Asbestos Management Process

1. Introduction

1.1. Purpose

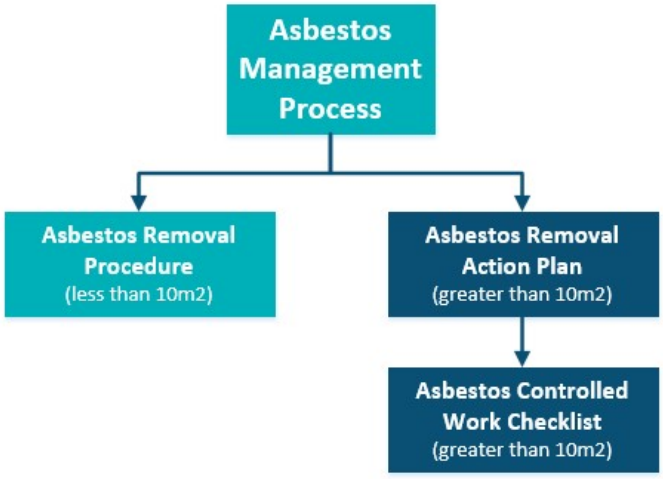
This in an overarching Asbestos Management process that identifies the actions that will be taken to prevent risk of exposure to asbestos. This process covers asbestos identification, asbestos risk management, and work with asbestos cement pipes (a specific procedure for working with less than 10m^2 has also been developed).

1.2. Scope

This process applies to all Wellington Water workers, Fulton Hogan workers working for Wellington Water as part of the Alliance, and all consultants and contractors who have involvement in asbestos management or removal on Wellington Water's behalf.

2. Asbestos overview

Note: Refer to WorkSafe NZ's Approved Code of Practice *Management and removal of Asbestos*, Section 3 (Introduction and Overview).



2.1. Background

Asbestos is a term that describes a group of minerals with similar properties. The most commons form of asbestos in New Zealand are amosite, crocidolite, and chrysotile, but they are more commonly known by their colours: brown, blue, and white asbestos.

Blue and brown asbestos was commonly used as insulation or lagging around hot water pipes, for example. White asbestos was very versatile and was commonly used in building products and as a strengthened/fire retardant for products like concrete. Water pipes were commonly made from white asbestos.

Asbestos is usually mixed with another material and is rarely encountered in its raw form, making identification based on visual examination unreliable. The common term for products that contain asbestos is 'asbestos-containing material,' or **ACM.**

From a health perspective, the most concerning ACM types that may be encountered in a building or other structure are ones that are **friable** (able to be crumbled up). The following examples are ranked from less concerning to most concerning, but it depends on the product's friability:

- Asbestos cement pipes and other materials
- Building cladding
- Acoustic plaster soundproofing
- Flooring
- Decorative coating, for example, textured ceilings
- Lagging/insulation
- Sprayed on fireproofing/soundproofing/thermal insulation.

2.2. Health aspects

Many ACMs in buildings may not present a significant health risk unless they are abraded or machined so as to release dust containing asbestos fibre, such as sanding, sawing, drilling or handling. Degradation may also occur as a result of water damage or movement of construction materials, lagged pipes, and so on.

Inhaling asbestos fibres has been proven to cause serious lung diseases, including asbestos-related cancers, but it highly depends on the length of exposure to asbestos, if you inhaled lots of fibres, and if you exposed to asbestos for long periods of time. People who smoked and worked with asbestos are more than twice as likely to have an asbestos-related disease.

It can take from around 15 to 50 years between exposure and the development of asbestos-related disease.

It is important to note that there are no safe exposure limits to asbestos fibres and PCBUs must do everything that is reasonably practicable to ensure that worker exposure to asbestos is kept and maintained in order to reduce fibre exposure as low as possible and under no circumstances exceed the Workplace Exposure Standards (WES) and the airborne contamination standard for asbestos that the workplace cannot exceed when work involving asbestos is carried out.

