



<b>Licence Number</b>	L9104/2017/1
<b>Licence Holder</b>	Barradale Sands Pty Ltd
<b>ACN</b>	606 114 363
<b>Registered business address</b>	367 Canning Highway COMO WA 6152
<b>File Number</b>	DER2017/001787-1
<b>Duration</b>	5/11/2018 to 4/11/2038
<b>Date of issue</b>	26 September 2019
<b>Prescribed Premises</b>	Category 13: Crushing of building material Category 70: Screening etc. of material
<b>Premises</b>	Barradale Sand Project  Mining Lease M08/497 and Miscellaneous Licence L08/108  YANNARIE WA 6710

This Licence is granted to the Licence Holder, subject to the following conditions, on 26 September 2019, by:

**TRACEY HASSELL**  
**A/MANAGER WASTE INDUSTRIES**  
**REGULATORY SERVICES**

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

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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

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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

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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

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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

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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

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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

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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

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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

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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

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

### Fees

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

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

# Definitions and interpretation

## Definitions

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

**Table 1: Definitions**

Term	Definition
ACM	means Asbestos Containing Material
ACN	Australian Company Number
Amendment Notice	means an amendment granted under s.59 of the EP Act in accordance with the procedure set out in s.59B of the EP Act.
Annual Period	means a 12 month period commencing from 1 October until 31 September.
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.
Asbestos Containing Material	has the meaning defined in the Guidelines for Assessment, Remediation and Management of Asbestos Contaminated Sites, Western Australia, (DOH, 2009)
Asbestos Guidelines	means document titled, "Guidelines for managing asbestos at construction and demolition waste recycling facilities", published by the Department, as amended from time to time.
Classified Load	means a load classified in accordance with the risk classification procedure outlined in Section 3.3 of the Asbestos Guidelines
Condition	means a condition to which this Licence is subject under s.62 of the EP Act.
Books	has the same meaning given to that term under the EP Act.
CEO	means Chief Executive Officer. CEO for the purposes of notification means:  Director General Department Administering the <i>Environmental Protection Act 1986</i> Locked Bag 33 Cloisters Square PERTH WA 6850 <a href="mailto:info@dwer.wa.gov.au">info@dwer.wa.gov.au</a>
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).

Term	Definition
Department	means the department established under section 35 of the <i>Public Sector Management Act 1994</i> and designated as responsible for the administration of Part V, Division 3 of the EP Act.
Department Request	means a request for Books or other sources of information to be produced, made by an Inspector or the CEO to the Licence Holder in writing and sent to the Licence Holder's address for notifications, as described at the front of this Licence, in relation to: <ul style="list-style-type: none"> <li data-bbox="628 562 1270 595">(a) compliance with the EP Act or this Licence;</li> <li data-bbox="628 611 1310 678">(b) the Books or other sources of information maintained in accordance with this Licence; or</li> <li data-bbox="628 694 1382 761">(c) the Books or other sources of information relating to Emissions from the Premises.</li> </ul>
Discharge	has the same meaning given to that term under the EP Act.
DWER	Department of Water and Environmental Regulation.
Emission	has the same meaning given to that term under the EP Act.
Environmental Harm	has the same meaning given to that term under the EP Act.
EP Act	means the <i>Environmental Protection Act 1986 (WA)</i> .
EP Regulations	means the <i>Environmental Protection Regulations 1987 (WA)</i> .
Implementation Agreement or Decision	has the same meaning given to that term under the EP Act.
Inert Waste Type 1	has the meaning defined in Landfill Definitions
Inspector	means an inspector appointed by the CEO in accordance with s.88 of the EP Act.
Landfill Definitions	<i>Landfill Waste Classification and Waste Definitions 1996 (as amended 2018)</i>
Licence	refers to this document, which evidences the grant of a Licence by the CEO under s.57 of the EP Act, subject to the Conditions.
Licence Holder	refers to the occupier of the premises being the person to whom this Licence has been granted, as specified at the front of this Licence.
Material Environmental Harm	has the same meaning given to that term under the EP Act.

