WORKSAFE
Mahi Haumaru Aotearoa

Asbestos in New Zealand

Information for businesses, workers, and others

Consultation draft
September 2023

When reviewing this draft guidance please note the following:

- This draft guidance forms part of a wider suite of asbestos related guidance currently under development.
- Please see: WorkSafe's Consultation webpage for more information on the other pieces of asbestos guidance under development.
- This draft does not necessarily present WorkSafe's final position on any matters contained within it.
- The current Approved Code of Practice: Management and removal of asbestos, and other published guidance should still be referred to as WorkSafe's primary guidance for managing asbestos.
- Please use the submission feedback form provided on WorkSafe's Consultation webpage to provide your feedback.

Submissions close Monday 2 October 2023

Completed submission forms can be sent to: guidanceandeducationdevelopment@worksafe.govt.nz

Contents

1.0 Introduction

1.1 What is this guide about?

This guide is for anyone interested in the history of asbestos in New Zealand and the diseases it can cause.

This might include anyone that:

- works on or near asbestos
- lives with someone that works on or near asbestos
- may have asbestos in their home or on their property
- provides health and safety advice about asbestos.

1.2 What is asbestos?

Asbestos is a naturally occurring mineral that is made up of tiny fibres. There are six types of asbestos (Figure 1).

If asbestos is disturbed, it can release fibres into the air. These fibres can get stuck in the lungs and cause disease.

All forms of asbestos are harmful to humans. Any type of asbestos fibre can be inhaled and get stuck in the lungs.

All types of asbestos should be treated with caution.

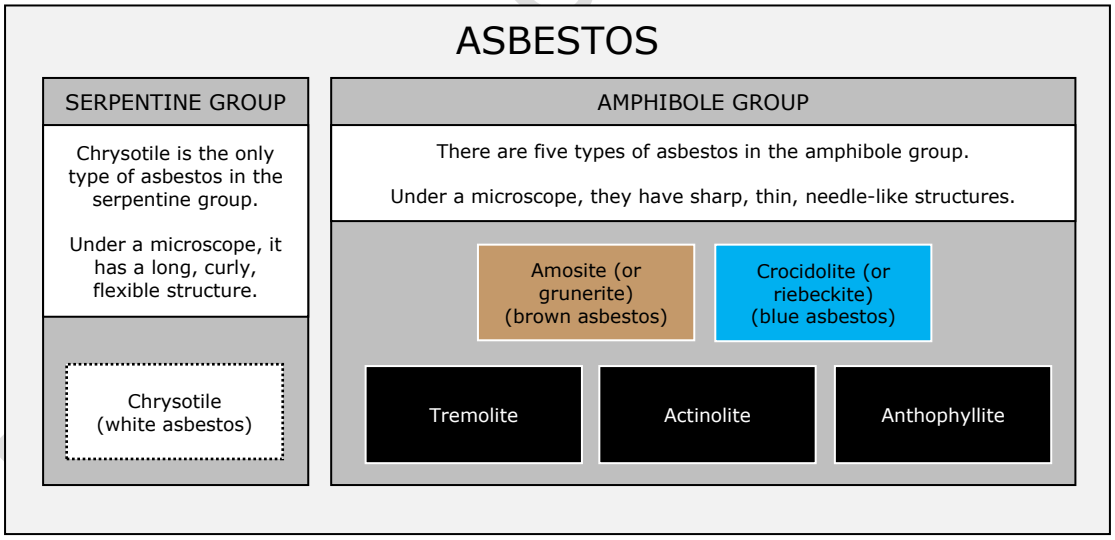


Figure 1: Types of asbestos

1.3 What was asbestos used for?

Asbestos is resistant to heat, fire, and chemicals and does not conduct electricity. For these reasons, asbestos was used widely in many industries, including construction, manufacturing, and textiles. It was a popular material for a lot of products, such as:

- cement cladding and roofing

- floor tiles and vinyl sheeting
- insulation board
- textured ceilings and sprayed-on wall surfaces
- insulation around pipes, heaters, and hot water cylinders
- vehicle brakes and clutches
- textiles.

