



Northern Transportables

ANNEXURE – 0

ASBESTOS MANAGEMENT PLAN



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1. Purpose

The purpose of an Asbestos Management Plan (AMP) is to provide guidelines for persons to comply with the asbestos prohibitions and prevent exposure to airborne asbestos fibres while Asbestos Containing Materials (ACM) remain in the workplace.

2. Scope

This AMP applies to Northern Transportables locations where asbestos containing materials could be or are present.

Northern Transportables shall conduct sampling of suspected areas and if found to be positive, a licenced asbestos removalist shall be contracted to remove and clear the area.

Northern Transportables employees shall not remove asbestos containing materials from any site.

3. Definitions

Air Monitoring means airborne asbestos fibre sampling to assist in assessing exposures and the effectiveness of control measures. Air monitoring includes exposure monitoring, control monitoring and clearance monitoring.

Note: Air monitoring is to be undertaken in accordance with the Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres [NOHSC: 3003 (2005)].

Airborne Asbestos Fibres means any fibres of asbestos small enough to be made airborne. For the purposes of monitoring airborne asbestos fibres, only respirable asbestos fibres (those fibres less than 3 µm wide, more than 5 µm long and with a length to width ratio of more than 3 to 1) are counted.

Note: Airborne asbestos fibres are generated by the mechanical disintegration of Asbestos Containing Materials (ACM) and subsequent dispersion of the fibres into the air from activities such as mining and the use, removal and disposal of asbestos and ACM. Airborne dust has the potential to contain respirable asbestos fibres.

Asbestos means the fibrous form of mineral silicates belonging to the serpentine and amphibole groups of rock-forming minerals, including actinolite, amosite (brown asbestos), anthophyllite, chrysotile (white asbestos), crocidolite (blue asbestos), tremolite, or any mixture containing one or more of the mineral silicates belonging to the serpentine and amphibole groups.

Asbestos Cement (AC) means products consisting of sand aggregate and cement reinforced with asbestos fibres (e.g. asbestos cement pipes and flat or corrugated asbestos cement sheets).



Asbestos-Containing Material (ACM) means any material, object, product or debris that contains asbestos.

Note: Information for determining if a material contains asbestos is provided in [NOHSC: 2018 (2005)] Appendix A - Examples of Asbestos-Containing Materials. Asbestos Management Code The NOHSC's Code of Practice for the Management and Control of Asbestos in Workplaces [NOHSC: 2018 (2005)]

Asbestos Removalist means a competent licenced person who performs asbestos removal work.

Note: An asbestos removal licence is required for the removal of any quantity of friable ACM. It is a requirement to hold a licence for the removal of 10m² or more of bonded asbestos. Asbestos Removal Code Work Health and safety (how to safely remove asbestos) Code of practice 2015

Asbestos Waste means all removed ACM and disposable items used during the asbestos work, such as plastic sheeting used to cover surfaces in the asbestos work area, disposable coveralls, disposable respirators, and rags used for cleaning.

Asbestos Work Area means the immediate area in which work on ACM is taking place. The boundaries of the asbestos work area must be determined by a risk assessment.

Note: The asbestos work area includes the boundaries of an enclosure or barriers set up to warn or restrict access to the area where the asbestos work is being undertaken.

Clearance Inspection means an inspection, carried out by a competent person, to verify that an asbestos work area is safe to be returned to normal use after work involving the disturbance of ACM has taken place. A clearance inspection must include a visual inspection, and may also include clearance monitoring and/or settled dust sampling.

Note: A clearance inspection should only be carried out when the asbestos work area is dry.

Clearance Monitoring means air monitoring using static or positional samples to measure the level of airborne asbestos fibres in an area following work on ACM. An area is 'cleared' when the level of airborne asbestos fibres is measured as being below 0.01 fibres/mL.

Note: Static or positional samples are taken at fixed locations which are usually between one and two meters above floor level.

Competent Person (clearance inspection) The WHS Regulation does not require a written clearance certificate following the removal of less than 10 square metres of non-friable asbestos or following the completion of asbestos related work.

However, before reoccupation of the area, decontamination of dust and debris is still required. The minimum requirements for a competent person checking for evidence that the work area and vicinity is free of visible dust and debris is a person who has acquired through training, qualifications and experience the knowledge and skills to carry out the task.

The person should have:

- working knowledge of the asbestos removal industry, the asbestos management code and asbestos removal code
- the ability to identify what is, or what may be, asbestos containing material
- the ability to thoroughly inspect the area for suspected material



Control Level means the airborne concentration of a substance, which, if exceeded, indicates a need to implement a control, action or other requirement. Control levels are generally set at no more than half the National Exposure Standard (NES) for the substance. Control levels are occupational hygiene ‘best practice’, and are not health based standards.

Note: The first Control Level for Asbestos is set at 0.01 fibres/mL of air.

Control Monitoring means air monitoring, using static or positional to measure the level of airborne asbestos fibres in an area during work on ACM. Control monitoring is designed to assist in assessing the effectiveness of control measures. Its results are not representative of actual occupational exposures, and should not be used for that purpose.

Note: Static or positional samples are taken at fixed locations which are usually between one and two meters above floor level.

Exposure Monitoring means air monitoring to determine a person’s likely exposure to a hazardous substance. Exposure monitoring is designed to reliably estimate the person’s exposure, so that it may be compared with the NES.

Note: Exposure monitoring includes airborne asbestos fibre sampling, analysis, estimation of timeweighted average exposure and interpretation.

Friable (Asbestos) means asbestos-containing material which, when dry, is or may become crumbled, pulverized or reduced to powder by hand pressure.

