



Procedure: Safe management of asbestos and synthetic mineral fibres

Purpose

The purpose of this procedure is to document the University's approach to the identification, management and removal of all installed Asbestos Containing Material (ACM) within the University buildings and building services and all plant, equipment and appliances within the University's responsibility. This procedure ensures the legal and other obligations of the *Work Health and Safety Act 2011 (Cth)* and *Work Health and Safety Regulations 2011 (Cth)*. Compliance with this procedure will ensure the management and removal of ACM's is completed in accordance with the relevant National Codes of Practice. This procedure is linked to the University's Work health and safety policy and is one of the Safe Work Procedures within the WHS Management System.

Definitions

Asbestos is a term applied to a group of hydrated fibrous silicate minerals. The most frequently encountered types are: chrysotile (white asbestos), amosite (brown asbestos) and crocidolite (blue asbestos).

Asbestos Containing Material (ACM) refers to any material that as part of its design contains asbestos.

Building and building services refers to a building that is a structure with a roof and walls standing permanently in one place and building services are the systems installed within a building that make the building functional, such as building control systems, energy supply and water, drainage and plumbing systems.

Asbestos-contaminated dust or debris (ACD) refers to dust or debris which has settled within a workplace and is or (assumed to be) contaminated with asbestos.

Class A Asbestos Removal Licences allow the licence-holder to remove both Friable and non-friable asbestos.

Class B Asbestos Removal Licences allow the licence holder to remove only non-friable asbestos (bonded).

A **Hazard** is an item, event or situation with the potential to affect the health and safety of people or to damage plant and equipment.

University hazardous materials registers are documents administered by Facilities and Services that list all identified (or assumed) asbestos and hazardous materials locations within a University building or building services.

University hazardous materials management plan is a document administered by Facility and Services which outlines how hazardous materials within University building or building services are managed.

Local area refers to a College, Research School or Service Division of the University.

Local area hazardous materials registers are documents developed and managed by local areas that identify all local area managed or owned plant, equipment and appliances that contain (confirmed or assumed) asbestos or hazardous materials.

Friable asbestos refers to material that is in a powder form or that can be crumbled, pulverised or reduced to a powder by hand pressure when dry, and contains asbestos.

Non-friable asbestos or bonded asbestos refers to asbestos-containing materials in which the asbestos is firmly bound in the matrix of the material. These materials are unlikely to release measurable levels of asbestos fibre into the airborne environment if they are left undisturbed. Therefore, they generally pose a lower risk to health. Examples of bonded asbestos-containing materials include:

- asbestos cement products (flat and corrugated sheeting used in walls, ceilings and roofs, moulded items such as downpipes)
- vinyl floor tiles (however removal of the glue can be classed as friable)

Synthetic Mineral Fibre (SMF) is a generic term used to describe ceramic, rock wool, mineral wool and glass filaments.

Risk Assessment is the systematic review of a hazard which examines the likelihood of an adverse effect that may result due to the hazard, and the severity of the adverse effect.

A **Worker** is defined as anyone who carries out work for the University. A worker includes staff, volunteers, contractor, students and visitors at the University.

Procedure

Scope

1. This procedure applies to all Asbestos Containing Materials (ACM's) at the University, contained within both Facilities and Services managed buildings and building services and local area managed plant, equipment and appliances.

2. This procedure should be read in conjunction with the [Facility and Services hazardous materials management plan](#), which provides more detail on specific Asbestos and Synthetic Mineral Fibre (SMF) work related practices, forms and risk assessments at the University.

Responsibilities

3. College Deans, Research School and Service Division Directors, or their nominees are responsible for:

- ensuring that as far as is reasonably practicable, all known ACM's within local areas are identified, labelled correctly, and controls implemented to minimise or eliminate exposure;
- maintaining a hazardous materials register for local area managed or owned plant, equipment and appliances containing ACM's; and
- liaising with F&S for remediation and disposal of identified ACM's.

4. Facilities and Services are responsible for:

- maintaining and managing hazardous materials registers for University buildings and building services;
- maintaining and managing a hazardous materials management plan for University buildings and building services;
- managing the repair and remediation of hazardous materials for buildings; and
- assisting local areas within management, remediation and disposal of ACM's.

5. All workers have the responsibility to not disturb ACM's and report all incidents or potential exposures in the [Workplace safety incident and hazard reporting tool](#). Sampling for the purpose of identification or confirming the presence of asbestos is to be conducted only by authorised personnel.