1.4 Why is asbestos still a problem in New Zealand?

Just because we stopped using asbestos in New Zealand, it does not mean the problem went away.

This is because asbestos was used in construction for many years, right up until 2000. This means that any building built or renovated before 2000 could contain asbestos.

Even if the original part of a building does not contain asbestos, newer parts might. For example, if an extension was added or if a building was refurbished before 2000, those parts might contain asbestos.

Asbestos can also be found underground, in soil, and in landfill.

Many buildings and structures in New Zealand that contain asbestos are getting old. That means there is a high risk of people coming into contact with asbestos when they do repair or renovation work. Even people who live or work in these buildings could be at risk, especially if the building gets damaged in some way.

1.5 Who is at risk of asbestos exposure?

Everyone is exposed to asbestos at some time during their life. Low levels of asbestos fibres are in the air, water, and soil.

People who become ill from asbestos are usually people who are exposed to it regularly. The health risks increase when:

- more asbestos fibres are inhaled
- exposure to asbestos happens more often
- exposure happens over a long period of time.

People who have jobs where they work directly with or near asbestos material are at higher risk of becoming ill from asbestos.

Remember

Even a single exposure to a lot of asbestos fibres can cause serious health problems later in life.

1.6 Secondary asbestos exposure

It is not just workers who are at risk from asbestos.

Secondary asbestos exposure means coming into contact with asbestos without working with it directly. It happens when someone who works with asbestos brings it back to their home, usually without knowing about it.

Asbestos fibres are not easy to get rid of. If a worker brings asbestos fibres into their home, the fibres can stay stuck in fabric (like sofas and carpets) for many years.

Asbestos is also very difficult to wash away. You cannot get rid of asbestos fibres by simply washing the clothes in a washing machine. The fibres can stick to other clothes in the wash and spread further.

2.0 Diseases caused by asbestos

2.1 Breathing in asbestos fibres is a serious risk to health

Breathing in asbestos fibres is a serious risk to health. Once asbestos fibres are breathed in, they can get stuck in the lungs and cause disease.

Preventing asbestos exposure is the most effective way to reduce the risk of asbestos causing a disease.

> If you think you might have signs or symptoms of an asbestos-related disease, talk to your doctor, or another health professional that you trust.
>
> There are many conditions can cause similar symptoms, but it is always best to get them checked out as soon as possible.

2.2 What happens when you inhale asbestos fibres?

Asbestos fibres are often too small to be seen with the naked eye. Even if you cannot see any dust particles in the air, asbestos fibres may still be present.

When you breathe in through your mouth or nose, these tiny asbestos fibres can enter the body (Figure 2). From there, they travel down into the lungs.

Because asbestos fibres are so small and sharp, they can get stuck in the lung tissue. They can cause inflammation, scarring, and the growth of cancer cells.

