

Hazardous Materials Management Plan (HMMP)

Property Services

Unclassified

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1 Introduction

RMIT University (RMIT) has developed this Hazardous Materials Management Plan (HMMP) for the management of hazardous materials identified within the Australian property portfolio (the site). This HMMP will assist RMIT with managing hazardous materials related health and environmental risks at the site.

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

- Asbestos-containing materials (ACM)
- Lead-containing paint (LCP)
- Ozone depleting substance (ODS)
- Polychlorinated biphenyls (PCBs) containing capacitors in electrical fittings
- Synthetic mineral fibre (SMF) materials

This HMMP has been developed in accordance with current state legislation, industry standards, codes of practice/compliance codes and guidance documents for the management of hazardous materials in workplaces.

Section 4 refers to Legislative requirements and Appendix A provides more detailed information on the each of the hazardous materials noted above.

2 Objective

The objective of this HMMP is to prevent negative health related impacts and disease resulting from exposure to hazardous materials, including, airborne asbestos in the workplace and to ensure compliance with Occupational Health and Safety Legislation. This objective will be met within RMIT controlled properties by ensuring the following:

- Hazardous materials are safely managed, in accordance with legislation and good practice requirements
- Hazardous materials are adequately investigated and identified during planning and delivery of Project works, normal operations and general maintenance activities
- Hazardous materials are managed in a consistent manner across RMIT's Property portfolio
- Minimise the possibility of accidental damage or exposure of workers, students, and the public, to hazardous materials
- Adequate stakeholder communications are disseminated and where necessary appropriate consultation is sought

3 RMIT Property Portfolio

RMIT owns and occupies properties of varying age, design and usage, including learning and teaching spaces, offices, retail and storage. The majority of RMIT Property portfolio is located in Victoria, Australia and as such this HMMP has been drafted with specific regard to Victorian and Australian Legislative requirements. As RMIT strives for international best practice and the alignment the management of hazmat across its portfolio, this document also serves as a guideline to RMIT overseas infrastructure.

RMIT's Australian portfolio includes the following campuses:

- BE - Bundoora East
- BR - Brunswick
- BW - Bundoora West
- CY - City (Melbourne)
- DR - Dromana
- HA - Hamilton
- PC - Point Cook
- YB - Yarra Bend Park

Hazardous materials have been assessed and identified across the portfolio, with findings recorded in each buildings specific Hazardous Materials Register (HazMat Register). These documents are currently accessible via privileged access to RMIT PSG's Hazardous Materials Register. Please refer to section 6.5 for more information.

4 Legislation and Guidelines

RMIT's Victorian property portfolio is managed in accordance with *Victorian Occupational Health and Safety Regulations 2017*, and with regards to the scope of this document being the safe management of hazardous building materials, specifically in accordance with Part 4.4 Asbestos and Part 4.3 Lead.

4.1 Asbestos

Victorian Occupational Health and Safety Regulations 2017; Part 4.4 Asbestos Subdivision 2 Duties of persons who manage or control a workplace requires, that a person who manages or controls the workplace must:

- Eliminate so far as reasonably practicable the exposure of persons to airborne asbestos fibres;
- Identify all asbestos that is under management or control;
- Record information in a register as per section 4.4 Division 5.2.227;
- Maintain currency of asbestos register in accordance with section 4.4 Division 5.2.228 and review and update at least every five years; and
- If there is uncertainty as to whether asbestos is present, or if there are inaccessible areas that are likely to contain asbestos: assume asbestos is present; or arrange for analysis of sample.

As RMIT strives for best practice, contractors are required to comply with Work Safe Victoria Compliance Codes: *Managing Asbestos and Removing Asbestos in Workplaces 2018* when conducting works on RMIT premises. Please refer to Appendix K for full details of reference documents.

4.2 Lead

Victorian *Occupational Health and Safety Regulations 2017; Part 4.3 Lead* details requirements for workplaces where a lead process is undertaken. RMIT Property Services does not undertake routine lead processes, however from time to time, planned and reactive works on RMIT infrastructure may incorporate tasks requiring works upon lead paint systems that could generate conditions analogous to a lead process as defined in section 4.3.178 (h) and (o) of the Regulations. As such, it is pertinent that all works consider potential for lead paint system impact and where required have appropriate controls in place. Any works on lead paint systems at RMIT are to be conducted in accordance with Australian Standard 4361.2 – 2017 *Guide to Hazardous Paint Management Part 2: Lead paint in residential, public and commercial buildings*.

4.3 Other Hazmat

Additional to the above, management of hazmat at RMIT is to be conducted in accordance with: Code of Practice for the Safe Use of Synthetic Mineral Fibres [NOHSC:2006(1990)]; Australian and New Zealand Environment and Conservation Council (ANZECC) Polychlorinated Biphenyls Management Plan 2003 and Identification of PCB-containing Capacitors information booklet – 1997; Australia and New Zealand Refrigerant Handling Code of Practice and Ozone Protection and Synthetic Greenhouse Gas Management Regulation.

Please refer to Appendix K for full list of reference documents for this HMMP.

4.4 RMIT Hazmat Management Strategies

This document outlines how Property Services will endeavour to ensure the safe and continued management of identified hazmat materials within its portfolio. This will be achieved in part by periodic reassessment of hazmat remaining onsite and proactive planning for removal of hazmat in line with planned future usage of RMIT infrastructure.

In general, it is RMIT intent to plan for removal of identified asbestos containing or other high risk hazardous materials, as and when an area is undergoing life cycle renovation/upgrade works.

5 Roles and Responsibilities

5.1 Internal Stakeholder Responsibilities

5.1.1 Executive Director of Property Services

- Provide Executive endorsement of HMMP

5.1.2 Associate Director of Reporting and Compliance

- Provide Director endorsement of HMMP
- Endorse Permit Approvers list within the PTW Procedure
- Provide support, including as required through Property Services Senior Leadership Team (SLT) to:
 - seek cooperation from all relevant RMIT departments, personnel and Contractors in implementation of this HMMP
 - obligate all RMIT Property Services personnel and Contractors to comply with this HMMP

5.1.3 HSE Manager - Governance & Systems

- Review the HMMP and Hazmat Registers in accordance with the terms outlined in Section 4 of this document and as noted in Appendix H
- Conduct periodic audits of hazmat works, including both internal and external stakeholders, to assess compliance with the HMMP
- Manage Operational function of RMIT Specialist Contractors (Hazmat Panel Members, reference 20160007PS Hazardous Material Management – Licensed Asbestos Removalist and Asbestos Consultancy Panel)
- Monitor Specialist Contractors compliance with RMIT and Legislative requirements
- Provide hazmat induction and PTW training for RMIT Property Services personnel and associated Contractors and maintain records of attendance at these inductions
- Manage operational function of RMIT Specialist Contractors (Hazmat Panel Members, reference 20160007PS Hazardous Material Management – Licensed Asbestos Removalist and Asbestos Consultancy Panel)
- Provide Subject Matter Expertise (SME) to Property Services personnel, including advice, scoping, quotation, technical review and auditing of approved specialist contractors, as required

5.1.4 Hazardous Materials Officer

- Monitor Specialist Contractors compliance with RMIT and Legislative requirements
- Provide hazmat induction and PTW training for RMIT Property Services personnel and associated Contractors and maintain records of attendance at these inductions
- Manage the review, update and provision of the HazMat Registers for RMIT Victorian Property Portfolio
- Manage the electronic storage of pertinent documentation to support the Hazmat Register, including Clearance documents, air monitoring reports, EPA docketts etc
- Manage the review, update and provision of the B108 & 201 Annotated Site Plans
- Conduct technical review and approval of hazmat Permit To Work (PTW) refer to Section 6.3 of this document

5.1.5 Property Services Project Representative

RMIT Property Service Project Representative is the person within Property Services who is requesting the works. This may be a Project Manager, Project Officer, Facilities Manager, or other.

