HAZARDOUS MATERIALS MANAGEMENT PLAN AND REGISTER

The purpose of this register is to identify, locate and assess health risks associated with hazardous materials located at the site.

March 2015

31/03/2015 10 William St, Perth, WA, 6000
The cover photo on this report was taken of 10 William St, Perth, WA, 6000 by QED Environmental Services.
14 April 2015

Knight Frank
Level 10 Exchange Plaza
2 The Esplanade
Perth WA 6000

Craig Clarke


Dear Craig,

We have pleasure in enclosing the completed Hazardous Materials Management Plan & Register for 10 William St, Perth, WA, 6000.

We trust these meet with your approval and should you require any further information please do not hesitate to contact this office.

Yours Faithfully

Elise Eldridge
Asbestos Assessor Class A (2014921)

The enclosed report has been authorised by the following QED Environmental Services Signatory

Ryan Tremain B SocSc
Partner
Asbestos Assessor Class A

QED Signatory
Environmental Consultant
QED Environmental Services Pty Ltd

QED Environmental Services Pty Ltd

HAZARDOUS MATERIALS MANAGEMENT PLAN AND REGISTER
March 2015

10 William St, Perth, WA, 6000
Report ID: 11042r0

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<td>Electrical Mounting Board (Asbestos Detected)</td>
<td>18</td>
</tr>
<tr>
<td>2</td>
<td>Pale Green Vinyl Floor Tiles (Asbestos Detected)</td>
<td>19</td>
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<td>3</td>
<td>HV Cable insulation (Suspected Asbestos Containing Material)</td>
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<td>11</td>
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<td>Fire Pillows (Suspected Synthetic Mineral Fibres)</td>
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</tr>
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<td>Boiler Gaskets &amp; Insulation (Suspected Synthetic Mineral Fibres)</td>
<td>27</td>
</tr>
<tr>
<td>15</td>
<td>Hot Water Pipe Insulation (Suspected Synthetic Mineral Fibres)</td>
<td>28</td>
</tr>
<tr>
<td>16</td>
<td>Tenancy Ceiling Tiles &amp; Insulation (Suspected Synthetic Mineral Fibres)</td>
<td>28</td>
</tr>
<tr>
<td>17</td>
<td>Hot Water Heater Insulation (Suspected Synthetic Mineral Fibres)</td>
<td>28</td>
</tr>
<tr>
<td>18</td>
<td>Lead Paint (Lead Detected)</td>
<td>29</td>
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<td>Fluorescent Lighting Capacitors (Suspected PCB Containing)</td>
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<td>20</td>
<td>Transformer Oil (Suspected PCB Containing)</td>
<td>30</td>
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</tbody>
</table>
HAZARDOUS MATERIALS MANAGEMENT PLAN AND REGISTER
10 WILLIAM ST, PERTH, WA, 6000

EXECUTIVE SUMMARY
QED Environmental Services was commissioned by Knight Frank Australia Pty Ltd to audit 10 William St, Perth, WA, 6000 (referred to as the “site”). Specifically the scope of works includes the following:

1. Asbestos Management Plan
2. Asbestos Register
3. Hazardous Materials Register (nominated materials – Synthetic Mineral Fibre, Lead & PCB’s)

The methodology employed by QED Environmental Services is consistent with HSG264 Asbestos: The survey guide (Health and Safety Executive (2012)). The processes and procedures implemented for these works have been independently assessed by the National Association of testing Authorities, Australia (NATA).

QED Environmental Services has endeavoured by best practice procedures based on the Health, Safety Executive recommendations, to locate and identify the presence of Hazardous Materials, however the findings summarised in this report should not be deemed absolute. As such this report is to be used for Building Operations only and not for Building Demolition purposes.

The following areas specific to this site were inaccessible on this occasion and, therefore, are excluded from this Hazardous Materials Management Plan and Register:

- Western Power transformer room - Basement

Elise Eldridge from QED Environmental Services conducted the site inspection on 31/03/2015.

The before mentioned registers will be due for review March 2016 unless changes to the condition of the material (i.e. damage, removal or encapsulation) occur prior to this date.
Initial Findings

Asbestos was identified, suspected or presumed in the following. Ensure that they remain clearly labelled and regularly inspect to ensure they are not deteriorating or otherwise contributing to an unacceptable health risk:

<table>
<thead>
<tr>
<th>ID #</th>
<th>Product</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Electrical Mounting Boards</td>
<td>Level 7 Plantroom, Levels 1-6 Electrical Cupboards, Basement Transformer Room</td>
</tr>
<tr>
<td>2</td>
<td>Pale Green Vinyl Floor Tiles</td>
<td>Basement Transformer Room</td>
</tr>
<tr>
<td>3</td>
<td>HV Cable insulation</td>
<td>Basement Transformer Room</td>
</tr>
<tr>
<td>4</td>
<td>Lift Door Thermal Insulation</td>
<td>Lift Doors – all floors. Lift shaft</td>
</tr>
<tr>
<td>5</td>
<td>Urinal Backing Membrane</td>
<td>Rear surface of the urinals.</td>
</tr>
</tbody>
</table>

The vermiculite spray-on insulation located on steel beams throughout the building has been sampled through to the slab/steel and was found not to contain asbestos. Investigations conducted at other sites has shown that, in a building of this age, remnants of Limpet Asbestos (greyish in appearance) may be present beneath the vermiculite. Caution is required when disturbing the vermiculite and further investigation should be undertaken before any large-scale removal of the material. If, during routine works, inconsistencies in the make-up of the vermiculite are noticed work should stop immediately, controls be put in place and the material sampled and analysed for asbestos content.

Other hazardous materials (synthetic mineral fibre) were identified, suspected or presumed in the following and assessed as posing a moderate risk, with recommended actions below:

<table>
<thead>
<tr>
<th>ID #</th>
<th>Product</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Ductwork internal insulation</td>
<td>L7 Plantroom Return air</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Assumed throughout all floors</td>
</tr>
<tr>
<td></td>
<td>Recommendations: Further investigation within the ductwork throughout the building is required to assess the condition and associated risk of exposed SMF.</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Loose ceiling insulation</td>
<td>L7 Tenancy ceiling space</td>
</tr>
<tr>
<td></td>
<td>Recommendations: Ensure disturbance is minimised, and contractors accessing the area for toilet exhaust maintenance are notified and inducted with safe work procedures.</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Ductwork external insulation</td>
<td>Suspected all floors – return air cupboards</td>
</tr>
<tr>
<td></td>
<td>Recommendations: Further investigation within the ductwork throughout the building is required to assess the condition and associated risk of exposed SMF.</td>
<td></td>
</tr>
</tbody>
</table>
Other hazardous materials were also identified, suspected or presumed in the following and assessed as posing a minor risk:

<table>
<thead>
<tr>
<th>ID #</th>
<th>Material</th>
<th>Product</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>Synthetic Mineral Fibres</td>
<td>Insulation</td>
<td>Roofs</td>
</tr>
<tr>
<td>10</td>
<td>Synthetic Mineral Fibres</td>
<td>Internal insulation</td>
<td>Fire doors throughout building</td>
</tr>
<tr>
<td>11</td>
<td>Synthetic Mineral Fibres</td>
<td>Lift Brakes</td>
<td>Lift Motor Room - Roof</td>
</tr>
<tr>
<td>12</td>
<td>Synthetic Mineral Fibres</td>
<td>Water proofing membrane</td>
<td>Roof</td>
</tr>
<tr>
<td>13</td>
<td>Synthetic Mineral Fibres</td>
<td>Fire pillows</td>
<td>Risers and penetrations – all floors</td>
</tr>
<tr>
<td>14</td>
<td>Synthetic Mineral Fibres</td>
<td>Boiler gaskets and insulation</td>
<td>Boiler – L7 Plantroom</td>
</tr>
<tr>
<td>15</td>
<td>Synthetic Mineral Fibres</td>
<td>Hot water pipe insulation</td>
<td>L7 Plantroom - All floors</td>
</tr>
<tr>
<td>16</td>
<td>Synthetic Mineral Fibres</td>
<td>Ceiling tiles and insulation</td>
<td>Tenancies – all floors</td>
</tr>
<tr>
<td>17</td>
<td>Synthetic Mineral Fibres</td>
<td>Hot water heater insulation</td>
<td>Plumbing ducts</td>
</tr>
<tr>
<td>18</td>
<td>Lead based paint (3.6%)</td>
<td>AHU paint</td>
<td>L7 Plantroom</td>
</tr>
<tr>
<td>19</td>
<td>PCBs</td>
<td>Florescent lighting capacitor</td>
<td>L7 Plantroom</td>
</tr>
<tr>
<td>20</td>
<td>PCBs</td>
<td>Transformer oil</td>
<td>Basement transformer room</td>
</tr>
</tbody>
</table>

All materials assessed as posing a minor health risk do not appear to impact adversely on the microenvironment; however, if at any such stage there is a possibility of disturbance before the next inspection (e.g. refits/upgrades to services) a monitoring and removal programme is recommended.
Recommendations

1. All materials identified as posing a minor risk may remain in situ, until requiring replacement although, where practicable, asbestos containing materials should be removed, consistent with the Federal Government’s stated ultimate goal of the prohibition of asbestos, which is for all workplaces to be free of asbestos”.

2. Further investigation is required within
   a. the ductwork to assess the condition of the exposed SMF within
   b. return air cupboards on each floor to assess the condition of the exposed SMF within

3. All identified items may remain in situ, until requiring replacement.

4. Asbestos Management Plan (AMP) implemented:
   a. Knight Frank Australia Pty Ltd site induction to include specific reference to AMP and Register.
   b. Register and AMP document to be printed and kept onsite at the location where contractors sign-in, and made available via the internet for contractors to use when accessing the site or planning for works.
   c. Emergency Response chart to be printed and kept onsite at the location where contractors sign-in.
   d. Craig Clarke nominated as Property Management contact for the site (principal custodian of the Asbestos Management Plan).
   e. QED Environmental Services nominated as Asbestos Management Planner for the site (part of Emergency Response).
   f. Register and plan reviewed at least annually, or more frequent if works occur.
   g. QED Environmental Services to review any procedures where works may disturb identified, presumed or suspected asbestos.
INTRODUCTION

Scope
The scope of this report is to assess the, nature, condition and potential risk to occupant health from exposure to in situ asbestos and other nominated hazardous materials within the building fabric and general services, in keeping with the appropriate State and Commonwealth Legislation.

The scope of work specified for the site survey excludes invasive investigative techniques and subsequently this report is not to be used in the event of building demolition.

Class of Assessment
The United Kingdom has developed a minimum standard for the surveying and sampling of asbestos containing material in the commercial sector. The standard identifies two types of survey which may be used, depending on the purpose for which the results of the survey are to be used. The two types are:

Management Survey. The assessor locates, as far as reasonably practicable, the location, extent and condition of suspect asbestos containing material (ACM) that may be damaged or disturbed during normal occupancy or foreseeable maintenance activities. This type of survey may involve minor intrusive work and some disturbance. The materials are assessed in relation to their condition and their ability to release fibres into the air.

Refurbishment and Demolition Survey. The assessor locates, as far as reasonable practicable, all asbestos containing materials in the area to be refurbished or demolished. The survey is fully intrusive and will involve destructive inspection. This type of inspection may also be necessary prior to more intrusive maintenance or repair work will be carried out, or where plant is to be removed or dismantled.

The surveys are completed by appropriately trained and experienced surveyors, who assess the following aspects of any ACM identified:

- product type
- location
- extent
- accessibility
- likelihood of disturbance
- amount of damage/deterioration (in the case of the Refurbishment and Demolition Survey, this is only required if the asbestos removal may not take place for some time.)

Source: HSG264 Asbestos: The survey guide (Health and Safety Executive (2012)).

QED Environmental Services has adapted this survey standard to also incorporate hazardous materials other than asbestos. In this case a Management Survey has been used by QED Environmental Services in order to develop the appropriate Asbestos and Hazardous Materials Register and Management Plan. Sampling of materials has been conducted wherever practical.
Methodology

The general methodology employed by QED Environmental Services is consistent with HSG264 Asbestos: The survey guide (Health and Safety Executive (2012) and is also in accordance with National Code of Practice for the Control of Workplace Hazardous Substances [NOHSC: 2007(1994)] and Asbestos (April 2005) in Workplaces.


This involves 3 phases; Identification, Evaluation and the Control Phase. This report details the Identification and Evaluation Phases, and provides recommendations of the Control Phase. The sampling and assessment of suspect materials was conducted by QED Environmental Services personnel from visible building and plant materials with minimal disturbance, and samples sent to an independent NATA certified laboratory for analysis.

Limitations

Non-destructive sampling is restricted by physical, safety and security constraints of access, and a number of operational limitations, protocols and codes of practice (WorkSafe) that restrict any building inspection.

Note that no inspection can guarantee to identify all materials subject to investigation present in a building, thus due to accessibility and scope constraints there is a possibility that additional hazardous materials may exist within the building which are not identified in the registers. In some instances, materials subject to investigation may be present in inaccessible areas such as:

- Wall cavities
- Locked or blocked off areas
- Beneath floors
- Elevator shafts
- Slabs
- Integral parts of boilers, pumps, machinery, plant and pipework
- Reheat units within air conditioning ducts; and
- Fire doors.

Confirmation of lagged pipework in wall cavities and that which may be “chased” into walls is not possible with a visual inspection in a non-destructive survey. Any scheduled demolition or upgrading works should allow for specific inspections to be undertaken in order to determine if asbestos is present in such areas.

In addition, the following areas specific to this site were inaccessible on this occasion:

- Western Power transformer room - Basement
ASBESTOS MANAGEMENT PLAN

Aim

The objective of the AMP is to allow the continuation of normal building occupancy practices and operations and maintenance activities, while limiting the potential exposure of occupants, maintenance workers, service personnel and visitors alike to airborne asbestos fibres.

The management plan should also include an information sharing mechanism to provide all relevant parties with information about the location, type and condition of ACM located at the site.

The ultimate goal is for all workplaces to be free of ACM. Accordingly, consideration should be given to the removal of ACM during renovation, refurbishment and/or maintenance, where practicable, in preference to other control measures such as enclosure, encapsulation or sealing.

This plan is to be read in conjunction with the following Asbestos Workplace Register.

An imperative of the management plan is to ensure compliance with current Commonwealth and State Legislation, Regulations, Australian Standards, Codes of Practice and Guidelines related to Asbestos Containing Materials within the workplace.

General principles of an asbestos management plan are shown in the diagram on the following page.

The Asbestos Management Plan covers the following elements:

1. A current asbestos register (located in following section)
2. Preparation of an asbestos works program
3. Site procedures for dealing with asbestos issues
4. Training staff and contractors
5. Management responsibilities
6. Annual Review
Figure 1. General principles of an asbestos management plan

Source: Code of Practice for the Management and Control of Asbestos in Workplaces [NOHSC: 2018 (2005)] Figure 1 page 20.
Application of Register

A current asbestos register for the building is maintained by the Asbestos Management Planner (QED Environmental Services), in accordance with current state and federal regulations.

In-situ management is the preferred method of managing asbestos-containing materials (ACM's) which is the primary responsibility of persons in control of the property, usually the Property Manager.

