Hazardous Materials Management Plan
1-5 Hickson Road,
Sydney NSW

Sydney Harbour Foreshore Authority

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Level 1, 50 Yeo Street

Neutral Bay NSW 2089

T: (02) 9033 8634

F: (02) 9033 8600

E: admin@prensa.com.au

ABN: 12 142 106 581

Job No: 50325-006: Client No: S0014

Statement of Limitations

This report has been prepared in response to specific instructions from the Sydney Harbour Foreshore Authority to whom this report has been addressed. The work has been undertaken with the usual care and thoroughness of the consulting profession. The work is based on generally accepted standards and practices of the time the work was undertaken. No other warranty, expressed or implied, is made as to the professional advice included in this report.

This report has been prepared for the use of the Sydney Harbour Foreshore Authority and the use of this report by other parties may lead to misinterpretation of the issues contained in this report. To avoid misuse of this report, Prensa advise that this report should only be relied upon by the Sydney Harbour Foreshore Authority and those parties expressly referred to in the introduction of this report. This report should not be separated or reproduced in part and Prensa should be retained to assist other professionals who may be affected by the issues addressed in this report to ensure this report is not misused in any way.

Unless otherwise stated in this report, the scope is limited to fixed and installed materials and excludes buried waste materials, contaminated dusts and soils.

Unless expressly stated it is not intended that this report be used for the purposes of tendering works. Where this is the intention of the Sydney Harbour Foreshore Authority, this intention needs to be communicated with Prensa and included in the scope of the Proposal.

Prensa is not a professional quantity surveyor (QS) organisation. Any areas, volumes, tonnages or any other quantities noted in this report are indicative only. The services of a professional QS organisation should be engaged if quantities are to be relied upon.

Future Works

During future works at the site, care should be taken when entering or working in any previously inaccessible areas or areas mentioned above and it is imperative that works cease immediately pending further investigation and sampling (if necessary) if any unknown materials are encountered. Therefore, during any refurbishment or demolition works, further investigation, sampling and/or assessment may be required should any suspect or unknown material be observed in previously inaccessible areas or areas not fully inspected, i.e. carpeted floors.

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1 Introduction

Prensa Pty Ltd (Prensa) was engaged by Sydney Harbour Foreshore Authority (SHFA) to develop a hazardous materials management plan (HMMP) for the management of hazardous materials identified within 1-5 Hickson Road, Sydney NSW (the Site). This HMMP will assist SHFA with managing hazardous materials-related health and environmental risks.

For the purposes of this HMMP, Prensa included the following hazardous materials and will be referred to hereafter as 'hazardous materials':

- Asbestos-containing materials (ACMs);
- Synthetic mineral fibre (SMF) materials;
- Polychlorinated biphenyls (PCBs) containing capacitors in electrical fittings;
- Lead-containing paint (LCP); and
- Ozone depleting substance (ODS) within air-conditioning units and chillers.

This HMMP has been developed in accordance with New South Wales (NSW) state legislation, industry standards, codes of practice and guidance documents for the management of hazardous materials in workplaces.

2 Objective

The objective of this HMMP is to manage hazardous materials at the Site and minimise the risk of exposure to hazardous materials of employees, contractors or subcontractors that work at the Site. To accomplish this objective, the HMMP specifies work practices and procedures to:

- Maintain the hazardous materials in good condition;
- Ensure the implementation of control strategies;
- Monitor the condition of the hazardous materials;
- Minimise the possibility of accidental damage or exposure of personnel and others, to hazardous materials; and
- Ongoing management strategies for hazardous materials at the Site.

The HMMP has been developed for the Site and all site occupants. The HMMP is to be referred to, and after a suitable training program, SHFA expects all site personnel to understand their responsibilities with regards to the HMMP. This HMMP has been developed solely for the use of SHFA at the Site.

The HMMP must be made available to, and understood by, all persons involved in the management and operation of the Site. Personnel at the Site, nominated to have responsibilities under this HMMP, should be aware of the presence of hazardous materials at the Site and the associated management requirements.

The HMMP should be referred to regularly and updated and maintained by the Management Plan Controller (See section 6.1 for further information) when any hazardous materials are disturbed, removed or repaired. The HMMP should be updated on an annual basis by a competent person and/or hygienist as nominated by the Management Plan Controller.

3 Legislation

The HMMP has been developed in accordance with the following legislation, industry standards, codes of practice and guidance documents, other reference documents are stated throughout the HMMP:

- NSW *Work Health and Safety Act 2011*;
- NSW *Work Health and Safety Regulation 2011*;
- *How to Manage Asbestos in the Workplace Code of Practice 2011*;
- *How to Safely Remove Asbestos Code of Practice 2011*;
- Australian Standard (AS) 2601-2001 *The demolition of structures*;
- *Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres* [NOHSC:3003(2005)];
- AS 4964-2004 *Method for the qualitative identification of asbestos in bulk samples*;
- AS 2985-2009 *Workplace atmospheres - Method for sampling and gravimetric determination of respirable dust;*
- AS 3640-2009 *Workplace atmospheres - Method for sampling and gravimetric determination of inhalable dust;*
- *Code of Practice for the Safe Use of Synthetic Mineral Fibres* [NOHSC:2006(1990)];
- *Polychlorinated Biphenyls Management Plan Revised Edition April* 2003, published by the Australian and New Zealand Environment and Conservation Council (ANZECC);
- ANZECC *Identification of PCB-containing Capacitors information booklet* – 1997;
- AS 4361.2 – 1998 *Guide to Lead Paint Management – Part 2: Residential and Commercial Buildings;*
- Code of Practice for the Control and Safe Use of Inorganic Lead at Work [NOHSC:2015(1994)];
- *NSW Protection of the Environment Operations Act* 1997;
- *NSW Protection of the Environment Operations (Waste) Regulation* 1996;
- *Commonwealth Ozone Protection and Synthetic Greenhouse Gas Management Regulation* 1995;
- *Australian Chlorofluorocarbon Management Strategy* October 2001;
- *Australia and New Zealand Refrigerant Handling Code of Practice 2007 Part 1 – Self-Contained Low Charge System;*
- *Australia New Zealand Refrigerant Handling Code of Practice 2007 Part 2 – Systems Other than Self-Contained Low Charge System;*
- *Code of Practice for the Control of Workplace Hazardous Substances* 2006;
- Australia/New Zealand Standard (A/NZ) 4360:2004 Risk Management;
- AS 1319-1994 *Safety signs for the Occupational Environment;*
- AS/NZS 60335.269 – 2003 Household and similar electrical appliances – safety – particular requirements for wet and dry vacuum cleaners, including power brush for industrial and commercial use;
- AS 4260 – 1997 *High efficiency particulate air filters (HEPA) classification, construction and performance;*
- AS/NZS 1716 – 2012 *Respiratory Protective Devices*; and
- AS/NZS 1715 – 2009 Selection, use and maintenance of respiratory equipment.

4 Risk Assessment and Hazard Ratings

4.1 Risk Assessment Factors for ACM

To assess the health risk posed by the presence of ACMs the relevant factors must be considered. These factors include:

- **Demolition/refurbishment works** that are likely to disturb the ACMs;
- The **condition** of the ACMs. Materials in a poorer condition will pose a higher risk of generating airborne asbestos fibre. Surface treatment of the materials (i.e. painting) is also considered;
- The **friability** of the ACMs is considered. A material's friability represents how easily it can be pulverized. Asbestos product types are generally classified as friable or non-friable, however, severely deteriorated/weathered non-friable materials may be considered friable under certain circumstances; and
- The **accessibility/disturbance potential** for each ACM is considered. To determine this potential, the following is considered:
  - The frequency that the area containing the material is entered;
  - The height at which the material is located;
  - Processes that occur in the material's location (i.e. forklift use);
  - Maintenance activities (i.e. servicing of plant and equipment, general housekeeping – cleaning or painting of surfaces etc.);
  - Barriers that prevent the material from being disturbed (i.e. carpet over asbestos-containing flooring); and
  - Airflow within the area containing the material.

These factors, as listed above, are used to determine the **risk status** for each ACM identified during the assessment.

The purpose of the risk assessment is to establish the relative ability of ACMs at the Site to release asbestos fibres into the atmosphere and the likelihood that this will lead to airborne asbestos fibre exposure. A simple four parameter algorithm is used to assess the risk the likely magnitude of release from the material, given a standard disturbance. This is evaluated using four categories: high, medium, low and very low. Where these factors have indicated that there is a possibility of exposure to airborne fibres, appropriate recommendations for sealing, encapsulation or removal of the ACMs are made.

4.1.1 Condition

The condition of ACMs identified during the assessment is reported as being either **good**, **fair** or **poor**.

- **Good** refers to material that is in sound condition with no or very minor damage or deterioration.
- **Fair** refers to a material with some areas of damage or deterioration.
- **Poor** refers to a material that is extensively damaged or deteriorated.

4.1.2 Friability

The friability of ACMs describes the ease in which the material can be pulverized by hand, which in turn, can increase the likelihood to release airborne asbestos fibres.

- **Friable asbestos** can be crumbled, pulverised, or reduced to powder fibre particles by hand pressure when in a dry state increasing the risk of asbestos fibre release.
- **Non-friable asbestos**, also known as bonded asbestos, is typically comprised of asbestos fibres tightly bound in a non-asbestos matrix.

4.1.3 Accessibility/Disturbance Potential

Accessibility/disturbance potential of ACMs can be classified as being low, medium or high.

- **Low accessibility** describes ACMs that have very little or no activity being conducted in the immediate area with the potential to disturb the materials. Low accessibility is considered as monthly occupancy, or less, of the area containing the materials, or the materials are inaccessible due to its height or are enclosed.
- **Medium accessibility** describes ACMs that have moderate activity being conducted in the immediate area with the potential to disturb the materials. Medium accessibility is considered weekly access or occupancy of the areas containing the materials.
- **High accessibility** describes ACMs that have regular activity in the immediate area with the potential to disturb the materials.

4.1.4 Risk Status

The risk factors described above are used to grade the potential health risk rating posed by the presence of ACMs. These risk ratings are described below:

- A **low risk** describes an ACMs that poses a negligible or low risk to occupants of the area due to the materials being one which doesn't readily release fibres unless significantly disturbed. 'Low risk' usually applies to non-friable ACMs in at least average condition, or materials with no or low accessibility to the area containing them.
- A **medium risk** describes ACMs that pose a moderate risk due to the materials' condition/composition and the activity conducted in the area. 'Medium risk' usually applies to non-friable ACMs in a state of minor deterioration and in moderate to high activity area, or it apples to accessible friable ACMs in good condition.
- A **high risk** describes ACMs that pose a high health risk to personnel or the public in the area of the material. Immediate action is required to restrict access to the areas to reduce the potential of fibre release. Furthermore, a plan for decontamination and remedial works is required to address the high risk of the material. Materials with a high risk ranking will be given a 'Priority 1' recommendation to manage the ACMs and reduce the risk.

4.1.5 Priority Rating System for Control Recommendations

The following schedule of risk status priority rating is adopted to assist the site controller in the programming of the management, removal or encapsulation of the ACMs at the site.

Priority 1 (P1): Hazard with High Risk Potential

Status: - ACMs that are either damaged or are being exposed to continual disturbance. Due to these conditions there is an increased potential for exposure and/or transfer of asbestos fibre to other parts of the property if unrestricted use of the area containing the material is allowed.

