



# Asbestos



**Asbestos Booklet**

The information in this booklet is based on:

- *Code of Practice for the Management and Control of Asbestos in Workplaces* [NOHSC:2018(2005)]
- *Code of Practice for the Safe Removal of Asbestos - 2<sup>nd</sup> Edition* [NOHSC:2002(2005)]

Readers should familiarise themselves with the Codes, which are available from <http://www.ascc.gov.au>

**This booklet is a guide only and does not cover all provisions of the Codes of Practice. The guidelines contained herein support maintenance works conducted for the Building Management and Works business unit of the Department of Treasury and Finance.**

### **Further Information**

You can access an electronic copy of this booklet from the Department of Treasury and Finance website <http://www.bmw.wa.gov.au>

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Government of **Western Australia**  
Department of **Treasury and Finance**  
Building Management and Works

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# IMPORTANT INFORMATION

## Introduction

This booklet outlines safe work practices for dealing with asbestos. It has been prepared as a resource for building maintenance contractors to refer to in situations where a job may require them to modify or manage their normal work practices so that asbestos containing materials (ACM) are handled appropriately.

## Before You Start Work

### Asbestos Is A Hazardous Substance

On arrival at a site, maintenance workers must check with site management for the existence of asbestos in the vicinity of the work area. If asbestos is present, the Asbestos Register must be sited. You may also be asked to sign a Log Book.

Where possible, plan maintenance repair work to avoid disturbing ACM. Check for site or agency specific procedures. For example, schools specify that asbestos-related work must not be carried out while students or school staff are on site.

When conducting maintenance or repair work that may involve disturbing or removing ACM, it's important to wear protective equipment that prevents inhalation of asbestos fibres. It's also important to dispose of or decontaminate clothing and equipment correctly. Make use of disposable protective clothing and equipment where possible.

Follow the correct safety procedures to protect yourself from asbestos related disease.

# USEFUL DEFINITIONS

## **AS or AS / NZS**

AS is an Australian Standard and AS / NZS is an Australian / New Zealand Standard. Both are always followed by a number.

## **ACM**

Asbestos Containing Material.

## **Asbestos Vacuum Cleaner**

A vacuum cleaner that is fitted with a high efficiency particulate air (HEPA) filter and complies with the AS/NZS 60335.2.69:2003: Household and Similar Electrical Appliances – Safety – Particular requirements for wet and dry vacuum cleaners, including power brush, for industrial and commercial use. A domestic vacuum cleaner is not suitable for use with asbestos, even if fitted with a HEPA filter.

## **Competent Person**

A person possessing adequate qualifications, such as suitable training and sufficient knowledge, experience and skill, for the safe performance of the specific work.

## **PPE**

Personal Protective Equipment.

## **PVA**

Polyvinyl Acetate.

# SECURITY SIGNS AND BARRIERS

## Purpose

A work site should be clearly defined to warn people that asbestos work is being conducted and to limit entry to essential people only. Signs and barriers must delineate the boundaries of the “**Asbestos Work Area**” and the “**Asbestos Removal Site**”. The boundaries of these areas should be determined by a competent person based on a risk assessment.

The use of effective signs and barriers to isolate the work area should prevent those not involved with the work from being exposed to any potential risk.

## Barriers

Where possible, barriers should be constructed of post and chain or similar materials. Tape can be used as a barrier to define an asbestos work area for some types of asbestos related work of short duration. If a sign is not feasible, tape with the words “**Asbestos Hazard**” along its length can be used to communicate the hazard.

## Signs

Entry points to the asbestos work area should be signposted or labelled in accordance with *AS 1319-1994 Safety Signs for the Occupational Environment*. Signs chosen to signal the work area should be weatherproof, constructed of light-weight material and adequately secured.

## Security

Responsibilities for the security and safety of the asbestos removal site and asbestos work area should be specified in the asbestos removal control plan. Site specific security and emergency plans should be provided prior to commencement of the works. Maintenance of site security and prevention of unauthorised access should also be designated in the asbestos removal control plan.

## Clearance to reoccupy

Reoccupation can only occur after a thorough clearance inspection conducted by a competent person who is independent of the person responsible for the asbestos removal work. Protective barriers and signs should remain in place until clearance to reoccupy a site has been granted.

# PERSONAL PROTECTIVE EQUIPMENT

## General

Personal protective equipment (PPE) may need to be used, in combination with other effective control measures, when working with asbestos containing materials.