Advice regarding ACM is to be included in induction training procedures. Follow up briefings are recommended after each review of the ACM register. This applies to persons directly responsible for the management of asbestos on site. Follow up briefings should occur after any material change in the ACM register, or every 12 months after the initial survey.

Induction briefings for contractors who may work at the site are to be conducted during sign in procedures or during site induction training. Where necessary, the briefings will be site specific.

Updates, where a change to the Asbestos Management Plan (AMP) or extensive work to buildings is planned, are to be delivered by:

- Reviewing the asbestos register;
- Briefing meetings; and
- Staff training.

Access to Asbestos Register

The asbestos register is to be made available to contractors on every occasion that work may be done which could possibly disturb ACM. Requests by staff members for inspection of the asbestos register will be granted.

Asbestos Register & Service Works

The asbestos register is located in the following section of the report. The Register describes the type, location risk assessment and associated control measures for asbestos identified for the Site. The Register also contains reference information and a ‘Service Record’ section which is updated whenever works are completed eg. labelling, removal etc.

Planning for Removal of ACM

Planning requirements for the removal of ACM can differ greatly, depending on the specific asbestos removal task, the type, location, quantity and condition of the ACM to be removed, whether there are workers or other persons nearby and many other factors.

Asbestos removal work includes:

- Removal of ACM from buildings and structures, including demolition/excavation sites;
- Removal of ACM from plant and equipment, including friction products; and
• cleaning up asbestos dust or debris.

Whatever the circumstances, it is essential for an asbestos removal control plan to be developed and implemented whenever any ACM is to be removed.

The asbestos removalist should develop a site-specific control plan before commencing any asbestos removal work.

The purpose of each asbestos removal control plan is to help ensure the removal is well planned and carried out in a safe manner.

The asbestos removal control plan should include specifications and/or drawings addressing all of the items which are relevant to the particular removal job. An asbestos removal control plan is provided in the appendices under ‘Asbestos Removal Control Plan’.

Safe Work Procedures

Prior to commencing any works within the building, such as demolition, refurbishment or maintenance, the Asbestos Register must be consulted to determine if any ACM are present which are at risk of being disturbed.

If ACM are present in the area, and may be impacted by the proposed works, the asbestos must be removed under controlled conditions which need to be established prior to the commencement of any building works. Subject to the nature of the asbestos, abatement options other than removal (such as encapsulation) may be deemed more appropriate given the prevailing circumstances at the time.

Notwithstanding the former, if any asbestos materials are at risk of being disturbed as a result of any intended works a Job Safety Analysis (JSA) will need to be submitted before a Permit to Work allows such works to proceed. A JSA is a statement of work procedures which identifies any associated risks, the remedial actions and site emergency contact details.

Full consultation of all involved parties is required prior to the start of works. Parties involved shall be made aware of the presence and extent of ACM’s and their inherent responsibilities.

If unknown materials, or undocumented materials suspected of containing asbestos are encountered during building works, such materials should be treated as asbestos and any work that would impact on that material must immediately cease, pending sampling and analysis by the Asbestos Management Planner (QED Environmental Services).

A set of specific safe work procedures for ACM’s detailing preparation, equipment, removal, decontamination and clearance are contained in the appendices under ‘Workplace Procedures’. These procedures are lifted under copyright from the following codes of practice:


Code of Practice for the Management and Control of Asbestos in Workplaces [NOHSC: 2018(2005)]
Sampling and Monitoring

In support of the asbestos register and/or when deemed appropriate, future samples of materials suspected of containing asbestos should only be taken by competent persons and analysed by a NATA accredited laboratory. This also applies to the subsequent risk assessment and control measures as entered into the asbestos register.

Where there is a large amount of asbestos in a confined space, periodic air tests should be commissioned to monitor asbestos fibre levels to confirm that it is safe to access the area.

Air monitoring events include:

**Exposure Monitoring** determines a person’s likely exposure to a hazardous substance. Levels are compared against the National Exposure Standards (NES).

**Control Monitoring** measures the concentrations of airborne asbestos fibres in an area during works on ACM’s, so that it may be used in assessing the effectiveness of control measures. This should not be used for assessment of occupational exposures.

**Clearance Monitoring** measures the concentrations of airborne asbestos fibres in an area at the conclusion of works on ACM’s. An area may be deemed to be ‘cleared’ when the level of airborne asbestos fibres is measured as being <0.01 fibres/mL and there is no visual evidence of dust and debris.

Subsequently airborne monitoring should only be commissioned in conjunction with the nominated Asbestos Management Planner (QED Environmental Services) and conducted in accordance with the “Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres [NOHSC: 3003 (2005)]."
Emergency Response

Flow Chart to be Printed and Placed Onsite adjacent to Contractor Sign In

Potential asbestos problem identified

STOP WORK IMMEDIATELY

Contact Knight Frank Facilities Response Centre
1300 553 065

Management & Asbestos Management Planner (QED Environmental Services) to conduct visual assessment of suspected emergency situation

Is asbestos or suspected asbestos containing material present?

NO

YES

Has the damaged material been positively identified as asbestos?

NO

YES

Resume normal work activities

Evacuate all unprotected personnel from immediate area and restrict access by use of signage and barriers

Resume normal work based on the provision that there is no risk of exposure of asbestos fibres

Is clean-up/remediation required?

NO

YES

Engage a licensed asbestos removalist to clean-up and dispose of asbestos containing material / removalist to liaise with Asbestos Management Planner (QED Environmental Services) for monitoring / inspections and clearance

Disposal of asbestos waste at an approved landfill site

Resume normal work activities

NO

YES

Does sample contain asbestos?

Resume normal work activities

Engage Asbestos Management Planner (QED Environmental Services) to obtain sample for

Has the damaged material been positively identified as asbestos?

NO

YES

Engage Asbestos Management Planner (QED Environmental Services) to provide report to Management for distribution as required

Resume normal work activities

Review incident, inform exposed personnel to OHS Regulation 1996 and make changes where necessary

Resume normal work activities

Management to contact Asbestos Management Planner QED Environmental Services (08) 9201 0998

Resume normal work based on the provision that the asbestos will remain undisturbed – otherwise manage asbestos as per Asbestos Management Plan
Training

It is recommended that employees attend an information evening or seminar specifically tailored to the workplace in any situation where asbestos is part of the workplace. These information sharing activities are intended to educate employees about the associated risks of asbestos in the workplace and current control measures. Training packages should be the responsibility of in-house Occupational & Health and Safety personnel or the asbestos management planner (QED Environmental Services).

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 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;
- 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;
- Control levels for asbestos; and
- The purpose of any air monitoring or health surveillance that may occur.

Persons Responsible for the Management of Asbestos

Facility Management will provide a focal point for all matters relating to asbestos across the site and to co-ordinate all activities with regard to managing asbestos hazards on site.

The nominated manager will work in close liaison with any Occupational & Health and Safety, Human Resources, Building & Property, Operations & Maintenance, Staff Development, Unions and other stakeholders with an interest in the execution of asbestos related activities.

Typical duties of the officer should include, but may not be limited to:

- Maintain the Asbestos Register through a systematic auditing and recording process;
- Co-ordinate the implementation of control measures on a priority basis as determined through the consultative process;
- Keep the building community informed about asbestos hazards and its control;
- Administer a permit-to-work system for all persons working with asbestos and approving the submitted Job Safety Analysis;
- Monitor the work environment and licensed asbestos removal where appropriate;
- Oversee asbestos work in the building in liaison with line management and health and safety representatives;
- Maintain all records in accordance with the relevant standards and codes of practice for asbestos work;
• Ensure that all contractors who are engaged to carry out work with asbestos are competent, and have developed procedures; and
• Ensure individuals under their control are not exposed to any potential hazardous situations from working with asbestos.

**General Staff**

Although asbestos management is the primary responsibility of persons in control of the property, all staff should make themselves aware of situations in which asbestos may be encountered and ensure that maintenance and other workers are informed of the presence or suspicion of asbestos. All staff should be aware of the hazard of asbestos exposure.

Any staff or contractors who observe what may be damaged or unsealed asbestos, must report it to **Facility Management** for investigation and appropriate control measures.

**Recording Work on ACM**

Work done on ACM that materially changes a register entry is to be recorded in the asbestos register and asbestos management plan by either the property manager or the Asbestos Management Planner (QED Environmental Services) 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.

**Review**

The register of ACM is to be reviewed every 12 months or when a change to the register is necessary.

The asbestos management plan is to be reviewed every 12 months 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.
HAZARDOUS MATERIAL REGISTERS

Asbestos Register

Building address: 10 William St, Perth, WA, 6000
Construction: Concrete/steel
Year of Construction: 1968
Assessor: Elise Eldridge
Date of Assessment: 31/03/2015

<table>
<thead>
<tr>
<th>ID 1:</th>
<th>Electrical Mounting Board (Asbestos Detected)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material</td>
<td>Chrysotile asbestos detected.</td>
</tr>
<tr>
<td>Lab No.</td>
<td>BL-0153 PB</td>
</tr>
<tr>
<td>QED Sample No.</td>
<td>N/A</td>
</tr>
<tr>
<td>Locations</td>
<td>Level 7 Plantroom, Levels 1-6 Electrical Cupboards, Basement Transformer Room</td>
</tr>
<tr>
<td>Condition</td>
<td>Good to fair, damaged in places, non-friable.</td>
</tr>
<tr>
<td>Signage</td>
<td>Labelled.</td>
</tr>
<tr>
<td>Potential for Disturbance</td>
<td>Low to Medium.</td>
</tr>
</tbody>
</table>

**Risk**

The ACM are not friable and are in stable condition. In accordance with [NOHSC: 2018 (2005)], ensure that they remain clearly labelled and regularly inspect to ensure they are not deteriorating or otherwise contributing to an unacceptable health risk.

**Management Actions**

May remain in-situ until replacement is required. Manage as per Asbestos Management Plan. Administrative – Follow safe work procedures during removal and maintenance. Personal protective equipment – P2 facemask and coveralls required when working on material.

**References (See Appendices)**


**Service Record**


**Further Details**

All coal tar pitch boards should be presumed to contain asbestos. Brand names include Zelemite, Miscoilte and Lebah.
<table>
<thead>
<tr>
<th>ID</th>
<th>Pale Green Vinyl Floor Tiles (Asbestos Detected)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material</td>
<td>Chrysotile asbestos detected.</td>
</tr>
<tr>
<td>Lab No.</td>
<td>BL-0165 PB</td>
</tr>
<tr>
<td>QED Sample No.</td>
<td>N/A</td>
</tr>
<tr>
<td>Locations</td>
<td>Basement Transformer Room</td>
</tr>
<tr>
<td>Condition</td>
<td>Good to Fair, non-friable.</td>
</tr>
<tr>
<td>Signage</td>
<td>Labelled</td>
</tr>
<tr>
<td>Potential for Disturbance</td>
<td>Low</td>
</tr>
</tbody>
</table>

**Risk**

The ACM are not friable and are in stable condition. In accordance with [NOHSC: 2018 (2005)], ensure that they remain clearly labelled and regularly inspect to ensure they are not deteriorating or otherwise contributing to an unacceptable health risk.

Photos Taken on a previous visit. No access 2015.

**Management Actions**

No access to the transformer room during this audit. May remain in-situ until replacement is required. Manage as per Asbestos Management Plan. Administrative – Follow safe work procedures during removal and maintenance. Personal protective equipment – P2 facemask and coveralls required when working on material.

**References (See Appendices)**


**Service Record**

Review in 12 Months – March 2016. Company: Date: Works: Clearance certificate:
### ID 3: HV Cable insulation (Suspected Asbestos Containing Material)

<table>
<thead>
<tr>
<th>Material</th>
<th>Suspected asbestos containing material.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab No.</td>
<td>Unable to sample – live electricity</td>
</tr>
<tr>
<td>QED Sample No.</td>
<td>N/A</td>
</tr>
<tr>
<td>Locations</td>
<td>Basement Transformer Room</td>
</tr>
<tr>
<td>Condition</td>
<td>Good</td>
</tr>
<tr>
<td>Signage</td>
<td>Labelled on Lift Motor Room door</td>
</tr>
<tr>
<td>Potential for Disturbance</td>
<td>Low.</td>
</tr>
</tbody>
</table>

**Risk**

The ACM are not friable and are in stable condition. In accordance with [NOHSC: 2018 (2005)], ensure that they remain clearly labelled and regularly inspect to ensure they are not deteriorating or otherwise contributing to an unacceptable health risk.

**Management Actions**

No access to the transformer room during this audit. May remain in-situ until replacement is required. Manage as per Asbestos Management Plan. Administrative – Follow safe work procedures during removal and maintenance. Personal protective equipment – P2 facemask and coveralls required when working on material.

**References**


**Service Record**


Company:
Date:
Works:
Clearance certificate:
<table>
<thead>
<tr>
<th>ID 4- Lift Door Thermal Insulation (Suspected Asbestos Containing Material)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Material</strong></td>
</tr>
<tr>
<td><strong>Lab No.</strong></td>
</tr>
<tr>
<td><strong>QED Sample No.</strong></td>
</tr>
<tr>
<td><strong>Locations</strong></td>
</tr>
<tr>
<td><strong>Condition</strong></td>
</tr>
<tr>
<td><strong>Signage</strong></td>
</tr>
<tr>
<td><strong>Potential for Disturbance</strong></td>
</tr>
</tbody>
</table>

**Risk**

The ACM are friable and are in stable condition (encapsulated within the doors). In accordance with [NOHSC: 2018 (2005)], ensure that they remain clearly labelled and regularly inspect to ensure they are not deteriorating or otherwise contributing to an unacceptable health risk.

**Management Actions**

May remain in-situ until replacement is required. Manage as per Asbestos Management Plan. Administrative – Follow safe work procedures during removal and maintenance. Personal protective equipment – P2 facemask and coveralls required when working on material.

**References (See Appendices)**


**Service Record**


Company:

Date:

Works:

Clearance certificate:
### ID 5: Urinal Backing Membrane (Suspected Asbestos Containing Material)

<table>
<thead>
<tr>
<th>Material</th>
<th>Suspected asbestos containing material.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab No.</td>
<td>Unable to access material to sample.</td>
</tr>
<tr>
<td>QED Sample No.</td>
<td>Rear surface of the urinals.</td>
</tr>
<tr>
<td>Locations</td>
<td>Male toilets</td>
</tr>
<tr>
<td>Condition</td>
<td>Good, intact, non-friable.</td>
</tr>
<tr>
<td>Signage</td>
<td>Not practicable to label.</td>
</tr>
<tr>
<td>Potential for Disturbance</td>
<td>Low.</td>
</tr>
</tbody>
</table>

#### Risk

The ACM are not friable and are in stable condition. In accordance with [NOHSC: 2018 (2005)], ensure that they remain clearly labelled and regularly inspect to ensure they are not deteriorating or otherwise contributing to an unacceptable health risk.

#### Management Actions

May remain in-situ until replacement is required. Manage as per Asbestos Management Plan. Administrative – Follow safe work procedures during removal and maintenance. Personal protective equipment – P2 facemask and coveralls required when working on material.

