RIVERMOUTH CARAVAN PARK
ABLUTION BLOCK

A1324 – No. 1 (Lot 1084) Inlet Drive, Res. 46241

ASBESTOS
MANAGEMENT PLAN
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FOREWORD

This plan is developed to assist the Shire of Denmark to comply with government policy and legislative requirements in the management of asbestos containing materials (ACM) in workplaces.

Legislative Requirement

The Shire of Denmark as an employer has a responsibility to maintain a safe working environment under the provisions of:

- Regulation 3.1a of the Occupational Safety and Health Regulations 1996 (OSH Regulations 1996), which requires an employer to identify hazards at a workplace, assess the risk of harm to a person from each hazard and to take steps to reduce the risk.
- Regulation 5.43 (OSH Regulations 1996) which specifically requires the presence and location of asbestos at a workplace to be identified and that the process of identification and risk assessment is conducted in accordance with the Code of Practice for the Management and Control of Asbestos in Workplaces [NOHSC:2018 (2005)].

Government Policy

The long-term aim is for all buildings occupied or controlled by government agencies to be free of ACM.

Whilst working towards this goal, agencies have an obligation to identify and manage ACM in public buildings to meet the Occupational Health and Safety requirements.

ACM in sound condition, left undisturbed, presents negligible risk to building occupants and the general community. Therefore removal of asbestos may not be immediately necessary but should take into consideration immediate health risks and be completed prior to demolition, partial demolition, renovation or refurbishment if these works are likely to disturb ACM.

Remaining ACM should be regularly inspected and actions taken to minimise health risk, where practical.

All work conducted on ACM must be undertaken in such a manner as to minimise health risks in accordance with the provisions of the Code of Practice for the Management and Control of Asbestos in Workplaces [NOHSC:2018 (2005)].
IDENTIFICATION OF ASBESTOS HAZARDS

Surveys of the Shire of Denmark buildings have been conducted by the Council’s Principal Building Surveyor or Principal Environmental Health Officer (Authorised Asbestos Officers) for the month of April 2016. The surveys include a risk assessment and recommendation for future control measures. Results of surveys are recorded in the Shire of Denmark Asbestos Register, maintained by The Director of Community and Regulatory Services (DCRS) and held at the Shire of Denmark Administration Building, 953 South Coast Highway, Denmark.

RISK ASSESSMENT

A matrix comprising the condition of the ACM and the likelihood of disturbance has been applied to all material found or assumed to contain asbestos during the survey. A qualitative risk ranking has subsequently been assigned to each occurrence of ACM.

CONTROL MEASURES

The recommended control measures that have been considered and approved by the Shire of Denmark management are as follows:

Category 1
- Risk Ranking {See asbestos surveyor's report} Pages 30 & 31
- Immediate isolation until remedial action completed
- Immediate removal of asbestos containing material

Category 2
- Risk Ranking {See asbestos surveyor's report} Pages 30 & 31
- Remove source of disturbance; or
- Isolate asbestos containing material

Category 3
- Risk Ranking {See asbestos surveyor's report} Pages 30 & 31
- Remove before possible disturbance, such as demolition, partial demolition, renovation or refurbishment to ensure potential health risks do not arise.
- Monitor risk until remedial action is completed

Category 4
- Risk Ranking {See asbestos surveyor's report} Pages 30 & 31
- Monitor and manage in accordance with the review of risk assessments

Category 1 Risk Ranking items

All category 1 items identified at survey have been reported by the asbestos surveyor and immediate remedial action taken. Category 1 items identified in the future, through register review, prior oversight or damage, are to be reported and immediately rectified through normal agency maintenance channels. Any friable, unstable ACM must be treated as a category 1 risk.

Category 2 Risk Ranking items

Category 2 risks are characterised by an elevated risk due to likely disturbance and the control measure is designed to reduce or eliminate the possibility of disturbance.
**Category 3 Risk Ranking items**

Category 3 items are programmed for removal prior to a time of likely disturbance for another purpose, such as renovation. Management decision is necessary as to when this should be done.

{Issue 1 decision – including due by date and responsible officer} Pages 30 & 31

{Issue 2 decision – including due by date and responsible officer} Pages 30 & 31

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**Category 4 Risk Ranking items**

These items are low risk due to good condition with a low probability of disturbance and need only future management and monitoring. Generally they are well bonded, for example in a cement matrix, stable and relatively inaccessible.

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**Monitoring and Management**

The following elements of monitoring and management, as required under the code of practice, have been determined after consideration of the Authorised Officer’s recommendations relating to the Shire of Denmark’s buildings and the Shire of Denmark’s business requirements.

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**Labelling and Signage**

All Buildings containing ACM are identified and precautionary labels are placed at all entry points into the building and electric meter box.

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**Access**

No access restriction required as all remaining ACM is well bonded and unlikely to be disturbed.

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**Work Permits**

Work permits required prior to any maintenance work commencing. Work Permits shall be issued and controlled by the Principal Building Surveyor.

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**Log Books**

A Log book is maintained by the Principal Building Surveyor and all work permits are logged.

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**Recording Work on ACM**

Work done on ACM that materially changes a register entry is to be recorded in the asbestos registers by the Principal Building Surveyor and will include details of:

- The company conducting the work;
- The date of the work;
- The scope of the work done; and
- Any clearance certificates.

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**Maintenance of Asbestos Register**

Maintained by the Director of Community and Regulatory Services (Authorised Officer)

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**Access to Asbestos Register**

The Asbestos Registers are to be made available to contractors on every occasion that work may be done which could possibly disturb ACM. Reasonable requests by staff members for inspection of the Asbestos Register will be granted.
Safe Work Methods
All work conducted on ACM must be undertaken in such a manner as to minimise health risks in accordance with the provisions of the *Code of Practice for the Management and Control of Asbestos in Workplaces* [NOHSC:2018 (2005)].

