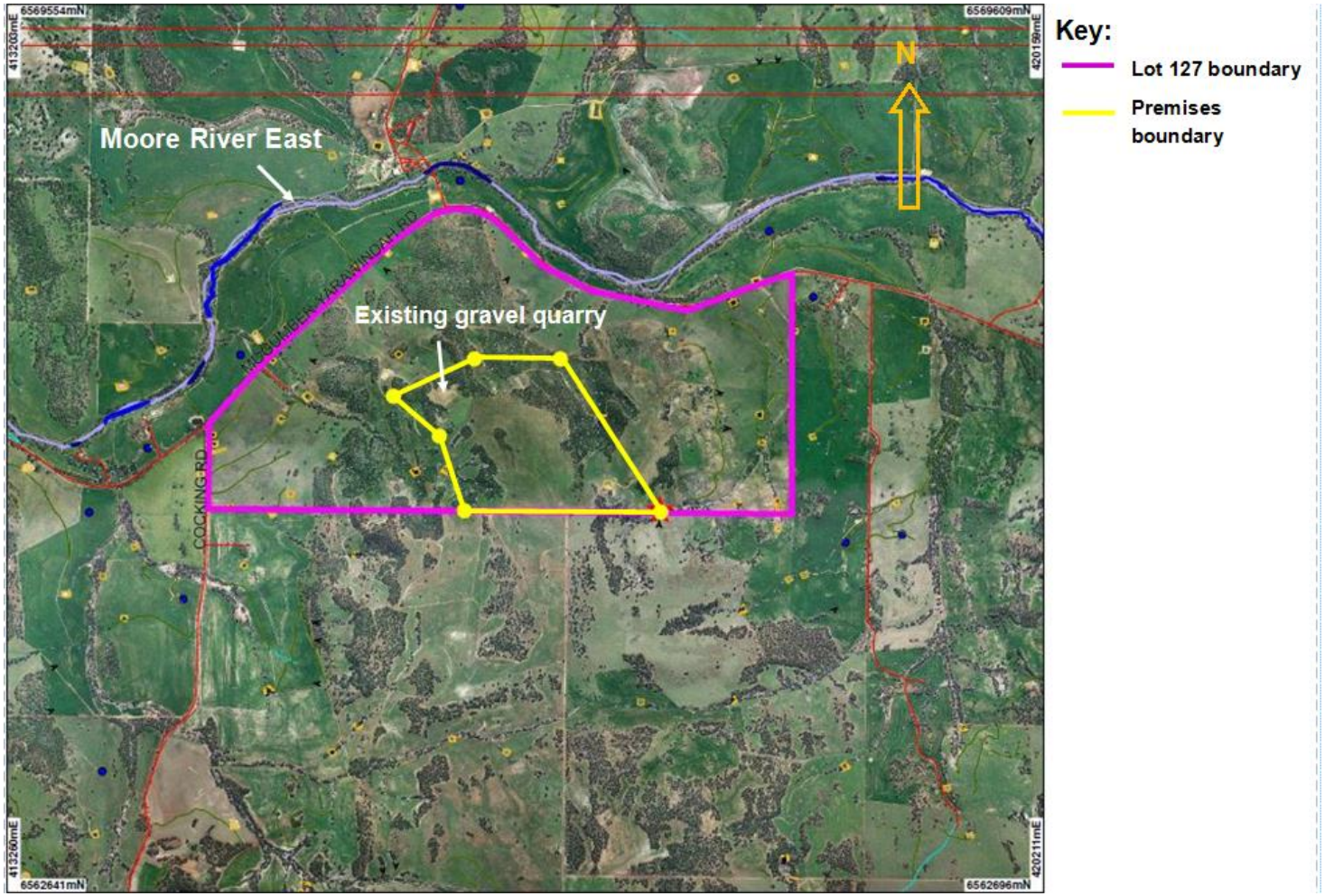


Figure 1: Premise boundary (yellow) within Lot 127 Mogumber-Yarrawindah Road boundary

