Hazardous Materials Management Plan

City of Sydney
Town Hall House
456 Kent Street
Sydney NSW 2000

Abraham Mott Youth Centre
2 Watson Road, Millers Point
9 July 2019

Sydney2030/Green/Global/Connected
city of villages

CITYOFSYDNEY 2030

Contents

1. Introduction

This Hazardous Materials Register and management plan has been prepared to assist the City of Sydney (City), its managing agents, contractors and tenants identify all hazardous materials in the facility and highlights control measures to be put in place.

The objective of this document is to ensure that the City's workers, contractors and tenants are, so far as is reasonably practicable, not at risk of any uncontrolled exposure to hazardous materials at properties owned or managed by the City by:

- Informing all workers, tenants and contractors of areas where hazardous materials exist;
- Providing training and information to all workers, tenants and contactors on what to do if they encounter or disturb hazardous materials, including emergency response procedures;
- Ensuring that City of Sydney complies with the *NSW Work Health and Safety Act 2011, the Work Health and Safety Regulation 2017* and the SafeWork NSW Codes of Practices on *How to Manage and Control Asbestos in the Workplace* and *How to Safely Remove Asbestos.*

City of Sydney workers, managing agents, contractors and tenants need to familiarise themselves with these requirements, which are outlined in this plan.

This plan will increase the awareness of City workers and tenants of the risks arising from hazardous materials and how those risks are to be managed in conjunction with, managing agents and contractors. It is to be used by all who are involved in planning or managing responsive or refurbishment maintenance or other works on City properties, including demolition and emergency maintenance as a result of property damage.

This document is intended to be a living document that is updated as necessary. It is designed to be kept at a convenient location on site where it can be reviewed by all relevant personnel. It has also been designed so that updates and other information can be added at any time when required.

This plan clarifies the protocols, processes, roles and responsibilities of City workers, managing agents and contractors.

The residential properties that the City owns or manages are not defined as workplaces under the NSW Work Health and Safety Act 2011 when they are used as residences and leased to tenants in accordance with the NSW Residential Tenancies Act 2011. When maintenance or refurbishment work is carried out on these properties then they become the temporary workplace of the contractor.

Any further information about this plan should, in the first instance, contact the City's managing agent (details in Part 9).

Risk Summary

The hazardous materials covered in this management plan are:

- Asbestos;
- Polychlorinated biphenyls (PCB);
- Lead based Paint;
- Lead dust;
- Synthetic Mineral Fibres (SMF).

A common feature of each of hazardous materials identified in this report is that they only become a risk to health and safety when they are in a deteriorated or damaged condition or when proper controls are not implemented for maintenance or refurbishment work. For example:

- When asbestos-containing material is in a good condition it does not create a risk to health. When it is fully bonded and sealed in a cement matrix, such as in fibro, it does not create a risk. The risk to health occurs when asbestos fibres are released into the atmosphere and can be inhaled;
- When lead paint is in a good condition it does not create a risk to health. The risk to health occurs when it is flaking and it can be ingested, particularly by young children;
- When PCBs are fully sealed within the capacitor of a fluorescent light fitting, they do not create a risk. The risk to health occurs only when the PCBs leak from a worn or damaged capacitator.

The summary of risks is included in the attached Hazardous Materials Register included in Appendix A**.**

2. Scope

This plan applies to all properties that the City owns or manages.

This plan addresses the requirements of the NSW Work Health and Safety Regulation 429 for the preparation of an asbestos management plan for a workplace where asbestos may be present and encompasses the identification and management of risks arising from:

- Asbestos in Buildings;
- Asbestos in Grounds;
- Lead Paint; and
- PCBs.

Information regarding each of these hazardous materials is included in Appendices A. In addition to this, relevant Australian Standards, Acts and Regulations can be referred to for more comprehensive information about these hazards and in the handling of them. These are, but are not limited to the following:

- NSW Work Health and Safety Act 2011;
- NSW Work Health and Safety Regulations 2017;
- SafeWork NSW Code of Practice - How to Manage and Control Asbestos in the Workplace 2016;
- SafeWork NSW Code of Practice – How to Safely Remove Asbestos 2016;
- AS4964:2004 Method for the qualitative identification of asbestos in bulk samples;
- AS4361.2 Guide to Lead Paint Management Part 2: Residential and commercial buildings;
- Australian and New Zealand Environment and Conservation Council (ANZECC) Information Booklet for Electricians and Electrical Contractors on the Identification of PCB-Containing Capacitators 1997 (updated 2005).

3. Roles and Responsibilities

The roles and responsibilities of the City, its managing agent and the stakeholders involved in this plan are as follows:

Managing agent

- Receipt of maintenance requests from its client(s);
- To package the works, including scope of works, performance requirements and identification of known or possible presence of hazardous materials;
- Calling of tenders / quotations – including briefing of contractors for refurbishment maintenance;
- Assessment and recommendation of quotations and tenders;
- Facilitating contractor's access for site inspections and clarification of requirements;
- Ensure works are classified as a high priority where they involve the identification of known or possible presence of hazardous materials;
- Issue work order requests for the work to be completed;
- Confirm with the client that the ordered works have been completed;
- Notify the Property Manager as soon as practically possible;
- Confirmation with tenant / contractor that ordered works have been completed;
- Sign-off of works completed by contractors; and
- Update the Hazardous Materials Register and management plan if any hazardous materials remedial works are completed at the site.

Property / Portfolio Manager

- Monitoring of managing agent;
- Ensure workers, contractors, managing agents and tenants are aware of the Hazardous Materials Management Plan and its location on the property.

Contractors

- Developing and implementing safe working methods that comply with Work Health and Safety legislation, including using only competent and trained workers;
- Undertaking pre-tender / quotation inspections to ascertain the scope of works, including the possible presence of hazardous materials;
- Notifying their appointed contact being the managing agent or Property Manager of any previously unidentified hazardous materials affecting the proposed works – whether during the pre-tender inspection or during execution of the works;
- Notifying their appointed contact being the managing agent or Property Manager of any issues or concerns about the behaviour of the occupiers in relation to safe management of any hazardous materials that are encountered;

- Notifying their appointed contact being the managing agent or Property Manager when the works are completed; and
- In the event a contractor has removed a hazardous material(s) they are to provide the managing agent with documentation that the hazardous material(s) have been disposed of in accordance with SafeWork NSW, EPA and Local Government guidelines.

City Workers, clients and tenants

- Reasonably comply with the requirements of this plan;
- Obtaining approvals prior to undertaking any works or attachment of fixtures to the premises that may expose or damage hazardous materials.

4. Training

City workers involved in the management of works on City owned or managed properties will be trained in the following:

- Information on the presence of hazardous materials in City properties;
- Overview of the legislation, codes of practice and standards - and typical locations where hazardous materials may be encountered;
- Information on the health risks associated with the hazardous materials covered by this plan;
- Procedures to be followed in the event of discovery, damage or disturbance to a hazardous material; and
- Protocols for informing Property Managers, managing agents and contractors about the known and possible hazardous materials prior to any works commencing as well as for the updating of the City's Hazardous Materials Register.

This information will be provided to City workers and its contractors by the managing agents or Portfolio/Property Manager at these milestones:

- Before the commencement of work in an area where hazardous materials has been identified through an induction;
- When the contents of this plan have been updated.