Recommendation: - If the ACMs is in a poor/unstable condition and accessible with a risk to health from exposure, then immediate access restrictions to the immediate area should be applied, air monitoring should be considered and removal is recommended as soon as practicable using an appropriately licenced asbestos removalist.

Priority 2 (P2): Hazard with Medium Risk Potential

Status: - ACMs with a potential for disturbance due to the following conditions:

- Material has been disturbed or damaged and in its current condition, while not posing an immediate risk, is unstable.
- The material is accessible and can, when disturbed, present a short-term exposure risk.
- The material could pose an exposure risk if workers are in close proximity.

Recommendation: - If the ACMs is easily accessible but in a stable condition, removal is preferred. Nevertheless, if removal is not immediately practicable, short-term control measures (i.e. restrict access, sealing, enclosure etc.) may be employed until removal can be facilitated as soon as is practical (<3 months).

Priority 3 (P3): Hazard with Low Risk Potential

Status: - ACMs with a low potential for disturbance due to the following conditions:

- The condition of any friable asbestos-containing building material is stable and has a low potential for disturbance i.e. is encased in metal cladding.
- The ACM is in a non-friable condition, however, further disturbance or damage is unlikely other than during maintenance or service and the material therefore does not present an exposure risk unless cut, drilled, sanded or otherwise abraded.

Recommendation: - Minor health risks if the material is left undisturbed under the control of an asbestos management plan. The site controller should consider organising the removal or encapsulation of the damaged non-friable ACM within a practically achievable scheduled timeframe. These ACMs should be left in present condition, with ongoing maintenance and periodic inspection if they are to remain in-situ.

Priority 4 (P4): Hazard with Negligible (very low) Risk Potential

Status: - ACMs of a non-friable form and in good condition. It is highly unlikely that the materials can be disturbed under normal circumstances, even if they were subjected to minor disturbance they poses a minor health risk.

Recommendation: - These ACMs should be left in a good and stable condition, with ongoing maintenance and periodic inspection. It is advisable that any remaining ACMs or presumptions should be labelled (with a warning against disturbing the materials), and regularly inspected to ensure they are not deteriorating resulting in a potential risk to health.

4.2 Risk Assessment Factors for SMF

SMF building materials are defined as either being un-bonded or bonded. Un-bonded SMF materials are defined as those manufactured without the use of any binding agents, facing/cladding or other sealants or the binder as deteriorated. There are two main applications of manufactured un-bonded materials, wet spray and loose fill. Un-bonded SMF also refers to severely deteriorated thermal insulation, batts and debris, and any other instance of SMF where fibres can be released with only minimal disturbance. Bonded SMF materials are defined as those manufactured using binding or sealing agents to hold the fibre in a batt or blanket form.

The selection of the most appropriate control measure for SMF material should be determined through a risk assessment process that includes a detailed knowledge of the workplace and activities likely to be conducted in the area containing the SMF material. The following principles may be applied:

- If the SMF material is un-bonded or deteriorated, in a poor/unstable condition and accessible with risk to health from exposure, then immediate access restrictions should be applied and removal is required as soon as practicable.
- If the SMF material is un-bonded or deteriorated, in a poor/unstable condition but in inaccessible areas (i.e. ceiling space), then removal is preferred. Nevertheless, if removal is not immediately practicable, short-term control measures (i.e. restrict access, or provide personal protective equipment to personnel required to access the area) may be employed until removal can occur.
- If the SMF material is bonded and in a poor/unstable condition; then minimising disturbance, removal or encapsulation may be appropriate controls.
- For bonded SMF material in a good and stable condition, ongoing maintenance and periodic inspection of the material to ensure it is not deteriorating would be appropriate controls.
- Prior to any demolition, partial demolition, renovation or refurbishment works, SMF materials likely to be disturbed by these works should be removed in accordance with the *Code of Practice for the Safe Use of Synthetic Mineral Fibres* [NOHSC:2006 (1990)].

Airborne SMF monitoring of the area containing the material can provide the basis of a risk assessment to address the most appropriate control measures and the urgency required for the implementation of the measures.

4.3 Risk Assessment Factors for PCB

For the purpose of this HMMP only capacitors within in electrical equipment, such as fluorescent light fittings and ceiling fans were included.

To assess the health and environmental risk posed by the presence of PCB-containing capacitors within electrical equipment the relevant factors must be considered. These factors include:

- **Demolition/refurbishment works** that are likely to disturb the PCBs;
- The **condition** of the capacitor is determined by a visual inspection of the fitting, and internal capacitor where safe access is available. This will determine the level of priority and control measures required during removal of the fittings from service;
- The **accessibility** to PCB-containing capacitors is determined by the priority of the area in which the materials are located;
- The **likelihood** of human and/or environmental exposure to PCBs during occupational activities.
- Quantity of PCB-containing capacitors at the Site. The quantity is based on the aggregate weight of all PCBs on the a premises.

4.4 Risk Assessment Factors for LCP

In accordance with Clause 392 of the *NSW Work Health and Safety Regulation 2011* a lead process is commenced, where lead is machine sanded, grinded or buffed. Lead paint, as defined by the AS 4361.2 – 1998 *Guide to Lead Paint Management – Part 2: Residential and Commercial Buildings,* is that which contains in excess of 1% lead by weight.

The selection of the most appropriate control measure for lead exposure should be determined through a risk assessment process that includes a detailed knowledge of workplace activities likely to impact on lead-containing paints. Risk of lead exposure through lead-containing paint is based on the following factors:

- **Demolition/refurbishment works** that are likely to disturb the LCPs;
- The **condition** of the lead-containing paint. Paint that is flaking or in a poor condition is more likely to be ingested than paint that is in a good and stable condition; and
- The **likelihood** of inhalation or ingestion by people working in the vicinity of the paint.

4.5 Risk Assessment Factors for ODS

For the purpose of this HMMP only ODS within in air conditioning units and chillers were included.

The inspection visually identified stored refrigerants in accessible areas. The status of suspected ODSs were compared to the United Nations Environment Programme's Division of Technology, Industry and Economics (UNEP DTIE) *Inventory of Trade Names of Chemical Products Containing Ozone Depleting Substances and their* Alternatives and the Australian Institute of Refrigeration Air Conditioning and Heating Inc. (AIRAH) *Air Conditioning and Refrigeration Industry Refrigeration Selection Guide* 2003. The risk assessment factors utilised in this report relate to the potential of exposure of personnel (excluding programmed hazardous material removal works). This assessment is based on the following factors and properties of the ODS, particularly:

- Risk potential;
- Condition;
- Volatility and quantity;
- Location and accessibility; and
- Potential of disturbance and ongoing deterioration.

5 Hazardous Materials Management Options

As per state legislation, all materials suspected of containing asbestos or being a hazardous material must be identified and recorded in a register. Furthermore, a risk assessment must be conducted of each hazardous material and control measures implemented. The exposure control measures, which are determined by the competent person and/or hygienist, need to reflect the hierarchy of control, as outlined in the specific state legislation. The hierarchy of controls for the management of hazardous materials is as follows:

1. Elimination/removal (most preferred);
2. Substitution
3. Isolation, such as erection of permanent enclosures encasing the material;
4. Engineering controls, such as negative air pressure enclosures for removal works, HEPA filtration systems;
5. Administrative controls – including the incorporation of registers and management plans, the use of signage, personnel training, safe work procedures, regular re-inspections and registers; and
6. The use of Personal Protective Equipment (PPE) (least preferred).

To manage the hazardous materials, a combination of the above techniques may be required.

6 Staff Responsibilities

The following section outlines the responsibilities of key personnel regarding the management of hazardous materials at the Site.

6.1 Management Plan Controller

The HMMP is to be managed and updated by the Management Plan Controller.

The roll of the Management Plan Controller for the Site has been appointed to the Manager of Facilities on behalf of SHFA.

The Management Plan Controller has the following responsibilities:

- Ensure re-inspection and risk assessments are carried out by a competent person (i.e. a trained, employee, qualified consultant or hygienist) on a yearly basis or sooner as recommended by the previous risk assessment. It is imperative that the re-inspection is conducted in accordance with the *NSW Work Health and Safety Regulation 2011* and the relevant industry standards and codes of practice;
- Inform employees, contractors and subcontractors of the locations of the hazardous materials at the Site through the implementation of awareness training, as part of the induction process etc.;
- When issuing a permit to work (see section 11.1 Work Permit Systems), ensure that the hazardous materials register is read and understood by the personnel prior to the commencement of work in the areas where hazardous materials have been identified;
- Inform occupants of any removal or remedial works occurring at the Site, particularly in relation to any hazardous materials;
- Engage an appropriately licenced removal contractor as required by legislative requirements to conduct hazardous materials abatement works and notify site personnel of air monitoring results (if applicable) during abatement or refurbishment works;
- Install warning signage and labels to ACMs, this will assist with mitigating the risk of accidental disturbance by employees, contractors or subcontractors or any other persons at the site;
- Ensure a destructive hazardous substances survey is conducted prior to demolition or refurbishment works;
- Identified hazardous substances that may be impacted by demolition or refurbishment works should be safely removed or appropriately contained **prior to** commencement of works. This will prevent the accidental disturbance of the material(s); and
- Ensure hazardous materials related records are maintained in **Appendix B** of this HMMP. Documentation must be archived indefinitely and be accessible to any WorkCover NSW representatives, if requested. Records such as hazardous materials register updates, hazardous materials removal specifications, contractor licences and SWMS, air monitoring reports; clearance inspection certificates and waste disposal documents are also to be attached to **Appendix B.**

6.2 Contractors and Subcontractors

Contractors must ensure proper safety procedures are followed and works are conducted in accordance with all relevant legislative requirements and best industry practice. SWMS should be issued to the Management Plan Controller for approval prior to works being completed in areas where hazardous materials have been identified.

6.3 Licenced Asbestos/Hazardous Material Removal Contractors

If necessary, the Management Plan Controller will engage or delegate an appropriately licenced contractor as prescribed by state legislation to conduct abatement works. The contractor must perform all works in accordance with licencing requirements and standard industry practice for the particular hazardous material.

In accordance with the current *NSW Work Health and Safety Regulation 2011*, ACMs that require abatement, should be undertaken by either an Class A (friable) licenced asbestos contractor for friable works or an Class B (non-friable) licenced asbestos contractor for non-friable asbestos materials only.

Many licenced asbestos removal contractors have the experience to remove other hazardous materials e.g. SMF, lead-containing dust and lead-containing paint as they require similar setup, controls and removal methodology.

A refrigerant handling licence is required for working on air conditioning and chiller units as described in *Ozone Protection and Greenhouse Gas Management Regulation* 1995 Subdivision 6A.2.2.

6.4 Hygienist

The Management Plan Controller may appoint a suitably qualified hygienist to assist in the following areas:

- Conduct surveys to assess the risk involved with any proposed works where disturbance of hazardous material is likely to occur prior to commencing proposed works;
- Regularly review hazardous materials on the Site, as required by state legislation;
- Develop 'scope of works' documentation for removal of hazardous materials;
- Provide hygienist services during abatement works (i.e. asbestos fibre air monitoring, atmospheric lead monitoring, clearance inspections); and
- Review the HMMP on a regular basis as part of the ongoing management of the site. This should be conducted annually or earlier if required.

