



ASBESTOS IN NEW ZEALAND

This document aims to provide some brief background information on asbestos and its uses in New Zealand.

After 4 April 2018, all workplaces, including residential dwellings not occupied by the owner, must comply with the *Health and Safety at Work (Asbestos) Regulations (2016)*. Please see our document *Overview of the Health and Safety at Work (Asbestos) Regulations (2016)* for more information on legal obligations for workplaces in relation to asbestos.

Forensic and Industrial Science Ltd. have staff fully competent at asbestos surveying and bulk sampling of materials for asbestos. Staff are BOHS trained in *Surveying and Sampling Strategies for Asbestos in Buildings (IP402)* and follow strict internal Quality Assurance/Quality Control procedures compliant with current industry best practice.

WHAT IS ASBESTOS?

Asbestos is a name given for six types of naturally occurring fibrous minerals. Typically, only three types were used commercially: chrysotile (white asbestos), crocidolite (blue asbestos) and amosite (brown asbestos).

These fibrous minerals possess many ideal physical properties that made them excellent additives to building materials. For example, asbestos fibres are fire retardant and make good thermal insulating materials. From the 1930s to the 1980s, raw asbestos was imported to New Zealand and was either used raw or manufactured into asbestos containing materials (ACMs).

In 1938, not long after the asbestos industry began in New Zealand, a relationship between lung diseases and asbestos was officially recorded. It later became clear that asbestos fibres were small enough to enter the lungs and cause fatal diseases such as mesothelioma, asbestosis and lung cancer. It was a misconception that chrysotile (white asbestos) was not dangerous like the other types.

The importation of raw crocidolite and amosite asbestos was banned in 1984 and the importation of raw chrysotile was banned in 1999. It only became illegal to import asbestos containing materials into New Zealand on 1 October 2016.



HOW WAS ASBESTOS USED?

Asbestos and ACMs were commonly used in commercial and residential buildings that were built or refurbished from 1940 to 2000. It is possible that buildings built prior to 1940 and after 2000 contain asbestos though it is not as likely.

In residential dwellings, asbestos was commonly used as an additive in building materials, such as Hardie's Super Six roofing, sprayed textured coatings on ceilings, or vinyl floor tiles. In commercial and industrial buildings, asbestos was commonly used for its insulating and fireproofing properties. This could be in the form of insulation (lagging) around pipes and boilers, gaskets, and insulating boards. Building materials containing asbestos were also commonly used in these types of buildings.

It should be noted that for both residential and industrial buildings, although there were common uses for asbestos, builders would use asbestos and ACMs in many unique ways as it was a cheap and available material. Therefore, no two buildings may be alike in terms of where asbestos or ACMs may be located.

Friable vs Non-friable Asbestos and ACMs

ACMs are commonly referred to as friable and non-friable. *Friable asbestos* is asbestos or ACMs that are easily crushed or crumbled, releasing large amounts of airborne fibres. *Non-friable asbestos* are ACMs that cannot be as easily crushed or crumbled therefore releasing fewer airborne fibres.

Friable asbestos and ACMs include loose asbestos, sprayed coatings, pipe insulation and asbestos insulating board (AIB). Non-friable ACMs include asbestos cement and vinyl flooring.

DO I HAVE ASBESTOS IN MY BUILDING?

If a building was built prior to 1985, it is highly likely that asbestos or ACMs were used in its construction. If a building was built from 1985 to 1990, it is likely that asbestos or ACMs were used. Buildings constructed from 1990 to 2000 are less likely to contain asbestos or ACMs.

The best way to determine if asbestos or ACMs are present in a building is by conducting an asbestos survey. During an asbestos survey, a trained surveyor will go through the building and locate any materials they suspect to be asbestos.

The asbestos survey may also include bulk sampling, which requires a piece of the material to be removed and sent to a laboratory for analysis. Laboratory analysis will determine if asbestos fibres are present and if so, the type of asbestos present.



TYPES OF ASBESTOS SURVEYS

There are two main types of asbestos surveys. Bulk sampling may or may not occur during both types of surveys depending on the client's requirements, though typically bulk sampling is recommended at the surveyor's discretion.

Management Surveys

A management survey is designed to locate all asbestos within a building, as far as is reasonably practicable, without being invasive. This is the preferred type of survey for a building in which the owner needs to identify asbestos and ACMs in order to properly manage them.

During a management survey, the surveyor will identify locations of asbestos and ACMs and assess their condition through an algorithm (a mathematical formula) called a material assessment. The material assessment is designed to estimate a material's potential to release airborne asbestos fibres by assessing the current condition of the ACM.

A management survey report will typically include an asbestos register with all identified asbestos and ACMs, a bulk sample laboratory analysis report and a material assessment algorithm.

Refurbishment & Demolition Surveys

A refurbishment and demolition survey aims to locate all asbestos within a building or part of a building, as far as reasonably practicable, to prepare for refurbishment and/or demolition of that building or part of a building. It is vital that all ACMs are identified and removed prior to refurbishment and demolition works. If asbestos or ACMs are present during these works, they could be damaged and release airborne fibres, placing the workers' health at risk.

Refurbishment and demolition surveys are very invasive surveys. The surveyor will need access to all areas of a building, including wall and ceiling voids, in order to determine if asbestos is present.

If only part of a building is to be refurbished or demolished, then only this part of the building will require the invasive survey. It is recommended that a management survey is performed in areas of the building that will not be affected by refurbishment and/or demolition works.

Reports from refurbishment and demolition asbestos surveys typically include an asbestos register with all identified asbestos and ACMs and a bulk sample laboratory analysis report. Material assessment algorithms are not routinely performed on these surveys as the asbestos and ACMs will be removed in order to perform refurbishment and/or demolition works.



I HAVE ASBESTOS IN MY BUILDING, NOW WHAT?

An asbestos management plan is a tool designed to list all asbestos and ACMs located in a building and how they should be managed. Asbestos management plans contain many different pieces of information, including remedial action plans for asbestos and ACMs and control measures put in place to ensure ACMs do not get damaged. It is beneficial to have all of the information in regards to asbestos kept in one place.

An asbestos management plan is required under the *Health and Safety at Work (Asbestos) Regulations* (2016) for all workplaces and homes not occupied by the owner where asbestos is known or assumed to be present. Please contact us if you require assistance with creating an asbestos management plan or if you require further information.

Asbestos becomes a health issue once fibres become airborne as they can enter the lungs. If ACMs are in good condition, there may not be any immediate health hazards. A professional opinion from a licensed asbestos removalist is the best way to decide how to manage existing asbestos or ACMs. Please refer to our document *Contractors & Work Involving Asbestos* or WorkSafe's website for more details on licensed asbestos removalists.