Note: This may include ACM that have been subjected to conditions that leave them in a state where they meet the above definition, such as weathering, physical damage, water damage etc.

Hazard means any matter, thing, process or practice that may cause death, injury, illness or disease.

In situ means fixed or installed in its original position, not having been moved.

National Exposure Standard (NES) means an airborne concentration of a substance, within the worker’s breathing zone, which according to current knowledge, should not cause adverse health effects or undue discomfort to nearly all workers. NES are established, from time to time, by the National Occupational Health and Safety Commission (NOHSC) and are published on the NOHSC website.

Note: The NES for all forms of asbestos is 0.1 fibres/mL of air, measured using the Membrane Filter Method (MFM).

Personal Protective Equipment (PPE) means equipment and clothing that is used or worn by an individual person to protect them against, or minimise their exposure to, workplace risks. It includes items such as facemasks and respirators, coveralls, goggles, helmets, gloves and footwear, (refer to Appendix C – “Guide to the selection of respiratory protection” in the Work Health and safety (how to safely remove asbestos) Code of practice 2015.



Respirable Asbestos Fibre means a fibre of asbestos small enough to penetrate the gas exchange regions of the lungs.

Risk means the likelihood of a hazard causing harm to a person.

Note: In this document, risk relates to illness or disease arising from exposure to airborne asbestos fibres.

4. Responsibilities

4.1 QHSE Administrator

- Ensure compliance with AMP.
- Review Asbestos Removal Control Plan and other SWM statements documents produced by the certified removalists.
- Provide primary point of contact for site related asbestos issues.
- Organise for competent person/Class "A" Asbestos Assessor to survey, identify and sample suspected asbestos containing materials.
- Provide training and awareness to site employees and contractors.

4.2 Site Manager

- Ensure resources are allocated to enable thorough application of AMP on site.
- Ensure employees are made available for asbestos awareness training and asbestos removal work.
- Ensure the Asbestos Register is maintained for the site, if required.
- Ensure the Asbestos Exposure Register is maintained for the site, if required.
- Provide primary point of contact for site related asbestos issues.

4.3 Supervisory Personnel

- Ensure persons involved with asbestos work have attended asbestos training.
- Inform the QHSE Administrator of any asbestos work.
- Ensure legislative requirements and appropriate procedures are complied with.
- Report immediately to supervisor any perceived asbestos risk.
- Identify and bring to the attention of appropriate employees any suspect material.
- Ensure all contractors working on asbestos are aware of and meet the requirements of the AMP.
- Review Asbestos Removal Control plan, safe work method statements (SWM) and other documents produced by the licenced removalists.

4.4 Competent Person for Asbestos Removal Work

- Review and approve asbestos removal health and safety plans, work method statements and JSEAs produced by the Third Party Licenced Removalists.
- Supervise and consult with workers on all asbestos removal works.
- Ensure all workers involved in minor asbestos sample removal works are trained.
- Ensure compliance with all legislative requirements on all asbestos removal projects.



- Conduct inspections on asbestos removal works using Checklist for the Removal of Friable Asbestos.
- Conduct Air Monitoring

4.5 Licenced Asbestos Removalist

- Conduct asbestos removal work safety inspections regularly.
- Bring to the attention of the Contract Administrator of any suspected asbestos material.
- Submit risk assessment and HSE plans prior to performing asbestos removal work.
- Develop a site-specific asbestos removal control plan prior to performing the asbestos removal work.
- Undergo site induction.

4.6 Employees

- Comply with the Site AMP and any associated procedures.
- Attend and comply with associated AMP training.
- Ensure no asbestos is removed without prior notification to their supervisor, contract administrator or Site Asbestos Officer.
- Report asbestos related hazards to the Site supervisor immediately.

5. Actions

5.1 Legislative Requirements

Northern Transportables has an obligation under the Workplace Health and Safety Regulations specifically related to onsite management of ACM. As a removal of buildings organisation, Northern Transportables must comply with the Asbestos Management Code – NOHSC's Code of Practice for the Management and Control of Asbestos in Workplaces [NOHSC: 2018 (2005)].

5.2 Airborne Asbestos Fibres Exposure Health Risks

Airborne Asbestos Fibres Exposure Health Risks Asbestos is a carcinogen and 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 because 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 National Exposure Standard (NES) of 0.1 fibres/mL should never be exceeded, and control measures are to be reassessed whenever air monitoring indicates the 'control level' of 0.01 fibres/mL has been reached. The Code of Practice for the Work Health and safety (how to safely remove asbestos) Code of practice 2015 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.

6. Principles of Asbestos Management

6.1 General Principles

Northern Transportables principles of asbestos management have been adapted from the Code of Practice for the Management and Control of Asbestos in Workplaces [NOHSC: 2018(2005)].

These principles are summarised below:

- The removal of ACM during renovation, refurbishment and/or maintenance, will be a priority, (where practicable), in preference to other control measures such as enclosure, encapsulation or sealing.
- Reasonable steps will be taken to identify all possible locations of ACM. Where ACM is identified or presumed, the locations must be labelled and recorded in the Asbestos Register.
- A risk assessment must be conducted for all identified or presumed ACM.



- Control measures will be established to prevent exposure to airborne asbestos fibres and will consider the results of risk assessments conducted for the identified or presumed ACM
- If ACM is identified or presumed, workers will be consulted, involved and information provided during implementation of control measures.
- Competent persons will be involved in the identification of ACM and conducting risk assessments. All workers and contractors on premises where ACM are present, and all other persons who may be exposed to ACM, must be provided with full information on the occupational health and safety consequences of exposure to asbestos and appropriate control measures.