6.5 WorkCover NSW

WorkCover NSW administers and enforces the hazardous materials related state legislation. The NSW *Work Health and Safety Regulation 2011* requires building owners and/or controllers of premises to identify, assess and control risks arising from hazardous materials in buildings. The NSW *Work Health and Safety Act 2011* also details the overriding general obligation of various parties including person conducting business or undertaking (PCBU), officers, contractors, employers, self-employed persons and persons in control of workplaces to ensure the workplace health and safety of persons affected by their work activities.

WorkCover NSW inspectors may request access to hazardous materials related documentation from time to time. The NSW *Work Health and Safety Act 2011* outlines the powers of WorkCover NSW inspectors.

7 Labelling and Signage of ACMs

As per Section 2.5 and Appendix B of the *How to Manage Asbestos in the Workplace Code of Practice 2011*, ACMs that have been identified on the Site are required to be labelled with an asbestos warning label to highlight the risk of inadvertently disturbing the material.

The warning signs and labels should comply with AS 1319 – 1994 *Safety signs for the Occupational Environment*. A competent person or hygienist should determine the number of labels to be used and where the labels should be affixed.

The warning labels and signs must be consistent with the locations of the ACMs identified within the site asbestos materials register. If it is impractical to label an ACM, a prominent warning sign should be posted in the immediate vicinity identifying the location of the ACM or on the entrance to an area containing the ACM.

The asbestos warning label to be used at the site to label all identified ACMs (where practical) is shown below:

Further examples of asbestos warning labels are located in Appendix B of the *How to Manage Asbestos in the Workplace Code of Practice 2011*.

7.1 Guidance on Labelling ACMs

The following information within **Table 3** has been developed by Prensa to assist the Management Plan Controller with the labelling of ACMs within the site. **However, please note, this is to be used as a guide only and it is up to the discretion of the competent person and/or hygienist to label ACMs accordingly.**

Table 3: Warning Labels Guidance Information

Type of Material	Location of Label	Consistency of the Label
Fibre cement sheeting	Upper or lower corner of the sheeting	1 label every 10 metres
Fire door core insulation	Internal spine of the door	1 label per door
Vinyl floor tiles (VFTs) or vinyl sheeting	Skirting boards adjacent to the VFTs	1 label per corner of room
Fibre cement pipe conduit	Centre of the pipe conduit	1 label every 5 metres
Electrical backing boards (EBB)	Corner of the EBB	1 label per EBB
Pipe lagging/Rope lagging	Centre of the pipe lagging on the calico wrapping	1 label every 3 metres

8 Training

In accordance with Section 6.3 of the *How to Manage Asbestos in the Workplace Code of Practice 2011* all employees, contractors and subcontractors are provided with hazardous materials awareness training. The training will increase their awareness of hazardous materials on the Site and the processes adopted by SHFA in managing the materials identified.

The information should cover the following aspects:

- Background information on hazardous materials;
- The health risks of exposure to hazardous materials;
- The types, uses and likely occurrences of hazardous materials in buildings, plant and/or equipment in the workplace;
- Legislative requirements and responsibilities of all personnel on the Site;
- Sources and general locations of hazardous materials located at the site (as noted in the hazardous materials register);
- The location of the hazardous materials register at the Site;
- An overview of the structure and function of the HMMP i.e. the processes and procedures to follow to prevent exposure to any hazardous materials; and
- Management recommendations and controls for any hazardous materials located at the Site.

The training should be designed to serve a number of purposes:

- To increase the awareness and knowledge of building management personnel with respect to their statutory obligations with respect to the management of hazardous materials at the site;
- To provide valuable introductory information to staff/contractors who may have a requirement to handle hazardous materials or enter areas where hazardous materials are present; and
- To assist the employer in addressing their statutory duties with respect to providing information, instruction and training to those exposed to risk.

9 Hazardous Materials Information

9.1 Asbestos

9.1.1 Asbestos and Its Uses

Asbestos is defined as the fibrous form of mineral silicates. There are two major groups of asbestos:

- ***Serpentine*** group of minerals: **chrysotile** (white asbestos); &
- ***Amphibole*** group of minerals: **amosite** (brown asbestos), **crocidolite** (blue asbestos) and within, less commercially used forms including actinolite, tremolite and anthophyllite.

Asbestos minerals can be split into elongated long fibres that are strong, flexible and heat resistant. Because of these characteristics, asbestos has been historically used for a wide range of manufactured goods, mostly in building materials, friction products, heat-resistant fabrics, gaskets, and coatings.

9.1.2 Types of Asbestos-Containing Materials

ACMs can be classified into two main groups, **friable** and **non-friable**.

ACMs considered to be **friable** can be crumbled, pulverised or reduced to powder by hand pressure when dry. Friable ACMs are considered higher risk materials as they are more readily damaged, and thus have a greater potential to release fibres into the air.

All other ACM are considered to be **non-friable** and are generally considered to be 'low' risk if properly handled. Non-friable ACM are bound in a matrix such as cement (e.g. cement sheeting) or various resin/binders (e.g. vinyl floor tiles).

The following table details the common materials found in the two groups:

Table 1: Types of asbestos-containing materials

Friable	Non-Friable (bonded)
• Sprayed or trowelled materials applied to ceilings, walls and other surfaces for fire-rating purposes. This material is often referred to as 'limpet asbestos'. • Insulation on pipes, boilers, tanks, ducts etc. which is often referred to as asbestos lagging. • Paper products, millboard in electrical switchboards or underlying lining for linoleum or vinyl floor coverings. • Textiles, braided asbestos, rope, tape, etc. • Millboard from inside auxiliary switchboxes/fuse boards or air-conditioning reheat boxes.	• Cementatious products, i.e. cement-like or concrete-like products (e.g. 'fibro' and 'Super Six roofing' – see description below). • Vinyl tiles, vinyl flooring mastic and associated adhesives. • Compounds, gaskets and mastic from mechanical fittings. • Electrical switchboards containing compressed tar mounting boards, cement sheeting. • Roofing sealants, bituminous membranes, tar composites and similar materials.

9.1.3 Current Occupational Exposure Standard and Control Level

As asbestos poses a risk to health by inhalation when asbestos fibres are airborne, all exposure should be prevented. The current occupational exposure standard for all forms of Amphibole (brown and blue) and Serpentine (white) asbestos fibres is 0.1 fibres/mL of air as per the hazardous substances information system (HSIS) maintained by Safe Work Australia.

This occupational exposure standard should **never** be exceeded, outside an asbestos work area.

The membrane filter method is used throughout Australia for conducting airborne asbestos fibre monitoring. The detection limit for this method is 0.01 fibres/mL of air. This detection limit is also the primary control level in relation to asbestos removal and abatement works. Control measures should be reassessed whenever air monitoring indicates the control levels of 0.01 fibres/mL or above have been reached. Refer to **Section 9.1.6** for further information.

9.1.4 Asbestos Remedial Works

For ACMs requiring removal or encapsulation the asbestos remedial works must be completed by an appropriately licenced asbestos contractor. The following licences will apply for the following types of ACMs:

- Friable asbestos – Class A licenced asbestos contractor is licenced to remove **both** friable and non-friable/bonded types of asbestos; and
- Non-friable asbestos – Class B licenced asbestos contractor is licenced to remove non-friable types of asbestos only.

When choosing a licenced asbestos contractor, it is important for the Management Plan Controller to review all relevant information regarding the licenced asbestos contractor. The following information should be considered:

- Evidence of appropriate insurances i.e. public liability, professional indemnity, asbestos liability insurance;
- Evidence of the appropriate asbestos removal licence for the company to perform the particular type of work;
- Evidence of individual employee asbestos removal licences;
- Provision of an appropriate asbestos removal plan, which has been reviewed by an independent hygienist and submitted to WorkCover NSW;
- Names of employees who are supervisors and have the appropriate licence and experience necessary to complete the work; and
- A list of previous asbestos removal jobs over the past 6 months detailing the type of asbestos removed and the name and telephone number of the client.

All asbestos remedial works must be conducted in accordance with the *How to Safely Remove Asbestos Code of Practice 2011*.

9.1.5 Asbestos Fibre Air Monitoring

Asbestos fibre air monitoring (air monitoring) must be conducted during the removal of friable ACMs. Air monitoring during the removal of non-friable asbestos materials is not mandatory, but is highly recommended as best practice.

The requirements for air monitoring must be established prior to the commencement of the works.

All air monitoring must be conducted in accordance with the *Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres* [NOHSC:3003(2005)] and all results must be analysed by a National Association of Testing Authorities (NATA), Australia accredited laboratory.

It is up to the discretion of the occupational/asbestos hygienist to determine where the air monitoring equipment should be placed during the removal works. As a guide, during the removal of ACMs, air monitors should be placed at the perimeter of the work area, particularly to boundaries with sensitive receptors i.e. occupied areas. At the conclusion of the removal works, clearance air monitoring is required within the removal work area to determine whether the removal area is safe for re-occupation by unprotected personnel.

9.1.6 Control Levels for Asbestos Fibre Air Monitoring

When air monitoring control levels are exceeded during asbestos removal works, it indicates that there is a need to review the control measures used during the removal of ACMs. The control levels are occupational hygiene 'best practice' and are not health-based standards i.e. they are more prudent than the Occupational Exposure Standard (OES) for asbestos.

The control levels provided below in **Table 4** should be used for the purposes of determining the effectiveness of control measures:

Table 4: Control Levels and Required Actions

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

Refer to **Section 14.2** for information regarding an incident where the air monitoring samples return results above 0.02 fibres/mL.

9.1.7 Clearance Inspections, Clearance Air Monitoring and Clearance Certificates

9.1.7.1 Visual Clearance Inspection

At the conclusion of asbestos removal/remedial works, a visual clearance inspection must be conducted by a competent person and/or asbestos hygienist in accordance with **Section 3.10** of the *How to Safely Remove Asbestos Code of Practice 2011*.

The visual clearance inspection will determine whether the asbestos remedial works have been completed to a satisfactory standard in accordance with relevant legislation and there is no visual evidence of dust and debris throughout the work area.

9.1.7.2 Clearance Air Monitoring

The need for clearance air monitoring should be assessed by a competent person prior to the commencement of asbestos removal/remedial works. It is a mandatory requirement that clearance air monitoring is undertaken for any friable asbestos remedial works, however, it is at the discretion of the competent person/asbestos hygienist whether clearance air monitoring is undertaken for any non-friable asbestos remedial works.

Clearance air monitoring should be undertaken by a competent person who is independent of the person responsible for the asbestos remedial works. It should be undertaken after the removal/remedial works have been of completed and the work area is dry i.e. representing a normal workplace.

The air monitoring equipment should be placed in the asbestos work area. For jobs involving a temporary enclosure, air monitoring equipment should be placed within the enclosure, following the completion of work but prior to the enclosure being removed. A final clearance air monitoring shift must be undertaken once the enclosed area has been dismantled and removed but prior to the re-occupation of the area by unprotected personnel.

The removal/remedial works enclosure is only considered to be cleared and completed once an airborne fibre result of <0.01 fibres/mL is achieved. When airborne fibre results ≥ 0.01 fibres/mL are returned for a clearance monitoring shift, the work area is to be re-cleaned by the licenced asbestos contractor and another clearance monitoring shift shall be undertaken until an airborne fibre result of <0.01 fibres/mL is achieved.

9.1.7.3 Clearance Certificate

Following the successful completion of a visual clearance inspection and/or clearance air monitoring, a clearance certificate must be issued by the competent person performing the clearance work. The clearance certificate should state that:

- The asbestos materials have been removed to the appropriate legislative requirements;
- All air monitoring results below the reporting limit have been achieved;
- The name of the licenced asbestos contractor that removed the asbestos materials; and
- That the area is safe for re-occupation by unprotected personnel.

