Key Risk Area (KRA)

KRA 3.3 Asbestos and Hazardous Materials Management

1. Purpose

This document provides guidance on the process of identifying, assessing, controlling and documenting asbestos and asbestos containing materials, and other hazardous materials.

2. Scope

This Guideline applies to all health, safety and wellbeing activities of staff, students, visitors (including volunteers and contractors), Council members, and other persons interacting with the University of Newcastle (workers); the operations of staff of University aligned Research Centres and controlled entities; and all activities conducted by or on behalf of the University of Newcastle on and outside of the University's campuses.

3. Guidelines

3.1. Identification and Assessment

ACM is any material, object, product or debris that contains asbestos. ACM may exist in a number of different forms across University campuses. See Appendix 1 for a table of potential sources of asbestos or ACM.

Hazardous materials (HazMat) in building construction are known as hazardous building materials. These include:

- Asbestos containing materials (ACM);
- Lead paint and lead dust;
- Synthetic mineral fibre (SMF);
- Polychlorinated biphenyls (PCBs); and
- Ozone depleting substances (ODSs)

IFS will identify, so far as is reasonably practicable, whether asbestos, ACM or a hazardous material is present in any University workplaces by arranging for surveys to be conducted.

The survey will identify:

- Whether a hazardous material is present;
- The type of asbestos or ACM, or hazardous material;
- The location of the hazardous material;
- Whether the asbestos or ACM is friable or non-friable;
- The condition of the asbestos or ACM, or hazardous material;
- Provide updates through professional experience to confirm or deny the potential for asbestos, ACM or hazardous material to be present if not accessible for testing.

For further information on identification, assessment and reporting of hazardous materials exposures, refer to Guideline HSG 8.4 Workplace Exposure Monitoring.

When it has been identified that there is hazardous material in a University workplace, the University will ensure:

- That the presence and location of hazardous material is clearly identified;
- Where reasonably practicable, the identification is by labelling and signage.

3.2. Asbestos and ACM Register

An Asbestos Register is maintained by IFS which includes information on all the locations where asbestos or ACM has been identified or considered a place possibly containing asbestos or ACM, details of which include:

- Exact location e.g. campus, building, room;
- Type of asbestos e.g. chrysotile, crocidolite (where known);
- Condition e.g. friable, non-friable;
- Date of survey from which the information is derived and the service provider;
- Any changes to the condition of the asbestos or ACM over a period of time;
- Any changes as a result of removal or repair, or where asbestos or ACM is identified in an area previously thought to be clear.

The Register is reviewed in accordance with regulatory requirements, as well as every 5 years, and revised according to changes which may have taken place.

The Register will be readily accessible by making it available to contractors, who will be briefed before starting work in an area where asbestos or ACM is present, to ensure that they have the appropriate work procedures and equipment.

3.3. Asbestos and Hazardous Materials Management Plans

An Asbestos or Hazardous Materials Management Plan will be developed based on the results of the workplace exposure surveys. Plans will address the actions required to eliminate or minimise the risk of exposure to asbestos, ACM or a hazardous material in the workplace so far as is reasonably practicable and priorities for action will depend on the condition of the hazardous material and the likelihood of exposure.

Plans will include the following information:

- The identification of the hazardous material;
- Decisions and reasons for decisions about the management of the hazardous material at the workplace;
- Workers carrying out work involving a hazardous material;
- Timetable for removal where this is considered to be appropriate;
- Timetable for ACM sealing activities where appropriate;
- Frequency of education/awareness program for staff, students, contractors and others who work in areas where the hazardous material is present;
- Frequency of the inspection program;
- Control measures to prevent exposure e.g. Standard Operating Procedures, Safe Work Method Statements;
- Procedures for dealing with and detailing incidents, emergencies and potential exposures to the hazardous material at the workplace;
- Management review dates, including review of the Asbestos Register.

3.4. Remediation, Removal and Waste Disposal

In complying with HSG 3.1 Health and Safety Risk Management, where a risk assessment identifies a hazardous material risk to health and safety, that risk must be eliminated so far as is reasonably practicable or, where this is not reasonably practicable, minimised so far as is reasonably practicable. Where elimination is not reasonably practicable, a hierarchy of controls must be used to minimise risks by selecting the appropriate risk control measures so far as they are reasonably practicable.

Asbestos and ACM will not be remediated or removed by University staff. Suitably qualified, competent and licenced contractors will be engaged by IFS to handle, remove and dispose of asbestos or ACM in accordance with the Work Health and Safety Regulation 2017 (NSW), Chapter 8, Asbestos.