5. Risk Management

The City manages (via the managing agents) the risks associated with the potential exposure of workers and other persons in the workplace to the risk of hazardous materials by the following:

- Before any refurbishment maintenance is to be undertaken for buildings completed before 1990 identifying asbestos and other hazardous materials ACM at the workplace and recording these in the asbestos register;
- Before any responsive maintenance is arranged for buildings completed before 1990 make the contractor aware that asbestos containing material may be present and that the requirements of the Codes of Practice on Asbestos should be applied;
- Assessing the risk of exposure to airborne asbestos and other hazardous materials;
- Eliminating or minimising the risks by implementing control measures;
- Reviewing control measures to ensure they are effective.

When choosing the most appropriate control measure, the following hierarchy of controls must be considered:

- Eliminating the risk (for example, removing the asbestos);
- Substituting the risk, isolating the risk or applying engineering controls (for example, enclosing, encapsulation, sealing or using certain tools);
- Using administrative controls (for example, safe work practices);
- Using PPE.

Where the hazardous material is in a stable condition then it may be left undisturbed until a major refurbishment is required, when it would be assessed for possible removal as part of those works.

Under most circumstances, the presence and condition of hazardous materials in City properties would not present any health concerns to residents or contractors undertaking routine maintenance works, where there is no impact to structural elements.

In the absence of a comprehensive condition assessment of every dwelling it is not possible to be completely confident that all known hazardous materials are identified.

By applying the controls and protocols in this Hazardous Materials Management Plan it is possible to manage the risk in a way that avoids the substantial cost of such an extensive condition assessment

It is possible over a more reasonable period of time and at a modest cost to obtain this sort of information as maintenance or refurbishment works are programmed and undertaken.

Generally, it is more an issue for older dwellings that have not undergone any significant maintenance or refurbishment works during the past 20 years or so.

Therefore, to manage the uncertainty it will be assumed that properties built prior to 1990 may have some hazardous material present and so the City shall alert the managing agent and contractors so that appropriate precautionary measures may be taken, both during pre-tender inspections and execution of the works.

6. Work Procedures – General Requirements

Disturbance of Hazardous Materials

Once stakeholders are familiar with the Hazardous Materials Register, they must also know what actions to take if hazardous materials are disturbed.

Asbestos

When asbestos containing materials are disturbed, they pose a risk of releasing asbestos fibres. Asbestos containing materials can be disturbed by cutting, sawing, breaking sanding etc.

If a person identifies disturbed asbestos containing material or are involved in disturbing asbestos containing materials then they should isolate the area, contact the relevant Managing Agent immediately and wash hands thoroughly.

The Managing Agent should undertake the following steps:

- Contact a licensed contractor to remove the bagged broken pieces and remediate any areas where there is the possibility of exposed fibres;
- If the disturbed asbestos was friable, engage an independent hygienist to undertake air monitoring of the area and provide a clearance certificate;
- Update of the Hazardous Materials Registers.

Further information on the management of asbestos in the workplace can be found in the SafeWork Codes of Practice on How to Manage and Control Asbestos in the Workplace and How to Safely Remove Asbestos.

PCBs

PCBs were used in the production on fluorescent light tubes in the 1970s. They are occasionally found in the domestic environment in older style fluorescent lights.

If any PCBs highlighted in the attached register are found leaking in fluorescent light fittings the following steps should be taken:

- Cover up the light fitting and inform all affected persons;
- Wash hands immediately;
- Contact the relevant property manager to inform them of the issue.

The Managing agent will undertake the following steps:

- Contact a licensed contractor to remove the fluorescent light fitting to the appropriately licensed facility;
- Update of the Hazardous Materials Registers.

Further information on the management of PCBs can be found in the *NSW Polychlorinated biphenyl (PCB) chemical control order 1997 administered under the Environmentally Hazardous Chemicals Act*.

Lead Based Paint

Lead based paint was commonly used in paint applications up until the early 1990s. If personnel identify any disturbed lead based paint, the following precautions should be undertaken:

- Flaking lead paint on walls or in soil where children may be present – quarantine / clean up immediate area, identify removal as high priority on maintenance program; and
- Isolate the area where the lead based paint has been disturbed;
- Wash hands immediately;
- Contact the Managing Agent to inform them of the issue.

The Managing Agent should undertake the following steps:

- Review the condition of the paint and advise on the most appropriate risk mitigation strategy;
- Update of the Hazardous Materials Registers.

Further information on the management of lead paint can be found in the National *Code of Practice for the Control and Safe Use of Inorganic Lead at Work (1994).*

Synthetic Mineral Fibres

SMF containing materials are usually found in insulation products such as roof insulation and hot water pipe insulation. If staff or contractors are working with SMF products they should ensure that they were gloves, safety glasses and a dust mask.

Further information on the management of Synthetic Mineral Fibres can be found in the *National Code of Practice for the Safe Use of Synthetic Mineral Fibres (1990).*

7. Specific Contractor and Consultant Information

Under the NSW Work Health and Safety Act 2011, Persons Conducting a Business or Undertaking have obligations to all personnel who access the site as a place of work. These obligations are similar to those for staff members at the site, with all contractors required to make themselves familiar with the register before entering and the site and commencing work.

Contractor acknowledgement

All contractors must review the Hazardous Materials Register and fill out the signoff sheet prior to commencing work, included in Appendix C.

Under no circumstances are contractors permitted to come on site and commence work without signing off on review of the Hazardous Materials Register (Appendix C).

Contractors working in areas where Hazardous Materials exist

Once contractors have reviewed the Hazardous Materials Register, they should be aware of hazards near their particular location of work. There are now four situations that may be encountered during the course of the work. The following scenarios outline the situations that may occur and the risk measures to be put into place by the contractor.

1. The contractor is working in an area where no hazards exist. This situation does not require risk management practices as the hazard does not exist. The contractor can carry out work as required.
2. The contractor is working in an area where it is possible they may disturb hazardous materials, however not working directly on the hazardous materials. This situation requires the contractor to be extremely careful and aware whilst working. If the contractor disturbs any hazardous materials he should notify onsite staff/tenants and the managing agent immediately.
3. The contractor's work requires minor disturbance of hazardous materials. This situation requires the contractor to have a complete risk assessment with adequate measures effectively control the exposure to hazardous materials. Control measures may include, but are not limited to:

    - Isolating the area where work will be undertaken to prevent unauthorised access;
    - Inform the managing agent of assessment;
    - Using non-powered tools and equipment;
    - Use dust suppression techniques;
    - Wear all the necessary personal protective equipment (PPE) including respirator and gloves;
    - Prepare a Safe Work Method Statement to carry out the necessary works.

In addition, the contractor must:

- Inform the site representative that the work is about to commence;
- Ensure the area is isolated from personnel;

- Ensure there is no fibre risk after their work is completed by thoroughly cleaning around the affected area.

The planned works are not to commence if the contractor has not undertaken a risk assessment for the job or does not have the identified control measures in place.

An example of this work may be an electrical contractor who has to make a small intrusion into a piece of asbestos cement sheeting to get wires through to their necessary work area. *The register should then be updated.*

4. The contractors work requires significant disturbance to hazardous materials. No work should be done by the contractor. If significant disturbance is required by a contractor to complete the necessary work, then an appropriately licensed contractor must be engaged to complete the works to the hazardous materials. The register should then be updated.

