

Australian Government Asbestos Safety and Eradication Agency



Information for those undertaking asbestos assessments



This information has been jointly developed by the Asbestos Safety and Eradication Agency and the Victorian Asbestos Eradication Agency.

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The aim of this information is to improve the consistency of asbestos assessments undertaken in Australia, to ensure different people assessing the same site achieve consistent, high quality outcomes.

This document refers to the asbestos assessment process throughout – it should be noted that this process may also commonly be referred to as an asbestos inspection, audit or survey. This information has been developed following an extensive literature review of best practice approaches, pilot testing of various approaches and extensive consultation with a range of industry stakeholders.

This document is designed to provide information to enable industry to assess its consistency with the approach outlined. The prompts enclosed are not an exhaustive list of questions to ask, but are intended to provide a guide regarding key issues that should be considered when assessing a site for asbestos-containing materials (ACMs).

This information should not be considered regulatory guidance – its intention is to support the existing guidance contained in the WHS Regulations and Codes of Practice. The use of this information must be supplemented by relevant assessor experience, training and expertise.

Asbestos assessments and the preparation of associated documents (including asbestos registers and management plans) must be carried out by a competent person.

A competent person should be:

- trained and experienced in taking asbestos samples
- knowledgeable and experienced in identifying asbestos
- able to determine the risk and the action that should be taken
- familiar with building and construction methods to identify where asbestos is likely to be.

Professionals who may meet this definition include:

- Occupational Hygienists who have experience with asbestos
- > Licensed Asbestos Assessors
- individuals who have undertaken a recognised training course in asbestos identification.

1. Undertake research before you begin the assessment

This stage involves the assessor accessing written and/or verbal information about the site to help determine the likelihood of the presence of asbestos. The reliability of the information gained from stakeholders needs to be considered.

Undertaking this initial stage before the assessment starts can inform you about where you should look to identify ACMs. Key questions to ask and issues to consider include:

Building information

- > When was the building constructed?
- Are original building plans or design specifications available?
- > What is the building currently used for?
- > What is known about its previous uses?
- What types of products were used in its construction?
- Have there been any additions/renovations since the original construction? (Remember – even if a site was built/renovated after the ban in 2003, there is still the potential for ACMs from illegally imported products containing asbestos to be present).
- What is the general condition of the building/ land site? (e.g. is it damaged/derelict, abandoned or currently operational).

Correspondence with stakeholders

Have you contacted the owner and maintenance staff to ascertain their knowledge of the site and its history?

- Have you ensured that you can access all areas? (e.g. arranged for keys to be available for all locked areas).
- Have you recorded the site owners/occupiers' reasons for the inspection? (e.g. Is the inspection for the purpose of an asbestos register and management plan, or predemolition/renovation).
- Is there a standard template/register format that your client requires you to use?
- Which sections of the site are to be assessed? (e.g. Building, other structures, soil etc).
- > Have you received permission to conduct any required invasive sampling?

Asbestos history and environmental site use

- Is there a record of any previous ACM assessments and documents, including details of past removal, clearances, remedial works or concerns raised? (Remember that where previous asbestos removal work has been undertaken, it may not have been to the same standard as today so ACMs or ACM debris may still be present).
- Do you need to review any environmental/ contaminated land reports?
- > What businesses have operated on the site?
- Is there any reason to believe there could be contaminated landfill present? (Consider where waste building materials may have been discarded on site).

2. Systematically search the site and identify ACMs

This stage involves the asbestos assessor creating a systematic plan to search the site thoroughly and then undertaking the search.

Create a systematic, logical and thorough assessment plan

- What order will buildings, structures and other areas be searched?
- > What order will the search be undertaken within buildings? (e.g. top floor to bottom floor)
- Consider previously inaccessible areas (e.g. roof and sub-floor spaces, ventilation systems, structures, soil, lift shafts, decommissioned plant/equipment that may be within scope.)

Consider safety issues

- What level of PPE may be required? (Consider this prior to commencing your search, especially if you are unfamiliar with the site.)
- Identify and implement your safe work method for access and sampling (e.g. for cavities, risers, height-restricted areas).

Implement the search

Commence the assessment in the room/area that was determined as the starting point in the assessment plan.

Search the area and room in a consistent manner

Start on the floors, then walls, ceilings, nonfixed or installed contents, plant, furniture, ceiling and wall cavities. Ensure that the same systematic approach is taken in each room. Every surface in the room should be visually and/or physically assessed for potential ACMs.