CONSULTATION, INFORMATION SHARING AND TRAINING
Advice regarding ACM is to be included in induction training procedures and follow up briefings are to be conducted after each review of the ACM Register, after any material change in the ACM register, or each 12 month period after the initial survey.

Induction briefings for contractors who may work within the buildings are to be conducted each 12 month period.

Briefings will include details according to Attachment A and/or Attachment B.

Where necessary, the briefings will be site specific.

Updates, where a change to the AMP or extensive work to buildings is planned, are to be delivered via briefing meetings and/or correspondence.

AGENCY OPERATIONAL CONSIDERATIONS
A workplace is defined under the OSH Act (1984) as: “a place, whether or not in an aircraft, ship, vehicle, building or other structure, where employees or self employed persons work or are likely to be in the course of their work.” Accordingly, this plan also needs to account for work outside the usual office building.

As part of this plan, all agency operations have been reviewed and particular precautions and control measures are to be taken in accordance with Attachment A.

*(This will include such tasks as visits to external places etc.)*

REVIEW
The Register of ACM is to be reviewed annually or when a change to the register is necessary.

The Asbestos Management Plan is to be reviewed annually or when a change to the register has been recorded, to ensure effectiveness of management processes in:

- Preventing exposure to airborne asbestos fibres;
- Controlling maintenance workers and contractors;
- Highlighting the need for action to maintain or remove ACM;
- Raising awareness among all workers; and
- Maintaining the accuracy of the register of ACM.
**HEALTH ASPECTS OF EXPOSURE TO AIRBORNE ASBESTOS FIBRES**

Asbestos is a known carcinogen. The inhalation of asbestos fibres is known to cause mesothelioma, lung cancer and asbestosis.

**Malignant mesothelioma** is a cancer of the outer covering of the lung (the pleura) or the abdominal cavity (the peritoneum). It is usually fatal. Mesothelioma is caused by the inhalation of needle-like asbestos fibres deep into the lungs where they can damage mesothelial cells, potentially resulting in cancer. The latency period is generally between 35 and 40 years, but it may be longer, and the disease is very difficult to detect prior to the onset of illness.

Mesothelioma was once rare, but its incidence is increasing throughout the industrial world as a result of past exposures to asbestos. Australia has the highest incidence rate in the world.

**Lung cancer** has been shown to be caused by all types of asbestos. The average latency period of the disease, from the first exposure to asbestos, ranges from 20 to 30 years. Lung cancer symptoms are rarely felt until the disease has developed to an advanced stage.

**Asbestosis** is a form of lung disease (pneumoconiosis) directly caused by inhaling asbestos fibres, causing a scarring (fibrosis) of the lung tissue which decreases the ability of the lungs to transfer oxygen to the blood. The latency period of asbestosis is generally between 15 and 25 years.

Asbestos poses a risk to health by inhalation whenever asbestos fibres become airborne and people are exposed to these fibres. Accordingly, exposure should be prevented. The NES of 0.1 fibres/mL should never be exceeded, and control measures should be reassessed whenever air monitoring indicates the 'control level' of 0.01 fibres/mL has been reached. The Code of Practice for the Safe Removal of Asbestos [NOHSC:2018 (2005)] provides additional information on control levels.

**ACM** can release asbestos fibres into the air whenever they are disturbed, and especially during the following activities:

- any direct action on ACM, such as drilling, boring, cutting, filing, brushing, grinding, sanding, breaking, smashing or blowing with compressed air (State and Territory legislation prohibits most of these actions, and the relevant laws should be checked before performing any activity on ACM);
- the inspection or removal of ACM from workplaces (including vehicles, plant and equipment);
- the maintenance or servicing of materials from vehicles, plant, equipment or workplaces;
- the renovation or demolition of buildings containing ACM.

Non-friable ACM that has been subjected to extensive weathering or deterioration also has a higher potential to release asbestos fibres into the air.
Historical Uses of Asbestos
Asbestos is the fibrous form of mineral silicates belonging to the serpentine and amphibole groups of rock-forming minerals. The most significant types are crocidolite (blue asbestos), amosite (brown or grey asbestos) and chrysotile (white asbestos). Other mineral forms of asbestos include actinolite, anthophyllite and tremolite, but these were not widely used.

As a naturally occurring mineral fibre, asbestos is mined and then broken down from mineral clumps into groups of loose fibres. Asbestos has excellent fire resistance, insulation properties, fibre strength, durability and flexibility. As a result, it was used in more than 3,000 products, including heat-resistant textiles (cloth, padding and board), asbestos cement products (sheets and pipes), special filters for industrial chemicals, thermal insulation products (pipe and boiler insulation), friction materials (clutch plates, brake linings), gaskets, floor tiles, roofing materials, packing materials, paints and protective paper.

A major historical use was as sprayed thermal insulation on steel beams for fire protection. This sprayed or ‘limpet’ asbestos poses the greatest health risk, because of its highly friable nature. Asbestos-containing materials (ACM) may still be encountered throughout public and private buildings and structures, especially those built between the 1950s and the late 1970s to early 1980s. Some uses of ACM continued until 2003, notably in friction materials (brakes) and gaskets.

Asbestos production and use in Australia
In Australia, more chrysotile than amphibole asbestos was mined until 1939. With the commencement of mining at Wittenoom in Western Australia in 1937, crocidolite dominated production until the final closure of this mine in 1966.

New South Wales, the first State to mine asbestos, produced the largest tonnages of chrysotile (until 1983), as well as smaller quantities of amphibole (until 1949).

Australian asbestos production and exports declined after the closure of the Wittenoom mine, and imports of chrysotile also started to decline. Consumption peaked in about 1975, at 70,000 tonnes/year.