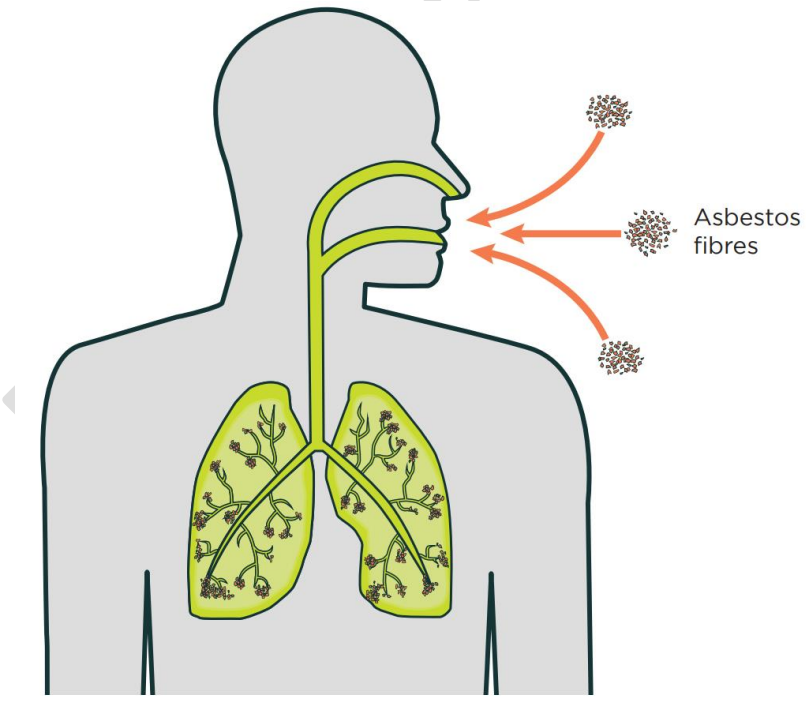


Figure 2: Asbestos fibres can be breathed in and get stuck in the lungs

2.3 Types of asbestos-related diseases

The most common diseases caused by asbestos are mesothelioma and asbestosis, but asbestos can also cause other diseases (Figure 3).

The diseases caused by asbestos can be split into two groups:

- diseases that are malignant (sometimes called 'cancerous')
- diseases that are non-malignant (sometimes called 'benign').

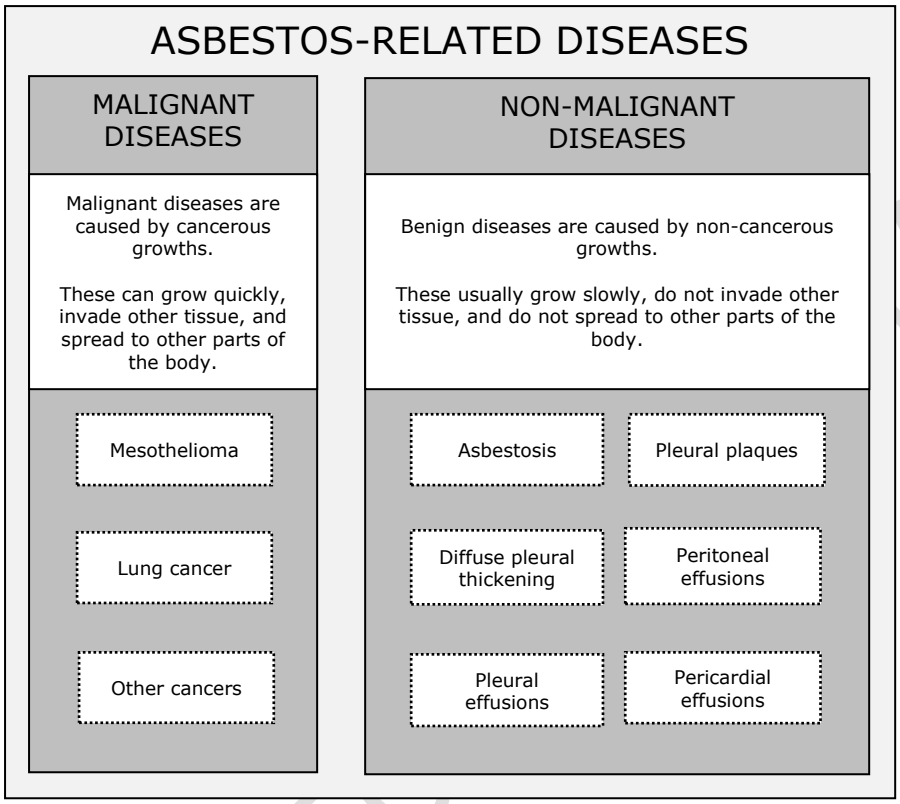


Figure 3: Malignant and non-malignant diseases caused by asbestos

Remember

Even though non-malignant diseases are not cancerous and do not spread, they can still be life-threatening.