<b>Term</b>	<b>Definition</b>
Pollution	has the same meaning given to that term under the EP Act.
Premises	refers to the premises to which this Licence applies, as specified at the front of this Licence and as shown on the map in Schedule 1 to this Licence.
Prescribed Premises	has the same meaning given to that term under the EP Act.
Primary Activities	refers to the Prescribed Premises activities listed on the front of this Licence as described in Schedule 2, at the locations shown in Schedule 1.
Reportable Event	means an exceedance above the target limit specified in Column 4 of Table 6, in Schedule 3.
Serious Environmental Harm	has the same meaning given to that term under the EP Act.
Unreasonable Emission	has the same meaning given to that term under the EP Act.
Waste	has the same meaning given to that term under the EP Act.

## Interpretation

In this Licence:

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

# Conditions

## General

1. The Licence Holder shall only accept waste on to the Premises if:
  - (a) it is of a waste type listed in Table 2; and
  - (b) the quantity accepted is below any quantity limit listed in Table 2; and
  - (c) it meets any specification listed in Table 2.

**Table 2: Types of waste authorised to be accepted onto the premises**

Waste type	Quantity limit	Specification <sup>1</sup>
Inert Waste Type 1	20,000 tonnes per annual period	Concrete and reinforced concrete from construction and demolitions wastes  Waste containing visible asbestos or ACM shall not be accepted

Note 1: Additional requirements for the acceptance of controlled waste (including asbestos and tyres) are set out in the *Environmental Protection (Controlled Waste) Regulations 2004*.

2. The Licence Holder shall ensure that where waste does not meet the waste acceptance criteria set out in Condition 1 it is removed from the Premises by the delivery vehicle or, where that is not possible, stored in a quarantined storage area or container and removed to an appropriately authorised facility as soon as practicable.
3. 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 Section 3.3 of the Asbestos Guidelines as per Attachment 1 (Classified Load).
4. The Licence Holder shall direct each accepted and Classified Load to an unloading area at the site for further inspection. The unloading area shall be appropriately designed and constructed to ensure the waste will not mix with other waste.
5. The Licence Holder shall dampen all Classified Loads prior to unloading and maintain the waste in a damp state throughout the inspection process using appropriate dust suppression measures.
6. The Licence Holder must inspect and maintain records for all unloaded waste in accordance with the low risk and high risk load procedure as outlined in Section 3.4 of the Asbestos Guidelines as per Attachment 2.
7. The Licence Holder must continue to visually inspect waste on the Premises at all stages of the crushing process. Suspect asbestos identified at any stage of the process must be handled in accordance with the high risk load procedure outlined Section 3.4 of the Asbestos Guidelines, as per Attachment 2.
8. The Licence Holder must maintain waste and processed waste on the Premises in at least two separate stockpile areas for unprocessed waste, processed waste tested for ACM and:
  - (a) unprocessed waste and processed waste areas must be kept clearly separated at a minimum 3 m distance;



(b) processed waste tested for ACM and processed waste awaiting testing for ACM must be clearly separated by a minimum 3 m 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 processed waste, untested processed waste and unprocessed waste.

9. The Licence Holder shall ensure that the asbestos content of any recycled output originating from Inert Waste Type 1 does not exceed the contamination limit of 0.001% w/w for asbestos (in any form).
10. The Licence Holder shall ensure that recycling outputs originating from Inert Waste Type 1 are sampled and tested in accordance with the Asbestos Guidelines, as outlined in Attachment 3

## Emissions

11. 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 3 subject to the exclusions, limitations or requirements specified in Column 2 of Table 3.