#### References (See Appendices)


#### Service Record

Company:  
Date:  
Works:  
Clearance certificate
### Hazardous Materials Register (other than asbestos)

<table>
<thead>
<tr>
<th>ID 6: Ductwork Internal Insulation (Presumed Synthetic Mineral Fibres)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Material</strong></td>
</tr>
<tr>
<td><strong>Lab No.</strong></td>
</tr>
</tbody>
</table>
| **Locations** | L7 Plantroom Return air  
Assumed throughout all floors |
| **Condition** | Unknown |
| **Signage** | N/A. |
| **Potential for Disturbance** | Low. |
| **Risk** | Moderate |
| **Management Actions** | Minimise disturbance / handling.  
Appropriate PPE required when disturbing, at least a P2 Mask.  
Removal by an appropriate contractor. |
| **References (See Appendices)** | National Code of Practice for the Safe Use of Synthetic Mineral Fibres [NOHSC: 2006(1990)]. |
| **Service Record** | N/A. |

<table>
<thead>
<tr>
<th>ID 7: Loose Ceiling Insulation (Presumed Synthetic Mineral Fibres)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Material</strong></td>
</tr>
<tr>
<td><strong>Lab No.</strong></td>
</tr>
<tr>
<td><strong>Locations</strong></td>
</tr>
<tr>
<td><strong>Condition</strong></td>
</tr>
<tr>
<td><strong>Signage</strong></td>
</tr>
<tr>
<td><strong>Potential for Disturbance</strong></td>
</tr>
<tr>
<td><strong>Risk</strong></td>
</tr>
</tbody>
</table>
| **Management Actions** | Minimise disturbance / handling.  
Appropriate PPE required when disturbing, at least a P2 Mask.  
Removal by an appropriate contractor. |
| **References (See Appendices)** | National Code of Practice for the Safe Use of Synthetic Mineral Fibres [NOHSC: 2006(1990)]. |
| **Service Record** | N/A. |
### ID 8: Ductwork External Insulation (Presumed Synthetic Mineral Fibres)

<table>
<thead>
<tr>
<th>Material</th>
<th>Presumed synthetic mineral fibres.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab No.</td>
<td>Observed.</td>
</tr>
<tr>
<td>Locations</td>
<td>Suspected all floors – return air cupboards</td>
</tr>
<tr>
<td>Condition</td>
<td>Fair to poor</td>
</tr>
<tr>
<td>Signage</td>
<td>N/A.</td>
</tr>
<tr>
<td>Potential for Disturbance</td>
<td>Low.</td>
</tr>
<tr>
<td><strong>Risk</strong></td>
<td>Moderate</td>
</tr>
<tr>
<td>Management Actions</td>
<td>Minimise disturbance / handling.</td>
</tr>
<tr>
<td></td>
<td>Appropriate PPE required when disturbing, at least a P2 Mask.</td>
</tr>
<tr>
<td></td>
<td>Removal by an appropriate contractor.</td>
</tr>
<tr>
<td>Service Record</td>
<td>N/A.</td>
</tr>
</tbody>
</table>

### ID 9: Roof Insulation (Presumed Synthetic Mineral Fibres)

<table>
<thead>
<tr>
<th>Material</th>
<th>Presumed synthetic mineral fibres.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab No.</td>
<td>Observed.</td>
</tr>
<tr>
<td>Locations</td>
<td>Lift motor room</td>
</tr>
<tr>
<td></td>
<td>L7 Plantroom</td>
</tr>
<tr>
<td>Condition</td>
<td>Good.</td>
</tr>
<tr>
<td>Signage</td>
<td>N/A.</td>
</tr>
<tr>
<td>Potential for Disturbance</td>
<td>Low.</td>
</tr>
<tr>
<td><strong>Risk</strong></td>
<td>Minor</td>
</tr>
<tr>
<td>Management Actions</td>
<td>Minimise disturbance / handling.</td>
</tr>
<tr>
<td></td>
<td>Appropriate PPE required when disturbing, at least a P2 Mask.</td>
</tr>
<tr>
<td></td>
<td>Removal by an appropriate contractor.</td>
</tr>
<tr>
<td>Service Record</td>
<td>N/A.</td>
</tr>
</tbody>
</table>
### ID 10: Fire Door Internal Insulation (Suspected Synthetic Mineral Fibres)

<table>
<thead>
<tr>
<th>ID</th>
<th>Material</th>
<th>Lab No.</th>
<th>Locations</th>
<th>Condition</th>
<th>Signage</th>
<th>Potential for Disturbance</th>
<th>Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Suspected synthetic mineral fibres.</td>
<td>Observed. Installed 2003</td>
<td>Fire stairs throughout building</td>
<td>Good</td>
<td>N/A</td>
<td>Low</td>
<td>Minor</td>
</tr>
</tbody>
</table>

Management Actions:
- Minimise disturbance / handling.
- Appropriate PPE required when disturbing, at least a P2 Mask.
- Removal by an appropriate contractor.

References

Service Record: N/A.

### ID 11: Lift Brakes (Synthetic Mineral Fibres Detected)

<table>
<thead>
<tr>
<th>ID</th>
<th>Material</th>
<th>Lab No.</th>
<th>Locations</th>
<th>Condition</th>
<th>Signage</th>
<th>Potential for Disturbance</th>
<th>Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>Synthetic mineral fibres.</td>
<td>MPL Lab 094573-003 Lift Motors and controllers replaced 2006</td>
<td>Lift motor room</td>
<td>Good</td>
<td>N/A</td>
<td>Low</td>
<td>Minor</td>
</tr>
</tbody>
</table>

Management Actions:
- Minimise disturbance / handling.
- Appropriate PPE required when disturbing, at least a P2 Mask.
- Removal by an appropriate contractor.

References

Service Record: N/A.
### ID 12: Waterproofing Membrane (Synthetic Mineral Fibres Detected)

<table>
<thead>
<tr>
<th>Material</th>
<th>Synthetic mineral fibres.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab No.</td>
<td>MPL Lab 094573-001</td>
</tr>
<tr>
<td>Locations</td>
<td>Roof</td>
</tr>
<tr>
<td>Condition</td>
<td>Good.</td>
</tr>
<tr>
<td>Signage</td>
<td>N/A.</td>
</tr>
<tr>
<td>Potential for Disturbance</td>
<td>Low.</td>
</tr>
<tr>
<td><strong>Risk</strong></td>
<td>Minor</td>
</tr>
<tr>
<td>Management Actions</td>
<td>Minimise disturbance / handling. Appropriated PPE required when disturbing, at least a P2 Mask. Removal by an appropriate contractor.</td>
</tr>
<tr>
<td>References (See Appendices)</td>
<td>National Code of Practice for the Safe Use of Synthetic Mineral Fibres [NOHSC: 2006(1990)].</td>
</tr>
<tr>
<td>Service Record</td>
<td>N/A.</td>
</tr>
</tbody>
</table>

### ID 13: Fire Pillows (Suspected Synthetic Mineral Fibres)

<table>
<thead>
<tr>
<th>Material</th>
<th>Suspected synthetic mineral fibres.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab No.</td>
<td>Observed</td>
</tr>
<tr>
<td>Locations</td>
<td>Risers – all floors</td>
</tr>
<tr>
<td>Condition</td>
<td>Good.</td>
</tr>
<tr>
<td>Signage</td>
<td>N/A.</td>
</tr>
<tr>
<td>Potential for Disturbance</td>
<td>Low.</td>
</tr>
<tr>
<td><strong>Risk</strong></td>
<td>Minor</td>
</tr>
<tr>
<td>Management Actions</td>
<td>Minimise disturbance / handling. Appropriated PPE required when disturbing, at least a P2 Mask. Removal by an appropriate contractor.</td>
</tr>
<tr>
<td>References (See Appendices)</td>
<td>National Code of Practice for the Safe Use of Synthetic Mineral Fibres [NOHSC: 2006(1990)].</td>
</tr>
<tr>
<td>Service Record</td>
<td>N/A.</td>
</tr>
</tbody>
</table>
### ID 14: Boiler Gaskets & Insulation (Suspected Synthetic Mineral Fibres)

<table>
<thead>
<tr>
<th>Material</th>
<th>Suspected synthetic mineral fibres.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab No.</td>
<td>Observed. Boiler installed 2013</td>
</tr>
<tr>
<td>Locations</td>
<td>L7 Plantroom</td>
</tr>
<tr>
<td>Condition</td>
<td>Good</td>
</tr>
<tr>
<td>Signage</td>
<td>N/A</td>
</tr>
<tr>
<td>Potential for Disturbance</td>
<td>Low.</td>
</tr>
<tr>
<td><strong>Risk</strong></td>
<td><strong>Minor</strong></td>
</tr>
<tr>
<td>Management Actions</td>
<td>Minimise disturbance / handling.</td>
</tr>
<tr>
<td></td>
<td>Appropriate PPE required when disturbing, at least a P2 Mask.</td>
</tr>
<tr>
<td></td>
<td>Removal by an appropriate contractor.</td>
</tr>
<tr>
<td>References (See Appendices)</td>
<td>National Code of Practice for the Safe Use of Synthetic Mineral Fibres [NOHSC: 2006(1990)].</td>
</tr>
<tr>
<td>Service Record</td>
<td>N/A</td>
</tr>
</tbody>
</table>

### ID 15: Hot Water Pipe Insulation (Suspected Synthetic Mineral Fibres)

<table>
<thead>
<tr>
<th>Material</th>
<th>Suspected synthetic mineral fibres.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab No.</td>
<td>Observed. Boiler installed 2013</td>
</tr>
<tr>
<td>Locations</td>
<td>L7 Plantroom All floors</td>
</tr>
<tr>
<td>Condition</td>
<td>Good to Fair</td>
</tr>
<tr>
<td>Signage</td>
<td>N/A</td>
</tr>
<tr>
<td>Potential for Disturbance</td>
<td>Low.</td>
</tr>
<tr>
<td><strong>Risk</strong></td>
<td><strong>Minor</strong></td>
</tr>
<tr>
<td>Management Actions</td>
<td>Minimise disturbance / handling.</td>
</tr>
<tr>
<td></td>
<td>Appropriate PPE required when disturbing, at least a P2 Mask.</td>
</tr>
<tr>
<td></td>
<td>Removal by an appropriate contractor.</td>
</tr>
<tr>
<td>References (See Appendices)</td>
<td>National Code of Practice for the Safe Use of Synthetic Mineral Fibres [NOHSC: 2006(1990)].</td>
</tr>
<tr>
<td>Service Record</td>
<td>N/A</td>
</tr>
</tbody>
</table>
### ID 16: Tenancy Ceiling Tiles & Insulation (Suspected Synthetic Mineral Fibres)

<table>
<thead>
<tr>
<th>Material</th>
<th>Suspected synthetic mineral fibres.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab No.</td>
<td>Observed.</td>
</tr>
<tr>
<td>Locations</td>
<td>Tenancies – all floors</td>
</tr>
<tr>
<td>Condition</td>
<td>Good to fair</td>
</tr>
<tr>
<td>Signage</td>
<td>N/A</td>
</tr>
<tr>
<td>Potential for Disturbance</td>
<td>Low.</td>
</tr>
</tbody>
</table>

**Risk**

**Minor**

**Management Actions**

- Minimise disturbance / handling.
- Appropriate PPE required when disturbing, at least a P2 Mask.
- Removal by an appropriate contractor.

**References**


**Service Record**

N/A.

### ID 17: Hot Water Heater Insulation (Suspected Synthetic Mineral Fibres)

<table>
<thead>
<tr>
<th>Material</th>
<th>Suspected synthetic mineral fibres.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab No.</td>
<td>Observed.</td>
</tr>
<tr>
<td>Locations</td>
<td>Plumbing Ducts</td>
</tr>
<tr>
<td>Condition</td>
<td>Good, encapsulated within the unit.</td>
</tr>
<tr>
<td>Signage</td>
<td>N/A</td>
</tr>
<tr>
<td>Potential for Disturbance</td>
<td>Low.</td>
</tr>
</tbody>
</table>

**Risk**

**Minor**

**Management Actions**

- Minimise disturbance / handling.
- Appropriate PPE required when disturbing, at least a P2 Mask.
- Removal by an appropriate contractor.

**References**


**Service Record**

N/A.
### ID 18: Lead Paint (Lead Detected)

<table>
<thead>
<tr>
<th>Material</th>
<th>Lead based paint (3.6%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab No.</td>
<td>MPL Lab No. 146783-1</td>
</tr>
<tr>
<td>QED Sample No.</td>
<td>3526</td>
</tr>
<tr>
<td>Locations</td>
<td>AC Plantroom</td>
</tr>
<tr>
<td>Condition</td>
<td>Good</td>
</tr>
<tr>
<td>Signage</td>
<td>N/A</td>
</tr>
<tr>
<td>Potential for Disturbance</td>
<td>Low.</td>
</tr>
</tbody>
</table>

**Risk** Minor

**Management Actions**
- Minimise disturbance / handling.
- Appropriate PPE required when disturbing.
- Removal by an appropriate contractor.

**References**

**Service Record** N/A.

### ID 19: Fluorescent Lighting Capacitors (Suspected PCB Containing)

<table>
<thead>
<tr>
<th>Material</th>
<th>Suspected PCB (poly chlorinated biphenyl) containing capacitor. Further identification required upon removal.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Locations</td>
<td>L7 Plantroom</td>
</tr>
<tr>
<td>Condition</td>
<td>Good, sealed, no leaks.</td>
</tr>
<tr>
<td>Signage</td>
<td>N/A.</td>
</tr>
<tr>
<td>Potential for Disturbance</td>
<td>Low.</td>
</tr>
</tbody>
</table>

**Risk** Minor

**Management Actions**
- At removal, all PCB materials must be placed in a strong, sealed polyethylene bag, which is then placed in a sound, sealable metal drum. An absorbent material should be packed around the PCB equipment to absorb any leaks. The drum should then be sealed and labelled as "TOXIC - PCB waste".

**References**
- Refer to PCB removal section in appendices.

Note: Photo taken previously.
<table>
<thead>
<tr>
<th>ID 20: Transformer Oil (Suspected PCB Containing)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Material</strong></td>
</tr>
<tr>
<td><strong>Lab No.</strong></td>
</tr>
<tr>
<td><strong>Locations</strong></td>
</tr>
<tr>
<td><strong>Condition</strong></td>
</tr>
<tr>
<td><strong>Signage</strong></td>
</tr>
<tr>
<td><strong>Potential for Disturbance</strong></td>
</tr>
<tr>
<td><strong>Risk</strong></td>
</tr>
</tbody>
</table>

**Management Actions**

Access must remain prohibited. Entry by Western Power staff only. Prior to removal, oil should be sampled for PCB. An appropriate management or removal plan must be developed by Western Power, communicated to building management prior to any disturbance.

