Licence

Licence number	L9341/2022/1
Licence holder	Cougar Inert Waste Pty Ltd
ACN (if applicable)	658 043 951
Registered business address	Cougar Inert Waste Pty Ltd Level 1, 35 Outram Street WEST PERTH, WA 6005
DWER file number	DER2019/00576
Duration	18/10/2022 to 18/10/2042
Date of issue	18/10/2022
Premises details	Cougar Inert Waste Landfill Lot 1001 Lake Clifton Road LAKE CLIFTON, WA 6215 Legal description - Part of Lot 1001 on Deposited Plan 66023 Certificate of Title Volume 2764 Folio 126 As defined by the coordinates in Schedule 2

Prescribed premises category description (Schedule 1, ***Environmental Protection Regulations 1987***)	**Assessed production 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.	25,000 tonnes per annual year period
Category 62: Solid waste depot: Premises on which waste is stored, or sorted, pending final disposal or re-use.	25,000 tonnes per annual year period
Category 63: Class I inert landfill site: Premises on which waste (as determined by reference to the waste type set out in the document entitled “Landfill Waste Classification and Waste Definitions 1996” published by the Chief Executive Officer and as amended from time to time) is accepted for burial.	25,000 tonnes per annual year period
Category 70: Screening, etc. of material: Premises on which material extracted from the ground is screened, washed, crushed, ground, milled, sized or separated.	25,000 tonnes per annual year period

This licence is granted to the licence holder, subject to the attached conditions, on 18 October 2022, by:

Abbie Crawford
A/MANAGER, WASTE INDUSTRIES
REGULATORY SERVICES

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

Licence history

Date	Reference number	Summary of changes
13/05/2020	W6335/2020/1	Works approval for construction, commissioning and time limited operations of the Cougar Inert Waste, Inert landfill.
18/10/2022	L9341/2022/1	Licence Granted

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 site 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

Site infrastructure and equipment	Operational requirement	Infrastructure location
Bulldozer	N/A	Variable location within the Premises Boundary, as quarrying activity proceeds.
Water Tanker	Must maintain an operational water cart at all times with a storage capacity of at least 12 kL on the Premises. Must be operated to ensure that unsealed roads, operational surfaces and all product and waste stockpiles remain wetted down to prevent fugitive dust emissions. Must be 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.	To be retained on-site with access to water at all times.
Excavator	N/A	Within Prescribed Premises Boundary, as depicted in Schedule 1, Figure 1.
Loaders	Cat 980 or similar capacity excavator.	Within Prescribed Premises Boundary, as depicted in Schedule 1, Figure 1.
Rock Breaker	N/A	Inert landfill processing area footprint as depicted in Schedule 1, Figure 2.
Mobile Crushing and Screening Plant	All raw material processing operations are to be undertaken within the inert landfill processing area. The crusher must be fitted with a dust suppression system with spray nozzles to be located within the hopper and at the discharge points from crusher and screens. Must only be operate between 7:00am and 5:00pm Monday to Saturday, excluding public holidays.	Inert landfill processing area footprint as depicted in Schedule 1, Figure 2.

Site infrastructure and equipment	Operational requirement	Infrastructure location
Mobile Fuel Tanker	N/A	Within Prescribed Premises Boundary, as depicted in Schedule 1, Figure 1.
Semi-trailer trucks, truck and trailer combinations	Must stay to access roads	Within Prescribed Premises Boundary, as depicted in Schedule 1, Figure 1.
Signage at front entrance to the Premises	Signage at front entrance is to maintained and as a minimum notification that asbestos is not accepted at the site and facility operating hours.	Entrance to the access road off Lake Clifton Road.
Non-conforming waste bins	Must provide appropriate storage of non-conforming wastes in designated onsite location.	Inert landfill processing area footprint as depicted in Schedule 1, Figure 2.
Water sprays/sprinklers on crushing and screening equipment	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. Water must be effectively delivered to Product and Waste and not be blown away by wind.	N/A
Sprinklers/misters	Operate when visible dust is generated from stockpile surfaces on the Premises. Operate proactively subject to weather forecasting over a 24 hour period. Reticulated sprinklers must be capable of wetting down the entire surface of all stockpiles on the Premises that are subject to dust lift-off simultaneously or within a period of thirty minutes. Spray reach and rate of flow of sprinklers must be sufficient to reach the top of all stockpiles specified above. Spray reach and rate of flow of sprinklers must be maintained in good working order.	Various locations
Inert Landfill processing area.	All stockpiles must be placed and maintained within the inert landfill processing area footprint.	Inert landfill processing area footprint as depicted in Schedule 1, Figure 2.
Inert Landfill area	All landfilling must be undertaken within the inert waste landfill area.	Inert landfill footprint as depicted in Schedule 1, Figure 2.
Fire Management	Maintain perimeter fire breaks as required. Water must be available on site at all times to be used for firefighting purposes	Various locations.