2.3. Unlicensed asbestos removal

Wellington Water workers (including Alliance workers and contractors working for Wellington Water) can remove up to and including 10m^2 of non-friable asbestos, (refer to the document '***Asbestos Removal Procedure – less than 10m^2***) but the following conditions apply:

- only non-friable asbestos, or asbestos-contaminated dust (ACD) associated with removing that amount of non-friable asbestos, can be removed
- ACD that is not associated with the asbestos removal and is only a minor contamination may be removed
- the 10 m^2 restriction applies cumulatively to the whole asbestos removal project for the site. This means the site cannot be divided into 10m^2 sections and with asbestos removed from each section. The licence requirements cannot be avoided by dividing a large site into 10 m2 or less sectors and removing asbestos from each one.

The reason behind this requirement is that WorkSafe recognises that small-scale occasional asbestos removal is less risky than removing lots of asbestos most of the time because worker exposure to asbestos is lower and the controls for removing the asbestos aren't as strict for large-scale or friable asbestos removal. PCBUs or workers who think they can get away with removing large amounts of asbestos without using all of the controls, are simply putting their, and their workers' lives, at risk.

Sites where over 10m^2 of asbestos needs to be removed must be conducted by licensed asbestos removalists.

Asbestos removalists must still follow all other applicable regulations and remove the asbestos in accordance with safe practices. Refer to the *ACOP for the Management and Removal of Asbestos* for further information.

Note: Measure the area of asbestos or ACM involved, if it is unclear if the area is over or under 10 m^2.

2.4. Licensed asbestos removal

Over 10m^2 of non-friable ACM or any volume of friable ACM must be completed by a licensed asbestos removalist as approved by WorkSafe NZ. Refer to WorkSafe NZ's licence holder register for a list of licensed and qualified removalists.

This work is called licensed asbestos removal and requires special controls. Licensed asbestos removal work is notifiable to WorkSafe NZ in advance. Refer to WorkSafe NZ's Notification of Licensed Asbestos Removal form.

For work with asbestos cement pipes, refer to the *Asbestos cement (AC) pipes* section.

2.5. Asbestos removal control plan

All non-friable asbestos removal work over 10m^2 and all friable asbestos removal work must submit an asbestos removal control plan to Wellington Water. See Preparing an asbestos removal control plan in the *Approved Code of Practice for the Management and Removal of Asbestos* for more information.

Any work that involves contact with asbestos materials must only be carried out after the approval of an asbestos removal action plan using the Wellington Water ***Asbestos Removal Action Plan*** **Template**, or similar. Wellington Water will assess the action plan using the "***Asbestos Controlled Work Checklist – greater than 10m^2***).

3. Identification and risk

3.1. Identifying asbestos

Note: Refer to WorkSafe NZ's Approved Code of Practice *Management and removal of Asbestos*, Sections 6 and 7 (Asbestos Records).

Refer to Wellington Water's Asbestos Register for known and recorded asbestos containing material.

An asbestos assessment assists in determining whether an asbestos risk exists. There is an exclusion that applies to asbestos in soil. Refer to the Approved Code of Practice for more information.

Any areas of the workplace where ACM is present (or thought to be present) must be identified or have their presence assumed. The assessment may should be carried out by an asbestos surveyor. For more information about asbestos surveyors, refer to WorkSafe New Zealand's Conducting Asbestos Surveys.

If there is doubt as to whether a material contains asbestos, a competent person should take a sample for analysis. An asbestos surveyor can do this. Analysis and identification of the materials must be performed by an IANZ (International Accreditation New Zealand) laboratory.

3.2. Risk assessment

Note: Refer to WorkSafe NZ's *Approved Code of Practice for the Management and removal of Asbestos*, Section 8

If sample analysis confirms the presence of asbestos, the potential exposure of persons entering workplaces should be evaluated by suitably competent people such as an asbestos surveyor. The composition and condition of all ACM in the work area should be assessed for its potential to release fibres into the workplace air.

The period between each assessment will be determined by the condition and location of the ACM. In some cases, a visual assessment will be required at least annually. Where the ACM is in good condition, and is unlikely to be disturbed, visual assessment at three-yearly intervals may be adequate.