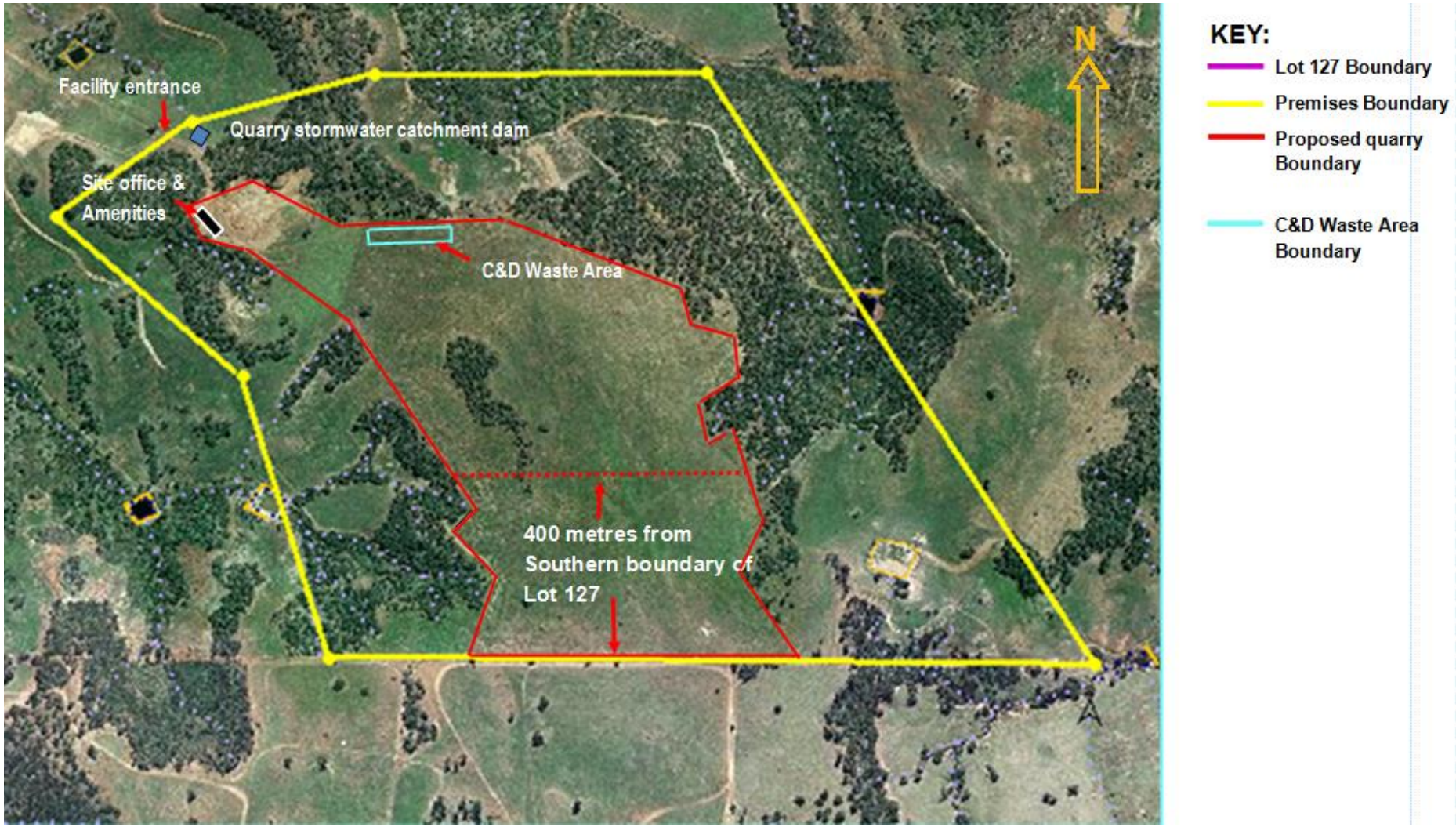


Figure 2: Site Plan

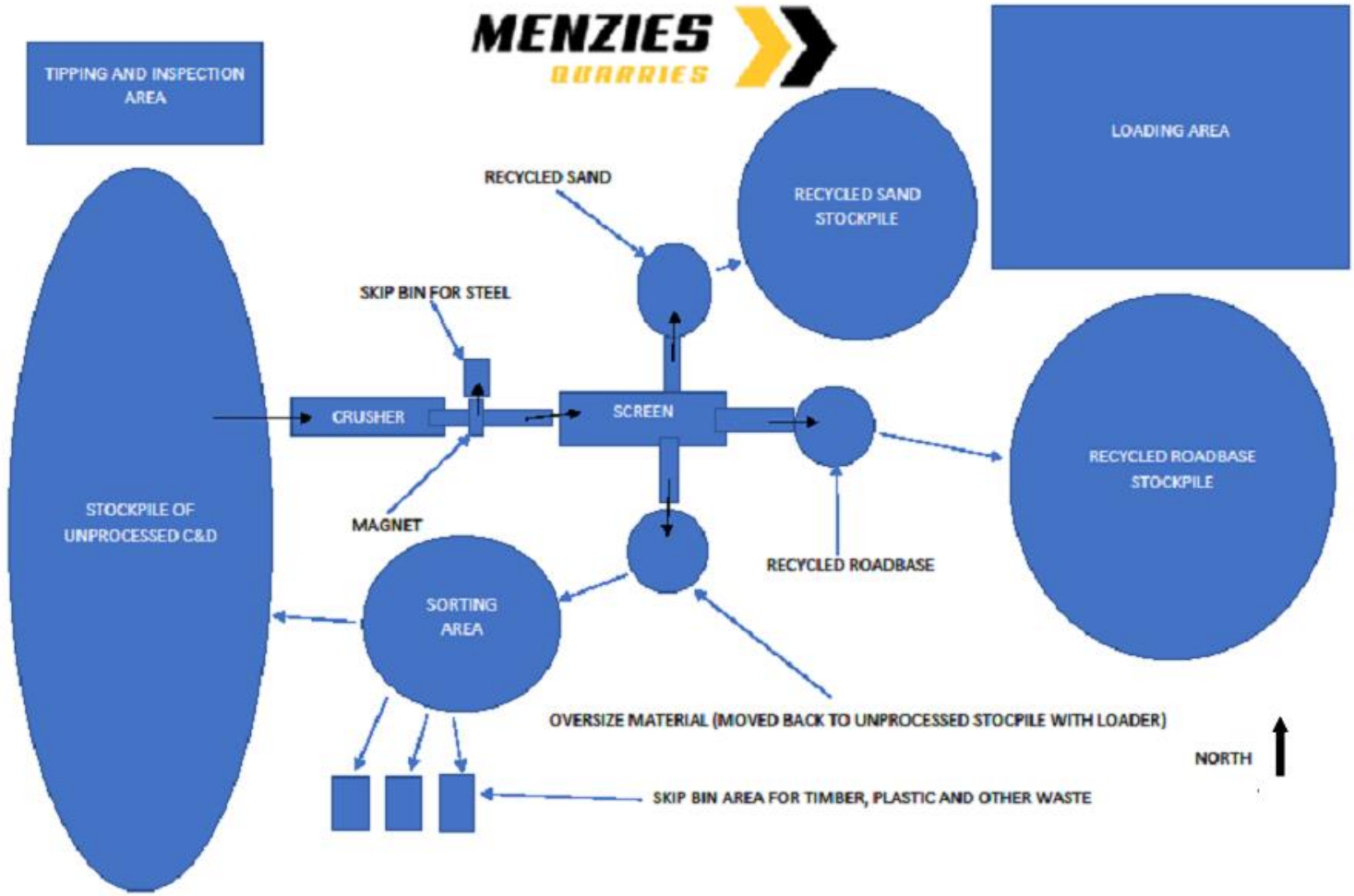


Figure 3: C&D Waste Area - acceptance, storage and processing area (as per Application)

4.3 Exclusions to the Premises

The activity of raw material (gravel) extraction (quarrying) is not a prescribed activity and as such is not considered in this assessment. The quarry is regulated by the Shire of Victoria Plains. Other activities being undertaken that are excluded from this assessment include the installation of a transportable site office and amenities block at the facility, the installation of stock proof fencing, the replacement of the existing self-bunded diesel tank with a larger (20,000 litre capacity) self-bunded tank and the construction of a gravel access road along the western perimeter of the proposed quarry boundary line.

Key Finding: *The activity of quarrying (extracting raw material from the ground) is not prescribed and is regulated by the Local Government Authority; therefore the existing and future proposed quarrying activities do not form part of this assessment.*

5. Legislative context

5.1 Relevant Approvals

5.1.1 Planning Approvals

The Premises is located within the Shire of Victoria Plains in an area zoned 'rural' under the Town Planning Scheme No.5.

The Shire of Victoria Plains granted Planning Approval for the Extractive Industry (sand and gravel) and for C&D Waste recycling on 6 July 2017. Planning approval was granted for a period of 5 years, expiring on 14 June 2022. The planning approval includes 17 Conditions covering the term of the agreement, various dust and noise control measures, hours of operation restrictions and requirements regarding decommissioning and rehabilitation of the quarry. The specific conditions and relevant DWER conditions in the Issued Licence are summarised in Appendix 2.

5.2 Part V of the EP Act

5.2.1 Applicable regulations, standards and guidelines

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

5.2.2 Clearing

No clearing is approved under the Issued Works Approval or Issued Licence.

5.2.3 Compliance inspection

DWER officers conducted a site visit of the Premises on 16 November 2017 following advice that the Premises was receiving C&D Waste ahead of the Issued Licence (L9038/2017/1) being granted. The site visit determined that there was a quantity of C&D waste that had already been received, processed and stored within the newly constructed C&D Waste Area.

5.2.4 Works Approval compliance certification

Works Approval (W6038/2017/1) was issued on 7 August 2017. Condition 2, Table 2 of the Works Approval required compliance reporting with respect to proposed infrastructure and equipment installation requirements. .Compliance documentation was submitted to DWER on 19 November 2017. A DWER request for further information to determine compliance was sent on 24 November 2017 and responded to on 9 December 2017.

In this correspondence the Applicant noted that the new dam was still to be built and was now intended to be constructed further north of the existing gravel quarry area, requiring a slight change to the Premises boundary. DWER accepted the compliance reporting subject to transferring the outstanding requirement to build a new catchment dam and associated reticulation to supply water for dust suppression activities in the C&D Waste Area as part of authorised works in the Issued Licence.

6. Consultation

The Application was advertised in the West Australian Newspaper on the 8 May 2017 and on the Departments website.

The Application was also referred to the Shire of Victoria Plains, the Department of Health and to four rural landholders occupying lots immediately surrounding the Premises, on 8 May 2017 and to the title holder of Lot 127 on 1 June 2017. A summary of comments received and DWER's consideration in this assessment is included in Appendix 3.

7. Location and siting

7.1 Siting context

The Premises is located within the Shire of Victoria Plains in an area zoned 'rural', occupying approximately 135 hectares within a 685 hectare lot. This lot and surrounding rural lots have predominantly been cleared and are used for broadacre sheep grazing and cropping activities.

Access to the premises is off Mogumber-Yarrawindah Road, and is located approximately 7.8 km west of the Great Northern Highway and 7.9km east of the Brand Highway.

The nearest town and residential area is New Norcia located approximately 11km north east of the Premises.

7.2 Residential and sensitive Premises

There are no commercial or industrial receptors within a 5km radius of the premises. The distances to residential and sensitive receptors are detailed in Table 5.

The distances to residential and sensitive receptors are detailed in Table 5.

Table 5: Receptors and distance from activity boundary

Sensitive Land Uses	Distance from Prescribed Activity
Nearest rural residence – Lot 127	900m west of the northern Premises (quarry area) boundary
Other surrounding rural residences	1.8km west of the northern Premises (quarry area) boundary 1.7km NNW of the northern Premises (quarry area) boundary 2.1km NE of mid-western Premises (quarry area) boundary 2.3km WSW of northern premises quarry boundary Another 10 rural residences, including part-time worker occupied residences lie within a 3.2km to 5.0km radius of the Premises boundary.
Residential Area	Town of New Norcia 11km north east

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. There are no specified ecosystems within a 5km radius of the Premises. Table 6 identifies the distances to other relevant ecosystem values which do not fit the definition of a specified ecosystem.

The table has also been modified to align with the *Guidance Statement: Environmental Siting.*

Table 6: Environmental values

Specified ecosystems	Distance from the Premises
N/A	
Biological component	**Distance from the Premises**
Threatened/Priority Flora	The closest recorded site of a threatened flora species is within 810 metres of the Premises boundary. One recorded site of a priority flora species is located within 565 metres of the Premises boundary.
Other relevant ecosystem values	**Distance from the Premises**
Moore River East	The closest point to the river is 1.17km north east of the northern boundary of the Premises Otherwise, the river lies approximately 1.7km to the north, northwest and west of the northwest boundary of the premises.

7.4 Groundwater and water sources

The distances to groundwater and water sources are shown in Table 7.

Table 7: Groundwater and water sources

Groundwater and water sources	Distance from Premises	Environmental value
Public drinking water source areas	Nearest is approximately 11km to the north east at New Norcia.	
Major watercourses/waterbodies	Nearest surface water protection area is for the Moore River and specified tributaries lying at its' closest point approximately 5.6km north west.	
Groundwater	Regionally, the locality between Mogumber and Gingin is underlain by a superficial aquifer (locally discontinuous) present in sandy gravels and gravelly clays. The underlying semi-confined aquifer, known as the Mirrabooka aquifer is present in the clay profile. There are no known bores located within 1km of the Premises (based on available GIS dataset –WIN Groundwater Sites) and it is unclear whether the superficial aquifer is present at this site. The presence of a seasonal (interflow or perched) aquifer within the gravel profile cannot be ruled out, especially given the reported presence of spring fed water within the Premises boundary Lot and on at least one of the adjacent lots. Superficial groundwater flow is likely to be to the north, north west towards the Moore River, whilst groundwater within the Mirrabooka aquifer generally has a westerly flow direction.	Predominant beneficial use is for stock watering.
Surface water dams	Three dams, one east of the quarry boundary, one to the south east and the other approximately 330 m west of the lower section of the western quarry boundary. Sections of the Premises are within the catchment area supplying runoff to these dams. Perennial creeklines when flowing are reported locally to be 'salty'.	Water supply for grazing animals and agricultural use. Water proposed to be used for dust management.

7.5 Soil type

The area is described as having low hilly to hilly terrain, with the chief soils consisting of hard acidic and sandy acidic yellow mottled soils, containing moderate amounts of ironstone gravels in the surface horizon (DWER Geographical Information System – Statewide soils). Site based evidence from the existing quarrying activity also shows the presence of clay in the deeper soil profile.

7.6 Meteorology

7.6.1 Wind direction and strength

Mean wind speeds at the Wongan Hills weather station are plotted in Figure 3 below.