Additionally, the clearance certificate should include a description of all the ACMs removed, together with a unique description of the area from where they were removed.

9.1.8 Asbestos Vacuum Cleaners

For any asbestos abatement works a specialised vacuum cleaner is required to be used. The vacuum cleaner must comply with the requirements of AS 3544 – 1998 *Industrial vacuum cleaners for particulates hazardous to health* and AS 4260 – 1997 *High efficiency particulate air filters (HEPA) classification, construction and performance*.

A HEPA filtered vacuum cleaner must be used on all asbestos removal jobs and it is imperative for the management plan controller and the hygienist to ensure that this particular type of vacuum cleaner is used for each asbestos removal project.

9.1.9 Disposal of Asbestos

Waste containing asbestos must be stored and transported in a receptacle designed to prevent the release of its contents. This can include standard 200µm thick clear polythene labelled asbestos waste bags or suitably sealed and labelled drums.

The transportation and disposal of asbestos waste is regulated by the NSW *Protection of the Environment Operations (Waste) Regulation* 1996. Provisions are made for asbestos waste under Schedule 1, Part 3, Division 2, Section 29 of the Regulation. The following sections outline the requirements of this Regulation.

9.1.10 Registered Waste Facilities

Asbestos waste must be disposed of at an approved waste facility that must be registered to accept asbestos waste. Below is a list of registered waste facilities within the Sydney area as at 2nd March 2012 that are registered to receive and dispose of asbestos contaminated waste:

- Belrose Waste Management Centre, Crozier Road, Belrose (1300 651 116);
- Blacktown Waste Services, 920 Richmond Road, Marsden Park (02) 98354544;
- Blaxland Waste Management Facility, Attunga Road, Blaxland (02) 4782 1104;
- Eastern Creek Waste Management Centre, Wallgrove Road, Eastern Creek (1300 651 116);
- Horsley Park Waste Management Facility, 716-56 Wallgrove Road, Horsley Park (02) 9620 1944);
- Kemps Creek, SITA Environmental Solutions, 1725 Elizabeth Drive, Kemps Creek (02) 9756 6899);
- Lucas Heights Waste Management Centre, New Illawarra Road, Lucas Heights (1300 651 116);
- St Peters, Alexandria Landfill, 10 Albert Street, St Peters (02) 9519 5333); and
- Kimbriki Recycling and Waste Disposal Centre, Kimbriki Road, Terrey Hills (02) 9486 3542).

Refer to the following link for further updates regarding registered waste facilities within the Sydney area: http://www.environment.nsw.gov.au/waste/asbestos/sydasbestos.htm

9.1.11 Licenced Asbestos Contractor

The licenced asbestos contractor should arrange for transport and disposal of any asbestos-contaminated waste that is removed from site. It is up to the Management Plan Controller to ensure that the disposal dockets are received from the licenced asbestos contractor to confirm that all asbestos-contaminated waste has been transported and disposed of at the registered waste facility.

9.2 Synthetic Mineral Fibre Materials

9.2.1 Definition

Synthetic mineral fibre (SMF) is a generic term used to collectively describe a number of amorphous (non-crystalline) fibrous materials, commonly referred to as “man-made mineral fibres” (MMMF).

9.2.2 Types of Synthetic Mineral Fibre Materials

As per the *Code of Practice for the Safe Use of Synthetic Mineral Fibres* [NOHSC: 2006 (1990)], SMF materials include fibreglass, Rockwool and ceramic fibre based products. These products are used in a number of areas throughout buildings. These materials are generally used as insulation within ceilings and walls, as well as heating hot water heaters, pipework and associated mechanical equipment.

9.2.3 Classification of Synthetic Mineral Fibre Materials

SMF materials are classified as bonded and un-bonded materials. Bonded SMF materials contain adhesives, cements or other bonding agents and have a set form or shape, these materials include sectional fibreglass and Rockwool pipe insulation; ceiling batts, duct blankets (lined and unlined with mesh/foil), dry wall batts insulation and acoustic mineral fibre ceiling tiles etc. Un-bonded SMF materials contain no binding agent and include loose fill fibreglass or Rockwool dry wall or ceiling insulation, and sprayed Rockwool to structural steel and acoustic finishes i.e. Roberts M34.

9.2.4 Duties of the Management Plan Controller

The following information should be referenced to by the Management Plan Controller, to manage SMF materials effectively.

- When using SMF, so far as is practicable, select materials or product forms so as to minimise the release of fibres and/or dust;
- Engage appropriately qualified contractors to perform works entailing SMF i.e. removal or maintenance works;
- Action shall be taken to apply appropriate control strategies on a continuing basis. The aim of these strategies is to reduce exposure to SMF to the lowest practical levels. The hierarchy of controls, as sourced in the occupational health and safety legislation, should also be referenced, when assessing the appropriate control measure to be implemented for these types of materials. PPE **should not** be used to replace control measures, the use of PPE is always the least preferred option for management, and should only be used on occasions where engineering controls are inadequate or impractical; and
- Ensure appropriate and controlled site maintenance is conducted throughout building i.e. do not inadvertently disturb the material.

9.2.5 Management of Synthetic Mineral Fibre Materials

In all cases, it is essential that SMF materials be handled appropriately to control dust and debris, as they are irritating to the skin and mucous membranes. SMF fibres are generally thick and will scratch and puncture the skin causing rashes and irritation to the skin, nose and eyes if exposed to high levels of dust and debris. Protective eyewear therefore should be worn if handling SMF materials above the head, i.e. entering ceiling cavities.

9.2.6 Overall Strategy

Action should be taken on a continuing basis to achieve the lowest workable exposure levels of SMF. The provision of engineering controls, greater attention to plant cleanliness, in particular within plant rooms and air handling units, and the containment of waste material may achieve this. Additionally, the use of binders or work practices which reduce the liberation of fibres and the provision of appropriate PPE can help reduce SMF levels to personnel and the environment.

9.2.7 Handling and Disposal of SMF Material

Caution is required when handling SMF products in order to minimise airborne SMF levels. It is recommended that the following code of practice be closely adhered to when handling such materials:

- *Code of Practice for the Safe Use of Synthetic Mineral Fibres* [NOHSC:2006(1990)].

Essentially, SMF materials should be handled in such a way as to minimise dust and disturbance of the materials. Where SMF materials are installed or removed, then suitable controls and appropriate personal protection are to be provided. Consultation should be sought from an occupational hygienist with regard to appropriate procedures prior to the handling of such materials.

9.3 Polychlorinated Biphenyls (PCBs)

9.3.1 Definition

Polychlorinated biphenyls (PCBs) are chlorinated organic compounds and oils used as a dielectric within electrical capacitors. They are very stable chemicals that resist change over time and from temperature variation. PCBs are fire resistant and very good insulators.

Reference is made to the document *Identification of PCB-Containing Capacitors* – ANZECC, 1997 for identification of PCB-containing capacitors.

For the purpose of this HMMP only capacitors within in electrical equipment, such as fluorescent light fittings and ceiling fans were identified.

9.3.2 Types of PCBs Used

PCBs have been commonly used in closed or semi-closed systems such as electrical transformers, heat transfer systems, hydraulic fluids, feeder cabling and in the metal case capacitors to fluorescent lights, sodium vapour and mercury vapour light, and starter capacitors to electrical motors. PCBs will generally only be found in capacitors made before 1976 (though some electrical equipment imported after this period may contain PCBs). High voltage and medium voltage feeder cables prior to the use of PVC insulation, particularly the armoured type of cabling may contain PCBs in concentrations sufficient to be a scheduled PCB waste.

Importation of PCBs in Australia was banned in 1976, however, they are still present extensively in transformers and capacitors in electrical equipment manufactured prior to this date.

9.3.3 Management of PCB Materials

The management of PCBs is outlined in the policy document issued by ANZECC *Polychlorinated Biphenyls Management Plan, Revised Edition* April 2003. The Environmental Protection Authority (EPA) has deemed PCBs to be a hazardous material and a dangerous good. Proper procedures must be undertaken when disposing of items containing PCBs. Registered waste disposal companies are licenced to dispose of PCBs material.

Not all materials containing PCBs are required to be removed. The management strategy depends on the priority of the area in which the material is located and the classification of the PCB containing material. The PCB concentration classifies a material as one of the following:

- PCB free – materials and wastes are defined for the purposes of the PCB Management Plan as those materials or wastes containing PCBs at concentrations of 2mg/kg or less.
- Scheduled PCB materials and wastes containing PCBs at levels greater than or equal to either 50mg/kg or 50g.
- Non-Scheduled PCB materials or waste containing PCBs at concentration levels between those defined above.

A notifiable quantity of PCBs at a single premises is >10 kilograms (kgs). PCB-containing capacitors within small electrical equipment i.e. as fluorescent light fittings and ceiling fans, will be notifiable if the aggregate total weight of PCBs within these units is equal or greater than 10kgs.

9.3.4 PCB Removal Procedures

Prior to any removal of PCBs, workers involved should be suitably trained in the health and safety procedures and the use of appropriate PPE.

The following PPE should be worn when handling items containing PCBs:

- Nitrile Gloves;
- Eye Protection; and
- Disposable Overalls.

The PPE should be worn when removing capacitors from electrical equipment in case the capacitor housing is damaged and/or PCB oils are leaking.

The following key points should be considered when handling PCB containing electrical components:

- A registered electrical contractor should conduct all electrical works.
- All leaking capacitors should be treated as if they contain PCBs unless proven otherwise.
- Remove diffuser and light tubes.
- Remove cover panels carefully and inspect the internals of the light fitting for signs of leakage from the capacitor.
- Disposable overalls and gloves should be disposed of as PCB contaminated material on completion of work.
- Wash hands in warm soapy water before eating, drinking, smoking, handling food or drink or using toilet facilities (even if gloves were worn).
- If skin contact with PCB material occurs, the liquid should be removed immediately with soap and water and waste contained and disposed of as PCB containing waste (depending on quantity of spillage).
- If PCB material has leaked from the capacitor onto the cover plate or diffuser, the spillage must be wiped with an absorbent cloth soaked with some white spirit or kerosene, and the cloth then disposed of as PCB waste. Leaking capacitors should first be placed in a plastic bag with loose vermiculite (or similar) placed at the bottom to absorb any spillage/leakage.

9.3.5 Disposal of PCB Materials and Waste

PCB waste must be disposed of as contaminated waste in plastic lined drums. The drums must be leak-proof in a sound and clean condition and must be able to be securely locked. The drums should be labelled as follows:

" Caution Contains PCBs"

UN No.	2315	**Packaging Group**	II
HAZCHEM code	4X	**Class**	6.1

Pending removal of filled drums, the PCB waste should be stored in a secure location not accessible to the general public or building tenants. This area should be well ventilated and must not contain other dangerous goods.

9.4 Lead-Containing Paint

9.4.1 Definition

Lead is a naturally occurring metal. Pure lead can combine with other substances to form various lead compounds. Lead based paint is defined as "any paint containing greater than 1% of lead by dry weight" in AS 4361-1998 *Guide to Lead Paint Management Part 2: Residential and Commercial Buildings*.