3.5. Work considerations in areas containing a hazardous material

The Hazardous Material Management Flowchart in Appendix 2 summarises the process when work has to be conducted in an area where a hazardous material may be present.

Where licensed contractors are required to work in an area where a hazardous material is present the following actions will be taken:

- Wherever reasonably practicable, arrangements will be made for the work to be undertaken out of hours;
- The occupants in the area will be informed in advance of the work so that, if appropriate or required by the Work Health and Safety Regulation 2017 (NSW), arrangements can be made for them to relocate out of the area while the work is conducted;
- The contractors will be given access to the appropriate Asbestos or Hazardous Material Register and the exact location of the material will be shown to them;
- IFS will ensure that the contractors have the appropriate licences, procedures and equipment to conduct the work;
- A specific Standard Operating Procedure (SOP) will be developed for the work, signed off by all workers involved, which will be adhered to during the process. See Attachment 3 for activities to be considered for inclusion in a SOP for work in an area where asbestos or ACM is present;
- The area where work is to be conducted will be isolated and barricaded to prevent unauthorised entry;
- Every effort shall be made to prevent disturbing the hazardous material if reasonably practicable;
- Where the hazardous material is likely to be disturbed during the work the contractors will adhere to all the requirements in the SOP, relevant requirements in the Work Health and Safety Regulation 2017 (NSW) and University requirements outlined in Guideline HSG 6.1 Contractor Health and Safety Management;
- Following the work, monitoring will be undertaken by a qualified Occupational Hygienist to check for airborne contamination and contamination of the work surfaces and building components e.g. window ledges, blinds, furniture;
- When results of the monitoring have been received, and if contamination has been confirmed, the work area will be thoroughly cleaned by specialist cleaners;
- Results of monitoring will be maintained in accordance with Guideline HSG 8.4 Workplace Exposure Monitoring;
- All waste products from the work (including discarded Personal Protective Equipment) and the cleaning will be treated as asbestos or hazardous material waste in accordance with Work Health and Safety Regulation 2017 (NSW), Chapter 8, Asbestos.

3.6. Accidental identification or release of a hazardous material

In the event that suspected hazardous material is identified during demolition, construction or repair work, the following actions will be taken:

- All work will cease;
- The area will be isolated;
- The IFS contact will be notified immediately and a hazard report will be entered into the University's online incident reporting system;
- IFS will engage an appropriately qualified occupational hygienist to take samples of the material for analysis and to provide a report with details of the results;
- According to the analysis of the material, the work will either continue as planned if no hazardous material is identified, or asbestos management procedures will be implemented if the presence of asbestos or ACM is confirmed;
- The area will not be re-entered until a clearance certificate has been issued by the occupational hygienist to confirm there is no asbestos or ACM fibre or hazardous material contamination of the workplace following cleaning;
- The location of any confirmed asbestos or ACM and details of the type and condition will be entered into the University's Asbestos Register and future management of the material will be added to the Asbestos Management Plan. This will also occur for any other identified hazardous material.

3.7. Workplace Exposure Monitoring

Monitoring for contamination of the workplace with asbestos or a hazardous material will be undertaken by appropriately qualified occupational hygiene consultants selected by IFS. The following requirements along with requirements of Guideline HSG 6.1 Contractor Health and Safety Management will be met:

- Approved by the National Association of Testing Authorities (NATA) for identification of asbestos or ACM;
- Able to provide report to the University with details of the monitoring results;
- Able to issue a clearance certificate to confirm that there is no evidence of asbestos or ACM following the monitoring, or that all traces of asbestos or ACM, or hazardous material has been removed following cleaning.

3.8. Health Monitoring

If there are any concerns that staff or students have been accidently exposed to a hazardous material, they should be referred for base line medical review in accordance with Guideline HSG 8.5 Health Monitoring. The health monitoring and review will include:

- Discussion about the exposure;
- Basic medical history with a focus on respiratory symptoms;

- May require a lung function test or chest x-ray.