2.4 Mesothelioma

Mesothelioma is an aggressive cancer that affects the lining of vital organs. It can affect the lining of the lungs, stomach, heart, and other organs. Mesothelioma can be caused by inhaling asbestos fibres.

Most cases of mesothelioma are caused by exposure to asbestos.

Mesothelioma can take a long time to develop – it can be many years after exposure to asbestos before symptoms start.

Symptoms of mesothelioma include:

- chest pain
- difficulty breathing
- a cough that does not go away.

The early symptoms of mesothelioma are usually mild, so most people do not seek medical help until the disease is in its later stages.

After being diagnosed, most people with mesothelioma will only have about a year left to live. When the disease is advanced, treatment options can be more limited, so the survival rate for mesothelioma is low.

Mesothelioma is usually treated with a combination of surgery, chemotherapy, or radiation therapy.

2.5 Lung cancer

While mesothelioma mainly affects the lining of organs (for example, the lungs), lung cancer affects the lung tissue itself. Lung cancer can take many years to develop but can quickly spread to other parts of the body.

The risk of developing lung cancer increases with higher levels of asbestos exposure. The risk is even higher for people who smoke or used to smoke.

The symptoms of lung cancer can be similar to other lung diseases, so it can be difficult to find early. Symptoms can include:

- a cough that does go away
- chest pain or shoulder pain
- coughing up blood
- often having lung infections (like bronchitis or pneumonia)
- weight loss that you cannot explain.

Treatments for lung cancer can include surgery to remove affected parts of the lung, chemotherapy, radiation therapy, or a combination of these.

2.6 Other cancers

Asbestos fibres can cause disease in other parts of the body outside of the lungs.

Asbestos exposure has been linked to cancer in other organs, including:

- ovarian cancer (cancer in the ovaries)
- laryngeal cancer (cancer in the larynx, sometimes called the voice box)
- bile duct cancer (cancer in the tube that connects the gall bladder to the liver and small intestine).

2.7 Asbestosis

Asbestosis is a lung disease caused by exposure to asbestos fibres. It is chronic, which means that it is long terms and tends to get worse over time. Asbestos fibres cause

scarring in the lung tissue, which makes the lungs stiff and less flexible. This makes it harder to breathe.

Unlike mesothelioma and lung cancer, asbestosis is not a form of cancer, but it is still a serious health problem.

Asbestosis usually takes many years to develop, sometimes even decades after the initial exposure to asbestos.

Symptoms of asbestosis can include:

- difficulty breathing, which usually gets worse over time
- a persistent, dry cough
- chest tightness or chest pain
- swelling of the fingertips (sometimes called 'clubbing').

Asbestosis cannot be cured, but treatments can help to control the symptoms. These treatments can include:

- oxygen therapy to help with breathing
- medicines to thin the mucus in the lungs
- physiotherapy to help clear the lungs.