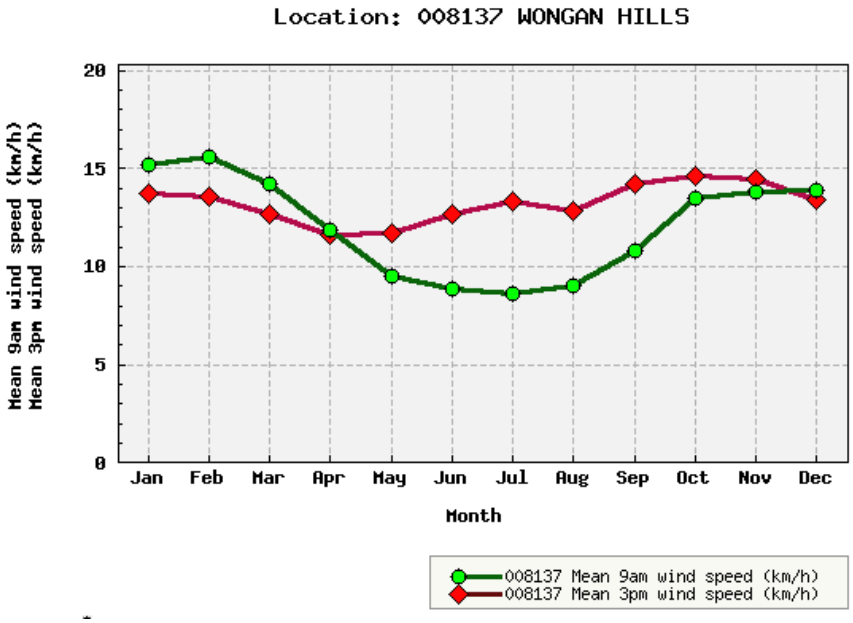
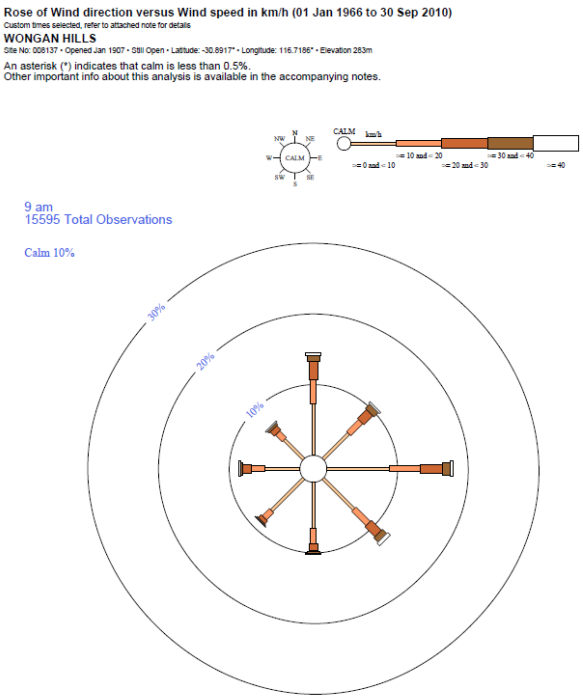


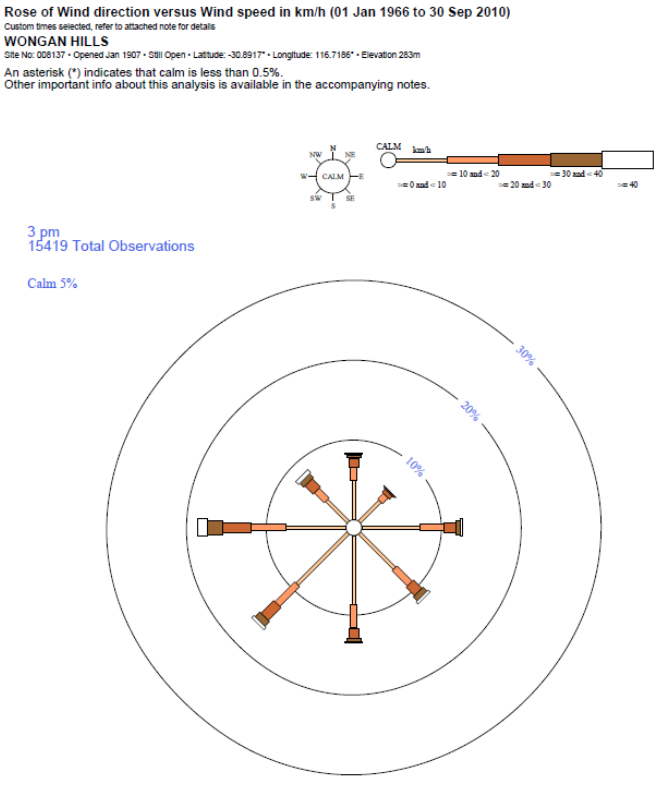
Figure 4: Mean wind speeds at Wongan Hills

Wind roses for 9am and 3pm at Wongan Hills are shown in Figures 4 and 5 below.



Source: Bureau of Meteorology

Figure 5: 9am Wind speed and direction – Wongan Hills



Source: Bureau of Meteorology

Figure 6: 3pm Wind speed and direction – Wongan Hills

It is important to note that these wind roses show historical wind speed and wind direction data for Wongan Hills weather station and should not be used to predict future data.

7.6.2 Regional climatic aspects

The regional climate is characterized by cool, wet winters and warm, dry summers The nearest Bureau of Meteorology weather stations are at New Norcia (ID:009033) providing rainfall data only and the Wongan Hills station (ID:008137).

7.6.3 Rainfall and temperature

The nearest Bureau of Meteorology weather station recording rainfall data is at New Norcia approximately 11km northeast of the Premises. Monthly rainfall data is displayed in Figure 6 below.

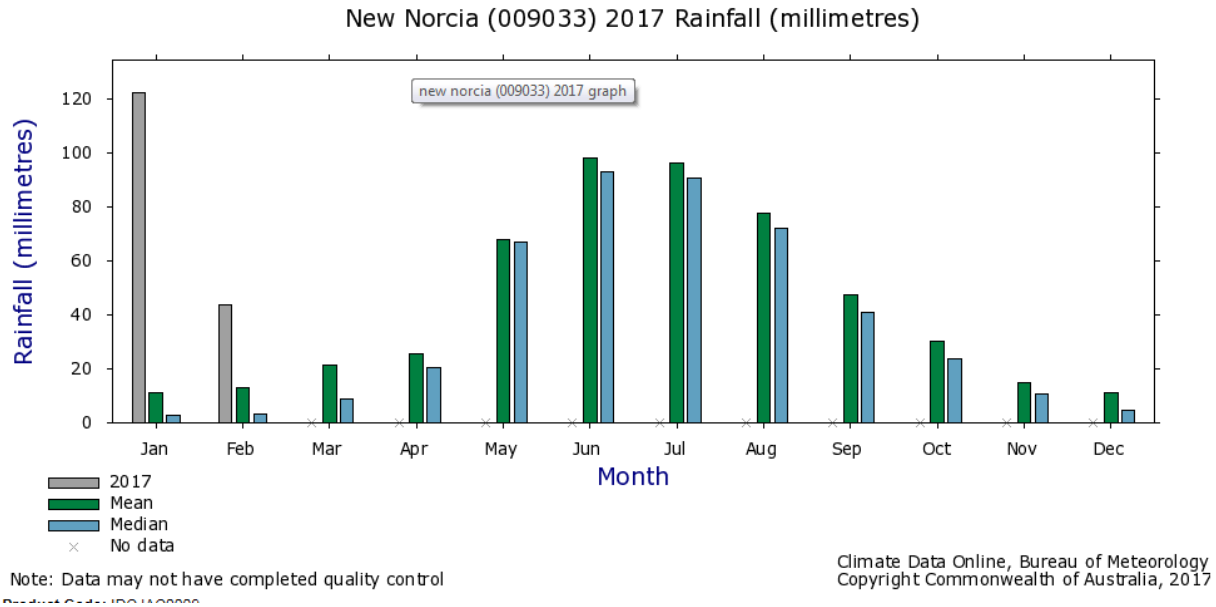


Figure 7: New Norcia Rainfall Data

The nearest Bureau of Meteorology weather station recording temperature data is at Wongan Hills approximately 60km north-east of the Premises. Monthly maximum and minimum temperatures are plotted in Figures 7 and 8 below.