The main sources of raw asbestos imports were Canada (chrysotile) and South Africa (crocidolite and amosite). Australia also imported many manufactured asbestos products, including asbestos cement articles, asbestos yarn, cord and fabric, asbestos joint and millboard, asbestos friction materials and gaskets. The main sources of these products were the United Kingdom, the USA, the Federal Republic of Germany and Japan.

In Australia, the asbestos cement manufacturing industry was responsible for over 60% of all production and 90% of all consumption of asbestos fibre. From about 1940 to the late 1960s all three types of asbestos were used in this industry. The use of crocidolite was gradually phased out from 1967, but amosite was used until the mid-1980s. Much of this industry output remains in service today in the form of ‘fibro’ houses and water and sewerage piping.

Between 1945 and 1954, 70,000 asbestos cement houses were built in New South Wales alone (52% of all the houses built in that State). In Australia as a whole, until the 1960s, 25% of all new housing was clad in asbestos cement. By 1954 Australia was number four in the Western world in gross consumption of asbestos cement products, after the USA, the UK and France, and clearly first on a per capita basis.

Health Surveillance
Health surveillance is an important part of the monitoring of exposure to hazardous substances, including asbestos, to ensure the health and safety of people in workplaces.

The main purposes are to ensure that control measures are effective and to provide an opportunity to reinforce specific preventive measures and safe work practices.

The need for asbestos-related health surveillance should be determined by an assessment of the potential for exposure to asbestos, in accordance with the requirements of the NOHSC Model Regulations for the Control of Workplace Hazardous Substances [NOHSC:1005 (1994)], and consultations with relevant State or Territory OHS authorities to identify any specific health surveillance requirements.

Additional guidance on health surveillance may be obtained from the NOHSC Guidelines for Health Surveillance [NOHSC: 7039 (1995)], which set out, in a very practical manner, the minimum requirements for health surveillance for persons engaged in work that may expose them to asbestos or other hazardous substances.

**SELECTION AND USE OF PERSONAL PROTECTIVE EQUIPMENT (PPE)**

Personal protective equipment 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 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 in an approved manner.

If work with asbestos requires the use of other 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 (see sections 11.8 and 11.9.3 of Part 11 of the NOHSC Code of Practice for the Safe Removal of Asbestos [NOHSC:2002(2005)] (the code of practice).

Disposable coveralls should be disposed of as asbestos waste at the completion of the task (in accordance with the code of practice).
Footwear and Gloves
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.

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, and any gloves used they must be disposed of as asbestos waste.

Respirators
In general, the selection of suitable respiratory protection equipment (RPE) 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.

Some State and Territory legislation imposes minimum requirements for respiratory equipment, and relevant laws should be checked before selecting an appropriate respirator.

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. Respirators should be properly stored when not in use.

DRILLING OF ASBESTOS-CONTAINING MATERIALS
As a first priority, planning for the maintenance of ACM must include consideration of the removal of the ACM as the most preferred control option. Where removed, asbestos products must be replaced with a non-asbestos product. Removal of asbestos products must be done in accordance with the NOHSC Code of Practice for the Safe Removal of Asbestos [NOHSC:2002(2005)].

A risk assessment, as described in Part 10 of the code of practice, should be undertaken before any maintenance or service work with ACM is commenced, and only competent persons should carry out work with ACM.

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 these fibres.

A hand drill is preferred to a battery-powered drill, because the quantity of fibres is drastically 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 (requirements for asbestos vacuum cleaners are set out in section 11.8 of the code);
- 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; and
- a sturdy paper, foam or thin metal cup, or similar (for work on overhead surfaces only).

Personal Protective Equipment
Protective clothing: see Selection and Use of Personal Protective Equipment.

- Respirator (see AS1715, AS 1716 and section 11.7 of Part 11 of the code of practice): 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 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, as above.
- 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 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 section 11.9.3 of Part 11 of the code of practice.

**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. Refer to the NOHSC Code of Practice for the Safe Removal of Asbestos [NOHSC: 2002 (2005)] and relevant State and Territory legislation.
SEALING, PAINTING, COATING AND CLEANING OF ASBESTOS CEMENT PRODUCTS

As a first priority, planning for the maintenance of ACM must include consideration of the removal of the ACM as the most preferred control option. Where removed, asbestos products must be replaced with an appropriate non-asbestos product.

Removal of asbestos products must be done in accordance with the NOHSC Code of Practice for the Safe Removal of Asbestos [NOHSC:2002(2005)].

These tasks should only to be carried out on AC products that are in good condition. For this reason, the AC material should be thoroughly inspected before commencing the work.

There is a risk to health if the surface of asbestos cement sheeting is disturbed (e.g. from hail storms and cyclones) or if the sheeting has deteriorated as a result of aggressive environmental factors such as pollution. If asbestos cement sheeting is so weathered that its surface is cracked or broken, the asbestos cement matrix may be eroded, increasing the likelihood that asbestos fibres will be released.

If treatment of asbestos cement sheeting is considered essential, a method that does not disturb the matrix of the asbestos cement sheeting should be used.

Under no circumstances should asbestos cement products be water blasted or dry sanded in preparation for painting, coating or sealing.

Equipment

In addition to any equipment required to complete the particular 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;
• spare PPE;
• a suitable asbestos waste container; and
• warning signs and/or barrier tape.

Personal Protective Equipment

Protective clothing: See Selection and Use of Personal Protective Equipment.

• Respirator (see AS1715, AS 1716 and section 11.7 of Part 11 of the code of practice):
  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 AC 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 a spray brush, never use a high pressure spray to apply the paint.
• When using a roller, use it lightly to avoid abrasion or other damage.

Decontaminating the Asbestos Work Area and Equipment
• Use damp rags to clean the 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.

Personal Decontamination
See section 11.9.3 of Part 11 of the code of practice.

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).
• Clearance air sampling is not normally required for this task.
• Dispose of all waste as asbestos waste. Refer to the NOHSC Code of Practice for the Safe Removal of Asbestos [NOHSC: 2002 (2005)] and relevant State and Territory legislation (see section 11.11 of Part 11 of the code of practice).