9.4.2 Lead Processes

The duties contained in the *NSW Work Health and Safety Regulation 2011* apply to workplaces where lead processes are undertaken. Part 7.6 of this Regulation class the following as a lead process:

a) the smelting of ores containing lead or a lead compound;
b) lead burning;
c) the melting or casting of lead or a lead compound;
d) buffing;
e) the manipulation, movement or other treatment of metallic lead in particulate form or molten lead or of a lead compound;
f) the breaking up, repair or alteration of any ship or other structure which has previously been coated with a lead compound;
g) the cleaning, repairing or renovation of casks or other containers which have previously been used for the storage or transport of metallic lead in particulate form or of a lead compound; and
h) the cleaning, repairing or demolition of any building, structure or plant which contains or has contained metallic lead in particulate form or a lead compound, the reconstruction in whole or in part of any such building, structure or plant with material which has formed part thereof, or the installation, repairing, alteration or dismantling of equipment in any such building or structure.

Paints containing <1% and as low as 0.25% can result in high exposure levels if control measures are not adhered to, or unsafe practices are used during abatement works.

9.4.3 Duties of the Management Plan Controller

The Management Plan Controller has the responsibility under the regulations to protect occupants from excessive exposure to lead and these duties extend to any contractors and their employees that are engaged to work on the site.

9.4.4 Management of Lead Painted Surfaces

The health risks associated with lead occurs via an accumulative effect within the human body. Depending on the amount of exposure, side effects of lead poisoning may not be apparent for many years. It is therefore recommended that workers associated with lead processes have regular medical examinations to monitor the amount of lead in their system.

The most common exposure risks faced by workers are the inhalation of lead dust or fumes. The creation of the hazards generally relates to abrading or burning lead or lead coated surfaces. Other common sources of lead dust or fumes are as follows:

- Lead based paints – when removing paint by sanding or heat (e.g. creating dust), or when welding or cutting steel coated with lead or lead based paints;
- Welding, oxy cutting of steel coated with lead based paint or primer; and
- Dismantling of equipment containing lead based paint.

Lead exposure is likely where painted surfaces are to be removed or treated by mechanically sanding, scraping or other cleaning techniques creating airborne dust and fall-out contaminating ground and building surfaces. Accordingly, lead abatement work must fully contain and control airborne emissions and remove resultant lead contaminated dusts and sludge's from work surfaces. The painting contractors must prepare a waste management plan prior to any lead paint management work.

The abatement of lead painted surfaces and reduction of potential lead exposure risks to workers and the environment requires a review of the potential exposure pathways to lead dust during the abatement project. Local authority requirements, public safety and health requirements, site preparation, waste disposal and contamination control all need to be fully considered therefore, prior to the commencement of the abatement project.

Workers must also be protected against exposure with personnel protective clothing and respiratory protection. Employers of these workers must comply with the NSW *Work Health and Safety Regulation 2011*, including organising medical testing of their employees i.e. blood testing/screening.

AS 4361.2-1998 *Guide to Lead Paint Management Part 2: Residential and Commercial Buildings*, provides guidance for the management of lead-paint on non-industrial structures such as residential, commercial and public buildings.

The options available for the management of lead painted surfaces include:

- Report and Document;
- Stabilise the paint;
- Carrying out lead paint abatement (removal); and
- A combination of these options.

9.4.5 Report and Document

The presence of lead paint, even under existing non-lead painted surfaces should be documented and recorded and regular inspection conducted for evidence of deterioration. Remedial works documentation should be kept in **Appendix B** of this HMMP.

9.4.6 Lead Paint Stabilisation

The easiest option in dealing with lead painted surfaces is to over-paint using a lead free paint. This can only be done effectively where the existing lead paint is in good condition and does not require extensive preparation for re-painting.

Below is a summarised procedure of lead paint encapsulation:

- Remove all loose surface material in accordance with lead paint removal procedures;
- Remove surface gloss with a de-glossing solution;
- Ensure new paint is compatible with existing paint, i.e.: no leaching of lead compounds from old to new surfaces;
- Oil based paint is preferable;
- Carry out over-painting in accordance to AS 2311-2000 *Guide to the Painting of Buildings*;
- Undercoat sealer be applied;
- Two (2) coats of topcoat; and
- Monitor surface for any signs of deterioration.

Usually the existing paint will need to be washed to remove grime and dirt using sugar soap (tri-sodium phosphate) or removing a glossy surface by wet sanding with a de-glossing solution etc. Small areas of flaking paint will require rectification prior to stabilisation.

9.4.7 Lead Paint Removal

In the event that some surfaces are in poor condition and over-painting is not appropriate, the lead paint system will need to be removed by a lead certified paint contractor. Any lead paint removal must be carried out with the appropriate guidelines for any lead work activity involving machine sanding, grinding, discing, buffing of surfaces coated with paint containing greater than 1% of lead by dry weight.

Lead processes involving such activities with lead paint will require:

- Enclosure to prevent escape of lead bearing dusts;
- Adequate signage around work area;
- Appropriate personal protective equipment;
- Personal hygiene – no smoking, washing of hands prior to eating etc.;
- Removal of lead paint via wet sanding or chemical stripping;
- Vacuuming of all surfaces (with a HEPA filter fitted) within and including the enclosure to remove all remaining traces of lead paint;
- Decontamination;
- Clearance testing via surface soil or dust sampling; &
- Medical surveillance of lead workers (Blood tests).

9.4.8 Lead Dust Air Monitoring

Any work processes involving lead paint must be undertaken in a manner to ensure that no worker is exposed to lead at concentrations above occupational exposure standard (OES) of 0.15mg/m^3 over an eight-hour day. Furthermore, the levels should not exceed 0.03mg/m^3 at the boundary of the regulated area, i.e. boundary of area surrounding a lead paint worksite, where it can be reasonably expected not to exceed the OES.

Monitoring the personnel conducting these works, the Work Area and surrounds will provide documented evidence of the exposure levels at a specific point in time during the works. Exposure and atmospheric monitoring for lead dusts should be conducted by a competent person, such as a hygienist, and results are required to be produced by a NATA accredited laboratory.

9.4.9 Licenced Contractor Requirements

In a lead abatement operation, it is recommended that a certified lead abatement contractor be engaged. This contractor should then perform any lead abatement work. Contractors involved in lead paint removal must have medical surveillance, including blood tests, conducted in accordance with the relevant state legislation.

A detailed work procedure should be reviewed based on assessment of options available to the builder for the various painted surfaces and nature of refurbishment activities to be conducted.

9.4.10 Lead Health Surveillance

Health surveillance is required when personnel undertake work in a lead-risk environment or who undertake lead-process as defined in the NSW *Work Health and Safety Regulation 2011*.

The two main types of health surveillance are:

- Atmospheric monitoring – which is used to indicate the levels of exposure to lead of personnel during a lead-process i.e. exposure monitoring; and
- Biological monitoring (preferred) – which evaluates the amount of lead absorbed by personnel via absorption and/or inhalation when conducting a lead-process i.e. Blood zinc protoporphyrin (ZPP) test.

All medical surveillance should be conducted by an authorised medial practitioner in accordance with the *Code of Practices for the Control and Safe Use of Inorganic Lead at Work* [NOHSC:2015(1994)] Section 13 and 15.

9.4.11 Handling and Disposal

Disposal and transportation of lead and lead based compounds are governed by the *NSW Protection of the Environment Operations Act* 1997 and require Office of Environment and Heritage licensing for transport and disposal of lead based compounds.

9.5 Ozone Depleting Substances (ODSs)

9.5.1 Definition

An ODS for the purpose of this HMMP are substances used as a refrigerant within refrigeration and air-conditioning units (RAC) that acts to reduces the earth's upper atmosphere hence reducing the earth's ozone layer.

9.5.2 Types of ODSs Used

Gaseous compounds including chlorofluorocarbons (CFC), halons, carbon tetrachloride, methyl chloroform, and hydrochlorofluorocarbons (HCFC) or mixtures of these used in refrigeration, fire retardants, solvents, aerosol propellants and in manufactured foams are identified as ozone depleting substances.

9.5.3 Management of ODSs Refrigerants

From the 1 January 1996, the Australian *Commonwealth Government Ozone Protection Act* 1989 placed significant restrictions on import, export or manufacture of ODS. Control strategies for CFC and HCFC refrigerants include:

- CFC and HCFC based equipment should be made leak free (note that domestic refrigerators are leak free) where feasible; and
- CFC and HCFC based equipment should be converted/retrofitted or replaced with equipment using ozone benign refrigerants where feasible; and

The management of ODS refrigerants should be conducted in accordance with NSW Ozone Protection and Synthetic Greenhouse Gas Management Regulation 1995 including the keeping of records.

9.5.4 ODS Removal and Disposal

A licensed contractor as described in the *Ozone Protection and Greenhouse Gas Management Regulation* 1995 Subdivision 6A.2.2 must be engaged for all works on ODS within RAC and conducted in accordance with the *Australia and New Zealand Refrigerant Handling Code of Practice* 2007 *Part 1 – Self-Contained Low Charge Systems* and (if applicable) the *Australia New Zealand Refrigerant Handling Code of Practice* 2007 *Part 2 – Systems Other than Self-Contained Low Charge System.*

Refrigerants to be replaced or removed from RAC services must not be discharged into the atmosphere. Refrigerants must be returned to the supplier or taken to a refrigerant collection agency and disposed of at the National Halon Bank[1].

[1] Refrigerants must be recovered prior to disposal of RAC as per *Australia and New Zealand Refrigerant Handling Code of Practice* 2007 *Part 1 – Self-Contained Low Charge Systems*

10 Hazardous Materials Personal Protective Equipment (PPE)

During hazardous materials abatement works, PPE must be worn by the licenced contractor, the hygienist and other personnel who are required to enter the hazardous material removal area.

The following PPE must be used, as a minimum:

Table 5 : Types of Hazardous Materials PPE

PPE	Picture
Half faced respirator with a P2 particulate filter cartridge to be used for non-friable/bonded asbestos removal works. Respirators must comply with AS/NZS 1715 – 2009 Selection, use and maintenance of respiratory equipment.	
Full faced respirator with a P2/P3 particulate filter cartridge to be used for friable asbestos removal works. Respirators must comply with AS/NZS 1715 – 2009 Selection, use and maintenance of respiratory equipment.	
Disposable coveralls rated Type 5 or equivalent e.g. Tyvek	
Appropriate gloves i.e. disposable gloves	
Disposable booties	

It is important to note that the disposable coveralls, booties and gloves are one use only and must be disposed of as hazardous waste after each use. Respirators need to be decontaminated. Cartridge should be inspected and replaced as required dependent upon type and duration of usage.

11 Contractor Permits, Inductions and Safe Work Methods

All contractors and subcontractors visiting the site must report to the Management Plan Controller prior to commencing works. The Management Plan Controller will provide a brief induction for the building, examine the works to be performed, determine whether the works will impact on identified hazardous materials and advise what can and cannot be done. The induction will include the following information:

- That parts of the building that are known to contain hazardous materials;
- This HMMP must be made available on site to all contractors for reference;
- This HMMP provides direction on how to work safely with hazardous materials and work on site is controlled by the work permit system, see section 11.1 Work Permit Systems;
- Any hazardous materials abatement works must be approved by the Management Plan Controller and conducted by an appropriately licenced contractor;
- During normal routine maintenance work, external contractors and other personnel must report any residual, deteriorating or damaged hazardous materials to the Management Plan Controller as soon as possible so that the appropriate corrective action can be initiated; and
- There is no guarantee that all hazardous materials have been identified on the site due to access limitations and any suspect materials encountered during building, demolition or maintenance works must also be reported to the Management Plan Controller.