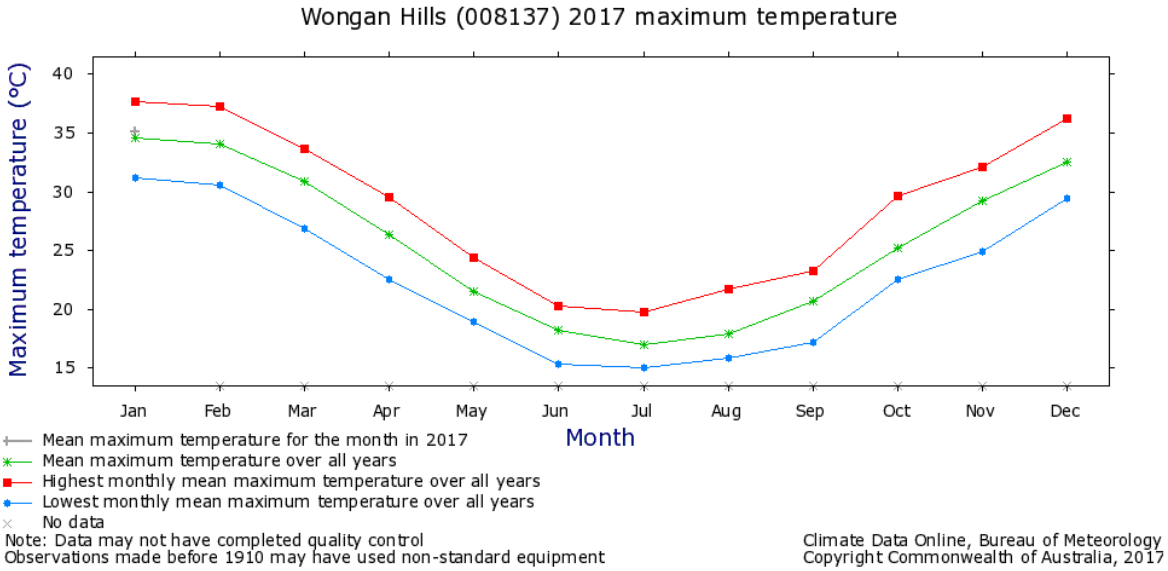


Figure 8: Wongan Hills Maximum Temperature Data Summary

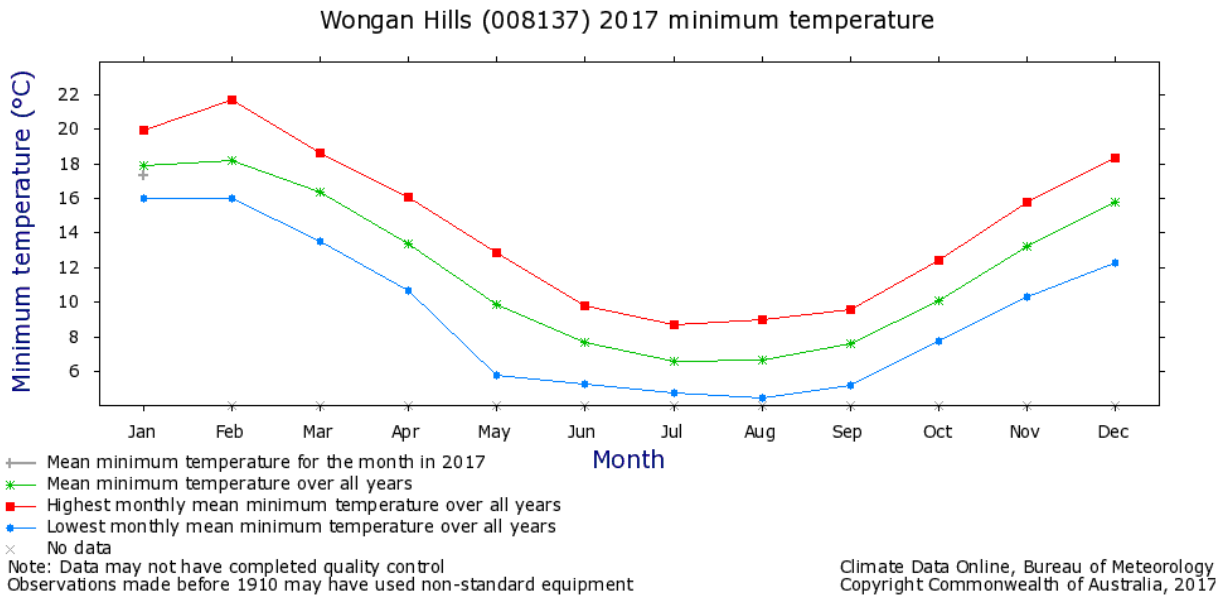


Figure 9: Wongan Hills Minimum Temperature Data Summary

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 through Table 9.

The identification of the sources, pathways and receptors to determine Risk Events are set out in Tables 8 and 9 below.

Table 8: Identification of emissions, pathway and receptors *during construction*

Risk Events						Continue to detailed risk assessment	Reasoning
Sources/Activities		**Potential emissions**	**Potential receptors**	**Potential pathway**	**Potential adverse impacts**		
Construction, mobilisation and positioning of infrastructure	*Vehicle movements on unsealed (gravel) access roads*	*Dust*	*Closest rural residential receptor located 900m west of the NW Premises boundary*	*Air / wind dispersion*	*None*	*No*	*The Delegated Officer has assessed that the majority of vehicle movement relates to the delivery and installation of transportable facilities and other equipment and construction of an access road at distances greater than 1km from the closest receptor and considers this to be an adequate buffer for any fugitive dust impacts.* *The Premises boundary has been defined to allow for a mixed cleared land / vegetated buffer of at least 130 to 200 metres west, north and east of all prescribed premise activity.*
		Noise					*The Delegated Officer has assessed that the majority of vehicle movement relates to the delivery and installation of minor transportable facilities and other equipment and construction of an access road at distances greater than 1km from the closest receptor and considers noise impact is adequately addressed by the EP (Noise) Regulations.*
	Construction / installation of new gravel access road, amenities buildings and mobile plant	*Dust*	*Closest rural residential receptor located 900m west of the NW Premises boundary*	*Air / wind dispersion*	*Amenity impacts*	*No*	*The Delegated Officer has assessed that the majority of construction relates to a new storm water collection dam and an access road and the installation of transportable office and amenities infrastructure at distances greater than 1km from the closest receptor and considers this to be an adequate buffer for any fugitive dust impacts.* *The Premises boundary has been defined to allow for a mixed cleared land / vegetated buffer of at least 130 to 200 metres west, north and east of all prescribed premise activity.*
		Noise					*The Delegated Officer considers noise impact is adequately addressed by the EP (Noise) Regulations.*

Table 9: 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**		
Waste acceptance and handling	*Acceptance and handling of C&D Waste*	*Dust*	*Closest rural residential receptor located 900m west of the NW Premises boundary*	*Air / wind dispersion*	*Health and amenity impacts*	*Yes*	*See Section 8.4*
		Noise			*Amenity impacts*	*No*	*The Delegated Officer considers the separation distance for this noise source to be adequate.* *The Delegated Officer considers noise impact is adequately addressed by the EP (Noise) Regulations.*
	Acceptance of C&D Waste potentially contaminated with asbestos containing materials and/or asbestos fibres	*Asbestos fibres from non-conforming waste types at the Premises being released into the air*	*Closest rural residential receptor located 900m west of the NW Premises boundary*	*Air / wind dispersion*	*Health impacts*	*Yes*	*See Section 8.6*
Crushing and screening raw material and C&D waste	*Crushing and screening of quarried raw materials and construction and demolition waste*	*Dust*	*Closest rural residential receptor located 900m west of the NW Premises boundary*	*Air / wind dispersion*	*Health and amenity impacts*	*Yes*	*See Section 8.4*
		Noise			*Amenity impacts*	*Yes*	*See Section 8.5*
	Crushing and screening of construction and demolition waste potentially contaminated with asbestos containing materials and/or asbestos fibres	*Asbestos fibres from non-conforming waste types at the Premises being released into the air*	*Closest rural residential receptor located 900m west of the NW Premises boundary*	*Air / wind dispersion*	*Health and amenity impacts*	*Yes*	*See Section 8.6*

Risk Events						Continue to detailed risk assessment	Reasoning
Sources/Activities		**Potential emissions**	**Potential receptors**	**Potential pathway**	**Potential adverse impacts**		
Stockpiling	*Processed quarry materials (sands & gravels) stockpiled on site*	*Dust*	*Closest rural residential receptor located 900m west of the NW Premises boundary*	*Air / wind dispersion*	*Health and amenity impacts*	*Yes*	*See section 8.4*
	Unprocessed and processed solid wastes stockpiled on site	*Dust*				*Yes*	*See section 8.4*
		Asbestos fibres from non-conforming waste types at the Premises being released into the air			*Health impacts*	*Yes*	*See section 8.6*
Final Product	*Recycled waste contaminated with asbestos containing material and/or asbestos fibres sold to third parties*	*Asbestos fibres from non-conforming waste types at the premises being released to third parties from the final product*	*Third parties receiving or exposed to the final product*	*Air / wind dispersion*	*Health impacts*	*Yes*	*See section 8.6*
Vehicle Movements	*Vehicular movement on unsealed roads and other unsealed operational areas*	*Dust*	*Closest rural residential receptor located 900m west of the NW Premises boundary*	*Air / wind dispersion*	*Amenity impacts*	*Yes*	*See section 8.4*
		Noise					*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 10 below.

Table 10: 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 11 below.

Table 11: 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	• **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	• 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	• **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	• **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	• **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	• **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	• **onsite impacts**: low level • **offsite impacts local scale**: minimal • **offsite impacts wider scale**: not detectable • Specific Consequence Criteria (for environment) likely to be met	• 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	• **onsite impact**: minimal • Specific Consequence Criteria (for environment) met	• **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, Table 12 below:

Table 12: 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 – Fugitive Dust (Operations)

8.4.1 Description of Fugitive Dust Risk Event

Fugitive dust emissions generated by vehicle movements on unsealed gravel roads, screening of extracted gravel, C&D Waste crushing and screening or other waste handling activities dispersed through the air (potentially assisted by prevailing winds), and inhaled by a sensitive receptor causing an adverse health impact and/or deposited within a rural residence boundary causing a loss of amenity.

8.4.2 Identification and general characterisation of emission

There is potential for dust in the form of particulate matter (PM) and coarse particles being raised and dispersed by a range of activities being undertaken at the Premises including from vehicle movements on unsealed roads and operational areas, excavation and crushing and screening activities and the unloading, sorting and stockpiling of waste and various final products. The dust could consist of topsoil, and fractions from deeper soil layers within the active quarry area, including sands and fine clay material, and particulate matter released from waste received, processed and stockpiled at the facility.

The risk from the potential presence and dispersal of asbestos fibres is considered separately in Section 8.6.

Emissions will be variable depending on waste loads received, weather conditions and the particular activity. Dust emissions from the screening of gravel and C&D Waste crushing and screening activities will be intermittent with these activities being undertaken on a ‘campaign’ basis, subject to stockpiled reserves and demand for gravel resources, supplies of incoming C&D Waste requiring processing and demand for C&D Waste recycled product. Dust emissions resulting from truck and other vehicle movements on unsealed gravel surfaces will be closely linked to the receipt, processing and subsequent removal of materials off-site.

8.4.3 Description of potential adverse impact from the emission

Particulate matter may be inhaled by sensitive receptors occupying nearby rural residences resulting in adverse health impacts or alternatively could cause a loss of amenity.

8.4.4 Criteria for assessment

The NEPM air quality criteria are applicable to determine air quality within residential areas in reference to dust/particulate matter. The NEPM sets ambient particles as PM10 being 50µg/m3 over a one day averaging period with the maximum allowable exceedance of not more than five days in a year.

8.4.5 Applicant controls (from Application)

The proponent controls for fugitive dust are set out in Table 13 below. They relate mainly to siting, stockpile heights and the use of water for dust suppression. The siting of the Premises is at a distance of 900 metres or more from surrounding rural residences and there is a minimum agricultural land / remnant vegetation buffer of 130 to 200 metres width around the western, northern and eastern perimeters of all facility activities to the Premises boundary, allowing a considerable distance over which dust could settle. Crushing, screening and stockpiling of extracted gravel is also proposed to occur within the quarry void which will assist in minimising dust dispersion.

This assessment has reviewed the controls set out in Table 13 below.