Site infrastructure and equipment	Operational requirement	Infrastructure location
	as required. Water sprayers, sprinklers and misters must be maintained in good working order and used in the event of a fire at the premise. Bulldozer to be used as required to extinguish small fires. Fire extinguishers to be tested and tagged as required.	

Waste acceptance

2. The Licence Holder must only accept onto the Premises waste of a waste type, which does not exceed the corresponding rate at which waste is received, and which meets the corresponding acceptance specification set out in Table 2.

3. The Licence Holder shall ensure that waste types accepted onto the Premises are only subjected to the processes set out in Column 3 of Table 2.

Table 2: Waste acceptance

Column 1	Column 2	Column 3	Column 4
Waste type	**Acceptance specification**	**Processes**	**Rate at which waste is received**
Inert Waste Type 1	Inert waste type I category waste as defined in the *Landfill Waste Classification and Waste Definitions 1996 (as amended 2019).*	Sorting, crushing, screening, stockpiling, prior to removal from site or disposal by landfilling	25,000 tonnes per annual period
Class I Solid Waste	Contaminated solid waste meeting acceptance criteria for Class I Landfills as defined in the *Landfill Waste Classification and Waste Definitions 1996 (as amended 2019)*.	Sorting, crushing, screening, stockpiling, prior to removal from site or disposal by landfilling	
Clean Fill	Limited to soils, rocks and unprocessed material as defined in the *Landfill Waste Classification and Waste Definitions 1996 (as amended 2019).*	Sorting, crushing, screening, stockpiling, prior to removal from site or disposal by landfilling	

4. The Licence Holder shall ensure that where waste does not meet the waste acceptance criteria set out in Condition 3 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 within 28 days.

5. The Licence Holder must classify and inspect loads for asbestos in accordance with the requirements of Attachment 1 and Attachment 2.

Premises Operations

Stockpile management

6. The Licence Holder must ensure that:

(a) Separate stockpiles are maintained for:

(i) Unprocessed waste;

(ii) Products tested for Asbestos or ACM; and

(iii) Products awaiting testing for Asbestos or ACM.

(b) Stockpiles must be no more than 4 m high, contain a volume of less than 4,000 tonnes per stockpile and be separated by a minimum 3 m distance from the base of each stockpile; and

(c) Products tested for Asbestos or ACM and products awaiting testing for Asbestos or ACM are separated and clearly labelled.

7. Clearly visible and legible signage must be erected on individual stockpiles to clearly identify and delineate tested products, untested products and unprocessed waste types.

Windblown waste

8. The Licence Holder must ensure windblown waste is collected from the landfill area and from the greater Premises including, perimeter fencing, roads and vegetated areas on at least a weekly basis and returned to the tipping area or appropriately contained.

Land filling

9. A minimum of 3 m separation distance from the landfill floor to the highest annual groundwater levels must be maintained at all times.

10. Prior to landfilling commencing, the Licence Holder must provide to the CEO, a survey plan of the landfilling area developed by a suitably qualified surveyor confirming the separation distance required in accordance with Condition 9.

Fire management

11. The License Holder must:

(a) ensure that an unauthorised fire on the Premises is extinguished as soon as possible.

(b) ensure that fire-fighting equipment as outlined in Condition 1 are in good working order and capable of controlling a fire in a recycling and landfill Premise of this size.

Closure

12. The Licence Holder must, within 60 calendar days of closure, submit to the CEO a closure report evidencing compliance with the requirements of the Applicant's Closure and Rehabilitation Plan.

(a) ensure that all buildings, machinery, stockpiles and other such features are removed from site;

(b) ensure all batter slopes are to be no greater than 1:6 gradient (vertical to horizontal);

(c) ensure land surface is to be covered by 1 m of natural overburden and soil or screened sand; and

(d) Ensure a self-sustaining cover of native vegetation and parkland pasture is established with minimal phosphorous fertiliser.