CLEANING LEAF LITTER FROM THE GUTTERS OF ASBESTOS CEMENT ROOFS

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:
• a bucket of water, or more as appropriate, and detergent;
• a watering can or garden spray;
• a hand trowel or scoop;
• disposable cleaning rags;
• a suitable asbestos waste container;
• warning signs and/or barrier tape; and
• an asbestos vacuum cleaner.
**Personal Protective Equipment**
Protective clothing: See Selection and Use of Personal Protective Equipment.

Respirator (see AS1715, AS 1716 and section 11.7 of Part 11 of the code of practice):

At least a class P1 or P2 half face respirator should be used for this task, provided the recommended safe work procedure is followed.

**Preparing the Asbestos Work Area**
- Since 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 containers are available.
- 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.
- *Segregate the area below.*
- 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.

**Gutter Cleaning**
- Disconnect or re-route the downpipes to prevent any entry of contaminated water into the waste water system and ensure there is a suitable container to collect contaminated runoff. Contaminated water must be disposed of as asbestos waste.
- Mix the water and detergent.
- Using the watering can or garden spray, pour the water and detergent mixture into the gutter, but avoid over-wetting as this will create a slurry.
- Remove the debris using a scoop or trowel. Do not allow debris or slurry to enter the water system.
- Wet the debris again if dry material is uncovered.
- Place the removed debris straight into the asbestos waste container.

**Decontaminating the Asbestos Work Area and Equipment**
- Use damp rags to wipe down all equipment used.
- Use damp rags to wipe down the guttering.
- Where practicable, and if necessary, use an asbestos vacuum cleaner to vacuum the area below.
- Place debris, used rags and other waste in the asbestos waste container.
- Wet wipe the external surfaces of the asbestos waste container to remove any adhering dust before it is removed from the asbestos work area.

**Personal Decontamination**
See section 11.9.3 of Part 11 of the code of practice.

**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).
- Clearance air sampling is not normally required for this task.
- Dispose of all waste, including all water, as asbestos waste. Refer to the NOHSC Code of Practice for the Safe Removal of Asbestos [NOHSC: 2002 (2005)] and relevant State and Territory legislation.
WORKING ON ELECTRICAL MOUNTING BOARDS (SWITCHBOARDS) CONTAINING ASBESTOS

As a first priority, planning for the maintenance of ACM must include consideration of the removal of the ACM as the most preferred control option. Where removed, asbestos products must be replaced with a non-asbestos product. Removal of asbestos products must be done in accordance with the NOHSC Code of Practice for the Safe Removal of Asbestos [NOHSC:2002(2005)].

Where a risk assessment identifies the need, electrical mounting panels containing asbestos in poor condition (i.e. friable), or those requiring major works, should be removed in accordance with the NOHSC Code of Practice for the Safe Removal of Asbestos [NOHSC:2002(2005)] and replaced with non-asbestos panels.

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:

- 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 (requirements for asbestos vacuum cleaners are set out in section 11.8);
- duct tape;
- warning signs and/or barrier tape;
- disposable cleaning rags;
- a plastic bucket of water, or more as appropriate, and/or a misting spray bottle;
- spare PPE;
- a suitable asbestos waste container;
- 200 μm plastic sheeting; and
- an asbestos vacuum cleaner.

Personal Protective Equipment
Protective clothing: see Selection and Use of Personal Protective Equipment.

Respirator (see AS1715, AS 1716 and section 11.7 of Part 11 of the code of practice): 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
- Because the asbestos work area will involve electrical hazards, appropriate precautions must be taken to prevent the risk of electrocution.
- 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.
- 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.
Work on Electrical Mounting Panels
Providing the panel is not friable, maintenance and service work may include:

- the replacement of asbestos-containing equipment on the electrical panel with non-asbestos equipment;
- the operation of main switches and individual circuit devices;
- pulling/inserting service and circuit fuses;
- bridging supplies at meter bases;
- using testing equipment;
- accessing the neutral link; and
- the installation of new components/equipment.

If the asbestos-containing electrical mounting panel has to be removed for work behind the board, the procedures for removing electrical meter boards outlined in the NOHSC Code of Practice for the Safe Removal of Asbestos [NOHSC:2002 (2005)] should be followed.

If drilling is required, the control process should be consistent with the measures described in Drilling of Asbestos-Containing Material.

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.
- In areas where there is an electrical hazard, an asbestos vacuum cleaner should be used to remove any dust or debris from the mounting panel and other visibly contaminated sections of the asbestos work area.
- In areas where there is no electrical hazard, wet wiping with a damp rag can be used to remove minor amounts of dust or debris.
- 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 section 11.9.3 of Part 11 of the code of practice.

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).
- Clearance air sampling is not normally required for this task.
- Dispose of all waste, including all water, as asbestos waste. Refer to the NOHSC Code of Practice for the Safe Removal of Asbestos [NOHSC: 2002 (2005)] and relevant State and Territory legislation

EXAMPLES OF SPECIFIC ASBESTOS REMOVAL PROCEDURES

The specific removal requirements outlined in Part 12 of the code of practice are designed to supplement the requirements set out elsewhere in the code of practice.

When in doubt, the relevant State or Territory OHS authority should be consulted on the control measures required.

Removal of Asbestos-Cement Products
Historically, a large number of asbestos-cement building products have been used in the building industry in Australia. These asbestos-cement products — about 15% asbestos fibres, by weight — include, but are not limited to,
• flat or corrugated wall and roof sheeting (‘fibro’);  
• floor sheeting;  
• water, drainage and flue pipes;  
• roofing shingles, and  
• flexible building boards (e.g. Villaboard, Hardiflex, Wundaboard and Flexiboard).