3.0 History of asbestos in New Zealand

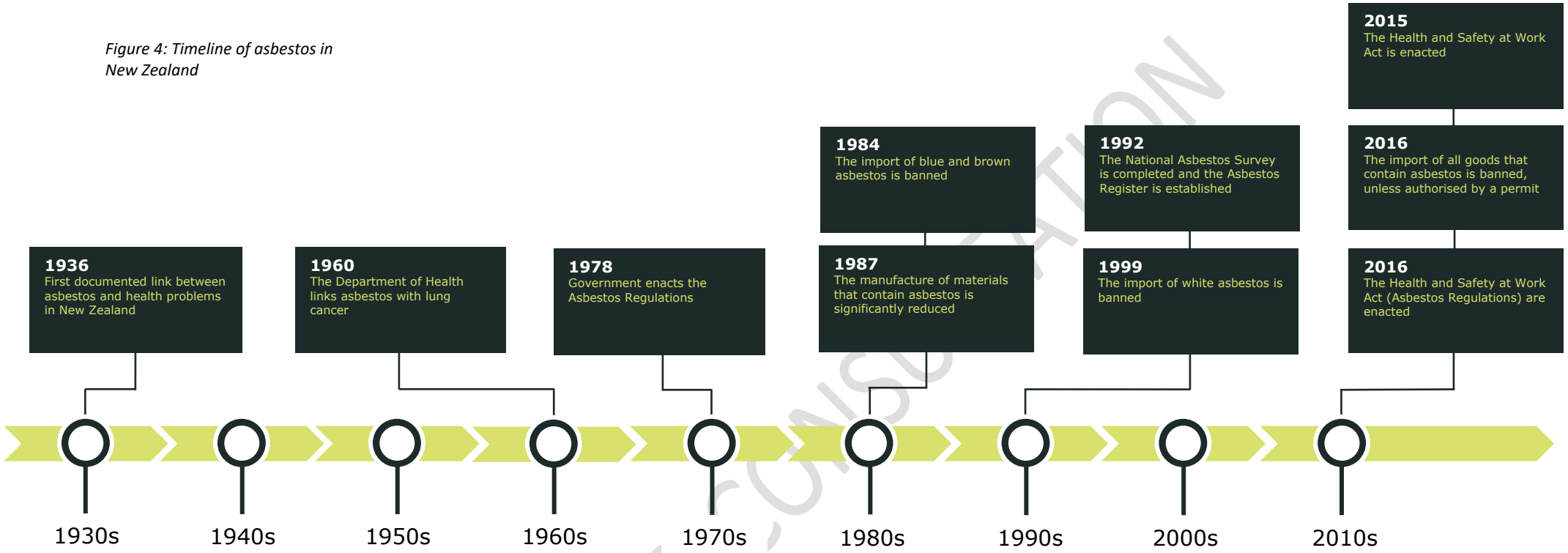
Asbestos was used widely for most of the 20th century. For some of that time, its risks were not well known.

Nowadays, we know more about the risks of asbestos and regulations are in place to protect people's health and safety.

Many different people and groups have played a part in improving how asbestos is managed in New Zealand, including government agencies, unions, charities, and individuals affected by asbestos.

Figure 4 shows some of the important dates that led to changes in how asbestos is managed in New Zealand.

Figure 4: Timeline of asbestos in New Zealand



1930s and 1940s

This era saw an increase in the amount of asbestos across many industries and low understanding about its risks.

Asbestos was used commonly, especially for shipbuilding during World War II.

International research started to link asbestos exposure to health risks, but awareness about these risks was quite low in New Zealand. No formal systems were in place to protect worker health and safety.

1950s and 1960s

International evidence about the dangers of asbestos planted a seed of awareness in New Zealand.

Asbestos use continued to rise after World War II, especially in the production of asbestos cement.

By the late 1960s, the government began to investigate asbestos use and its effects on health.

1970s and 1980s

In this era, there were growing concerns about the risks of asbestos.

The government started to take steps to tackle the asbestos problem.

The Asbestos Regulations were enacted in 1978. These regulations did not cover all industries or completely ban asbestos.

1990s and 2000s

These decades were marked by greater awareness about asbestos and the problems it can cause.

The impact of asbestos on people's health became more visible during this time. Several high-profile cases brought the issue to the attention of the public and the media shared their stories with the public.

A National Asbestos Register was established to track asbestos exposure and asbestos-related diseases.

2010s onward

The widespread demolition and refurbishment of buildings, many containing asbestos, led to public concern about asbestos exposure.

The government enacted a ban on asbestos-containing products.

New laws to protect the health and safety of workers were brought in, such as the Health and Safety at Work Act was enacted in 2015. This was followed by specific asbestos regulations in 2016.

4.0 New Zealand legislation that relates to asbestos management

4.1 The Health and Safety at Work Act 2015 (HSWA)

The Health and Safety at Work Act 2015 (HSWA) is New Zealand's workplace health and safety legislation.

Underneath HSWA are different sets of regulations (Figure 5). Each set of regulations covers a specific area or industry. Regulations provide more detailed rules for situations or hazards. For example, there are specific regulations for working with asbestos and working with hazardous substances.