**Table 3: Authorised Emissions table**

Column 1	Column 2
Emission type	Exclusions/Limitations/Requirements
<b>Specified Emissions - None</b>	
<b>General Emissions (excluding Specified Emissions)</b>	
Emissions which: <ul style="list-style-type: none"> <li>• arise from the Primary Activities set out in Schedule 2</li> </ul>	Emissions excluded from General Emissions are: <ul style="list-style-type: none"> <li>• Unreasonable Emissions; or</li> <li>• Emissions that result in, or are likely to result in, Pollution, Material Environmental Harm or Serious Environmental Harm; or</li> <li>• Discharges of Waste in circumstances likely to cause Pollution; or</li> <li>• Emissions that result, or are likely to result in, the Discharge or abandonment of Waste in water to which the public has access; or</li> <li>• Emissions or Discharges which do not comply with an Approved Policy; or</li> <li>• Emissions or Discharges which do not comply with a prescribed standard; or</li> <li>• Emissions or Discharges which do not</li> </ul>

Column 1	Column 2
Emission type	Exclusions/Limitations/Requirements
	<p>comply with the conditions in an Implementation Agreement or Decision; or</p> <ul style="list-style-type: none"> <li>Emissions or Discharges the subject of offences under regulations prescribed under the EP Act, including materials discharged under the Environmental Protection (<i>Unauthorised Discharges</i>) Regulations 2004.</li> </ul>

## Infrastructure and equipment

12. 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
Screening Plant	When in operation, located as shown in Schedule 1: Maps: Premises map (within the area defined by the yellow lines).
Water cart/sprays	Available at all times for purposes of dust suppression when any earthmoving, screening, cartage, crushing or crushed materials storage activities are occurring.  Water cart to contain sufficient water for dust suppression purposes.
Signage at the premises	Easily visible at the entrance of the premises.  To include the premises' site-manager's phone contact information.
Mobile crushing plant (Rubble Master RM70GO or similar)	When in operation, located as shown in Schedule 1: Maps: Premises map, within the 'Crushing plant location'

Column 1	Column 2
<b>Site infrastructure and equipment</b>	<b>Operational requirements</b>
Designated area for stockpiling of crushing products awaiting use or sale	Bunded or otherwise constructed to contain runoff to prevent sediment-laden runoff entering the Yannarie River water flow path beyond the designated storage area boundary.

## Operational conditions

13. The Licence Holder must ensure that the actions specified in Column 1 of Table 4 are carried out in accordance with the requirements specified in Column 2 of Table 4.

**Table 4: Operational actions table**

Column 1	Column 2
Action	Specification
Temporary cessation of activities.	Cease an activity causing visible dust lift-off where dust management measures have not prevented dust lift-off and there is a risk of dust affecting sensitive receptors (Yannarie River 24 Hour Rest Area)
Control of dust from trucks.	All loaded trucks leaving the premises are to be covered to prevent dust generation.

## Monitoring - input and outputs

14. The Licence Holder shall undertake the monitoring in Table 55 according to the specifications in that table.

**Table 5: Monitoring and recording of input and outputs**

Input/Output	Parameter	Units	Averaging period	Frequency
Waste inputs	Inert Waste Type 1	tonnes	N/A	Each load arriving at the Premises
Waste outputs	Waste type as defined in the Landfill Definitions	tonnes	N/A	Each load leaving or rejected from the Premises
Product outputs	Crushed and screened products	tonnes	N/A	Each load leaving the Premises

## Record-keeping

- 15.** 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 12 of this Licence;
  - (c) complaints received under Condition 16 of this Licence;
  - (d) records obtained in accordance with Condition 10 of this Licence; and
  - (e) monitoring undertaken in accordance with Condition 14 of this Licence.
- 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 3 years from the date the Books were made; and
  - (i) be available to be produced to an Inspector or the CEO.
- 16.** 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.