6.2 Risk Assessment

The asbestos risk assessment process involves identifying, analysing, evaluating, controlling and monitoring sources of asbestos within buildings or other structures. The presence of asbestos within a building is considered a hazard, but the level of risk associated with the hazard is related to the presence of airborne fibres. The identification of asbestos within a building doesn't automatically necessitate its immediate removal. Asbestos that is in a stable matrix, or effectively encapsulated or sealed, and remains in a sound condition while left undisturbed, represents low risk to health.

A qualitative risk assessment is undertaken each time asbestos is found in a building. Each asbestos situation is allocated a high/ significant, medium or low risk rating. These ratings are defined as follows:

Significant/High risk: friable (unbonded) ACM that has deteriorated significantly. The material is readily accessible and prone to further disturbance, or unsealed friable asbestos material located in air conditioning systems.

Moderate risk: minor deterioration of the ACM is evident and/or the ACM is prone to mechanical disturbance due to routine building activity and/or maintenance.

Low risk: ACM shows no signs or very minor signs of damage/deterioration. Regular access to the ACM is unlikely to cause significant deterioration, if the material is adequately sealed.

If materials of unknown composition, or materials suspected of containing asbestos, are encountered on site, such materials are to be sampled and treated as asbestos until sample analysis confirms otherwise.

If demolition or refurbishment works are to be carried out in areas previously not inspected for the presence of asbestos, such as inaccessible wall cavities or beneath floors, an inspection and risk assessment must be performed by an appropriately qualified person prior to the commencement of the planned demolition or refurbishment works.



The risk assessment of ACM is to be reviewed when:

- There is evidence that the risk assessment is no longer valid.
- There is evidence that control methods are not effective.
- A significant change is proposed for the workplace or work practices or procedures relevant to the risk assessment.
- There is a change in condition of the ACM.

6.3 Controlling Asbestos Hazards

Hazards Control measures will be implemented based on the level of risk of exposure to asbestos containing materials at Northern Transportables sites. The control measures must be aimed at eliminating risk arising from ACM and prevent exposure to airborne asbestos fibres. After elimination, the methods adopted should follow the remaining levels within the hierarchy of controls.

The following information should be used as a guide when determining the correct control method for effective ACM management:

- If the ACM is friable and not in a stable condition, and there is a risk to health, it must be removed by a licenced asbestos removalist as soon as practicable.
- If the ACM is friable but is in a stable condition and is accessible, consideration should be given to its removal. If removal is not immediately practicable, short term control measures, such as sealing and enclosure, may be used until removal is possible.
- If the ACM is not friable and is in a good stable condition, minimising disturbance and encapsulation may be appropriate controls.
- Any remaining ACM is to be clearly labelled, according to the Code of Practice for the Management and Control of Asbestos [NOHSC: 2018(2005)], where possible, and regularly inspected to ensure it is not deteriorating or otherwise contributing to an unacceptable health risk.

ACM needs to be removed before demolition, partial demolition, renovation or refurbishment if it is likely to be disturbed by those works.

Elimination/Removal

Removal is the preferred control option because it removes the hazard from the workplace. The removal process does pose an increased risk to personnel engaged in the removal.

Asbestos Removal work is to be performed by a licenced Asbestos Removalist, with the appropriate licence according to the type of ACM being removed. Asbestos removal work must be conducted in accordance with the Work Health and safety (how to safely remove asbestos) Code of practice 2015.

Use "Form 144 Asbestos Removal Site Checklist" to assist in this role, see Attachment 18.1



Encapsulation/Sealing

Encapsulation refers to the coating of the outer surface of the ACM by the application of some form of sealant compound that usually penetrates to the substrate and hardens the material. Sealing is the process of covering the surface of the material with a protective coating impermeable to asbestos. Either of these options helps protect the asbestos from mechanical damage and is designed to reduce the risk of exposure by preventing the release of asbestos fibres into the airborne environment. This control method is not considered to be an acceptable alternative to repairing or removing severely damaged asbestos materials.

Enclosure/Isolation

This method involves installing a barrier between the ACM and adjacent areas. This inhibits further mechanical damage to the asbestos and some friable products may be candidates for enclosure if removal is not an option. The type of barrier installed may include plywood or sheet metal constructed as boxing a cladding around the asbestos.

Safe Work Practices

The asbestos register for the site is available and must be consulted prior to commencing work, if that work could result in the generation of airborne asbestos fibres. If, after consultation with the register and conducting a risk assessment, it is determined that the type of work and the location of work to be performed would result in an unacceptable level of risk, other controls are required to be implemented.

Personal Protective Equipment (PPE)

The PPE requirements for work involving ACM at Northern Transportables sites are to be based on the relevant risk assessment conducted by a suitably qualified person. Work Health and safety (how to safely remove asbestos) Code of practice 2015 must be consulted to determine the PPE needs, as well as AS/NZS 1715 and AS/NZS 1716 for specific respiratory protection requirements. See Appendix C – Guide to the selection of respiratory protection.

Protective clothing and equipment is to be worn always during work in the asbestos work area, prior to the final clearance inspection. Any PPE worn during asbestos disposal is to be treated as asbestos waste and disposed of in the approved waste bags. **The laundering of contaminated protective clothing in workers' homes is strictly prohibited. All protective clothing shall be destroyed as part of the procedure.**

7. Asbestos Register

Each site will establish, if required, an Asbestos Register recording the specific location, condition and exposure risk of each asbestos area. The accuracy and currency of the Register will be confirmed and updated on an annual basis by conducting site inspections of each asbestos area, or areas where asbestos removal or damage has occurred.