Monitoring

Input and output monitoring

13. The Licence Holder must record the total amount of waste accepted onto, and removed from the premises, for each waste type listed in Condition 3, in the corresponding unit, and for each corresponding time period, as set out in Table 3.

Table 3: Waste volumes accepted onto the premises

Input/Output	Unit	Time period	Frequency
Waste Inputs	m^3 and calculated tonnes:	Annual period	Each load arriving at the Premises
Waste Outputs			Each load leaving or rejected from the premises

Note: Waste conversion factors are outlined in the Waste Avoidance and Resource Recovery Amendment Regulations 2019, as published in the Western Australian Government Gazette No.97 (28 June 2019).

Product testing

14. The Licence Holder must ensure that testing of all products is undertaken in accordance with the product testing procedures specified in Attachment 3.

15. The Licence Holder must ensure that products have been tested in accordance with Condition 14 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.

16. The Licence Holder must maintain accurate and auditable records of all Asbestos product testing undertaken in accordance with Condition 14. 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) a description of any Asbestos detected; and

(e) an estimate of the concentration of Asbestos detected if practical to do so.

17. The records maintained in accordance with Condition 14 must be retained by the Licence Holder for the duration of the licence and be available to be produced to an inspector or the CEO as required.

18. The Licence Holder is not authorised to implement a reduced product testing rate as per the reduced sampling criteria section of Attachment 3.

Noise validation

19. Within 180 days of the commencement date of landfilling commencing, the Licence Holder must retain the services of a person qualified and experienced in the area of environmental noise assessment and who, by their qualifications and experience, is eligible to hold membership of the Australian Acoustical Society or the Australian Association of Acoustical Consultants to:

(a) investigate the nature and extent of noise emissions from the Premises;

(b) assess in accordance with the methodology required in the *Environmental Protection (Noise) Regulations 1997*, the compliance of the noise emissions from the primary activities, against the relevant assigned levels specified in those Regulations; and

(c) compile and submit to the Licence Holder within six (6) months of the commencement date of this Licence a report in accordance with Condition 19.

20. A report prepared pursuant to Condition 19(c) is to include:

(a) a description of the methods used for monitoring and/or modelling of noise emissions from the Premises;

(b) details and the results of the investigation undertaken pursuant to Condition 19(a);

(c) details and results of the assessment of the noise emissions from the Premises, against the relevant assigned levels in the Environmental Protection (Noise) Regulations 1997 undertaken pursuant to Condition 19(b); and

(d) an assessment of noise levels against the most recent previous noise assessment (if available).

21. The Licence Holder must submit to the CEO the report prepared pursuant to Condition 19(c) within 30 days of receiving it.

22. Where an assessment pursuant to Condition 19(b) indicates that noise emissions do not comply with the relevant assigned levels in the *Environmental Protection (Noise) Regulations 1997*, the license holder must:

(a) within 60 days of receiving an assessment report pursuant to Condition 19(c) prepare a plan to ensure the undertaking of the licensed activity will no longer lead to any contravention of the Environmental Protection (Noise) Regulations 1997; and

(b) provide to the CEO a copy of the plan prepared pursuant to Condition 22(a) within 30 days of its preparation.

Groundwater monitoring

23. The Licence Holder must monitor groundwater for concentrations of the identified parameter(s) in accordance with Table 4.

Table 4: Groundwater monitoring of ambient concentrations

Monitoring well location	Parameter	Unit	Frequency	Sampling Method
MW1-MW4	Standing water level[1]	m(AHD) and m(BGL)	six-monthly	Spot sample, in accordance with AS/NZS 5667.11.
MW1-MW4	pH[1]	N/A		
MW1-MW4	Electrical Conductivity[1]	µS/cm		
MW1-MW4	Ammonium - nitrogen cadmium chloride chromium (total) copper, iron lead mercury manganese nickel nitrate nitrite total potassium total nitrogen phosphorus zinc total dissolved solids Total Petroleum Hydrocarbons (TPH)	mg/L		

Note 1: In-field non-NATA accredited analysis permitted.

24. All sample analysis must be undertaken by laboratories with current accreditation from the National Association of Testing Authorities (NATA) for the relevant parameters, unless otherwise specified.

