

Appendices

Appendix A – General information and guidance

1. What is asbestos?

Asbestos is the generic term for a number of naturally occurring, fibrous silicate materials. If asbestos is disturbed it can release dangerous fine particles of dust containing asbestos fibres. Breathing in dust containing elevated levels of asbestos fibres can cause asbestosis, lung cancer and mesothelioma.

There are two major groups of asbestos:

- The serpentine group contains chrysotile, commonly known as white asbestos
- The amphibole group contains amosite (brown asbestos) and crocidolite (blue asbestos) as well as some other less common types (such as tremolite, actinolite and anthophyllite).

Further information about the different types of asbestos can be found in enHealth, 2005, *Management of asbestos in the non-occupational environment* and *Asbestos: A guide for householders and the general public – February 2013*:

<http://www.health.gov.au/internet/main/publishing.nsf/Content/health-pubhlth-publicat-environ.htm>

In Australia, in the past asbestos was mined and widely used in the manufacture of a variety of materials. Asbestos was gradually phased out of building materials in the 1980s and the supply and installation of asbestos containing goods has been prohibited in Australia since 31 December 2003.

Asbestos legacy materials still exist in many homes, buildings and other assets. It is estimated that 1 in 3 Australian homes contains building materials with asbestos. Where the material containing asbestos is in a non-friable form (or bonded), undisturbed, and painted or otherwise sealed, it may remain safely in place. However, where the asbestos containing material is broken, damaged or mishandled, fibres can become loose and airborne posing a risk to health. Disturbing or removing asbestos unsafely can create a health hazard.

It is often difficult to identify the presence of asbestos by sight. If you are in doubt, it is best to assume that you are dealing with asbestos and take every precaution. The most accurate way to find out whether a material contains asbestos is to obtain an asbestos inspection by a person competent in the identification and assessment of asbestos such as an occupational hygienist. It can be unsafe for an unqualified person to take a sample of asbestos. Licensed asbestos removalists can be found by using the telephone directory.

Council encourages residents to ask the contractor for a copy of their licence prior to engaging them. Residents can then check with SafeWork NSW NSW (phone 13 10 50) to confirm the contractor has the appropriate class of licence for the asbestos removal job.

2. Where is asbestos found?

Asbestos can be found where it occurs naturally and in a variety of materials (from prior to 2004) in residential, commercial and industrial premises and on public and private land.

2.1 Naturally occurring asbestos

Naturally occurring asbestos refers to the natural geological occurrence of asbestos minerals found in association with geological deposits including rock, sediment or soil.

Asbestos is found as a naturally occurring mineral in many areas of NSW. Asbestos may occur in veins within rock formations. The map provided in Appendix L gives an indication of areas in NSW known to have naturally occurring asbestos. Note whether council is aware of areas of naturally occurring asbestos within the LGA and if so the general location and information on situation eg the asbestos is underground and does not present a high risk to public health. Naturally occurring asbestos may be known of from previous mining operations or from being uncovered during road construction and other civil works.

Work processes that have the potential to inadvertently release naturally occurring asbestos into the air include:

- Agriculture
- Forestry
- Landscaping
- Mining
- Other excavation or construction activities
- Pipe works and telecommunications works
- Road construction and road works.

Further information can be found in this policy under section 5 and in the *Naturally-occurring asbestos fact sheet* published by SafeWork NSW, which provides a photograph of naturally occurring asbestos.

2.2 Residential premises

As a general rule, a house built:

- Before the mid 1980s – is highly likely to contain asbestos containing products.
- Between the mid 1980s and 1990 – is likely to contain asbestos containing products.

- After 1990 – is unlikely to contain asbestos containing products. However, some houses built in the 1990s and early 2000s may have still used asbestos cement materials until the total ban on any activity involving asbestos products became effective from December 2003.

Pipelines installed prior to 1992, particularly black surface coated and grey surface pipes, may contain asbestos.

It is important to note, the most accurate way to find out whether a material contains asbestos is by engaging a licensed asbestos removalist or occupational hygienist to inspect and arrange testing where necessary.

Fibre cement sheeting, commonly known as ‘fibro’, ‘asbestos sheeting’ or ‘AC sheeting’ (asbestos containing sheeting) is the most commonly found legacy asbestos material in residential premises. Other asbestos containing materials were used in ‘fibro’ houses but also found in brick and timber housing stock from that period. Asbestos materials were sold under a range of commercial names. Some asbestos containing materials found in New South Wales domestic settings are listed in Appendix J.

