Government of Western Australia
Department of Water and Environmental Regulation

Licence

Licence number	L6544/1993/11
Licence holder	Red Sand Supplies Pty Ltd
ACN	081 951 617
Registered business address	Unit 1, 163 Canning Highway EAST FREMANTLE WA 6158
DWER file number	2010/009437-1 and INS-0001326
Duration	13/02/2023 to 02/02/2027
Date of issue	03/02/2023
Date of amendment	10/02/2025
Premises details	Red Sand Supplies Pty Ltd 192 Hope Valley Road HOPE VALLEY WA 6165 Legal description - Part of Lot 339 on Deposited Plan 245455 Certificate of Title Volume 1967 Folio 842 As defined by the premises map in Schedule 1 and the coordinates in Schedule 2

Prescribed premises category description (Schedule 1, *Environmental Protection Regulations 1987*)	**Assessed design capacity**
Category 13: Crushing of building material	100,000 tonnes per annual period
Category 62: Solid waste depot	100,000 tonnes per annual period

This licence is granted to the licence holder, subject to the attached conditions, on 10 February 2025, by:

Digitally signed by Koby Anderson
Date: 2025.02.10 11:54:52 +08'00'

SENIOR ENVIRONMENTAL OFFICER
INDUSTRY REGULATION

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

Licence history

Date	Reference number	Summary of changes
13/02/2012	L6544/1993/10	Licence issued
25/01/2013	L6544/1993/10	Licence amended to include improvement program relating to the *Guidelines for managing asbestos at construction and demolition waste recycling facilities*
29/04/2016	L6544/1993/10	Expiry date of licence amended to 12 February 2023
25/08/2016	L6544/1993/10	Amendment Notice to correct a clerical error incorrectly stating the prescribed premises address and registered business address
03/02/2023	L6544/1993/11	Licence renewed for 2 years including an update to the format and appearance of the licence and revised conditions
10/02/2025	L6544/1993/11	Licence amended to extend expiry date to 2/02/2027

Interpretation

In this licence:

(a) the words 'including', 'includes' and 'include' in conditions mean "including but not limited to", and similar, as appropriate;

(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:

  (i) if dated, refers to that particular version; and

  (ii) if not dated, refers to the latest version and therefore may be subject to change over time;

(e) unless specified otherwise, any reference to a section of an Act refers to that section of the EP Act; and

(f) unless specified otherwise, all definitions are in accordance with the EP Act.

NOTE: This licence requires specific conditions to be met but does not provide any implied authorisation for other emissions, discharges, or activities not specified in this licence.

Licence conditions

The licence holder must ensure that the following conditions are complied with:

Infrastructure and equipment

1. The licence holder must ensure that the infrastructure and equipment listed in Table 1 and located at the corresponding infrastructure location is maintained and operated in accordance with the corresponding operational requirement set out in Table 1.

Table 1: Infrastructure and equipment requirements

Infrastructure and equipment	Operational requirement	Infrastructure location
Signage	i) Must have a clear visible sign specifying “No Asbestos” at all entries to the premises.	Site entrance(s)
Water cart	i) At least one water cart with a capacity of at least 20,000 L must be present on the premises at all times. ii) Must be fitted with sprays and high pressure water cannon. iii) Must be in good working order.	Not specified
Water storage tank	i) Must have a capacity of at least 60,000 L. ii) Must be in good working order.	
Reticulated sprinkler system	i) Fixed reticulated sprinkler network must be in place for dust suppression over all product bays. ii) Portable reticulated sprinklers must be mobilized for dust suppression over all waste stockpiles. iii) Must be in good working order.	
Rubble Master RM100GO! mobile crusher	i) Up to one mobile crusher on-site. ii) Must only operate within the hours of 6:00 am and 5:00 pm.	
S130 McCloskey screening plant	i) Up to two screening plants on-site. ii) Must be fitted with fixed water sprays to prevent dust emissions during operation. iii) Must only operate within the hours of 6:00 am and 5:00 pm.	
R105 McCloskey screening plant		
Stacker(s)	i) Must be fitted with fixed water sprays to prevent dust emissions during operation. ii) Must only operate within the hours of 6:00 am and 5:00 pm. iii) Must be in good working order.	
Vehicle(s), truck(s), wheel loader(s), excavator(s) and diesel generator(s)	i) Vehicle and mobile plant speeds do not exceed 10 km/hr. ii) Must be in good working order.	Not specified