4. Definitions

In the context of the Health and Safety Management System Framework:

Asbestos	The asbestiform varieties of mineral silicates that belong to the serpentine and amphibole groups of rock-forming minerals and includes actinolite, grunerite or amosite (brown asbestos), anthophyllite, crocidolite (blue asbestos), chrysotile (white asbestos), tremolite, or any mixture containing one or more of these mineral silicates.
Asbestos Containing Material (ACM)	Any material or thing that, as part of its design, contains asbestos.
Employer	Means the University of Newcastle (the University).
Executive Committee	Consisting of the Vice-Chancellor, the Deputy Vice-Chancellors, the Pro Vice-Chancellors, the Chief Operating Officer, Chief People and Culture Officer and the Chief Financial Officer, the University Secretary and the President of Academic Senate.
Friable Asbestos Material	Any material that contains asbestos and which, when dry, is in a powder form or may be crumbled, pulverised or reduced to powder by hand pressure.
Hazardous Materials	Materials used in the construction of buildings or plant that are known to have an increased risk to humans
Leader / Supervisor	Any member of the University who is responsible for supervising staff and/or undergraduate or postgraduate students and/or for leading research projects.
Non-friable Asbestos Material	Any material that contains asbestos, other than friable asbestos material, including material containing asbestos fibres reinforced with a bonding compound.
Worker	Includes an employee, conjoint, student on work experience, contractor, sub-contractor, and volunteer. A person is a worker if the person carries out work in any capacity for the University or another person conducting a business or undertaking, including work as: (a) an employee, or (b) a contractor or subcontractor, or (c) an employee of a contractor or subcontractor, or (d) an employee of a labour hire company who has been assigned to work in the person's business or undertaking, or (e) an outworker, or (f) an apprentice or trainee, or (g) a student gaining work experience, or (h) a volunteer, or (i) a person of a prescribed class.

5. Responsibilities

A comprehensive list of health, safety and wellbeing responsibilities is provided in HSG 1.2 Roles and Responsibilities Guideline.

Specific responsibilities under this Guideline include:

Infrastructure and Facility Services (IFS)

- Ensure the University's approach to asbestos, ACM and other hazardous materials is managed in accordance with this procedure and the requirements of the Work Health and Safety Regulation 2017 (NSW);
- Arrange for surveys to be conducted for University sites or buildings to identify where asbestos ACM and other hazardous materials or may be present;
- Maintain a hazardous materials register which is regularly updated and reviewed as material is removed from the University buildings or identified and ensure it remains current;
- Arrange for signage to be installed where asbestos or ACM or other hazardous material is identified as being present;
- Ensure that prior to construction or repair work being carried out that a risk assessment is conducted where hazardous material is suspected of being present;
- Ensure that contractors who are required to undertake work in an area where hazardous material is likely to be present are informed of the risk, and that they have the appropriate procedures and equipment to undertake the work;
- Ensure that only suitably qualified and competent persons perform hazardous waste removal work when required;
- Ensure that monitoring is performed when work is undertaken in an area where hazardous material is present to check for contamination of surfaces and air; and
- Provide information in relation to affected locations where construction or repair work is to take place where hazardous material is present.

Leaders and Supervisors

- Implement and monitor systems, resources and processes in line with these procedures and ensure that these are being used and followed to control the risk to the health and safety of people who may be using or affected by hazardous materials;
- Inform IFS if any construction or repair work is required in their area of responsibility so that contractors and staff can be appropriately briefed regarding the potential hazards of the work including the possible presence of hazardous material;

- Inform IFS if any asbestos removal work is required so they can manage the process and the contractors who are required to undertake the work; and
- Where the College, School or Division is planning to undertake work that does not require the involvement of IFS, ensure that contractors are informed of the risk, and that they have the appropriate procedures and equipment to undertake the work if there is potential for exposure to hazardous materials.

Health, Safety and Wellbeing Team

- Provide professional input regarding the University's hazardous material management activities when required; and
- Support IFS in risk assessment of work activities in areas of actual and potential hazardous materials and the selection of contractors for testing and monitoring.

6. References & Related Documents

The following documentation is referenced in, or applicable to this Guideline:

HSG 1.2 Roles and Responsibilities

HSG 3.1 Health and Safety Risk Management

HSG 6.1 Contractor Health and Safety Management

HSG 8.4 Workplace Exposure Monitoring

HSG 8.5 Health Monitoring

7. Amendment History

Version	Date of Issue	Approval	Section(s) Modified	Details of Amendment
1	September 2015	Director, People and Workforce Strategy	-	Original version as KRA 3.3 Asbestos Management.
2	October 2023	CPCO	All	1. All sections reviewed for legal compliance. Title change to KRA 3.3 Asbestos and Hazardous Materials Management. 2. Updated content in all sections to include Hazardous Materials management. 3. Added new/renamed Related Documents

				4. Added Amendment History 5. Amended document control header and footer

8. Appendices

Appendix 1 Example asbestos containing materials (ACM)