Details of contractors or other personnel who have attended the induction are to be kept on the Site in **Appendix B** of this HMMP.

11.1 Work Permit System

Prior to performing any works on the Site that may impact on the building fabric / structure, it must be ascertained by the Management Plan Controller if the works will disturb, or potentially disturb, any hazardous materials. As such the contractor or employee **must** obtain a **work permit** from the Management Plan Controller when either of the following applies.

- The **hazardous materials register** has identified or suspects the presence of hazardous materials in the area of the proposed works; or
- The area where proposed works are to be conducted has not been fully assessed for the presence of hazardous materials.

The **work permit** is required to ensure that future works at the site are conducted in a controlled manner to prevent the accidental disturbance of hazardous materials located at the site.

Any works likely to disturb the building fabric require the completion of the **work request form**. During the completion of the **work request form**, it is to be determined if a **work permit** is required.

Examples of the **work request form** and **work permit** forms are located overleaf.

FORM 1 – WORK REQUEST FORM (EXAMPLE)

Any employees or contractors must complete a **work request form** prior to commissioning works likely to disturb the building fabric or structure.

Section 1 – Contractor to Complete

Date:	**Reference No:**
Location:	
Start Date:	**Completion Date:**
Proposed Works:	
Contractor Company:	
Signed By:	**Position:**
Print Name:	**Date:**

Section 2 – Management Plan Controller to Complete

Is the location clearly defined **(If NO request further information from the contractor)**?	YES ❑ NO ❑
Is the contractor inducted to the Site and qualified to conduct the works?	YES ❑ NO ❑
Are proposed plans appended?	YES ❑ NO ❑
Are hazardous materials present in the proposed work area? **(Refer to Hazardous Materials Register)**?	YES ❑ NO ❑
Are hazardous materials likely to be disturbed by the proposed works?	YES ❑ NO ❑
Has the contractor developed a SWMS to work in an area with hazardous materials?	YES ❑ NO ❑
Has the Management Plan Controller read and approved the SWMS?	YES ❑ NO ❑
Are permits required **(if YES state type/s of permits)**?	YES ❑ NO ❑
Work Permit ❑ (Form 2 required to be completed)	Other (nominate) ❑
Approval to Proceed:	YES ❑ NO ❑
Signed:	
Dated:	

Original to be retained by the **Management Plan Controller.**

Copy to be retained by **instigator of work request.**

FORM 2 – WORK PERMIT (EXAMPLE)

The contractor must retain a copy of the **work permit** and **work request form** on site for the duration of works.

WORK REQUEST FORM REFERENCE:	
VALID UNTIL (Insert Date)	
Description of hazardous materials:	
Has work specification altered from **Work Request Form** ?	YES ❑ NO ❑
Will asbestos/hazardous materials consultant be required ?	YES ❑ NO ❑
Will a licenced removal contractor be required?	YES ❑ NO ❑
Company Name:	
Supervisor:	
Contact Number:	

SPECIFIC PERMIT REQUIREMENTS (TICK AS REQUIRED)	
Scope of works/technical specification for hazardous materials removal?	YES ❑ NO ❑
Contractor Work Method Statement (SWMS) issued for review and approval prior to commencement of work?	YES ❑ NO ❑
Other Items (list details):	

CONTRACTOR ACCEPTANCE STATEMENT

I have read and understood the permit requirements and will undertake the work in accordance with all necessary procedures and specifications.

Signed:

Print Name and Position:

Date:

WORK PERMIT COMPLETION

(To be completed by the Management Plan Controller & Contractor)

Date Work Completed:	
Clearance certificate & air monitoring results (if applicable) received (list reference numbers)	
I am satisfied that the works have been completed in accordance with the work permit and the area has been cleaned to the required standard. Inspections and air monitoring (if applicable) confirm that the area can be safely re-occupied.	
Management Plan Controller Signature:	
Date:	
Contractor Signature:	
Date:	

Original to be retained by the **Management Plan Controller.**

Copy to be retained by **instigator of the work request.**

12 Demolition and Refurbishment Works

Prior to any proposed demolition or refurbishment works, a destructive hazardous substances survey and management plan should be conducted by a competent person and/or asbestos hygienist to determine whether potential hazardous substances are located in areas that were inaccessible during the initial survey. The destructive hazardous substances survey must be conducted in accordance with Section 1.2 of the *How to Manage Asbestos in the Workplace Code of Practice 2011*, Part 8.6 of the *NSW Work Health and Safety Regulation 2011*, AS 2601 – *The Demolition of* Structures and other industry related standards, codes of practice and guidance notes.

It should be noted that the hazardous materials report for the site should **not** be used for the purposes of costing for removal or programming of future refurbishment or demolition works unless accompanied by an appropriate and site-specific scope of works.

If any hazardous materials have been identified in the demolition and/or refurbishment works area and are likely to be disturbed by the works, then these materials will be required to be removed by an appropriately licenced removal contractor prior to the commencement of the proposed works.

13 Uncovering of Suspected Hazardous Materials

It is possible that hazardous materials, which may be concealed within inaccessible areas/voids, may not have been located during previous surveys. Such inaccessible areas fall into a number of categories as outlined in **Table 6** below.

Table 6: Examples of inaccessible areas
Underneath the concrete slab of all building structures at the Site.
Exposed soils surrounding the building structures of the Site.
Energised services, gas, electrical, pressurised vessel and chemical lines.
Height restricted areas above 2.7m or any area deemed inaccessible without the use of specialised access equipment.
Within cavities that cannot be accessed by the means of a manhole or inspection hatch.
Within voids or internal areas of plant, equipment, air-conditioning ducts etc.
Within service shafts, ducts etc., concealed within the building structure.
Within those areas accessible only by dismantling equipment.
Within totally inaccessible areas such as voids and cavities present but intimately concealed within the building structure.
All areas outside the Scope of Work.

Without substantial demolition of a building, it is not possible to guarantee that every hazardous material has been identified.

During the course of any works that uncover any materials that are suspected of being a hazardous material, works should cease **immediately** until the material can be identified or sampled and a risk assessment undertaken by a competent person and/or occupational hygienist.

If the sample returns a positive result then the material should be removed by an appropriately licenced removal contractor. If the material is to remain insitu, the hazardous materials register and report should be updated to reflect the new findings.

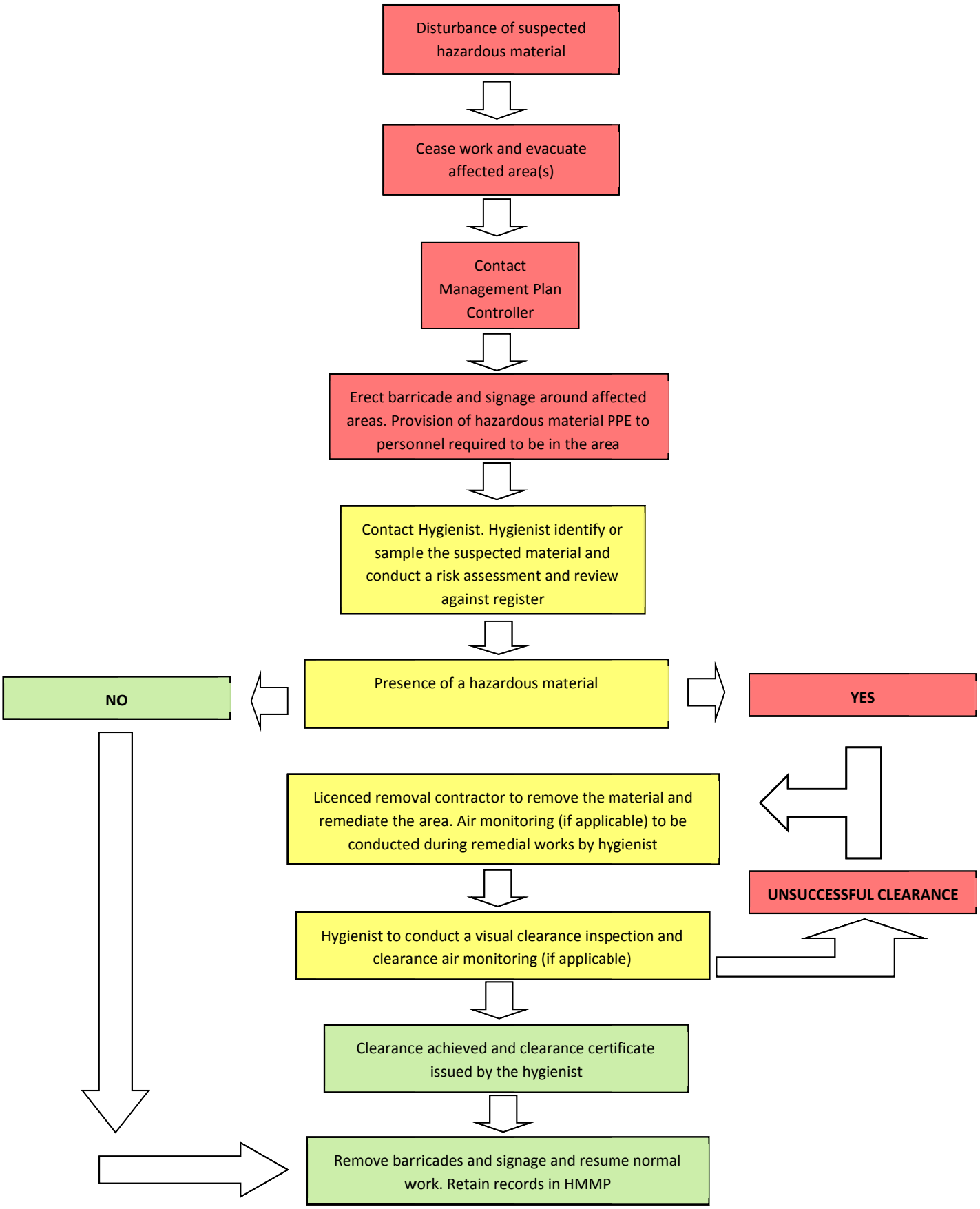
If the sample returns a negative result, the hazardous materials register and report should be updated to reflect the new findings and works can continue as normal.