**References**

Refer to PCB removal section in appendices.
## Materials Not Containing Asbestos, SMF, Lead or PCBs

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Lab No.</th>
<th>Location</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrical mounting board</td>
<td>Observed</td>
<td>Lift Motor Room L7 Roof Penthouse</td>
<td>Non-asbestiform</td>
</tr>
<tr>
<td>Lift control cabinet</td>
<td>Observed</td>
<td>Lift Motor Room L7 Roof Penthouse</td>
<td>Lift Motors and controllers replaced 2006</td>
</tr>
<tr>
<td>RA Fan flexible connection</td>
<td>ARL 14-1235-1</td>
<td>L7 Plantroom</td>
<td>No asbestos detected</td>
</tr>
<tr>
<td>Sprayed vermiculite</td>
<td>PB BL-0164</td>
<td>L7 Lift core ceiling Underside of slab all floors</td>
<td>No asbestos detected</td>
</tr>
<tr>
<td>Item Description</td>
<td>Lab No.</td>
<td>Location</td>
<td>Comments</td>
</tr>
<tr>
<td>--------------------------</td>
<td>--------------</td>
<td>------------------------------------</td>
<td>---------------------------------------------------</td>
</tr>
<tr>
<td>Fire hose reel gaskets - nylon</td>
<td>Observed</td>
<td>Fire hose reel cupboards – all floors</td>
<td>Level 2 and basement appear to be a different material</td>
</tr>
<tr>
<td>Fire hose reel gaskets</td>
<td>ARL 14-1235-2</td>
<td>Fire hose reel cupboards – all floors</td>
<td>No asbestos detected</td>
</tr>
<tr>
<td>Underside of sink membrane</td>
<td>PB BL-0163</td>
<td>Pantry all floors</td>
<td>No asbestos detected</td>
</tr>
<tr>
<td>Building mastic</td>
<td>PB BL-0159</td>
<td>Roof and balcony</td>
<td>No asbestos detected</td>
</tr>
<tr>
<td>Item Description</td>
<td>Lab No.</td>
<td>Location</td>
<td>Comments</td>
</tr>
<tr>
<td>---------------------------------------</td>
<td>------------------</td>
<td>-----------------------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>Duct re-heats</td>
<td>Observed</td>
<td>All floors</td>
<td>Air is re-heated via hot water coils.</td>
</tr>
<tr>
<td>Small fire hose reel gaskets - Fibrous</td>
<td>ARL Lab No. 15-2520-1</td>
<td>Fire hose reel cupboards – Basement and level 2</td>
<td>No asbestos detected</td>
</tr>
</tbody>
</table>
### LABORATORY REPORT

**Job Number:** 15-2520  
**Revision:** 00  
**Date:** 8 April 2015

**ADDRESS:**  
QED  
PO Box 162  
LEEDERVILLE WA 6903

**ATTENTION:**  
Elise Eldridge

**DATE RECEIVED:** 7/04/2015

**YOUR REFERENCE:** 11042

**PURCHASE ORDER:** EE11042

**APPROVALS:**
- Adam Green  
  Approved Identifier  
- Reagan Neal  
  Approved Signatory

**NATA**

**SAMPLE COMMENTS:**
Samples are analysed on an "as received" basis

**METHOD:**
Qualitative identification of fibre type in bulk samples by Stereo Microscope  
Examination and Polarised Light Microscopy, Including Dispersion Staining, using  
ARL In-house method ASBID and In accordance with AS4964-2004.

<table>
<thead>
<tr>
<th>Sample Number</th>
<th>Sample Description</th>
<th>Sample Type</th>
<th>Approximate Sample Weight (g)</th>
<th>Asbestos in Bulk Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-2520-1</td>
<td>ID: 110421</td>
<td>Gasket</td>
<td>&lt;0.1</td>
<td>No Asbestos Detected</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Organic Fibres Detected</td>
</tr>
</tbody>
</table>

**REPORT COMMENTS:**

Page 1 of 1

---

**Analytical Reference Laboratory (WA) Pty Ltd.**  
46-48 Banksia Road, Welshpool, Western Australia 6106  
Telephone: 08 6253 4444  
Facsimile: 08 6253 4440  
www.arlwes.com.au  
ABN  91 906 159 696
LABORATORY REPORT

Job Number: 14-1235
Revision: 00
Date: 26 February 2014

ADDRESS: QED
PO Box 182
Leederville WA 6903

ATTENTION: Joe Scholz

DATE RECEIVED: 26/02/2014

YOUR REFERENCE: IDA001

PURCHASE ORDER: 8670

APPROVALS:

[Signatures]

Adam Green
Approved Identifier
Reagan Neal
Approved Signatory

SAMPLING COMMENTS:

Samples are analysed on an "as received" basis

METHOD:

AISID: Qualitative determination of fibre type in bulk samples by Stereo Microscope Examination and Polarized Light Microscopy, including Dispersion Staining, using ARL in-house method AISID.

<table>
<thead>
<tr>
<th>Sample Number</th>
<th>Sample Description</th>
<th>Sample Type</th>
<th>Approximate Sample Weight (g)</th>
<th>Asbestos in Bulk Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>14-1235.1</td>
<td>ID: 03525 14: RA Fan, Flexible Connection</td>
<td>Woven Material</td>
<td>0.4</td>
<td>No Asbestos Detected Organic Fibres Detected</td>
</tr>
<tr>
<td>14-1235.2</td>
<td>ID: 03526 16: Fire Reel Gasket</td>
<td>Gasket</td>
<td>0.1</td>
<td>No Asbestos Detected Organic Fibres Detected</td>
</tr>
</tbody>
</table>

REPORT COMMENTS:

[Blank]

Page 1 of 1
CERTIFICATE OF ANALYSIS 146783

Client:
QED Environmental Services
PO Box 162
LEEDERVILLE
WA 6903

Attention: Joe

Sample Log in Details:
Your Reference: 10 W001
No. of samples: 1 Paint Sample
Date samples received: 21/02/14
Date completed instructions received: 21/02/14
Location:

Analysis Details:
Please refer to the following pages for results, methodology summary and quality control data.
Samples were analysed as received from the client. Results relate specifically to the samples as received.
Results are reported on a dry weight basis for solids and on an as received basis for other matrices.
Please refer to the last page of this report for any comments relating to the results.

Report Details:
Date results requested by: 26/02/14
Date of Preliminary Report: Not issued
Issue Date: 26/02/14

NATA accreditation number 2901. This document shall not be reproduced except in full.
Accredited for compliance with ISO/IEC 17025.
Tests not covered by NATA are denoted with *.

Results Approved By:

Todd Lee
Laboratory Manager

MPL Reference: 146783
Revision No: R 00
<table>
<thead>
<tr>
<th>Lead in Paint</th>
<th>UNITS</th>
<th>146783-1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Our Reference</td>
<td>------</td>
<td>3328</td>
</tr>
<tr>
<td>Your Reference</td>
<td>------</td>
<td>20/02/2014</td>
</tr>
<tr>
<td>Date Sampled</td>
<td>------</td>
<td>20/02/2014</td>
</tr>
<tr>
<td>Type of Sample</td>
<td>------</td>
<td>Paint</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lead in Paint</th>
<th>%</th>
<th>3.6</th>
</tr>
</thead>
</table>

MPL Reference: 146783
Revision No: R 00
## Method ID | Methodology Summary
--- | ---
METALS-020 | Metals in soil and water by ICP-OES.
<table>
<thead>
<tr>
<th>QUALITY CONTROL</th>
<th>UNITS</th>
<th>POL</th>
<th>METHOD</th>
<th>Blank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead Paint</td>
<td>%</td>
<td>0.1</td>
<td>METALS-020</td>
<td>0.1</td>
</tr>
</tbody>
</table>
Client Reference: 10 W001

Report Comments:

Asbestos was analysed by Approved Identifier: Not applicable for this job
Airborne fibres were analysed by Approved Counter: Not applicable for this job

INS: Insufficient sample for this test; NT: Not tested; PQL: Practical Quantitation Limit; <: Less than; >: Greater than
RPD: Relative Percent Difference; NA: Test not required; LCS: Laboratory Control Sample;
NS: Not specified; NEPM: National Environmental Protection Measure
DOL: Sample rejected due to particulate overload

Quality Control Definitions
Blank: This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc. can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate: This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike: A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample): This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike: Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Laboratory Acceptance Criteria
Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however were analysed at a frequency to meet of exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD a matrix spike recoveries for the sample batch were within laboratory acceptance criteria.
Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction. Spikes for Physical and Aggregate Tests are not applicable
For VOCs in water samples, three vials are required for duplicate or spike analysis
Duplicates: <5xPQL - any RPD is acceptable; >5xPQL - 0-50% RPD is acceptable,
Matrix Spike and LCS: Generally 70-130% for inorganics/metals; 80-140% for organics; 10-140% for SVOC and Speciated Phenols; and 40-120% for low level organics is acceptable.
Surrogates: 60-140% is acceptable for general organics and 10-140% for SVOC and Speciated Phenols.
In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively; the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.
When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.
Analytical Report

Asbestos Fibre Identification

Job No : 094573
Client: QED Environmental Services
Address: PO Box 918
Victoria Park
WA 6979

Contact: Leonard Sharp
E-mail: lsharp@qed.net.au
Fax: 9355 2166
Client Reference: LSPON0933
Date Sampled: 6/21/2009
Date Received: 7/21/2009
Date Reported: 7/24/2009
Sampled By: Client
Location: 10 William St

Test Method: Qualitative identification of asbestos types in bulk samples by polarised light microscopy, including dispersion staining technique using MPL Laboratories Method WILAB 1. Accreditation does not cover the identification of Synthetic Mineral Fibres.

Approved Identifier
Lalanee Rupasinghe

Approved Signatory
Monika Bürger

This document is issued in accordance with NATA's accreditation requirements. AN: 2220

Document may not be reproduced except in full.
## Analytical Report

**Job No:** 094573

<table>
<thead>
<tr>
<th>Lab Id</th>
<th>External Idents</th>
<th>Sample Type</th>
<th>Dimensions</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>094573-001</td>
<td>Roof Membrane</td>
<td>Fibrous Material</td>
<td>25x10x3mm</td>
<td>NAD(SMF)</td>
</tr>
<tr>
<td>094573-002</td>
<td>Unidentified fire door</td>
<td>Fibrous Material</td>
<td>20x10x3mm</td>
<td>NAD</td>
</tr>
<tr>
<td>094573-003</td>
<td>LMR Brakes</td>
<td>Fibre Board</td>
<td>20x10x2mm</td>
<td>NAD(SMF)</td>
</tr>
<tr>
<td>094573-004</td>
<td>Boiler gasket</td>
<td>Scrapings</td>
<td>10x3x2mm</td>
<td>NAD</td>
</tr>
</tbody>
</table>

*Date Printed:* 7/24/2009
Analytical Report

Job No : 094573

Report Comments

Key to results on previous pages:
NAD = No Asbestos Detected
Chrys = Chrysotile Asbestos Detected
Amos = Amosite Asbestos Detected
Croc = Crocidolite Asbestos Detected
SMF = Fibres Consistent with Synthetic Mineral Fibres
UMF = Unknown Mineral Fibres Detected
FIM = Fibrous Insulation Material
EMB = Electrical Mounting Board

Notes:
- If Unknown Mineral Fibres (UMF) are detected by polarised light microscopy including dispersion staining confirmation by another independent technique may be required.
- Bonded asbestos material may need to be disintergrated. This procedure can lead to difficulties isolating and identifying fibres and another independent analytical technique may be recommended.
- Asbestos found to be non-homogenous within samples is reported as "hand picked".

Result Comments

Date Printed 7/24/2009
Reproduced from Parsons Brinkerhoff report dated 17 February 2005.
Original Lab certificates not available for samples re-printed in this report: PB BL0153, BL0159, BL0163, BL0164, BL0165
Lab certificate supplied for M001 following.