The selection and use of PPE should be based on risk assessments (see Part 10 of the *Code of Practice for the Management and Control of Asbestos in Workplaces [NOHSC: 2018 (2005)]*) and determined by a competent person.

The ease of decontamination should be one of the factors considered when choosing PPE. Where possible, disposable equipment should be used. All disposable PPE should be disposed of as asbestos waste.

If work with asbestos requires the use of chemicals that are themselves hazardous substances, a further risk assessment must be performed. The relevant Material Safety Data Sheets (MSDS) must be referred to for information on the PPE to be used and any other precautions to be taken when using the chemicals (the manufacturer can supply the MSDS).

## Coveralls

Protective clothing should be made from material capable of providing adequate protection against fibre penetration. When selecting protective clothing, factors such as the possibilities of heat stress, fire and electrical hazards should also be considered.

Disposable coveralls with fitted hoods and cuffs should be worn. Coveralls with open pockets and/or Velcro fastenings should not be used because these features can be easily contaminated and are difficult to decontaminate.

Fitted hoods should always be worn over the straps of respirators and loose cuffs should be sealed with tape.

Asbestos fibres should be prevented from being transported outside the workplace by thoroughly vacuuming asbestos fibres from work clothes using an asbestos vacuum cleaner. Disposable coveralls should be disposed of as asbestos waste at the completion of the task.

## Footwear

Laced boots should be avoided as they can be difficult to clean and asbestos dust can gather in the laces and eyelets. Laceless boots such as gumboots are preferred where practicable, and boot covers should be worn where necessary.

Safety footwear must be decontaminated before leaving the asbestos work area for any reason or sealed in double bags for use only on the next asbestos maintenance task. Alternatively, work boots that cannot be effectively decontaminated must be disposed of as asbestos waste at the end of the job.

## Gloves

The use of protective gloves should be determined by a risk assessment. If significant amounts of asbestos fibres may be present, disposable gloves should be worn. Protective gloves can be unsuitable if dexterity is required.

Workers must clean their hands and fingernails thoroughly after work. Used gloves must be disposed of as asbestos waste.

## Respirators

In general, the selection of suitable respiratory protection equipment depends on the nature of the asbestos work, the probable maximum concentrations of asbestos fibres that would be encountered in this work and any personal characteristics of the wearer that may affect the facial fit of the respirator (e.g. facial hair and glasses). A competent person should determine the most efficient respirator for the task.

Respirators should comply with *AS/NZS 1716-2003 Respiratory Protective Devices* and be selected, used and maintained in accordance with *AS/NZS 1715-1994 Selection, Use and Maintenance of Respiratory Protective Devices*. They should always be worn under fitted hoods. Face pieces should be cleaned and disinfected according to the manufacturer's instructions. Respirators should be properly stored when not in use.

Respiratory protective equipment should be used until all contaminated disposable coveralls and clothing has been vacuum cleaned and/or removed and bagged for disposal, and personal washing has been completed.

# ASBESTOS CEMENT ROOFS

## ACCESS AND PENETRATIONS

### General

Care should be taken when accessing asbestos cement roofs not to damage them. The risk of injury due to falling through or slipping off asbestos cement roofs is significant due to the nature of the material.

**Access to asbestos cement roofs by children and others who have not been given special instruction, should be expressly forbidden.**

### Instructions

Prior to accessing asbestos cement roofs conduct a job safety analysis.

- Put in place appropriate measures in accordance with the WorkSafe (WA) Code of Practice - Prevention of Falls at Workplaces.
- Do not scrape or drag tools or equipment across the surface of the roof (this may cause damage to the surface of the roof resulting in the possible release of asbestos fibres or the acceleration of the weathering process).

### Roof Penetrations

Prior to commencing work on asbestos cement roofs the Officer in Charge of the work place and where available the Health and Safety Representative shall be consulted regarding the proposed work and work practices. The work should be undertaken when the premise is not occupied.

Under no circumstances should power tools be used for other than removing fixing screws. The roof sheets concerned should be removed from the roof and replaced with a suitable material in which the penetration has already been cut.

If a replacement sheet cannot be found the asbestos cement roof sheet may be removed from the site, modified using appropriate procedures and then reinstated.

Any roof sheets damaged during the above work shall be repaired to the satisfaction of the Officer in Charge.

Following completion of the works all areas associated with the work shall be cleaned as described in 'Decontamination' (page 25).