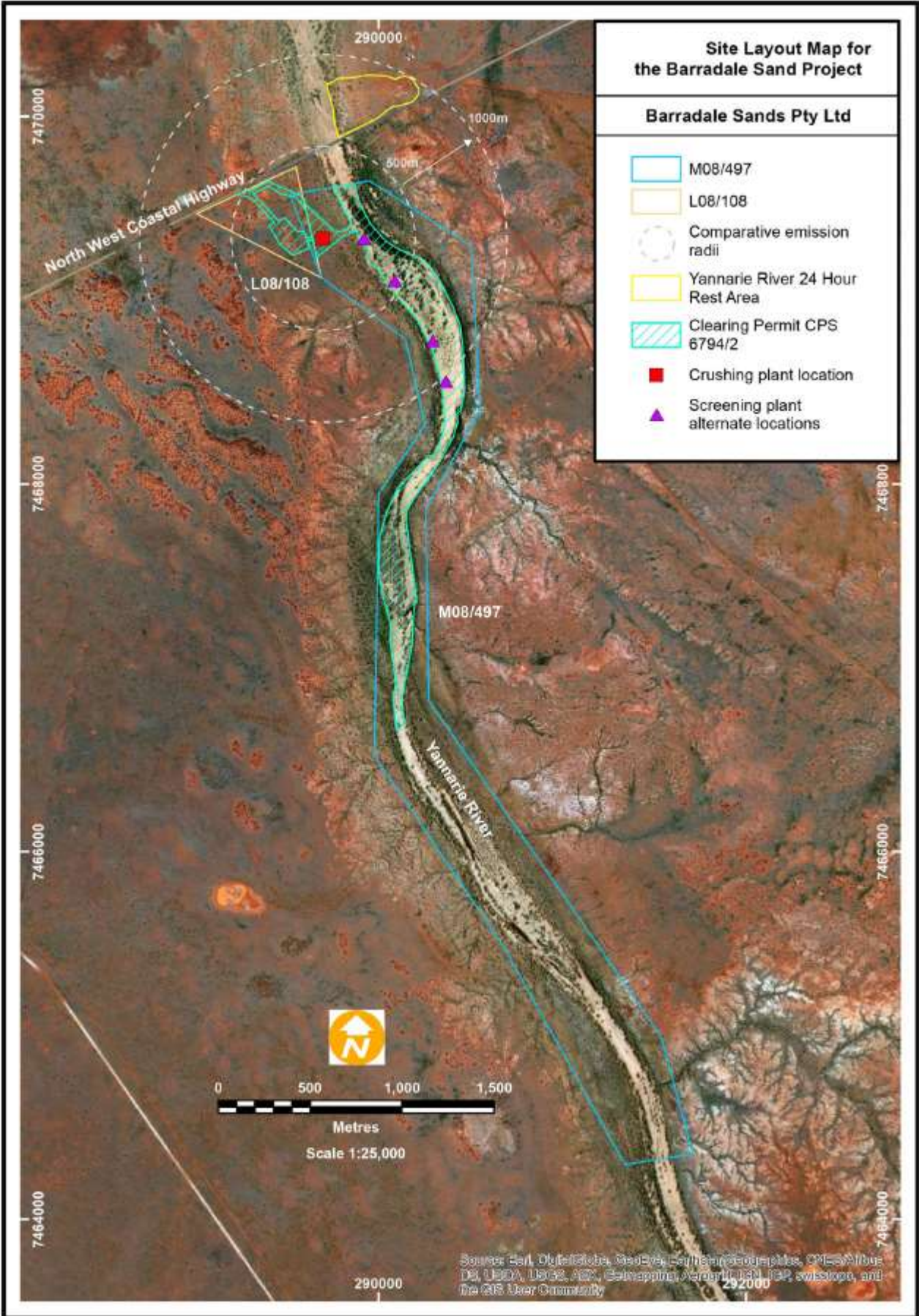
## Information

- 17.** The Licence Holder must submit to the CEO, no later than 31 October, a Compliance Report indicating the extent to which the Licence Holder has complied with the Conditions in this Licence for the preceding Annual Period.
- 18.** The Licence Holder must submit to the CEO, no later than 31 October, a summary of complaints received under Condition 16 of this Licence for the preceding annual period.
- 19.** The Licence Holder must comply with a Department Request, within 14 days from the date of the Department Request or such other period as agreed to by the Inspector or the CEO.