- Planning works in accordance with and throughout Gateway Process
- Present proposed projects to Project Kick-off Meetings
- Review existing hazmat Register
- Consider hazmat impact to project – allow sufficient budget and timeline to manage hazmat in accordance with this HMMP
- Financial management of project if additional assessment or remediation of hazmat is required
- Define scope of hazmat works required for proposed project to be completed safely and in accordance with this HMMP
- Provision of pertinent hazmat documentation to Contractors in accordance with attached Procedures e.g. HMMP, Procedures, Hazmat Registers etc

- Ensure all Contractors conducting Project works have, as required, attended RMIT hazmat induction and PTW training prior to the commencement of site works
- Ensure Contractor compliance with RMIT PTW process, including submission of complete PTW forms in a timely manner
- Monitor Specialist Contractors compliance with RMIT and Legislative requirements
- Seek advice from in-house Subject Matter Expertise (SME), Manager, Hazardous Materials and Safety, as required
- **Where RMIT is engaging Specialist contractors to conduct hazmat works on RMIT premises, it is imperative that the Hygienist is engaged independently of the licensed asbestos removal contractor.**

5.1.6 Health, Safety, Security & Environment (HSSE) Advisors and Senior Health, Safety & Wellbeing Advisors (HSW)

RMIT has Health & Safety personnel within both Property Services (HSSE) and Human Resources (HSW).

- Strive for a safe working environment on all RMIT sites
- Conduct technical review and approval of hazmat Permit To Work (PTW) refer to Section 11 of this document, refer to Permit Approval
- Communicate with Property Services, the School/Departments Representatives and staff occupying the site in relation to health, safety and wellbeing
- Manage the Permit Approvers list within the PTW Procedure on behalf of AD RC

5.1.7 Property Services PTW Approvers

PTW Approvers may have dual or multiple responsibilities within the process. Property Service maintains a list of PTW Approvers which for the purposes of hazmat will include Facilities Managers and Technical OHS personnel. These personnel are integral part of the PTW process and are to be consulted with in order to coordinate onsite works and minimise impact to other activities in the space.

- Manager, Hazardous Materials and Safety and HSSE are required to conduct technical review and approval of any 'high risk' hazmat Permit To Work (PTW) refer to Section 6.3 of this document
- Facilities Manager can conduct coordination review and approval of 'low risk' hazmat Permit To Work (PTW) refer to Section 6.3 of this document

5.1.8 Security

- Provide access for Specialist Contractors to site as directed by the Project Representative
- Has authority to turn Contractors away from site (particularly B108 & B201) if they do not have correct PTW paperwork with them

5.1.9 Procurement

- Manage Relationship with RMIT Specialist Contractors (Hazmat Panel Members, reference 20160007PS Hazardous Material Management – Licensed Asbestos Removalist and Asbestos Consultancy Panel), ensuring insurances are current and any exceptions to this are brought to the attention of the Manager, Hazardous Materials and Safety

5.1.10 The School/Departments Management Representative

- Consult with Health & Safety, Property Services and the School/Departments HSR in relation to OH&S at the site

5.1.11 Health & Safety Representatives (HSRs)

- Conduct the HSR role in accordance with the *Occupational Health & Safety Act 2004*
- Consult with all relevant RMIT departments, including: Human Resources, Property Services and the School/Departments staff occupying the site, in relation to OH&S

5.2 External Stakeholder Responsibilities

Property Services maintains various panels of approved Contractors which is endorsed by Procurement. RMIT reference PS-R-RC 2039 Appendix B 1704 Hazmat Approved Vendors Contact Details.

The Manager, Hazardous Materials and Safety manages the operational performance of the Panels, whilst Procurement manages the relationship. Please refer to Appendix B for approved Contractors contact details.

Specialist Hazmat Contractors may be appointed to work on RMIT premises in two ways: directly by RMIT, or via a Principal or Head Contractor appointed by RMIT. The responsibilities assigned to each of these processes is outlined in the Property Service Operating Procedures: Hazardous Building Materials Management (HBBM) – Contractor Managed Works and HBBM - RMIT Appointed works. Please refer to Appendix C for reference to these Property Services Procedures.

It is critical that all parties understand the delegation of responsibility for a project or work site prior to the commencement of these works. If this is unclear please refer to RMIT Project Representative for clarification.

5.2.1 Principal Contractor

- Where a contractor is appointed as Principal Contractor, in accordance to OHS Regulations 5.1.2 Subdivision 2, they are responsible for management control of works and or workplaces that are assigned to them
- Principal Contractor must prepare a health & safety co-ordination plan, including the management of hazardous materials that is in line with this procedure
- Principal Contractor **must** appoint and manage any required specialist hazmat contractors, in accordance with this HMMP and specifically RMIT Procedure: 'Hazardous Building Materials Management (HBBM) - Contractor Managed Works'. Please refer to Appendix C for reference to these Property Services Procedures.

5.2.2 Head Contractor

- Where a contractor is appointed as head contractor, management control of works and or workplaces will be assigned to these contractors
- Head Contractor **may** appoint and manage any required specialist hazmat sub-contractors
- Where Head Contractor appoints specialist contractors, manage those works in accordance with this HMMP and specifically RMIT Procedure: 'Hazardous Building Materials Management (HBBM) - Contractor Managed Works'. Please refer to Appendix C for reference to these Property Services Procedures.

5.2.3 Contractor Manager / Superintendent

- The Contractor Manager or Superintendent will be responsible for the administration of the construction contract and has overall accountability for the Project
- Ensure that their employees and subcontractors conduct works in accordance with HMMP

5.2.4 Contractors and Subcontractors

- Manage day-to-day operations of Project sites
- Ensure personnel are trained and inducted in accordance with RMIT minimum requirements
- Contractors must ensure works are conducted safely and, in accordance with relevant state legislation
- Conduct works in accordance with this HMMP, including the review all relevant HazMat Register and understand the limitations of such reports, prior to the commencement of works, please refer to Appendix C for reference to these Property Services Procedures
- Conduct works in accordance with RMIT Contractor Safety Management System
- Where required, ensure hazmat permit to work (PTW) process is adhered to
- If a unanticipated hazardous containing materials are identified or suspect materials are disturbed, works must cease and Property Services Representative informed immediately, in accordance with RMIT approved Procedures. Please refer to Appendix F for reference to these Property Services Procedures.
- **Where Principal or Head Contractor is engaging Specialist contractors to conduct hazmat works on RMIT premises, it is imperative that the Hygienist is engaged independently of the licensed asbestos removal contractor**

5.2.5 Specialist Hazmat Contractors – Asbestos Consultant/Hygienist

- Ensure personnel are trained and inducted in accordance with RMIT minimum requirements and competent to perform specialist tasks
- Contractors must ensure works are conducted safely and, in accordance with relevant state legislation, including specialist tasks:
 - Hazmat assessments and sampling, both compliance inspections and intrusive inspections in accordance with scope of proposed works
 - Clearance inspections and reports
 - Monitoring for potential hazmat containing materials including: airborne asbestos, SMF, lead or other hazardous dusts
 - Update of HazMat Registers for all works
- Conduct works in accordance with this HMMP and Hazardous Material Management - Asbestos Consultancy Master Agreement, specifically RMIT Procedures, Work Instructions etc.
- Conduct works in accordance with RMIT Contractor Safety Management System
- Where required, ensure hazmat permit to work (PTW) process is adhered to
- If unanticipated hazardous containing materials are identified or suspect materials are disturbed, works must cease and Property Services Representative informed immediately, in accordance with RMIT Procedure. Please refer to Appendix F for reference to these Property Services Procedures.

5.2.6 Specialist Hazmat Contractors – Licensed Asbestos Removal Contractor

- Ensure personnel are trained and inducted in accordance with RMIT minimum requirements and competent to perform specialist tasks
- Contractors must ensure works are conducted safely and, in accordance with relevant state legislation, including specialist tasks:
 - Controlled hazmat removal and remediation works
 - Assisting with safe completion of hazmat inspections and sampling
 - Transport and disposal of hazmat materials
- Conduct works in accordance with this HMMP and Hazardous Material Management - Licensed Asbestos Removalist Master Agreement, specifically RMIT Procedures, Work Instructions etc
- Conduct works in accordance with RMIT Contractor Safety Management System
- Where required, ensure hazmat permit to work (PTW) process is adhered to
- If unanticipated hazardous containing materials are identified or suspect materials are disturbed, works must cease and Property Services Representative informed immediately, in accordance with RMIT Procedure. Please refer to Appendix F for reference to these Property Services Procedures.