8. Record Keeping

As incidents concerning the presence, condition or removal of hazardous materials are reported and investigated and as a result this plan and the Hazardous Materials Register (Appendix A) will be updated.

The Hazardous Materials Register is updated by the City's managing agent and monitored by the City's Projects and Property Division, which will be maintained once investigations have been completed.

9. Communication

This plan is available on the City's website at http://www.cityofsydney.nsw.gov.au/.

Tenants in City owned or managed residential properties have been advised that the residential properties are not defined as workplaces under the NSW Work Health and Safety Act 2011 when they are used as residences and leased to tenants in accordance with the Residential Tenancies Act 2011.

The following parties and key stakeholders will be advised of this plan and where to locate it:

- Managing agents;
- Portfolio/Property Managers;
- Project Managers;
- All contractors that have been engaged by the City for maintenance related works;
- All City employees.

Maintenance conducted at City properties is classified as either reactive or capital works. All contractors conducting reactive maintenance are supervised by managing agents and contractors conducting capital works are supervised by Project Managers or managing agents. The managing agent or Project Manager will be responsible for communicating the presence of hazardous materials, where known, to their respective contractors before works commence.

The City has appointed its managing agent as the contact in regard to this plan. Queries, further information and advice can be obtained from the:

WHS Manager
Ventia Pty Ltd,
Level 21 Town Hall House,
456 Kent Street, Sydney 2000,
Phone: 1800 332 254 Helpdesk
Email: CityOfSydney@ventia.com.au

10. Incident Reporting

This section addresses what must be done, by whom and by when – once hazardous materials exposure has occurred or management requirements have not been complied with.

The managing agent is to be advised immediately of any incidents which have resulted in a disturbance of a hazardous material on the premises:

WHS Manager
Ventia Pty Ltd,
Level 21 Town Hall House,
456 Kent Street, Sydney 2000,
Phone: 1800 332 254 Helpdesk
Email: CityOfSydney@ventia.com.au

Contractors reporting incidents are to report the incident to the managing agent or Project Manager. In the absence of the managing agent's WHS Manager or Project Manager, the incident is to be reported directly to managing agents Helpdesk for assistance.

City employees are to complete and submit an incident report using the online Incident / Accident Report form on the Safety Management System as soon as reasonably practicable.

After receiving notice of a hazardous materials incident, the managing agent or the City shall engage a suitably qualified contractor to conduct an investigation and provide recommendations on the treatment of the hazardous materials.

The City or the managing agent will arrange for the recommended treatment to be undertaken and for the Hazardous Materials Register to be updated.

11. Evaluation

This plan and its implication will be reviewed on a biennial basis to ensure ongoing relevance and effectiveness. The review will consider:

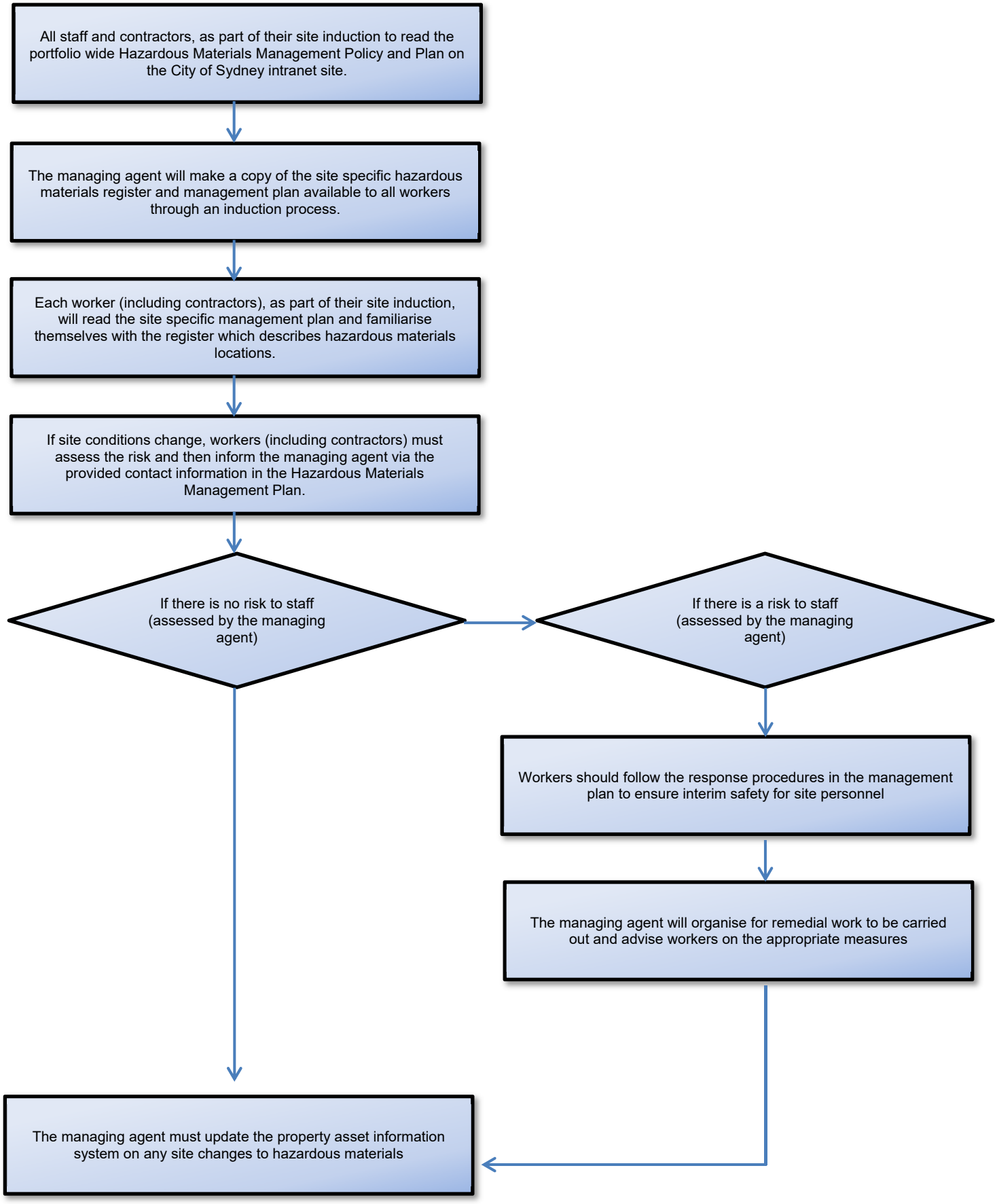
1. Has the plan been effective in preventing hazardous material incidents? If not, why not?

2. Where incidents did occur, what were their causes and consequences? What lessons were derived from these for the City, managing agents, Property Managers, Project Managers or the contractors? Are any changes required to the procedures?

3. Is the City's Hazardous Materials Register reflecting an accurate classification of properties with or without hazardous materials?

APPENDIX A. Hazardous Materials Register

APPENDIX B. Staff Training Process



APPENDIX C. Contractor Signoff Sheet

(Note: to be managed by managing agent)

Contractor Signoff Sheet				
Company Name	**Name**	**Work Description**	**Date**	**Acknowledgement of Hazardous Materials Register review - signature**

APPENDIX D. Remedial Works Clearance

(Note: To be managed by managing agent)

APPENDIX E. Hazardous Materials Survey

(Note: to be managed by managing agent)

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MILLERS POINT NSW

VENTIA PTY. LTD.