Common places where asbestos is likely to be found in and around homes include:

Outside

- Backyard garden sheds, carports, garages and dog kennels
- Electrical meter boards
- Imitation brick cladding
- Lining under eaves
- Wall and roof materials (flat, patterned or corrugated asbestos sheeting).

Inside

- Insulation materials in heaters and stoves
- Interior walls and sheeting
- Sheet materials in wet areas (bathroom, toilet and laundry walls, ceilings and floors)
- Vinyl floor tiles, the backing to cushion vinyl flooring and underlay sheeting for ceramic tiles including kitchen splashback. 37

Asbestos can also be found in:

- Angle mouldings (internal and external)
- Board around windows and fireplaces
- Brake pads and clutch pads to vehicles
- Buried and dumped waste materials
- Carpet underlay

- Ceilings (ceiling tiles or sprayed coatings or loose in the ceiling cavity)
- Cement flooring
- External toilets
- Fencing
- Guttering, downpipes and vent pipes
- Inside appliances eg irons, whitegoods
- Gable ends
- Outbuildings
- Ridge capping
- Swimming pools – reinforcing marble swimming pools
- Ventilators – internal and external.

Other places asbestos can be found are listed in Appendix J.

2.3 Commercial and industrial premises

In commercial and industrial premises, asbestos may be found in the abovementioned places and also:

- Asbestos rope or fabric in expansion joints (for example exhaust flues) and insulation
- Bitumous waterproof membrane on flat roofs
- Brake disc pads and brake linings
- Cloth, tapes, ropes and gaskets for packing
- Electrical switchboards and duct heater units
- Fillers and filters
- Fire doors
- Lagging on pipes such as heater flues
- Lift motor rooms
- Pipes, casing for water and electrical/ telecommunication services
- Rubber, plastics, thermosetting resins, adhesives, paints, coatings, caulking compounds and sealants for thermal, electrical and insulation applications
- Structural beams of buildings
- Yarns and textiles eg fire blankets.

Other places asbestos can be found are listed in Appendix J.

2.4 Sites contaminated with asbestos

Contamination of soils from asbestos or asbestos containing materials can present a risk in urban and rural environments if the asbestos can give rise to elevated levels of airborne fibres that people can breathe. Whilst buried material may not give rise to airborne asbestos fibres if securely contained, inappropriate disturbance of this waste could give rise to harmful levels of asbestos fibres in air. Activities such as those listed in section 3 of this Appendix have the potential to encounter and disturb asbestos waste or contamination, particularly where the contamination is not known to be present at the site or has not been appropriately considered.

2.4.1 Situations where asbestos contamination may occur

Situations where asbestos contamination may occur include:

- Industrial land, eg, asbestos-cement manufacturing facilities, former power stations, and rail and ship yards, especially workshops and depots
- Waste disposal or dumping sites, including sites of illegal dumping eg, building waste
- Sites with infill or burial of asbestos waste from former asbestos mining or manufacture processes
- Buildings or structures damaged by fire or storm (particularly likely for those with pre-1980s building materials but also possible for those with materials from prior to 2004)
- Land with fill or foundation material of unknown composition
- Sites where buildings or structures have been constructed from asbestos containing material or where asbestos may have been used as insulation material, eg, asbestos roofing, sheds, garages, reservoir roofs, water tanks, boilers and demolition waste has been buried onsite
- Sites where buildings or structures have been improperly demolished or renovated, or where relevant documentation is lacking (particularly likely for those with pre-1980s building materials but also those with materials from prior to 2004)
- Disused services with asbestos containing piping such as water pipes (including sewage systems, water services and irrigation systems), underground electrical and telephone wires and telecommunications trenches or pits (usually within 1 metre of the surface).

2.4.2 Significantly contaminated land

For sites that are significantly contaminated, the EPA and SafeWork NSW are the lead regulatory authorities. The Contaminated Land Management Act 1997 applies to significantly contaminated land. In general, significant contamination is usually associated with former asbestos processing facilities or where large quantities of buried friable asbestos waste has been uncovered and is giving rise to measureable levels of asbestos

fibres in air. Such sites require regulatory intervention to protect community health where the source of the contamination is not being addressed by the responsible person. The Environment Protection Authority has details of sites that have been nominated as significantly contaminated on its Public Register at: <http://www.epa.nsw.gov.au/clm/publiclist.htm>

If land is contaminated but not determined to be 'significant enough to warrant regulation' then the Contaminated Land Management Act 1997 does not apply. In such cases the provisions within the planning legislation and/or the Protection of the Environment Operations Act 1997 may be the appropriate mechanism for management of such contamination.