5.2.7 WorkSafe Victoria

WorkSafe Victoria administers and enforces the hazardous materials related state legislation, including the Licensing of competent Asbestos Removalists. The Victorian Occupational Health and Safety Regulation 2017 requires building owners and/or controllers of premises to identify, assess and control risks arising from hazardous materials in buildings. The Victorian Occupational Health and Safety Act 2004 also details the overriding general obligation of various parties including employers, self-employed persons and persons in control of workplaces, including the health & safety representative, to ensure the workplace health and safety of persons affected by their work activities.

WorkSafe Victoria inspectors may request access to hazardous materials related documentation from time to time. The Victorian *Occupational Health and Safety Act 2004* outlines the powers of WorkSafe Victoria inspectors.

5.2.8 Environment Protection Agency (EPA) Victoria

The Environment Protection Authority Victoria regulates the environment and is an authority on the things that impact on our environment. The EPA administers and enforces of The Environment Protection Act 1970 and Environment Protection (Industrial Waste Resource) Regulations 2009. This includes the transport of contaminated waste materials on public roads and their disposal at EPA Licensed Landfills.

6 Hazardous Materials Management at RMIT

As per state legislation, all materials suspected of containing asbestos or being a hazardous material must be identified and recorded in the Hazmat register, including, complete risk assessment and control measures. **RMIT Hazardous Materials Database Work Instruction** provides further information on RMIT Hazmat Registers and also outlines the detailed risk assessment process which aims to provide consistent assessment across RMIT infrastructure and by competent persons/service providers.

In general the exposure control measures are to reflect the hierarchy of control, as outlined in the specific state legislation and documented below:

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).

In general, it is RMIT intent to plan for removal of identified asbestos containing or other high risk hazardous materials as and when an area is undergoing life cycle renovation/upgrade works.

6.1 Property Service QMS

RMIT Property Services maintains a Quality Management System (QMS) that is comprised of the business processes which are focused on achieving the Property Services Quality Policy and Quality Objectives. The Property Services QMS is designed to ensure delivery of quality products and services to RMIT students and staff so as to ensure an outcome of maximum customer satisfaction.

This HMMP is the key reference document for the safe and proactive management of hazardous materials in the RMIT built environment. This document is to be made available to, and understood by, all persons involved in the management and operation of the site. Personnel nominated to have responsibilities under this HMMP, will be aware of the presence of hazardous materials at the site and the associated RMIT management requirements via training and induction as noted below.

The HMMP references Property Services Procedures and Work Instructions under the banner of Hazardous Materials Database. All documents referred to in this HMMP can be found on the Property Services intranet: <https://sites.google.com/a/rmit.edu.au/psg-intranet/home/tools-templates-1/hazmat>

6.2 Hazmat Induction and Training

The Property Services Safety Team provides both face to face and online hazmat inductions for RMIT Property Services personnel and associated Contractors who conduct project works on or to RMIT building infrastructure. Records of attendance at these inductions are maintained in the Property Services CMS. Induction and training topics include:

- General Asbestos Awareness Training
- RMIT Procedures & Documents
- Example Asbestos Containing Materials
- Hazmat PTW Process

Copies of training packages can be found on the Property Services intranet:

<https://sites.google.com/a/rmit.edu.au/psg-intranet/home/tools-templates-1/induction-training>

6.3 Hazmat Permit to Work (PTW)

6.3.1 Requirement for Hazmat PTW

All works within Building 108, 201 and any work that may disrupt hazmat in any RMIT building requires a hazmat permit to work (PTW) be approved by RMIT prior to the commencement of those works.

All works within building 108, 201 and any work that may disrupt hazmat in any RMIT buildings, are subject to management under the requirements of this HMMP.

In addition to this all contractors and subcontractors visiting the Site must comply with RMIT's Contractor Safety Management System, which may include requirements for additional permits and approvals.

Refer to Section 6.7 for HBMM Process Flow for graphic showing when PTW may be required.

6.3.2 Hazmat PTW Process

All project works are to be conducted Hazardous Building Materials Management (HBMM) - RMIT Appointed works

Prior to works the contractor must review the HazMat Register for all work areas and determine if hazardous materials have the potential to be affected by the proposed works. If there is the potential that hazardous materials can be affected by the works, the HazMat Permit to Work Form (<https://www.rmit.edu.au/about/our-locations-and-facilities/facilities/property-contractor-management>) must be completed and approved by Property Services prior to the commencement of works.

It should be noted that a Hazmat Permit to Work is required to be completed for all works within Buildings 108 and 201 regardless of the potential for the disturbance of hazardous materials.

6.4 Procurement of Hazmat Services

Specialist Hazmat Contractors may be appointed to work on RMIT premises in two ways. The responsibilities assigned to each of these processes is outlined in the Property Service Operating Procedures. Please refer to Appendix C for Property Services approved Procedures. Below is a summary:

Hazmat Contractor Procurement Model	Property Service Operating Procedure
Contractor engaged directly by RMIT	PS-1001 HBMM - RMIT managed works
Contractor engaged by RMIT appointed Principal or Head Contractor	PS-1002 HBMM - Contractor managed works

***It is critical that all parties understand the delegation of responsibility for a project or work site prior to the commencement of these works. If this is unclear please refer to RMIT Project Representative for clarification.**

6.5 Provision of Existing Hazmat Registers to Contractors

Property Services maintains Hazmat registers for all RMIT buildings and these are reviewed regularly.

Property Services Representative is to provide all Contractors conducted works on RMIT premises with current hazmat Register, this may be via privileged access to the Hazmat Register via an email invitation.

6.6 Limitations of Reports and Investigations

6.6.1 Scope of Inspections

The RMIT Project Representative is responsible for scoping required reviews or onsite inspections for the purpose of risk assessing or investigating hazmat within a proposed work area. The scope of these reviews must include all possible areas of impact by the works, including support and services works such as service risers, cable runs, installation from main supply etc. The Project Rep should seek guidance from the Manager, Hazardous Materials and Safety as required.

6.6.2 Inaccessible Areas

Areas which cannot be accessed during normal building operations or without substantial damage to a buildings fabric may be deemed to be 'inaccessible'. All inaccessible areas are to be identified and assessed by the competent person (Asbestos Consultant/Hygienist) conducting the site inspection. Any inaccessible areas that are suspected to contain hazmat are to be recorded in the Hazmat Register, as outlined in **RMIT Hazardous Materials Database Work Instruction**. These areas are to be managed as containing asbestos or hazmat as documented, until its absence can be verified.

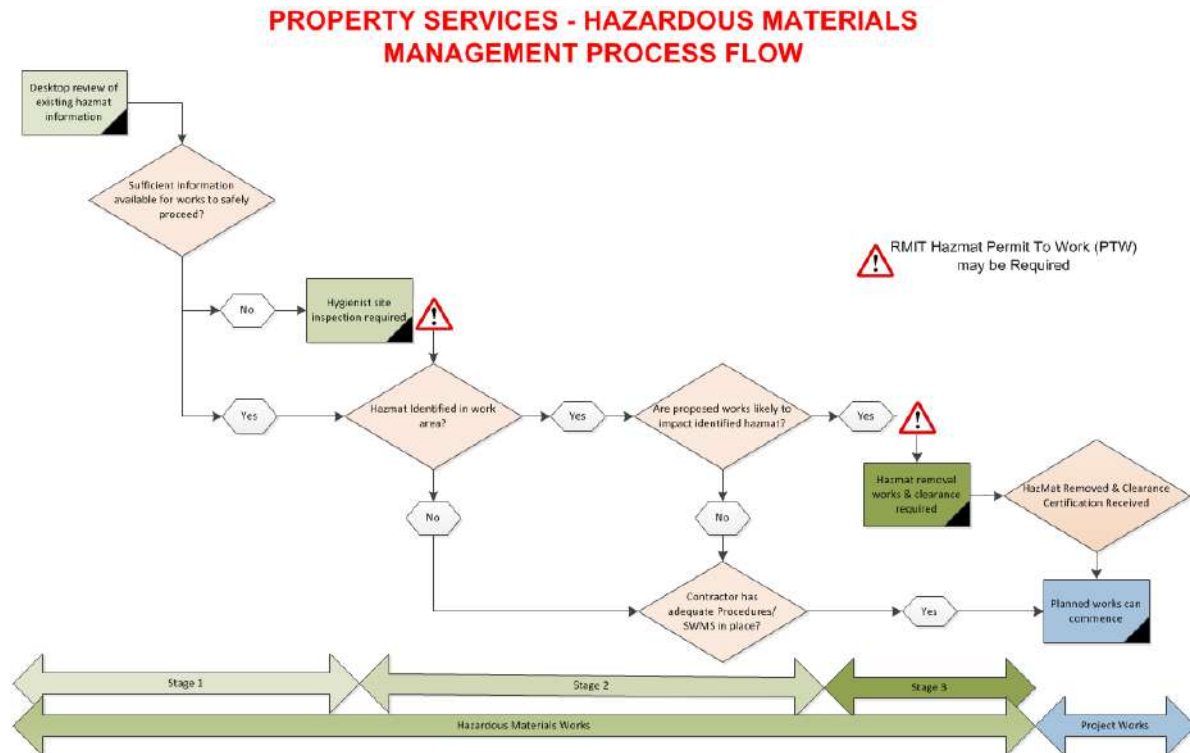
Examples of areas that may be deemed inaccessible during routine inspections, include:

- Inaccessible ceiling spaces e.g. those that cannot be accessed by the means of a manhole or inspection hatch
- Beneath carpet or multiple layers of floor coverings
- Wall cavities, risers, within service shafts, ducts etc., concealed within the building structure
- Exposed soils surrounding the building structures of the site, or underneath the concrete slab of all building structures at the site
- Height restricted areas above 2.7m or any area deemed inaccessible without the use of specialised access equipment
- Internal areas of plant, equipment, air-conditioning ducts and re-heat units and within those areas accessible only by dismantling equipment
- Energised services, gas, electrical, pressurised vessel and chemical lines

Where a Hygienist has been engaged to conduct an intrusive onsite assessment of a building/area, any inaccessible areas should be brought to the attention of the RMIT Project Manager ASAP and before site works conclude. Arrangements may be made to safely facilitate a full inspection.

6.7 HMM – Process Flow

Planning and delivery of all RMIT Property Services works follow the same Hazmat Process Flow, regardless of the scale or complexity or entity engaging the works. The process flow principally follows up to a 3-stage hazmat process, ceasing in the provision of safe working environment for non-hazmat project works to be conducted within. The stages of this process are mapped out below:



6.7.1 Stage 1: Desktop Review

Prior to any proposed demolition or refurbishment works, a review must be undertaken of the existing register to determine if a destructive hazardous materials survey should be conducted.

If sufficient hazmat information available for the area of proposed works is available **and** no identified hazmat materials are likely to be impacted by proposed works. Site works can commence, with no additional actions required.

6.7.2 Stage 2: Hygienist Site Inspection

If insufficient hazmat information is available for the area of proposed works, then additional/intrusive inspections by specialist Hazmat Contractors are required. The scope of these works are to be determined by the Property Services Project Representative based on the scope of works of the project, and in consultation with the HSE Manager - Governance & Systems, Head/Principal Contractor and Specialist Contractors as required.

The additional/intrusive hazardous materials inspections must be conducted in accordance with Part 4.4, Division 6 of the Victorian Occupational Health and Safety Regulations 2017 and other industry related standards, codes of practice and guidance notes.

Hazardous materials assessments are to be undertaken by an RMIT approved Asbestos Consultancy who is a competent person trained/experienced in identifying and assessing the risk of hazardous materials.

The Regulations require the findings of an asbestos risk assessment to be recorded in an HazMat Register in the format outlined in **RMIT Hazardous Materials Database Work**

Instruction. RMIT have a standard asbestos register template which records the location, extent, type, approximate quantity and condition of ACM identified during assessments. The register also includes a qualitative risk assessment and photograph reference number. The register must be updated in accordance with the Regulations and as outlined in **RMIT Hazardous Materials Database Work Instruction**.





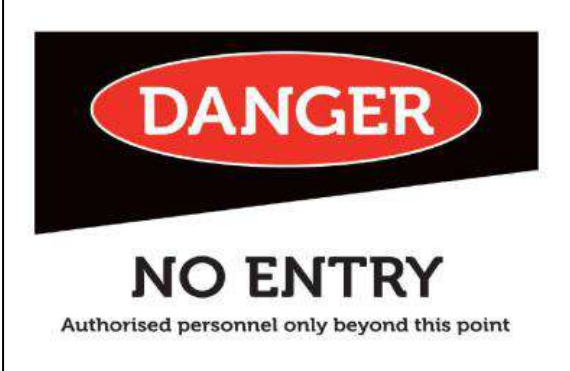
6.7.3 Stage 3: Hazmat Removal Works

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 licensed removal contractor prior to the commencement of the proposed works.

6.8 Labelling of ACM

The OHS Regulations 2017 4.4.5- Asbestos in workplaces, states the presence and location of the asbestos is clearly indicated; and that if reasonably practicable, the indication of asbestos containing materials is to be by labelling. RMIT utilises direct labelling under some circumstances, particularly in areas where the risk of inadvertent disturbance of ACM is possible. The absence of an asbestos warning label does not indicate that a material does not contain asbestos. The Asbestos Register is the source of truth for the presence and location of the asbestos and should be consulted prior to all works.

The RMIT preferred warning signs and labels shown below comply with Australian Standard (AS) 1319-1994 – *Safety signs for the Occupational Environment*. Warning labels and signs must be consistent with the locations of the asbestos-containing materials identified within the site HazMat Register and are to be affixed, as required, in accordance with the guidance outlined below.

Example Asbestos and Hazmat Warning Labels and Signage			
			
<p>Example 1: Preferred RMIT warning label</p>	<p>Example 2: Historic RMIT warning labels some of which are still in use on-site, these will be phased out overtime</p>		
			
<p>Example 3: No Entry signage that may be used at entrances to asbestos work areas and any areas with specialist controls and access procedures with regard to hazmat</p>			

In addition to labelling, a colour coded system has been implemented in some areas within the RMIT portfolio, particularly where labels are difficult to affix, such as gaskets and penetration points.

The following information in the Table below has been developed by RMIT as a guide to labelling asbestos-containing materials 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 approved hygienist to label asbestos-containing materials accordingly.

7 Works Impacting Hazardous Materials at RMIT

RMIT does not permit non-specialist contractors to conduct works on or to identify hazmat materials. All works requiring the disturbance or removal of asbestos containing materials at RMIT premises are to be conducted by a Licensed Asbestos Removalist, in accordance with OHS Regulations and this HMMP. Please refer to Appendix B for list of RMIT approved service providers.

7.1 RMIT Approved Procedures

Property Services Procedures RMIT managed works; and Contractor managed works, outline specific requirements for works impacting hazardous materials on RMIT premises, including requirements that may be over and above Legislative compliance.

It is imperative that all contractors performing or managing hazmat works on RMIT premises are well versed in these procedures and in particular Section 7 & 8 which lists specialist contractor requirements.







7.2 Hazardous Materials Personal Protective Equipment (PPE)

By way of reference, this section outlines the typical type of PPE required during hazardous materials abatement works. Contractors are to provide their own supplies of appropriate RPE/PPE when conducting works on RMIT premises, including responding to emergencies. This section is provided for information purposes only and specific requirements for each asbestos-related task or work area, should be discussed with the appointed Principal Contractor, Licenced asbestos removalist, or hygienist.

As a minimum it would be expected that any entry to suspect hazmat contaminated areas will require P2 dust mask, disposable coveralls rated Type 5 or equivalent and appropriate footwear covers/booties. Additional to this disposable nitrate gloves and eye protection should be used when handling leaking PCB capacitors.

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 (if not disposable) are to be decontaminated after each use and subject to appropriate maintenance, storage and inspection.

Under no circumstances should contractors leave a hazmat work area on RMIT premises wearing PPE, such as respirators or coveralls, even where the PPE is unused or has been decontaminated.