- Pay particular attention to potential multiple lower layers of floor covering and the walls beneath rendered layers. Construction joints should also be checked for the presence of any asbestos mastics or insulation encased within the joint. When checking below top layers of floor covering, ensure that you check multiple areas of the room as the lower layer of floor covering may not be consistent throughout the room.
- Check all walls within the area as not all walls within the room will necessarily be made of the same material. Make sure to inspect windows, caulking, infill panels etc.

Inspect plant and equipment

- Remember to inspect plant and equipment for the presence of ACMs. ACMs should be assumed present in equipment where access within could not be gained. The assessor should question the specific use of the equipment to determine what possible use asbestos may have in its manufacture.
- When inspecting the equipment, the assessor should check the ID plate on the equipment (if present) to determine the age of manufacture. The source of the equipment should also be checked, as even new equipment imported to Australia may contain asbestos components. Refer to the website of the Australian Border Force (Department of Home Affairs) for countries found to be the source of illegal asbestos imports into Australia www.homeaffairs.gov.au/asbestos.

Pipes

Where pipe runs are in place, particular attention needs to be paid to pipe brackets, pipe elbows, floor and wall penetrations and on walls adjacent to pipe runs. Where an older building has what appears to be new style insulation applied to pipework (e.g. foil wrapped synthetic mineral fibre), the underside of the insulation should be checked to determine if any residual asbestos lagging is present on the pipework. Walls, ceilings, soffits etc. adjacent to the pipework should be checked to determine if any overspray is present from the original insulating process.

Ceiling cavities

- Ceiling cavities should be well inspected with the assistance of a strong light source for the presence of additional asbestos materials. Ensure a detailed inspection is conducted around pipework, perimeter beams and to any cladding brackets that may be present. Penetrations through concrete slabs should be checked for insulating products or packing material. Horizontal surfaces should be thoroughly inspected for an accumulation of asbestoscontaining dust and/or debris from existing or previously existing asbestos materials.
- Buildings with previous limpet removal works should have the previous removal zones assessed thoroughly for any residual asbestos that may be present. This includes beside brackets, fixings and within concrete imperfections. Limpet also has the potential for contaminating voids/risers/cavities that are in close proximity to original sprayed fixings.
- If the building has a corrugated asbestoscement roof, or is of a style of building that may have previously had a corrugated cement sheet roof, the roof cavity (or the steel structure of the building) will likely be contaminated by asbestos-containing dust. It is important that any persons entering (or assisting with entry) into a cavity that could potentially contain debris or dust-like materials wear the correct PPE and RPE prior to accessing the roof cavity.

Plant rooms

- Plant rooms in older buildings often contain asbestos. When assessing plant rooms, every pipe should be individually checked to ensure consistency in what material has been used.
- Where friable insulation products have been used in the room, the room should be checked in its entirety for the presence of dust and debris that may have dislodged from its parent material through air movement, previous maintenance work or accidental disturbance.
- Asbestos materials are also commonly found in plant rooms associated with water containment, heat containment and electrical containment. All pipework should be inspected for the presence of asbestos-containing gaskets, valves, brackets and bitumen coated polystyrene insulation. All boilers should be inspected for the presence of remnant lagging, burner gaskets, inspection hatch and other rope seals. All electrical equipment should be visually inspected (if safe to do so) for the presence of electrical backing boards, fuses, bitumen coatings, rope sheath and flash guards.
- Stored items should also be checked gaskets, fuse cartridges, rope gaskets etc., may be present within old boxes, on shelves or on floors.
- Doors should be inspected. If the door is a fire door, the spine of the door could indicate the standard to which the door was manufactured to and in what year it was manufactured. This will help the assessor get a better idea of the possibility of the presence/absence of asbestos within the core.

External areas

- External walls, joints and infill panels should be assessed thoroughly.
- Pipework and/or ductwork protruding from the building should also be checked, including their flange joints.

- Roof tops need to be checked. Determine what type of materials may have been used to waterproof a flat roof building. Has a bituminous membrane been used? Membranes may have been replaced and repaired in sections over the years, so sampling in just one location may not be adequate.
- When sampling roof membrane, ensure that a sample is taken to the full depth of the material. It is strongly advised that where waterproof membranes are penetrated, that the area be fixed with a waterproof material prior to leaving the site.
- Asbestos corrugated roof sheeting should be thoroughly inspected for any damage or major deterioration. Ground/soil areas adjacent to buildings with corrugated asbestos-cement (AC) roofs should be checked for the presence of debris. Guttering and rainwater goods should be inspected for the presence of run-off debris and dust from the corrugated roofing.
- Joints to parapet walls, window sills, expansion joints and window frames should all be inspected for the presence of caulking, putty or mastics.