HAZARDOUS MATERIALS INSPECTION REPORT

JULY 2019

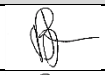
Healthy Buildings International Pty Ltd (HBI) was commissioned by **Ventia Pty. Ltd.** to carry out hazardous material inspection of the **Abraham Mott Youth Centre** located at **12 Watsons Road, Miller Point NSW.** The inspection was carried out during **July 2019**.

All lead paint within the building had a very low risk rating. It should be maintained and reinspected annually.

We recommend that the area affected by lead contaminated paint be managed though the incorporation of recommended actions into the routine maintenance program. If deterioration does occur, we recommend the material be encapsulated in such as manner that it does not presents a risk to building users. Painting contractors should be advised that the materials contain lead and they should only be dealt with by an experienced lead paint contractor. *AS4361.2:2017: Guide to lead paint management Part 2 Residential & Commercial Buildings* provides options and procedures for managing lead paint.

No asbestos or synthetic mineral fibre products have been identified within the site.

DOCUMENT CONTROL

DATE	JOB NUMBER	REVISION HISTORY	AUTHOR & POSITION	SIGNATURE
8/8/19	*190619*	*Data Entry*	*J Burgin – Environmental Scientist*	
8/8/19		*Draft*	*J Burgin – Environmental Scientist*	
29/08/19		*Final*	*L. Robertson – General Manager*	
09/10/19		*Revision 1*	*D. Styman – Graduate Environmental Scientist*	

The work presented in this document was carried out in accordance with the Healthy Buildings International Pty Ltd (HBI) Quality Assurance System which is based on Australian Standard / NZS ISO 9001.

This document is issued subject to review and authorisation by the Team Leader noted by the initials printed in the last column above. If no initials appear, this document shall be considered as preliminary or draft only and no reliance shall be placed upon it other than for information to be verified later.

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HBI does not make any other warranty, expressed or implied, as to the professional advice contained in this document

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1.0 INTRODUCTION

Healthy Buildings International Pty Ltd (HBI) was commissioned by **Ventia Pty. Ltd.** to carry out hazardous material inspection of the **Abraham Mott Youth Centre** located at **2 Watson Road, Millers Point NSW** (the Property)**.**

The inspection was conducted in **July 2019**. The object of the survey was to identify and ascertain the condition of any hazardous materials within the building.

1.1 Building Description

Abraham Mott Youth Centre, formerly gum, is a single story, open plan brick building adjacent to the Abraham Mott Hall.

1.2 Legislation

Throughout the study HBI have abided by the recommendations, standards, specifications, and regulations of:

- Work Health and Safety Act (2011), and associated regulations.
- How to Manage and Control Asbestos in the Workplace – Code of Practice [Safe Work Australia (2018)].
- How to Safely Remove Asbestos – Code of Practice [Safe Work Australia (2018)]
- Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres 2nd Edition [NOHSC : 3003(2005)]
- Your Guide to Working with Asbestos [WorkCover (2008)].
- Selection, Use and Maintenance of Respiratory Protective Devices [Standard: AS/NZS 1715 (2009)]
- National Code of Practice for the Control and Safe Use of Inorganic Lead at Work [NOHSC:2015(1994)]
- Guide to Hazardous Paint Management Lead Paint in Residential, Public, and Commercial Buildings (AS/ NZS 4361.2:2017)
- National Standard for the Control of Inorganic Lead [NOHSC:1012(1994)]
- Code of Practice for the Safe use of Synthetic Mineral Fibres [WorkCover (1993)]
- National Standard for Synthetic Mineral Fibres [NOHSC:1005 (1990)]
- National Code of Practice for the Safe use of Synthetic Mineral Fibres [NOHSC (2004[1990])]
- AIOH Positional Paper – Synthetic mineral fibres (SMF) and occupational health issues [AIOH (2011)]
- Identification of PCB containing capacitors [ANZECC (1997)]

The conclusions and recommendations in this report are based on the findings of our experienced consultants and comparison with HBI's extensive database of information.

1.3 Disclaimer

This hazardous materials inspection was carried out in a professional manner by qualified and experienced personnel. The procedures used meet all relevant guidelines and regulations.

The extent of some materials identified in this inspection was informed by the findings of a previous survey inspection, the SLR report dated 4 September 2013 and titled Hazardous Building Materials Re-inspection Report, Abraham Mott Youth Centre, 107-125 Railway Parade, Erskineville NSW 2043 (Report No. 610.12791.00053/01/HMR). The presence of hazardous materials containing materials will, therefore, be reported to the best of our ability within the constraints of non-destructive methods and information and access made available to HBI. HBI cannot be held liable for any errors or omissions in the original survey report completed by SLR (2013).

Thus, while we are confident that all hazardous material that were previously identified during the course of the former survey of the building have been reinspected and assessed, no guarantees are made that a specific building or area of a building is absolutely free of hazardous materials since future remodelling or demolition activities may well reveal hazardous materials in areas inaccessible or unknown to the HBI inspection team.

Healthy Buildings International cannot be accountable for any omissions to this report resulting from information, data, systems or plant not made readily and reasonably accessible by the Client.

1.4 Product or Service Recommendation

Property Managers frequently approach HBI for guidance regarding which products or services should be used to carry out recommendations contained in reports. HBI endeavours in this regard to remain completely independent and objective. If products or services are identified in this report or at other times they are given only as a guide. No particular endorsement is implied.

When products are purchased, Clients should exercise care to ensure that the product is entirely appropriate for the use intended. Emissions from certain products can be harmful if safety precautions are not taken. Harm will also be minimised if products are used in accordance with their manufacturer's instructions. Any person or persons using such products or procedures should where appropriate electrically isolate equipment and ensure they are observing all the necessary safety protocols and procedures.

2.0 HAZARDOUS MATERIALS

2.1 Asbestos: Description, Properties, Uses and Health Effects

Asbestos, a naturally occurring mineral fibre found in various rock formations, is a collective name for a group of natural minerals that separate into strong, very thin fibres. Asbestos minerals consist of various percentages of: oxygen, hydrogen, sodium, iron, magnesium, and calcium. Different ratios account for the various varieties or types. The more common types are amosite, chrysotile, and crocidolite. Less common types are anthophyllite, actinolite and tremolite.

The NOHSC defines an asbestos fibre as one that has a diameter of less than 3 micrometres (μm), is greater than 5 μm in length with a length to diameter ratio of greater than 3:1.

Asbestos is generally divided into two groups, serpentine and amphibole. Serpentine, which contains only chrysotile asbestos, is composed of curled fibres. It has been suggested that nearly 95% of all asbestos used in commercial products is of the chrysotile asbestos type. The second group, known as amphiboles, contains amosite, crocidolite, actinolite, anthophyllite, and tremolite. The amphibole group is considered a more significant hazard than the serpentine group due to the straight, sharp, and resilient fibres. Only amosite asbestos and crocidolite asbestos of the amphibole group have been used in relatively significant quantities.