Example Types of Hazardous Materials PPE	Picture
<p>PPE</p> <p>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 <i>Selection, use and maintenance of respiratory equipment.</i></p>	
<p>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 <i>Selection, use and maintenance of respiratory equipment.</i></p>	
<p>Disposable coveralls rated Type 5 or equivalent e.g. Tyvek</p>	
<p>Appropriate glasses or goggles when dealing with PCB's.</p>	
<p>Appropriate gloves i.e. Nitrile disposable gloves for PCB's</p>	
<p>Disposable booties</p>	

8 Hazardous Building Materials Management Emergency Procedures

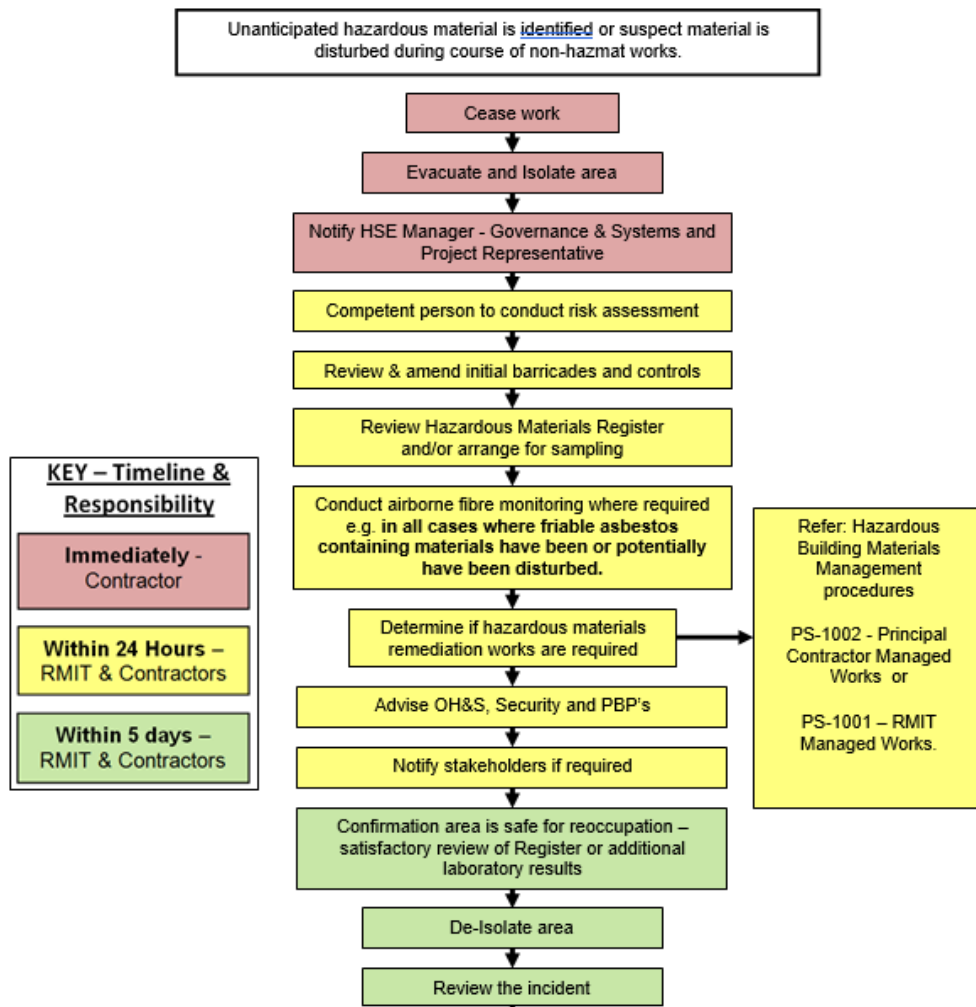
No safety management plan is infallible and as such, RMIT has established Emergency Procedures to be enacted in any situation where an unanticipated suspect hazmat material is identified or disturbed; or if a detectable result (>0.01f/ml) is reported for any airborne asbestos fibre monitoring.

The Procedures are summarised below and full information is attached. **It is imperative that the Property Services Project Representative overseeing the works is notified immediately.** RMIT will assist Principal/Head Contractors as required to carry out the necessary corrective actions.

In all cases Property Services expects the immediate enactment of these Procedures and in a timely manner, written verification from competent persons that appropriate corrective actions, including as required stop works, isolation of work area and escalation to RMIT and where required satisfactory clearance inspection and/or monitoring results.

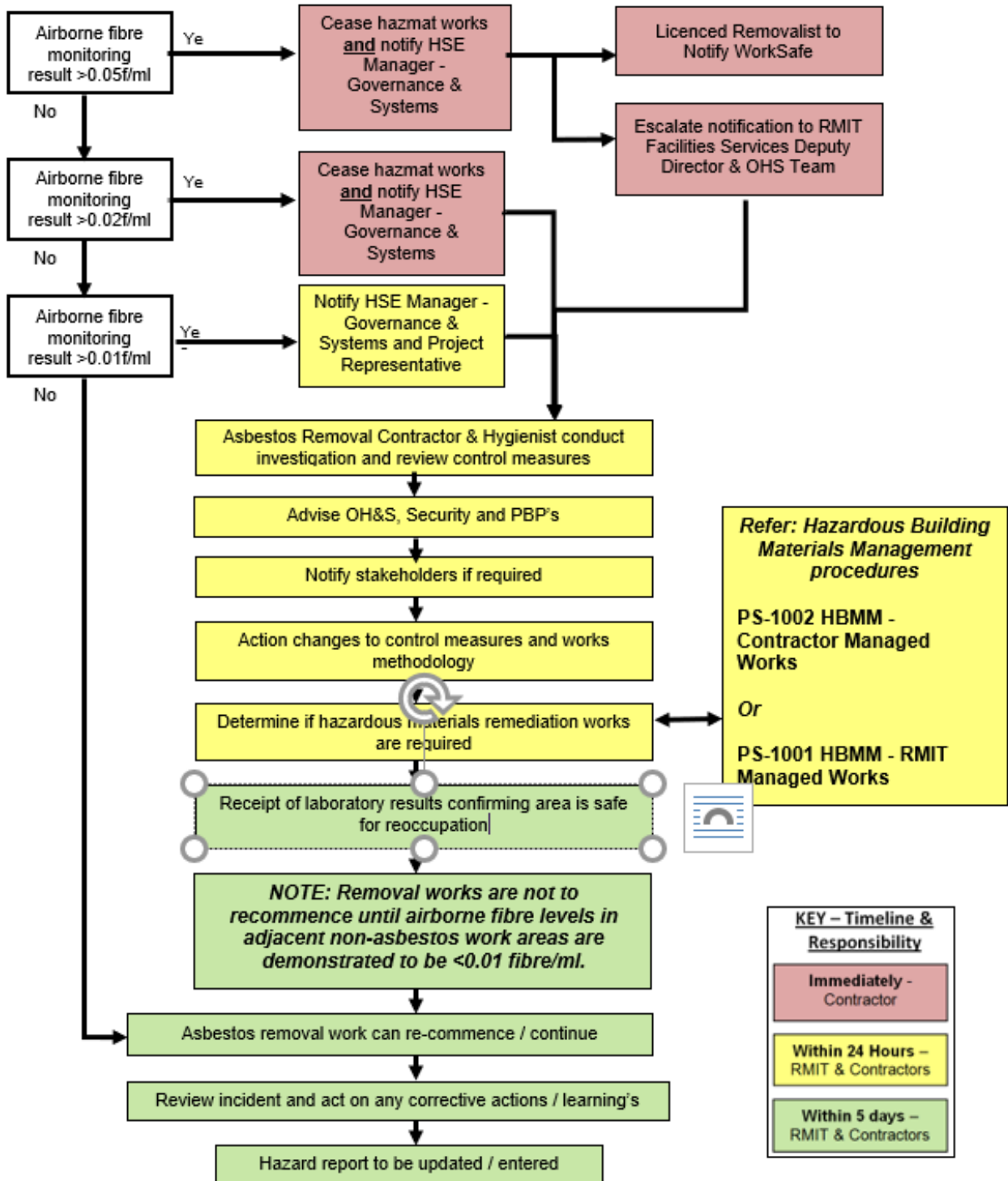
8.1 Unanticipated Find or Disturbance of Suspect Hazardous Building Materials

Please refer to Appendix F for cull copies of Emergency Procedures



8.2 Detectable Airborne Monitoring Result

Please refer to Appendix F for cull copies of Emergency Procedures



Appendix A: General Information on Hazardous Building Materials

A1. Asbestos

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); and

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.