Table 13: Applicant's proposed controls for fugitive dust

Site infrastructure	Description	Operation details	Reference to issued Licence plan (Attachment 2)
Controls for dust			
Access road to quarry and C&D Waste processing area and associated unsealed operational areas	Vehicle speed restricted to 20 km per hour	Observation and management of vehicle speeds is the responsibility of staff onsite	Premises Map
	15,000 litre capacity water truck with associated water dispensing equipment, including a pump, hosing and spray unit, to be permanently located on the Premises	Water truck used to wet down road surfaces and working areas	
Radial stacker/conveyor	Misters on the radial stacker/s used for material stockpiling	Misters directed at dust generating points to be operated at all times while stacking. No stacking will take place when wind conditions cause visible dust generation C&D Waste materials and Product	Mobile plant operating within current area of quarrying activity or within C&D Waste area. Premises Map & C&D Waste Area Layout

Site infrastructure	Description	Operation details	Reference to issued Licence plan (Attachment 2)
		stockpiles will be restricted to a maximum of 8 metres above ground height.	
Crushing & screening equipment	Sprinkler system / dust suppression units fitted to all crushers	Systems will typically be operated at 30 L/min whilst crushing and screening of C&D Waste is occurring or as soon as visible dust emissions are observed. No screening will take place when wind conditions cause visible dust generation.	Premises Map. Mobile plant operating within current area of quarrying activity or within the C&D Waste processing area.
Piped reticulation systems and sprinklers, including portable sprinklers for use in material handling areas	To cover dust generating operations, including material handling and material stockpiles	Sprinkler systems to wet down C&D Waste unloading, sorting and material storage areas	
Management controls for fugitive dust			
Visual monitoring	All activities on site will be visually monitored for generation of dust by staff on site. Visual monitoring is to include a daily inspection of all stockpiles and a weekly inspection outside of the premises boundary. If dust cannot be prevented from blowing over the Premises boundary the activity generating the dust will immediately cease.		
Receipt and sorting of dusty waste loads	If particularly dusty waste loads are identified, such loads will be barred from being delivered to site unless they can be delivered in a manner that reduces or prevents dust emissions. If a dusty load is received during adverse weather conditions it will be wet down and left until weather conditions improve before being sorted.		
Screening and stacking operations	Only carried out when weather conditions permit. Apply low speed screening operations.		
Contingency Plans	If unacceptable dust emissions are identified onsite one or more of the following contingency plans will be implemented; Slow vehicles down using traffic calming methods (speed humps)/ reduce site speed limit further; Restrict dust generating activities to the appropriate time of day to reduce dust generation (weather dependent); Reject or restrict excessively dusty loads; and Utilise chemical dust suppressants.		

8.4.6 Key findings

The Delegated Officer has reviewed the information regarding fugitive dust risk and has found:

1. *The siting of gravel crushing and screening activities within the quarry void, and the C&D Waste processing located at the northern end, with significant non-operational buffers to the west, north and east, mitigate the likelihood of fugitive dust emissions dispersing beyond the Premises boundary.*
2. *Operational fugitive dust risk event primarily relates to the acceptance and processing of waste and product, the crushing and screening of quarried raw materials and vehicle movements around the Premises. The Applicant has proposed a number of actions to control dust emissions; these actions relying on a consistent water source (i.e. dam supplies). The ability of the Applicant to source water and meet the commitments made with regards to dust suppression is the responsibility of the Applicant.*

8.4.7 Consequence

The Delegated Officer has had regard to the management of fugitive dust and the infrastructure controls in place, and has determined that the impact of dust on residential receptors will be minimal to amenity and at a local scale. Therefore, the Delegated Officer considers the consequence to be **Slight.**

8.4.8 Likelihood of Risk Event

The Delegated Officer has determined that the impacts from fugitive dust will probably not occur in most circumstances. Therefore, the Delegated Officer considers the consequence to be **Unlikely.**

8.4.9 Overall rating of Fugitive Dust Risk Event

The Delegated Officer has compared the consequence and likelihood ratings described above with the Risk Rating Matrix (Table 10) and determined that the overall rating for the risk of fugitive dust emissions on residential receptors during operation is ***Low.***

8.5 Risk Assessment – Noise (Operations)

8.5.1 Description of Noise Risk Event

Noise (unwanted sound) generated from operations on the Premises being transmitted through the air and received by surrounding sensitive receptors resulting in an adverse impact on wellbeing and amenity.

8.5.2 Identification and general characterisation of emission

Excessive noise can be generated from the operation of excavation and crushing and screening equipment, the loading, unloading and stockpiling of various waste and processed raw materials, the operation of pumps and generators as well as from trucks and other vehicle movements (including reversing beepers) associated with the general handling of waste and the movement of final products off-site.

Noise generating activities related to quarrying and C&D Waste processing will be intermittent, with quarrying conducted on a campaign basis to establish raw material stockpiles for off-site sale in accordance with material demands and C&D Waste processing subject to incoming volumes and types of material requiring screening and/or crushing.

The crushing, screening and radial stacking (conveyor) equipment to be used on site is all mobile equipment that the Applicant proposes to locate and operate within the active area of quarrying operations at any one time, commencing at the northwest end of the Premises and proceeding southeasterly over the lifetime of quarrying operations. As these operations proceed, the distance from these operational areas to the nearest rural residence will increase.

C&D Waste unloading, sorting, processing and stockpiling is to occur within the northern section of the quarry greater than 1km distance to all surrounding rural residences.

At peak demand for gravel supplies the Application states that an estimated 5 -10 trucks would leave the facility every hour and not before 0700 hours. Operating hours will be from 0600 hours to 1700 hours from Monday to Saturday.

8.5.3 Description of potential adverse impact from the emission

Noise has the potential to adversely impact on the wellbeing, amenity and comfort of surrounding nearby rural residential receptors, the nearest being 900 metres west of the northwest Premises boundary and the entrance/exit gate to the facility.

8.5.4 Criteria for assessment

The current applicable criteria (assigned levels) for noise emissions are detailed in the *Noise Regulations*.

8.5.5 Applicant controls (from Application)

The proponent controls for noise are set out in Table 14 below. They relate mainly to siting of noise generating equipment and operational hours. The siting of the Premises is at a distance of 900 metres or more from surrounding rural residences and there is a minimum agricultural land / remnant vegetation buffer of 130 to 200 metres width around the western, northern and eastern perimeters of all facility activities to the Premises boundary, allowing a considerable buffer. In addition the noise generating gravel crushing and screening and materials stockpiling equipment will be positioned in the excavated quarry area when processing quarried raw materials which, along with the overburden bund walls at the outer perimeter of the operational quarry area, will provide additional noise buffering.

This assessment has reviewed the controls set out in Table 14 below.

Table 14: Applicant's proposed controls for noise

<table>
<tr><th>Site Infrastructure</th><th>Description</th><th>Operation details</th><th>Reference to Issued Licence Plans (Attachment 2)</th></tr>
<tr><td colspan="4">Controls for noise</td></tr>
<tr><td>Trucks and other vehicles and equipment</td><td>Delivery and despatch trucks, 1 x water truck, 2 x front end loaders, 1 x bulldozer, 1 x excavator and personal vehicles</td><td rowspan="4">Operate within restricted hours:
Monday to Saturday from 0600 hours to 1700 hours, with no machinery operating or delivery trucks arriving prior to 0700 hours.
All equipment will be operated and maintained in good working order.
All gravel processing equipment will be operated within the quarry.</td><td>N/A</td></tr>
<tr><td>Equipment for product movement and stockpiling</td><td>Radial stacker/conveyor (and front end loaders (2) and bulldozer as identified above)</td><td rowspan="3">Premises Map & C&D Waste Area Layout.
Mobile equipment, initially operating in the northern end of the quarry (gravel processing only) and specifically within the C&D Waste processing area for waste processing activities.</td></tr>
<tr><td rowspan="2">Crushing and screening equipment</td><td>1 x Impact crusher and associated conveyors</td></tr>
<tr><td>1 x double deck screen</td></tr>
<tr><td colspan="4">Management controls and contingency measures for noise</td></tr>
<tr><td colspan="4">If standard reversing vehicle beacons are identified as causing noise disturbance, beacons will be replaced by low frequency devices.
Location of crushing and screening operations within the quarry can be reviewed, optimising noise barriers such as the quarry wall/s.
Site activities will be staggered to reduce the cumulative effect of multiple plant and equipment operating simultaneously.
Noise complaints will be dealt with in accordance with the environmental complaints procedure and will be raised using the Environmental Complaint Form.
In the event of noise being identified as a problem, third party independent specialists will be engaged to monitor noise emissions and where necessary recommend site improvements to reduce noise emissions.</td></tr>
</table>

8.5.6 Key findings

The Delegated Officer has reviewed the information regarding noise and has found:

1. *Operational controls implemented by the Applicant are satisfactory to manage potential noise emissions.*
2. *No noise complaints have been recorded from the current and previous quarrying and gravel crushing and screening operations.*

8.5.7 Consequence

If *a noise Risk Event* occurs*, then* the Delegated Officer has determined that the adverse impact on *amenity for sensitive receptors* will be minimal and *at a local scale only.* Therefore, the Delegated Officer considers the consequence of a *noise Risk Event* to be **Slight.**

8.5.8 Likelihood of Risk Event

Taking into consideration siting of the facility activities and Applicant controls the Delegated Officer has determined that the likelihood of *a noise Risk Event* occurring and impacting on surrounding sensitive receptors will probably not occur in most circumstances. Therefore, the Delegated Officer considers the likelihood of a noise Risk Event to be **Unlikely.**

8.5.9 Overall rating of Noise Risk Event

The Delegated Officer has compared the consequence and likelihood ratings described above with the Risk Rating Matrix (Table 10) and determined that the overall rating for the risk of *noise* is ***Low.***

8.6 Risk Assessment – Asbestos (Operations)

8.6.1 Description of Asbestos Risk Event

Asbestos is a hazardous material that can cause mesothelioma, asbestosis or lung cancer. Most C&D Waste is not contaminated with asbestos fibres. However, the handling, storage and processing of potentially contaminated C&D Waste could result in asbestos fibres being released, made airborne and subsequently inhaled by a person present on a neighboring property resulting in adverse health impacts known to be directly associated with asbestos. Alternatively, processed contaminated C&D Waste could result in asbestos fibres being present within final products sold to third parties that are subsequently inhaled by a third party resulting in adverse health impacts known to be directly associated with asbestos.