25. The Licence Holder must adhere to the following field quality assurance and quality control procedures, as specified in Schedule B2 of the Assessment of Site Contamination NEPM, and must include as a minimum:

(a) decontamination procedures for the cleaning of tools and sampling equipment before sampling and between samples;

(b) field instrument calibration for instruments used on site;

(c) blind replicate samples and rinsate blanks must be collected in the field and sent to the primary laboratory to determine the precision of the field sampling and laboratory analytical program;

(d) completed field monitoring sheets / sampling logs for each sample collected, showing:

(i) time of collection;

(ii) location of collection;

(iii) initials of sampler;

(iv) sampling method;

(v) field analysis results;

(vi) duplicate type / location (if relevant); and

(vii) site observations and weather conditions, and

(e) chain-of-custody documentation must be completed which details the following information:

(i) site identification;

(ii) the sampler;

(iii) nature of the sample;

(iv) collection time and date;

(v) analyses to be performed;

(vi) sample preservation method;

(vii) departure time from site;

(viii) dispatch courier(s); and

(ix) arrival time at the laboratory.

Records

26. 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 1 of this Licence;

(c) monitoring undertaken in accordance with Conditions 14 and 23 of this Licence; and

(d) complaints received under Condition 28 of this Licence.

27. The books specified under condition 26 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.

28. 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.

Reporting

29. 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 by no later than 90 days after the end of that annual period an Annual Audit Compliance Report in the approved form.

30. The Licence Holder must submit to the CEO by no later than 30 March 2024 and then biennially thereafter, an Environmental Report for the previous two annual periods (or part thereof).

31. The Licence Holder must ensure the report required by condition 30 includes the following:

(a) monitoring of inputs and outputs in accordance with condition 13;

(b) a summary of product asbestos sampling in accordance with condition 14;

(c) copies of laboratory reports for product asbestos sampling in accordance with condition 14.

(d) groundwater monitoring results recorded in accordance with conditions 23, 24 and 25, that includes:

(i) a clear statement of the scope of work carried out;

(ii) a description of the field methodologies employed;

(iii) a summary of the field and laboratory quality assurance / quality control (QA/QC) program;

(iv) copies of the field monitoring records and field QA/QC documentation;

(v) a tabulated summary of results, as well as all raw data provided in an accompanying Microsoft Excel spreadsheet digital document/file (or a compatible equivalent digital document/file), with all results being clearly referenced to laboratory certificates of analysis;

(vi) copies of laboratory reports for groundwater monitoring results.

32. 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.

Definitions

In this licence, the terms in Table 5 have the meanings defined.

Table 5: Definitions

Term	Definition
ACN	Australian Company Number
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.
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 *Environmental Protection Act 1986* Locked Bag 10 Joondalup DC WA 6919 info@dwer.wa.gov.au
Department	means the department 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 EP Act.
discharge	has the same meaning given to that term under the EP Act.
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).
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.
premises	the premises to which this Licence applies, as specified at the front of this Licence and as shown on the premises map (Figure 1) in Schedule 1 to this Licence.
prescribed premises	has the same meaning given to that term under the EP Act.

Term	Definition
suitably qualified surveyor	refers to a surveyor who is licensed with the Land Surveyors Licensing Board of Western Australia.
waste	has the same meaning given to that term under the EP Act.

END OF CONDITIONS

Schedule 1: Maps

Location map

Figure 1: Location Map depicting the boundary of Lot 1001 and the prescribed premises boundary

