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Asbestos Materials

- Residential Guide -

This Guide highlights some of the more common asbestos containing materials (ACMs) in low-rise residential buildings, their uses and likely locations.

The Guide is designed for builders, renovators, trades, and homeowners. To help identify ACMs and prevent asbestos exposure from accidental damage.

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Asbestos containing materials (ACMs) are common in most homes and workplaces built prior to 1980.

ACMs may be in building fabric, services & equipment, or as surface finishes.

Recent History

Asbestos has been used for thousands of years, and found increasing use during the industrial revolution as insulation, fireproofing, and other industrial applications.

After World War 2, mass production techniques for making asbestos cement products made it the material of choice for the post war building boom. An increasingly diversified manufacturing industry during this time also called for ACMs as for components in new manufacturing equipment and end consumer products.

Asbestos use peaked in Australia circa 1975, tailing off in the early 1980's until only limited uses (primarily gaskets and brake pads) remained after 1985-1990.

A complete ban on the new installation of ACMs, their sale, re-use, and importation was legislated in Australia on 31 December 2003.

Asbestos materials are still produced in countries including Russia, China, India, Brazil. Despite the Australian 2003 ban, ACMs can still find make it across the border.

Asbestos Cement

Asbestos cement (cement mixed with asbestos fibres) accounts for most ACMs worldwide. Asbestos cement can be moulded, is hard wearing, weather/waterproof, fire resistant, electrically non-conductive, heat & acoustic insulating.

Asbestos cement was used for flat or corrugated sheeting. Corrugated sheets are typically found as roofing and external walls or fencing. Flat sheets were used as walls (typically wet areas), floor linings, or around electrical or heating equipment.

Asbestos cement pipes are very common for rainwater goods / water / sewage pipes, conduits for electrical cables, or flue pipes to gas heating equipment.

Any fibre cement sheets or moulded pipes likely to have been manufactured before 1980-1985 should be presumed ACM.

Flooring

Asbestos was used in flooring applications due to its durability, waterproof qualities, and the ease and low cost of levelling floor surfaces for other materials to be laid.

Cement Sheet

Asbestos cement sheet is often below ceramic and stone floor tiles in wet areas.

Sheets were also laid below boilers/heaters/fires/ovens.

Vinyl Backing

Older style vinyl floor sheets may have an asbestos paper backing, usually white or grey.

Bitumen material backings may also be ACM.

Above: Example of asbestos backed vinyl flooring.
Right: White asbestos paper backing.

Vinyl Floor Tiles

Asbestos vinyl tiles are typically thicker and more brittle than non-asbestos tiles.

Right: Asbestos vinyl floor tiles & asbestos cement sheet below boiler.

Hessian Underlay

Historically, asbestos was often transported in hessian bags between asbestos mills and factories making ACMs. Sometimes these bags were recycled as carpet underlay.

Ceilings & Walls

Flat asbestos cement sheet was an ideal material for ceilings and walls in the home. Cement sheet walls and ceilings can sometimes be identified by visible characteristics.

- Multiple panels with joining strips
- Raised nail heads
- Grey in colour
- Textured surface (e.g. ‘golf ball’ dimples)
- Visible fibres at broken edges

Ceilings

Ceilings in wet and hot areas - Kitchens, bathrooms, laundries, boiler cupboards and garages.

Internal ceilings to extensions and outbuildings.

Loft hatches.

Walls

Internal walls in extensions, outbuildings and hot areas (laundries, boiler cupboards, kitchens, garages etc.) may be flat asbestos cement sheet.

Walls & Panels

Sometimes only sections of walls or wall panels are asbestos cement sheet.

Tiled Walls

Cement sheet was often used as a backing surface for wall tiles, in wet or dry areas.

Often cement sheet is only (hidden) behind tiled sections, even for small areas such as sink splashbacks.

Left: Cement sheet behind tiles, plaster walls above.

Laminated Panels

Laminated asbestos cement sheet, in a variety of designs, was specifically made for wet areas.

Other Panels

Cement sheet panels were used to walls around hot equipment & electrics, as in-fills, access panels, or covering for holes.

Heating Equipment

Being heat insulators, resistant to high temperatures and fireproof, ACMs are commonly found associated with fires, boilers, ovens, and other hot equipment.

Panels & Linings

Asbestos cement sheet backing boards and panels may be used around equipment, as linings to vents, or to protect and insulate walls, ceilings, and floors from heat or fire.