While new fibre-cement products no longer contain asbestos, which was replaced by non-asbestos fibres such as cellulose in the late 1980s, crocidolite (blue asbestos) and amosite (brown asbestos) were extensively used in many asbestos-cement building products until the 1970s. Chrysotile (white asbestos) was used almost exclusively in fibre-cement products during the 1970s and 1980s.

**Preparation and Enclosure**

Asbestos-cement products would normally be assessed as non-friable, even though they can suffer significant weathering in outdoor environments. Provided these asbestos-containing building products are maintained in good order, they present a low health risk.

Precautions should be observed, however, during structural alterations or demolitions involving these 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. Section 9.7 of the code of practice provides further information on the selection, use and maintenance of appropriate RPE and PPE.

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

The relevant authority should be consulted to determine whether a licence is required for this type of asbestos removal work.

**Removal**

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 (see sections 9.10 and 9.11 of the code of practice).

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.

**Removal of Asbestos-Cement Sheets**

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 (see section 9.10.4 of the code of practice). Smaller pieces of sheeting and asbestos-cement debris should be placed in heavy-duty clear plastic bags. Section 9.10 of the code of practice provides information on appropriate waste removal methods.

**Removal of Asbestos-Cement Roofing**

Asbestos-cement roofing should be sprayed with Poly Vinyl Adhesive (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 or Territory 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 it is 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**

**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 section 9.9.1 of the code of practice.

If asbestos-contaminated nails are to be reused they must be decontaminated. Nails that can not 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 maybe circumstances where a full decontamination unit should be used for personal decontamination. A risk assessment should be conducted to determine appropriate decontamination requirements.
Removal of Vinyl Floor Tiles and Sheet Vinyl Containing Asbestos
In the 1960s and 1970s vinyl floor tiles and vinyl floor sheets were commonly reinforced with asbestos in a bonded matrix. A visual inspection cannot determine whether vinyl floor tiles contain asbestos.

Preparation and Enclosure
All fittings and fixtures on top of the vinyl floor should be removed before the vinyl is taken up.

If the removal includes grinding or abrading, the wet spray method should be used (see section 9.5.1 of the code of practice) and the removal undertaken within an enclosure. Part 10 of the code of practice provides information on the use of enclosures.

The minimum respiratory protection for this operation is a P1 or P2 filter with a half-face piece respirator. If grinding or abrading is involved, the minimum recommended respiratory protection is a P3 full-face, particulate, filter (cartridge) respirator. Section 9.7 of the code of practice provides further information on the selection, use and maintenance of appropriate RPE and PPE.

Decontamination facilities should be available throughout the entire removal process. A decontamination unit, as described in section 10.2.3 of the code of practice, should be available when grinding or abrading is undertaken and otherwise as determined by a risk assessment. Section 10.2.4 of the code of practice provides information for situations where the decontamination unit cannot be located immediately adjacent to the asbestos work area.

Removal
Wherever possible, removal methods such as scraping, chipping or the use of a wide bladed tool should be used.

Grinding and abrading should only be used if there is no other suitable alternative. Care should be taken to minimise dust release from the activity. Where grinding or abrading is used, and the asbestos work area is not enclosed, the equipment should be fitted with or connected to an asbestos vacuum cleaner.

The vinyl can be cut into strips prior to its removal, to facilitate bagging, or it can be rolled into one roll and wrapped securely with plastic, making sure it is totally sealed. If a heat source is used to soften the adhesive beneath a vinyl tile, care should be taken not to scorch or burn the tile.

Burning or scorching vinyl tiles can result in the release of toxic decomposition products and generate a fire hazard. In some cases the adhesive may contain asbestos.

Removal of Asbestos-Backed Vinyl and Millboard From Beneath a Vinyl Floor

Preparation and Enclosure
All fittings and fixtures on top of the floor vinyl should be removed before the vinyl is taken up.

The minimum respiratory protection for this operation is a P3 full-face powered air-purifying particulate respirator. Section 9.7 of the code of practice provides further information on the selection, use and maintenance of appropriate RPE and PPE.

Since asbestos millboard is typically 100% asbestos and very friable, a full enclosure, with negative air extraction units, must be used for this type of removal. Part 10 of the code of practice provides information on the use of enclosures for the removal of friable ACM.

A decontamination unit must be available at all times.
Removal
The asbestos millboard should be wetted down as the vinyl is peeled from the floor, preferably with the millboard attached. The vinyl can be cut into strips prior to its removal, to facilitate bagging, or it can be rolled into one roll and wrapped securely with plastic, making sure it is totally sealed.

If the vinyl sheeting cannot be removed without leaving some of the asbestos millboard on the floor surface, the remaining asbestos millboard should be wetted down and, when thoroughly soaked, scraped off the floor surface. Sufficient water should be used to dampen the asbestos millboard, but not so much that run-off or pools of contaminated water will occur.

If a heat source is used to soften the adhesive beneath a vinyl tile, care should be taken not to scorch or burn the tile. Burning or scorching vinyl tiles can result in the release of toxic decomposition products and generate a fire hazard.

Alternative removal methods should only be used if they do not result in excessive fibre release from the asbestos millboard and do not result in any additional hazard.

REMOVAL OF ASBESTOS GASKETS AND ROPE FROM PLANT AND EQUIPMENT

Gaskets reinforced with asbestos were once used extensively in plant and equipment exposed to high temperatures and/or pressures. These gaskets were typically used between the flanges of pipes.

Asbestos rope was often used for lagging pipes and valves and for sealing hatches.

It is likely that the ACM in gaskets and rope from plant and equipment will be friable.

Preparation
Ensure the plant or equipment is shut down and isolated.

The minimum respiratory protection suitable for this operation is a P1 or P2 filter with a half-face piece respirator.

Removal
Dismantle the equipment carefully. Protect any other components with plastic sheeting.