The register is located at each site and is managed by the Site Supervisor. The register is to provide the following information on asbestos identified or presumed in the workplace, as well as items confirmed as asbestos-free:

1. Date entered into register.
2. Address of building.
3. Location. In side building.
4. Type of Asbestos suspected.
5. Date Sample taken to Laboratory.
6. Date Sample returned, if positive, fill in register.
7. Location of ACM within the building.
8. Form of material (tiles, gaskets, sheeting, etc).
9. Asbestos Type (based on analysis).
10. Present condition of material.
11. Qty in m2 to be removed.
12. Potential risk to occupants (low, medium or high).
13. How easy to access.
14. Any other comments required.

The Asbestos Register will be made available to all employees upon request and made clear by the competent person/team leader/supervisor to any maintenance personnel or contractor, prior to their commencing work on buildings or items of plant containing asbestos. The competent person/supervisor must advise workers of the register and there is asbestos present, or if any other activity may cause exposure to the asbestos.

A simple, qualitative risk assessment is completed for each identified item. Each asbestos item identified is given a health risk rating (low, medium, or high), based on the location, asbestos form and type, and its present condition at the time of the site assessment.

Materials and products on Northern Transportables sites that could potentially contain asbestos include, but are not limited to:

- Thermal insulation (e.g. lagging, blankets or fire-door packing)
- “Fibro” boards and pipes (e.g. ac-sheeting in building products)

8. Managing in Situ Asbestos

The management of in situ asbestos is important to ensure ACMs are not damaged or deteriorate to such an extent that Northern Transportables employees, external contractors, or visitors are unnecessarily exposed to airborne asbestos fibres.

8.1 Asbestos Identification

Products suspected of containing asbestos and requiring identification are to be taken to an National Association of Testing Authorities (NATA) accredited facility by:

- Appropriately qualified person, or
- External asbestos analysis consultant.



Only trained persons are to remove samples suspected of containing asbestos. The sample is to be provided in a double sealed plastic bag and labelled with the following:

- Date
- Contact name
- Location of sample (detailed description of plant area and/or equipment where sample collected from)
- Description of product type and application (e.g. insulation blocks, lagging, fibreboard, gasket, pipe etc)
- Where practical a photograph and label should be used to identify the sample location, for future reference.
- Samples size should, where practical be a minimum of 100 grams or the size of a matchbox.

WHEN IN DOUBT TREAT THE PRODUCT AS ASBESTOS CONTAINING MATERIAL UNTIL IDENTIFIED AS OTHERWISE

8.2 Asbestos Material Labelling and Signage

A labelling system is established and must be maintained on site to enable the visual and legible identification of ALL asbestos materials recorded on the site Asbestos Register.

The labels are fixed to the plant/pipe/area (maximum distance of 1.5 meters apart) and are to be maintained in-situ always.

The labels used must comply with AS 1319 Safety Signs for the Occupational Environment, and a competent person is to determine their required location.

The labels are to be affixed in a secure manner and checked to ensure they are not damaged, missing, obscured or faded. If a risk assessment suggests an ACM might be disturbed or persons might be exposed and it is not practical to label the ACM (e.g. ceiling panels, furnaces or a friable ACM such as lagging) a prominent warning sign, specifying the ACM, is to be posted in the immediate vicinity.

If floor tiles have been identified as containing asbestos, an appropriate warning sign, displayed on an adjacent wall might read, "WARNING FLOOR TILES CONTAIN ASBESTOS. DO NOT DISTURB WITHOUT PROPER TRAINING AND EQUIPMENT."

Warning signs should be placed at the main entrance to the work areas where asbestos is present. This will ensure that asbestos is not unknowingly disturbed without the correct precautions being taken. Signs are to be displayed at the entry to the site and at site reception areas stating there is an asbestos register and when and where a person may inspect the register and the contact details for the Site Asbestos Officer.



All waste products will be packaged and labelled as asbestos at the point of removal. Materials or products that are not labelled, but could potentially contain asbestos, are to be treated as asbestos until tested and confirmed otherwise.

9. Record Keeping

All Northern Transportables sites shall maintain a complete record of all activities and work permits relating to asbestos works found.

The records that are to be kept include:

- Copies of all asbestos survey reports, including updates and amendments
- Copies of all permit to work documents
- Site induction records pertaining to the information disseminated to contractors prior to conducting work onsite
- Induction records pertaining to the information disseminated to employees regarding the presence of asbestos onsite
- Records of any removal or other asbestos related works onsite
- Clearance certificates indicating areas are safe to reoccupy after asbestos removal works
- Asbestos fibre air monitoring results
- All versions of the asbestos register
- Records dealing with Regulated and Trackable Waste and landfill disposal documentation.

Re-inspections of all ACM remaining on site are to be conducted by a suitably qualified person only. The re-inspection process will involve a visual assessment of the materials to determine if there has been any deterioration since the last inspection and, if so, what course of action should be taken i.e. temporary encapsulation, isolation or immediate removal.

Once the re-inspection has been completed, the Asbestos Register are to be updated accordingly.

10. Safe Work Practices

Maintenance tasks that may involve ACM at Northern Transportables sites are to be addressed under controlled conditions, to prevent and minimise the risk of exposure of the maintenance personnel or any other person to airborne asbestos fibres. The Code of Practice for the Management and Control of Asbestos in Workplaces [NOHSC: 2018(2005)] details procedures to be adopted for certain maintenance tasks.