It is recommended that workers become familiar with sections 11.5 and 11.6 of the *Code of Practice for the Management and Control of Asbestos in Workplaces [NOHSC:2018(2005)]* prior to undertaking work on asbestos cement roofs.

Where a safe work practice is not obvious, a competent person should be contacted to design a safe work practice.

ASBESTOS

# ACCESSING CEILING SPACES

## General

Work undertaken near ceilings that contain asbestos should give due consideration to the spaces under the roof, eaves, gables or asbestos cement flue pipes.

## Instructions

Prior to commencing work the Officer in Charge of the work place and the Health and Safety representative where available shall be consulted regarding the proposed work and work practices.

Where the roof is not asbestos, the **Asbestos Register** must be consulted to ascertain whether the roof is a replacement for an asbestos roof.

The entry or access point into the ceiling space should be marked with appropriate signs indicating that asbestos related work is in progress.

As with all dusty environments persons working in such areas should wear a disposable respirator (class P1 or P2 disposable respirators are recommended).

Effort should be made when moving around in the roof space to avoid generating dust. Items of equipment or materials taken into the roof space should be placed in position and not dropped or thrown.

Ensure that the area around the access point is left in a clean and dust-free state at the completion of the work.

If the entry into the roof space is such that the dropping of dust and dirt during entry and egress cannot be avoided, a drop sheet should be used to contain that dirt and both the drop sheet and dirt disposed of as asbestos waste.

# CLEANING GUTTERS ON ASBESTOS ROOFS

## Equipment

In addition to any equipment required to complete the particular task workers should obtain:

- A bucket of detergent water.
- A watering can or garden spray.
- A hand trowel or scoop.
- Disposable cleaning rags.
- A suitable asbestos waste container (drum, bin or skip) lined with 200 micron ( $\mu\text{m}$ ) thick plastic sheeting or 200 $\mu\text{m}$  thick plastic bags.
- Warning signs and/or barrier tape.
- An asbestos vacuum cleaner.
- PPE.
- A class P1 or P2 half face respirator is adequate for this task, provided the recommended safe procedure is followed.

## Prepare the work area

- Since the work is to be carried out at a height, take appropriate precautions to prevent the risk of falls.
- Segregate the work area to restrict access – use warning signs and/or barrier tape at entry points.
- Segregate the area below.
- Ensure availability of suitable asbestos waste disposal containers.
- Avoid working in windy environments where asbestos fibres can be redistributed.

## Gutter cleaning

- Disconnect or re-route the downpipes to prevent entry of contaminated water into the waste water system and ensure there is a suitable container to collect contaminated run off and dispose as asbestos waste.
- Mix the water and detergent and using the watering can or garden spray, pour the detergent water into the gutter, but avoid creating a slurry.
- Remove the debris using a scoop or trowel. Do not allow debris or slurry to enter the waste water system.
- Wet the debris again if dry material is uncovered.
- Place the removed debris straight into the asbestos waste container.

## Site clean up

- Use damp rags to wipe down gutters and equipment used. **Do not resoak or reuse rags.**
- If necessary and practicable, use an asbestos vacuum cleaner to vacuum the area below.
- Place debris, used rags and other waste in the asbestos waste container.
- Seal asbestos waste container with lids or rims in good working order.
- Wet wipe the external surfaces of the asbestos waste container to remove any adhering dust before it is removed from the asbestos work area. Mark the container as "**Asbestos Waste**".
- Seal the contaminated run off container and dispose of as asbestos waste.
- Follow personal decontamination procedure – see 'Decontamination' (page 25).

# WORKING ON ASBESTOS CEMENT PRODUCTS

## General

A risk assessment as described in Part 10 of the *Code of Practice for the Management and Control of Asbestos in Workplaces [NOHSC:2018 (2005)]* should be undertaken before any maintenance or service work with ACM is commenced and only competent persons should carry out work with asbestos containing materials.

The drilling of asbestos cement sheeting can release asbestos fibres into the atmosphere, so precautions must be taken to protect the drill operator and other persons from exposure to asbestos fibres. A hand drill is preferred to a battery-powered drill, because the quantity of fibres is reduced if a hand drill is used.

## Equipment

In addition to any equipment required to complete the particular task, the following equipment may be required on site prior to commencing the work.