## Schedule 1: Maps

### Premises map

In the map below, the Premises boundary is defined by the blue and yellow lines of M08/497 and L08/108.



## 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 6:

**Table 4: Primary Activities**

Primary Activity	Premises production or design capacity
Category 13: Crushing of building material: premises on which waste building or demolition material (for example, bricks, stones or concrete) is crushed or cleaned.	20,000 tonnes per annual period
Category 70: Screening etc. of material : premises (other than premises within category 5 or 8) on which material extracted from the ground is screened, washed, crushed, ground, milled, sized or separated.	Less than 50,000 tonnes per annual period.

## Infrastructure and equipment

The Primary Activity infrastructure and equipment situated on the Premises is listed in Table 6.

**Table 5: Infrastructure and equipment**

Infrastructure and equipment
Excavator
Front end loader
Screening plant
Dump truck
Water cart
Haul truck
Crushing plant
Designated storage area for crushed products awaiting use or sale

# Attachment 1: Section 3.3 of the Asbestos Guidelines

- Ensuring a "no asbestos" clause is included in any contracts with C&D waste suppliers;
- Installing a clearly visible sign saying "No Asbestos" is present at the entry to the facility;
- Establishing a system to record the details of loads arriving/received at the site which have been found to contain asbestos.

DEC has a supply of brochures that outline the rules on disposal of asbestos loads that can be handed to customers. Please contact DEC's Waste Management Branch on (08) 6467 5323 for copies.

## 3.3 Acceptance procedures

When waste arrives at the recycling facility, acceptance procedures must serve to confirm that the characteristics of the waste are consistent with the waste types permitted by the Part V licence and to determine the risk of the load containing asbestos.

To follow on from the pre-acceptance procedures, all persons bringing waste onto the premises must be asked to sign a declaration or provide a 'customer warranty' on a vehicle load specific basis confirming that their load is free from asbestos. The associated documentation should be retained on the premises and be available for DEC to inspect. Where an individual is not prepared to sign this disclaimer or provide such a warranty the load shall be refused entry.

All loads must be visually inspected when they arrive at the recycling site. Where the inspection identifies that the wastes are not permitted by the licence and/or asbestos is visually identified in the load it shall be rejected for acceptance. A record of all rejected loads must be maintained on the premises and be available for DEC to inspect. As a minimum, a record must be made of the waste producer, waste carrier, registration number of the vehicle and the date of rejection.

The risk of a load containing asbestos is related to the type and source of the waste. In general, buildings and structures constructed after 1990 are unlikely to have asbestos containing materials within them, whereas buildings and structures constructed before this date may have been built using asbestos containing materials.

Because large buildings and structures undergo regulated asbestos removal programs and inspections before they are demolished the probability of asbestos being present in the demolition debris should be low. However, a risk of contamination can remain from asbestos formwork embedded or attached to concrete columns that cannot be readily identified through the asbestos clearance certification process and from asbestos piping from reclaimed road, car park areas and water supply systems.

It is also common for mixed waste from unknown sources, particularly those in skip bins or from small-scale demolition or refurbishment activities to contain amounts of asbestos waste. These sources must be considered high risk.

To determine the risk of an incoming load containing asbestos the gatehouse operator shall establish:

- The source of the load including the site location and if possible the age of any building or structure from which the C&D 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 and managed as outlined in the following section. 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.

Once classified, each load must be directed to the appropriate area for unloading and further inspection in line with the following sections.

Risk Classification Matrix			
Material Type	Type of load		
	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)

### 3.4 Load inspection after acceptance

Each accepted and classified load shall be directed to an unloading area at the site which is appropriately designed and constructed to ensure the waste will not mix with other waste. Where feasible, separate unloading areas shall be provided for low risk and high risk wastes.