Guidance on assessing land can be found in the document: Guidelines on the duty to report contamination under the Contaminated Land Management Act 1997.

3. Potentially hazardous activities

A number of activities could cause asbestos to be inadvertently disturbed and consequently create a health risk.

Before undertaking any of the activities listed below, it should be considered whether asbestos containing materials may be present. If asbestos is present, these activities may be illegal or certain precautions may be required, or an appropriately licensed person may be required to undertake the activity.

Members of the public could inadvertently disturb asbestos through activities including:

- Renovations, refurbishments or repairs particularly those involving power tools, boring, breaking, cutting, drilling, grinding, sanding or smashing asbestos containing materials
- Sealing, painting, brushing and cleaning asbestos cement products
- Demolitions of homes or other structures (dismantling or destruction)
- Relocating a house, building or structure
- Using compressed air on asbestos containing materials
- Water blasting asbestos containing materials
- Cleaning gutters on asbestos cement roofs
- Handling asbestos cement conduits or boxes
- Maintenance work such as plumbing and electrical work on or adjacent to asbestos containing materials such as working on electrical mounting boards
- Maintenance or servicing of materials from vehicles, plant or equipment.

Council could inadvertently disturb asbestos through activities such as:

- Abovementioned activities
- Asset and building maintenance
- Certifying
- Inspections of sites and premises
- Transport and disposal of illegally dumped materials
- Collection, transport and disposal of incorrectly disposed of materials.

Naturally occurring asbestos and contaminated sites could be inadvertently disturbed during:

- Road building
- Site and construction work
- Other excavation activities
- Vehicle movements.

Natural processes can create a risk of exposure to asbestos including:

- Extensive fire or storm damage to asbestos cement roofs or building materials
- Extensive weathering and etching of unsealed asbestos cement roofs.

In addition, work that intentionally disturbs asbestos, such as sampling or removal, should be conducted by a competent person and in accordance with the relevant codes of practice and legislation.

4. Health hazards

Asbestos fibres can pose a risk to health if airborne, as inhalation is the main way that asbestos enters the body. The World Health Organisation has stated that concentrations of asbestos in drinking water from asbestos cement pipes do not present a hazard to human health.

Breathing in asbestos fibres can cause asbestosis, lung cancer and mesothelioma. The risk of contracting these diseases increases with the number of fibres inhaled and the risk of lung cancer from inhaling asbestos fibres is greatly increased if you smoke. Small fibres are the most dangerous and they are invisible to the naked eye. People who are at most risk are those who have been exposed to high levels of asbestos for a long time. The symptoms of these diseases do not usually appear for some time (about 20 to 30 years) after the first exposure to asbestos.

Asbestosis is the irreversible scarring of lung tissue that can result from the inhalation of substantial amounts of asbestos over a period of years. It results in breathlessness that may lead to disability and, in some case, death.

Lung cancer can be caused by asbestos. Lung cancer is related to the amount of fibre that is breathed in and the risk of lung cancer is greatly increased in those who also smoke tobacco.

Mesothelioma is a cancer of the pleura (outer lung lining) or the peritoneum (the lining of the abdominal cavity). Mesothelioma rarely occurs less than 15 years from first exposure, and most cases occur over 30 years after first exposure. Accordingly, the rates of malignant mesothelioma (an incurable cancer) are expected to rise from the year 2012 to 2020 and are expected to peak in this time.

If asbestos fibres are in a stable material, for example bonded in asbestos-cement sheeting (such as fibro), and these materials are in good condition they pose little health risk. However, where fibro or other non-friable asbestos sheeting is broken, damaged or mishandled, fibres can become loose and airborne posing a risk to health. Disturbing or removing asbestos containing materials unsafely can create a hazard.

The occupational standard for asbestos is 0.1fibre/ml of air and the environmental standard is 0.01fibre/ml in air.

When someone has potentially been exposed to asbestos, or receives or expects they may receive a diagnosis of an asbestos-related disease, they may experience psychological distress, including anxiety and may be in need of support. Their family and those around them may also be vulnerable to psychological distress.

Appendix B – Further information

Aboriginal communities

Illegal dumping prevention and clean-up. Handbook for Aboriginal communities, 2008 (EPA)

<http://www.epa.nsw.gov.au/wastetools/local-councils.htm>

Asbestos contractors

A search of SafeWork NSW licenced contractors is available at

<http://www.safework.nsw.gov.au/information-searches/asbestos-demolition-licence-holders>

or by contacting the Asbestos Removal Contractors Association NSW (ARCA) www.arcansw.asn.au Phone: (02) 8586 3521.