Infrastructure and equipment	Operational requirement	Infrastructure location
Excavator attachments – DnB D55 rock breaker, 20T concrete shear, 20T concrete pulveriser, grapple jaw(s), magnet(s), bucket(s) and fork(s)	i) Only one of the rock breaker, concrete shear or concrete pulveriser must be used at one time. ii) The rock breaker, concrete shear and concrete pulveriser must not be used while the mobile crusher is operating. iii) Must only operate within the hours of 6:00 am and 5:00 pm. iv) Must be in good working order.	Not specified
Earthen bunds	i) Earthen bunds at least 3 metres high are maintained along the northern, western and southern premises boundaries.	Along the northern, western and southern premises boundaries

Asbestos Management Plan

2. The licence holder must maintain and implement an Asbestos Management Plan that is consistent with the conditions of this licence and sets out in prescriptive detail:

(a) where asbestos or asbestos containing material (ACM) may be present on the premises at each stage of operations for:

(i) waste acceptance;
(ii) waste processing; and
(iii) recycled products generated from construction and demolition waste,

(b) operating procedures and management practices to mitigate the risks from asbestos or ACM at each stage of operations as set out it condition 2(a);

(c) monitoring (including visual inspections), sampling and analysis to identify asbestos contamination at each stage of operations as set out it condition 2(a);

(d) actions to control any asbestos or ACM detected at each stage of operations as set out it condition 2(a);

(e) procedures for annually reviewing and revising the Asbestos Management Plan, and in response to any matters arising from compliance and process audits;

(f) procedures for responding to incidents or emergencies where any asbestos is detected at the premises or within products;

(g) identification of each person with responsibilities under the Asbestos Management Plan, the person's responsibilities and the training, qualifications and/or experience required for their role; and

(h) recordkeeping requirements in accordance with the conditions of this licence.

Waste acceptance

3. The licence holder must only accept onto the premises waste of a type that:

(a) does not exceed the rate at which that waste is received; and

(b) meets the relevant acceptance specification,

as set out in Table 2.

Table 2: Waste acceptance criteria

Waste type	Rate at which waste is received	Acceptance specification
Inert Waste Type 1	100,000 tonnes per annual period	i) Limited to construction and demolition waste only. ii) Must not contain, or be suspected of containing, asbestos or ACM.

4. The licence holder must obtain a signed declaration from the supplier of the waste with each delivery that:

(a) specifies the details of the:

(i) waste (type and description);
(ii) source of the waste load;
(iii) name of the waste carrier;
(iv) registration number of the delivery vehicle; and
(v) date of delivery,

(b) sets out the quantity being delivered; and

(c) declares that the load does not contain any asbestos or ACM.

5. The licence holder must:

(a) visually inspect all loads of waste on arrival at the premises prior to acceptance, to determine the risk of a load containing asbestos and/or ACM; and

(b) classify each load as either a 'low risk load' or a 'high risk load', in accordance with the risk classification procedure provided in Schedule 3.

6. Where waste does not meet the waste acceptance criteria set out in condition 3 the licence holder must:

(a) record the details of the:

(i) waste (type and description);
(ii) source of the waste load;
(iii) name of the waste carrier;
(iv) registration number of the delivery vehicle; and
(v) date that the waste load was rejected; and

(b) reject the waste and have it removed from the premises by the waste supplier's delivery vehicle;

or

(c) where the waste supplier cannot immediately remove the waste in the delivery vehicle, it is stored in a quarantined storage area or container and removed to an appropriately authorised facility within seven days of receipt.

7. Where waste does not meet the waste acceptance criteria set out in condition 3 because it contains, or is suspected to contain, asbestos or ACM, the licence holder must ensure that the actions specified in condition 6 are implemented in accordance with the following requirements:

(a) if the waste is to be immediately rejected, it is wet down prior to reloading into the delivery vehicle; or

(b) if the waste is to be temporarily stored in a quarantined storage area or container, it is wrapped or otherwise contained in a manner that prevents release of asbestos fibres and clearly labelled before being placed in the quarantined storage area or container.

Waste processing

8. The licence holder must ensure that the waste types specified in Table 3 are only subjected to the corresponding processes, subject to the corresponding process limits and/or specifications.