Asbestos' near unique properties of fire resistance, high abrasion resistance, insulation and superb acoustical characteristics coupled with its relatively low cost, led to its' immense popularity as a building material between 1900 and 1980. Prior to 1973, asbestos was the material of choice for fireproofing insulation, thermal insulation, abrasion resistance, and sound insulation. Asbestos containing insulation was used as a sprayed-on insulation for ceilings and steel supports; as a thermal insulation for boilers, piping, ducting, and air conditioning units. Additionally asbestos was used as an abrasion resistant filler in floor tiles, vinyl sheet floor coverings, roofing and siding shingles, joint compound, and filler of textured paints and gaskets. Asbestos can be found as a bulking and wear resistant additive to motor vehicle brake shoes and in countless domestic appliances such as toasters, dishwashers, refrigerators, ovens, clothes dryers, electric blankets, hair dryers, etc.

Many asbestos bearing materials or products don't pose a health risk when used in the normal course of events. A health risk exists solely when asbestos fibres are released into the air and when that air is inhaled into the lungs. Even then, it appears that most people exposed to relatively small amounts of asbestos do not develop any health related problems. However, numerous health studies conducted independently in many parts of the world prove conclusively that the chances of developing serious respiratory illnesses, including lung cancer, are greater in those exposed to airborne asbestos fibres.

Scientific evaluation of all the available human data provides no evidence for a "safe" level of asbestos exposure, thus any quantity should be considered potentially dangerous. Those at most risk are those constantly exposed, especially the asbestos workers in industry. The tragedy in dealing with asbestos linked diseases is that they only manifest themselves years or tens of years after the exposure, in essence those exposed to asbestos fibres today are being "poisoned" without being aware of it.

The results of this exposure to asbestos, a known carcinogen, may include any of the following conditions: cancer of the lung; mesothelioma (cancer of the lining of the pleura and peritoneum - almost invariably terminal); oesophageal, stomach, laryngeal or pharyngeal cancers; asbestosis - a progressive and painful loss of lung capability due to the accumulation of asbestos fibres in the small air passages of the lung.

Asbestosis is usually a progressive disease moving from shortness of breath when exerted to loss of breath even at rest. Death results from the body's inability to absorb sufficient oxygen. Since many of these diseases have a latent period stretching beyond 20 years following the initial exposure to asbestos, many cases are not diagnosed and only very few survive. The American Cancer Society in 1983 reported that less than 9% of lung cancer patients survive five or more years after diagnosis.

Since we cannot cure the diseases caused by asbestos and normally cannot even diagnose the disease until many years after exposure, the only correct course of action to take is one of prevention. Any level of asbestos containing materials (ACMs) inside a building constitutes a hazard. It should be noted that *hazard* is a potential for harm, whereas *risk* is the probability that this potential may become actual.

In this report, after we have identified the areas of materials that contain asbestos, we then provide a risk analysis and based on this analysis we define appropriate asbestos response options. However, once ACMs are identified, it is essential that a formal asbestos management plan be implemented.

2.2 Lead: Description, Properties, Uses and Health Effects

Lead was used extensively in paints and petroleum products for many years. Most metal structures such as bridges and steel framed buildings were red-leaded to protect the metal, and most exterior paints contained lead to protect it against the weather.

Lead was and is still also used in batteries and many other industrial processes such as welding and soldering, and so long as it is used with care it does not present any serious concerns. Lead paint however inevitably deteriorates and when it does it becomes flaky and unsightly which prompts its removal or refurbishment and it is here where a serious risk to health arises. The material should not generally be sanded but if that is unavoidable then wet or dry sand paper should be used to minimise dust levels. Nor should the paint be burnt off as the fumes are toxic. Again if this is unavoidable low heat guns should be used with operators in both cases wearing personal protective equipment to avoid exposure to dust or fumes.

Whilst there is no requirement to remove lead paint it is sound occupational hygiene practice to minimise exposure to flaking lead paint or lead dust. Many years of use of petrol containing lead has resulted in crops and other surfaces being coated with lead and it is frequently found in ceiling voids of older buildings.

The NSW Work Health & Safety Act 2011 requires all Property Owners and Managers to operate their premises in such a way that there is not an increased risk to the health of occupants or visitors to the premises, so it makes sense to carefully remove or encapsulate paints containing significant levels of lead as soon as they as seen to be deteriorating.

It is now recognised that lead can harm virtually every organ in the human body, and for some time now its use has been banned or is in the process of being phased out. This particularly applies to both lead in paint and in petrol. Lead can enter the body via respiration or absorption and by consuming food and water containing lead. It is described as a cumulative poison because it cannot be excreted and it can in fact be stored in the bones for twenty-thirty years before being released back into the blood stream.

It is particularly dangerous to children as it may be asymptomatic even when blood levels reach as high as 60-70 micrograms per decilitre (µg/dL). The National Health and Medical Research Council have set a specific goal “to achieve for all Australians a blood level of below ten micrograms per decilitre (µg/dL).

Lead poisoning in children may manifest itself in developmental problems, learning difficulties and behavioural problems whilst in adults severe exposure may lead to abdominal pain, constipation seizures and even death.

With children, a common form of lead ingestion occurs when they run their fingers along the old sash type window ledges which have accumulated dust containing lead from the paints used in bygone years, and then they put their fingers in their mouths.

Many lead materials or products are of no health risk whatsoever when used in the normal course of events. A health risk exists solely when lead dust or fumes are released into the air and when that air is inhaled into the lungs. Even then, it appears that most people exposed to relatively small amounts of lead do not develop any health related problems. However, numerous health studies conducted independently in many parts of the world prove conclusively that the chances of

developing serious illnesses are increased as exposure to lead is increased. Scientific evaluation of all the available human data provides no evidence for a "safe" level of lead exposure, thus any quantity should be considered potentially dangerous. Those at most risk are those constantly exposed, especially the lead workers in industry. The tragedy in dealing with lead linked diseases is that they only manifest themselves years or tens of years after the exposure, in essence those exposed to lead today are being "poisoned" without being aware of it.

Since we cannot cure the diseases caused by lead exposure and normally cannot even diagnose the disease until many years after exposure, the only correct course of action to take is one of prevention. Any level of lead containing materials inside a building constitutes a hazard. It should be noted that *hazard* is a potential for harm, whereas *risk* is the probability that this potential may become actual.

In this report, after we have identified the areas where lead testing occurred we provide a risk analysis and based on this analysis we define appropriate lead response options. Once lead deterioration is observed it is important that a formal lead paint management plan be implemented.

2.3 Synthetic Mineral Fibre: Description, Properties, Uses and Health Effects

Synthetic Mineral Fibre (SMF, or also known as Man Made Mineral Fibres (MMMFs)) is a term used to fibrous materials made from glass (glass fibre), silica, rock (rock wool) or alumina.

Widely used as an alternative to asbestos in insulation and fire-rating products and reinforcement in building materials, SMF products are now commonly used in commercial and residential buildings

Due to similarities in appearance, fibrous composition and uses, there are concerns that SMF may be associated with health effects similar to those found with asbestos.

Short term exposure has been proven to cause skin and eye irritation – this may involve reddening, burning, itching, prickling, scaling, thickening and inflammation around the fingernails. Mechanical irritation is more prevalent with thicker fibre widths.

Exposure to high concentrations of fibres with widths less then 3µm may cause upper respiratory tract irritation, through the release of greater quantities of inhalable and respirable fibres. Long term exposure to SMF has been shown to be associated with a slightly increased risk of lung cancer among those exposed. Animal studies have shown the potential of SMF to cause mesothelioma, but no cases of this lung disease were reported from studies in the fibreglass and rockwool manufacturing industries.