8.6.2 Identification and general characterisation of emission

Asbestos was used extensively in Australian buildings and structures from the 1950's through to 1990. Due to this widespread use, there is potential for C&D Waste to contain asbestos fibres. C&D Waste will be accepted, sorted and then select materials will be processed at the Premises using crushing and screening equipment in an open air environment, with the possibility of asbestos fibres being present in the waste.

Asbestos fibres could potentially become airborne, impacting people on neighboring properties. Additionally, asbestos fibres present in final products sold to third parties may result in adverse health impacts linked to asbestos for final end users of these products.

8.6.3 Description of potential adverse impact from the emission

Asbestos is a hazardous material that can cause mesothelioma, asbestosis or lung cancer.

8.6.4 Criteria for assessment

Asbestos content in final product is specified in DWER Asbestos Guidelines and specifies that any product determined to contain ≥0.001% weight for weight asbestos must be treated as waste, deemed as potentially contaminated material and considered for off-site disposal, or it should be subject to further actions to remediate the contamination and demonstrate the materials' acceptability by further assessment.

The 0.001% weight for weight value is consistent with the Western Australian Department of Health investigation level as stated in the May 2009, *Guidelines for the Assessment,*

Remediation and Management of Asbestos Contaminated Sites in Western Australia. This Guideline also sets the asbestos air-quality limit for protecting the public around contaminated sites at 0.01 fibres per milliliter (***f/ml***) (using the membrane filter method).

8.6.5 Applicant controls (from Application)

The Applicant controls for asbestos dust are set out below. They relate mainly to restrictions on waste acceptance, waste receipt, handling and inspection procedures and the use of water for dust suppression. The siting of the Premises is at a distance of 900 metres or more from surrounding rural residences and there is a minimum agricultural land / remnant vegetation buffer of 130 to 200 metres width around the western, northern and eastern perimeters of all facility activities to the Premises boundary, allowing a considerable distance over which airborne asbestos fibres could settle. The Application stated that the site will not accept asbestos and that asbestos will not be intentionally delivered to, nor accepted at the Premises. The Application states that all activities will be carried out in accordance with a site Asbestos Management Plan developed to comply with DWER's Asbestos Guidelines. The Applicant submitted a copy of a generic Asbestos Management Plan on 21 June 2017.

This assessment has reviewed the asbestos management actions and infrastructure information provided in the Application, which consists of the following stated controls:

- Customers will be advised that asbestos products are not accepted on site;
- Appropriate signage will be erected at the site entrance notifying customers that asbestos is not accepted on site;
- Staff working at the facility will be trained to ensure that they are able to recognise asbestos containing material and are aware of the protocols to be followed if it is identified;
- Upon arrival at the facility, the incoming waste will be inspected and sorted into recyclable components and residual waste. If at any stage asbestos is identified, the load will either be rejected (if the delivery vehicle is still on site) or the asbestos containing material will be separated and placed in a waste bin for immediate removal (at least within 24 hours); and
- Sand and rubble products will be managed in accordance with the most recent DWER *Asbestos Guidelines, 18 December 2012.*

8.6.6 Key findings

The Delegated Officer has reviewed the information regarding the potential risk event of asbestos release and notes that whilst the Asbestos Management Plan (AMP) submitted on 21 June 2017 is largely generic, it commits to material acceptance and handling, asbestos removal and containment and the testing of final product in accordance with the DWER Asbestos Guidelines.

8.6.7 Consequence

Taking into consideration the potential impacts associated with asbestos fibres, if *an asbestos release Risk Event* occurs*, then* the Delegated Officer has determined that the adverse health impacts would be severe with a potential loss of life. Therefore, the Delegated Officer considers the consequence of *an asbestos release risk event* to be **Severe.**

8.6.8 Likelihood of Asbestos Risk Event

Taking into consideration siting of the C&D Waste crushing and screening activity relative to sensitive receptors and the controls in place by the Applicant, the Delegated Officer has determined that the likelihood of the health impacts from *an asbestos release Risk Event* occurring will be *unlikely to occur*. Therefore, the Delegated Officer considers the likelihood of health impacts from asbestos exposure will be **Unlikely.**

8.6.9 Overall rating of Asbestos Risk Event

The Delegated Officer has compared the consequence and likelihood ratings described above with the Risk Rating Matrix (Table 10) and determined that the overall rating for the risk of *asbestos exposure impacts* on sensitive receptors is ***High.***

8.7 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 15 below. Controls are described further in Section 9.

Table 15: Risk assessment summary

	Description of Risk Event			Applicant controls	Risk rating	Acceptability with controls (conditions on instrument)
	Emission	**Source**	**Pathway/ Receptor (Impact)**			
1.	Fugitive Dust	Excavating quarry materials Crushing & screening Materials stacking / conveying and stockpiles Vehicle movement on unsealed surfaces	Air/wind to sensitive receptor causing health and/or amenity impacts from inhalation of dust.	Infrastructure and management controls	Slight consequence Unlikely **Low risk**	Acceptable subject to Applicant controls conditioned
2.	Noise	Crushing & screening Operating quarrying and material stockpiling equipment Loading, unloading and sorting of materials Vehicle movements Operation of pumps & generators	Air/wind to sensitive receptor causing amenity impacts	Management controls	Slight consequence Unlikely **Low risk**	Acceptable subject to Applicant controls conditioned
3.	Asbestos	Recycled waste	Air/wind to sensitive receptor causing health impacts associated with the inhalation of asbestos fibres or transferred in final product	Infrastructure and management controls	Severe consequence Unlikely **High risk**	Acceptable subject to Applicant controls conditioned and regulatory controls

9. Regulatory controls

A summary of regulatory controls determined to be appropriate for the Risk Event is set out in Table 16. 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 (L9038/2017/1) will be set to give effect to the determined regulatory controls.

Table 16: Summary of regulatory controls to be applied

		9.1.1 Throughput and processing restrictions	9.1.2 Infrastructure & equipment	9.1.3 Waste restrictions and waste acceptance	9.1.4Acceptance and load inspection	9.1.5 Stockpile management	9.1.6 Product testing and supply	9.1.7 Reports
Risk Items (see risk analysis in section 8)	**1A Dust** from acceptance and handling	●	●		●			
	1B Dust from operation of plant	●	●					
	1C Dust from stockpiles	●	●			●		
	1D Dust from onsite vehicle movements	●	●					
	2A Asbestos from acceptance and handling	●	●	●	●	●		
	2B Asbestos from operation of plant	●	●					
	2C Asbestos from stockpiles	●	●			●		
	2D Asbestos from products						●	●
	3. Noise from vehicles and operations	●	●					

9.1 Licence controls

9.1.1 Throughput and processing restrictions

The Licence Holder shall be subject to total annual limits on throughput of:

- up to 500,000 tonnes of raw material (gravel) crushed and / or screened;
- up to 150,000 tonnes of C&D Waste / solid waste accepted for processing annually; and
- C&D Waste and / or Product is not to be used to fill the quarry void or any other land areas (landfilling) within the Premises, and may only be temporarily stored in designated stockpile areas.

The Licence Holder shall record tonnages of incoming waste and outgoing wastes or final products and report to the CEO at the end of each annual period - Category 62.

The Licence Holder shall record monthly tonnages of raw material extracted from the quarry and processed (crushed and/or screened) and report to the CEO at the end of each annual period - Category 12.

The Licence Holder shall record tonnages of C&D waste processed (crushed) and report to the CEO at the end of each annual period – Category 13.

Grounds:

The likelihood of dust, noise and asbestos emissions is correlated with the throughput at the Premises. Throughput influences the rate of turnover of stockpiles, number of vehicle movements and the length of time machinery is operational. All of these activities are sources of noise and dust and some are specific to potential asbestos emissions.

Controls requiring ongoing monitoring and reporting of inputs and outputs allow DWER to determine compliance with these conditions. Output monitoring can assist in addressing incidents should asbestos contamination in material supplied to third parties ever occur.

As the Licence Holder has not applied to bury or landfill waste (i.e. fill land or the quarry excavation with Waste or Product) or construct the gravel access road with WDM, DWER must ensure that waste acceptance in excess of Product output storage capacity does not occur, as it could result in excessive stockpiling potentially leading to the land or quarry void being filled with Product or a landform being altered and excessive dust/windblown waste risk due to excessively high stockpiles.

9.1.2 Infrastructure and equipment

The following requirements will be included in the Licence:

- Truck fitted with a 15,000 litre water tank, spray bars and hose to be retained on-site with water inside at all times;
- Sprays to crushers and screens to be operating when crushing and screening in the C&D Waste area;
- Misters on radial stacker/conveyor operating when stockpiling processed C&D Waste materials;
- Piped reticulation and sprinklers to stockpiles and portable sprinklers to material handling areas; and
- An adequate available supply of water for dust suppression during dry summer periods (i.e. ensure adequate dam supplies or tanks filled with water).

The Licence Holder shall ensure that the primary noise generating equipment (crushing and

screening) will not be operated on the Premises, and delivery trucks may not unload, prior to 0700 hours Monday to Saturday.

Grounds:

Equipment based controls for managing dust and noise and the Premises operating hours are based on operational and management controls proposed by the Licence Holder.

9.1.3 Waste restrictions and waste acceptance

The Licence Holder shall only accept C&D Waste that does not contain visible asbestos. The Licence Holder should comply with a number of acceptance criteria including no asbestos, maintaining visible signage at the Premises and obtaining signed declarations from suppliers. The Licence Holder should visually inspect loads as they arrive, reject loads suspected of containing asbestos and maintain accurate records.

Grounds:

These controls are derived from DWER Asbestos Guidelines, which the Licence Holder has incorporated in their Asbestos Management Plan.

9.1.4 Acceptance and load inspection

The Licence Holder shall maintain a designated unloading area and ensure that separately delivered incoming waste loads cannot mix prior to their inspection and sorting. The Licence Holder shall also ensure that, wastes are maintained in a damp state, records for classified loads received are maintained and loads are continually inspected for visible evidence of asbestos contamination at all stages of storage, sorting and screening.

Grounds:

These controls are derived from DWER Asbestos Guidelines, which the Licence Holder has incorporated in their Asbestos Management Plan.