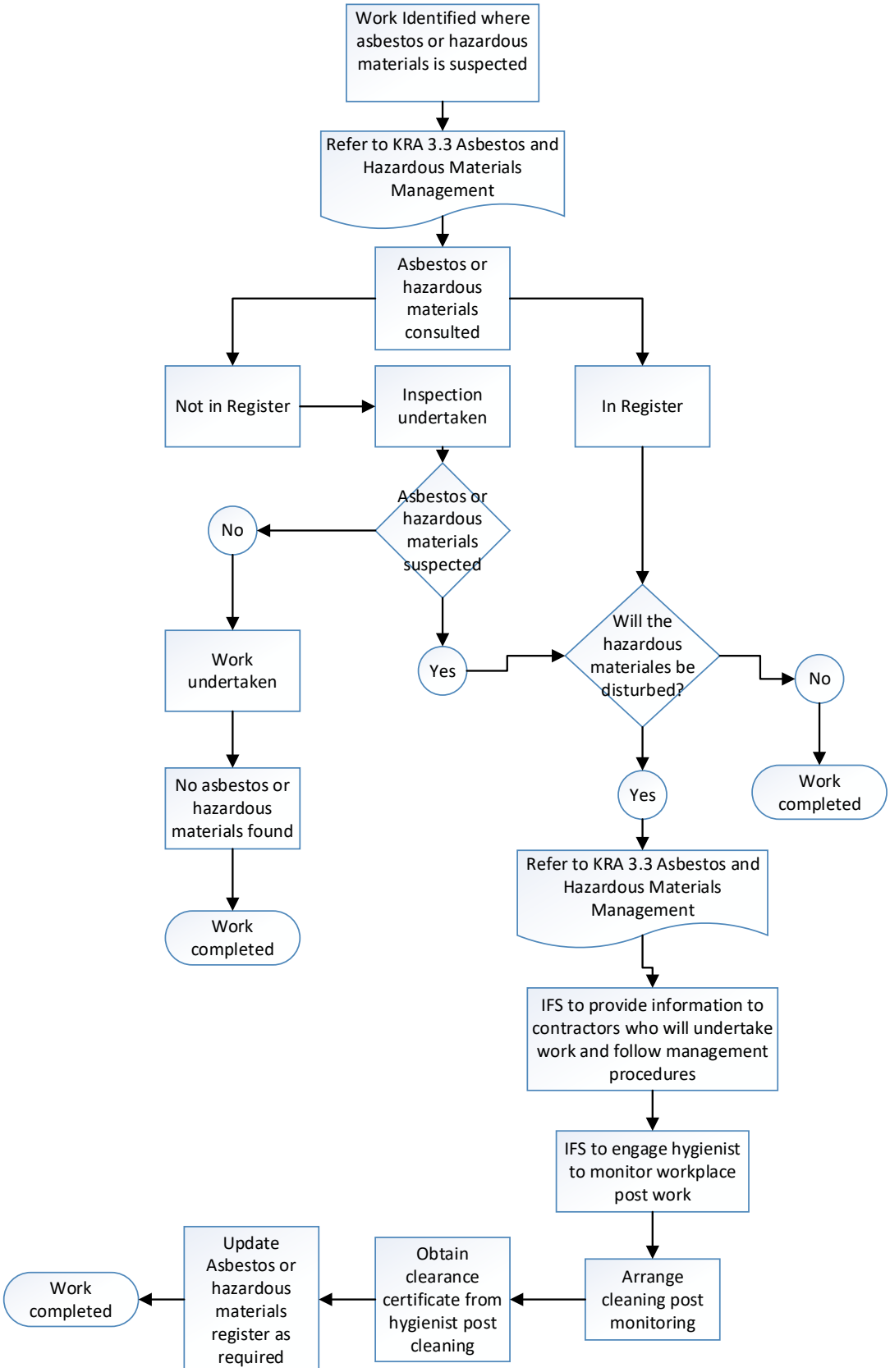
Appendix 2 Hazardous Material Management Flowchart

Appendix 3 Considerations for inclusion in a Standard Operating Procedure relating to work in an area containing ACM

Appendix 1 Example asbestos containing materials (ACM)

Location	Image
Flooring	 
Roofing	 
Fire Door	
Walls	 
Insulation	 

Appendix 2 – Hazardous Material Management Flowchart



Appendix 3 – Considerations for inclusion in a Standard Operating Procedure relating to work in an area containing ACM

Background

During assessment of potential hazardous materials that may impact on building works and contractors engaged to undertake alterations, sampling and testing of material on and around (location), was found to contain Asbestos.