Types of Asbestos-Containing Materials

ACM can be classified into two main groups, **friable** and **non-friable**. ACM considered to be **friable** can be crumbled, pulverised or reduced to powder by hand pressure when dry.

Friable ACM 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).

Table 1 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'.	Cementitious products, i.e. cement-like or concrete-like products (e.g. 'fibro' and 'Super Six roofing').
Insulation on pipes, boilers, tanks, ducts etc. which is often referred to as asbestos lagging.	Vinyl tiles, vinyl flooring mastic and associated adhesives.
Paper products, millboard in electrical switchboards or underlying lining for linoleum or vinyl floor coverings.	Compounds, gaskets and mastic from mechanical fittings.
Textiles, braided asbestos, rope, tape, etc.	Electrical switchboards containing compressed tar mounting boards, cement sheeting.
Millboard from inside auxiliary switchboxes/fuse boards or air-conditioning reheat boxes.	Roofing sealants, bituminous membranes, tar composites and similar materials.

Asbestos Remedial Works

For ACM 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 fixed/installed ACM:

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

Non-friable asbestos – It is RMIT's policy that all asbestos removal works must be conducted by a Class A licenced asbestos contractor

Class B licence holder may be permitted to remove non-friable asbestos as an exemption provided by the Manager, Hazardous Materials and safety.

Where ACM is not fixed/installed (i.e. dust, debris and contaminated soil), is considered more than minor contamination and is not associated with non-friable fixed/installed debris, a Class A asbestos contractor must be engaged to conduct the removal works to comply with the Dangerous Goods Order.

When appointing a licenced asbestos contractor, it is important for Property Services Contractors 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 control removal plan, which has been reviewed by an independent Hygienist and submitted to WorkCover VIC;

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 Victorian *Occupational Health and Safety Regulations 2017* as well as in general accordance with the *WorkSafe Victoria Compliance Code Removing Asbestos in Workplaces, 2018*.

Asbestos Fibre Air Monitoring

In accordance with Victorian OHS Regulations asbestos fibre air monitoring (air monitoring) **must** be conducted during the removal of friable ACM or during potential disturbance works associated with areas which contain asbestos. Air monitoring during the removal of non-friable ACM is not mandatory. As RMIT strives for best practice, all asbestos inspection which may disturb suspect or identified asbestos contaminated areas and all asbestos remediation works occurring on RMIT occupied premises, are to have representative air monitoring to verify controls are working effectively.

RMIT may from time to time conduct ad-hoc or routine air monitoring in some areas/buildings to confirm that hazardous material management strategies are satisfactory overtime.

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 Hygienist to determine where the air monitoring equipment should be placed during the removal works. As a guide, during the removal of ACM, air

monitors should be placed at the perimeter of the work area, particularly to boundaries with sensitive receptors i.e. occupied areas.

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 (OES) for all forms of asbestos is 0.1 fibres/ml of air, as per the hazardous substances information system (HSIS) maintained by Safe Work Australia.

This OES 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.

Control Levels for Asbestos Fibre Air Monitoring

When air monitoring control levels (0.01 fibres/ml) are exceeded during asbestos removal works, it indicates that there is a need to review the control measures used during the removal of ACM. 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.

Reference should be made to **Appendix F: HBMM- Detectable Airborne Monitoring Results** for the procedure to be followed where the results of airborne asbestos monitoring during works involving ACM are at a detectable level.

Clearance Inspections, Clearance Air Monitoring and Clearance Certificates

Visual Clearance Inspection

At the conclusion of asbestos removal/remedial works, a visual clearance inspection must be conducted by a competent person and/or Hygienist in accordance with Regulation 297 sub regulation (2) (a), *Clearance certificates* of the Victorian *Occupational Health and Safety Regulations 2017*.

S.R. No. 22/2017 and in general accordance with the clearance inspection protocol outlined in the *WorkSafe Victoria Compliance Code Removing Asbestos in Workplaces, 2018*.

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.

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 the duration of friable asbestos remedial works, however, it is at the discretion of the competent person/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 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 licensed asbestos contractor and another clearance monitoring shift shall be undertaken until an airborne fibre result of <0.01 fibres/ml is achieved.

Clearance Certificate

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

- The asbestos materials have been removed to the appropriate legislative requirements;
- Most recent air monitoring results are below the detection limit (<0.01f/ml);
- 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.

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 200 μm thick, clear polythene, asbestos waste bags or suitably sealed and labelled drums.

The transportation and disposal of asbestos waste is regulated by the Environment Protection (Industrial Waste Resource) Regulation 2009 with specific guidance provided by EPA Victoria in IWRG 611.2 Asbestos Transport and Disposal 2017. The following sections outline the requirements of this Regulation.

The licensed asbestos contractor should arrange for transport and disposal of any asbestos-contaminated waste that is removed from site. The disposal dockets should be received from the licensed asbestos contractor to confirm that all asbestos-contaminated waste has been transported and disposed of at the registered waste facility.

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 link to a list of registered waste facilities within Victoria that are registered to receive and dispose of asbestos contaminated waste.

Refer to the following link for further updates regarding registered waste facilities within Victoria: <http://www.epa.vic.gov.au/your-environment/waste/landfills-that-accept-asbestos-in-victoria>

A2. Lead-Containing Paint

Definition

Lead is a naturally occurring metal. Pure lead can combine with other substances to form various lead compounds. Lead paint is defined as “a paint film that contains greater than 0.1% of lead by mass in the dry film” in AS 4361.2 – 2017 *Guide to hazardous paint management Part 2: Lead paint in residential, public and commercial buildings*. The standard states that ‘Paints manufacture since 1997 contain 0.1% by mass or less. Therefore it is this value that has been determine for the new standard. If this is exceeded, the paint would be defined as hazardous.

Duties of RMIT

RMIT 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.

An employer shall ensure that a suitable and sufficient assessment is made of the risks to health created by work involving potential exposure to lead. As such, Contractors must submit a risk assessment for RMIT approval prior to the commencement of works which may involve exposure to lead.

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.

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.

The potential for lead exposure is increased 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 contain and control airborne emissions and remove resultant lead contaminated dusts and sludge’s from work surfaces. The painting contractors should prepare management plan prior to any lead paint management work outlining the proposed control measures.

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.

AS 4361.2-2017 *Guide to Hazardous Paint Management Part 2: Lead paint in residential, public and commercial buildings*, provides guidance for the management of lead-paint on non-industrial structures such as residential, commercial and public buildings.

It should be noted that removal of lead paint has the greatest potential to generate hazardous dust and as such, is the least preferred management method. The options available for the management of lead painted surfaces include:

- Report and Document;
- Removal of lead-painted article as a whole unit, e.g. removal and replacement of lead-painted door;
- Stabilise the paint;
- Carrying out lead paint abatement (removal); and
- A combination of these options.

These management options are outlined in the following sections in the order of preference. Action should be taken on a continuing basis to manage the lead-based paints which remain in situ on the site and to ensure that their condition remains a low risk. The easiest option in dealing with lead painted surfaces is to over-paint using a lead free paint. Any works that are likely to disturb lead containing paint surfaces should be conducted in accordance with the AS4361.2-2017 *Guide to Hazardous Paint Management Part 2: Lead paint in residential, public and commercial buildings* and Part 4.3 of the *Occupational Health & Safety Regulations 2017*.

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. Upon the conclusion of works involving lead paint the HazMat Register for the building should be updated.

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 loose surface material in accordance with lead paint removal procedures;
- Remove surface gloss with a de-glossing solution, do not sand the surface;
- 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 2311-2017 *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.

Lead Paint Removal

Part 4.3 the OH&S Regulations 2017 outlines the management, including the removal, of lead paint and should be referred to for guidance however the key factors have been outlined in the following sections.

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 suitably experienced, trained and competent contractor.

The methods of *wet scraping and wet sanding, on-site chemical stripping and enclosure*, described in Section 3 of the Standard as the least hazardous way of dealing with lead paint and as such, are the preferred abatement methods as they do not constitute a 'Lead Process'.