6. All contractors are required to consult the University or local area register hazardous materials registers prior to commencing work on site.

University hazardous materials management plan

7. The [hazardous materials management plan](#) applies to all the University buildings and building services and all University workers undertaking work on these premises. The plan assumes that:

- when pre-existing ACM is present and is maintained in good condition and is safe from disturbance or damage, any potential risk to health is minimal.

- Notwithstanding this, while ACM remains present in the workplace, a potential risk of exposure to airborne fibres exists.
- As a result, the ultimate goal of the University hazardous materials management plan is to eventually remove all identified ACM wherever practicable to achieve an asbestos free workplace.

University hazardous materials registers

8. F&S maintain a computerised database for facilities management including searchable University [hazardous materials registers](#). The University Hazardous materials registers provide information on the existence and location of any known or presumed hazardous materials found in buildings and building services on various University campuses.
9. The University [hazardous materials registers](#) contain the following information:
- building number, which refers to a specific location on the unique hazardous materials register location map;
 - exact location descriptions (e.g. room locations, overhead space etc.);
 - photographs (where possible) showing the general or specific location of the ACM and the material itself when possible. The intent is to provide as much information as possible;
 - specific identification, material type, condition and any results of any testing, including where no asbestos was detected;
 - results of any risk assessments carried out by a suitably qualified person, which will be used to assist in prioritising asbestos management activities ; and
 - when removed - a removal date and the company who performed the work.
10. All confirmed or suspected ACM identified within buildings or building services will be recorded in University [hazardous materials registers](#) maintained by F&S.
11. A record of all asbestos removal from buildings and building services, and the results of suspected ACM analysis will be maintained by F&S.
12. The University hazardous materials registers will be reviewed by an independent Occupational Hygienist or Licensed Asbestos Assessor following significant changes to University buildings and services.
13. The University hazardous materials registers will be updated based on the findings of the review, and any removal of or alteration to ACM presently on site.

14. University hazardous materials registers are readily accessible to all workers who have carried out or intend to carry out work at the University or on University premises.

15. All work involving alterations to the University built environment must be conducted in accordance with the [Alterations in or about University buildings](#) procedure.

Local area hazardous materials register

16. The local area hazardous materials register contains the following information:

- building number, room number and any information which refers to a specific location of the plant, equipment and appliance;
- exact location descriptions (e.g. room locations, lab bench etc.) of the item;
- photographs showing the general or specific location of the ACM and the material itself when possible (the intent is to provide as much information as possible);
- specific identification, material type, condition and any results of any testing, including where no asbestos was detected;
- results of any risk assessments carried out; and
- when removed - a removal date and the company who performed the work.

17. The local area hazardous materials register will be reviewed by an independent Occupational Hygienist or Licensed Asbestos Assessor as necessary following significant changes to a local area owned or managed item of plant, equipment and appliance.

18. The register will be updated based on the findings of the review, and any removal of or alteration to ACM presently within the local area.

19. The register is to be readily accessible to all workers or any persons who have carried out, carry out or intends to carry out work within the local area.

Suspected asbestos

20. Any work on any university building or building service must be reported to the F&S Maintenance Team on (02) 6125 7943. They will attend site and determine an appropriate course of action. Afterhours please contact ANU Security on (02) 6125 2249.

21. Any operation that exposes, or disturbs suspected or known ACM must be reported to the Work Environment Group.

22. The material will be treated as containing asbestos until confirmed otherwise through a NATA accredited laboratory analysis. A risk assessment will be completed immediately or as soon as reasonably practical and:

- the area isolated from contact until the analysis is returned; and
- all workers will be removed from the area of concern; and
- a general communication to the affected workplace will be made by the F&S Maintenance Team via the [Work Environment Group](#).

23. If the substance is confirmed to be ACM a clearance inspection and certificate is required prior to the immediate area of concern being de-isolated and suitable for workers. See Clearance section below.

24. The F&S Maintenance team will have the suspected asbestos sampled and analysed at a National Association of Testing Authorities (NATA) accredited laboratory to identify any asbestos content and the type present. If analysis is not carried out the material must be assumed to be asbestos until proven otherwise.

25. The location and details of all assumed, confirmed ACM or confirmed non-ACM, along with photographs, showing the location, will be included in the hazardous materials registers.