Further sampling has occurred, and the extent of the contamination has not yet been quantified.

Key concept

All work is, wherever possible, to be undertaken outside of normal working hours [8am till 8pm on Monday to Friday of a normal week (not including public holidays)], or where there is no risk of people entering the area of the work. Where work is required but there is a risk people may enter the work area, people are to be posted at each entry point to deny access while the work is occurring.

This guide provides a minimum set of requirements only and does not substitute for the requirement for contractors and University staff to undertake a risk assessment and develop their own SWPs or SWMS as per their own safety management system and the requirements of the Work Health and Safety Regulation 2017 (NSW).

The potential risks from asbestos in this situation include:

- air movement causing dust and the fibres to become airborne
- persons moving around causing dust and airborne fibres
- persons entering the space, collecting fibres on their clothing or equipment and then transferring those to other spaces

Equipment required:

- Face mask of a P2 level or better
- Disposable armlets / apron
- Plastic sheet at least 2 metres x 2 metres
- Disposable gloves
- Plastic bag for placing PPE on completion of work pending disposal
- Tape for sealing plastic bag on completion
- Two cloth rags for wiping down tools, equipment and hands on completion
- Hand held gardeners spray bottle with water for dampening dust and reducing risk of disturbance, airborne dust generation, and increased risk of inhalation

Work Method

The method of work will include but not limited to:

1. Re-consider the need to access during this time pending quantification of the risk, and only access if absolutely necessary and if this is not prohibited by the Work Health and Safety Regulation 2017 (NSW).
2. Identify the most appropriate access point taking into account
    a. the distance to the required location (preference should be given to proximity to the work area so as to minimise movement)
    b. the materials or equipment required to be carried and/or used (minimise tools and equipment so as to reduce the need to decontaminate following the works)
    c. the visibility of the entrance to the general public (preference is to use an entrance away from public so as to avoid public anxiety)
3. Identify if the work can be undertaken outside normal hours.
4. Isolate the area (during work hours, this may include asking all people to leave the room and closing the door; blocking off corridors and posting people at each entry point to keep people out).
5. Consider, based on location and scope of the work, the application of air monitoring for the duration of the work and for a short period following.
6. Place plastic sheets down under ladder.
7. Put ladder in place.
8. Put on PPE including face mask, armlets/apron and gloves ensuring there is no gap between gloves and armlets and the gloves are over the top of the armlets / apron.
9. Gather tools and equipment and spray bottle (for non-electric work).
10. Move ceiling tiles (or similar) taking care to minimise movement that may disturb dust or knock against beams or trusses.
11. In line with applicable asbestos sampling techniques, take swab samples of dust in the area around the penetrations and have tested by a suitably qualified person, for asbestos content.
12. For non-electrical work, spray liberally the area in the ceiling around the work site.
13. Undertake the required work.
14. Gather up all equipment and remove it from the ceiling space.
15. Replace ceiling tile or similar.
16. Spray water onto the rag and wipe down the joint area of the moved tile.
17. Descend the ladder.
18. Spray more water onto the rag and wipe down tools and equipment including any containers, as well as the spray bottle, and place rag in plastic bag.
19. Spray water onto the second rag and wipe down the gloves and armlets / apron.
20. Turning the armlets inside out as you go, roll armlets / apron, and then gloves, inside out trapping any contaminants inside the inside-out gloves.
21. Remove face mask.
22. Dispose of bag containing PPE as asbestos contaminated materials.

Cabling works

Where cabling is required within the ceiling space, the above procedure is to be applied with the addition of the use of conduit or other cable passage.

1. Breach the ceiling space using the previous mentioned method.
2. Ensure the conduit or other passageway is sealed to avoid and ceiling dust contaminating the internal of the conduit using a bung, tape or other means.
3. Feed the conduit or other passageway into the ceiling to the point of exit.
4. Breach the ceiling using the previous procedures at the point of exit.
5. Connect both ends of the conduit with appropriate fittings to enable the open ends to be outside of the ceiling space.
6. Reseal the breached ceiling spaces.
7. Feed the cables through the safe space of the conduit.

Planning for the future

As it is not possible without a major testing contract or cleaning, work activities in the ceiling space is not able to be undertaken without the above controls.

One method of reducing future risk to workers and contamination should include creation of safe passages. Where works such as cabling works are being undertaken, consider the future needs of the space and where possible, place a larger safe passageway that will allow for future works to be undertaken without the need to breach the ceiling space.