14 Accidental Disturbance & Emergency Procedures

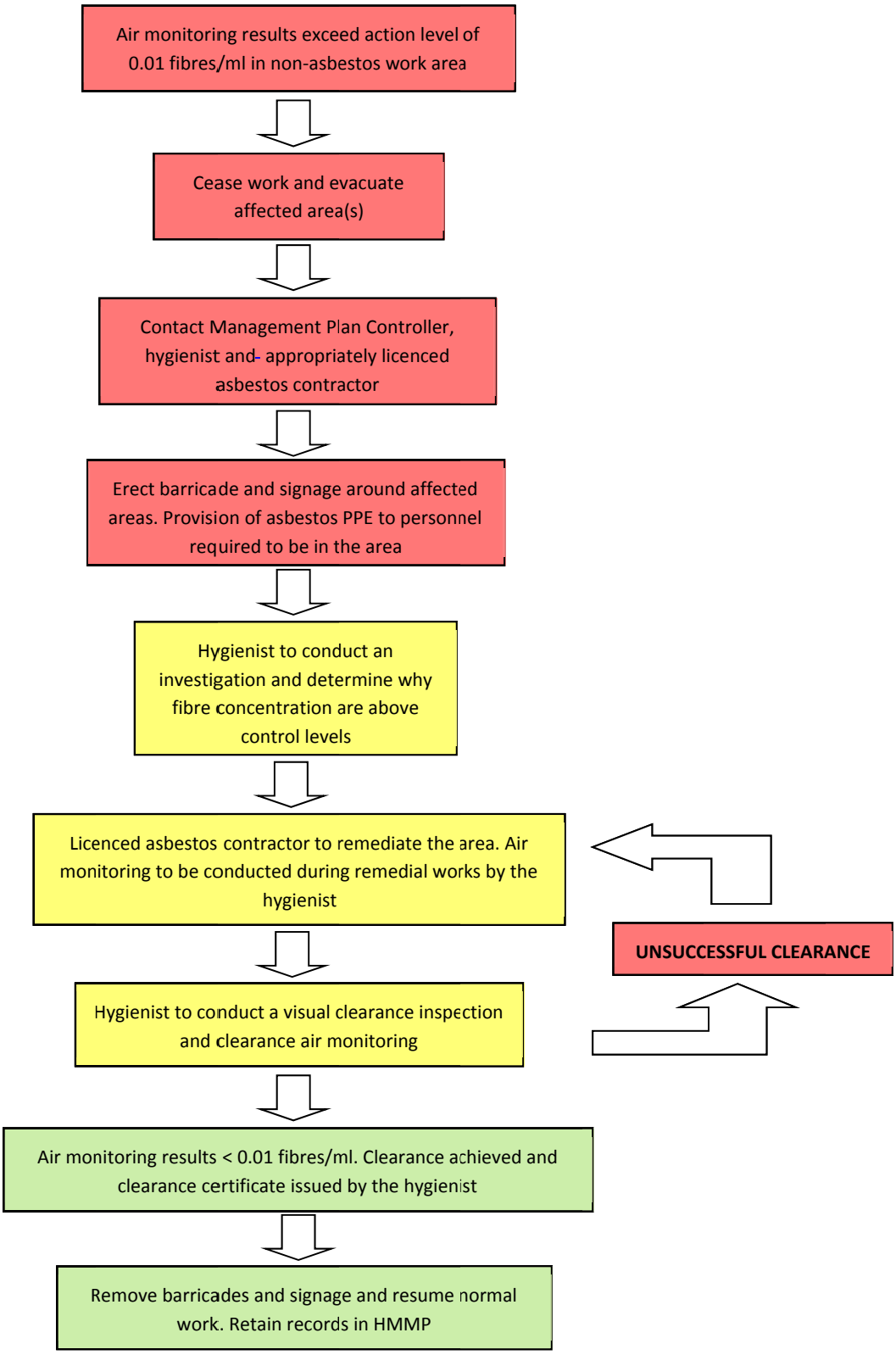
For any previously identified or suspected hazardous materials that are disturbed accidentally or if the air monitoring control levels are exceeded, the Management Plan Controller must be notified immediately to carry out the necessary corrective actions.

The Management Plan Controller will instigate the appropriate corrective actions and arrange to have the damage assessed, if necessary, and the materials repaired or removed as required. The flowcharts overleaf must be adhered to when a known or suspected hazardous material has been disturbed.

14.1 Emergency procedure when a suspected hazardous material is disturbed



14.2 Emergency procedure when air monitoring control levels are exceeded for an ACM



Appendix A: Hazardous Materials Register

Register definitions:-

Sample Status (For Asbestos Only)

Positive – Where a material has been sampled and has been confirmed by laboratory analysis that it **contains** asbestos.

Negative – Where a material has been sampled and has been confirmed by laboratory analysis that it **does not contains** asbestos.

Assumed Positive – (a) Where a sample has been taken of a visibly similar **asbestos-containing material** or (b) where the sample has been analysed by another consultancy and has been confirmed to **contain asbestos**.

Assumed Negative – (a) Where a sample has been taken of a visibly similar **non asbestos-containing material** or (b) where the sample has been analysed by another consultancy and has been confirmed **not to contain asbestos**.

Suspected Positive – Where a Prensa consultant cannot sample a material due to safety reasons and there is a suspicion that material **contains asbestos** due to age and appearance.

Suspected Negative – Where a Prensa consultant cannot sample a material due to safety reasons and there is a suspicion that material **does not contain asbestos** due to age and appearance.

prensa

SHFA Hazardous Materials Register

Planning & Infrastructure
Sydney Harbour Foreshore Authority

Site Address: 1-5 Hickson Rd, The Rocks, NSW 2000
Survey Date: 22nd June 2012
Assessor: John Crockett and Derrick Scott
Age (Circa): 1884

Levels: 5
Approx. area (m^2): ~4,000
Roof Type: Slate
External Walls: Sandstone blocks and brick

Internal Walls: Sandstone, brick, blockwork, plaster and fibre cement sheeting
Ceilings: Plaster
Floor: Timber and concrete
Floor Coverings: Carpet, ceramic tiles and vinyl floor tiles

Prensa Pty Ltd.
Level 1, 50 Yeo Street
Neutral Bay, NSW 2089
Ph.: (02) 9033 8634

Level / Area	Room & Location	Feature	Item Description	Hazard Type	Sample No.	Sample Status	Friability	Disturb. Potential	Condition	Risk Status	Quantity	Recommendations & Comments	Control Priority	Reinspect date
Exterior	Throughout	Windows	Window caulking	Asbestos	50325-006-009	Negative	-	-	-	-	-	-	-	-
Exterior Ground level	Throughout	Walls	Pointing material	Asbestos	50325-006-001	Negative	-	-	-	-	-	-	-	-
Interior	Throughout	Floor	Concrete screed	Asbestos	50325-006-002	Negative	-	-	-	-	-	-	-	-
Interior Bay 2-4	Central fire stair	Fire doors	Internal insulation	Asbestos	Not sampled - sealed units	Suspected negative	-	-	-	-	-	-	-	-
Interior Bay 2-4	Southern fire stair	Fire doors	Internal insulation	Asbestos	Not sampled - sealed units	Suspected negative	-	-	-	-	-	-	-	-
Interior Bay 2-4	Lifts	Black - floor covering	Vinyl floor tiles	Asbestos	50325-006-005	Negative	-	-	-	-	-	-	-	-
Interior Bay 2-4	Lifts (all levels)	Exterior doors	Internal insulation	Asbestos	Not sampled - sealed units	Suspected positive	Friable	Low	Good	Low	~10 units	Confirm status, remove under controlled friable asbestos removal conditions as soon as practicable by a Class A licensed asbestos removal contractor.	P3	Jun-17
Interior Bay 2-4 Ground level	Throughout	Walls	Pointing material	Asbestos	50325-006-006	Negative	-	-	-	-	-	-	-	-
Interior Bay 2-4 Ground level	Lift lobby	Floor	Bituminous material	Asbestos	50325-006-007	Negative	-	-	-	-	-	-	-	-
Interior Bay 2-4 Level 1	Main distribution/comms room	Walls	Fibre cement sheeting	Asbestos	Same as: 50325-006-003	Assumed negative	-	-	-	-	-	-	-	-
Interior Bay 2-4 Level 1	Amenities	Partition walls	Fibre cement sheeting	Asbestos	Same as: 50325-006-003	Assumed negative	-	-	-	-	-	-	-	-
Interior Bay 2-4 Level 2	Amenities behind reception	Partition walls	Fibre cement sheeting	Asbestos	50325-006-003	Negative	-	-	-	-	-	-	-	-
Interior Bay 2-4 Level 2	Kitchen behind reception	Red - floor covering	Vinyl floor tiles	Asbestos	50325-006-004A	Negative	-	-	-	-	-	-	-	-

Level / Area	Room & Location	Feature	Item Description	Hazard Type	Sample No.	Sample Status	Friability	Disturb. Potential	Condition	Risk Status	Quantity	Recommendations & Comments	Control Priority	Reinspect date
Interior Bay 2-4 Level 2	Kitchen behind reception	Red - floor covering	Adhesive under vinyl floor tiles	Asbestos	50325-006-004B	Negative	-	-	-	-	-	-	-	-
Interior Bay 2-4 Level 3	Kitchenette	Red - floor covering	Vinyl floor tiles	Asbestos	Same as: 50325-006-004A	Assumed negative	-	-	-	-	-	-	-	-
Interior Bay 2-4 Level 3	Amenities	Partition walls	Fibre cement sheeting	Asbestos	Same as: 50325-006-003	Assumed negative	-	-	-	-	-	-	-	-
Interior Bay 5 Level 2	Cinema service corridors	Walls	Fireproofing	Asbestos	50325-006-008	Negative	-	-	-	-	-	-	-	-
Interior Bay 5 Level 2	Cinema service corridors	Fire doors	Internal insulation	Asbestos	Not sampled - sealed units	Suspected negative	-	-	-	-	-	Suspected negative due to age and appearance.	-	-
Interior Bay 1 Ground level	Toilets	Hot water heater	Internal insulation	SMF	-	Suspected positive	-	Low	Good	Low	1 unit	Maintain in good condition if to remain in-situ. Remove under controlled SMF conditions as per Code of Practice for the Safe Use of Synthetic Mineral Fibres [NOHSC: 2006 (1990)].	-	-
Interior Bay 1 Level 2	West office kitchenette	Water boiler	Internal insulation	SMF	-	Suspected positive	-	Low	Good	Low	1 unit	Maintain in good condition if to remain in-situ. Remove under controlled SMF conditions as per Code of Practice for the Safe Use of Synthetic Mineral Fibres [NOHSC: 2006 (1990)].	-	-
Interior Bay 1 Level 3	West bathroom	Hot water heater	Internal insulation	SMF	-	Suspected positive	-	Low	Good	Low	1 unit	Maintain in good condition if to remain in-situ. Remove under controlled SMF conditions as per Code of Practice for the Safe Use of Synthetic Mineral Fibres [NOHSC: 2006 (1990)].	-	-
Interior Bays 2-4 Level 1	Kitchen	Hot water heater	Internal insulation	SMF	-	Suspected positive	-	Low	Good	Low	1 unit	Maintain in good condition if to remain in-situ. Remove under controlled SMF conditions as per Code of Practice for the Safe Use of Synthetic Mineral Fibres [NOHSC: 2006 (1990)].	-	-
Interior Bays 2-4 Level 1	Kitchen	Water boiler/chiller	Internal insulation	SMF	-	Suspected positive	-	Low	Good	Low	1 unit	Maintain in good condition if to remain in-situ. Remove under controlled SMF conditions as per Code of Practice for the Safe Use of Synthetic Mineral Fibres [NOHSC: 2006 (1990)].	-	-
Interior Bays 2-4 Level 2	North	Hot water heater	Internal insulation	SMF	-	Suspected positive	-	Low	Good	Low	1 unit	Maintain in good condition if to remain in-situ. Remove under controlled SMF conditions as per Code of Practice for the Safe Use of Synthetic Mineral Fibres [NOHSC: 2006 (1990)].	-	-
Interior Bays 2-4 Level 2	Ceiling space	Air conditioning ductwork	Internal insulation	SMF	-	Suspected positive	-	Low	Good	Low	~50m	Maintain in good condition if to remain in-situ. Remove under controlled SMF conditions as per Code of Practice for the Safe Use of Synthetic Mineral Fibres [NOHSC: 2006 (1990)].	-	-
Interior Bays 2-4 Level 2	Kitchen behind reception	Hot water heater	Internal insulation	SMF	-	Suspected positive	-	Low	Good	Low	1 unit	Maintain in good condition if to remain in-situ. Remove under controlled SMF conditions as per Code of Practice for the Safe Use of Synthetic Mineral Fibres [NOHSC: 2006 (1990)].	-	-
Interior Bays 2-4 Level 2	Kitchen behind reception	Water boiler	Internal insulation	SMF	-	Suspected positive	-	Low	Good	Low	1 unit	Maintain in good condition if to remain in-situ. Remove under controlled SMF conditions as per Code of Practice for the Safe Use of Synthetic Mineral Fibres [NOHSC: 2006 (1990)].	-	-