These are:

- Drilling of asbestos containing materials
- Sealing, painting, coating and cleaning asbestos cement products
- Cleaning leaf litter from the gutters of asbestos cement roofs
- Working on electrical mounting boards (switchboards) containing asbestos.



10.1 Tools and Equipment

Tools and equipment to be used for asbestos removal work are required to generate a minimum amount of airborne fibres during use. High-speed abrasive power or pneumatic tools such as angle grinders, sanders, saws, and high-speed drills **MUST NEVER** be used. Hand tools only are permitted.

At the end of the removal work all tools are to be either:

- Decontaminated (i.e. fully dismantled and cleaned under controlled conditions)
- Placed in a sealed container and used only for asbestos removal work
- Disposed of as asbestos waste

10.2 Prohibited Practices

Work practices that are prohibited include:

- Work practices near asbestos materials that may disturb or, damage the material, cladding, enclosure, sealant or containment barrier;
- Workers using a high-pressure water process to clean an asbestos product or to clean up debris from an asbestos product;
- Workers using compressed air to clean an asbestos product or a surface where debris from an asbestos product is present

11. Asbestos Removal

11.1 General

A detailed site-specific Asbestos Removal Control Plan is to be developed by the licensed asbestos removalist prior to commencing the asbestos removal work. This document must be provided to the Site Asbestos Officer five days prior to work commencing. The Asbestos Removalist is also required to prepare a work method statement / job safety and environment analysis specific to the proposed removal job. The document must detail the way the work is to be performed, the specific control measures to be used, how they will be implemented and how their effectiveness is to be monitored and reviewed.

The removal of ACM will require an asbestos removal work area set up appropriate to the level of risk outlined in the risk assessment to ensure that the workplace exposure limits are not breached. Asbestos warning tape and warning signs are to be displayed.

Asbestos Removalists are to be appropriately licensed in accordance with the Workplace Health and Safety legislation.

These specify that:

An **“A Class”** asbestos removal license, also known as Asbestos Removal Business Certificate, be acquired for the removal of friable asbestos containing material but the license also covers the removal of bonded asbestos material of 10sqm or more.

A **“B Class”** asbestos removal license is acquired for work to remove 10sqm or more of bonded asbestos material. This license **DOES NOT** permit its holder to remove friable asbestos.



Asbestos Removalists must also have a current Workers Compensation Insurance, Professional Indemnity and Public Liability Insurance.

11.2 Removal Procedures

Work Procedures (depending on the type of ACM being removed, whether it is bonded or friable), are to ensure that exposure to airborne asbestos fibres is minimised and remain under the control levels and exposure standards.

Work Health and safety (how to safely remove asbestos) Code of practice 2015 details procedures to be strictly followed when any of the following materials are removed:

- Asbestos-Cement Products
- Vinyl Floor Tiles and Sheet Vinyl containing asbestos
- Asbestos backed vinyl and millboard from beneath a vinyl floor
- Asbestos switchboards or meter boards
- Removal and cleaning of ceiling tiles

11.3 Communications

The removal of ACM on site requires certain people to be informed of the processes involved. This communication will ensure those involved and impacted upon will have a better understanding of the process.

Major and Small Asbestos Removal Job (

Regardless of type or size of asbestos removal jobs, all asbestos removal, except samples, shall be carried out by a licenced asbestos removalist, not Northern Transportables employees.

It may be of moderate/significant or high risk, is in a location that will cause disruption to the building area occupants during the removal process and is to include visible asbestos warning barricading and signage.

The Site Asbestos Officer is to conduct a meeting with the Site Management Team and licenced asbestos removalist.

Topics discussed are to include relevant details of the job:

- the asbestos removal control plan,
- areas/locations affected,
- times and dates of removal,
- safety precautions,
- risk of the materials being removed,
- areas that will be closed during the removal, and
- risks and health effects of exposure to asbestos.



2. This meeting is to be held well in advance of the actual asbestos removal so that the Site Manager, Superintendents and Supervisors can then have a team meeting to disseminate the information.

3. Regular inspections of the asbestos removal work are to be conducted by the competent person using Checklist for the Removal of Friable Asbestos.

A record of the topics discussed as well as of those in attendance is to be kept and copies of the checklists are also to be kept.

11.4 Removal Program

The removal of ACM at Northern Transportables sites will be based on the following guidelines in order of priority:

1. Removal of any friable ACM as identified on the register and any other friable situation as identified
2. Removal of any ACM involved in any refurbishment job, overhaul or forced outage
3. Removal of any ACM impacted upon during any maintenance or service work
4. Removal of any medium risk items as identified on the register
5. Removal of any low risk item as identified on the register.

11.5 Air Monitoring

Air monitoring is to be performed wherever ACM are being removed, to ensure the control measures are effective.

The competent person for the asbestos removal control plan is to determine all air monitoring requirements. The monitoring program will address:

- The location, rate and frequency of sampling;
- Whether is necessary to monitor air quality in areas adjacent to, above and below the asbestos work area, taking account of the potential exposures of occupants of these areas: and –
- Whether additional routine air sampling is warranted in (for example) nearby high occupancy areas.

A documented air-monitoring program is to be developed. The air-monitoring program is to include requirements for clearance monitoring. An air-monitoring program is recommended for the removal of non-friable ACM, as it is good occupational hygiene practice. The air monitoring is to be performed in accordance with the NOHSC Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres [(NOHSC: 3003 (2005))]. Asbestos removal work must not commence until the air monitoring has commenced.

If an enclosure is used, air monitoring is to occur:

- Prior to any work (background monitoring);
- At least daily at the boundary of the asbestos work area;
- As part of preliminary clearance monitoring, following a satisfactory visual inspection;



- During dismantling of the enclosure, and
- As part of the final clearance inspection.

