



# Asbestos contaminated soils

This information sheet provides advice to persons in control of a workplace<sup>1</sup> and those involved in inspecting, removing, managing or disposing of asbestos contaminated soils at workplaces.

This information sheet deals with soils at a workplace, which are contaminated with asbestos containing material (ACM). It does not cover naturally occurring asbestos at a workplace.

A workplace includes residential premises when paid work is occurring at that site.

## Background

Asbestos can be found in soil usually as a result of:

- inadequate asbestos removal work or demolition
- degradation of a building or structure on site
- legacy or recent illegal dumping
- waste burial
- past use of contaminated fill/top soil.

Asbestos in soils only poses a risk to the health of workers if the fibres become airborne and are then inhaled. The likelihood of exposure depends on the:

- nature
- quantity and distribution
- condition, that is, whether it is non-friable (bonded) or friable (crumbles under hand pressure, non-bonded)
- level of disturbance
- systems of work and controls used to limit the release and inhalation of asbestos fibres.

Non-friable asbestos is asbestos that is bound tightly in a matrix (e.g. asbestos cement fencing, eaves). Non-friable asbestos may become friable after severe degradation, such as during a fire or as a result of a chemical 'attack'.

Friable asbestos refers to asbestos that can be broken up using hand pressure. Examples include asbestos pipe lagging, asbestos fibres spread by high pressure cleaning of asbestos cement, or fire damaged asbestos cement sheeting that has spalled. Friable asbestos presents a greater health risk than non-friable due to the increased chance of fibre release.

## Inspection and assessment

Asbestos contaminated soils must be inspected by a competent person such as a consultant who has the relevant training, knowledge and experience to undertake the task. The detail of inspection required depends on a number of factors including:

- background knowledge of the site
- the likely amount and type of asbestos contamination (including sampling and analysis where necessary)
- the likely source of the asbestos contamination.

Residential sites with contamination can be reported to the Local Government Authorised Officer (Environmental Health Officer) who has powers to regulate asbestos contamination under the Health (Asbestos) Regulations 1992.

For extensive or legacy asbestos contamination, the site should be reported under section 11 of the Contaminated Sites Act 2003. For more information on reporting and assessment of contaminated sites, refer to [Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia](#).

<sup>1</sup> *Workplace* means a place, whether or not in an aircraft, ship, vehicle, building, or other structure, where employees or self-employed persons work or are likely to be in the course of their work

## Removal

Recent or minor, small scale soil contamination at workplaces can be removed using safe systems of work under the Occupational Safety and Health Regulations 1996.

Removal of non-friable asbestos in soil contamination of 10 square metres or more (total asbestos surface area) may be conducted by a restricted or unrestricted asbestos licence holder. However, if the asbestos contamination is friable or mixed friable/non-friable, an unrestricted asbestos licence holder should be engaged. An independent consultant may also be required to assess and manage the site to address the client's compliance with environmental legislation.

Table 1 Licensing requirements

Type of material present	Quantity	Licence requirements
Non-friable only	Total amount of asbestos containing material in soil is less than 10 m <sup>2</sup> (total surface area)	Removal licence not required  Safe systems of work required, including training and supervision
Non-friable only	Total amount of asbestos containing material in soil is equal to or greater than 10 m <sup>2</sup> (total surface area)	Restricted or unrestricted asbestos licence holder  Safe systems of work required, including training and supervision  Licence holders must comply with conditions of the licence
Friable only or mixed friable and non-friable	Visible contamination of friable asbestos	Unrestricted asbestos licence holder  Safe systems of work required, including training and supervision  Licence holders must comply with conditions of the licence
Minor contamination <sup>2</sup>	As determined by risk assessment (refer to footnote 2)	As determined by risk assessment (refer to footnote 2)

It is important to note that soil remediation work is a specialised activity and may require additional competency, skills and resources. As such, the selection of a restricted or unrestricted licence holder should consider the resources, skills and experience required for soil remediation work. Controls and safe systems of work must be used during the removal of asbestos in soils.

Controls for removal work that is **not** small-scale or minor should include (but not be limited to):

- appropriate planning (e.g. preparation of an asbestos management plan/safe work method statement for the site)
- selecting mobile plant with cabin air filters where practicable
- restricting access to the work site
- isolating and securing the removal work area using signs and barriers
- implementing systems to control cross contamination of ACM between vehicles and uncontaminated areas of the site, including buildings
- controlling dust with dust suppression techniques (e.g. water and wetting agents)
- providing information and training for workers on hazards and safe work practices to minimise exposure
- selecting and providing the correct personal protective equipment (PPE) and respiratory protective equipment (RPE)
- implementing decontamination procedures for workers and equipment.

Following removal, the adequacy of the work will need to be assessed. The soil validation will depend on the remediation approach adopted and the form of asbestos. Sampling should be conducted to check that the decontamination is complete. Air monitoring based on risk should be conducted to ensure exposure controls are effective. For more information, refer to [Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia](#).

## Transport/disposal

Asbestos is listed in Schedule 1 of the Environmental Protection (Controlled Waste) Regulations 2004 (the Regulations) as a controlled waste. Prior to transport, all asbestos contaminated soils must be wet down and covered or contained to minimise the risk of dust and fibres becoming airborne during transport. Moderate watering should be used such that the soil does not wash away or cause stability issues during transport.

Contaminated soils must be contained using an appropriate method and accompanied by a warning label or sign prior to transport to a licenced waste facility. Appropriate systems of work must be used to decontaminate the vehicles used after transport of the asbestos contaminated soils.

<sup>2</sup> Safe Work Australia – [Minor contamination of asbestos-containing dust or debris](#) and WA Department of Health – [Asbestos contaminated sites](#)

## Managing asbestos in soils *in situ*

Where appropriate, ACM contamination may be contained on site in compliance with the Contaminated Sites Act 2003 and associated regulations and guidelines administered by the [Department of Water and Environmental Regulation](#). In such situations, the site would be classified under section 13 of the Act and a memorial placed on the title.

In certain circumstances the site may be registered on a public access database and subject to mandatory disclosure requirements at sale or lease. A site management plan (SMP) may be required to protect future site workers and users. A SMP should include:

- information on the location of ACM contamination, including coordinates and depth
- inspection and maintenance of a barrier above the contaminated soil
- notification of workers in the area prior to work commencing, so that a safe system of work can be implemented
- established safe work practices for identifying and repairing any damage to the barrier.

### Further information

The [Department of Water and Environmental Regulation](#) (DWER) regulates contaminated sites. DWER seeks advice from the Department of Health on asbestos or other contaminants of public health concern as required.

[Asbestos FAQs](#) – Department of Mines, Industry Regulation and Safety

[Asbestos regulators and information sources](#) – Department of Mines, Industry Regulation and Safety

[Code of practice for the safe removal of asbestos](#) – National Occupational Health and Safety Commission

[Asbestos controlled waste fact sheet](#) – Department of Water and Environmental Regulation

[Search for disposal facilities](#) – Asbestos Safety & Eradication Agency

[Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia](#) – WA Department of Health