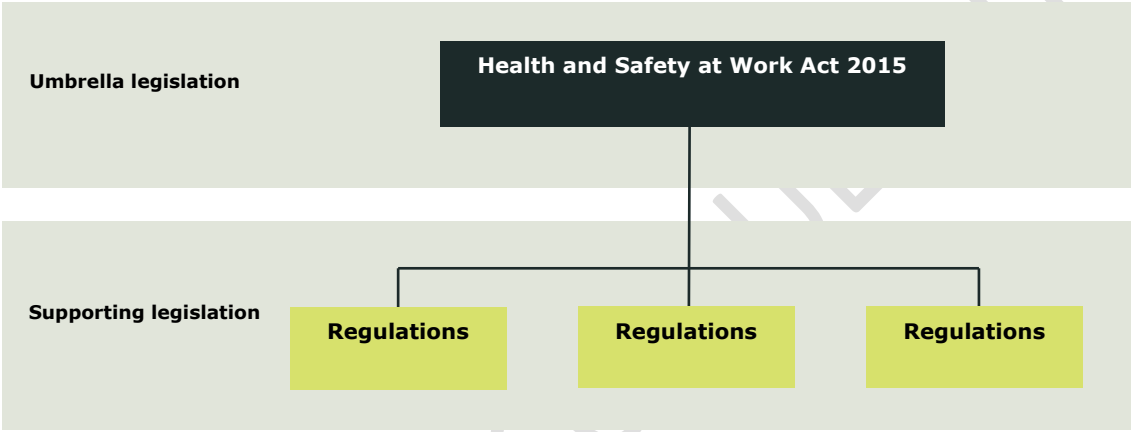


Figure 5: Structure of HSWA and supporting regulations

HSWA sets out principles, duties, and offences relating to workplace health and safety.

One of the purposes of HSWA is to protect workers and others against harm to their health, safety, and wellbeing by eliminating or minimising risks at work.

HSWA ensures that everyone has a role to play in keeping people healthy and safe in workplaces.

DUTY HOLDERS UNDER HSWA

A duty holder is a person who has a duty under HSWA. There are four types of duty holders (Table 1).

Duty holder	Details
PCBU	A PCBU is a 'person conducting a business or undertaking'. A PCBU may be an individual person or an organisation. PCBUs have the primary responsibility for the health and safety of their workers while at work and any other workers they influence or direct while carrying out the work. They are

	also responsible for the health and safety of people at risk from their work.
Officer	An officer is a person who has significant influence over the management of a business (for example, company directors, partners, board members, and chief executives). Officers must exercise due diligence to make sure the PCBU complies with its duties and obligations under HSWA.
Worker	A worker is an individual who carries out work in any capacity for a PCBU. Workers must take reasonable care for their own health and safety and that their actions (or failure to act) do not put the health and safety of others at risk. Workers can be at any level of the PCBU (for example, managers are workers too).
Other persons	Examples of other persons at workplaces include workplace visitors and casual volunteers at workplaces. Other persons in the workplace have a duty to take reasonable care for their own health and safety and that their actions (or failure to act) do not put the health and safety of others at risk.

Table 1: Duty holders under HSWA

You can find more detailed information about HSWA on the WorkSafe website: [Introduction to the Health and Safety at Work Act 2015 – special guide | WorkSafe]

4.2 Health and Safety at Work (Asbestos) Regulations 2016

The Health and Safety at Work (Asbestos) Regulations 2016 also sit under HSWA and specify how to manage asbestos risks.

PCBUs must manage asbestos risks to protect the health and safety of their workers and other people. This applies to:

- PCBUs that that carry out work involving asbestos, and
- PCBUs that own or manage workplaces that have asbestos in them.

WORK INVOLVING ASBESTOS

The Asbestos Regulations generally prohibits PCBUs carrying out work, or directing or allowing a worker to carry out, work involving asbestos.