All loads shall be dampened prior to unloading and maintained in a dampened state throughout the inspection process. Operators will need to ensure there are adequate facilities on the premises to achieve this.

#### Low risk load procedure

Loads classified as "low risk", must be visually inspected while the material is being unloaded to determine whether any asbestos can be identified.

If suspect fibrous asbestos (FA) or asbestos fines/fibres (AF) are detected, the load must be isolated, kept wet and once appropriately contained in accordance with the Asbestos Factsheet in Appendix A, redirected to an appropriately authorised disposal facility. If suspect ACM is identified, the load must be reclassified as "high risk" and continue to be processed in accordance with the high risk procedure below. Where the visual inspection confirms that the

## Attachment 2: Section 3.4 of the Asbestos Guidelines

- 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 and managed as outlined in the following section. 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.

Once classified, each load must be directed to the appropriate area for unloading and further inspection in line with the following sections.

Risk Classification Matrix			
Material Type	Type of load		
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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)

### 3.4 Load inspection after acceptance

Each accepted and classified load shall be directed to an unloading area at the site which is appropriately designed and constructed to ensure the waste will not mix with other waste. Where feasible, separate unloading areas shall be provided for low risk and high risk wastes.

All loads shall be dampened prior to unloading and maintained in a dampened state throughout the inspection process. Operators will need to ensure there are adequate facilities on the premises to achieve this.

#### Low risk load procedure

Loads classified as "low risk", must be visually inspected while the material is being unloaded to determine whether any asbestos can be identified.

If suspect fibrous asbestos (FA) or asbestos fines/fibres (AF) are detected, the load must be isolated, kept wet and once appropriately contained in accordance with the Asbestos Factsheet in Appendix A, redirected to an appropriately authorised disposal facility. If suspect ACM is identified, the load must be reclassified as "high risk" and continue to be processed in accordance with the high risk procedure below. Where the visual inspection confirms that the

load is clear of suspect ACM, FA and AF, the load may then be added to the waste stockpiles awaiting further processing eg crushing and screening.

#### **High risk load procedure**

Loads classified as "high risk" 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. One method of achieving this is to spread the material to a depth of less than 30cm and to turn over the material with the use of an excavator or similar. Where appropriate, larger sections of concrete should be inverted to permit a visual check for embedded or underlying asbestos product debris.

If suspect FA or AF are detected, the load must be isolated, kept wet and once appropriately contained in accordance with the Asbestos Factsheet in Appendix A, and 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 in accordance with the Asbestos Factsheet in Appendix A, and 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.

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 wind blown fibres.

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 awaiting further processing.

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 can be traced back to the customer and originating site. Through Part V licence conditions, DEC will require records of loads found to contain asbestos and action taken by the C&D recycler to address this issue with the customer, to be submitted on a regular basis. DEC will take follow up action with customers delivering asbestos containing waste to the premises as necessary.

# Attachment 3: Section 4.3 of the Asbestos Guidelines on product testing

## 4 Monitoring and Testing

Monitoring must be undertaken to confirm that risk management measures are effectively meeting their objectives. This shall include qualitative and quantitative monitoring and product testing.

### 4.1 Qualitative monitoring

Site operatives must undertake visual inspections whilst the facility is operational to ensure that fugitive emissions of dust are being adequately controlled and are not being carried outside of the premises. Where fugitive dust releases are identified their source must be investigated and all reasonable and practicable measures implemented to prevent or minimise the release.

Where risk management measures are ineffective or likely to be ineffective at preventing visible dust crossing the site boundary, for example during adverse weather conditions, waste processing activities must cease until additional measures have been put in place to prevent the discharge or until the adverse weather conditions have passed.

### 4.2 Quantitative environmental monitoring

On some sites it may be necessary for ambient dust or asbestos fibre air monitoring to be undertaken to provide further confidence in risk management measures. Such monitoring may be required where recycling sites are located in close proximity to sensitive receptors, are within a relevant Environmental Protection Policy area or have a poor compliance history relating to fugitive dust control. Where quantitative dust monitoring is not proposed, the proponent/operator must provide a risk based justification as to why it is not considered necessary at their premises.