- A non-powered hand drill or a *low-speed* battery-powered drill or drilling equipment. Battery-powered drills should be fitted with a local exhaust ventilation (LEV) dust control hood wherever possible. If a LEV dust control hood cannot be attached and other dust control methods – such as pastes and gels – are unsuitable then shadow vacuuming techniques should be used with an approved asbestos vacuum cleaner.
- Disposable cleaning rags.
- A bucket of water or more as appropriate, and/or a misting spray bottle.
- Duct tape.
- Sealant.
- Spare PPE.
- A thickened substance such as wallpaper paste, shaving cream or hair gel.
- A suitable asbestos waste container (e.g. 200 µm plastic bags or a drum, bin or skip lined with 200 µm plastic sheeting).
- 200 µm plastic sheeting.
- Warning signs and/or barrier tape.
- An asbestos vacuum cleaner.
- A sturdy paper, foam or thin metal cup, or similar (for work on overhead surfaces only).

## Personal Protective Equipment

- Protective clothing.
- Respirator (*AS/NZS 1715, AS/NZS 1716*). It is likely that a class P1 or P2 half face respirator will be adequate for these tasks, provided the recommended safe work procedure is followed.

## Preparing the asbestos work area

- If the work is to be carried out at a height, appropriate precautions must be taken to prevent the risk of falls.
- Ensure appropriately marked asbestos waste disposal bags are available.
- Carry out the work with as few people present as possible.
- Segregate the asbestos work area to ensure unauthorised personnel are restricted from entry (e.g. close door and/or use warning signs and/or barrier tape at all entry points). The distance for segregation should be determined by a risk assessment.
- If drilling a roof from outside, segregate the area below.
- If access is available to the rear of the asbestos cement, segregate this area as well.
- If possible, use plastic sheeting, secured with duct tape, to cover any surface within the asbestos work area that could become contaminated.
- Ensure there is adequate lighting.
- Avoid working in windy environments where asbestos fibres can be redistributed.
- If using a bucket of water, do not re-soak used rags in the bucket, as this will contaminate the water. Instead, either fold the rag so a clean surface is exposed or use another rag.

## Drilling vertical surfaces

- Tape both the point to be drilled and the exit point, if accessible, with a strong adhesive tape such as duct tape to prevent the edges crumbling.
- Cover the drill entry and exit points (if accessible) on the ACM with a generous amount of shaving cream, gel or a similar thickened substance.
- Drill through the paste.

- Use damp rags to clean off the paste and debris from the wall and drill bit.
- Dispose of the rags as asbestos waste, as they will contain asbestos dust and fibres.
- Seal the cut edges with sealant.
- If a cable is to be passed through, insert a sleeve to protect the inner edge of the hole.

## **Drilling overhead horizontal surfaces**

- Mark the point to be drilled.
- Drill a hole through the bottom of the cup.
- Fill or line the inside of the cup with shaving cream, gel or a similar thickened substance.
- Put the drill bit through the hole in the cup so that the cup encloses the drill bit, and make sure the drill bit extends beyond the lip of the cup.
- Align the drill bit with the marked point.
- Ensure the cup is firmly held against the surface to be drilled.
- Drill through the surface.
- Remove the drill bit from the cup, ensuring that the cup remains firmly against the surface.
- Remove the cup from the surface.
- Use damp rags to clean off the paste and debris from the drill bit.
- Dispose of the rags as asbestos waste, as they will contain asbestos dust and fibres.
- Seal the cut edges with sealant.
- If a cable is to be passed through, insert a sleeve to protect the inner edge of the hole.

## **Decontaminating the asbestos work area and equipment**

- Use damp rags to clean the equipment.
- Carefully roll or fold any plastic sheeting used to cover any surface within the asbestos work area, so as not to spill any dust or debris that has been collected.

- If necessary, use damp rags and/or an asbestos vacuum cleaner to clean any remaining visibly contaminated sections of the asbestos work area.
- Place debris, used rags, plastic sheeting and other waste in the asbestos waste bags/container.
- Wet wipe the external surfaces of the asbestos waste bags/container to remove any adhering dust before they are removed from the asbestos work area.

## **Personal decontamination**

See 'Decontamination' (page 25).

## **Clearance procedure**

- Visually inspect the asbestos work area to make sure it has been properly cleaned (see 'Decontamination' page 25). Clearance air sampling is not normally required for this task.
- Dispose of all waste as asbestos waste.