### Table 4.1 Hazardous Materials Register and Report

<table>
<thead>
<tr>
<th>Priority</th>
<th>Hazard Group</th>
<th>Sample No.</th>
<th>Material</th>
<th>Item</th>
<th>Hazard Location</th>
<th>Status</th>
<th>Condition</th>
<th>Survey Date</th>
<th>Risk</th>
<th>Date Removed</th>
<th>Action required</th>
</tr>
</thead>
<tbody>
<tr>
<td>P1</td>
<td>Visual Observation</td>
<td>UST</td>
<td>Redundant fuel oil storage tank</td>
<td>Not sighted 2004</td>
<td>Redundant</td>
<td>Good</td>
<td>08/11/2001</td>
<td>Decommission &amp; PB</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N4</td>
<td>Asbestos - A</td>
<td>Removed</td>
<td>Gasket</td>
<td>Asbestos hatch gasket &amp; fuse packing - Removed 18</td>
<td>Plant room boiler</td>
<td>Removed</td>
<td>Poor</td>
<td>21/06/1995</td>
<td>Low</td>
<td>21/06/1995</td>
<td>No action required</td>
</tr>
<tr>
<td>N4</td>
<td>Asbestos - A</td>
<td>Suspected</td>
<td>Millboard</td>
<td>Pila door cores</td>
<td>All fire doors replaced 2003</td>
<td>Removed</td>
<td>Good</td>
<td>01/12/2004</td>
<td>Low</td>
<td>30/12/2003</td>
<td>No action required</td>
</tr>
<tr>
<td>N4</td>
<td>Asbestos - CH</td>
<td>BL-0166</td>
<td>Millboard</td>
<td>Within heater tank deckwork</td>
<td>Not sighted 2004</td>
<td>Removed</td>
<td>Poor</td>
<td>27/04/2002</td>
<td>27/04/2002</td>
<td>No action required</td>
<td></td>
</tr>
<tr>
<td>P2</td>
<td>Asbestos - CH</td>
<td>BL-0181</td>
<td>Brake Lining</td>
<td>Lift motor brakes (x2)</td>
<td>Lift motor room</td>
<td>Unsealed &amp; Flammable</td>
<td>Average</td>
<td>01/12/2004</td>
<td>Low</td>
<td>Leave and monitor condition</td>
<td></td>
</tr>
<tr>
<td>P2</td>
<td>Asbestos - CH</td>
<td>BL-0192</td>
<td>Fibre Cement</td>
<td>Acis sheets to the lift control panel</td>
<td>Lift motor room</td>
<td>Unsealed &amp; Flammable</td>
<td>Average</td>
<td>01/12/2004</td>
<td>Low</td>
<td>Leave and monitor condition</td>
<td></td>
</tr>
<tr>
<td>P2</td>
<td>Asbestos - CH</td>
<td>BL-0156</td>
<td>Gasket</td>
<td>To old (decommissioned No. 1 Compressor)</td>
<td>Not sighted 2004</td>
<td>Unknown</td>
<td>01/12/2004</td>
<td>01/12/2004</td>
<td>No action required</td>
<td></td>
<td></td>
</tr>
<tr>
<td>P4</td>
<td>Asbestos - CH</td>
<td>BL-0165</td>
<td>Vinyl Ties</td>
<td>Pale green floor covering</td>
<td>Western Power switch room, Basement</td>
<td>Sealed and Not Flammable</td>
<td>Good</td>
<td>01/12/2004</td>
<td>Low</td>
<td>Leave and monitor condition</td>
<td></td>
</tr>
<tr>
<td>P4</td>
<td>Asbestos - CH</td>
<td>Ref BL-0129</td>
<td>Zelletite</td>
<td>Electrical mounting board</td>
<td>A/V Plant room</td>
<td>Sealed and Not Flammable</td>
<td>Good</td>
<td>01/12/2004</td>
<td>Low</td>
<td>Leave and monitor condition</td>
<td></td>
</tr>
<tr>
<td>P4</td>
<td>Asbestos - CH</td>
<td>MO4</td>
<td>Gasket</td>
<td>Boiler Inspection Gasket Flap</td>
<td>Plant Room</td>
<td>Sealed and Non Flammable</td>
<td>Good</td>
<td>01/12/2004</td>
<td>Low</td>
<td>Leave and maintain</td>
<td></td>
</tr>
<tr>
<td>P4</td>
<td>Asbestos - CH</td>
<td>BL-0153</td>
<td>Zelletite</td>
<td>Electrical mounting board</td>
<td>Western Power switch room, Basement</td>
<td>Sealed and Not Flammable</td>
<td>Good</td>
<td>01/12/2004</td>
<td>Low</td>
<td>Leave and monitor condition</td>
<td></td>
</tr>
<tr>
<td>Priority</td>
<td>Hazard Group</td>
<td>Sample No.</td>
<td>Material</td>
<td>Item</td>
<td>Hazard Location</td>
<td>Status</td>
<td>Condition</td>
<td>Survey Date</td>
<td>Risk</td>
<td>Date Removed</td>
<td>Action required</td>
</tr>
<tr>
<td>----------</td>
<td>-------------</td>
<td>------------</td>
<td>----------</td>
<td>------</td>
<td>----------------</td>
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<td>-----------</td>
<td>-------------</td>
<td>------</td>
<td>--------------</td>
<td>----------------</td>
</tr>
<tr>
<td>P4</td>
<td>Asbestos - CH</td>
<td>BL-0153</td>
<td>Zelemica</td>
<td>Electrical mounting board</td>
<td>Lift control panel in lift motor room</td>
<td>Sealed and Not Friable</td>
<td>Good</td>
<td>01/12/2004</td>
<td>Low</td>
<td></td>
<td>Leave and monitor condition</td>
</tr>
<tr>
<td>NI</td>
<td>Asbestos - NAD</td>
<td>BL-0156</td>
<td>Rope gasket</td>
<td>To striker</td>
<td>AC Plant room</td>
<td>Sealed and Not Friable</td>
<td>Good</td>
<td>06/12/2001</td>
<td>Low</td>
<td></td>
<td>Leave and monitor condition</td>
</tr>
<tr>
<td>NI</td>
<td>Asbestos - NAD</td>
<td>BL-0163</td>
<td>Membrane</td>
<td>Sound dampener</td>
<td>To underside of sink, pantry, all levels</td>
<td>Sealed</td>
<td>Good</td>
<td>01/12/2004</td>
<td>Low</td>
<td></td>
<td>Leave and monitor condition</td>
</tr>
<tr>
<td>NI</td>
<td>Asbestos - NAD</td>
<td>BL-0161</td>
<td>Insulation</td>
<td>Fire door core</td>
<td>AC Plant room</td>
<td>Sealed and Not Friable</td>
<td>Good</td>
<td>01/12/2004</td>
<td>Low</td>
<td></td>
<td>No action required</td>
</tr>
<tr>
<td>NI</td>
<td>Asbestos - NAD</td>
<td>BL-0160</td>
<td>Membrane</td>
<td>Water proofing</td>
<td>Roof slab, Roof</td>
<td>Unsealed &amp; Friable</td>
<td>Good</td>
<td>01/12/2004</td>
<td>Low</td>
<td></td>
<td>Leave and monitor condition</td>
</tr>
<tr>
<td>NI</td>
<td>Asbestos - NAD</td>
<td>BL-0158</td>
<td>Mastic Sealant</td>
<td>Expansion joints</td>
<td>Parapet walls, Roof</td>
<td>Sealed and Not Friable</td>
<td>Average</td>
<td>01/12/2004</td>
<td>Medium</td>
<td>No action required</td>
<td></td>
</tr>
<tr>
<td>NI</td>
<td>Asbestos - NAD</td>
<td>BL-0155</td>
<td>Woven Insulation</td>
<td>To trailing centres</td>
<td>Not sighted 2004</td>
<td>Sealed and Not Friable</td>
<td>Good</td>
<td>01/12/2004</td>
<td>Low</td>
<td></td>
<td>No action required</td>
</tr>
<tr>
<td>NI</td>
<td>Asbestos - NAD</td>
<td>BL-0164</td>
<td>Insulation</td>
<td>Sprayed applied to underside of concrete slab</td>
<td>Concrete slab, all levels</td>
<td>Unsealed &amp; Friable</td>
<td>Good</td>
<td>2/08/1995</td>
<td>Low</td>
<td></td>
<td>No action required</td>
</tr>
<tr>
<td>NI</td>
<td>Asbestos - NAD</td>
<td>BL-0157</td>
<td>Gasket</td>
<td>To Boiler</td>
<td>AC Plant room</td>
<td>Sealed and Not Friable</td>
<td>Good</td>
<td>08/11/2001</td>
<td>Low</td>
<td></td>
<td>Leave and monitor condition</td>
</tr>
<tr>
<td>NI</td>
<td>Asbestos - NAD</td>
<td>M003</td>
<td>Gasket</td>
<td>Asbestos Pve Paking</td>
<td>Plant Room Boiler</td>
<td>Sealed and Non Friable</td>
<td>Good</td>
<td>01/10/2004</td>
<td>Low</td>
<td></td>
<td>No action required</td>
</tr>
<tr>
<td>NI</td>
<td>Asbestos - NAD</td>
<td>M002</td>
<td>Gasket</td>
<td>Asbestos Hatch gasket</td>
<td>Plant Room Boiler</td>
<td>Sealed and Non Friable</td>
<td>Good</td>
<td>01/10/2004</td>
<td>Low</td>
<td></td>
<td>No action required</td>
</tr>
<tr>
<td>NI</td>
<td>Asbestos - NAD</td>
<td>M001</td>
<td>Vermiculite</td>
<td>Spray on acoustic insulation</td>
<td>Roof level ceiling</td>
<td>Sealed and Non Friable</td>
<td>Good</td>
<td>01/12/2004</td>
<td>Low</td>
<td></td>
<td>No action required</td>
</tr>
<tr>
<td>NI</td>
<td>Non PCB’s</td>
<td>Visual Observation</td>
<td>Capacitors Within. Fluoro Light Fittings</td>
<td>Plessey, 3,5uF capacitors</td>
<td>Throughout office areas</td>
<td>Sealed</td>
<td>Good</td>
<td>01/12/2004</td>
<td>Low</td>
<td></td>
<td>No action required</td>
</tr>
<tr>
<td>P2</td>
<td>PCB’s</td>
<td>Visual Observation</td>
<td>Capacitors Within Fluoro Light Fittings</td>
<td>Ducan, APD 265 CF, 6uF capacitors</td>
<td>AC Plant room &amp; Lift motor room</td>
<td>Sealed</td>
<td>Good</td>
<td>01/12/2004</td>
<td>Low</td>
<td></td>
<td>Leave and monitor condition</td>
</tr>
</tbody>
</table>
Certificate of Analysis

CLIENT: Downer Engineering

CLIENT ADDRESS: PO Box 5139 Garden City VIC 3227

SAMPLED BY: Parsons Brinckerhoff

CONTACT: Julian Balecchi

LOCATION: 8909/ William St Perth

TEST METHOD: Qualitative identification of asbestos types in bulk samples at Parsons Brinckerhoff Queensland Laboratory by polarised light microscopy, including dispersion staining techniques using Parsons Brinckerhoff in-house method No.1 and N.A.T.A accreditation No.3667. N.A.T.A., does not assess/ sampling.

<table>
<thead>
<tr>
<th>Lab Number</th>
<th>Client ID</th>
<th>Sample Description</th>
<th>Sample Dimensions</th>
<th>Identification Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>M001</td>
<td>65083-01-0337</td>
<td>Vermiculite</td>
<td>1 x 1</td>
<td>NAD</td>
</tr>
<tr>
<td>M002</td>
<td>65083-02-0236</td>
<td>Gasket</td>
<td>1 x 1</td>
<td>NAD</td>
</tr>
<tr>
<td>M003</td>
<td>65083-03-0235</td>
<td>Gasket</td>
<td>1 x 4</td>
<td>NAD</td>
</tr>
<tr>
<td>M004</td>
<td>65083-04-0434</td>
<td>Gasket</td>
<td>1 x 2</td>
<td>CH</td>
</tr>
</tbody>
</table>

Legend:
- NAD: No Asbestos Detected
- CH: Chrysotile Asbestos Detected
- A: Amosite Asbestos Detected
- C: Crocidolite Asbestos Detected
- UMF: Unknown Mineral Fibres Detected

N.B.: If no asbestos is detected in bulk samples, matrices, sealants, epoxy resins and core samples then confirmation by another independent analytical technique is advised due to the nature of the samples.

Over a Century of Engineering Excellence

Parsons Brinckerhoff Australia Pty Ltd (ABN 06 005 723 206) and Parsons Brinckerhoff International (Australia) Pty Limited (ABN 06 041 075 066) trading as Parsons Brinckerhoff ABN 04 797 325 419
APPENDICES:

LEGISLATION GUIDELINES AND STANDARDS

National Occupational Health and Safety Commission’s List of Designated Hazardous Substances (NOHSC: 10005 - 1994); or

Approved Criteria for Classifying Hazardous Substances [NOHSC: 1008 (2004)]

National Occupational Health and Safety Commission’s Control of Workplace Hazardous Substances


Government of Western Australia, Occupational Safety and Health Act 1984.

Government of Western Australia, Occupational Safety and Health Regulations 1996.


GLOSSARY OF TERMS

Accredited Laboratory: Means a testing laboratory accredited by the National Association of Testing Authorities (NATA) Australia

Asbestos: Includes chrysotile, amosite, crocidolite, tremolite, anthophyllite, actinolite, and any of these minerals that has been chemically treated and/or altered.

ACM: Asbestos containing material: Means any material containing more than one percent asbestos.

Asbestos Management Planner: Means a person employed to interpret survey results make hazard assessment, evaluation and selection of control options or develop an operation and maintenance plan.

Authorised Person: Means any person authorized by the employer and required by work duties to be present in regulated areas.

Code of Practice: A code of practice is defined in the Occupational Health and Safety Act as a document prepared for the purpose of providing:
- practical advice on preventive strategies; and
- practical means of achieving any code, standard, rule, provision or specification relating to occupational safety or health in Western Australia.

Competent Person: Means a person who is capable of identifying existing asbestos hazards in the workplace and selecting the appropriate control strategy for asbestos exposure.

Demolition: Means the wrecking or taking out of any load-supporting structural member and any related razing, removing, or stripping of products.

Disturbance: Means activities that disrupt the matrix of ACM or PACM, crumble or pulverize ACM or PACM, or generate visible debris from ACM or PACM. This term includes activities that disrupt the matrix of ACM or PACM, render ACM or PACM friable, or generate visible debris.

Encapsulate: Means the application of any material onto any asbestos containing material to bridge or penetrate the material to prevent fibre release.

Enclosure: Means the permanent confinement of friable asbestos containing materials with an airtight barrier in an area not use or designed as an air plenum.

Fibre: Means a particulate form of asbestos, 5 micrometres or longer, with a length-to-diameter ratio of at least 3 to 1.

Friable: Means material which is capable of being crumbled, pulverized or reduced to powder by hand pressure and which under normal use or maintenance, emits or can be expected to emit, asbestos fibres into the air.

Hazard: A source of potential harm or a situation with a potential to cause loss

Hazard Identification: The process of recognizing that a hazard exists and defining its characteristics.
**High efficiency particulate air (HEPA) filter:** Means a filter capable of trapping and retaining at least 99.97 percent of all particles at least 0.3 micrometres or more in diameter.

**Incident:** Any unplanned event resulting in, or having a potential for injury, ill-health, damage or other loss.

**Likelihood:** Used as a qualitative description of probability or frequency.

**NAD – No Asbestos Detected:** A common abbreviation reported when laboratory analysis for asbestos fibres has detected no asbestos fibres.

**Presumed:** Taken for granted. Used when it is taken for granted that the item contains the nominated hazardous material. This presumption is based on the belief that the item is the same as another that has been tested and confirmed to contain the nominated hazardous material (e.g. one sheet lining the eaves has been sampled and confirmed to contain asbestos, the one next to it is presumed to contain asbestos) or, by visual observation, the item is determined to contain the hazardous material. Conversely, an item can be presumed not to contain a hazardous material. This may presumption is typically based on the belief that, due to the age and type of the material or building i.e. >2004, it should not contain asbestos.

**Regulations:** Regulations have the effect of spelling out specific requirements of the legislation. Regulations may prescribe minimum standards and have a general application, or define specific requirements related to a particular hazard or particular type of work. They may also allow licensing or granting of approvals and certificates etc.

**Removal:** Means all operations where ACM and/or PACM are taken out or stripped from structures or substrates, and includes demolition operations.

**Renovation:** Means the modifying of any existing structure, or portion thereof

**Risk:** The chance of something happening that will have an impact. It is measured in terms of consequences and likelihood

**Risk Analysis:** A systematic use of available information to determine how often specified events may occur and the magnitude of their consequences

**Risk Assessment:** The overall process of risk analysis and risk evaluation

**Risk Evaluation:** The process used to determine risk management priorities by comparing the level of risk against predetermined standards, target risk levels or other criteria

**Suspected:** Thought to be likely. Used when the item is likely to contain the nominated hazardous material because it appears to be similar to items that historically have been found to contain that material (e.g. the eaves appear to be similar to other buildings of a similar age, which have been confirmed to contain asbestos). All suspected hazardous materials must be treated as though they are hazardous unless sampling and analysis demonstrates otherwise.
INFORMATION ON HAZARDOUS MATERIALS

Worksafe Australia states: -

“A hazardous substance can be anything, whether solid, liquid or dust, that may be unhealthy for you at work”

Over the past 30 years, international health issues have arisen over building materials that contain asbestos, electrical equipment that contains PCB’s, paint, water, or soil that contains lead, and radon, a naturally occurring gas that can seep into occupied buildings. Since a direct link exists between these substances and diseases, efforts have been initiated to abate the hazard of each particular substance.

In Australia, exposure of building occupants to pollutants, whether industrial or non-industrial falls within the requirements of occupational health and safety legislation that is set at State level.

State occupational health and safety practices are influenced by the activities of the National Occupational Health and Safety Commission (NOHSC), Worksafe Australia, established in 1985 to develop, facilitate and implement a national health and safety strategy.

Specific Items relating to commercial buildings

Buildings used for professional or commercial purposes are typically assessed for the presence of construction, operational and services-related generic substances (not all designated hazardous substances), such as: -

Asbestos;

Lead;

Polychlorinated Biphenyl’s (PCB’s) and,

Synthetic Mineral Fibre (SMF)

Asbestos (CAS Number 1332-21-4)

Asbestos is a generic term that applies to a group of impure hydrated silicate minerals which occur in various fibre forms, are incomestible and separable into filaments. Asbestos fibres belong to the mineral groups of amphibole (such as amosite*, crocidolite*, tremolite, anthophyllite, and actinolite) and serpentine (chrysotile*).