Level / Area	Room & Location	Feature	Item Description	Hazard Type	Sample No.	Sample Status	Friability	Disturb. Potential	Condition	Risk Status	Quantity	Recommendations & Comments	Control Priority	Reinspect date
Interior Bays 2-4 Level 3	Kitchenette	Hot water heater	Internal insulation	SMF	-	Suspected positive	-	Low	Good	Low	1 unit	Maintain in good condition if to remain in-situ. Remove under controlled SMF conditions as per Code of Practice for the Safe Use of Synthetic Mineral Fibres [NOHSC: 2006 (1990)].	-	-
Interior Bays 2-4 Level 3	Kitchenette	Water boiler	Internal insulation	SMF	-	Suspected positive	-	Low	Good	Low	1 unit	Maintain in good condition if to remain in-situ. Remove under controlled SMF conditions as per Code of Practice for the Safe Use of Synthetic Mineral Fibres [NOHSC: 2006 (1990)].	-	-
Interior Bays 2-4 Level 4	Roof/ceiling	Air conditioning ductwork	Internal insulation	SMF	-	Suspected positive	-	Low	Good	Low	~50m	Maintain in good condition if to remain in-situ. Remove under controlled SMF conditions as per Code of Practice for the Safe Use of Synthetic Mineral Fibres [NOHSC: 2006 (1990)].	-	-
Interior Bays 2-4 Level 4	Main classroom area	Water chiller	Internal insulation	SMF	-	Suspected positive	-	Low	Good	Low	1 unit	Maintain in good condition if to remain in-situ. Remove under controlled SMF conditions as per Code of Practice for the Safe Use of Synthetic Mineral Fibres [NOHSC: 2006 (1990)].	-	-
Interior Bay 5 Ground Level	Bathroom	Hot water heater	Internal insulation	SMF	-	Suspected positive	-	Low	Good	Low	1 unit	Maintain in good condition if to remain in-situ. Remove under controlled SMF conditions as per Code of Practice for the Safe Use of Synthetic Mineral Fibres [NOHSC: 2006 (1990)].	-	-
Interior Bay 5 Level 1	Cinema	Walls	Insulation material	SMF	-	Suspected positive	-	Low	Good	Low	~500m²	Maintain in good condition if to remain in-situ. Remove under controlled SMF conditions as per Code of Practice for the Safe Use of Synthetic Mineral Fibres [NOHSC: 2006 (1990)].	-	-
Interior Bay 5 Level 2	Rear office	Water chiller	Internal insulation	SMF	-	Suspected positive	-	Low	Good	Low	1 unit	Maintain in good condition if to remain in-situ. Remove under controlled SMF conditions as per Code of Practice for the Safe Use of Synthetic Mineral Fibres [NOHSC: 2006 (1990)].	-	-
Interior Bay 5 Level 2	Cinema	Walls	Insulation material	SMF	-	Suspected positive	-	Low	Good	Low	~500m²	Maintain in good condition if to remain in-situ. Remove under controlled SMF conditions as per Code of Practice for the Safe Use of Synthetic Mineral Fibres [NOHSC: 2006 (1990)].	-	-
Interior Bay 5 Level 3	Roof space	Air conditioning ductwork	Internal insulation	SMF	-	Suspected positive	-	Low	Good	Low	~50m	Maintain in good condition if to remain in-situ. Remove under controlled SMF conditions as per Code of Practice for the Safe Use of Synthetic Mineral Fibres [NOHSC: 2006 (1990)].	-	-
Interior	Throughought	Fluorescent light fittings	Capacitors	PCB	-	Suspected negative	-	-	-	-	-	PCB-containing capacitors are unlikely to be present due to age and appearance of light fittings. Confirm PCB status prior to refurbishment or demolition works.	-	-
Exterior	Throughout	Doors	Beige - upper coloured paint system	Lead Paint - Swab	-	Negative	-	-	-	-	-	-	-	-
Exterior	Throughout	Door frames	Red - upper coloured paint system	Lead Paint - Swab	-	Negative	-	-	-	-	-	-	-	-
Exterior	Throughout	Window frames	White - lower coloured paint system	Lead Paint - Chip	50325-006-LP001	Positive - 14%	-	Low	Good	Low	~500m	>1% lead content, maintain in current condition, over paint with a lead-free paint as part of ongoing maintenance. Remove under controlled conditions in accordance with AS 4361.2:1998 Guide to lead paint management prior to renovation or demolition works.	-	-
Exterior	Throughout	Windows	Cream - upper coloured paint system	Lead Paint - Chip	50325-006-LP002	Positive - 9.6%	-	Low	Good	Low	~500m	>1% lead content, maintain in current condition, over paint with a lead-free paint as part of ongoing maintenance. Remove under controlled conditions in accordance with AS 4361.2:1998 Guide to lead paint management prior to renovation or demolition works.	-	-

Level / Area	Room & Location	Feature	Item Description	Hazard Type	Sample No.	Sample Status	Friability	Disturb. Potential	Condition	Risk Status	Quantity	Recommendations & Comments	Control Priority	Reinspect date
Interior Bay 1 Ground level	Toilets	Door frames	White - lower coloured paint system	Lead Paint - Chip	50325-006-LP003	Positive - 11%	-	Low	Good	Low	~15m	>1% lead content, maintain in current condition, over paint with a lead-free paint as part of ongoing maintenance. Remove under controlled conditions in accordance with AS 4361.2:1998 Guide to lead paint management prior to renovation or demolition works.	-	-
Interior Bay 1 Ground level	Toilets	Doors	Cream - upper coloured paint system	Lead Paint - Chip	50325-006-LP004	Negative - <0.05%	-	-	-	-	-	<1% lead content, not lead containing paint as described in AS 4361.2:1998 Guide to lead paint management	-	-
Interior	Throughout	Door and window timberwork	White - lower coloured paint system	Lead Paint - Chip	50325-006-LP005	Positive - 13%	-	Low	Good	Low	~1000m²	>1% lead content, maintain in current condition, over paint with a lead-free paint as part of ongoing maintenance. Remove under controlled conditions in accordance with AS 4361.2:1998 Guide to lead paint management prior to renovation or demolition works.	-	-
Interior	Throughout	Skirting	White - lower coloured paint system	Lead Paint - Chip	50325-006-LP006	Positive - 2%	-	Low	Good	Low	~500m²	>1% lead content, maintain in current condition, over paint with a lead-free paint as part of ongoing maintenance. Remove under controlled conditions in accordance with AS 4361.2:1998 Guide to lead paint management prior to renovation or demolition works.	-	-
Interior	Throughout	Brick walls	White - lower coloured paint system	Lead Paint - Chip	50325-006-LP007	Negative - 0.087%	-	-	-	-	-	<1% lead content, not lead containing paint as described in AS 4361.2:1998 Guide to lead paint management	-	-
Interior	Throughout	Brick walls	Cream - upper coloured paint system	Lead Paint - Chip	50325-006-LP009	Positive - 4.5%	-	Medium	Fair	Medium	~100m²	>1% lead content, remove flaking sections and over paint with a lead-free paint. Remove under controlled conditions in accordance with AS 4361.2:1998 Guide to lead paint management prior to renovation or demolition works.	-	-
Interior Ground level	Throughout	Sandstone walls	White - lower coloured paint system	Lead Paint - Chip	50325-006-LP010	Negative - <0.05%	-	-	-	-	-	<1% lead content, not lead containing paint as described in AS 4361.2:1998 Guide to lead paint management	-	-
Interior Bay 1	Throughout	Plaster walls	Purple - upper coloured paint system	Lead Paint - Chip	50325-006-LP008	Negative - 0.13%	-	-	-	-	-	<1% lead content, not lead containing paint as described in AS 4361.2:1998 Guide to lead paint management	-	-
Exterior Bay 1	Roof	Air conditioning units (Deakin)	R22	Ozone Depleting Substances	-	Positive	-	Low	Good	Low	~2 unit	Hydrochlorofluorocarbon (HCFC), ozone depleting substances identified in the assessment that require removal during refurbishment or demolition works should be appropriately decanted and disposed of by a licensed contractor in accordance with the Ozone Protection and Synthetic Greenhouse Gas Management Act 1989.	-	-
Interior Bay 5 Level 2	Cinema service corridors	Air conditioning unit (Apal)	R22	Ozone Depleting Substances	-	Positive	-	Low	Good	Low	1 unit	Hydrochlorofluorocarbon (HCFC), ozone depleting substances identified in the assessment that require removal during refurbishment or demolition works should be appropriately decanted and disposed of by a licensed contractor in accordance with the Ozone Protection and Synthetic Greenhouse Gas Management Act 1989.	-	-
Interior Bay 5 Level 2	Plant room with mezzanine	Air conditioning unit (Apal)	R22	Ozone Depleting Substances	-	Positive	-	Low	Good	Low	1 unit	Hydrochlorofluorocarbon (HCFC), ozone depleting substances identified in the assessment that require removal during refurbishment or demolition works should be appropriately decanted and disposed of by a licensed contractor in accordance with the Ozone Protection and Synthetic Greenhouse Gas Management Act 1989.	-	-

Level / Area	Room & Location	Feature	Item Description	Hazard Type	Sample No.	Sample Status	Friability	Disturb. Potential	Condition	Risk Status	Quantity	Recommendations & Comments	Control Priority	Reinspect date
Interior Bay 1 Level 3	Cleaners store	Ceiling space	-	-	-	-	-	-	-	-	-	No access at the time of the assessment due to height restrictions	-	-
Interior Bays 2-4 Ground level	Lift lobby	Electrical distribution cupboard x3	-	-	-	-	-	-	-	-	-	No access at the time of the assessment due to locked door	-	-
Interior Bays 2-4 Level 1	Lift lobby	Electrical distribution cupboard	-	-	-	-	-	-	-	-	-	No access at the time of the assessment due to locked door	-	-
Interior Bays 2-4 Level 2	Lift lobby	Electrical distribution cupboard	-	-	-	-	-	-	-	-	-	No access at the time of the assessment due to locked door	-	-
Interior Bays 2-4 Level 3	Lift lobby/reception	Electrical distribution cupboard	-	-	-	-	-	-	-	-	-	No access at the time of the assessment due to locked door	-	-
Interior Bays 2-4 Level 4	Lift lobby/reception	Electrical distribution cupboard x3	-	-	-	-	-	-	-	-	-	No access at the time of the assessment due to locked door	-	-
Interior Bays 2-4 Level 4	Main classroom area	Small store	-	-	-	-	-	-	-	-	-	No access at the time of the assessment due to locked door	-	-
Interior Bay 5 Level 2	Main showroom	Cupboard under stair	-	-	-	-	-	-	-	-	-	No access at the time of the assessment due to stored stock	-	-
Interior Bay 5 Level 3	Main showroom	Ceiling space	-	-	-	-	-	-	-	-	-	No access at the time of the assessment due to height restrictions	-	-

Appendix B: Records