Premises map

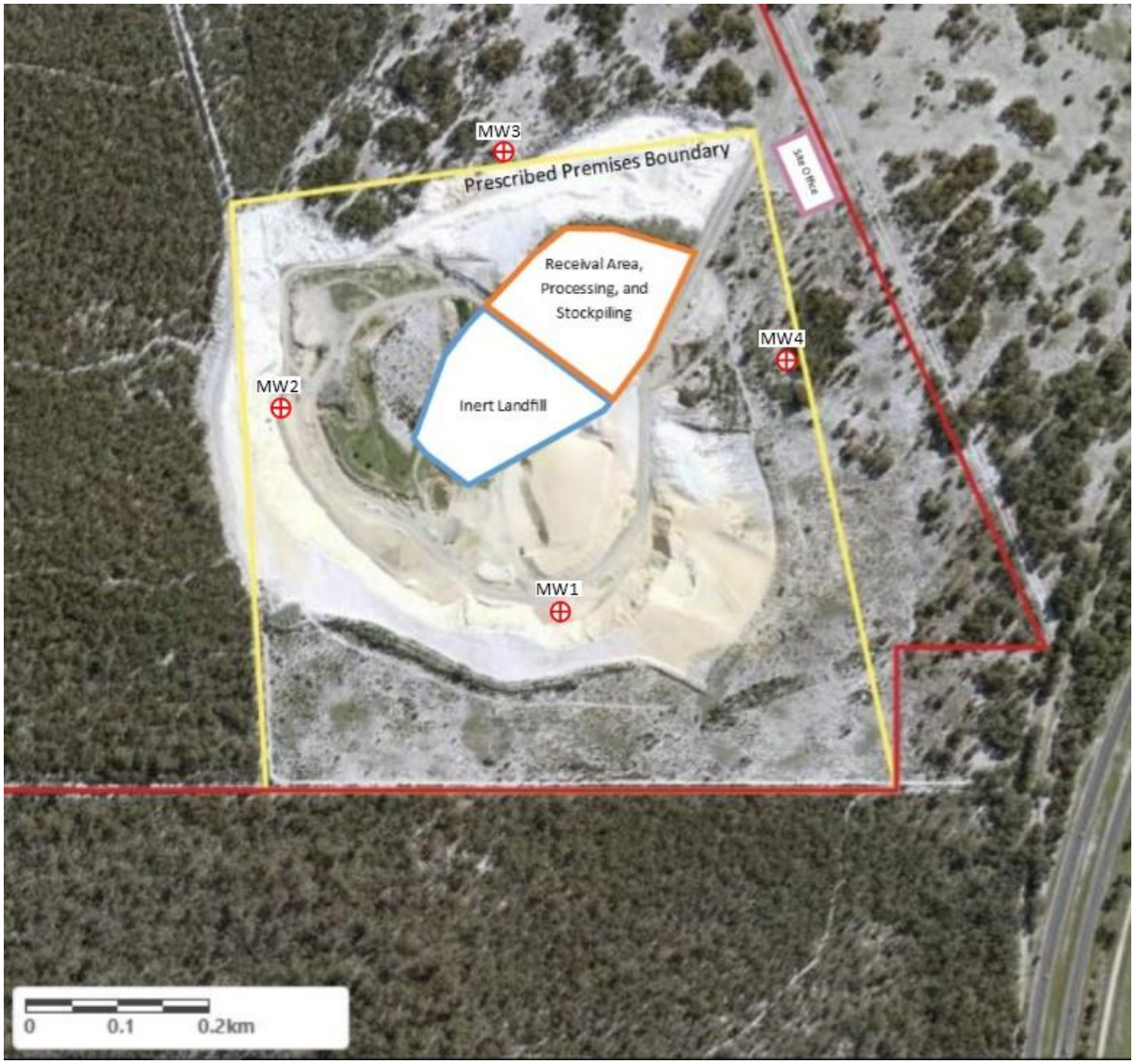

Figure 2: Premises map depicting the boundary of the prescribed premises and landfill areas.

Schedule 2: Premises boundary

The premises boundary is defined by the coordinates in Table 6.

Table 6: Premises boundary coordinates (GDA94)

Easting	Northing	Zone
380213.0 E	6367416.0 N	GDA 2020 Zone 50
379681.2 E	6366681.8 N	GDA 2020 Zone 50
380379.4 E	6366690.8 N	GDA 2020 Zone 50
379635.1 E	6367327.9 N	GDA 2020 Zone 50

Attachment 1 – Asbestos risk classification procedure

To determine the risk of an incoming load containing asbestos the 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			
	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 (e.g. 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*).

Attachment 2 – Load inspection procedure

Each accepted load shall be directed to an unloading area, ensuring 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 before 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

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 Attachment 3 – Asbestos monitoring and testing, and redirected to an appropriately authorised disposal facility. If suspect ACM is identified, the load must be reclassified as 'high risk' and 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 (e.g. crushing and screening).

High-risk load

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. One method of achieving this is to spread the material to a depth of less than 30 cm 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 and kept wet. Once appropriately contained in accordance with the Asbestos factsheet in Attachment 3 – Asbestos monitoring and testing, it should be 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 and kept wet. Once appropriately contained in accordance with the Asbestos factsheet in Attachment 3 – Asbestos monitoring and testing, it should 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.

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 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.