9.1.5 Stockpile management

The Licence Holder shall maintain unprocessed, tested processed and untested processed waste in three separate stockpiles. A minimum distance of 3 meters between the three separate stockpiles shall be maintained. The Licence Holder shall maintain stockpiles within specific height and area limits. No waste or WDM may be stored outside the C&D Waste Area as shown on the Premises Map and defined by the boundary coordinates listed in Table 8 in Schedule 1 of the Licence.

Grounds:

Higher stockpiles are exposed to higher wind velocities and a higher discharge height and therefore dust can potentially travel a greater distance before it settles (larger impact plume). Stockpiles of any raw materials must be limited to being no higher than the height of the quarry walls at any one time. Proper implementation of dust suppression measures such as the use of water sprays are more likely to be successful in mitigating adverse impacts with lower stockpile height and with a limited footprint. Water trucks have a limited spray height range and their effectiveness is therefore limited for high stockpiles. The control requiring separation of stockpiles addresses the risk of cross-contamination between processed and unprocessed waste to provide higher controls to mitigate the risk of potential asbestos contamination in materials.

The Licence Holder has not applied to fill land or any quarry void with waste (landfilling), the intention being to sell products generated from the crushing and screening of C&D Waste to off-site users/buyers. The stockpiling of finished products needs to complement the throughput restrictions for the facility to ensure appropriate management of the storage area (stockpiles) and volumes of finished product retained on-site prior to their off-site removal.

9.1.6 Product testing and supply

The Licence Holder must test all finished Products in accordance with Section 4.3 of the DWER Asbestos Guidelines. Finished Products must not be supplied to customers unless testing demonstrates the Product meets the specification of ≤0.001% asbestos weight for weight (w/w) for asbestos content (in any form). Records must be kept for at least 5 years and the Licence Holder will not be permitted to implement a reduced product testing rate.

Grounds:

These controls are derived from the DWER Asbestos Guidelines, which the Licence Holder included in its' submitted Asbestos Management Plan.

9.1.7 Reporting

The Licence is to include the requirement for the Licence Holder to provide an Annual Environmental Report which shall contain:

- A tabulated summary of volumes (tonnes) of waste material inputs and outputs, product outputs and raw material (gravel) crushed and screened; and
- A summary of any complaints received and actions taken in response.

10. Determination of Licence conditions

The conditions in the Issued Licence have been determined in accordance with DWER Guidance Statement: Setting Conditions.

Table 17 provides a summary of the conditions applied to the Issued Licence.

Table 17: Summary of Licence conditions to be applied

Condition Ref	Grounds
Emissions 1	This condition is valid, risk-based and consistent with the EP Act.
Infrastructure and Equipment 2	These conditions are valid, risk-based and contain appropriate controls.
Throughput Restrictions 3, 4 and 5	These conditions are valid, risk-based and contain appropriate controls.
Waste Control Conditions 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17 and 18	These conditions are valid, risk-based and contain appropriate controls.
Product Testing and Supply 19, 20 and 21	These conditions are valid, risk-based, contain appropriate controls and are consistent with DWER Asbestos Guidelines
Authorised Works 22, 23, 24, 25 and 26	These conditions are valid, risk-based and contain appropriate controls.
Information/ Record Keeping 27, 28, 29, 30 and 31	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 initially provided with the draft Decision Report, and draft Works Approval and Licence on 2 August 2017. The Applicant did not provide comments on the draft documents, other than noting that the occupancy of the lease area had been demonstrated following submission of the revised Lease Agreement on 31 July 2017. The Works Approval was subsequently issued on 7 August 2017.

The revised draft Licence and Decision Report was again referred to the Applicant on 9 January 2018. The Applicantdid not provide comments on the draft documents.

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.

In accordance with the Guidance Statement- *Licence Duration* the licence has been issued with an expiry date that does not exceed that of the planning approval (13 June 2022).

Caron Goodbourn
A/Manager Licensing (Process Industries)
Delegated Officer

under section 20 of the *Environmental Protection Act 1986*

Appendix 1: Key documents

	Document title	In text ref	Availability
1.	i. Application Form completed as a Concurrent Works Approval / Licence application; and ii. Menzies Quarries Pty Ltd Works and Licence Approval Application, Annexure 1: Supporting documentation, Rev 1, including: Mogumber Designed Area.pdf; Mogumber Survey – Model.pdf and Mogumber Survey.dwg.pdf	The Application	DWER records: A1373378
2.	Menzies Quarries Pty Ltd – Excavation and Rehabilitation Management Plan. Lot 668 Mogumber-Yarrawindah Rd, Mogumber	Rehabilitation Management Plan	DWER records: A1373378
3.	Agreement for gravel extraction and payment of road maintenance charge. Shire of Victoria Plains & Menzies Quarries Pty Ltd. January 2017.	Gravel extraction agreement	DWER records: A1431881
4.	Guidelines for managing asbestos at construction and demolition waste recycling facilities, Department of Environment and Conservation, December 2012.	DWER Asbestos Guidelines	accessed at www.dwer.wa.gov.au
5.	Guidelines for the Assessment, Remediation and Management of Asbestos Contaminated Sites in Western Australia. Department of Health, May 2009.	Guidelines for the Assessment, Remediation and Management of Asbestos Contaminated Sites in Western Australia.	accessed at www.doh.wa.gov.au
6.	Dust Management Plan, SAF022 Menzies Quarries Pty Ltd.	Dust Management Plan	DWER records: A1471911
7.	Asbestos Management Plan, SAF023, Menzies Quarries Pty Ltd.	Asbestos Management Plan	DWER records: A1471912
8.	Shire of Victoria Plains – Schedule 9 – Notice of Approval of Planning Approval. Planning consent for Gravel Extraction and	Shire of Victoria Plains Planning Approval	DWER records: A1471907

	Document title	In text ref	Availability
	Demolition and Construction Waste Recycling. Menzies Quarries Pty Ltd. 6 July 2017.		
9.	DWER Clearing Assessment Report CPS 7512/1 dated 26 July 2017	Clearing Assessment Report	DWER records: A1487308
10.	Assignment & Variation of Lease – Lease and gravel quarrying agreement 668 Mogumber-Yarawindah Road, Mogumber. Montrose Marinus Driessen, Menzies Civil Australia Pty Ltd and Menzies Quarries Pty Ltd	Lease Agreement	DWER records: A1493490
11.	Works Approval W6038/2017/1 – Compliance Report	Compliance Report	DWER records A1567025, A1576982 and A1584101
12.	Response to draft Licence	N/A	DWER records A1593083
13.	July 2015. *Guidance Statement: Regulatory principles.* Department of Environment Regulation, Perth.	DER 2015a	accessed at www.dwer.wa.gov.au
14.	October 2015. *Guidance Statement: Setting conditions.* Department of Environment Regulation, Perth.	DER 2015b	
15.	DER, August 2016. *Guidance Statement: Licence duration.* Department of Environment Regulation, Perth.	DER 2016a	
16.	DER, November 2016. *Guidance Statement: Risk Assessments*. Department of Environment Regulation, Perth.	DER 2016b	
17.	DER, November 2016. *Guidance Statement: Decision Making*. Department of Environment Regulation, Perth.	DER 2016c	

Appendix 2: Summary of Shire of Victoria Plains Planning Approval Conditions

Condition	Condition Wording	Application to Licence
1	The terms of this approval shall be for the period from the date of issue until 14 June 2022 at which time all excavation and distribution activities must cease and the site be rehabilitated in accordance with the approved documentation. A further ten years may be considered by council following satisfactory achievements of works up until this date.	Licence expiry date is 13 June 2022.
2	Prior to the commencement of any works the applicant shall submit to the Shire of Victoria Plains evidence of currency of public liability insurance for the excavation works. The issue of the approval shall not, in any way, render the Shire of Victoria Plains liable for damage or injury of any kind to any member of the public; such liability shall be the sole responsibility of the applicant. The Applicant shall ensure that the proprietor and/or the excavating contractor and/or transportation contractor hold sufficient public liability insurance for any claim against them.	Not applicable to DWER assessment.
3	A levy of 0.25c per tonne of material is to be paid on an annual basis to Council to assist in the upgrade and maintenance of gazetted roads used for access to the pit.	Not applicable to DWER assessment.
4	Top soil from the excavated areas shall be stockpiled, stabilised and used where applicable in the rehabilitation process.	Not applicable to DWER assessment.
5	An erosion management report is to be submitted and approved by the Shire and is to provide details of how the topsoil stockpiles will be managed from impacts of wind, water and any other cause of erosion.	Not applicable to DWER assessment.
6	Dust suppression measures shall be undertaken at all times where	Licence conditions have been set to control dust emissions /

Condition	Condition Wording	Application to Licence
	any operation on the site is likely to generate a dust nuisance to nearby residents in accordance with the Dust Management plan.	dust suppression measures during operations.
7	The operations shall comply with the requirements of the Environmental Protection (Noise) Regulations 1997 in respect to noise but, notwithstanding, the operations to have due regard to the health and amenity of any person in the vicinity.	General offences under the EP Act and regulations, including the *Environmental Protection (Noise) Regulations 1997* apply and are referenced in the Licence. Acceptance of incoming truck loads and the operation of specified equipment, prior to 0700 hours, is restricted.
8	All vehicles' loads entering and exiting the site shall be fully covered and secured prior to and upon leaving the site to prevent spread of material.	Emissions outside of the Premises boundary are not considered in DWER's risk assessment for a Licence.
9	The proposed fuel station is to be situated in a constructed and bunded hardstand area to the satisfaction of the relevant authorities.	No conditions specified in the Licence. General offences under the EP Act and regulations apply and are referenced in the Licence.
10	The hours of operation shall be in accordance with the approved management plan, limited to: Monday to Saturday 0600 to 1700 hours; Sunday and Public holidays not permitted; and Any variation of these times requires written approval from Council.	Hours of operation are specified in Condition 2 of the Licence.
11	Noise suppression measures are to be undertaken at all times where any operation onsite is likely to generate noise nuisance to nearby residents in accordance with the noise management plan.	As per Planning Approval Condition 7 above.
12	Excavation for the extractive industry shall not occur in the following areas: Within 400 metres of a boundary of any land not owned by the	Not applicable to DWER assessment.