An asbestos removal contractor's licence can be verified by contacting the SafeWork NSW NSW's Certification Unit on 13 10 50.

Demolition and Contractors Association (DCA) NSW

www.demolitioncontractorsassociation.com.au

Asbestos waste

Crackdown on Illegal Dumping: A Handbook for Local Government, 2007 (EPA)

<http://www.epa.nsw.gov.au/wastetools/local-councils.htm>

Management of asbestos in recycled construction and demolition waste, 2010 (SafeWork NSW), (WC02772)

<http://www.safework.nsw.gov.au/health-and-safety/safety-topics-a-z/asbestos/asbestos-resources-and-networks>

Safely disposing of asbestos waste from your home, 2009 (EPA) <http://www.epa.nsw.gov.au/managewaste/house-asbestos.htm>

For information on illegal dumping and safely disposing of asbestos waste visit the EPA website: <http://www.epa.nsw.gov.au/waste/asbestos.htm>

Useful websites

WorkCover Website

- [Asbestos resources.](#)
- [General information re WorkCover's role in asbestos management.](#)

EPA Website.

- [Safely disposing of asbestos waste.](#)

NSW Health Website.

- [Health impacts of asbestos.](#)

Asbestos Education Committee.

- [Asbestos awareness.](#)

Aboriginal communities

[Illegal dumping prevention and clean-up. Handbook for Aboriginal communities](#), 2008 (EPA).

Asbestos services and contractors

WorkCover provides a link on its website to a variety of asbestos services:

<http://www.workcover.nsw.gov.au/newlegislation2012/asbestos/Pages/find-asbestos-services.aspx>

For a listing of asbestos removal contractors in your area, refer to your local telephone directory or the [Yellow Pages](#) or by contacting the [Asbestos Removal Contractors Association NSW \(ARCA\)](#) Phone: (02) 8586 3521.

An asbestos removal contractor's licence can be verified by contacting the WorkCover NSW's Certification Unit on 13 10 50 or email contact@workcover.nsw.gov.au.

The Demolition and Contractors Association of NSW are an industry group whose members work with demolition, asbestos removal and related sectors of the demolition industry and may be able to advise on services available in the industry.

[Demolition & Contractors Association \(DCA\) NSW](#)

Asbestos waste

[Crackdown on Illegal Dumping: A Handbook for Local Government, 2007 \(EPA\)](#)

[Management of asbestos in recycled construction and demolition waste, 2010](#) WorkCover NSW

[Safely disposing of asbestos waste from your home, 2009](#) (EPA and WorkCover NSW)

For information on illegal dumping and safely disposing of asbestos waste visit the EPA website: www.environment.nsw.gov.au.

Contaminated land

[Guidelines on the duty to report contamination under the Contaminated Land Management Act 1997, 2009 \(EPA\)](#)

[Managing Land contamination: Planning guidelines SEPP 55 - Remediation of land, 1998](#)

Environmental risk assessment

[Environmental health risk assessment; Guidelines for assessing human health risks from environmental hazards, 2002 \(Commonwealth of Australia\)](#)

Health

[Asbestos and health risks](#) (NSW Health)

Further advice concerning the health risks of asbestos can be obtained from your local public health unit on 1300 066 055.

Renovation and development

[Asbestos: A guide for householders and the general public, 2012](#) (Commonwealth of Australia)

[Choosing and working with a principal certifying authority: A guide for anyone planning to build or subdivide, 2011 \(Building Professionals Board\)](#)

[Think asbestos website, 2011](#) (Asbestos Education Committee) (and Printable Website Handbook)
[Working with asbestos guide, 2008](#) (WorkCover NSW)

Practical guidance

[Code of practice on how to manage and control asbestos in the workplace](#) (catalogue no. WC03560) published by WorkCover NSW

[Code of practice on how to safely remove asbestos](#) (catalogue no. WC03561) published by WorkCover NSW

[Cutting, Handling and Disposal of Asbestos Cement \(AC\) Pipe Guidelines](#) June 2014 published by the Water Directorate

Tenants

[Tenants rights Fact sheet 26 Asbestos and lead, 2010](#) (Tenants NSW)

Tenants – Housing NSW tenants

[Asbestos Fact Sheet, 2010 \(Housing NSW\)](#)