Ground surface contamination

- Assess the ground around the building for any potential surface contamination such as fragments of AC sheeting. Fragments of AC sheeting on the surface may indicate previous removal works on site. It could also indicate further contamination at the site, either within or outside the building.
- Communications/electrical/Telstra pits and water services pipework may all be present within the grounds of the site, but not necessarily within the building itself. A site walk through should be conducted to identify any of these potential items.

Sampling and analysis

 Identify suspected ACMs and take samples for analysis by a National Association of Testing Authorities (NATA) accredited laboratory.

- ➤ For information on the sampling process, refer to Appendix A of the How to Manage and Control Asbestos in the Workplace Code of Practice.
- Remember that in the absence of sampling, material must be assumed as containing asbestos and must be treated as if it does for the purposes of monitoring, management and removal.
- Where sampling cannot be conducted for whatever reason, the assessor should identify the reason in any report or register that is developed for the site.

Recommended contents of a sampling kit (non-exhaustive)

- > Hammer
- > Chisel
- > Flat head screwdriver
- Phillips head screwdriver (alternatively use a motorised screwdriver with replaceable heads)
- > Carpet lifter/carpet cutter
- > Knife (e.g. Stanley knife)
- > Torch (head or hand held)
- > Adjustable spanner
- Spray bottle (water with surfactant such as dish washing liquid/PVA)
- > Wet wipes
- > Zip-lock sample bags
- > Pen/pencil
- > P2 rated respiratory protection (at a minimum)
- Disposable suit (including large zip lock bag for suit disposal)
- > Putty (non-asbestos), silicone
- > Asbestos warning labels
- Ladder

3. Assess the risk of the material

This stage involves assessing the condition of the ACMs using a set of standard condition descriptions and assessing the risk of disturbance.

Determine friability and material type

- > Is the material friable or non-friable?
- > What type of material is it?
- > What is the material made of?
- What has the material been used for?
 (e.g. insulation, floor covering, wall linings.)

Assess condition

Examine the ACMs identified and assess their condition using the set of standard condition descriptions provided in the table at Appendix A.

Assess site use/disturbance potential

- > What is the area used for?
- > Who has access?

- > How often is it used?
- > Is it a highly trafficked area?
- Is it potentially subject to mechanical damage?
 (e.g. warehouse or hospital sites where forklifts, vehicles and the movement of equipment and patients is routine)
- > Is it exposed to weathering or air movement?
- Is it used/accessed by members of the public?
 (e.g. community buildings)
- Is it used/accessed by children or groups who may be more prone to cause physical damage? (e.g. schools)
- Are there any planned renovations/building works that could result in disturbance?
- > What type of cleaning or maintenance occurs?

These three factors all contribute to the risk rating. The worse the condition of the material, the higher the disturbance potential and the materials friability. This will determine the risk level of the material.



4. Record and present findings

This stage involves providing the client with written (and typically verbal) records and recommendations regarding suggested next steps to manage and address any ACM risks. The provision of the report should precede/follow verbal discussion to ensure the client understands the recommendations.

Assessment outcomes should be fully recorded to inform future asbestos assessments and, in the case of workplaces, meet legal requirements. Asbestos registers need to be properly structured and completed so that the known status of ACMs in the premises is clearly and fully specified. Well labelled indexed photographic records should be provided where possible.

Register format

- Is the register format you are providing consistent with client and regulatory requirements?
- Consideration of format is important when dealing with clients who have multiple property holdings to allow for future consolidation of currently separate registers and to ensure consistency.
- Use of a single format also makes it easier for organisations to train employees and contractors to understand their asbestos registers and inform them of the location of ACMs.
- Has the register/report made clear the scope of the assessment? (e.g. does it identify the areas that may not have been included?)

Communication of outcomes

- > Does the client understand the process undertaken and outcomes presented?
- Does the client understand how the register should be used and who it should be provided to?

Management plan

- > Is an asbestos management plan required?
- If so does the management plan clearly identify the actions required to manage the risks?
- Does the client understand the management plan, including timeframes and responsibilities for implementing it?

Inaccessible areas

- Have you clearly noted the inaccessible areas and whether you have reason to believe they have ACMs?
- Have you documented the reasons why you could not access the area and made clear recommendations for how/when these areas may be inspected?