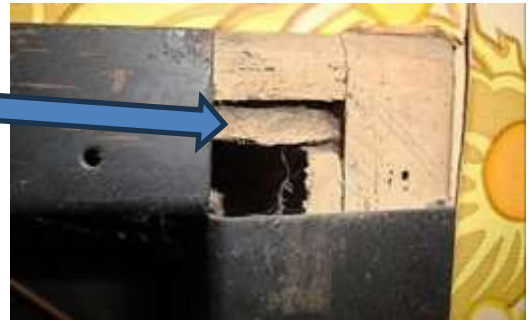
Above: Asbestos cement lining oven extraction vent.

Cement sheet panel to fance adjacent heater.

Above: Cement sheet (decorative brick) fireplace.

Asbestos cement (decorative brick) hearth sheet.

Above: Recessed wall heater.



Asbestos cement sheet lining to wall heater recess.

Heating Equipment

Cement Flue Pipes

Asbestos cement flue pipes are common to boilers/heaters/fires. They may be visible or concealed in walls/chimneys.

New equipment is often connected to old flue pipes

Left: Cement flue pipe (and cement sheet walls).

Gaskets & Seals

Asbestos gaskets can be found in heating or hot equipment. Asbestos rope or millboard gaskets are typically found around doors, access panels and windows.

Right: Asbestos rope gasket (white) to gas fire window.

External Insulation

Asbestos insulation covering boilers, heaters, and pipes is less common in homes. Examples include woven blankets, asbestos filled blankets, pre-formed sections (pipework) and hand applied 'hard-set' material.

Internal Insulation

ACM Insulation can be found within between casings or as a lining to internal surfaces.

Above: Boiler and asbestos cement flue pipe in loft.

Right: White asbestos paper below boiler cover.

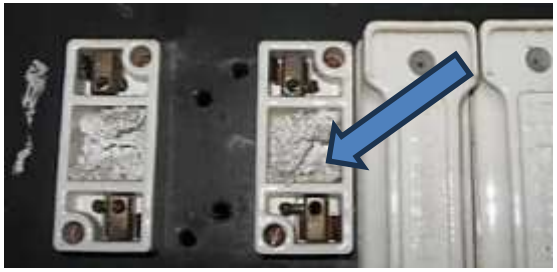
Electrical

Being electrically non-conductive and fireproof, ACMs were used in & around electrics.

Fuse Boxes & Boards

Various ACMs may be found around fuse boxes.

- Cement sheet lining **(Right:** To sides**)**
- Black resin electrical boards **(Right)**
- Millboard / paper lining **(Right:** Concealed within timber fuse box case)
- Woven pads behind ceramic fuses **(Below)**



ACMs in fuse boxes may have been damaged or disturbed due to historical electrical works.

Similar ACMs may be found with electrics in other areas of the home.

Wire Insulation

Asbestos wire insulation may be found in older electrical equipment. (See Light Fittings)

Below: Woven insulation to electrical wires.

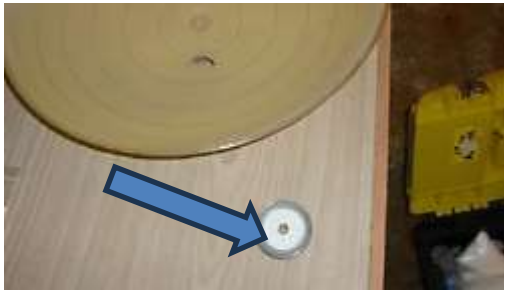
Electrical

ACMs may be visible around electrical equipment, or as components hidden inside.

Light Fittings

Light fittings, in particular 'oyster shell' types, can contain ACMs.

- Paper/board pads **(Right)**
- ACM washers **(Below)**
- Wire insulation **(Below right)**



Gaskets & Seals

Above: Asbestos rope gasket between equipment parts.

Asbestos gaskets to access covers or internal parts.

- Rope
- Millboard
- Paper
- Compressed sheet

Other Electrical

Other ACMs may be found in electrical equipment, including insulation, boards or paper, cement components or linings, or bitumen coatings or pads.

Loft & Underfloor

ACMs can be found in lofts and underfloor as building materials, debris or stored items.

Heating equipment or electrics, and associated ACMs, may be in the loft or underfloor. Refer **Heating Equipment & Electrical** above.

Loft Areas

ACM debris from historical building works, typically asbestos cement, can be found in lofts including flue pipe and cement sheet sections or debris.

Asbestos loft insulation is not common. Specific areas where asbestos loft insulation is more likely, where one particular company historically used the material, include the ACT, and adjacent areas of southern NSW and northern VIC.