Animal studies and epidemiological results have led the World Health Organisation (WHO) International Agency for Research on Cancer to classify fibres such as refractory ceramic fibres and other specialist fibres as Class 2B carcinogens, that is to say they are possibly carcinogenic to humans. Further more other older types of SMF including Mineral wools (including both glass wool and rock wool) have been classified as class 3 carcinogens, which defines them as not classifiable as to their carcinogenicity to humans, that is to say insufficient evidence exists to classify them. As such Worksafe Australia has also classified the above products category 2 and 3 respectively. Category 2 carcinogens to be regarded as if they are carcinogenic to man, and Category 3 carcinogens to be regarded as materials that cause concern owing to their possible carcinogenic effect, but to which satisfactory information is unavailable to make a satisfactory assessment.

Furthermore, newer SMF fibres are also in circulation that have been exonerated from being classified as a carcinogen due to their low bio persistent nature. Such fibres may still cause mechanical irritation but are not considered carcinogenic.

With other cancer-causing substances (carcinogens), we know that there is no safe level of exposure -that is, there is no low level that can be guaranteed not to cause an increased cancer risk. However, Current scientific opinion is that SMF caused chronic health effects will not occur under typical "modern-day" operations, provided adequate precautions are taken in the workplace. In particular fibrous dust is less easy to limit and control on construction sites and it is very important to ensure that workers in the construction, as well as the manufacturing, industry are

protected from over exposure. As such risk control measures not only include dust suppression techniques, respiratory and eye protection, overalls and gloves, but also control air monitoring as per NOSHC SMF membrane filter method, to ensure fibre levels do not breach the current national exposure standard of 0.5f/ml should be considered to assess the effectiveness of control measures in place.

2.4 Polychlorinated biphenyls (PCBs): Description, Properties, Uses and Health Effects

PCB is the common name for polychlorinated biphenyls. PCBs are a subset of the family of chlorinated hydrocarbons. PCBs range in appearance from colourless, oily liquids to more viscous and increasingly darker liquids, to yellow then black resins, depending on chlorine content of the PCB.

These synthetic compounds are chemically stable, have good insulating properties and do not degrade appreciably over time or with exposure to high temperatures. If these chemicals are released into the environment, they do not readily break down and can accumulate in fatty tissues of animals. The longevity of PCBs and their affinity for fatty tissue can result in PCBs moving up and concentrating through the food chain. Research has found that some animal species, such as young fish, are particularly sensitive to PCBs. PCBs in the Australian environment, and their subsequent presence in food, can also have a serious effects on the export of Australia's agricultural products.

Generally manufactured between the mid 1920's and the late 1970's, PCB's were used for applications requiring stable, fire resistant materials with heat transfer properties.

PCBs were particularly used for applications requiring dielectric fluids, notably light ballasts, capacitors and transformers with the major use of PCBs in the electrical industry has been as insulating fluid inside transformers and capacitors.

These transformers and capacitors have ranged in size from the very large transformers which contain several thousand litres of PCBs and were typically used by electrical supply businesses and heavy industries, to the small capacitors which may only contain several millilitres of PCBs and were used in farming equipment and on commercial premises.

Capacitors containing PCBs were installed in various types of equipment including fluorescent light fittings during the 1950's, 60's and 70's.

2.4.1 *Are PCBs harmful?*

PCBs can enter the body in three ways:

- absorption through the skin;
- inhalation of PCB vapour (at room temperature, the vapour concentrations of PCBs are not significant); and
- ingestion, if there is contamination of food or drink.

The likelihood of becoming sick from PCB exposure increases with the length of time and the amount of material that a person might come in contact with. The most commonly observed symptom in people exposed to high levels of PCBs is a condition known as chloracne. It is a severe, persistent acne-like rash due to repeated and prolonged contact of PCBs with skin. This condition has also occurred in people who have accidentally ingested PCBs orally. Very high exposure to PCBs may also cause liver damage and damage to the nervous system, resulting in numbness, weakness and tingling in the arms and legs. There is the possibility that PCBs may cause cancers.

2.4.2 *What are the Controls?*

In 1997 the Polychlorinated Biphenyl Chemical Control Order 1997 (PCBCCO, 1997) repealed the earlier gazetted 1994 Chemical Control Order for PCB waste. The 1997 CCO sets controls on

activities including the generation, processing, storing, conveying and disposing of PCB material or PCB wastes, depending upon the PCB concentration. It also requires people storing PCBs to:

- develop emergency management arrangements;
- carry out a survey of potential PCB containing equipment; and
- undertake a risk management program to ensure that PCBs are removed from equipment and/or processed to reduce PCB levels, within specified timeframes.

The specific phase-out requirements depend upon the concentration of the PCBs and whether the PCBs are located in a priority area, such as schools, hospitals, aquatic spawning areas and the habitats of endangered species.

2.5 Chlorofluorocarbons (CFCs): Description, Properties, Uses and Environmental Effects

CFCs are nontoxic, non-flammable chemicals containing atoms of carbon, chlorine, and fluorine used in the manufacture of aerosols, foams, packing materials, solvents and refrigerants. CFCs are safe in most applications and inert in the lower atmosphere but decompose in the upper atmosphere via UV radiation, releasing the chlorine atoms which destroy the ozone in the stratosphere.

Reduction in ozone in the atmosphere can cause biological damage to plants and animals as it blocks harmful ultraviolent radiation, specifically UV-B. The Montreal Protocol to Reduce Substances that Deplete the Ozone Layer provides for the elimination of these compounds by the year 2000.

3.0 RISK ASSESSMENTS

3.1 General

The information collected by HBI during the site inspections is used to calculate an exposure risk associated with a particular hazardous material. This assessment provides guidelines to help prioritise action levels for identified ACMs, lead products, PCBs or SMF. This is assessed solely by the lead surveyor undertaking the inspection on behalf of Ventia Pty. Ltd. Should further clarity be necessary to assess the more specific human exposure potential taking into account occupancy levels and frequency of access a full priority assessment score can be generated with the help of Ventia Pty. Ltd.

3.1.1 *Exposure risk analysis*

Before taking into account the condition and type of hazardous material present, the general risk of exposure is assessed. Factors used in the exposure risk analysis included:

- The Accessibility. This is based on the hazardous materials location, accessibility, and amount that contribute to its risk of disturbance.
- The Likelihood of Disturbance takes into account the severity of any potential disturbance based on the main type of activities undertaken in the area and any maintenance carried out in the area that requires direct disturbance of the hazardous material.

The following risk assessment matrix was used to evaluate the overall exposure risk from an identified hazardous material;

		Likelihood of disturbance			
		Very High	**High**	**Medium**	**Low**
Accessibility	**Very High** e.g. confined space	**Very high**	**Very high**	**Very high**	**High**
	High e.g. offices or rooms with high activity	**Very high**	**High**	**High**	**Moderate**
	Medium e.g. offices or rooms with normal activity	**High**	**High**	**Moderate**	**Moderate**
	Low e.g. large, well ventilated indoor areas	**Moderate**	**Moderate**	**Moderate**	**Low**
	Very low e.g. Outside, not normally accessible	**Moderate**	**Low**	**Low**	**Low**

Table 1: Exposure risk matrix[1]

[1] The above examples are subject to the surveyor's judgement when on site. Further details on how accessibility and likelihood of exposure are categorized can be found in Healthy Buildings International Standard Operating Procedures

3.2 Asbestos Containing Materials

3.2.1 *Overall Risk Assessment*

The information collected by HBI during the site inspections is used to calculate an overall risk associated with a particular asbestos containing material. Overall risk ratings range from very high to very low.