Monitoring and re-inspection timeframes

- > Have you clearly communicated the necessary monitoring and review timeframes?
- Have you clearly identified a timeframe for reinspection/register review?

Further information

For further information, please refer to the following National and state based organisations:

Organisation	Website	Phone
Asbestos Safety and Eradication Agency	www.asbestossafety.gov.au	1300 326 148
Comcare	www.comcare.gov.au	1300 366 979
Safe Work Australia	www.safeworkaustralia.gov.au	
SafeWork NSW	www.safework.nsw.gov.au	13 10 50
SafeWork SA	www.safework.sa.gov.au	1300 365 255
WorkSafe Victoria	www.worksafe.vic.gov.au	1800 136 089
WorkSafe ACT	www.accesscanberra.act.gov.au	13 22 81
WorkSafe WA	www.commerce.wa.gov.au/WorkSafe	1300 307 877 or 08 6251 2200
WorkSafe Tasmania	www.worksafe.tas.gov.au	1300 366 322 or 03 6166 4600
Workplace Health and Safety Queensland	www.worksafe.qld.gov.au	1300 362 128
NT WorkSafe	www.worksafe.nt.gov.au	1800 019 115

Relevant codes of practice and legislative requirements:

- How to Manage and Control Asbestos in the Workplace Code of Practice: www.safeworkaustralia.gov.au/doc/model-code-practice-how-manage-and-control-asbestos-workplace
- How to Safely Remove Asbestos Code of Practice: www.safeworkaustralia.gov.au/doc/model-code-practice-how-safely-remove-asbestos
- Workplace Health and Safety Regulations (2011):
 www.legislation.gov.au/Details/F2011L02664/Download
- **AC** Asbestos-cement sheeting
- **ACM** Asbetos-containing materials
- > NATA National Association of Testing Authority
- > PPE Personal Protective Equipment
- > RPE Respitatory Protective Equipment

Appendix A – ACM CONDITION DESCRIPTIONS

Condition category	Description	Recommended actions
Good	 Firmly bonded Painted or sealed Without visible cracks or damage Without associated debris Without weathering or deterioration 	 Label as appropriate Ensure information is contained in the register Manage and inspect on a regular basis Avoid damage or abrasion Remove if impacted by planned refurbishment or demolition
Fair Moderate	 > Unpainted or unsealed > Subject to minor or infrequent weathering > Friable but encapsulated (e.g. pipe lagging wrapped in plastic) > Without significant visual damage or deterioration (e.g. minor cracks or frayed edges) 	 Apply sealant/encapsulate any damaged/deteriorating areas to avoid fibre release Continue to monitor closely for signs of further deterioration Consider scheduling for future removal
Poor Deteriorated Damaged Broken down Dilapidated	 > Un-bonded > Unstable > Significant damage > Friable and damaged > Fire damaged > Visible debris 	 Restrict access to the area and arrange removal Ensure warning signs are clearly displayed and occupants are notified Remove debris and ensure area has been decontaminated prior to resuming use of the area
Unknown	 Only use when: Material is inaccessible Area or room is inaccessible but it is assumed to have ACMs within it For consolidated registers – you are transcribing information from one register/report and the condition is not stated 	 Schedule for future inspection and testing when access will be available Ensure access to the area remains restricted and the area is signed as being assumed to contain ACMs

Appendix B – List of common asbestos items and materials

Please note - these lists should not be considered exhaustive. А Above door Access hatch Air conditioning trunking Air handling unit Awning lining В Backing panel Backing panel box lining Bagged waste Bain marie Ballustrade Bath surround panels BBQ top Beams Behind heater Bench top Benchtop lining Beneath carpet Beneath floor covering Beneath roof Beneath sink Beneath slab(s) Board Boiler Boiler gasket Boxing Brake lining Bulkhead С Cabinet lining Cable tray

Calorifier

Capping

Ceiling and awning

Ceiling and vertical infill panel

Ceiling

Ceiling and walls Ceiling cavity Ceiling lining Ceiling strapping Ceiling tiles Chalk board Chimney Cistern boxing Cladding Cladding brackets **Clearstorey Eaves** Clutch pad Coils (electrical) Columns Communications pit Compressor(s) Conduit Contact panel Contaminated soil Cover battens Cubicle partition(s) Culvert cover Cupboard Cupboard lining D Dado wall