Underfloor

Asbestos cement sheet can be found filling gaps between floors and joists, as packing on house piles, or shuttering in wall vents.

Cement sheet formwork may have been left in place from construction.

Right: Cement sheet shuttering to top of wall vent.

Above: Cement sheet packing (left) in concrete foundations.

Above: Cement sheet debris below floor.

Asbestos cement sheet debris is common in floor voids.

External - Roof

Being durable and weather/waterproof, asbestos cement was often used around roofs.

Eaves & Canopies

Asbestos cement sheet eaves are common to residential property.

Porch ceilings, canopies, or other overhanging roof elements may be lined with asbestos cement sheet.

Fascia's & Extensions

Panels / in-fills / walls to roof extensions are often cement sheet.

Any flat sheet roof features may be asbestos cement.

Roof Tiles & Felts

Imitation slate roof tiles are often asbestos cement material.

Bitumen roof felts and coverings may also contain asbestos fibres.

Guttering & Drainage

Asbestos cement was used for guttering, drainpipes, and other rainwater goods.

Lichen and moss growth may indicate (asbestos) cement roof materials.

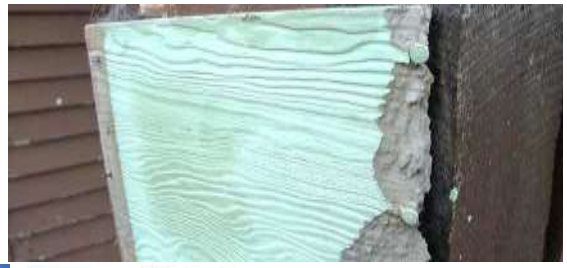
External Areas

Asbestos materials can be found in many external locations.

Imitation Timber & Brick

Imitation brick sheets, with a lower cement sheet layer, and timber effect moulded (cement sheet) planks are used to clad homes and outbuildings.

Right: Timber effect fence plank.
Below: Cement sheet weatherboards.
Below right: Brick effect cladding.



Outbuilding Walls & Roofs

Flat or corrugated cement sheet used as walls and roofs to sheds, outhouses, and garages.

Individual walls, wall sections and panels may be different materials or different types of cement sheet.

Left: Flat cement sheet walls and roof to shed.

Fencing & Wall Panels

Corrugated, flat or moulded asbestos cement sheets are used for fencing.

Flat asbestos cement sheet was used to create feature walls, with tile or stone cladding on top.

Right: Moulded trellis fence.

External Areas

External structural elements or materials associated with services, such as gas, water, telecoms or electricity, may be ACM.

Drainage

Above: Asbestos cement mains drain pipe.
Right: Asbestos cement drain collar (filled with non-ACM).

Drains, drain collars and pipes are often made of asbestos cement.

ACM Debris

Asbestos material debris is common to surface and below ground areas. The most common types of ACM found as debris and contamination are cement materials.

The source of debris may be obvious, such as a damaged outbuilding wall, or from historical disturbance of ACMs at the site.

Other Uses

- Compressed sheet gaskets to gas mains.
- Structural shuttering in letterboxes, BBQs, etc.
- Moulded cement telecoms and services pits.

Residential Asbestos Inspections

Our licensed Asbestos Assessors are asbestos experts, with between 15 to 25 years' experience each, providing asbestos testing, inspections, and consultancy services for all client and site types in Australia and the UK.

If there are doubts whether asbestos containing materials (ACMs) are present in a residential property, particularly prior to building or renovation works, an asbestos inspection should be conducted before materials are disturbed.

Our Asbestos Assessors provide Residential Asbestos Inspections throughout Greater Melbourne and Statewide.

- Our residential asbestos inspections are conducted to National legislated standards, and industry Best Practice, for a '**Workplace Asbestos Audit**'.
- For an inspection of a typical residential property, including lofts and underfloor where accessible, our Asbestos Assessors would usually be on site for around 1 to 1.5 hours.
- Many materials can be confidently visually assessed as ACM or non-asbestos by our experienced Assessors without the need for samples.
- Where samples are taken for analysis, all samples are analysed by our partner laboratory with NATA (National Association of Testing Authorities) accreditation.
- Following the site inspection, and results of any sample analysis, we issue a PDF Asbestos Audit Report. Reports are designed to be compliant with workplace asbestos legislation, and present information clearly.
- Reports include:
  - Photographs of all identified ACMs and other items of note.
  - The '**Asbestos Register**' for the site, including risk assessments.
  - NATA accredited Analysis Certificates for any samples taken.

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