# SEALING, COATING AND CLEANING OF ASBESTOS CEMENT PRODUCTS

## Equipment

In addition to any equipment required to complete the task (e.g. paint, paint brushes, paint rollers or airless spray gun/equipment), the following equipment may be required on site prior to commencing the work.

- Disposable cleaning rags.
- A bucket of water, or more as appropriate, and/or a misting spray bottle.
- Sealant.
- Spare PPE.
- A suitable asbestos waste container.
- Warning signs and/or barrier tape.

## Personal protective equipment

- Protective clothing (see 'Personal Protective Equipment' page 4).
- Respirator - it is likely that a class P1 or P2 half face respirator will be adequate for this task, provided the recommended safe work procedure is followed.
- Where paint is to be applied, appropriate respiratory protection to control the paint vapours / mist must also be considered.

## Preparing the asbestos work area

- If the work is to be carried out at a height, appropriate precautions must be taken to prevent the risk of falls.
- Before starting, assess the asbestos cement for damage.
- Ensure appropriately marked asbestos waste disposal bags are available.
- Carry out the work with as few people present as possible.

- Segregate the asbestos work area to ensure unauthorised personnel are restricted from entry (e.g. close door and / or use warning signs and / or barrier tape at all entry points). The distance for segregation should be determined by a risk assessment.
- If working at a height, segregate the area below.
- If possible, use plastic sheeting, secured with duct tape, to cover any floor surface within the asbestos work area which could become contaminated. This will help to contain any runoff from wet sanding methods.
- Ensure there is adequate lighting.
- If using a bucket of water, do not re-soak used rags in the bucket, as this will contaminate the water. Instead, either fold the rag so a clean surface is exposed or use another rag.
- Never use high-pressure water cleaning methods.
- Never prepare surfaces using dry sanding methods. Where sanding is required consideration should be given to removing the ACM and replacing it with a non-asbestos product.
- Wet sanding methods may be used to prepare the asbestos containing material, provided precautions are taken to ensure all the runoff is captured, and filtered where possible.
- Wipe dusty surfaces with a damp cloth.

## **Painting and sealing**

- When using spray painting equipment, never use a high pressure spray to apply the paint.
- When using a roller, use it lightly to avoid abrasion or other damage.

## **Clearance procedure**

- Visually inspect the asbestos work area to make sure it has been properly cleaned.
- Clearance air sampling is not normally required for this task.
- Dispose of all waste as asbestos waste.

## Decontaminating the asbestos work area and equipment

- Where required, use damp rags and/or an asbestos vacuum cleaner to clean the asbestos work area.
- Place debris, used rags, plastic sheeting and other waste in the asbestos waste bags/container.
- Wet wipe the external surfaces of the asbestos waste bags/container to remove any adhering dust before they are removed from the asbestos work area.
- Use damp rags to clean the equipment.

ASBESTOS

# REMOVAL OF ASBESTOS CEMENT PRODUCTS

## General

Historically, a large number of asbestos-cement building products have been used in the building industry in Australia including but not limited to:

- Flat or corrugated wall and roof sheeting ('fibro').
- Floor sheeting.
- Water, drainage and flue pipes.
- Roofing shingles.
- Flexible building boards (e.g. Villaboard, Hardiflex, Wundaboard and Flexiboard).

## Preparation and enclosure

Precautions should be observed during structural alterations or demolitions involving asbestos cement products.

Hail, storm and fire damaged asbestos-cement products can pose a high risk of asbestos exposure, and should be assessed to determine if they are friable.

Under normal removal conditions the removal of asbestos-cement products does not attract a recommendation for extraction ventilation.

The minimum suitable respiratory protection is a P1 or P2 half-face respirator with a particulate filter.

The need for an enclosure and a decontamination facility should be determined by a risk assessment. The decontamination facility should be located inside the asbestos work area. Decontamination facilities, appropriate for the removal job, should be available throughout the entire removal process.

The work area should be kept clean, tidy and free from asbestos-cement debris, with the area being cleaned up on at least a daily basis. All the debris should be collected and disposed of as asbestos waste.

## Removal of asbestos-cement sheets

Wherever possible, the removal of asbestos-cement should use the wet spray method, unless this might create an electrical hazard. The dropping of asbestos-cement and the use of ramps, chutes or similar gravity-dependent devices should not be allowed under any circumstances.

If the asbestos-cement is behind ceramic tiles, sufficient tiles should be removed to give access to the fixings of the asbestos-cement sheet, taking care to minimise any damage to the sheet.