Table 3: Waste processing

Waste type	Processes	Process limits and/or specifications
Inert Waste Type 1	Receipt, handling, storage and processing by manual or mechanical sorting (screening or other mechanical equipment) and mechanical crushing Production of recycled products	(i) All waste must be: o processed into a product; or o managed as a waste. (ii) Must not process more than 100,000 tonnes of waste per annual period.

Waste load inspection

9. The licence holder must ensure water is routinely applied to each load of waste entering the premises, to ensure all loads are wetted prior to unloading, and maintained in a damp state throughout the inspection process.

10. Upon acceptance of the waste, the licence holder must direct each classified load to an unloading area designed and constructed to ensure the classified load will not mix with other waste prior to further inspection.

11. The licence holder must:

(a) visually inspect each ‘low risk load’ while the material is being unloaded, and continue to do so at all stages of the storage, sorting, and screening process, to determine whether any asbestos and/or ACM can be identified;

(b) where asbestos and/or ACM is suspected or identified in a ‘low risk load’, reclassify that load as a ‘high risk load’; and

(c) visually inspect and handle each ‘high risk load’ in accordance with the procedure provided in Schedule 4.

12. The licence holder must continue to visually inspect waste at the premises at all stages of the storage, sorting and screening process. Suspected asbestos or ACM identified at any stage of the process must be handled in accordance with the procedure set out in Schedule 4.

Waste output and storage

13. The licence holder must ensure that:

(a) materials on the premises are maintained in at least three separate stockpiles for unprocessed waste, products tested for asbestos or ACM, and processed waste awaiting testing for asbestos or ACM;

(b) unprocessed waste is kept clearly separated from tested products and processed waste awaiting testing, by a minimum three (3) metre distance from the base of the stockpile;

(c) products tested for asbestos or ACM and processed waste awaiting testing for asbestos or ACM are clearly separated by a minimum three (3) metre distance from the base of the stockpile; and

(d) clearly visible and legible signage is erected on individual stockpiles to clearly identify and delineate tested products, processed waste awaiting testing, and unprocessed waste.

14. The licence holder must ensure that residual wastes generated during processing are:

(a) collected and stored in a container; and

(b) removed to an appropriately authorised facility within four weeks of receipt.

Emissions and discharges

Dust emissions

15. The licence holder must maintain an adequate water supply to the following plant and equipment to facilitate dust suppression:

(a) reticulated sprinkler system;

(b) fixed water sprays on screeners and stackers; and

(c) water cart.

16. The licence holder must ensure that waste and product stockpiles are maintained in a damp state to prevent dust lift off.

17. The licence holder must ensure that waste and product stockpiles do not exceed seven (7) metres in height at any point from the base of the stockpile.

18. The licence holder must regularly wet down unsealed roads and trafficable areas to prevent dust lift-off.

19. The licence holder must ensure that products are wet down before being removed from the premises.

Stormwater emissions

20. The licence holder must ensure that stormwater that has come into contact with wastes or products is retained on the premises.

Monitoring

Waste and output monitoring

21. The licence holder must record the total amount of waste accepted onto the premises, for each waste type listed in Table 4, in the corresponding unit, and for each corresponding time period, as set out in Table 4.

Table 4: Waste accepted onto the premises

Waste type	Unit	Time period
Inert Waste Type 1	Tonnes as measured by certified load scales OR m^3 and calculated tonnes – a relevant conversion factor must be used to calculate tonnage	Each load arriving at the premises

22. The licence holder must record the total amount of outputs removed from the premises, for each output type listed in Table 5, in the corresponding unit, and for each corresponding time period set out in Table 5.

Table 5: Outputs removed from the premises

Output type	Unit	Time period
Waste types as defined in the Landfill Definitions	Tonnes as measured by certified load scales OR m^3 and calculated tonnes – a relevant conversion factor must be used to calculate tonnage	Each load leaving the premises

Recycled product monitoring

23. The licence holder must ensure that testing of all recycled products generated from construction and demolition waste is undertaken in accordance with the product testing procedures specified in Schedule 5.

24. The licence holder must ensure that recycled products generated from construction and demolition waste are only supplied to customers or used in the construction of infrastructure on the premises if they have been tested in accordance with condition 23 and must not exceed the product specification of 0.001% asbestos weight for weight (w/w) for asbestos content (in any form) within any products.