Thoroughly dampen the gasket or rope with water. Use a hand scraper to slowly remove the gasket or rope. Continue to dampen as drier material is exposed. Collect the removed ACM in a container directly beneath the scraper.

All of the asbestos gasket or rope should be removed.

REMOVAL AND CLEANING OF CEILING TILES

False ceiling tiles or suspended ceilings sometimes need to be removed so maintenance work can be performed.

If ACM have been used on structural materials above a false ceiling there could be contamination on the upper surface of the tiles.
Preparation
The minimum respiratory protection suitable for this operation is a P1 or P2 filter with a half-face piece respirator. If considerable amounts of asbestos dust or debris are likely to be involved, full-face air-purifying positive pressure respirators should be worn. Section 9.7 of the code of practice provides further information on the selection, use and maintenance of appropriate Respiratory Protective Equipment (RPE) and PPE.

Method
Any surface below the tiles that might be contaminated should be covered with plastic sheeting.

The first tile should be lifted carefully to minimise the disturbance of any asbestos fibres. The top of each tile should be thoroughly vacuumed and wet wiped, where possible, prior to removing subsequent tiles.

Where non-asbestos ceiling tiles are to be reused, they should be covered with plastic as they are removed from the ceiling, to prevent further dust settling on them.

Asbestos-ceiling tiles must not be reused. Under the asbestos prohibition it is illegal to reuse and reinstall asbestos products. Wrap the asbestos-ceiling tiles in a double layer of heavy duty, 200μm thick plastic sheeting (see sections 9.10 and 9.11 of the code of practice on waste removal).

Ceiling tiles should not be placed in the ceiling until the areas of the ceiling space affected by the maintenance work have been cleaned.

GUIDE TO THE SELECTION OF RESPIRATORY PROTECTION

There is a wide range of respiratory protection available for protection against airborne asbestos fibres.

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).

Table 3 below provides, in approximate order of increasing efficiency, an overview of some of the respirators which can be used for protection against airborne asbestos fibres. The protection afforded by each device depends not only on the design and fit of the respirator but also upon the efficiency of the filters (i.e. P1, P2 or P3).

Australian Standards AS1715 and AS1716 provide detailed advice on the selection, use and maintenance of respiratory protection equipment and should be consulted for more detailed advice on ‘Nominal Protection Factors’ and other relevant matters.

Table 4 below provides guidance for the selection of appropriate respiratory protection for different tasks, assuming the correct work procedures are being followed.

This guide does not take account of personal features such as facial hair or the need to wear spectacles (full protection will not be achieved if either of these factors interferes with the face seal). It also does not take any account of misuse of the protective equipment.

The respirators and filters presented in Table 4 are the minimal recommended for the corresponding task. The most efficient respirator and filter should be used.
<table>
<thead>
<tr>
<th>FIGURE</th>
<th>RESPIRATOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Disposable, half-face particulate respirator</td>
</tr>
<tr>
<td>2</td>
<td>Half-face, particulate filter (cartridge) respirator</td>
</tr>
<tr>
<td>3</td>
<td>Powered, air-purifying, ventilated helmet respirator</td>
</tr>
<tr>
<td>4</td>
<td>Full-face, particulate, filter (cartridge) respirator</td>
</tr>
<tr>
<td>5a</td>
<td>Full-face, powered air-purifying particulate respirator – Face Piece</td>
</tr>
<tr>
<td>5b</td>
<td>Full-face, powered air-purifying particulate respirator – Power pack</td>
</tr>
<tr>
<td>6</td>
<td>Full-face, positive pressure demand air-line respirator</td>
</tr>
<tr>
<td>7</td>
<td>Full suit or hood, continuous flow air-line respirator</td>
</tr>
</tbody>
</table>

![Figure 1](image1.png)  ![Figure 2](image2.png)  ![Figure 3](image3.png)

![Figure 4](image4.png)  ![Figure 5a](image5a.png)  ![Figure 5b](image5b.png)

![Figure 6](image6.png)  ![Figure 7](image7.png)
### Table 4 – Selection of Appropriate Respiratory Equipment

<table>
<thead>
<tr>
<th>Work procedure</th>
<th>Required respirator</th>
<th>Filter type (where applicable)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simple enclosure erection for containing undamaged asbestos materials to prevent damage – no direct handling but possible disturbance of asbestos</td>
<td>Disposable, half-face particulate respirators or Half-face, particulate filter (cartridge) respirator</td>
<td>P1 or P2</td>
</tr>
<tr>
<td>Inspection of the condition of any installed, friable asbestos, which appears in poor condition or has been disturbed</td>
<td>Disposable, half-face particulate respirators or Half-face, particulate filter (cartridge) respirator</td>
<td>P1 or P2</td>
</tr>
<tr>
<td>Sampling material for the purpose of identifying asbestos</td>
<td>Disposable, half-face particulate respirators or Half-face, particulate filter (cartridge) respirator</td>
<td>P1 or P2</td>
</tr>
<tr>
<td>For work with asbestos-cement (fibro) (e.g. hand drilling and sawing)*.</td>
<td>Disposable, half-face particulate respirators or Half-face, particulate filter (cartridge) respirator</td>
<td>P1 or P2</td>
</tr>
<tr>
<td>For work with asbestos based friction materials*</td>
<td>Disposable, half-face particulate respirators or Half-face, particulate filter (cartridge) respirator</td>
<td>P1 or P2</td>
</tr>
<tr>
<td>Removal of non-friable asbestos (e.g. asbestos-cement and ceiling tiles)</td>
<td>Disposable, half-face particulate respirators or Half-face, particulate filter (cartridge) respirator</td>
<td>P1 or P2</td>
</tr>
<tr>
<td>Maintenance work in the vicinity of installed asbestos insulation – no direct handling but possible disturbance of asbestos</td>
<td>Full-face, particulate, filter (cartridge) respirator</td>
<td>P3</td>
</tr>
<tr>
<td>Extensive sample operations on friable asbestos</td>
<td>Full-face, particulate, filter (cartridge) respirator or Full-face, positive pressure demand air-line respirator or Full suit or hood, continuous</td>
<td>P3</td>
</tr>
<tr>
<td>Work procedure</td>
<td>Required respirator</td>
<td>Filter type (where applicable)</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------</td>
<td>--------------------------------</td>
</tr>
<tr>
<td>Maintenance work involving the removal of small quantities of friable asbestos (e.g. replacement of asbestos gaskets and insulation)</td>
<td>Full-face, particulate, filter (cartridge) respirator or Full-face, positive pressure demand air-line respirator or Full suit or hood, continuous flow air-line respirator</td>
<td>P3</td>
</tr>
<tr>
<td>Certain forms of wet stripping in which wetting is prolonged and effective, and certain small-scale dry stripping operations.</td>
<td>Full-face, powered air-purifying particulate respirator or Full-face, positive pressure demand air-line respirator.</td>
<td>P3</td>
</tr>
<tr>
<td>Certain forms of dry stripping (e.g. asbestos vinyl floor tiles, bituminous products containing asbestos [i.e. malthoid]); ineffective wet stripping (light wetting, no time given to saturate)</td>
<td>Powered air-purifying particulate respirator or Full-face, positive pressure demand air-line respirator. NO LESSER RESPIRATOR WILL SUFFICE.</td>
<td>P3</td>
</tr>
<tr>
<td>Dry stripping in confined areas</td>
<td>Full suit or hood, positive pressure demand continuous flow air-line respirator. NO LESSER RESPIRATOR WILL SUFFICE.</td>
<td>P3</td>
</tr>
</tbody>
</table>