Labelling

26. Where practicable, any materials confirmed as containing asbestos will be labelled, for example as “Danger Asbestos”. This is not always practicable due to the impact of environmental conditions (location, heat, cold, weather etc.) and soiling on labels, quickly obscuring or defacing them. When not practical or possible to correctly label, the area of concern must be indicated on the University Hazardous materials register. Signage should be placed as near as possible to indicate an ACM is present, refer to labelling guidelines in the University hazardous materials management plan.

New products or installations

27. Asbestos and asbestos containing materials shall not be introduced in new products or onto new installations at the University.

Modification and demolition of plant

28. Prior to the undertaking of any modification or demolition of plant, the University and local area hazardous materials registers must be consulted to determine the location of any ACM.

29. Due to the age of the University and some plant, equipment and appliances, there is a likelihood that not all ACM currently present in the workplace will be identified in the registers. Therefore, prior to any demolition or refurbishment, a detailed survey

incorporating invasive and destructive inspection should be carried out by a licensed Asbestos assessor to identify any ACM currently present.

30. F&S Maintenance supervisors and local area management will consult the registers to identify any confirmed or suspected ACM which may be encountered during work. This must be clearly identified on MAXIMO generated work orders.

31. It is the duty of the local area representative or building custodian to ensure that all contractors consult the registers prior to the commencement of any University built environment or plant alterations, including modification, demolition or refurbishment.

32. Prior to the demolition or refurbishment of any University structure, all ACM likely to be disturbed must be identified and as far as is reasonable practicable removed.

Asbestos removal

33. All removal shall be in accordance with the [WHS \(How to Safely Remove Asbestos\) Code of Practice 2015 \(Cth\)](#).

34. Friable Asbestos may only be removed by the holder of an A Class asbestos removal licence.

35. University staff members will not carry out any asbestos removal. All asbestos removal (both within buildings and building services and local area owned or managed plant, equipment and appliances) will be carried out by an externally licensed asbestos removalist.

36. Prior to carrying out any asbestos removal at the University, the licenced removalist shall provide notification to Comcare at least five days in advance of the work commencing.

37. For all asbestos removal work within buildings and building services, approval must be obtained in writing from the Director, Facilities and Services or delegate.

38. An asbestos removal licence or permit is not required to remove small samples from a specific location for the purpose of identification or analysis. The sample will be taken by an appropriately trained industrial hygienist, competent in undertaking the correct sampling techniques.

Air monitoring

39. Static air monitoring will be in place at all times during asbestos removal, or where asbestos work poses significant risk of fibre emission or exposure.

Clearance

40. A clearance inspection of the removal of ACM must be carried out prior to re-occupation of a building or facility. Clearance inspections must be carried out by a competent person (e.g an Occupational Hygienist) independent from the asbestos removalist.

41. After clearance has been provided, the relevant section of the removal permit must be completed by both the licenced assessor and the Director, Facilities and Services Division or delegate. An independent clearance certificate and the results of monitoring carried out must be attached to the removal approval.

Disposal

42. All asbestos materials removed by licensed contractors will be sealed for transport and disposal in accordance with the [WHS \(How to Safely Remove Asbestos\) Code of Practice \(Cth\)](#), and disposed of in a licensed asbestos disposal facility.

43. After disposal of the material has been confirmed by the licenced asbestos disposal facility, the University [hazardous materials register](#) will be updated by F&S and the local area hazardous materials register will be updated by local area management.

Emergency involving asbestos

44. In the event of any situation where material, either ACM or assumed ACM is damaged, the immediate area will be isolated until sufficient measures are in place to control any potential emission or exposure to airborne asbestos fibres.

45. University workers shall not carry out collection of asbestos debris. This material should be removed by a licensed asbestos removalist.

46. In an emergency situation, where the potential for emission of or exposure to airborne fibres cannot be sufficiently controlled, the licence holder may carry out removal work immediately in the following limited circumstances:

- a sudden expected event that may lead to a situation where there is a risk of exposure, for example a burst pipe that was lagged with asbestos or a forklift crashing into an asbestos cement sheet wall; or
- an unexpected breakdown of an essential service that requires immediate rectification, for example gas, water, sewerage or telecommunications services.

47. If this is the case, the licensed asbestos removalist must notify the regulator immediately by telephone and in writing within 24 hours after the notice provided over the telephone.