Non-Lead Processes

The methods of wet stripping, chemical stripping and low pressurised washes do not constitute a 'Lead Process' in Part 4.3 of the OH&S Regulations 2017. However there is a duty of care under the OH&S Act 2004 'where an employer must make arrangements, so far as is reasonably practicable, safety and the absence of risks to health in connection with the use, handling, storage or transport of plant or substances.' To comply with this regulation the management techniques outlined in the Australian Standard AS4361.2 2017 should be implemented. These are listed in Section 5 of the Australian Standard and are summarised below:

- Using ground sheets to contain the paint debris generated;
- Minimise debris and fumes generated by the works and ensure they are removed from the immediate work area;
- Wear an appropriate respirator;
- Use disposable coveralls and booties within the work area;
- Ensure the work area is cleaned regularly; and
- Wipe down all surfaces after vacuum removal.

These works should be conducted by an appropriately trained contractor and in accordance with AS 4361.2 – 2017 *Guide to hazardous paint management – Part 2: Lead paint in residential, public and commercial buildings*.

Lead Processes

Part 4.3 of the Victorian OHS Regulations define a Lead Process as "use of a power tool, including abrasive blasting and high pressure water jets, to remove any surface coated with paint containing greater than 1% by dry weight of lead metal and the handling of waste containing lead resulting from that removal". Under the Regulations once a task has been classed as a Lead Process a set of management techniques must be enacted on to eliminate risk. Lead processes involving such activities with lead paint include the following:

- Enclosure to prevent escape of lead bearing dusts;
- Ensure adequate ventilation, for example using negative air units;
- Adequate signage around work area;
- Provision of changing and washing facilities;
- Appropriate personal protective equipment;
- Personal hygiene – no smoking, washing of hands prior to eating etc.;
- Vacuuming of surfaces (with a HEPA filter fitted) within and including the enclosure to remove all remaining traces of lead paint; and
- Decontamination.

Additionally, once a lead process has been identified, a determination must be made as to whether a lead-risk job is being undertaken which is usually made by occupational exposure monitoring.

Determination of a Lead-Risk Job

Under Regulation 4.3.193 a determination must be made as to whether the lead process is a lead risk-job. A number of factors, as outlined in 4.3.194 of the Regulations, must be assessed to determine if a lead process is a lead-risk job. It may be prudent to engage a

suitable qualified Hygienist to assess whether the proposed works constitute a lead-risk job. If the removal of the paint is determined to be a lead-risk, additional prohibitions and requirements are required which includes, but is not limited to, the following:

- Notify the Authority within 7 days of identifying a lead-risk job;
- Ensure biological monitoring is carried out at certain intervals depending on blood lead levels in workers (see reg for details) - the specific levels have been amended and are now in effect (June 2020)
 - **(a) for a woman not of reproductive capacity or a man—**
 - (i) 6 months after the last biological monitoring if the result of the last monitoring shows a blood lead level of less than 0.48 micromoles/litre (10 micrograms/decilitre); or
 - (ii) 3 months after the last biological monitoring if the result of the last monitoring shows a blood lead level of 0.48 micromoles/litre (10 micrograms/decilitre) or more but less than 0.97 micromoles/litre (20 micrograms/decilitre); or
 - (iii) 6 weeks after the last biological monitoring if the result of the last monitoring shows a blood lead level of 0.97 micromoles/litre (20 micrograms/decilitre) or more;
 - **(b) for a woman of reproductive capacity—**
 - (i) 3 months after the last biological monitoring if the result of the last monitoring shows a blood lead level of less than 0.24 micromoles/litre (5 micrograms/decilitre); or
 - (ii) 6 weeks after the last biological monitoring if the result of the last monitoring shows a blood lead level of 0.24 micromoles/litre (5 micrograms/decilitre) or more but less than 0.48 micromoles/litre (10 micrograms/decilitre).
- Remove works from a lead-risk job if (a) the results of biological monitoring reveal that the blood lead level of the employee is at or exceeding—
 - (i) for a woman not of reproductive capacity or a man, 1.45 micromoles/litre (30 micrograms/decilitre); or
 - (ii) for a woman of reproductive capacity, 0.48 micromoles/litre (10 micrograms/decilitre); or
 - (b) following a medical examination by a registered medical practitioner, the practitioner is of the opinion that the employee must be removed from the work; or
 - (c) there is an indication that risk control measures have failed and, as a result, it is likely that the blood lead level of the employee will reach or exceed the levels set out in paragraph (a).
- Retain medical examination reports and all the results of biological monitoring of a person provided under the Regulations.

Lead Dust Air Monitoring

During a Lead Process the works must be undertaken in a manner to ensure that no worker is exposed to lead at concentrations above occupational exposure standard (OES) of 0.05mg/m³ over an eight-hour day.

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.

Contractor Requirements

In a lead abatement operation, it is recommended that a certified or a suitably trained, experienced and competent lead abatement contractor be engaged. This contractor should then perform any lead abatement work. Contractors, involved in task deemed to be a Lead Process, must have medical surveillance, including blood tests, conducted in accordance with the relevant state legislation.

The contractors should submit a work procedure based on assessment of options available to the builder for the various painted surfaces and nature of refurbishment activities to be conducted. The procedure must be submitted to RMIT for approval prior to the commencement of works.

Lead Health Surveillance

Contractors are required to conduct health surveillance when personnel undertake work in a lead-risk environment or who undertake a Lead Process as defined in the state regulations. 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 medical practitioner in accordance with the *Hazardous chemicals requiring health monitoring Guideline 2013*.

Handling and Disposal

Disposal and transportation of lead and lead based compounds are governed by the Industrial waste resource guidelines (IWRG) and require licensing for transport and disposal of lead based compounds.

A3. Ozone Depleting Substances (ODSs)

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 reduce the earth's upper atmosphere hence reducing the earth's ozone layer.

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.

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.

The management of ODS refrigerants should be conducted in accordance with *Ozone Protection and Synthetic Greenhouse Gas Management Amendment Regulation 2012* including the keeping of records.

Action should be taken on a continuing basis to manage ODS which remain in situ on the site, to minimise leakages to the atmosphere. The management of ODS refrigerants should be conducted in accordance with *Ozone Protection and Synthetic Greenhouse Gas Management Amendment Regulation 2012* including the keeping of records.

RMIT will no longer install CFC or HCFC based equipment and where feasible will consider the removal and replacement of any existing refrigerant gases during lifecycle and upgrade works.

ODS Removal and Disposal

A licenced contractor as described in the *Ozone Protection and Synthetic Greenhouse Gas Management Amendment Regulation 1995* 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.

Australia has phased out the importation of CFCs and has a legislated phase out of HCFC, in line with its obligations under the Montreal Protocol. Australia will largely phase out the importation of HCFCs from 2016, which will be permitted until 2029 to service equipment. RMIT will continue maintenance of their equipment in line with these phase out dates, and to have stopped the installation of HCFCs by 2016 on any of their sites.

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*

As the phase out of CFC's and HCFC's (i.e. R12 and R22 for example) will include moving entirely away from the import and manufacture of air conditioners that operate on ODS (a total ban of ODS usage will come into effect in 2029), the servicing of remaining ODS-based systems will rely solely on recycled or reclaimed refrigerant, which will most likely result in a marked increase of price of the refrigerant as it becomes scarcer.

In accordance with the Commonwealth Ozone Protection Legislation, in line with Australia's commitment to phase out ODS-containing substances that units which are required to be replaced due to their age, damage or functionality, have their ODS-containing refrigerants replaced with a non-ODS alternative such as R410.

If any ozone depleting substances identified in this assessment require removal they should be appropriately decanted and disposed of by a licensed contractor in accordance with the *Ozone Protection and Synthetic Greenhouse Gas Management Amendment Regulation 2012*.

It is important to note that, if a system which utilises ODS-refrigerants is in good working order, there is no need to transition to an alternative refrigerant/system (until 2029) however it would be prudent to commence a progressive phase out.

Table 3 below details the phase out dates of known ODS-containing substances:

Table 3 : Phasing out of ODS	
ODS type and usage	Phase out timelines
Importation of HCFC's	2016
Full ban on the use of ODS on site (including CFCs and HCFCs)	2029

A4. Polychlorinated Biphenyls (PCBs)

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, capacitors within in electrical equipment, such as fluorescent light fittings and ceiling fans were identified but also electrical transformers located at certain sites.

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

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 notifiable chemical. Proper procedures must be undertaken when disposing of items containing PCBs. Registered waste disposal companies are licenced to dispose of PCBs material.