25. The licence holder must maintain accurate and auditable records of all asbestos product testing undertaken in accordance with condition 23, including:

(a) findings from the visual inspection of product stockpiles;

(b) details of the field and laboratory sample sizes;

(c) a statement of limit of detection of the laboratory analysis;

(d) results in relation to asbestos detected (positive result exceeding the 0.001% w/w limit) or not;

(e) a description of any asbestos detected;

(f) an estimate of the concentration of asbestos detected; and

(g) actions taken to address any processed waste stockpiles that do not conform to the product specification.

26. The licence holder is authorised to implement a reduced product testing rate as per the “Reduced sampling criteria” section of Schedule 5.

Staff training and competency

27. The licence holder must ensure personnel working on the premises undergo training when commencing a role at the premises and at least every two years following the initial training.

28. The training pursuant to condition 27 must cover:

(a) the health hazards associated with asbestos;

(b) the controls used to minimise dust emissions and exposure to asbestos dust;

(c) how to visually inspect waste and recognise different types of asbestos and ACM;

(d) procedures relevant to the person's role, such as processes for rejecting loads, classifying loads, unloading and inspecting low risk and high risk loads, segregating and storing asbestos and ACM, recycled product quality monitoring and sampling, and recordkeeping; and

(e) the requirements specified in the conditions of this licence, the Asbestos Management Plan and the DWER Asbestos Guidelines.

Records and reporting

29. The licence holder must record the following information in relation to complaints received by the licence holder (whether received directly from a complainant or forwarded to them by the Department or another party) about any alleged emissions from the premises:

(a) the name and contact details of the complainant, (if provided);

(b) the time and date of the complaint;

(c) the complete details of the complaint and any other concerns or other issues raised; and

(d) the complete details and dates of any action taken by the licence holder to investigate or respond to any complaint.

30. The licence holder must retain the services of a suitably qualified and independent person to:

(a) undertake a process audit of compliance with the conditions of this licence, the Asbestos Management Plan and the DWER Asbestos Guidelines during the preceding annual period; and

(b) prepare and submit to the licence holder by no later than 28 February in each year an annual Process Audit Report in accordance with condition 31.

31. A Process Audit Report pursuant to condition 30 must include:

(a) an assessment of the following during the preceding annual period:

(i) compliance with the conditions of this licence, the Asbestos Management Plan and the DWER Asbestos Guidelines;

(ii) the effectiveness and implementation of pre-acceptance, acceptance, classification, unloading, inspection, sampling and testing procedures;

(iii) the effectiveness and results of product testing, including interpretation of results;

(iv) the effectiveness of staff training, including their ability to recognise asbestos or ACM;

(v) the adequacy of recordkeeping practices; and

(vi) the effectiveness of the Asbestos Management Plan and degree to which it reflects site operations, and

(b) a summary of the qualifications and experience of the suitably qualified and independent person.

32. The licence holder must:

(a) undertake an audit of their compliance with the conditions of this licence during the preceding annual period; and

(b) prepare and submit to the CEO an Annual Audit Compliance Report in the approved form by no later than 31 March in each year.

33. The licence holder must:

(a) prepare an environmental report that provides information in accordance with the requirements set out in Table 6 for the preceding annual period; and

(b) submit that environmental report to the CEO by no later than 31 March each year.

Table 6: Environmental reporting requirements

Condition	Requirement
N/A	A summary of any failure or malfunction of any pollution control equipment or any incidents that occurred during the annual period and any related action taken.
6 and 34(b)	A summary of any rejected loads during the annual period.
11, 12 and 34(c)	A summary of any loads that were inspected and suspected or found to contain asbestos or ACM.
21 and 34(e)	A summary of waste input monitoring.
22 and 34(e)	A summary of output monitoring.
23, 24, 25 and 26	A summary of product monitoring results, including the following information: i) the total number of samples collected; ii) the number of samples that conformed to the product specification; iii) the number of samples that did not conform to the product specification; iv) the outcome of any investigations or actions taken to address any processed waste stockpiles that did not conform to the product specification; and v) field sampling records and laboratory certificates for any samples that did not conform to the product specification.
29 and 34(g)	A summary of complaints, including the information required to be recorded by the condition.
30 and 31	A complete copy of the Process Audit Report. A summary of improvement strategies identified to address the findings of the Process Audit Report and a summary of any related revisions to the Asbestos Management Plan.