4. Asbestos management

4.1. Managing asbestos-related risks

If the PCBU is not sure whether asbestos is present or used in a certain activity at the workplace, they must assume asbestos is present and treat the activity as asbestos-related work, or have a sample analysed to confirm if asbestos is present.

The PCBU must put control measures in place to minimise any exposure if it is not reasonably practicable to remove the asbestos.

The PCBU always needs to make sure the airborne contamination standard for asbestos is not exceeded.

Specific situations where removal may be the best control include:

- asbestos lagging on pipes
- asbestos in plant
- ACD
- loose fibre insulation
- cracked or damaged fibreboard containing asbestos.

If it is not reasonably practicable to remove asbestos, the PCBU must put other control measures in place to make sure people are not exposed to airborne asbestos. These control measures include enclosing, encapsulating, or sealing the asbestos. For more information, refer to the *Approved Code of Practice for the Management and removal of Asbestos*: Section 8.

When the PCBU decides on the control measures, it must record them in the workplace's asbestos management plan.

Note: Clothes washing must only be done in laundries specifically set up for handling asbestoscontaminated clothing. It must not be done at home or a public laundromat. Disposable protective clothing should be worn instead where practicable as laundries that are set up to handle asbestoscontaminated clothing are rare in New Zealand.

For information about protective clothing and equipment, refer to the *Approved Code of Practice for the Management and removal of Asbestos*: Section 14.

4.2. Personal protective equipment (PPE)

Ensure all workers use and wear provided PPE and clothing to prevent asbestos exposure. The following table details the PPE that is required when asbestos is or maybe present.

Required equipment/clothing	Explanation
Respiratory protective equipment (RPE) To ensure workers are wearing the correct RPE, refer to the *Approved Code of Practice for the Management and removal of Asbestos*: section 14.	To avoid inhaling asbestos fibres The most common way of asbestos entering the body is by breathing fibres in, so it is critical that the RPE is fit for purpose and fits the workers.
Coveralls that are impervious to asbestos dust (preferably disposable, or able to be washed) Should be rated type 5, Category 3 (EN ISO 13982-1) or equivalent	To avoid the risk of carrying asbestos fibres away from the worksite on clothing
Footwear	Appropriate for the work being undertaken (footwear should be non-laced as laced footwear is difficult to clean – alternatively wear disposable boot covers but be aware they can cause slips).

5. Asbestos removal

Note: Refer to WorkSafe NZ's Approved Code of Practice of *Management and removal of Asbestos*,

The asbestos removalist should develop a site-specific control plan before commencing any licensed asbestos removal work. Each asbestos removal control plan helps ensure the removal is well planned and carried out in a safe manner.

For the information that is required for an asbestos management plan, refer to the *Approved Code of Practice for the Management and Removal of Asbestos:* Appendix C.

6. Transport and disposal

Refer to the *Approved Code of Practice for the Management and removal of Asbestos*: Section 18 (Waste containment and disposal).

7. Asbestos cement (AC) pipes

Non-friable ACM is asbestos that has been compounded with cement or other hard bonding materials. This section recommends precautions to be taken when working with asbestos cement pipes and other non-friable asbestos products.

7.1. Work procedure

When asbestos cement pipes are maintained in good order and are not worked on with abrasive cutting or grinding tools the likelihood of health risk is reduced.

When asbestos cement piping is damaged, the removal and remediation work is licensed asbestos removal work and will require the removal and decontamination of the surrounding soil in most cases.

Ensure that precautions are taken during structural alteration or demolition involving ACM:

- Abrasive cutting or sanding power tools MUST NOT be used on ACM as they will generate large amounts of dust containing asbestos.
- Non-powered hand tools such as hand saws or hydraulic chain cutters must be used. Sometimes the cutters can crush the softened pipe rather than making a clean cut. Care must be taken to avoid the generation of dust when tidying up the cut.
- Wet the material to further reduce the release of asbestos fibre when cutting.
- High pressure water jets/guns MUST NOT be used because they spread asbestos fibres into the surrounding environment.
- Use plastic drop sheets at least 200 µm thick to collect off-cuts and coarse dust, and use dedicated and appropriate vacuum cleaning equipment when necessary. See section 13.5 of the ACOP for information about vacuum cleaners.