Attachment 3 – Asbestos monitoring and testing

Product testing and supply

To ensure 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 attachment have application for the three main recycled products:

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

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 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 1000 m^3 of product.

Conveyor sampling

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

Reduced sampling criteria

Once premises have demonstrated their procedures are able to consistently produce recycled product that meets the product specification and that they undertake their activities to a high standard, the department may authorise a reduced product testing rate, including down to five locations per 4000 tonnes (one sample per 600 m^3) of product. All requests for a reduced product sampling rate must be submitted in writing.

Sample treatment

Each sample collected must be at least 10 litres in volume and then be divided into two size fractions (>7 mm and <7 mm) in the field by sieving though a 7 mm screen or spread out for inspection on a contrasting colour fabric. The >7 mm fraction should be examined for any suspect asbestos material 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

>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 (DoH), 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 <7 mm 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 DER 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 DER:
    - 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 (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 possible 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.

Attachment 4 – Asbestos factsheet

Transportation and disposal of asbestos-containing material

The transportation and disposal of asbestos-containing material (ACM) from commercial, industrial and other activities is regulated by the Environmental Protection (Controlled Waste) Regulations 2004 (Controlled Waste Regulations). The Controlled Waste Regulations apply obligations on the waste transporter to ensure the waste is safely transported to an approved location.

The Controlled Waste Regulations define what is considered to be ACM for the purposes of the Controlled Waste Regulations. This definition includes material which contains 0.001 per cent or more of asbestos fibres weight/weight.

Please note that removal, handling, signage, security and onsite packaging of asbestos-contaminated material must be carried out in accordance with the local government authority, Department of Health (DoH) and WorkSafe requirements. Contact the relevant authority for further information (refer to the end of this factsheet).

Transportation of ACM

The Controlled Waste Regulations require ACM to be:

1. separated from other material for disposal where that is reasonably practicable
2. wrapped and contained in a manner that prevents asbestos fibres entering the atmosphere during transportation on a road
3. labelled or marked with the words 'CAUTION ASBESTOS' in letters no less than 50 mm high on the individual packages and the transport container.

Further guidance on the transportation of ACM is set out in the Code of Practice for the Safe Removal of Asbestos 2nd Edition [NOHSC:2002(2005)] and the Health (Asbestos) Regulations (1992 or as amended). This Code of Practice recommends that:

- ACM is sealed in heavy-duty 200 μm (minimum thickness) polythene plastic and clearly labelled with the appropriate signage warning
- all drums or bins used to store and dispose of ACM should be in good condition, with lids and rims in good working order. The drums or bins should be lined with polythene plastic (200 μm minimum thickness) and be clearly labelled
- if a waste skip bin, vehicle tray or similar container is used, the ACM should be double-bagged before being placed in to the container or

sealed in double-lined, polythene plastic (200 μm minimum thickness), and be clearly labelled. In the case of bulk loads such as contaminated soil, an alternative is to double-line the vehicle tray with the polythene and completely cover the load with a close-fitting, durable material such as the double-layered polythene or a tarpaulin

- in the case of ACM in the form of contaminated soil, it needs to be wetted down before removal and loading onto a vehicle or bin.

Disposal of material containing asbestos

All material containing asbestos must be disposed at a disposal site appropriately licensed or registered under Part V of the *Environmental Protection Act 1986* (EP Act) to accept asbestos waste.

A person who disposes of material containing asbestos other than at a licensed disposal site commits an offence.

Receipts for the disposal of ACM should be retained or passed on to the disposal client to assist any subsequent regulatory investigation.

Duty to notify others of the presence of asbestos

A person who takes material containing asbestos to a disposal site **MUST** inform the operator of the facility that the material is, or contains, asbestos waste. This notification should be provided in a written form; however, where notification is verbally provided the disposal site should make a written record of the notification.

Penalties for non-compliance

Penalties apply for offences committed under the EP Act and Controlled Waste Regulations.

Further information and contacts

Local government authority

For information on demolition licence requirements and household queries contact an Environmental Health Officer at your local government authority.

Department of Health

For information on asbestos cement products in your home, asbestos-contaminated sites and frequently asked questions on asbestos, visit the *DoH website* or phone 9222 4222.

Department of Consumer and Employment Protection - Worksafe

For information about asbestos in the workplace, licensed asbestos removalists and appropriate handling of asbestos including safety wear, visit the *Worksafe website* or phone 1300 307 877.