34. 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) all waste loads rejected from the premises;

(c) incoming waste loads that have been inspected and suspected or found to contain asbestos and/or ACM showing the source (person) and originating site (location), and actions taken to address the issue;

(d) any maintenance of infrastructure that is performed in the course of complying with condition 1 of this licence;

(e) monitoring programmes undertaken in accordance with conditions 21 and 22 of this licence;

(f) training, qualifications and experience of site personnel in accordance with conditions 27 and 28, such as records of in-house training courses or external accredited training courses; and

(g) complaints received under condition 29 of this licence.

35. The books specified under condition 34 must:

(a) be legible;

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

(c) be retained by the licence holder for the duration of the licence; and

(d) be available to be produced to an inspector or the CEO as required.

Definitions

In this licence, the terms in Table 7 have the meanings defined.

Table 7: Definitions

Term	Definition
ACM	means bonded asbestos containing material and has the meaning defined in the *Guidelines for the Assessment, Remediation and Management of Asbestos Contaminated Sites in Western Australia* published by the Department of Health.
ACN	Australian Company Number
AF	means asbestos fines and has the meaning defined in the *Guidelines for the Assessment, Remediation and Management of Asbestos Contaminated Sites in Western Australia* published by the Department of Health.
Annual Audit Compliance Report (AACR)	means a report submitted in a format approved by the CEO (relevant guidelines and templates may be available on the Department's website).
annual period	a 12 month period commencing from 1 January until 31 December in the same year.
appropriately authorised facility	means a facility which holds approval under the EP Act for the acceptance of the relevant waste type as defined in the Landfill Definitions.
AS 4964	means *Australian Standard Method for the Qualitative Identification of asbestos in bulk samples* published by Standards Australia
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 Management Plan	means the plan specified in condition 2 of this licence.
books	has the same meaning given to that term under the EP Act.
CEO	means Chief Executive Officer of the Department. "submit to / notify the CEO" (or similar), means either: Director General Department administering the *Environmental Protection Act 1986* Locked Bag 10 Joondalup DC WA 6919 or: info@dwer.wa.gov.au
classified load	means a load that has been classified based on the risk of waste materials containing asbestos in accordance with the risk classification procedure provided in Schedule 3.

Term	Definition
construction and demolition waste	has the meaning defined in the Landfill Definitions.
conversion factor	means the default bulk densities listed in Appendix B Table 2 of the Western Australian Government Gazette No. 97, 28 June 2019.
damp	means the material is moist to touch.
Department	means the department established under section 35 of the *Public Sector Management Act 1994* (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 3.
discharge	has the same meaning given to that term under the EP Act.
DWER Asbestos Guidelines	means the document titled *Guideline: Managing asbestos at construction and demolition waste recycling facilities* published by the Department.
emission	has the same meaning given to that term under the EP Act.
EP Act	*Environmental Protection Act 1986* (WA)
EP Regulations	*Environmental Protection Regulations 1987* (WA)
FA	means fibrous asbestos and has the meaning defined in the *Guidelines for the Assessment, Remediation and Management of Asbestos Contaminated Sites in Western Australia* published by the Department of Health
high risk load	refers to loads classified as “high risk” in accordance with the DWER Asbestos Guidelines risk classification matrix included in Schedule 3 to this licence.
Inert Waste Type 1	has the meaning defined in the Landfill Definitions.
Landfill Definitions	means the document titled *Landfill Waste Classification and Waste Definitions 1996* published by the Department.
licence	refers to this document, which evidences the grant of a licence by the CEO under section 57 of the EP Act, subject to the specified conditions contained within.
licence holder	refers to the occupier of the premises, being the person specified on the front of the licence as the person to whom this licence has been granted.
low risk load	refers to loads classified as “low risk” in accordance with the DWER Asbestos Guidelines risk classification matrix included in Schedule 3 to this licence.
NATA	National Association of Testing Authorities
premises	refers to the premises to which this licence applies, as specified at the front of this licence, shown on the premises map (Figure 1) in Schedule 1 to this licence and defined by the coordinates in Schedule 2 to this licence.
prescribed premises	has the same meaning given to that term under the EP Act.