Refer to WorkSafe NZ's *Personal Protective Equipment to Use When Working with Asbestos* for more detail about PPE requirements and asbestos clean-up. https://worksafe.govt.nz/topic-andindustry/asbestos/ppe-when-working-with-asbestos/

If work practices leave asbestos debris in the soil, refer to Part D in the ACOP: Asbestos in the ground.

7.2. Disposal

See section 18 Waste containment and disposal of the ACOP for more information.

All pipe off-cuts are to be disposed of as asbestos waste.

- Small off cuts are to be kept wet and placed in plastic bags (200 µm thick) and securely sealed.
- Large off cuts should not be made to fit by breaking or cutting. Large off cuts must be suitably sealed with plastic sheet (200 µm thick) and tape. Waste bags and wrapped pieces must be labelled as follows: ***Caution Asbestos – Do not open or damage bag. Do not inhale dust.***

Loading and transportation of the waste is to be carried out with care to ensure that the plastic bags or wrapping are not damaged by abrasion. If damage occurs, the skip or truck must be thoroughly cleansed after disposal (and the cleaning material plus debris becomes asbestos waste).

- All asbestos waste is to be buried in a designated area within a managed refuse disposal site under the control of a territorial authority and covered with a least a metre of earth. Prior notification must be given to the disposal site.
- PPE should be vacuumed and wet-wiped, in conjunction with any other decontamination methods. Contaminated PPE is not to be worn outside the asbestos work area under any circumstances.

Refer WorkSafe NZ's *Personal Protective Equipment to Use When Working with Asbestos* for more detail about PPE requirements and asbestos clean-up.

8. Responsibilities

The following (position titles) have a responsibility for making sure part or all of this process is carried out.

Position title	What they are responsible for
General Manager – Customer Operations	Ensure everyone who handles or removes ACM water pipes follows this process

9. Training and qualifications

Workers carrying out asbestos removal work should be trained so they can carry out this work safely and without risk to their own health and others. This training must reflect the specific type of asbestos work to be undertaken.

All workers undertaking asbestos sampling and/or testing must be competent to be able to undertake these tasks without any risk to their own safety and health.

Retraining and/or refresher training should be given to all workers who work with asbestos contaminated materials to ensure that their knowledge remains consistent with current practices. This is particularly important for those workers whose work with ACM is intermittent. Refresher training needs need to be assessed regularly.

If removing greater than 10m^2 of non-friable asbestos and associated dust, the work must have an asbestos removal supervisor and trained workers. The following training that is referenced in sections 24 to 28 and Part H is required.

If removing less than 10m^2 of non-friable asbestos, workers must have training that is referenced in section 12 of the ACOP.

10. Related documents

Document number	Title
HSET_0001	Asbestos Removal Action Plan Template (greater than 10m^2)
HSEC_0011	Asbestos Removal Controlled Work Checklist (greater than 10m^2)

HSEP_0026	Asbestos Removal Procedure (less than 10m^2)
	Asbestos Register
	Health & Safety risk register

11. Reference documents

Document name	Entity	Location
ACOP for the Management and Removal of Asbestos	WorkSafe NZ	https://worksafe.govt.nz/topic-andindustry/asbestos/management-andremoval-of-asbestos
Notification of licensed asbestos removal form	WorkSafe NZ	https://forms.worksafe.govt.nz/asbestosremoval-notification

12. Legislation and standards

- Health and Safety at Work Act 2015
- Health and Safety at Work (Asbestos) Regulations 2016

13. Definitions

Word or Phrase	Definition
Asbestos-containing material (ACM)	Any material or thing that, by its design, contains asbestos
Friable	Means, in relation to asbestos or ACM, in a powder form or able to be crumbled, pulverised, or reduced to a powder by hand pressure when dry
Non-friable	Asbestos that is firmly bound in the bond of the material. Unlikely to release measurable amounts of asbestos if not disturbed