Asbestos Register

Blue Mountains City Council maintains asbestos registers ("registers") and asbestos management plans ("plans") relating to each of the buildings owned or occupied by the Council. The registers and plans record information about the existence and location of any known or presumed asbestos containing materials ("ACM") within those buildings.

The Council's governing body has adopted the Council's corporate [/asbestos-registers]Asbestos Policy, which is available on our website.

The registers and plans are in two forms. First, the Council maintains a corporate asbestos register and a corporate asbestos management plan. Second, the Council has prepared individual registers and individual plans for each building that contains or may contain ACM. Hardcopies of those individual registers and plans are held in the building concerned.

Whenever work is carried out on a Council building the hardcopy register and the hardcopy plan are each amended by hand, as required. This action ensures that Council employees or contractors who work from time to time within that building have access to accurate information about the ACM that it contains or may contain.

The electronic versions of each of the corporate plans and registers, and of the plans and registers for individual buildings, are periodically updated. However, the key documents are the hardcopy registers and the hardcopy plans for each building which must be inspected before any work is carried out on that building.

NOTES:

(1) The Council's electronic registers and plans are valid as dated, and ARE NOT to be relied upon as definitive records and ARE NOT to be used for reference purposes for any construction, demolition, maintenance or any other onsite works. IN ALL CASES, the onsite hardcopy building specific asbestos register and building specific asbestos management plan MUST BE CONSULTED prior to the commencement of physical works on the building concerned. While the electronic versions of the Council's registers and plans provide guidance concerning the presence or possible presence of ACM it is the onsite hardcopy registers and plans which will remain up to date.

(2) The Council's electronic registers and plans relate to Council owned or managed buildings. The electronic registers and plans do not relate to structures (such as picnic shelters, bus shelters and other freestanding structures). Before any work is carried out on such structures the Council's Hazardous Materials Team ("HMT") MUST BE CONSULTED. The HMT may be contacted at **council@bmcc.nsw.gov.au**. The HMT will provide information concerning any ACM that may be present in the structure concerned.

Further information: Further information on safe asbestos management may be obtained by contacting Councils Hazardous Materials Management Team at **council@bmcc.nsw.gov.au**.

ASBESTOS MANAGEMENT REGISTER

Blue Mountains City Council

Cottage 2, Residential Property

2-20 Lawson Road

Springwood, NSW, 2777

Jan 2020

19761

Report Generated by

DOCSIES

Prepared by

JMB ENVIRONMENTAL CONSULTING

EXECUTIVE SUMMARY

JMB Environmental Consulting Pty Ltd were commissioned by Blue Mountains City Council to conduct an Asbestos Management Register for the building located at 2-20 Lawson Road, Springwood, NSW, 2777.

The inspection was conducted on 16/12/2019, and the following items were identified:

ASBESTOS

LOCATION	MATERIAL
LOW RISK	
External GF All Elevations Window frames	Putty
External GF Toilet Wall panels behind plasterboard	Flat cement sheets
External GF Laundry Wall panels behind plasterboard	Flat cement sheets
Internal GF Kitchen Wall panels	Flat cement sheets
Internal GF Bath Ceiling panels	Flat cement sheets
Internal GF Bath Wall panels	Flat cement sheets
Internal GF Kitchen Ceiling panels	Flat cement sheets
VERY LOW RISK	
External GF South Elevation Electrical mounting board	Compressed bitumen
Internal GF Roof Space Panels forming ceiling to kitchen and bathroom below	Flat cement sheets
Internal GF Roof Space Adjacent manhole	Cement debris

NO ACCESS OR LIMITED ACCESS

LOCATION	REASON
Internal Sub-Floor Undercroft Undercroft	Limited access due to only one entry point to confined space. Stored items also preventing full access to area

Please refer to Appendix A for the full materials register, Appendix B for recommended action code guidance and Appendix E for guidance on possible risk mitigation strategies than can be adopted on these materials.