Term	Definition
product	refers to either: • construction and demolition waste which has undergone processing, crushing and/or screening to create a fit-for-purpose recycled product which has been tested and conforms to the product specification in this licence; or • mulch produced off-site which is stored at the premises.
product specification	means the specification set out in condition 24.
quarantined storage area or container	means a designated storage area or container that is: • clearly labelled; • separated and isolated from other waste storage and processing areas; and • designed to contain all non-conforming waste and prevent and mitigate the release to the environment of emissions that may arise from the waste.
residual wastes	means physical contaminants such as timber, glass, plastic, metals, paper and cardboard and any other waste that has been screened or otherwise removed during the processing of construction and demolition waste.
Special Waste Type 1	has the meaning defined in the Landfill Definitions.
suitably qualified and independent person	means a person who: (a) holds a tertiary qualification in occupational health and safety, industrial hygiene, science, building construction, or environmental health; (b) has a minimum of three years of relevant industry experience such as working on managing asbestos risks in the waste industry or contaminated site assessment; and (c) is employed by an independent third party external to the licence holder's business.
waste	has the same meaning given to that term under the EP Act.

END OF CONDITIONS

Schedule 1: Maps

Premises map

The boundary of the prescribed premises is shown by the pink line and area marked 'Lease Area A' in the map below (Figure 1).

Figure 1: Map of the boundary of the prescribed premises

Schedule 2: Premises boundary

The corners of the premises boundary are the coordinates listed in Table 8.

Table 8: Premises boundary coordinates (GDA2020)

	Easting	Northing	Zone
1.	386728.85	6437256.69	50
2.	386729.23	6437121.88	50
3.	386728.39	6437086.94	50
4.	386715.29	6437322.95	50
5.	386715.87	6437228.61	50
6.	386714.19	6437260.85	50
7.	386616.40	6437170.84	50
8.	386608.49	6437321.42	50
9.	386728.85	6437256.69	50

Schedule 3: Asbestos load risk classification procedure

To determine the risk of an incoming load containing asbestos or ACM, the gatehouse operator at the premises must 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 in Table 9 below.

Table 9: 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 construction and demolition material (such as in the case of a small trailer with a shallow load), then consideration may be given to classifying those loads as ‘low risk’.

Schedule 4: 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 and components of the material to be undertaken.
- If asbestos fines (AF) or fibrous asbestos (FA) is suspected or identified, the load must be isolated, kept wet and, once appropriately contained, redirected to an appropriately authorised facility.
- Where ACM is suspected or identified within a load and is not capable of being easily removed by hand, the load must be rejected in full and isolated, kept wet and, once appropriately contained, redirected to an appropriately authorised 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:
  - (a) 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 facility. If testing confirms the material is not ACM the waste can be returned to the stockpile to await further processing; or
  - (b) assumed to be ACM and redirected to an appropriately authorised facility.
- All suspected or assumed ACM must be segregated and stored in the quarantined storage area or container. 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 material can be added to the stockpile waiting further processing.
- Records must be kept to ensure that the process from receipt of all waste types 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.

Schedule 5: Asbestos monitoring and testing

Product testing and supply

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

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

ACM and FA are subject to visual inspection and sampling procedures since they are larger in size (>7 mm) and AF (<7 mm) 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 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 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 1000 m^3 of product.

Conveyor sampling

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

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, DWER may authorise a reduced product testing rate including down to 5 locations per 4000 tonnes (1 sample per 600 m^3) of product.

Sample treatment

- Each sample collected must be at least 10 litres in volume and then be divided into 2 size fractions (>7 mm and <7 mm) in the field by sieving through a 7 mm screen or spread out for inspection on a contrasting colour fabric. The >7 mm fraction should be examined for any suspect ACM and this be retained to calculate the level of contamination.

- The <7 mm 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

- **>7 mm sample fractions –**
    - Asbestos concentrations (ACM and FA) should be calculated in accordance with the methods detailed in Appendix 2 of the *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.
- **<7 mm sample fractions**
    - Each <7 mm sample fraction must be analysed for fibrous 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* (*AS 4964*) or be demonstrated to be able to achieve the equivalent level of results to this Australian Standard.

AS 4964 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 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 500 mL 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. Either of the following methods are considered acceptable by DWER:
    - The extraction and weighing of fibre bundles or fibre cement material from the total sample; and
    - Measuring the width and length (i.e. volume) of individual fibre by Phase Contrast Microscopy 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 criterion, then that stockpile or product process should be deemed potentially contaminated and considered for off-site disposal as Special Waste Type 1, 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 criterion, 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 10 m^2 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 >7 mm sieve sampling in regard to the recycled sand material and roadbase. In this case a 1 cm^3 fragment of ACM or FA would be deemed to exceed the specification for a 10 L 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.