Condition	Condition Wording	Application to Licence
	applicant/Landowner or Planning consent holder; Within 50 metres of any identified threatened ecological community; Within 20 metres of any land affected by a registered grant of easement; Within 40 metres of any designated water course; Within 1000 metres of any house; Below the level of winter groundwater table; Within 50 metres of any road or road reserve; and Outside of the approved excavation areas shown on map 12 Proposed Excavation Area and in accordance with the submitted and approved plans.	
13	The Applicant is to obtain a Clearing Permit from the Department of Environment and Regulation[1] prior to any extraction activity occurring.	The Applicant withdrew the application to clear native vegetation on 4 August 2017. No clearing is authorised under the Licence
14	The Applicant is to refer the application and seek advice from the Commonwealth Department of Environment and Energy prior to the removal of any vegetation listed under the EPBC Act	Not relevant to DWER assessment
15	<u>Rehabilitation and Land Management Plan</u> i). Upon decommissioning of each pit stage, rehabilitation shall take place in accordance with the approved plan, or as otherwise stipulated, at no greater than 5 yearly intervals. ii). Rehabilitation of each pit shall include surface water and wind control measures on all pit faces to prevent gully erosion, and final batters to be graded to provide safe entry and exit slopes should access to any standing water within the pit be required or	The Rehabilitation and Land Management Plan for the quarry operations is not applicable to DWER's assessment. However, DWER notes that the Applicant did not apply to landfill any waste or use waste for pit rehabilitation. The filling of land with inert waste would require a Category 63 inert landfill to be applied for. The Licence does not authorise any changes to the landform or infilling of the quarry void with either unprocessed or processed C&D or inert Waste. The Licence has been conditioned to ensure that C&D

Condition	Condition Wording	Application to Licence
	accidentally occur. iii). Materials imported for rehabilitation or other purposes shall be certified free of dieback or other plant diseases and shall not include any waste residue or products from C & D. iv). Any amendments or variations to the rehabilitation or land management plan associated with the excavation shall be approved in writing by the Shire within three months of the commencement of operations. v). An annual report shall be submitted to the Shire that includes: a. the progress of excavation; b. depth to groundwater from each pit floor; c. monitoring program results and findings; d. progress of rehabilitation; e. contingency actions and outcomes; and f. community complaints and responses.	Waste reception, sorting, processing and storage is contained strictly within the defined C&D Waste Area boundary and that all Product/s from C&D Waste processing can only be sold and/or removed off-site. All other waste types separated out and temporarily stored from each load of C&D Waste received, is similarly to be disposed of off-site.
16	A bond or bank guarantee for an agreed value be submitted to the Shire for the rehabilitation of the stages in accordance with Condition 15. The guarantee/bond may be rolled over provided the satisfactory completion of rehabilitation.	Not applicable to DWER assessment.
17	Satisfactory arrangements being made with the local government for full cost of upgrading and/or construction of the access and egress to/from the site from Mogumber-Yarrawindah Road to the satisfaction of the Shire and Main Roads specifications.	Not applicable to DWER assessment.

Note 1: Refer to DWER definition in Table 1.

Appendix 3: Summary of issues raised in consultation

Submissions from interested parties including individuals and government agencies are summarised in the table below.

Item or Activity	Summary of Submission Points	Response
Lease area occupancy and authorised activities under the Lease Agreement	Correspondence from the legal representative of the Lot 127 title holder and signatory to the Lease Agreement for operations within part of Lot 127, Mr Montrose Driessen, noted the discrepancy between the Applicant (Menzies Quarries Pty Ltd) and the signatory to their signed Lease Agreement (Menzies Civil Australia Pty Ltd) and included reference to activities not permitted by the Lease.	Occupancy of the Lease Area has been demonstrated.
Noise & facility operating hours	With recent operations of gravel extraction to supply the New Norcia Bypass concerns were expressed regarding operations occurring outside of the proposed operating hours and if this could be ongoing when there is a high demand for gravel. Noise from machinery and reversing beacons was reported as being audible at night to residents west of the facility (noting easterly prevailing winds) during recent quarrying activity at the Premises.	The risks associated with noise have been considered in Section 8.5 of the Decision Report. The Applicant is proposing to operate the facility within restricted hours and comply with the assigned levels in Regulation 8 of the Noise Regulations during operations. The Delegated Officer has added the opening hours as a regulatory control. The Applicant has included a contingency measure for managing noise that where vehicle reversing beacons are identified as causing noise disturbance, reversing beacons will be replaced by low frequency devices.
Dust	Given likely future traffic volumes, it is considered that access roads within the premises would require sealing to control dust emissions effectively.	The risks associated with dust have been considered in Section 8.4 of the Decision Report. The Applicant has identified a range of dust suppression measures including vehicle speed limits and spraying of access roads using a water truck to mitigate dust emissions. Dust emission controls in the Licence and other Licence conditions around waste acceptance, stockpile

Item or Activity	Summary of Submission Points	Response
		management and infrastructure and equipment have been set to manage a potential dust risk event.
Light emissions	Concern expressed regarding the brightness and extent of spotlight visibility up to at least 3.3km distant from recent night time activity at the quarry (impacting a resident on Mogumber-Yarrawindah Road).	The Applicant will only operate the facility within the hours of 0600 to 1700 hours Monday to Saturday. The Applicant has stated that the only lighting at the Premises will be security lighting that will comply with AS4282 – 1997 'Control of Obtrusive Effects of Outdoor Lighting'. The Delegated Officer has added the opening hours as a regulatory control.
Contamination of agricultural land	Risk of contamination of land from the application of salty dam water to land for dust suppression and potential use of chemical dust suppressants, resulting in contaminated runoff that could degrade and adversely impact on agricultural business. Potential risk of contaminated runoff impacting on agricultural land and downstream of perennial drainage lines impacting the Moore River East. Cited evidence of erosion and salt outcrops on a nearby lot related to high runoff down adjacent gullies following heavy rainfall events.	The potential risk of contaminated runoff is considered to be primarily related to the broader quarrying activity which does not form part of DWER's assessment. The Shire of Victoria Plains Planning Approval has considered and addressed these concerns through specific conditions of their approval.
Contamination of freshwater springs and / or surface water dams	Potential risk of contamination of fresh water spring / seepage supplying water to adjacent Lot owner and /or contaminated runoff impacting surface water dam quality and it's suitability for stock watering or other critical agricultural application, noting that all agricultural activity in the region is dependent upon capturing rainfall and runoff in surface water dams for water supply. Regarding the above, the buffer distance to an	The Delegated Officer notes that this concern was related to the initial plans to include a composting facility at the Premises, which was subsequently withdrawn from the Application on 8 June 2017. The Delegated Officer considers that there is an adequate separation distance (and emission controls) between the C&D waste processing/storage areas and the water source to mitigate any potential sediment impacts to the spring.

Item or Activity	Summary of Submission Points	Response
	adjacent spring fed water source from the quarrying and C&D Waste recycling activity is considered inadequate at less than 2km distant.	
Presence of mapped rare and threatened flora	The Concurrent Works Approval / Licence application does not mention two listed (one threatened and one Priority 4) plant species identified as being present locally. It was considered that industrial activity of the scale proposed will have a negative impact on these plants. Other landowners have fenced off and protected these plant communities on their land holdings.	The presence of mapped rare or threatened flora is noted in Table 6 of this Decision Report. The Premises boundary is greater than 500 metres from any recorded rare or threatened flora. The Delegated Officers considers this to be an adequate separation distance to the waste storage and processing activities.
Traffic Management	Concerns regarding truck traffic numbers when the facility is operating at the maximum throughput	Under Part V of the Act, the assessment of the proposal is constrained to the environmental acceptability of potential emissions and discharges from the Premises. This does not include wider traffic issues relating to the development.
Surrounding sensitive receptors	The Applicant did not correctly identify all the surrounding rural residences. Information provided indicates a total of 14 occupied residences and 3 part time/seasonally occupied residences within a 5 km radius of the boundary of the quarry lease.	The Delegated Officer notes that all surrounding sensitive rural residential receptors have been considered in assessing the application including those not identified by the Applicant with respect to appropriate buffer distances.
Water use/availability	The Application and supporting information does not provide an estimate of the total volume of water required for dust suppression, noting that evaporation exceeds rainfall in all but four months of the year and dependence on surface water dam supplies.	The Delegated Officer notes that as part of proposed works to be authorised under the Licence (L9038/2017/1) the Applicant will construct a new dam with an approximate volumetric capacity of 3,300 cubic metres, providing an additional water source for dust suppression. The Licence includes specifications for retaining the water truck on-site ready to operate at all times and a requirement to ensure an available water supply for dust suppression during summer months, even if this means

Item or Activity	Summary of Submission Points	Response
		tankering in water.
Visual Management	Screening with tree lines on the west side would lower the visual impact for the residence at Lot 510 which is at a comparable elevation to the facility.	Under Part V of the Act, DER's assessment of the proposal is constrained to the environmental acceptability of potential emissions and discharges from the Premises. This does not include issues relating to visual amenity.
C&D Waste recycling & material types – Litter Management	Concern expressed with materials other than concrete and bricks to be received and processed as part of C&D Waste recycling, including plastics and cardboard and their management and containment. Light materials such as cardboard were considered to be a potential litter issue, especially considering strong prevailing easterly winds.	The Delegated Officer notes that all sorted C&D Waste materials that are not to be crushed and screened to produce saleable final products will be stored and contained within metal bins prior to off-site disposal. This waste is expected to primarily consist of metals, timber and plastics.
Compost Facility	Numerous points of concern and opposition to various aspects of the composting proposal were expressed by nearby land owners.	The Delegated Officer notes that as of 8 June 2017 Menzies Quarries Pty Ltd withdrew the consideration of Prescribed Premises activities related to the proposed composting facility due to community concerns and noting that further consultation was required. Therefore the submissions that were made specifically with respect to composting have not been included.

Attachment 1: Issued Licence L9038/2017/1