Fixings holding the asbestos-cement sheet in place should be cut with a cold chisel under the edge of the sheet or cut around the head using a punch, again so as to minimise damage to the sheet. If necessary, nails should be punched through the sheeting to facilitate effective removal. All nails and asbestos waste should be removed from the timber. The sheets should be removed with as little breakage as possible. Unnecessary breaking of asbestos-cement sheeting must not be permitted.

The asbestos-cement sheets should be wetted using a fine water spray. Once they are removed, the backs of the sheets should be wetted using a fine water spray and the sheets should be placed into a waste skip, vehicle tray or similar receptacle lined with 200 micron ( $\mu\text{m}$ ) thick polythene. Smaller pieces of sheeting and asbestos-cement debris should be placed in heavy-duty clear plastic bags 200 micron ( $\mu\text{m}$ ) thick.

## Removal of asbestos-cement roofing

Asbestos-cement roofing should be sprayed with PVA prior to the removal process. The PVA must be dry before sheet removal begins, to avoid a slip hazard.

Asbestos-cement can become brittle with age, so any removal work on roofs must address the risk of fall hazards. The removal of asbestos-cement roofing must be performed in accordance with all relevant State legislation for working on roofs and at heights.

Angle grinders should not be used, because of the potential for damage to the asbestos-cement and subsequent fibre release. Anchoring screws/bolts should be removed from the roofing sheets using an oxy torch or another suitable device that will not significantly damage the sheet.

If lichen is encountered on roof sheeting, caution should be exercised in the use of water and the choice of workers' footwear because lichen can be slippery, especially when wet. In these instances, the asbestos removalist should confer with the person with control, to determine appropriate controls, before commencing the work.

Roof sheeting should be lowered to the ground using slings and/or lifting equipment such as a crane or a forklift.

## **Decontamination of the work area**

On completion of the removal, the asbestos removalist should clean up all dust and debris within the removal area, and in particular from the framework, ceiling spaces and exposed wall cavities, using the procedures outlined in 'Decontamination' on page 25.

If asbestos-contaminated nails are to be reused they must be decontaminated. Nails that cannot be decontaminated must be removed from the timber and disposed of as asbestos waste.

Rough-sawn timber cannot be effectively wet wiped or vacuum cleaned. If the timber is to remain in situ or be recycled, it should be sealed with pigmented PVA, using low-pressure spray equipment.

## **Personal Decontamination**

PPE should be vacuumed and wet wiped, in conjunction with any other decontamination methods. Decontamination should be carried out in a designated area. Contaminated PPE should not be worn outside the asbestos work area under any circumstances.

There may be circumstances where a full decontamination unit should be used for personal decontamination. A risk assessment should be conducted to determine appropriate decontamination requirements.

# REPLACING CABLING IN ASBESTOS CEMENT CONDUITS OR BOXES

## Equipment

In addition to any equipment required to complete the particular task, the following equipment may also be required on site prior to commencing the work:

- Disposable cleaning rags.
- A bucket of water or more as appropriate, and / or a misting spray bottle.
- 200 µm thick plastic sheeting.
- Cable slipping compound.
- Appropriately marked asbestos waste disposal bags.
- Spare PPE.
- Duct tape.
- Warning signs and/or barrier tape.
- An asbestos vacuum cleaner.

## Personal protective equipment

- Protective clothing (see 'Personal Protective Equipment' page 4).
- Respirator (see *AS/NZS 1715* and *AS/NZS 1716*). It is likely that a class P1 or P2 half face respirator will be adequate for this task, provided the recommended safe work procedure is followed.

## Preparing the asbestos work area

- If the work is carried out in a confined space, appropriate precautions (see *AS/NZS 2865:2001*) must be taken to prevent the risk of asphyxiation.
- Ensure appropriately marked asbestos waste disposal bags are available.
- Carry out the work with as few people present as possible.

- Segregate the asbestos work area to ensure unauthorised personnel are restricted from entry (e.g. use warning signs and / or barrier tape at all entry points). The distance for segregation should be determined by a risk assessment.
- Use plastic sheeting, secured with duct tape, to cover any surface within the asbestos work area which could become contaminated.
- Place plastic sheeting below the conduits through which cable(s) are to be pulled, prior to pulling any cables.
- Ensure there is adequate lighting.
- Avoid working in windy environments where asbestos fibres can be redistributed.
- If using a bucket of water do not re-soak used rags in the bucket as this will contaminate the water. Instead, either fold the rag so a clean surface is exposed or use another rag.