* Note: High dust producing processes must be avoided by keeping materials damp and by Using non-powered tools or tools equipped with approved exhaust ventilation.
ATTACHMENTS

Attachment A
Asbestos Survey

Attachment B
Schedule of Operational Precautions and Practices

Attachment C
Extract from *Code of Practice for the Management of Asbestos in Workplaces*  

Attachment D
Extract from *Code of Practice for the Management of Asbestos in Workplaces*  
[NOHSC: 2018(2005)] Part 7.2 – Awareness training for workers, contractors and others

Attachment E
Schedule of Briefings

Attachment F
Permit to Work - Contractors

Attachment G
Work Request

Attachment H
Log Book
Attachment A – Asbestos Survey

Shire of Denmark
South Coast Highway (PO Box 183), Denmark WA 6333
Phone: (08) 9848 0300 Fax: (08) 9848 1965
Email: enquiries@denmark.wa.gov.au
Website: www.denmark.wa.gov.au

ASBESTOS REGISTER

Property Details: Rivermouth Caravan Park Ablution Block (Older Block)

Inspection Carried Out By: Iain Dines

Date of Inspection: October 2013

Location of Asbestos: Ceilings

Asbestos:
- Friable - No
- Bonded Sheeting - Yes

Condition of Asbestos: ACM appears to be in good condition

Type of Asbestos: Given the age of the building I would consider that it is likely to be grey asbestos

Inaccessible Areas Likely to Contain Asbestos: (eg – Wall Cavity, Roof Space, (Pipe Lagging)
It is possible that the wall cavities may contain pipe lagging & the ceiling space may contain Asbestos fibres

Asbestos Liable to Damage or Deterioration: Given the location of the ACM it is unlikely to suffer damage or deterioration

Probability of Disturbance: Possible but unlikely

Will Asbestos Need to be Replaced in the Next Five Years?: No the ACM is in good condition & with regular maintenance will not require replacement.

Category – Risk Ranking of Asbestos: Unlikely

Does Asbestos in its Current Location and Condition Present as a Potential Health Hazard?: No, with an ongoing maintenance program (Painting) there should be no health hazard presented by the ACM in this building.

Has Asbestos Material Been Tested: No

Have Photos Been Taken: Yes
# CATEGORY RISK ASSESSMENT

<table>
<thead>
<tr>
<th>Likelihood of Disturbance</th>
<th>Category 1</th>
<th>Category 2</th>
<th>Category 3</th>
<th>Category 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rare - Less than once in twenty years</td>
<td>Moderate</td>
<td>Moderate</td>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td>Unlikely - At least once in ten years</td>
<td>Moderate</td>
<td>Moderate</td>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td>Possible - At least once in Five years</td>
<td>Extreme</td>
<td>Extreme</td>
<td>Moderate</td>
<td>Low</td>
</tr>
<tr>
<td>Likely - At least once each year</td>
<td>Extreme</td>
<td>Extreme</td>
<td>Moderate</td>
<td>External Cladding and internal Walls and Ceiling</td>
</tr>
<tr>
<td>Almost Certain - more than once a year</td>
<td>Extreme</td>
<td>Extreme</td>
<td>Moderate</td>
<td>Moderate</td>
</tr>
</tbody>
</table>

**Legend**

**Category 1.**
Immediate isolation until remedial action completed. Immediate removal of asbestos containing material.

**Category 2.**
Remove source of disturbance; or isolate asbestos containing material.

**Category 3.**
Remove before possible disturbance, such as demolition, partial demolition, renovation or refurbishment to ensure potential health risks do not arise. Monitor and manage until remedial action is completed.