Amphibole asbestos includes various silicates of magnesium, iron, calcium and sodium. Its fibres are generally brittle and cannot be spun, but it is more resistant to heat than chrysotile asbestos. Chrysotile, which is commonly found if a product is asbestos-containing, is a magnesium silicate whose fibres are strong and flexible, and its longer fibres can be spun into thread for weaving, and is the most widely used form of asbestos.

The inherent properties of asbestos make it largely impervious to chemical corrosion and a poor conductor of electricity. The many ways to process asbestos, from crushing into tiny fibres to weaving into fabric, facilitates the use of asbestos into hundreds of products.

Chrysotile is the most frequently found in buildings, often known as “white asbestos”

Amosite is the second most frequently used in buildings, often known as “brown asbestos”

Crocidolite, used in high temperature insulation applications, often known as “blue asbestos”
These products vary greatly in the types and amounts of asbestos and binders that were used, and subsequently exhibit large differences in their physical integrity, particularly friability. Friability is the ability of the material to be broken down to dust.

After widespread use of asbestos over a 15 to 25 year span, a pattern of illnesses-specifically diseases of the lung-gradually began to occur in asbestos workers. It was determined that if ACM's were, or become friable, or capable of being crushed by hand pressure, fibres could be inhaled and cause diseases which disrupt the normal functioning of the lungs.

Currently the use of asbestos-containing materials in Commonwealth workplaces was prohibited on 31st December 2003, as part of an Australian wide ban, under the Occupational Health and Safety (Commonwealth Employment) (National Standards) Regulations 1994.

**Electrical Mounting Boards**

All coal tar pitch boards should be Presumed Asbestos Containing Materials, Brand names include ausbestos, zelemite, miscolite & lebah. It should also be noted that asbestos containing boards may have been removed and replaced, caution required with debris in cabinet. It is advisable to HEPA vacuum the material before commencing works.

**Vinyl Tiles**

All vinyl flooring should be considered as asbestos containing material. If removal is required Scanning Electron Microscope or X-ray Diffraction analysis technique maybe required to have accurate confirmation. Typically vinyl tiles contain very small amounts of asbestos (2-10%) used as a binder in a tightly bonded matrix without a back and glued onto the floor. Vinyl sheet sometimes incorporates a felt like back (cushioning) which does contain asbestos (generally 80 – 100%)

**Gaskets**

All fibrous type gaskets should be treated as containing asbestos until otherwise confirmed, brand names include but are not limited to: Klingerit (typically red, black & green colour)

**Synthetic Mineral Fibres**

Man made mineral fibres that may occur in a commercial building are sourced from a subset known as man made vitreous fibres (MMVF), which are fibres manufactured from glass, natural rock or other minerals, and termed collectively as synthetic mineral fibres (SMF's). While naturally occurring fibres are crystalline in structure, most synthetic mineral fibres are amorphous silicates. The amorphous networks of SMF’s are composed of oxides of silicon, boron, aluminium, oxides of the alkaline earth and alkali metals, oxides of bivalent iron and manganese, or amphoteric oxides.

The main source of emissions of SMF’s in a building (mainly glass fibres) is from thermal, acoustic, fireproofing and miscellaneous insulation. Although quantitative data are not available, emissions are probably highest shortly after installation or following any subsequent disturbances that may occur.

For respirable fibres, NOHSC has adopted a TWA exposure standard, and a proposed secondary standard for non-respirable fibres.

**Polychlorinated Biphenyls (CAS Number 53469-21 -9)**

Are a class of chlorinated, aromatic compounds which have found widespread applications due to their outstanding physio-chemical characteristics, namely thermal stability, resistance to oxidation (non-flammability), and to acids, bases, and other chemical agents as well as their excellent dielectric properties.
These characteristics made PCB’s ideal for use in electrical transformers and capacitors such as those found in light fixture ballasts. Other applications of PCB’s included elevator hydraulic fluids, dye carriers (carbonless copy paper), and construction related materials such as paint, adhesives, and caulking compounds.

Even though the importing of PCB’s was banned in 1976, they may still be present in building transformers and capacitors. Table (3)

The risk associated with PCB’s occurs primarily in the case of leaks and fire, at which time contamination of air and surfaces can occur. Once PCB molecules are released in the environment, they tend to keep their integrity and not react with other substances.

If PCB’s enter the body, they can remain there for a long period of time (sometimes years) stored in body fat and ultimately released into the blood stream.

PCB’s can enter the body through inhalation or ingestion by skin contact and can create long term health effects by causing reproductive and gastric disorders and sometimes cancerous tumours. Short-term exposure to the vapour can result in irritation to the eyes, nose, and throat.

**Lead**

Until recently, Lead (a heavy, soft, malleable metal) has been used extensively in paint, utensils and pottery, plumbing pipes and fittings, and gasoline additives. Potential sources of lead exposure include lead –based paint, lead dust in the soil, air or drinking water, and lead materials in the workplace. Exposure can also occur from uncontrolled lead removal activities.

Lead poisoning effects range from sluggishness to death. Children, foetuses, and pregnant women are the most susceptible to poisoning. Lead poisoning effects in children include attention span deficiencies, development, reduced I.Q. scores, mental retardation, seizures, convulsions, coma, and even death. Small exposures over weeks or years can cause lead poisoning because it bioaccumulates, or builds up in the body tissues.
HAZARDOUS MATERIAL REGISTERS COMPOSITION & RISK ASSESSMENT

The Workplace Registers

Since 1996, owners & employers have been required to record and maintain a "register" of Hazardous Materials in the workplace.

Regulation 3.1, 5.15 & 5.43 of OHS Regs 1996 requires the employer, main contractor, any self-employed person or the person having control of the workplace to identify each hazard, assess the risk of injury or harm to a person resulting from each hazard and consider the means by which the risk may be reduced.

Content

In keeping with the code at a minimum the register should contain five critical parameters, nominally:

Location
Identification
Condition
Risk Assessment
Control Measures

Additionally there are three phases to a hazardous materials workplace register:

Identification Phase
Evaluation Phase
Control Phase

Identification Phase

The identification phase is based on observations, findings, and substance samples, from a systematic inspection of the building structure, tenancy areas, plant rooms, services risers, lift motor rooms, ceiling spaces, car parking and basement areas, and general areas accessible through the supplied keying system.

Simplistically, the methodology involves a multi-step process:

Retrieve and review building documentation (if available)
Develop an investigation procedure
Commence the building inspection, record findings and obtain samples
Laboratory test and/or analyze samples

Identification and subsequent classification of substances, is by visual examination and laboratory assessments from samples of substances that are, or may be, installed, used, produced or stored in the workplace.
Generally, samples are taken from “suspect” accessible fixtures, fittings and process products, specifically in the absence of local identification, MSD Sheets, labels and/or, on site registers.

Such samples are sent under code, to independent laboratories for identification, and subsequently assessed, classified and recorded in the workplace register.

**Evaluation Phase**

The evaluation phase is based on observations from site and the analysis of samples reported from the independent NATA accredited laboratory.

In reviewing hazardous substances and asbestos, it is important to understand the terms **hazard** and **risk**, which in everyday use are commonly used as synonyms, but not so in industrial hygiene, where the difference is significant.

A hazard is something or condition, which has the capability of producing adverse health or safety consequences to humans. The mere presence of the capability to harm is sufficient to classify a substance, action, or condition as a hazard or to describe such as hazardous.

Risk is a statement, either quantitative, via statistical expression, or qualitative, via subjective expression, of the probability or likelihood that harm will actually occur.

For example, asbestos insulation in a building presents a hazard, but the risk is nil if no asbestos is released into the air.

The methods of evaluation for Hazardous Materials and Asbestos within buildings differ slightly, as directed by the Codes of Practice.

Hazardous Materials & Substances are evaluated in terms of their;

- Hazard Classification
- Potential for disturbance
- Subsequent risk of exposure and risk to health

Asbestos within buildings is evaluated using more detail, including *existing condition* as another step in the evaluation process.
Existing Condition is assessed and rated 1 to 5 from Good to Poor.

<table>
<thead>
<tr>
<th>Score</th>
<th>Condition</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Poor</td>
<td>Surface of material has extensive amounts of damage or deterioration and</td>
</tr>
<tr>
<td></td>
<td></td>
<td>appears friable. Surface covering of material is heavily torn or in poor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>condition (paint heavily flaking, insulation is extensively torn). Surface</td>
</tr>
<tr>
<td></td>
<td></td>
<td>shows amounts of visible fibres, dust and debris.</td>
</tr>
<tr>
<td>4</td>
<td>Fair to Poor</td>
<td>Surface of material shows moderate amounts of damage. Surface covering of</td>
</tr>
<tr>
<td></td>
<td></td>
<td>material is torn or in moderately poor condition (small flakes of paint,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>thermal insulation is torn). Moderate amount of visible dust and debris.</td>
</tr>
<tr>
<td>3</td>
<td>Fair</td>
<td>Surface of material shows no visible amounts of damage or deterioration.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Surface of material is covered and generally intact (painted, galvanised,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>coated with bitumen, thermal insulation is intact). Small amount of visible</td>
</tr>
<tr>
<td></td>
<td></td>
<td>dust and debris.</td>
</tr>
<tr>
<td>2</td>
<td>Good to Fair</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Good</td>
<td></td>
</tr>
</tbody>
</table>

Potential for disturbance is then assessed based on influencing factors, such as:

<table>
<thead>
<tr>
<th>Score 0 or 1</th>
<th>Typical Influencing Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>No = 0</td>
<td>Accessible during normal operations?</td>
</tr>
<tr>
<td>Yes = 1</td>
<td>i.e. common areas, accessible without ladders or steps, area unsecured</td>
</tr>
<tr>
<td></td>
<td>Maintenance activities on/or in area?</td>
</tr>
<tr>
<td></td>
<td>i.e. regularly accessed and serviced, servicing requires use of electric tools</td>
</tr>
<tr>
<td></td>
<td>Subjected to Mechanical Influences?</td>
</tr>
<tr>
<td></td>
<td>i.e. vibration of machinery, involved with moving parts, within the HVAC air supply</td>
</tr>
<tr>
<td></td>
<td>stream, subjected to mechanical exhaust</td>
</tr>
<tr>
<td></td>
<td>Subjected to Environmental Influences?</td>
</tr>
<tr>
<td></td>
<td>i.e. weathering, rainfall, surface runoff, wind, river and coastal influences</td>
</tr>
<tr>
<td></td>
<td>No Current Management Plan (&lt;1 year), Not labelled</td>
</tr>
<tr>
<td></td>
<td>(Score 1 for not adequately managed, Score 0 for adequately managed)</td>
</tr>
</tbody>
</table>

Score ≤ 1: Low potential for disturbance
Score 3: Medium potential for disturbance
Score 5: High potential for disturbance
The inherent risk is then calculated using the risk assessment matrix.

![Risk Assessment Table]

For hazardous materials other than asbestos, assessments are then allocated either a 'Major', 'Moderate' or 'Minor' risk rating. These ratings are typically defined as follows:

**Major Risk**: Material that has deteriorated significantly. The material is readily accessible and prone to further disturbance.

**Moderate Risk**: Minor deterioration of the hazardous material is evident and/or the material is prone to environmental influences and mechanical disturbance due to machinery, routine building activity and/or maintenance.

**Low or Minor Risk**: Hazardous material shows no or very minor signs of damage/deterioration. Regular access to the material is unlikely to cause significant deterioration, or the material is adequately sealed.

In the case of asbestos, rather than assigning a risk the Code of Practice for the Management of Asbestos in Workplaces defines a required action that must be undertaken. They are:

**For inherent risks rated at 2 to 4**: The ACM are not friable and are in stable condition. In accordance with [NOHSC: 2018 (2005)], ensure that they remain clearly labelled and regularly inspect to ensure they are not deteriorating or otherwise contributing to an unacceptable health risk.

**For inherent risks rated at 5 to 7**: IMMEDIATE ACTION REQUIRED. The ACM are friable but are in a stable condition and are accessible. In accordance with [NOHSC: 2018 (2005)], serious consideration should be given to their removal. If removal is not immediately practicable, short-term control measures, such as sealing and enclosure, may be able to be used until removal is possible. [NOHSC: 2018 (2005)].
For inherent risks rated at 8 to 10: IMMEDIATE ACTION REQUIRED. The ACM are friable and not in a stable condition, and there is a risk to health from exposure. In accordance with [NOHSC: 2018 (2005)], they should be removed by an appropriately licensed asbestos removalist as soon as is practicable.

When materials of unknown composition, or materials suspected of containing asbestos, are encountered, and are not listed in the Workplace Register, such materials should be treated as if they are asbestos until sample analysis confirms otherwise.

In the event that additional hazardous materials are identified, a risk assessment should be conducted by an appropriately qualified and competent person, and the workplace register updated accordingly.
Control Phase

The “Hierarchy of Control Measures” is a list, in priority order, of control measures that may be employed to eliminate and/or reduce exposure to the subject substance.

Notwithstanding elimination as the optimum solution, practical and cost effective control measures may be “and/or” classified as follows:

<table>
<thead>
<tr>
<th>Classification</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A – Elimination</td>
<td>A permanent solution should be attempted in the first instance.</td>
</tr>
<tr>
<td>B – Substitution</td>
<td>Involves replacing the material with a product that presents a lower and/or no risk.</td>
</tr>
<tr>
<td>C – Isolation</td>
<td>Isolation involves separation of the material from people by distance or use of barriers /encapsulation to prevent exposure.</td>
</tr>
<tr>
<td>D – Engineering Controls</td>
<td>Involves some structural change to the work environment or work process to place a barrier to, or interrupt the transmission path between, the worker or environment and the hazardous material aspect, i.e. isolation and/or enclosure and/or sealing of the hazardous material.</td>
</tr>
<tr>
<td>E – Administrative (procedural) Controls</td>
<td>Reduce or eliminate exposure of individuals to the hazardous materials, by adherence to procedures or instructions. The documentation should emphasize all the steps to be taken and the controls to be used in carrying out the task both safely and with minimum impact to the environment.</td>
</tr>
<tr>
<td>F – Personal Protective Equipment (PPE)</td>
<td>Relates only to hazards and their impact on personal safety risks. It is worn as a barrier between personnel and the hazardous material. The success of this control procedure is dependent on the protective equipment selected, as well as fitted correctly and worn at all times when required.</td>
</tr>
</tbody>
</table>
### ASBESTOS REMOVAL CONTROL PLAN (PROFORMA)

Sections referred to in this document are from – National Occupational Health and Safety Commission Code of Practice for the Safe Removal of Asbestos 2nd Edition [NOHSC: 2002(2005)] This code should be read in conjunction with this plan