If an enclosure and a decontamination unit are used, air quality must be monitored at the following locations: -

- The clean side of the de contamination unit;
- The lunch room (where applicable)
- The surroundings of the asbestos work area including in the vicinity of the negative area exhaust (where possible).

Note: air monitoring of the exhaust from the extraction unit is a specialised task. The membrane filter method (FMF) is unsuitable, because the results obtained do not always truly reflect actual fibre concentrations in the exhaust air, and air monitoring devices should not be positioned at the exit point of a negative pressure exhaust air unit, because this can lead to unwarranted confidence in the filter's integrity.

The results of all air monitoring are to be provided to all relevant parties as soon as possible.

11.6 Control Levels for monitored airborne asbestos fibres.

“Control levels” are airborne asbestos fibre concentrations, which, if exceeded, indicate there is a need to review current control measures or take other action. These control levels are occupational hygiene “best practice” and are not health-based standards (they are below the concentration set in the NES for asbestos).

The control levels shown in the table below are to be used to determine the effectiveness of control measures:

Control Level (airborne asbestos fibres/mL)	Control/Action
<0.01	Continue with control measures
≥0.01	Review control measures
≥0.02	Stop removal work and find the cause

(<http://www.safeenvironments.com.au/asbestos-monitoring>)

12. Waste Removal and Disposal

12.1 Waste Removal and Containment

Asbestos waste, including contaminated PPE and cleaning materials (e.g. cleaning rags and plastic sheeting used to cover surfaces in the asbestos work area) are to be removed and disposed of into bags.

Loose asbestos waste is not to be allowed to accumulate within the asbestos work area. It must be collected and disposed of in asbestos waste bags and/or in a solid, sealable asbestos waste container, such as a bin or drum, if storage is required.



Controlled wetting of asbestos waste is to be done to reduce the possibility of dust emissions during the bagging or other containment of the waste. If asbestos waste cannot be disposed of immediately (e.g. because of volume requirements for disposal), it is to be stored in a solid waste drum, bin or container or skip and sealed and secured upon the completion of each day's work so that unauthorised access is prevented.

Waste Bags: - asbestos waste is to be collected in heavy-duty 200 mm (minimum thickness) polythene bags that are no more than 1,200 mm long and 900 mm wide. The bags are to be labelled with an appropriate warning, clearly stating that they contain asbestos and that dust creation and inhalation should be avoided.

An example of a warning statement, which might be used, is:

CAUTION – ASBESTOS. DO NOT DAMAGE OR OPEN BAG. DO NOT INHALE DUST. CANCER AND LUNG DISEASE HAZARD.

Only previously unused bags are to be used, and bags marked for asbestos waste are not be used for any other purpose. Hard and sharp asbestos waste requires preliminary sealing or a protective covering before it is placed in the waste bags, to minimise the risk of damage to the bags.

To further minimise the risk of a bag tearing or splitting, and also to assist in manual handling, asbestos waste bags are not to be filled more than half full and excess air should be gently evacuated from the waste bag, in a manner that does not cause the release of dust. Consistent with good manual handling practices, the weight of the bags should also not exceed 16kg.

The bags are to be twisted tightly, folded over and the neck secured in the folded position with adhesive tape or any other effective method. The external surface of each bag is to be cleaned to remove any adhering dust before the bag is removed from the asbestos work area. All asbestos waste is to be double bagged outside the work area immediately following the decontamination process.

Waste drums and bins: - all drums or bins used for the storage and disposal of asbestos waste must be in a good condition, with lids and rims in good working order, and free of hazardous residues.

The drums or bins must be lined with plastic (minimum 200 mm thickness), and labels warning of the asbestos waste are to be placed on the top and side of each drum or bin, with the words, 'Danger: asbestos. Do not break seal' or a similar warning.

If the drum or bin is to be re-used, the asbestos waste must be packed and sealed so that when the drum or bin is emptied there is no residual asbestos contamination.

Where possible, the drums or bins should be placed in the asbestos work area before work on ACM begins and should remain there until the clearance inspection has been completed. At the completion of the maintenance or service work the drums or bins should have their



rims sealed and their outer surfaces wet wiped and inspected as part of the clearance procedure before they are removed from the asbestos work area.

If it is not possible to locate the drums or bins inside the asbestos work area, they should be located as close to the work area as possible. Drums or bins should not be moved manually once they have been filled. Trolleys or drum lifters should be used. Bins and hoppers, used to contain the bagged asbestos waste, need to be kept in an area where they are unaffected by weather conditions (e.g. filling with rain water).

Waste skips or Storage Containers: - if it is not feasible to use asbestos waste bags, drums or bins, because of the volume or size of the asbestos wastes, a well-maintained waste skip, vehicle tray or similar container may be used.

The ACM must be sealed in double-lined, heavy-duty plastic sheeting or double bagged before they are placed in the skip. However, non-friable asbestos waste may be placed directly into a skip or vehicle tray that has been double lined with heavy-duty plastic sheeting (200mm minimum thickness), provided it is kept damp to minimise the generation of airborne asbestos fibres.

Once the skip is full, its contents are to be completely sealed with the plastic sheeting.

If a skip or container is to be used for storing the asbestos waste its contents must be able to be secured (e.g. using a lockable lid) and placarding provided on the exterior of the container identifying the contents.

All waste removal and containment shall be done by the licenced asbestos contractor.

12.2 Onsite Waste Transportation

The routes used for removing waste from the asbestos work area are to be designated in the Asbestos Removal Control Plan before the commencement of each removal. A competent person, following discussions with the asbestos removalist, should determine the methods used to transport wastes through a building. In occupied buildings, all movements of waste bags should occur outside normal working hours.