Incident reporting and investigation

48. The local area will ensure that all asbestos related incidents:
- are reported into the [Workplace safety incident and hazard reporting tool](#) as an incident or near miss;
 - are investigated in accordance with the [WHS Incident management procedure](#) and the F&S [Hazardous materials management plan](#);
 - are notified to Comcare if necessary via the Work Environment Group;
 - have control measures reviewed before the activity is conducted again; and
 - have corrective action(s) implemented to prevent a recurrence.

Consultation

49. Before any asbestos removal or modification work is undertaken, all workers in the vicinity of the work shall be informed of the proposed work, its scope and precautionary measures. It is recommended a local area notice of the removal activity be issued.

50. It is the responsibility of the University contract coordinator, co-ordinating the asbestos removal work to inform University workers and any external parties that may be affected by the work.

51. In the case of contractors, if a location is known to contain asbestos, the University contract co-ordinator will inform the contractor.

Prohibited activities

52. A person must not use a high-pressure process to clean the surface of any material that consists of or contains asbestos, or work on it with high speed power tools. The exception is if the tools have been specifically designed to work on asbestos and incorporate dust capture technology.

Synthetic mineral fibres

53. Synthetic mineral fibres (SMF) is a generic term used to collectively describe a number of amorphous (non-crystalline) fibrous materials including glass fibre, mineral wool (Rockwool and Slagwool) and ceramic fibre. Generally referred to as SMF, these materials are also known as 'Man-Made Mineral Fibres' (MMMMF).

54. SMF products are used extensively in commercial buildings for thermal and acoustic insulation, and as a reinforcing agent in cement, plaster and plastic materials. In some specialised instances, SMF materials have also been used as alternatives to asbestos, especially where high temperature insulation properties are required.

55. There are two basic forms of SMF insulation, bonded and unbonded.
- bonded form is where adhesives, binding agents, facing/cladding, cement or other sealants have been applied to the SMF before delivery and the SMF product has a specific shape (e.g. a binding or sealing agents hold the SMF in a batt or blanket form). Some bonded SMF materials may also be clad in various coverings on one or more sides (e.g. a silver foil backing); and
 - unbonded form has no adhesives, binding agents, facing/cladding or sealants applied, and the SMF is a loose material (e.g. wet spray and loose fill).
56. Short-term exposure to SMF can cause irritation to the eyes and respiratory tract. In some cases contact with the skin can cause irritation.
57. When selecting synthetic mineral fibres, preference should be given to special purpose glass, mineral or rock wool. Refractory ceramic fibres should be avoided.
58. All locations of ceramic fibres should be identified and clearly marked on current engineering drawings. These drawings will be made available to contractors and University maintenance personnel.
59. Documented risk assessments for any new materials introduced to the University will be retained by the local area and should appear in the hazardous materials registers as SMF materials.
60. All installation and removal shall be in accordance with the precautions adopted for working with asbestos.
61. Before any SMF removal work is undertaken, all workers in the vicinity of the work will be informed of the proposed work, its scope and precautionary measures.

Staff member health records

62. Staff member health monitoring records must be kept for 40 years in accordance with current knowledge that asbestos related diseases may take up to 40 years to manifest.

Air monitoring records

63. Record of any air monitoring conducted during asbestos removal or clearance inspections shall be maintained by the relevant removal authority.
64. Monitoring information will be made available to any worker upon request.
65. Results of air monitoring will be kept for at least 40 years. A copy of any personal monitoring will also be kept in the individual's personnel records.

Training

66. All personnel considered at risk of exposure to ACM's through their work activities are required to complete an Asbestos awareness training course provided by an external accredited training organisation. Staff members considered at risk complete this training on a mandatory basis.
67. Contact the Work Environment Group for further information.
68. This awareness training will be completed at intervals not exceeding five years.
69. An Asbestos awareness training course is available to all University staff members and students as an online module in the Learning Management System (LMS).

Sources

Legal and other requirements
<i>Work Health and Safety Act 2011 (Cth)</i>
<i>Work Health and Safety Regulations 2011 (Cth)</i>
<i>Work Health and Safety Amendment (Licensing of Asbestos Removalists and Other Measures) Regulation 2016</i>
<i>Safe Work Australia (2016) Code of Practice, How to Safely Remove Asbestos</i>
<i>Safe Work Australia (2016) Code of Practice How to Manage and Control Asbestos in the Workplace</i>
<i>ANU Campus and Building Requirements Manual (CBRM)</i>
<i>ANU procedure: Alterations in or about University buildings (ANUP_000492)</i>
<u>Facilities & Services (University) Hazardous Materials Management Plan</u>

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