Dust monitoring provides a useful surrogate measure to evaluate the potential generation and distribution of airborne dust and asbestos fibres and will normally be sufficient on most sites. Dust monitoring equipment must demonstrate that dust levels are kept as low as reasonably possible. Tapered Element Oscillating Microbalance (TEOM) (or equivalent) equipment is preferred to provide continuous and accurate perimeter air monitoring for community protection. Any site perimeter monitoring for this purpose should be conducted to ensure compliance with the National Environmental Protection Measure (NEPM) ambient air 24 hour  $PM_{10}$  goal of  $50 \mu g/m^3$ .

Where air quality monitoring is required, an air quality monitoring and reporting strategy must be developed by a person suitably experienced in dust/asbestos sampling and exposure assessment and any associated analysis be undertaken by a laboratory accredited by NATA for this purpose.

### 4.3 Product testing and supply

To ensure that recycled products have been produced to the required specification in relation to asbestos content it is necessary for product testing to be undertaken. The testing procedures detailed in this section have application for the three main recycled products:

1. Recycled drainage rock 20-27mm;

2. Recycled sand, screened to <10mm; and
3. Recycled road-base, <19mm.

The testing must be documented as outlined under Section 5.3.

#### **Product specification**

To ensure the health of those using or coming into contact with recycled C&D products is protected, the asbestos content (in any form) of any recycled products must not exceed 0.001% asbestos weight for weight (w/w).

#### **Inspection and sampling requirements**

All types of recycled product must be inspected and/or sampled and tested for ACM, FA and AF, as outlined below. Inspections and sampling may be undertaken by staff employed by the licensee as long as they have received the required asbestos training for operational staff set out in section 5.2.

ACM and FA are subject to visual inspection and sampling procedures since they are larger in size (>7mm) and AF (<7mm) is assessed by submitting samples for laboratory analysis.

Recycled products may be sampled from conveyors or stockpiles. Whichever approach is adopted, the operator will need to ensure that they have appropriate systems in place to allow them to identify where in the product stockpiles each sample is from to allow further testing or separation to occur if required.

#### Stockpile inspection and sampling

In the case of recycled drainage rock and recycled road-base a visual inspection should be undertaken in a systematic grid fashion over the any new stockpile material to identify any suspect asbestos material.

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 asbestos material 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<sup>3</sup> of product.

#### Conveyor sampling

Sampling of road base and screened sand products must occur at a minimum rate of 1 sample per 70m<sup>3</sup> of a product output. Suspect asbestos material 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 asbestos material 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.

#### **Reduced Sampling Criteria**

Once premises have demonstrated that their procedures are able to consistently produce recycled product that meets the product specification and undertake their activities to a high standard, DEC may authorise a reduced product testing rate including down to 5 locations per 4000 tonnes (1 sample per 600m<sup>3</sup>) of product.

The criteria that DEC will use to consider and determine a reduction in product sampling frequency are:

1. Activities at the premises have been validated through a DEC inspection or audit to comply with these guidelines;
2. DEC has confirmed through an inspection or audit that the conditions of the Part V licence are being met;
3. DEC has not undertaken any enforcement action in relation to the activities at the premises in the last 6 months;
4. Product testing has demonstrated that the product specification has been consistently achieved at the premises for a continuous 6 month period;
5. The presence of mitigating factors such as best practice management measures, high control of source material or use of the product for low risk purposes;
6. The quantity of waste processed in the last 6 months and the different sources/types of material processed at the premises; and
7. DoH has agreed to the reduction in product sampling rate at the premises.

All requests for a reduced product sampling rate must be submitted in writing to the relevant DEC Industry Regulation Regional Leader for the Premises, details of which can be found in the interpretation section of the Part V licence for the Premises.

DEC will refer all requests to the DoH and operators must ensure that all requests include sufficient evidence, particularly in relation to product testing, to support compliance with the above criteria.