Once the waste bags have been removed from the asbestos work area, they are to be either:

- be placed in a solid waste drum, bin or skip; or
- be removed from the site by an approved and licensed carrier.

Waste bags should not be stored at the asbestos removal site if they are not placed in an asbestos waste drum, bin or skip. Drums or bins used to store asbestos waste should be stored in a secure location when they are not in use.



12.3 Offsite Waste Disposal

ACM is both a Regulated and Trackable Waste under the Environmental Protection (waste management) Regulation 2000 (Schedules 1 & 7). Waste tracking documentation must be completed with appropriate copies being retained for Northern Transportables records and forwarded to the Environmental Protection Agency. All offsite Waste Disposal shall be conducted by a contracted asbestos removalist.

Transport and final disposal of asbestos waste material shall be carried out by a competent person who carries certification as a transporter of hazardous materials in asbestos waste.

All asbestos waste material shall be buried at an approved landfill site and in a manner approved by the local and state authorities. Prior to payment of invoices Northern Transportables must receive copies of waste disposal receipts, as provided by the approved landfills. All details of offsite disposal are to be included in the asbestos removal control plan.

No building materials are to be re-used or recycled.

All waste disposals shall be recorded (date, quantity, disposal contract etc) in an appropriate register (e.g. within the sites waste management plans for disposal of regulated wastes). Where any buildings or essential plant are disposed of (offered for sale or lease, dismantled or demolished) and contain asbestos materials or products, the new owner/buyer is to be given a copy of the asbestos report and register relevant to the building or item of plant.

13. Project Supervision

During any large asbestos removal jobs or the removal of any high-risk ACM, the Site Supervisor/QHSE Administrator is to maintain a presence at the removal site, and liaise with the appointed asbestos removal contractor, to ensure that the removal process runs according to both the Northern Transportables Asbestos Management Plan, and/or the asbestos removal control plan developed by the removal contractor.

It might also be decided that an appropriately qualified occupational hygienist, with experience in asbestos abatement works, shall be engaged for the duration of the removal project, depending on the size of the removal job and level of risk associated with it.

13.1 Clearance Inspections

Clearance to re-occupy an asbestos work area is determined by a thorough clearance inspection conducted by a competent person. All of the barriers, warning barricade tape and warning signs are to remain in place until the clearance certificate to re-occupy has been granted.

A clearance certificate is to be provided to Northern Transportables by the asbestos removal contractor at the completion of the work and monitoring.



The need for clearance monitoring will be assessed as part of asbestos removal control plan and for undertaking any maintenance work involving ACM. It will be undertaken by a competent person, independent of the person conducting the asbestos work, after cleaning has been completed and the area dried.

Air samples are to be taken in the asbestos work area. For jobs involving an enclosed area, this is to be done within the enclosed area, following the completion of the work but prior to the removal of the enclosure and again after the removal of the enclosure.

The removal, cleaning and clearance work will not be considered completed until an airborne fibre level of less than 0.01 fibres/mL has been achieved, as determined by the clearance monitoring.

13.2 Settled Dust Sampling

This sampling only provides an indication of cleanliness following disturbances of ACM and should not be used as an indicator of risk to health. Any settled dust sampling criteria are to be developed by discussion with the Site Supervisor and a competent person undertaking a visual inspection of the area.

14. Emergency Response Procedures

14.1 Evacuation Event

An emergency associated with the potential for exposure to airborne asbestos fibres within a building site may necessitate the need to evacuate. Site procedures for evacuation are to be conveyed to contractors and employees during the site induction. The risks associated with any asbestos removal work should be assessed and include contingencies in the case of an emergency.

Decontamination procedures can be temporarily waived in the event of an emergency requiring evacuation. This is to be based on an informal risk assessment conducted at the time.

Persons involved in asbestos removal must evacuate to the evacuation assembly point but remain downwind to ensure any fibres remaining on clothes, because of not decontaminating completely, do not enter the breathing space of others.

Upon arrival at the evacuation point, emergency wardens and health and safety personnel are to be notified of the status of the asbestos removal work and the assessed level of risk associated, as well as the assessed level of risk associated with asbestos removalists not undergoing the complete decontamination process.

Events likely to require evacuation during asbestos removal work include but are not limited to:

- Fire evacuation



- Chemical spill and contamination
- Gas leak/contaminated atmosphere

14.2 Spills

Where suspected spills or damage has occurred to asbestos material, lagging, sealants, covers etc. the following is to be implemented:

- The site emergency contact number is to be used to report the location of the potential contamination,
- Asbestos trained workers are to respond (wearing suitable respiratory protection, gloves and disposable coveralls), assess the risks associated with the spill and secure the affected area, using asbestos warning tape and signs,
- Ensure any exhaust extraction, air conditioning systems, fans, wind sources are controlled to prevent further spread of the contamination,
- The areas below and adjacent or above are secured and barricaded with asbestos warning tape to prevent materials dropping or passing into those areas – (attention is to be paid to ledges, tops of ducts/pipes, cracks in the floor, folds in the cladding),
- Use surface soaking sprays to wet down the material and obtain a bagged sample of the suspect material, or
- Use plastic sheeting and adhesive tape to seal or encapsulate the affected area,
- Use materials such as plastic drop sheets, bunding material and or suitable adsorbent material to contain the water spray and run off,
- Clean up the affected areas using suitable tools (soft brushes, mops, dust pans etc.) and if necessary vacuum using HEPA filters,
- Apply sealant or repairs to the damaged areas to prevent further contamination,
- Inspect the work to ensure all suspect materials have been removed,
- All contaminated articles and clothing are to be bagged in suitable asbestos disposal bags and be disposed of as asbestos waste,
- Set up an air monitor in the work area to monitor airborne fibre concentrations and secure the work area until the results are obtained,
- Send the sample off for testing and determine if it contains asbestos,
- Undertake further asbestos removal work to make the area safe using a safe work method statement and an asbestos removalist,
- Provide details of the material sample results and monitoring results to the workers involved who may have been exposed,
- Undertake medical assessments of the workers involved who may have been exposed and provide copies of the assessments to the workers.
- Have the workers who were potentially exposed to uncontrolled asbestos fibres complete a– Asbestos Exposure Questionnaire
- Maintain records of the incident reporting, investigation and health assessments with the Asbestos Exposure Register.