It is only legal to work with asbestos in some specific circumstances. Examples of when it is legal to work with asbestos include:

- if asbestos needs to be removed or disposed of

- if asbestos needs to be sampled to identify it
- if maintenance or corrective actions are needed to be done on asbestos to reduce risk (for example, encapsulating or sealing asbestos material)
- for research or analysis
- in an emergency.

The Asbestos Regulations impose a number of duties on PCBUs that work on or near asbestos to ensure they manage the risks to keep people healthy and safe.

LICENCES

The Asbestos Regulations brought in a licensing system for certain tasks that involve working with asbestos.

Some tasks that involve working with asbestos can only be done by licenced PCBUs. These include tasks like:

- removing large amounts of asbestos, or
- work that involves a high risk of asbestos fibres being released into the air.

To get a licence, PCBUs must show they have the knowledge, skills, and equipment needed to work safely with asbestos. Licences need to be renewed regularly to make sure that operators continue to meet the necessary safety standards.

A licence is also required to be an asbestos assessor. An asbestos assessor provides air quality monitoring during removal work, inspects the finished job and provides a clearance certificate.

You can find more detailed information about licensing on the WorkSafe website: Licensing overview | WorkSafe

ASBESTOS FIBRES IN THE AIR AT WORKPLACES

Every PCBU must make sure the amount of asbestos in the air at a workplace does not go over a certain limit.

What is the limit for asbestos fibres in the air?

The asbestos limit for the air at a workplace is an average of 0.1 asbestos fibres per millilitre of air over eight hours.

This limit is about controlling the amount of asbestos in the air, not about how much a person can be exposed to.

The limit of asbestos fibres in the air applies to all workplaces except enclosures used for asbestos removal work (when certain control measures are in place to minimise the risk of exposure to asbestos).

The regulations require that PCBUs:

- eliminate the risk of exposure to asbestos fibres in the air so far as is reasonably practicable
- minimise the risk of exposure to asbestos fibres in the air if it is not reasonably practicable to eliminate the risk
- make sure that the airborne contamination standard for asbestos is not exceeded at the workplace.

What does 'reasonably practicable' mean?

There are two parts to 'reasonably practicable'.

Firstly, PCBUs must consider what actions are possible in their circumstances to ensure health and safety.

Then, PCBUs must consider which of the possible actions are reasonable for them to take in their circumstances.

You can read more about 'reasonably practicable' on the WorkSafe website: Reasonably practicable (worksafe.govt.nz)

4.3 Health and Safety at Work (General Risk and Workplace Management) Regulations 2016

The General Risk and Workplace Management (GRWM) Regulations sit under HSWA. They set further specific duties on PCBUs.

The GRWM Regulations set out a risk management process for substances that are hazardous to health. They cover specific areas, including:

- workplaces and workplace facilities
- information, instruction, training, and supervision
- personal protective equipment (PPE)
- monitoring worker exposure and worker health
- first aid equipment, facilities, and first aiders
- emergency plans
- young workers and young people at workplaces.

You can find more detailed information about GRWM Regulations on the WorkSafe website: General risk and workplace management | WorkSafe

4.4 Health and Safety at Work (Worker Engagement, Participation and Representation) Regulations 2016

The Worker Engagement, Participation and Representation (WEPR) Regulations also sit under HSWA.

Workers often have the detailed knowledge and experience of how work is done and how it affects them. This means worker engagement, participation and representation are important for any well-functioning workplace health and safety system.

The WEPR Regulations are about making sure workers are involved in decisions about health and safety. They require PCBUs to engage and consult with workers that are directly affected by a health and safety matter.

The WEPR Regulations cover areas that include:

- involving workers in identifying and assessing hazards
- involving workers in risk management
- health and safety representatives
- health and safety committees
- health and safety representative training.

You can find more detailed information about worker engagement, participation and representation on the WorkSafe website: Worker engagement and participation | WorkSafe

5.0 More information

You can find more information about the management of asbestos in workplaces on the WorkSafe website: Asbestos | WorkSafe