Proponents should note however, that despite a premises meeting the above reduced sampling criteria, there may be occasions where a reduced sampling rate is not approved by DEC. This

may occur for example where the site is close to sensitive receptors, contentious and/or there is a need to provide public confidence in the activities at the site.

Where a reduced sampling rate is approved at a premises, DEC will provide written notification of the approval and will continue to closely monitor that premises to ensure it remains compliant with the reduced sampling criteria. DEC's monitoring of the premises will be further supported by the annual process audits required by section 5.1 and the results of the product sampling.

DEC will withdraw the approval to implement a reduced sampling frequency where the reduced sampling criteria are not being met on an on-going basis. Where DEC withdraws approval for a reduced sampling frequency, proponents will be provided with the reasons for the withdrawal.

In the event that approval for a reduced sampling rate is withdrawn by DEC, proponents will be required to make a new reduced sampling frequency request and demonstrate that they have:

1. Implemented appropriate measures to prevent a re-occurrence of the non-compliance that caused the previous agreement for a reduced sampling frequency to be withdrawn; and that
2. The product specification (sampled at the 40 samples per 4000 tonnes rate) has been consistently met for a 6 month period following the implementation of the measures identified in 1. above.

### **Sample Analysis Method**

#### >7mm sample fractions

Asbestos concentrations (ACM and FA) should be calculated in accordance with the methods detailed in section 4.1.7 of Department of Health (DoH), 2009, *Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia*. As detailed in the DoH Guidelines, 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 FA and AF.

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 used, however DEC 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 specification for asbestos content, samples must be a minimum of 500mL in size. Proponents 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. A number of laboratories have developed such semi-quantitative methods for the analysis of low levels of asbestos. Techniques include:
  - The extraction and weighing of fibre bundles or fibre cement material from the total sample; and
  - Measuring the width and length (ie volume) of individual fibre by Phase Contrast Microscopy (PCM) and calculating the weight of fibres in the extracted sub-sample.

The use of either of these methods is considered acceptable to DEC.

Whatever analysis methods are adopted by an operator, DEC expects a number of assessment based statements to be included in all laboratory analytical reports. These include:

- Details of the sample size;
- A Statement of Limit of Detection of the analysis;
- Results in relation to asbestos detected or not – note that AS4964-2004 allows for a nil detection if the asbestos is less than a certain concentration and is non-respirable however DEC would consider a positive result to exceed the 0.001% w/w limit;
- Description of any asbestos detected; and
- Estimate of the concentration of asbestos detected if practical to do so.

#### **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 eg 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.

As a guide, in the case of recycled drainage rock identification of a piece of ACM or FA per 10m<sup>2</sup> of surface would be deemed to exceed the specification for that area, and for the whole stockpile if repeated in 2 or more other separate areas. A single fragment exceedance can be considered an isolated occurrence in the absence of other contamination evidence and the stockpile allowed for beneficial use. If there is multiple contamination only of a localised area then that area can be excavated to the extent of any visible asbestos and then the remainder of the stockpile considered to be suitable for use.

For laboratory analysis it is important that each result be considered on its own merits in regard to the asbestos control specification and that there is no averaging across samples. In the case of a single exceedance at a level less than 0.01% w/w, the stockpile (nominally 4000 tonnes) may not be deemed contaminated if repeat samples of immediately adjacent areas do not demonstrate specification exceedances.

The same approach as indicated in the preceding paragraph can be applied to the results of the >7mm sieve sampling in regard to the recycled sand material and roadbase. In this case a 1cm<sup>3</sup> fragment of ACM or FA would be deemed to exceed the specification for a 10L sample.

It should be noted that specification exceedances in regard to different assessment methods for the same type of stockpile should not be viewed in isolation from each other.

#### **Product Supply**

Recycled products should only be supplied to customers from stockpiles that have been sampled and tested in accordance with section 4.3 and shown to conform to the product specification.