## **Replacement or installation of cables**

- Wet down the equipment and apply adequate cable slipping compound to the conduits/ducts throughout the process.
- Clean all ropes, rods or snakes used to pull cables after use. Cleaning should be undertaken close to the point(s) where the cables exit from the conduits/ducts.
- Ropes used for cable pulling should have a smooth surface that can easily be cleaned.
- Do not use metal stockings when pulling cables through asbestos cement conduits.
- Do not use compressed air darts for pulling cables through asbestos cement conduits/ducts.

## **Decontaminating the asbestos work area and equipment**

- Use damp rags to clean the equipment.
- Wet wipe around the end of the conduit, sections of exposed cable and the pullin eye at the completion of the cable pulling operation.
- If the rope or cable pass through any rollers, these must also be wet wiped after use.
- Wet wipe the external surface of excess cable pulled through the conduit/duct, as close as possible to the exit point from the conduit, before it is removed from the work site.

- Carefully roll or fold any plastic sheeting used to cover any surface within the asbestos work area, so as not to spill any dust or debris that has been collected.
- If required, use damp rags or an asbestos vacuum cleaner to clean any remaining visibly contaminated sections of the asbestos work area.
- Place all debris, used rags, plastic sheeting and other waste in the asbestos waste bags/container.
- Wet wipe the external surfaces of the asbestos waste bags/container to remove any adhering dust before they are removed from the asbestos work area.

## Personal decontamination

See 'Decontamination' page 25.

## Clearance procedure

- Visually inspect the asbestos work area to make sure it has been properly cleaned (see section 11.10.1 of Part 11 of the *Code of Practice for the Management and Control of Asbestos in Workplaces* [NOHSC:2018(2005)]). Clearance air sampling is not normally required for this task.
- Dispose of all waste as asbestos waste.

Personal decontamination should be done within the asbestos work area where re-contamination cannot occur. Asbestos-contaminated PPE should not be transported outside the asbestos work area except for disposal purposes.

Before work clothes and footwear worn during asbestos work are removed from the asbestos work area for any reason, they should be thoroughly vacuumed with an asbestos vacuum cleaner to remove any asbestos fibres and the footwear should also be wet wiped.

Respiratory protective equipment should be used until all contaminated disposable coveralls and clothing have been vacuum cleaned and/or removed and bagged for disposal, and personal washing has been completed. Any PPE used while carrying out asbestos work must not be taken home.

A competent person may decide, on the basis of a risk assessment, that the following personal decontamination procedure can safely be used:

- First all visible asbestos dust/residue is removed from protective clothing using an asbestos vacuum cleaner and/or wet wiping.
- Second, the disposable coveralls are removed (while still using a respirator), placed in an asbestos waste bag and disposed of as asbestos waste.

- Third, clothing and footwear worn during the asbestos work is vacuumed using an asbestos vacuum cleaner, and footwear is wet wiped.
- Disposable respirators are discarded as asbestos waste. Non-disposable respirators are removed and thoroughly cleaned.
- After removing the respirator, workers should wash their head, face and hands, paying particular attention to fingernails.

ASBESTOS

# DECONTAMINATION

## General

All contaminated materials requiring disposal, including cleaning rags, plastic sheeting and PPE must be disposed of as asbestos waste.

## Workplace decontamination

Any asbestos dust or debris must be collected in a safe manner and the asbestos work area decontaminated. Attention must be given to all walls, ledges, fittings and furnishings. Two types of decontamination procedures are used: wet or dry decontamination.

**Wet decontamination** involves the use of damp rags to wipe down contaminated areas. Cleaning rags should only be used once, although they may be re-folded to expose a clean surface. The rags should be used flat and should not be wadded. If a bucket of water is used, the rags should not be re-wetted in the bucket, as this will contaminate the water. Care should be taken to avoid any potential electrical hazards when using this procedure.

**Dry decontamination** should only be used where wet methods are not suitable or pose a risk because of other hazards such as electricity or slipping. Dry decontamination procedures include carefully rolling or folding up and sealing plastic sheeting and/or vacuuming the asbestos work area with an asbestos vacuum cleaner. Large pieces of asbestos debris should be wetted and picked up by hand rather than vacuumed.