<table>
<thead>
<tr>
<th>Submitted by</th>
<th>(company)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Declaration</td>
<td>This Asbestos Removal Control Plan has been prepared in accordance with the performance requirements of the Code of Practice for the Safe Removal of Asbestos 2nd Edition [NOHSC: 2002(2005)] This asbestos removal control plan addresses risks associated with exposure to airborne asbestos fibres only. Other hazards should be addressed in other Work Risk Method Statement</td>
</tr>
<tr>
<td>Principle Contractor</td>
<td>Signature</td>
</tr>
<tr>
<td>List Asbestos Removal Licence (if applicable)</td>
<td>...........................................</td>
</tr>
<tr>
<td><strong>Removal Contractor</strong></td>
<td></td>
</tr>
<tr>
<td>-----------------------</td>
<td>---</td>
</tr>
<tr>
<td><strong>Site Address</strong></td>
<td></td>
</tr>
</tbody>
</table>
| **Abbreviations**     | ACM (Asbestos Containing Material)  
|                       | PPE (Personnel Protective Equipment)  
|                       | RPE (Respiratory Protective Equipment)  
|                       | SACM (Suspected Asbestos Containing Material)  
|                       | PACM (Presumed Asbestos Containing Material)  |
| **Specific Removal Location**  
(Asbestos Removal Work Area) |  |
| **Signatures**         | Signature represents responsibility for the asbestos risk control measures within this particular document. |
### Required Information

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Identification</strong></td>
<td></td>
</tr>
<tr>
<td><strong>A</strong></td>
<td>Details of the ACM to be removed (e.g. the locations(s), whether it is friable or non-friable, type, condition and the quantity to be removed)</td>
</tr>
<tr>
<td></td>
<td>See Part 7.2.4 of the Code</td>
</tr>
</tbody>
</table>

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Preparation</strong></td>
<td></td>
</tr>
<tr>
<td><strong>B</strong></td>
<td>Provide details of preparation works to be executed prior to ACM removal</td>
</tr>
<tr>
<td></td>
<td>Signature</td>
</tr>
<tr>
<td></td>
<td>..................................................</td>
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</tbody>
</table>

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Consultation. See Part 7.1 of the Code</strong></td>
<td></td>
</tr>
<tr>
<td><strong>C</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Signature</td>
</tr>
<tr>
<td></td>
<td>..................................................</td>
</tr>
<tr>
<td>Column</td>
<td>Description</td>
</tr>
<tr>
<td>--------</td>
<td>-------------</td>
</tr>
<tr>
<td>D</td>
<td>Asbestos removal Equipment and consumables. (spray equipment, asbestos vacuum cleaners, cutting tools, etc.) See Part 9.6 of the Code</td>
</tr>
<tr>
<td>E</td>
<td>Program of commencement and completion dates</td>
</tr>
<tr>
<td>F</td>
<td>Emergency Plans. See Part 8.2 of the Code</td>
</tr>
</tbody>
</table>

Signature

---------------------------------------------

---------------------------------------------
<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>G</td>
<td>Asbestos removal boundaries, work areas and exclusion zones, including the type and extent of isolation required and the location of any signs and barriers. Include details of incremental removal work areas. See Part 9.1 &amp; 9.2 of the Code</td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>Controls of electrical and lighting installations. See Part 9.3 of the Code</td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>Personal protective equipment (PPE) to be used, including respiratory protective equipment (RPE).</td>
<td></td>
</tr>
<tr>
<td></td>
<td>See part 9.7 of the Code.</td>
<td></td>
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<td>Details of plastic drop sheets or wrapping for containment including external and internal surfaces, plant and equipment that may remain in-situ during removal. See Part 9.4 of the Code</td>
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WORKPLACE PROCEDURES [NOHSC: 2018(2005)]

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

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The following Code of Practice Appendices have been extracted:

**APPENDIX C. 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 (see Part 10 of this code of practice) and determined by a competent person.

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

If work with asbestos requires the use of 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 this code of practice). Disposable coveralls should be disposed of as asbestos waste at the completion of the task (see section 11.11).

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 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. Facepieces 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.
APPENDIX D. 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 this 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);
- 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 Appendix C.
• Respirator (see AS1715, AS 1716 and section 11.7 of Part 11 of this 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 resoak 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 if 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 this 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 this 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).
APPENDIX H. WORKING ON ELECTRICAL MOUNTING BOARDS 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 Appendix C.
- Respirator (see AS1715, AS 1716 and section 11.7 of Part 11 of this 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 resoak 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 Appendix D - 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 this 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 this 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 (see section 11.11 of Part 11).
CONTROL MEASURES [NOHSC: 2018(2005)]

11.7 Personal protective equipment (PPE)

The risk assessment should determine the need for, and appropriate types and levels of, PPE for the task to be undertaken, including respiratory protection equipment. It is important that personal clothing does not become contaminated with asbestos fibres.

Appendix C provides more detailed information on the selection and use of PPE, and section 11.9.3 provides information on personal decontamination.

All respiratory protection equipment should meet the requirements of AS/NZS 1716-2003 Respiratory Protective Devices.

In general, the selection of suitable respiratory protective 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). All respirators should be worn in accordance with the manufacturer’s instructions. AS/NZS 1715-1994 Selection, Use and Maintenance of Respiratory Protective Devices provides further advice on these matters.

11.8 Asbestos vacuum cleaners

Asbestos vacuum cleaners should comply with the requirements of AS 3544-1988 Industrial Vacuum Cleaners for Particulates Hazardous to Health and AS 4260-1997 High Efficiency Particulate Air Filters (HEPA) – Classification, Construction and Performance.

Warning: Household vacuum cleaners must never be used where asbestos is or may be present, even if they have a HEPA filter.

Procedures should be established for the general maintenance of asbestos vacuum cleaners in a controlled environment. They should be cleaned externally with a wet cloth after each task, the hose and attachments should be stored in a labelled impervious bag and a cap should be placed over the opening to the asbestos vacuum cleaner when the attachments are removed.

PPE should be worn whenever an asbestos vacuum cleaner is opened to change the bag or filter or to perform other maintenance.

The emptying of asbestos vacuum cleaners can be hazardous if the correct procedures are not followed. Asbestos vacuum cleaners should only be emptied by a competent person with the correct PPE, in a controlled environment and in compliance with the manufacturer’s instructions.

Whenever possible, asbestos vacuum cleaners should not be hired, as they can be difficult to fully decontaminate.

Hiring may be more viable, however, in some instances, such as when a one-off maintenance task is required for an ACM.

Asbestos vacuum cleaners should be hired only from organisations that provide vacuum cleaners specifically for work with asbestos.
The asbestos vacuum cleaner should be decontaminated, as outlined above, before it is returned. Alternatively, the hire organisation may undertake the decontamination and maintenance of the filters and bags of the asbestos vacuum cleaner itself. In these cases, the asbestos vacuum cleaner should be hired out in a sealed storage container, with instructions that it may be removed from the container only when it is inside the asbestos work area and users are wearing appropriate PPE (see section 11.7). When the minor maintenance work is completed the asbestos vacuum cleaner should be re-sealed in the storage container provided, and the sealed storage container should then be decontaminated, by wet wiping (see section 11.9.1), before it is removed from the asbestos work area and returned to the hire organisation for decontamination and maintenance.

Organisations that hire out asbestos vacuum cleaners should ensure that all their asbestos vacuum cleaners are maintained in good working order and that the hirers are competent in their safe use.

11.9 Decontamination

The type of decontamination required will depend on the type of asbestos (i.e. friable or non-friable); the work method used (see section 11.5), and site conditions.

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

11.9.1 WORKPLACE DECONTAMINATION

Any asbestos dust or debris must be collected in a safe manner and the asbestos work area decontaminated, paying attention to all walls, ledges, fittings and furnishings.

Two types of decontamination procedures may be used: wet and dry decontamination:

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

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

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

If extensive contamination has occurred, an asbestos removalist should be engaged to perform the decontamination and clearance monitoring may be required (see section 11.10.2). The relevant State or Territory OHS authority should be contacted regarding any licensing requirements.

11.9.2 DECONTAMINATION OF EQUIPMENT AND TOOLS

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

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

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

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

### 11.9.3 PERSONAL DECONTAMINATION

Personal decontamination must be undertaken each time workers leave the asbestos work area and at the completion of the asbestos maintenance or service work. Personal decontamination should be done within the asbestos work area where re-contamination cannot occur.

Asbestos-contaminated PPE should not be transported outside the asbestos work area except for disposal purposes.

Before work clothes and footwear worn during asbestos work are removed from the asbestos work area for any reason, they should be thoroughly vacuumed with an asbestos vacuum cleaner to remove any asbestos fibres (see section 11.8), and the footwear should also be wet wiped.

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.

Any PPE used while carrying out asbestos work must not be taken home.

Personal hygiene and careful washing are essential. Particular attention should be paid to the hands, fingernails, face and head.

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

- First, all visible asbestos dust/residue is removed from protective clothing, using an asbestos vacuum cleaner and/or wet wiping.
- Second, the disposable coveralls are taken off (while still using a respirator), placed in an asbestos waste bag and disposed of as asbestos waste (see section 11.2).
- Third, clothing and footwear worn during the asbestos work should be vacuumed using an asbestos vacuum cleaner, and the footwear should also be wet wiped.
- Disposable respirators should then be discarded as asbestos waste. Non-disposable respirators should be removed and thoroughly cleaned.
- After removing the respirator, workers should wash their head, face and hands, paying particular attention to their fingernails.
11.10 Clearance inspections

The need for clearance monitoring should be assessed as part of planning and undertaking any maintenance work involving ACM.

Clearance to re-occupy an asbestos work area is determined by a thorough clearance inspection.

The clearance inspection must be conducted by a competent person.

All barriers and warning signs (see section 11.4.1) should remain in place until the clearance to re-occupy has been granted.

11.10.1 VISUAL INSPECTIONS

Visual inspections involve an examination of the asbestos work area, prior to the resumption of normal work in the area by unprotected personnel, to confirm that the asbestos removal work has been completed and there is no visual evidence of dust and debris.

Particular attention should be paid to ledges, the tops of air-conditioning ducts, cracks in the floor, folds in plastic sheeting and crevices or other areas which may have been overlooked during the initial clean-up.

11.10.2 CLEARANCE MONITORING

Monitoring results and experience with similar removals in the past will assist in determining whether clearance monitoring will be required.

Clearance monitoring should be undertaken by competent person, independent to the person responsible for the asbestos work, after cleaning has been completed and the area dried.

Air samples should be taken in the asbestos work area. For jobs involving an enclosed area, this should be done within the enclosed area, following the completion of the removal work but prior to the removal of the enclosure, and again after the removal of the enclosure (for a final clearance inspection).

The maintenance work should 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.

11.10.3 SETTLED DUST SAMPLING

Settled dust sampling may be considered as part of the clearance to reoccupy an asbestos work area.

Settled dust sampling can, however, only provide an indication of cleanliness following disturbance of ACM.

Settled dust sampling should not be used as an indicator of risk to health.

Any settled dust sampling should be determined by the competent person undertaking the visual inspection.
11.11 Waste removal and disposal

Asbestos waste, including contaminated PPE and cleaning materials (e.g., cleaning rags and plastic sheeting used to cover surfaces in the asbestos work area), should always be removed and disposed of by a competent person.

It may be collected and disposed of in asbestos waste bags (see section 11.11.1) and/or in a solid, sealable asbestos waste container, such as a bin or drum (see section 11.11.2), if storage is required.

Controlled wetting of asbestos waste should be used to reduce the possibility of dust emissions during the bagging or containment of the waste.

11.11.1 WASTE BAGS

Asbestos waste should be collected in heavy-duty 200 µm (minimum thickness) polythene bags that are no more than 1,200 mm long and 900 mm wide.

The bags should 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

Controlled wetting of the waste should be employed to reduce asbestos dust emissions during bag sealing or any subsequent rupture of a bag.

Only unused bags should be used, and bags marked for asbestos waste should 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.

In order to further minimise the risk of a bag’s tearing or splitting, and also to assist in manual handling, asbestos waste bags should not 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.

The bags should then 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 should be cleaned to remove any adhering dust before the bag is removed from the asbestos work area.

All asbestos waste should be double bagged outside the work area immediately following the decontamination process.

If asbestos waste cannot be disposed of immediately (e.g. because of volume requirements for disposal, or if several tasks are to be completed on consecutive days), the asbestos waste bags should be stored in a solid waste drum or bin, which should be secured upon the completion of each day’s work so that unauthorised access is prevented.
11.11.2 WASTE DRUMS AND BINS
All drums or bins used for the storage and disposal of asbestos waste should be in a good condition, with lids and rims in good working order, and free of hazardous residues.

The drums or bins should be lined with plastic (minimum 200 µm thickness), and labels warning of the asbestos waste should 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 (see section 9.5).

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.

Controlled wetting of the waste should be used to reduce asbestos dust emissions.

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 (see section 11.10) 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. Routes for moving the waste from the asbestos work area to the waste drums or bins should be designated prior to the commencement of each task. A competent person should decide the best means of moving the waste through the building. In occupied buildings, all movement of bags from the work area to the waste drums or bins should be performed out of normal working hours.

Drums or bins used to store asbestos waste should be stored in a secure location when they are not in use.

Drums or bins should not be moved manually once they have been filled. Trolleys or drum lifters should be used.

11.11.3 DISPOSAL
All asbestos waste should be removed from the workplace by a competent person and transported and disposed of in accordance with all relevant State or Territory legislation and guidelines for the transport and disposal of asbestos waste.

In some States and Territories a licence from environmental and/or waste disposal authorities is required for the transport and disposal of asbestos waste.

Further information on the transport and disposal of asbestos waste, including licensing requirements and designated asbestos waste dumps, may be obtained from local councils or the relevant environmental protection authority or waste disposal authority.
ASBESTOS REMOVAL PROCEDURES [NOHSC: 2002(2005)]

The specific removal requirements outlined in this Part 12 of the Code of Practice for the Safe Removal of Asbestos 2nd Edition supplement the requirements set out elsewhere in this code of practice.

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

12.1 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 and chrysotile (white asbestos) was used almost exclusively in fibre-cement products during the 1970s and 1980s.

12.1.1 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 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.

Decontamination facilities, appropriate for the removal job, should be available throughout the entire removal process.

The relevant State or Territory OHS authority should be consulted to determine whether a licence is required for this type of asbestos removal work.
12.1.2 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).

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.

12.1.2.1 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). Smaller pieces of sheeting and asbestos-cement debris should be placed in heavy-duty clear plastic bags. Section 9.10 provides information on appropriate waste removal methods.

12.1.2.2 REMOVAL OF ASBESTOS-CEMENT ROOFING

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

Asbestos-cement can become brittle with age, so any removal work on roofs must address the risk of fall hazards.

The removal of asbestos-cement roofing must be performed in accordance with all relevant State 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.

12.1.3 DECONTAMINATION

12.1.3.1 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.

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

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

12.1.3.2 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.

12.2 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.

12.2.1 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) and the removal undertaken within an enclosure. Part 10 of this 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 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, should be available when grinding or abrading is undertaken and otherwise as determined by a risk assessment. Section 10.2.4 provides information for situations where the decontamination unit cannot be located immediately adjacent to the asbestos work area.
12.2.2 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.

12.4 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.

12.4.1 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.

12.4.2 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.

12.5 Removal of asbestos switchboards or meter boards
Historically, ACM were used in and around switchboards and meter boards to provide electrical insulation and to prevent fire spreading from the boards.

ACM were used in the front panels and also in materials that covered the inside and back of the switchboard boxes. Small electrical load centres (with a main switch plus a few fuses) have also been known to have ACM backings.

A competent person must isolate the relevant switchboard or meter board before any work occurs.
When removing an asbestos switchboard or meter board any other ACM, such as fire proofing on the switchboard box sides and base, should also be removed.