Debris

Desk

Door

Decking

Door frame

Down pipe

Drip guard

Duct cover

Ductwork

Dumb waiter

Dust and debris

Draining board

Ductwork flange joint

Ductwork insulation

Door seal

Eave and porch ceiling Eave lining Electrical backing board Electrical board Electrical cabinet Electrical cabinet door lining Electrical cabinet lining Electrical cables Electrical components Electrical meter Exhaust Expansion joint Extraction cover F Fascia Fencing Filing cabinet Fire door(s) Fire fighting equipment Fire hose cupboard lining Fire proofing Fireplace Fireproof cupboard Flammable good cabinet Flange joints Flash guards Floor Floor and walls Floor covering Floor covering (beneath carpet) Floor covering (lower layer) Floor covering (upper layer) Floor covering adhesive Floor covering lining Floor penetration Floor underlay Flower pot(s) Flue Formwork

Е

Eave and awning

Fume cupboard Furnace door seal Fuse box Fuse cartridge

G

Gable lining Gas meter Gattic cover Gauze mats Gland packing Gutter

Н

Heat mats Heater Heater flue Hot plate Hot water service Hot water system

L

In cupboard Incinerator Incinerator flue Incubator lining Infill panels Infill panels below windows Inspection hatch Insulation Internal components Internal lining

J Joint

Joint

Κ

Kiln lining

L Lid

Lid Lift car Lift landing doors Lift motor Light switch Lining to ceramic tiles Lining to tiles Louvres Lower walls M Manhole cover Membrane Meter box O On floor On floor On ground Oven Oven door seal

Ρ Packing material Panel(s) Partition wall(s) Pebblecrete joint Penetration packing Pie warmer Pipe flange joint Pipework Pipework brackets Pipework flange joints Pipework insulation Pit Plant and equipment Porch Porch ceiling Porch floor Porch stoop

R

Rainwater goods Reheat unit (to ductwork) Residual debris Retaining wall Riser Rock sample Roof Roof cavity Roof covering Roofing

Pump flange joints

S Safe Sanitary incinerator Seal Seat Service riser Settled on surfaces Shelving Shower and bath surrounds Shower cubicle Skirting Soffit Soffit penetration Speaker Splashback Splashback lining Stairwell Stored item(s) Strapping to eave lining Stump packing Subfloor Switch (pitch) Switchboard Switchboard backing Switchboard cupboard lining Switchboard lining

Т

Textured coating Throughout To beam Toilet cistern Toilet seat Trolley

U

Underside of ceiling Underside of floor Underside of floor tiles Underside of roof Underside of sink Underside of tiles Unknown Upper wall(s) Urinal Urinal backing

V Valve Vent Vent cover Veranda

Void

W Wall and gable lining Wall beading Wall cavity/void Wall cladding Wall coating Wall covering Wall lining Wall panelling Wall strapping Wall(s) Walls and ceiling Washer Waste pipe Water pipe Water tank Waterproofing Window frame Window frame (between frame and glass) Window frame (between frame and wall) Window infill panels Window sill Within kiln

ACM product type

Acoustic pad (underside of sink) Adhesive/glue AIB (insulation board) Bitumen coated paper Bitumen coated polystyrene Bitumen coating Bitumen coating to underside of sink Blackjack adhesive to flooring Brake pads Cardboard Ceiling tiles Cement flues/pipes Cloth Communications pit Compressed electrical panels Compressed flat sheeting Concrete/levelling compound Contaminated materials Corrugated roof sheeting Debris Dust Electrical arc shields Electrical cable shrouding Electrical components Faux brick cladding Faux timber panelling/sheeting Fibrous material Fire brick Fire door core Fireproof bags/pillows Flange gaskets Flat sheeting Galbestos Gasket(s) Gaskets and washers Gland packing Hessian (as a result of contamination) Insulation Insulation board Internal insulation (suspected) Lagging (thermal Insulation)

Laminated cement sheeting Limpet Malthoid Mastic Mastic (flange joints) Mastic/caulking/putty Millboard Millboard/paper-backed sheet vinyl Moulded sheet Naturally occurring Other types of adhesive (usually in tube) Paper Pipe lagging residues (to walls, ceilings, pipework) Plaster/lath Profiled roof sheeting Rainwater guttering Residual debris Resinous block Ridge capping Roof products (excluding sheeting) Roof tiles/slates asbestos roof tiles Rope and string Rope/braided gasket Rubber gasket Rubber products SMF insulation (as a result of contamination) Tape Textured coating Tilux sheetina Vermiculite Vinyl sheet Vinyl sheet and adhesive Vinyl tiles Vinyl tiles and adhesive Water tanks Waterproof membranes and damp proof courses Weatherboards