**Category 4.**
Monitor and manage in accordance with the review of risk assessments.

Signed:  

Position: Building Surveyor – Shire of Denmark

Date: 17/10/2013
### Attachment B – Schedule of Operational Precautions and Practices

<table>
<thead>
<tr>
<th>Task</th>
<th>Location</th>
<th>Precaution</th>
<th>By Whom</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entry onto a workplace where ACM may be present or suspected to be present</td>
<td>All external workplaces</td>
<td>To prevent exposure or inhalation of asbestos fibres</td>
<td>All Shire of Denmark employees or contractors</td>
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<tr>
<td>The collection, handling, storage, transportation or disposal of ACM</td>
<td>All workplaces</td>
<td>To prevent exposure or inhalation of asbestos fibres</td>
<td>All Shire of Denmark employees or contractors</td>
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<tr>
<td>The collection, handling, storage, transportation or disposal of ACM</td>
<td>All waste transfer and disposal sites</td>
<td>To prevent exposure or inhalation of asbestos fibres</td>
<td>All Shire of Denmark employees or contractors</td>
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</table>


Asbestos is a known carcinogen. The inhalation of asbestos fibres is known to cause mesothelioma, lung cancer and asbestosis.

**Malignant mesothelioma** is a cancer of the outer covering of the lung (the pleura) or the abdominal cavity (the peritoneum). It is usually fatal.

Mesothelioma is caused by the inhalation of needle-like asbestos fibres deep into the lungs where they can damage mesothelial cells, potentially resulting in cancer.

The latency period is generally between 35 and 40 years, but it may be longer, and the disease is very difficult to detect prior to the onset of illness.

Mesothelioma was once rare, but its incidence is increasing throughout the industrial world as a result of past exposures to asbestos. Australia has the highest incidence rate in the world.

**Lung cancer** has been shown to be caused by all types of asbestos. The average latency period of the disease, from the first exposure to asbestos, ranges from 20 to 30 years. Lung cancer symptoms are rarely felt until the disease has developed to an advanced stage.

**Asbestosis** is a form of lung disease (pneumoconiosis) directly caused by inhaling asbestos fibres, causing a scarring (fibrosis) of the lung tissue which decreases the ability of the lungs to transfer oxygen to the blood. The latency period of asbestosis is generally between 15 and 25 years.

Asbestos poses a risk to health by inhalation whenever asbestos fibres become airborne and people are exposed to these fibres.

Accordingly, exposure should be prevented. The NES of 0.1 fibres/mL should never be exceeded, and control measures should be reassessed whenever air monitoring indicates the ‘control level’ of 0.01 fibres/mL has been reached. The Code of Practice for the Safe Removal of Asbestos [NOHSC:2002(2005)] provides additional information on control levels.

ACM can release asbestos fibres into the air whenever they are disturbed, and especially during the following activities:

- any direct action on ACM, such as drilling, boring, cutting, filing, brushing, grinding, sanding, breaking, smashing or blowing with compressed air is strictly prohibited;
- the inspection or removal of ACM from workplaces (including vehicles, plant and equipment);
- the maintenance or servicing of materials from vehicles, plant, equipment or workplaces; or
- the renovation or demolition of buildings containing ACM.

Non-friable ACM that has been subjected to extensive weathering or deterioration also has a higher potential to release asbestos fibres into the air.
Attachment D – Awareness Training For Workers, Contractors and Others

Extract from Code of Practice for the Management and Control of Asbestos in Workplaces [NOHSC:2018(2005)] Part 7.2

Information and training must be provided to workers, contractors and others who may come into contact with ACM in a workplace, either directly or indirectly. Depending on the circumstances this asbestos awareness training may include:

- the purpose of the training;
- the health risks of asbestos;
- the types, uses and likely occurrence of ACM in buildings, plant and/or equipment in the workplace;
- the trainees' roles and responsibilities under the workplace’s asbestos management plan;
- where the workplace's register of ACM is located and how it can be accessed;
- the timetable for removal of ACM from the workplace if required;
- the processes and procedures to be followed to prevent exposure, including exposure from any accidental release of asbestos dust into the workplace;
- where applicable, the correct use of maintenance and control measures, protective equipment and work methods to minimise the risks from asbestos, limit the exposure of workers and limit the spread of asbestos fibres outside any asbestos work area;
- the National Exposure Standard (NES) and control levels for asbestos; and
- the purpose of any air monitoring or health surveillance that may occur.
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<th>Date</th>
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<th>Briefing By</th>
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Attachment F - Permit to Work

Contractors - Permit to Work

Permit valid from: _______/_______/_______ to _______/_______/_______

General Details of Work Required

Location of Work: __________________________________________________________

Description of Work: ________________________________________________________
________________________________________________________________________

Acceptance of Permit

- I have read the conditions stated below and understand the precautions to be taken in carrying out the above works.
- I agree to ensure that all of my employees (that may be required to carry out this work) are provided with this information and are aware of these safety precautions.
- I have obtained all of the necessary licences in order to legally and safely carry out the above works.

Contractor: _______________________________________________________________

Address / Email: ____________________________________________________________

Phone: ___________________________ FAX: ___________________________

Signature: ____________________ Date: ____________________

CONDITIONS OF PERMIT

Asbestos

**Asbestos material may be present in the location of these works.** Asbestos materials must not be disturbed without prior consultation of the **Asbestos Register** for that particular location. All required licences for handling asbestos must be obtained prior to carrying out any works on asbestos containing materials.

Safety Signs

Specific warning notices/barricades required: __________________________________

Other special precautions: ______________________________________________________

Personal Protective Equipment

All required personal protective equipment must be worn at all times.

Official Use Only

Requested by /Approved by (name): __________________________ Position Title: _____________

Signature: __________________________ Date: __________________

☐ Details of permit entered into Log Book
## Work Request For a Building that may contain ACM

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<tr>
<th>Date</th>
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<th>Description of work required</th>
<th>Job No.</th>
<th>Priority</th>
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## Attachment F - Log Book

<table>
<thead>
<tr>
<th>Attendance Date/time</th>
<th>Completion Date/time</th>
<th>Contractors Name and Company</th>
<th>Description of work carried out</th>
<th>Job No.</th>
<th>Permit No.</th>
<th>Clearance Cert.</th>
<th>Acknowledgement</th>
<th>Signature</th>
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