12.5.1 PREPARATION
Electricity must be disconnected from the switchboard or meter panel by a licensed electrician. Once this is tested and confirmed the removal process can begin.

All wiring at the back of the switchboard or meter board should be disconnected or isolated by a competent person. If this is not practical, the wiring should be suitably terminated and labelled to indicate that it is live, and the wiring should be protected against mechanical damage or otherwise rendered safe. The switchboard or meter panel and surrounding area should be cleaned before removal work is started.

The minimum suitable respiratory protection is a P1 or P2 half-face respirator with a particulate filter. Section 9.7 provides further information on the selection, use and maintenance of appropriate RPE and PPE.

12.5.2 REMOVAL
Lay out a 200 µm thick plastic sheet to catch any debris that may fall.

Remove the mounting screws from the board without damaging the board. Vacuum the front surface of the board using an asbestos vacuum cleaner. Tilt the board forward and disconnect the cabling from the board. Wrap the board in a double layer of heavy duty, 200µm thick plastic sheeting (see sections 9.10 and 9.11 on waste removal).

12.5.3 DECONTAMINATION
Vacuum the area where the board was located and the surrounding area. Wet wipe with a rag to remove minor amounts of debris that may be attached to the wall or cabling. Dispose of this rag as asbestos waste. Vacuum the sheet of plastic laid out to catch any debris and dispose of it as asbestos waste.

12.6 Removal of asbestos mastics and bitumen
Mastics and bitumen are usually soft, so they were often reinforced with asbestos to give them strength while retaining their flexibility.

12.6.1 PREPARATION
The minimum respiratory protection suitable for this operation is a P1 or P2 filter with a half-face piece respirator. Section 9.7 provides further information on the selection, use and maintenance of appropriate RPE and PPE.

12.6.2 REMOVAL
Because these ACM are flexible they need to be removed using scraping and chipping tools. The pieces removed should be kept as intact as possible.

If heating is used to soften the material, to enable the material to be peeled, it is important not to burn the material, as this can release airborne asbestos fibres. Excessive heating is also likely to generate toxic fumes and gases and generate a fire hazard.
SMF REMOVAL PROCEDURES [NOHSC: 2006(1990)]

The following is an extract from the National Code of Practice for the Safe Use of Synthetic Mineral Fibres [NOHSC: 2006(1990)].

Procedures to be applied for removal depend on the form of the original SMF insulation installed. The two basic forms of SMF insulation are bonded and unbonded. The bonded form is where adhesives or cements have been applied to the SMF before delivery and the SMF product has a specific shape. The unbonded form has no adhesives or cements and the SMF is loose material packed into a package. The unbonded form can be packed loose or mixed with adhesives or cements before, or during, installation.

Removal of bonded material is easier and less hazardous. Any physical abrasion, including cutting, should be kept to a minimum during removal. Such removal can be performed in a dry condition if there is minimal physical abrasion. Only in circumstances where heat or other causes have made the bonded SMF attach itself to the substrate should physical abrasion take place. If this occurs, removal should be performed as for unbonded SMF removal.

Removal of unbonded material is difficult and more hazardous. The unbonded material should be thoroughly wetted before removal takes place. Dry removal may be necessary when there are electrical and heat considerations. Increased respiratory protection may be necessary when working in enclosed or poorly ventilated spaces or where the SMF insulation has undergone physical change.

The two considerations which determine the necessary work practices during removal of rockwool materials are the degree of burn-out of binding material in the product matrix, and the probable dust concentrations which may arise during removal. Accordingly, the following precautions should be applied:

The work area should be designated by using ropes and signs where workable. Persons not involved in the removal should not be within 3 metres of the designated area.

Waste shall be placed in plastic bags or other containers which prevent fibre and/or dust emission, and disposed of in accordance with local waste disposal authority requirements.

The following personal protective equipment should be used by personnel directly involved in the removal work:

(a) long sleeve, loose fitting clothing and gloves;
(b) where overhead work is involved, goggles and head covering should be worn; and
(c) a half-face (Class L or M) respirator.
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<tr>
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<th>LEAD REMOVAL PROCEDURES (WORKERS HEALTH CENTRE)</th>
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<tbody>
<tr>
<td>1.</td>
<td><strong>Test for presence of lead in paint</strong></td>
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<td>Laboratory testing of samples or field tests should be done prior to any work commencing. Laboratory tests will give the percentage of lead in paint by weight. Such testing should always be carried by qualified industrial hygienists. It is also important to recognize that there are limitations on the accuracy of such tests. Australian Standard AS 4361.1 recognises dried paint film with more than 1% (by weight) to be lead-containing paint.</td>
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<td>2.</td>
<td><strong>Determine what should be done with the paint</strong></td>
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<td>When lead-containing paint is confirmed on a structure, an agreed Safe Work Procedure must be implemented. A number of strategies may be considered to address the problem. For example, if the paint is to be removed from the structure, alternative strategies for painting may have to be considered. This may involve overcoating, some localized repair or the total removal of the lead-based paint coating. Sometimes the structure may be demolished and replaced. Whatever strategy is taken, make sure that the condition of the lead-based paint coating (for example whether or not it is flaking) is thoroughly assessed and taken into consideration when designing the agreed safe work procedures.</td>
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<td>3.</td>
<td><strong>Assess the risk of any emissions</strong></td>
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<td>The potential for exposure to lead-containing dust or paint chips or flakes should be taken into consideration when preparing to control these emissions. Potential health impacts on nearby workers in the site as well as the public and the surrounding environment also need to be considered.</td>
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<td>4.</td>
<td><strong>Develop emission controls to prevent dust and debris escaping from the lead-based paint removal areas</strong></td>
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<td>The agreed safe work methods used in removal or demolition will determine how elaborate the containment system should be. For example, power tools need to be kept to an absolute minimum. However, if power tools need to be used (therefore generating a large percentage of hazardous dust), a higher level of containment must be used as opposed to when manual methods such as scraping is used. Containment criteria for different removal methods are given in Appendix E of AS 4361.1 where types of containment material, joints and entryways and ventilation measures are included.</td>
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<td>5.</td>
<td><strong>Choose the most suitable method of paint removal</strong></td>
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<td>A number of factors need to be considered in making this choice. First, make sure that the contractor being considered has appropriate experience and training in lead-based paint removal. Ask all potential contractors for an Agreed Work Methods Statement and check if details are given on appropriate safety measures in doing the job. (The Lead Advisory Service has a useful checklist for choosing a suitable contractor – FREECALL 1800 626 086).</td>
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<td>6.</td>
<td><strong>Monitor emissions</strong></td>
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<td>Monitoring must be done to check that the controls put in place protect workers on site, the public and the environment. All monitoring must be done by a qualified occupational/environmental hygienist and may</td>
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<td>7. Protective measures for workers are critical</td>
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<tr>
<td>All workers involved in lead-based paint removal must be protected as per the National Occupational Health and Safety Commission's National Code of Practice for the Control and Safe Use of Inorganic Lead at Work.</td>
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<td>Other workers on site must be protected from exposure to lead-containing dust or debris that may escape to their work environment. In addition to the containment and emission controls, a series of other measures may be needed: air monitoring, good hygiene practices and housekeeping (for example, separate showers and change facilities for the paint removal workers and no smoking or eating in nearby areas), protective clothing to prevent debris being carried out of site and restricted areas.</td>
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<td>In addition, removal work can be organised so that it is done at hours when exposure to others is minimised. Under the requirements of the NSW Occupational Health and Safety Act 2000, information on lead hazards and training on safe work practices must be given to all workers on site. If needed, blood lead tests should be made available to workers.</td>
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<td>Overall, the removal process and protective measures should be surveyed and monitored by a competent person, agreed to by the site OHS Committee.</td>
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<th>8. Procedures for managing lead waste</th>
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<td>All waste and debris collection procedures must be clearly stated in the Agreed Safe Work Methods Statement and must suit the removal method. Proper storage and disposal must be included in it. The contractor or site management must make arrangements to comply with environmental protection laws and hazardous waste disposal requirements (contact the Environmental Protection Authority for further information). Contingency plans for any spills or excess exposures must also be included.</td>
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<th>9. On completion, ensure that there is no lead dust remaining on equipment or structures near the paint removal area</th>
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<tr>
<td>The person monitoring the procedures and the site OHS Committee should give a clearance on the process before the paint removal contractor is released</td>
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INORGANIC LEAD – SAFE HABITS (WORKSAFE)

The following is an extract from the Worksafe Safety Topic title “Inorganic Lead – Safe Habits”

1. Reduce Contamination

Lead is a poison that accumulates slowly in the body and can cause adverse health effects to the blood, nervous system, digestive and reproductive systems.

Lead poisoning may occur when excessive amounts of lead accumulate in the human body. It is most likely to enter the body as fume or dust, when it is easily inhaled, or as contamination on hands or face, from where it can be swallowed.

Poisoning by mouth may occur if personal hygiene is poor. Lead can be swallowed if food, drinks or tobacco are contaminated. Lead is usually not absorbed through the skin.

2. Poison

Lead poisoning can lead to symptoms such as:

- severe stomach disorders;
- anaemia;
- sleep disturbance;
- muscle weakness and wrist drop;
- mood changes;
- brain disorders;
- decrease in number and quality of sperm; and
- a tendency to miscarry.

3. Tips to Avoid Lead Entering the Mouth

Always wash hands, face, neck and arms before eating, drinking or smoking as required in Regulation 5.61.

- Eat, drink or smoke only away from work area.
- Store tobacco, food and drinks away from work area.
- Remove contaminated clothing or equipment before entering eating areas (Regulation 5.61).
- Lead dust can be caught under fingernails. Keep them clean and do not bite them.

Employers should:

- Introduce a system of work that excludes or minimises lead contamination (Regulation 5.20).
- Arrange Health Surveillance with an Appointed Medical Practitioner (AMP) for persons working in a lead-risk job (Regulation 5.56).
- Provide adequate and appropriate education and training (Regulation 5.58).
- Ensure adequate supervision (Section 19(1)).
- Provide and maintain adequate washing and showering facilities (Regulation 5.60).
- Arrange the laundering or renewal of work clothes at least once a week, more frequently when this will significantly help protect the worker from lead risks (Regulation 5.60).
- Provide good natural ventilation.
• Provide, as far as practicable, local exhaust extraction to remove fumes or dust from workers' breathing space, especially where there is a likelihood of frequent or heavy lead fume or dust exposure (Regulation 5.20).

• Where necessary, provide suitable protective equipment (Regulations 5.20, 3.33 and 3.40), for example:
  o gloves that help prevent lead accumulating on hands, including under nails;
  o respirators designated or marked as complying with AS/NZS 1716 and stored in clean airtight containers when not in use;
  o hair covering; and/or
  o aprons of rubber or plastic.

Employees should:

• Wear a suitable respirator if fumes or dust are likely. Keep it clean and sealed in an airtight container when not in use.
• Always wash hands and face before eating or drinking.
• Use (switch-on) the local exhaust ventilation system where provided. Where ventilation noise levels are high, consider consultation with your employer on possible control measures for this, including hearing protection.
• Wear plastic or rubber aprons and gloves when likely to touch lead dust or powder.
• Handle work clothes gently so as not to spread dust (no not blow down protective work clothes or personal protective equipment with compressed air).
• As far as practicable, wear clean protective work clothes as washed or renewed by your employer.
• Travel to and from work in clean clothes. Avoid taking the problems of lead dust home to your friends or family.
• Avoid excessive heating of metallic lead as this increases the amount of lead fumes.
• Know which products contain lead. Burning, welding, flame cutting or melting materials heavily coated with lead-bearing products (e.g. some paints) will produce dangerous fumes.

Management should ensure that:

• The work area is cleaned regularly.
• Damp sweeping or vacuuming is carried out. (Never dry sweep or blow dust away.)
• Where possible, lead work and the work areas are kept damp.
PCB REMOVAL PROCEDURES

The following is an extract from the Workers Health Centre available online at:

Removal Procedure

- PCB-containing equipment should be placed in a polythene bag and sealed inside a metal container that is clearly marked with the details of the contents.
- If some of the material is leaking then the container should be partially filled with an absorbent packing material.
- Equipment which is too large for such containment must have the PCB drained into suitable containers.
- Containers should be stored in an area that prevents discharge into the environment (no drains) and is secure from unauthorized entry. Storage areas should be clearly signed to warn workers of the potential hazards of PCBs.
- Containers should be stored in a separate location, well away from any flammable liquids and from food storage and preparation areas. Drums should be raised off the floor to avoid corrosion of the bottom of the container.
- Undamaged and non-leaking electrical equipment may be stored and transported in an upright position without further containment.
- Leakage to the environment during storage and transport must be avoided.
- The responsibility for supervision of the store should be assigned to a person with the appropriate knowledge and authority to direct operations in an emergency situation.
- Permanent records of all material in the store should be readily available for emergency situations. Duplicate records should be kept in an area remote from the store.

If spillage occurs, access should be restricted to trained personnel who are familiar with emergency procedures for handling PCBs. The appropriate State Government Environment Authority must be immediately notified of the spillage (WA Department of Environment Regulation).

EMERGENCY POLLUTION RESPONSE: 1300 784 782
Spill Clean-up

The following procedures should be followed in the event of a spill or a leak of PCBs:

- Use an absorbent material (preferably commercial absorbent, kitty litter or a diatomaceous earth or cloth, paper towel, sand, sawdust, straw or soil) to form a barrier to prevent any of the PCB from escaping into drainage systems. Under no circumstances are PCBs to be permitted to enter the drainage system or watercourses. Soak up the PCB with the absorbent material.

- Non-porous surfaces and equipment should be cleaned with an organic solvent eg. kerosene, and the solvent collected and disposed of as a PCB-containing solvent.

- All porous material, including protective clothing and soil that has been contaminated must be placed in a strong, sealed polyethylene bag, which is then placed in a sound, sealable metal drum. An absorbent material should be packed around the PCB equipment to absorb any leaks. The drum should then be sealed and labelled as “TOXIC - PCB waste” together with the contents.

- Any PCB-contaminated solvents from the clean-up should be stored in separate drums and labelled “TOXIC FLAMMABLE - PCB contaminated solvent”.

- Where a significant spill (i.e. in excess of 500ml) to the environment has occurred, notify the Department of Environment Regulation.

EMERGENCY POLLUTION RESPONSE: 1300 784 782

Disposal

Scheduled PCB waste - any material containing PCBs more than 50g or above 50mg/kg
All scheduled PCB waste must be treated by a licensed/approved operator. Solid and liquid scheduled waste must not go to landfill. Quantities above 10kg must be notified to Department of Environment Regulation

Non-scheduled PCB waste - any material which has no further use and which contains PCBs at levels less than 50 g or below 50mg/kg.
Non-scheduled liquid waste must not go to landfill however solid waste can go to landfill if correct disposal methods are used. Only approved landfill sites may be used. Contact the Department of Environment and regulation for details of local approved landfill sites.

PCB-free waste - material that contains PCBs at a concentration of 2mg/kg or less.
PCB-free waste may be disposed of in an approved landfill site.

Waste management facilities should be contacted prior to disposal for specific cartage and containment requirements.