Factors used in the risk analysis included:

- The type of asbestos containing material, with regards to Friable and non friable.[2]
- The physical condition of the material, ranging from good to poor. This assessment takes into account any enclosure or encapsulation, or any damage or visible debris.
- Probability of asbestos fibre exposure or lead exposure, ranging from very high to low

The following risk assessment matrix was used to evaluate the overall risk rating where asbestos containing materials were identified;

		Probability of Exposure			
		Very High	**High**	**Medium**	**Low**
Type, Condition	**Friable and Poor** e.g. Flock spray or debris	**Very high**	**Very high**	**Very high**	**High**
	Friable and Fair e.g. Textile rope seal	**Very high**	**High**	**High**	**Moderate**
	Friable and Good e.g. encapsulated or enclosed pipe lagging	**High**	**High**	**Moderate**	**Moderate**
	Non friable and Poor e.g. fibro with visible debris	**Moderate**	**Moderate**	**Moderate**	**Low**
	Non friable and Fair e.g. damaged fibro	**Moderate**	**Low**	**Low**	**Very low**
	Non friable and Good e.g. pained fibro with no damage	**Low**	**Low**	**Very Low**	**Very low**

Table 2: Asbestos Overall Risk Matrix[3]

[2] Friable asbestos is material containing asbestos which, when dry, is or may become crumbled, pulverised or reduced to powder by hand pressure. Non Friable asbestos is asbestos containing material that is bound in a matrix

[3] The above examples are subject to the surveyor's judgement when on site. Further details on how accessibility and likelihood of exposure are categorized can be found in Healthy Buildings International Standard Operating Procedures

Table 3 defines the general recommended controls and priority levels associated with the risk ratings used in this risk assessment.

Risk	Control	Time
Very High	Isolate the area and implement a permit to work system. Conduct interim air monitoring and re-inspect regularly until material can be remove along with and all associated debris under controlled conditions by a suitably licensed contractor, or encapsulate and enclose the material and environmentally clean	Immediate action
High	Isolate the area and implement a permit to work system. Re-inspect regularly until material can be removed along with and all associated debris under controlled conditions by a suitably licensed contractor or enclosed / encapsulated and managed. Implement correct signage if material is to remain in-situ.	Immediate / near future action
Moderate	Enclose or encapsulate material and Implement correct signage. Ensure management controls are put in place: admin, monitor, train, implement procedures and apply personal protective equipment	Within 6 months
Low	Implement correct signage. Ensure management controls are put in place: admin, monitor, train, implement procedures and apply personal protective equipment	Within 12 months
Very low	Implement correct signage. Ensure management controls are put in place: admin, monitor, train, implement procedures and apply personal protective equipment	Within 12 months

Table 3: Asbestos Risk Rating and Controls

3.3 Lead Containing Products

3.3.1 *Overall Risk Assessment*

The information collected by HBI during the site inspections is used to calculate an overall risk associated with a particular lead containing product. Overall risk ratings range from very high to very low.

Factors used in the risk analysis included:

- The physical condition of the material, ranging from good to poor, this also directly is related to the friability of the product. This assessment takes into account any enclosure or encapsulation, or any damage or visible debris.
- Probability of lead exposure, ranging from very high to low generated from the exposure risk assessment.

The following risk assessment matrix was used to evaluate the overall risk rating where asbestos containing materials were identified;

		Probability of Exposure			
		Very High	**High**	**Medium**	**Low**
Type, Condition	**Friable and Poor** e.g. Lead containing dust	**Very high**	**Very high**	**Very high**	**High**
	Friable and Fair e.g. heavily flaking lead paint, lead paint debris in poor condition	**Very high**	**High**	**High**	**Moderate**
	Friable and Good e.g. lightly flaking lead paint	**High**	**Moderate**	**Moderate**	**Low**
	Non friable Fair to Poor e.g. lead paint coating to a poor condition product, or thin warn paint coatings	**Moderate**	**Low**	**Low**	**Very Low**
	Non friable and Good e.g. lead paint in good condition or encapsulated.	**Low**	**Low**	**Very Low**	**Very Low**

Table 4: Lead Overall Risk Matrix[4]

[4] The above examples are subject to the surveyor's judgement when on site. Further details on how accessibility and likelihood of exposure are categorized can be found in Healthy Buildings International Standard Operating Procedures

Table 5 defines the general recommended controls and priority levels associated with the risk ratings used in this risk assessment.

Risk	Control	Time
Very High	Isolate the area and implement a permit to work system. Conduct interim lead in air monitoring and risk assess exposure. Remove along with and all associated debris under controlled conditions by a suitably licensed contractor, or encapsulate and enclose the material and environmentally clean, or enclose permanently with correct signage and manage with administration controls until removed	Immediate action
High	Isolate the area and implement a permit to work system. Re-inspect regularly until material can be encapsulated (repainted) and administrative controls put in place along with the removal and disposal of all associated debris removed by a suitably trained contractor. Implement correct signage if material is to remain in-situ.	Immediate / near future action
Moderate	Enclose or encapsulate material and Implement correct signage. Remove and dispose of all associated debris with a by a suitably trained contractor. Ensure management controls are put in place: admin, monitor, train, implement procedures and apply personal protective equipment	Within 6 months
Low	Implement correct signage. Ensure management controls are put in place: admin, monitor, train, implement procedures and apply personal protective equipment	Within 12 months
Very low	Implement correct signage. Ensure management controls are put in place: admin, monitor, train, implement procedures and apply personal protective equipment	Within 12 months

Table 5: Lead Risk Rating and Controls

3.4 Synthetic Mineral Fibres

3.4.1 *Overall Risk Assessment*

The information collected by HBI during the site inspections is used to calculate an overall risk associated with a particular SMF containing material. Overall risk ratings range from high to very low.

Factors used in the risk analysis included:

- The type of SMF containing material, with regards to Friable and non friable.[5]
- The SMF product fibre type, and the associated potential carcinogen risk associated with those fibres[6].
- The physical condition of the material, ranging from good to poor. This assessment takes into account any enclosure or encapsulation, or any damage or visible debris.
- Probability of SMF exposure ranging from very high to low

The following risk assessment matrix was used to evaluate the overall risk rating where SMF containing materials were identified;

		Probability of Exposure			
		Very High	**High**	**Medium**	**Low**
Type, Condition	**Friable and poor category 2 SMF product** e.g. spray insulations with Refractory ceramic fibers	**Very high**	**Very high**	**High**	**High**
	Friable moderate to fair category 2 SMF product e.g. pipe laggings	**Very high**	**High**	**High**	**Moderate**
	Friable moderate to poor category 3 SMF product e.g. spray coatings, pipe lagging	**High**	**Moderate**	**Moderate**	**Moderate**
	Friable Good condition category 2 or 3 e.g. good condition lagging, encapsulated spray coating	**Moderate**	**Moderate**	**Low**	**Low**
	Non-Friable category 2 or 3 SMF products e.g. SMF bonded in a matrix	**Moderate**	**Low**	**Very low**	**Very low**
	Friable new generation fibers e.g. new low bio-persistence fibers	**Low**	**Very Low**	**Very Low**	**Very low**

Table 6: SMF Overall Risk Matrix[7]

Table 7 defines the general recommended controls and priority levels associated with the risk ratings used in this risk assessment.