Overall Strategy

Action should be taken on a continuing basis to identify and manage the known PCB-containing materials at the site. Not all materials containing PCBs are required to be removed. The management strategy depends on the classification of the PCB-containing material. Reference is made to the document *Identification of PCB-Containing Capacitors* – ANZECC, 1997 for identification of PCB-containing capacitors. If the capacitor cannot be identified using the guide, sample analysis prior to disposal may be required to determine the presence of PCBs.

Transformers, feeder cabling or electrical equipment (other than capacitors) manufactured prior to 1976 should be assumed to contain PCBs. Where the item assumed to contain PCBs and is likely to be disturbed by works, or appears to be leaking, identification is conducted through sampling and NATA Accredited analysis. Upon analysis 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.

In summary, the regulation specifies that material or waste containing PCBs at a concentration of more than 2 mg/kg requires regulation.

A strict interpretation of the EPA Victoria document Polychlorinated Biphenyls (PCB) Management (IWRG) – 2009 requires that organisations notify EPA of the presence of PCBs where the mass exceeds 10 kg. It is considered unlikely that the policy intent was to address PCB containing capacitors, while the capacitors persist in operating light fittings. However, EPA should be consulted to determine the nature of the notification (if any).

When small equipment items, such as lighting and other similar sized capacitors, containing PCBs above the threshold concentration and in aggregate above the threshold quantity exist at any one premises, they shall, at the end of their useful lives, be collected and managed as scheduled PCB waste.

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.

Disposal of PCB Materials and Waste

PCB material and waste shall be:

- Transported in accordance with the Australian Dangerous Goods Code (ADG7.4) and any conditions required by the agency, and in accordance with any other legislative requirements; and
- Stored in accordance with the requirements of dangerous goods legislation and other relevant legislation which, where applicable, includes AS 1940 – *The Storage and Handling of Flammable and Combustible Liquids* (2004).

PCB-containing equipment (capacitors, ballasts, etc.) should be placed in a polyethylene bag that should then be placed in dangerous goods approved (DGA) drums. It should be noted that whilst the regulations stipulate the use of metal drums, modern plastic waste containers can achieve the same engineering performance. The container should be maintained in a good order (that is, no visible signs of damage or corrosion). If some of these materials are leaking, the container should be partially filled with an absorbent material, such as commercial absorbent, kitty litter or a diatomaceous earth. The plastic wrapped leaking components can then be placed in the container.

The containers should be labelled as follows:

“ Caution Contains PCBs”

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

Pending removal of filled containers, the PCB waste should be stored in a secure location that is protected from access by unauthorised persons and removed as soon as reasonably practicable. This area should be well ventilated, away from heat sources and must not contain other dangerous goods.

A5. Synthetic Mineral Fibre Materials

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” (MMMMF).

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.

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.

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. 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.

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 *Code of Practice for the Safe Use of Synthetic Mineral Fibres* [NOHSC:2006(1990)] be closely adhered to when handling such materials.

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

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

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, including the use of appropriate personal protection, are to be implemented by the Contractors. Consultation may be sought from an occupational hygienist with regard to appropriate procedures prior to the handling of such materials if deemed to be a high risk.

Duties of Contractors

The following information should be referenced to by Property Services contractors 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;

Contractors must conduct works in accordance with the *Code of Practice for the Safe Use of Synthetic Mineral Fibres* [NOHSC: 2006 (1990)];

Contractors shall provide suitable instruction, training and supervision to enable employees to safely perform their task. Ensure appropriate and controlled site works is conducted using a procedures. And provide suitable PPE, such as protective eyewear and gloves, where appropriate; and

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.

All works in Building 11 level 3 must adhere to *PS-1023 Property Services Contractor Minimum Requirements Disturbance of ceiling void in Building 11*;

Which outlines the minimum requirements for contractors work within or disturbance to the ceiling void of Building 11, level 3.

Appendix B: Approved Vendors Contact Detail

Please refer to:

Appendix B Hazmat Approved Vendors Contact Details

<https://sites.google.com/a/rmit.edu.au/psg-intranet/home/tools-templates-1/hazmat>

Appendix C: Property Services Hazardous Building Materials Management (HBMM) Procedures

Please refer to:

PS-OP-RC-2000 HBMM - RMIT Managed Works

PS-OP-RC-2001 HBMM - Contractor Managed Works

<https://sites.google.com/a/rmit.edu.au/psg-intranet/home/tools-templates-1/hazmat>

Appendix D: HBMM Templates & HazMat Permit to Work Form

Please refer to:

PS-T-RRC-2013 HazMat Register Template

<https://sites.google.com/a/rmit.edu.au/psg-intranet/home/tools-templates-1/hazmat>

PS-T-RRC-2014 Hazmat Survey Works Notice Template

PS-T-RRC-2015 Hazmat Removal Works Notice Template

<https://sites.google.com/a/rmit.edu.au/psg-intranet/home/tools-templates-1/business-support>

PS-FORM-F-4036 Hazmat Permit to Work Form

<http://www1.rmit.edu.au/propertyservices/contractorsafety>

Appendix E: Hazmat Work Instruction

Please refer to:

Hazardous Materials Database Work Instruction

Quick Reference - Standard User Guide - Hazmat Database

<https://sites.google.com/a/rmit.edu.au/psg-intranet/home/tools-templates-1/hazmat>

Appendix F: HBMM Emergency Procedures

Please refer to

PS-1003 HBMM - Asbestos Management Plan - Unexpected Finds or disturbance of suspect hazardous building materials

PS-1004 HBMM - Asbestos Management Plan - Detectable Airborne Monitoring

Result

<https://sites.google.com/a/rmt.edu.au/psg-intranet/home/tools-templates-1/hazmat>

Appendix G: Approved HMMP Safe Work Procedures

Please refer to:

PS/WI/RC/2040 Appendix G Approved Hazmat Safe Work Instructions
<https://sites.google.com/a/rmit.edu.au/psg-intranet/home/tools-templates-1/hazmat>

Appendix H: Indicative Timeline of Action

Please refer to I drive

Appendix I: Hazmat Safety Alert

Please refer to Property Services website, Safety Management:
<http://www1.rmit.edu.au/propertyservices>

Appendix J: RMIT Hazmat Training and Induction Modules

Please refer to Property Services Intranet, Human Resources and Inductions:

<https://sites.google.com/a/rmit.edu.au/psg-intranet/home/tools-templates-1/induction-training>

Appendix K: Reference Legislation and Guidance Documents

This 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:

- Victorian Occupational Health and Safety Regulations 2017;
- How to Manage Asbestos in the Workplace Code of Practice 2011;
- WorkSafe Victoria Compliance Code Managing Asbestos in Workplaces, 2018;
- WorkSafe Victoria Compliance Code Removing asbestos in workplaces 2018;
- Australian Standard (AS) 2601-2001 The demolition of structures;
- Dangerous Goods Order G 26, 2007;
- 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 1319-1994 Safety signs for the Occupational Environment;
- AS 4260 – 1997 High efficiency particulate air filters (HEPA) classification, construction and performance;
- AS/NZS 1716 – 2012 Respiratory Protective Devices;
- AS/NZS 1715 – 2009 Selection, use and maintenance of respiratory equipment;
- AS 2985-2009 Workplace atmospheres - Method for sampling and gravimetric determination of respirable 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 – 2017 Guide to hazardous paint management Part 2: Lead paint in residential, public and commercial buildings
- Code of Practice for the Control and Safe Use of Inorganic Lead at Work [NOHSC:2015(1994)];
- National Standard for the Control of Inorganic Lead at Work [NOHSC:1012(1994)]
- Protection of the Environment Operations (Waste) Regulation 2005;
- Assessment & Classification of Liquid & Non-liquid Wastes, 2002;
- The Waste Management and Pollution Control Act 2009;
- Environmental Management and Pollution Control Act 1994;
- Waste Avoidance and Resource Recovery Act 2007;
- Ozone Protection and Synthetic Greenhouse Gas Management Amendment Regulation 2012;
- Australian Chlorofluorocarbon Management Strategy October 2001;
- Australia and New Zealand Refrigerant Handling Code of Practice 2007 Part 1 – Self-Contained Low Charge System; and
- Australia New Zealand Refrigerant Handling Code of Practice 2007 Part 2 – Systems Other than Self-Contained Low Charge System.