15. Awareness Training

15.1 Asbestos Removalists

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

Asbestos Removalists are to keep written records of all training provided to their asbestos removal workers and these records should be requested before awarding the contract for any site removal work.

15.2 Site employees

Any Northern Transportables employees and others who may encounter ACM on a Northern Transportables site, either directly or indirectly, must be provided with adequate information and training.

Depending on the circumstances the 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 at specific Northern Transportables site;
- the trainees' roles and responsibilities under the Northern Transportables asbestos management plan;
- where each site-specific register of ACM is located and how it can be accessed;
- the timetable for removal of ACM from the Northern Transportables site;
- 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 NES and control levels for asbestos; and
- the purpose of any air monitoring or health surveillance that may occur.

16. Asbestos Exposure Register

Northern Transportables will maintain an asbestos exposure register that records persons that have been exposed, have potentially been exposed or have worked near asbestos materials.

Workers are to complete Asbestos Exposure Questionnaire and give a copy to the Site Supervisor who will update the site register accordingly.

A copy of the Form is to be kept by the worker and their employer.



17. 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. One of its main purposes is to ensure that control measures are effective and provide an opportunity to reinforce specific preventative measure and safe work practices.

Before removing asbestos samples, Northern Transportables will arrange and pay for health monitoring by a medical practitioner for all asbestos removal workers or workers who may be exposed to asbestos during the sample removal process.

The monitoring should identify any changes in a person's health because of exposure to asbestos.

All health records must be kept for 40 years and the worker must receive a copy of the report. You will need to notify the regulator of any changes to a worker's health.

The assessment will be conducted in accordance with the Guidelines for Health Surveillance (NOHSC: 7039:1995) by registered medical practitioners.



18.2 Asbestos Removal Site Checklist



ASBESTOS REMOVAL SITE CHECKLIST

Project: _____ Address: _____

Asbestos Removalist Organisation				
Company Name:		Representative:		
Contact Phone Number		Contact Email:		
General Site Details				
Client		Building Number/Location:		
NT Site Supervisor		NT Asbestos Advisor		
Asbestos Removalist				
Description	Yes	No	Remarks	
Is the removalist licensed				
Was the job notified to SafeWorkNT?				
Does the removalist have a supervisor on site?				
Does the removalist supervisor have the appropriate experience and training?				
Have all employees been appropriately trained?				
Are records of training available on site?				
Has an asbestos control plan been prepared?				
Is the control plan available on site?				
Has a risk assessment/audit been prepared?				
Has the results of the risk assessment been made accessible?				
Have all employees, received an appropriate medical examination?				
Does the Removalist hold a current "A Class" asbestos removal license?				
Does the Removalist hold a current Workers Compensation Insurance Professional Indemnity and Public Liability Insurance certificates.				
Asbestos Details				
Asbestos containing material being removed	Friable		Remarks	
	Yes	No		
Pipe lagging				
AC roof				
AC sheet				
Vinyl floor/wall tiles				
Fire door				
Other				
Risk Details				
Description	Yes	No	Remarks	
Are appropriate barriers and signs erected?				
Is an industrial HEPA filtered vacuum cleaner available on site?				
Have emergency exits been identified and evacuation plan disseminated to employees?				
Can the removalist locate appropriate fire extinguishers and are they appropriately placed?				

PROJECT ADMINISTRATION

Version 1.0
Revision Date: 15/07/2017
Form 144 - Asbestos Removal Site Checklist

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Uncontrolled when printed



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NORTHERN TRANSPORTABLES MANAGEMENT SYSTEM MANUAL

FORM 144

Description	Yes	No	Remarks
Is there sufficient protective clothing and respirators?			
Are sufficient asbestos waste containers and leak proof metal storage bins or containers on site?			
Are First Aid arrangements satisfactory?			
Has disposable clothing bagged as asbestos waste?			
Has all equipment that is being used, or is to be used, been assessed by the removalist for associated hazards, potential risks and appropriate controls implemented?			
Have or will clearance air monitoring results be completed?			
Has any exposed asbestos been sealed?			
Other:			
Asbestos Removalist Report			
Description	Yes	No	Remarks
Have you received a copy of the asbestos removal control plan?			
Have you received a copy of the work method statement / Job safety Analysis?			
Have you received a copy of the report			
Other:			
Asbestos Removalist Report			
Description	Yes	No	Remarks
Has all asbestos been disposed of correctly?			
Have you received copies of waste disposal receipts?			
Other:			
Asbestos Exposure Register			
Description	Yes	No	Remarks
Has the register been completed?			
Have the medicals been recorded?			
Other:			
Asbestos Documentation Filed			
Description	Yes	No	Remarks
All records stored electronically and hardcopies in files?			
Other:			