[5] Friable material by definition, when dry, is or may become crumbled, pulverised or reduced to powder by hand pressure. Non Friable asbestos is material that is bound in a matrix

[6] Based on the AIOH position of potential carcinogenic risk evidence, older SMF products can be classified as category 2 or 3 carcinogens. Category 2 – Should be for making a satisfactory assessment. considered carcinogenic to man, Category 3 – potentially has carcinogenic effects and is of concern, but available information is not adequate

[7] The above examples are subject to the surveyor's judgement when on site. Further details on how accessibility and likelihood of exposure are categorized can be found in Healthy Buildings International Standard Operating Procedures

Risk	Control	Time
Very High	Isolate the area and implement a permit to work system. Conduct interim SMF air monitoring and re-inspect regularly until material can be repaired or removed along with and all associated debris under controlled conditions by a suitably trained contractor with appropriate SWMS to reduce fibre release, or encapsulate and enclose the material and environmentally clean area	Immediate action
High	Isolate the area and implement a permit to work system. Re-inspect regularly, Remove (in the same manor as above), repair, encapsulated and managed as necessary to reduce risk. Implement correct signage if material is to remain in-situ.	Immediate / near future action
Moderate	Maintain and implement correct signage. Ensure management controls are put in place: admin, monitor, train, implement procedures and apply personal protective equipment	Within 6 months
Low	Implement correct signage. Ensure management controls are put in place: admin, monitor, train, implement procedures and apply personal protective equipment	Within 12 months
Very low	Implement correct signage. Ensure management controls are put in place: admin, monitor, train, implement procedures and apply personal protective equipment	Within 12 months

Table 7: SMF Risk Rating and Controls

3.5 PCB and CFC Containing Products

3.5.1 *Overall Risk Assessment*

The information collected by HBI during the site inspections is used to calculate an overall risk associated with a particular PCB or CFC containing product. Overall risk ratings range from very high to very low.

Factors used in the risk analysis included:

- The physical condition of the container bunding, ranging from good to poor. This assessment takes into account any further enclosure, or any damage or visible leakage present.
- Probability of exposure, ranging from very high to low generated from the exposure risk assessment.

The following risk assessment matrix was used to evaluate the overall risk rating where PCB or CFC containing materials were identified;

		Probability of Exposure			
		Very High	**High**	**Medium**	**Low**
Type, Condition	**Very Poor, Leaking and uncovered** e.g. exposed leaking strip light capacitor / CFC tubing	**Very high**	**Very high**	**Very high**	**High**
	Very Poor, Leaking but enclosed within equipment e.g. leaking capacitor within electrical cabinet / tubing within aircon or refrigerator	**Very high**	**High**	**Moderate**	**Moderate**
	Poor to fair e.g. Rusting but intact capacitor/tubing in operational condition	**Moderate**	**Low**	**Low**	**Low**
	Good e.g. confirmed PCB capacitor / CFC tubing in good operational condition	**Low**	**Low**	**Very Low**	**Very Low**

Table 8: PCB and CFC Overall Risk Matrix[8]

[8] The above examples are subject to the surveyor's judgement when on site. Further details on how accessibility and likelihood of exposure are categorized can be found in Healthy Buildings International Standard Operating Procedures

Table 9 defines the general recommended controls and priority levels associated with the risk ratings used in this risk assessment.

Risk	Control	Time
Very High	Isolate the area and implement a permit to work system, including adjacent areas effect by leakage. Re-inspect regularly until the removal of the PCB/CFC containing product and associated waste by a suitably trained contractor. Implement correct signage until removal.	Immediate action
High	Isolate the area and implement a permit to work system. Re-inspect regularly until the removal of the PCB/CFC containing product and associated waste by a suitably trained contractor. Implement correct signage until removal.	Immediate / near future action
Moderate	Implement correct signage restrict access as much as reasonably possible. Plan to implement removal of capacitor and dispose of all associated PCB/CFC waste by a suitably trained contractor. Ensure management controls are put in place: admin, monitor, train, implement procedures and apply personal protective equipment	Within 6 months
Low	Implement correct signage. Ensure management controls are put in place: admin, monitor, train, implement procedures and apply personal protective equipment	Within 12 months
Very low	Implement correct signage. Ensure management controls are put in place: admin, monitor, train, implement procedures and apply personal protective equipment	Within 12 months

Table 9: PCB and CFC Risk Rating and Controls

3.6 Negative Samples

The following materials were suspected in regards to containing hazardous materials and were found to be negative after laboratory analysis:

Location	Material	Date Sampled
Interior - Small room west of the north entrance - Floor	Vinyl tiles (enclosed beneath carpet)	November 2007
Exterior - Eaves above north entrance	Fibro cement sheeting	November 2007
Interior - Office - Walls	White paint and undercoats	November 2007
Interior - Computer room - Walls	Light green paint and undercoats	November 2007
Interior - Common room - Walls	Purple paint and undercoats	November 2007
Exterior - Doors	Grey paint and undercoats	November 2007

4.0 HAZARDOUS MATERIALS

4.1 Lead Containing Materials

Sample #	Date		Specific location	Material (Colour/ layer)	Extent	Friable/ Non Friable	Condition	Exposure	Refer Identical material	Result	Overall Risk status		Comments	Photo
	Sample Date	Reinspection Due									Previous	Current		
Spot test 5	9 July 19	July 2020	Exterior - North wall	Cream paint and undercoats	Approx. 10m²	N/A	Good	Low	N/A	Contains lead	Low	Very low	Maintain condition and reinspect annually	

5.0 EXCLUSIONS

Specific location	Reason	Photo
Electrics	Safety - Live electrics	N/A

6.0 CONCLUSIONS

6.1 Lead

All lead paint identified within the building had a low risk rating.

No asbestos or synthetic mineral fibre products have been identified within this site.

7.0 RECOMMENDATIONS

7.1 Lead

The WHS Act and associated regulations 2011 requires all property owners and managers to operate their premises in such a way that there is not an increased risk to the health of occupants or visitors to the premises, so it makes sense to carefully remove or encapsulate paints containing significant levels of lead as soon as they as seen to be deteriorating.

We recommend that the area affected by lead contaminated paint be managed though the incorporation of recommended actions into the routine maintenance program. If deterioration does occur, we recommend the material be encapsulated in such as manner that it does not presents a risk to building users. Painting contractors should be advised that the materials contain lead and they should only be dealt with by an experienced lead paint contractor. *AS4361.2:2017: Guide to lead paint management Part 2 Residential & Commercial Buildings* provides options and procedures for managing lead paint.

The NSW Environmental Protection Agency recommends the use of lead dust standards to determine the safety of premises for re-occupancy after renovation and clean up is completed. The lead dust loadings for various surfaces are from *AS4361.2:2017: Guide to lead paint management Part 2 Residential & Commercial Buildings*.

These standards were originally based on the 1995 US guidance for investigation of lead poisoning. In the US the “clearance” level for bare and carpeted floors was lowered in the year 2000 to 0.4 mg/m^2 or in other words 400 µg per m^2. The Australian Standard is yet to change to this more rigorous level.