Whenever the asbestos work area cannot be decontaminated using the wet or dry method - for example, if there is rough sawn wood that cannot be fully decontaminated by wet wiping or vacuuming — pigmented PVA may be used to seal the contaminated sections of the asbestos work area including any plant or equipment where practicable.

If extensive contamination has occurred, an asbestos removalist should be engaged to perform the decontamination and clearance monitoring may be required. WorkSafe should be contacted regarding any licensing requirements.

## **Decontamination - equipment and tools**

All tools, equipment and reusable respirators used during the maintenance or service task should be dismantled (where appropriate) and decontaminated, using either the wet or dry decontamination procedures described above, before they are removed from the asbestos work area. The method chosen should depend on its practicality and the presence of any electrical hazards.

If tools and equipment cannot be decontaminated in the asbestos work area or are to be reused at another asbestos work area they should be tagged to indicate asbestos contamination and double bagged in asbestos waste bags before being removed from the asbestos work area. Equipment and tools must remain sealed until decontamination or the commencement of the next asbestos maintenance or service task where the equipment can be taken into the work area and reused under full control conditions.

PPE should be worn when opening the bag to clean or re-use the equipment or tools, and decontamination should only be performed in a controlled environment.

Bags containing asbestos contaminated equipment and tools should be clearly labeled with an appropriate warning statement.

## **Personal decontamination**

Personal decontamination must be undertaken each time workers leave the asbestos work area and at the completion of the asbestos maintenance or service work.

# DISPOSAL OF ASBESTOS WASTE

## General

The following procedures have been developed to minimise the generation of dust, thereby reducing the potential risk associated with the possible release of asbestos fibres. There are many and varied situations where specific disposal processes are required and this is not intended as a full reference.

**It is strongly recommended that the relevant Code of Practice is consulted where asbestos waste is likely to be generated and require disposal.**

## Instructions

All asbestos material and waste must be separated from other waste and shall be either placed in polythene sheets, 200 micron ( $\mu\text{m}$ ) thick wrapped and sealed or placed in 200 micron ( $\mu\text{m}$ ) thick polythene bags (preferably purpose made), which are then sealed. Alternate containers that prevent asbestos fibres from entering the atmosphere during transportation by road are also acceptable. These may include drums or bins with lids.

**NOTE:** All wrapping or containers containing asbestos waste shall be clearly labelled or marked with the words "**CAUTION ASBESTOS**" in letters no less than 50 millimetres high.

When large removal of asbestos is involved the material may be placed directly into disposal bins or skips that have been lined with polythene, 200 micron ( $\mu\text{m}$ ) thick and are exclusively used for that purpose. Material which may potentially contain asbestos fibres such as debris from gutters and drains which accept discharge from asbestos cement roofs must also be placed in polythene bags and sealed. Disposable PPE and some materials or tools used in asbestos related jobs are to be treated as asbestos waste.

**Do not dispose of asbestos material or waste in general workplace waste disposal bins.**

All asbestos waste shall be removed from the work site and disposed of as soon as is practicable. Asbestos waste must be disposed of at an approved landfill site, which has been licensed by the Department of Environment and Conservation. The person who operates or controls that facility **must** be informed that the waste is asbestos or contains asbestos. A list of approved metropolitan sites is reproduced here.

## Metropolitan Disposal Facilities Able To Accept Asbestos

<b>Council or Company</b>	<b>Address</b>	<b>Phone Number</b>
RCG Pty Ltd	Lot 70/717 Hester Ave Neerabup	9407 5069
Mindarie Regional Council	1700 Marmion Ave Mindarie	9306 6300
Eastern Metro Regional Council	Toodyay Rd (Red Hill) Gidgegannup	9574 6235
City of Cockburn	Rockingham Rd Henderson	9411 3444
City of Armadale	Hopkinson Rd Forrestdale	9399 3935
Wastestream Management	Thomas Rd Kwinana	9439 1300
City of Rockingham	Millar Rd Baldivis	9524 2053
West Australian Landfill Services	Lot 200-201 Shale Rd South Cardup	9525 5355
Eclipse Resources	Lot 180 Abercrombie Rd Postans	9381 5600
Buller Road Refuse Disposal Site	Lot 1701 Buller Rd Waroona	9733 1277
Shire of Gingin	Lot 10 Cockram Rd Gingin	9575 2211

\*\*The list is subject to change and is only intended as a guide.