DOCUMENT CONTROL

DOCUMENT NO.	DATA ENTRY		APPROVED & AUTHORISED	
	DATE	PERSONEL	DATE	PERSONEL
19761Cottage 216122019AMR	16/12/2019	Nathan Bridger	23/01/2020	Jim Batty

PREVIOUS DOCUMENTATION

REPORT #	COMPANY	DATE
19761Cottage 216122019AMR-1	JMB Environmental Consulting Pty Ltd	23/01/2020
19761Cottage 216122019AMR	JMB Environmental Consulting Pty Ltd	16/01/2020

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INTRODUCTION

BUILDING INFORMATION

ASSET #:	Cottage 2
BUILDING NAME:	Residential Property
BUILDING ADDRESS:	2-20 Lawson Road, Springwood, NSW, 2777
BUILDING DESCRIPTION:	Single storey residential property with cement sheeting walls and ceilings, timber floors and a corrugated metal roof.
APPROXIMATE AGE:	1960s

SCOPE OF WORKS

REPORT TYPE	Asbestos Management Register
OBJECTIVE	To locate, identify and assess the human exposure risks associated with hazardous materials. For the purpose of this report hazardous materials includes: • Asbestos
THE CLIENT	Blue Mountains City Council
AREA COVERED BY THE SCOPE	Inspection of residential property
MATERIALS COVERED BY THE SCOPE	Asbestos
LEAD SURVEYOR	Nathan Bridger
LEAD SURVEYOR LAA NO.	LAA001296
ASSISTANT SURVEYOR	-
ASSISTANT SURVEYOR LAA NO.	-
INSPECTION DATE	16/12/2019

SAMPLE METHODOLOGY	Based on the assessor experience, if any suspect asbestos containing materials are encountered, they will be sampled using dust suppression techniques and correct sampling methodology for the material being sampled. JMBECs sampling methodology has been omitted from this report due to file size, but is available on request. In summary, asbestos containing materials were sampling in accordance with the United Kingdom HSE guidance HSG264 for the most part with guidance also taken from Safework Australia's model code of practice (CoP) How to manage and control asbestos in the workplace. Free versions of both these documents are freely available online from the respective publishing institutions. This is with the exception of sampling frequency, which will be largely reduced for large areas of visually assessed homogenous materials, in these locations representative or composite sampling techniques may be used at the surveyor's discretion after visually inspecting the material in its entirety. This methodology will be discussed with the client as and when the presence of larger sections of potentially asbestos containing materials are discovered, namely, but not limited to, large sections of insulated pipework, false ceiling tiles and large fiber cement surfaces. All sampled asbestos materials are double bagged, and transported under strict chain of custody to National Australian Testing Authority (NATA) accredited laboratories for analysis.
PRESUMED SAMPLES	Where it is unsafe to access a material for close inspection or sampling (e.g.high level eaves, live electrical panels etc.), or access prohibits close inspection but the assessor has encountered materials in similar area in the past (e.g. textile asbestos flash pads in fuses), the material or area will be presumed to contain the relevant hazardous material until proven otherwise.They are then risk assessed and photographed in the same way as sampled materials.
INACCESSIBLE AREAS	While maximum effort was made to inspect all areas, when access was unavailable and where practicable avenues of inspection had been exhausted, a reason was provided and the area deemed to contain ACM until otherwise determined. Specific areas of no or limited access, that are not encompassed or detailed in the scope or survey limitations, are detailed within the Register which can be found in Appendix A.

LEGISLATIVE REQUIREMENTS & GUIDANCE

The following legislation and guidance documents govern the management of hazardous contaminants contaminants throughout NSW.

This report was prepared in accordance with the following documents:

ASBESTOS

NO.	DOCUMENT NAME
LEGISLATION	
1	Work Health and Safety (WHS) Act NSW (2011 [reviewed 2016]).
2	WHS Regulation NSW 2017
STANDARDS	
3	AS/New Zealand Standard (NZS) 1716 (2003), Respiratory Protective Devices.
4	AS/NZS 1715 (2009), Selection, Use and Maintenance of Respiratory Protective Devices.
5	Australian Standard (AS) 4964 (2004) Method for the qualitative identification of asbestos in bulk samples.
CODES OF PRACTICE	
6	United Kingdom Health & Safety Executive. (2012). Health and Safety Guidance 264, Asbestos: The survey guide.
7	Safework Australia (2016), How to Manage and Control Asbestos in the Workplace: Code of Practice.
8	Safework Australia (2016), How to Safely Remove Asbestos: Code of Practice.
9	National Occupational Health and Safety Commission (NOHSC):3003 (2005), Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres. 2nd Edition
10	Workcover NSW (2008), Your Guide to Working with Asbestos
11	National Occupational Health and Safety Commission. (1989). 3006: Guidance Note on the Membrane Filter Method for the Estimation of Airborne Synthetic Mineral Fibres.
12	United Kingdom Health & Safety Executive. (2002). Health and Safety Guidance 227, A Comprehensive Guide to Management of Asbestos in Premises.

HAZARDOUS SUBSTANCES

ASBESTOS

Asbestos is a naturally occurring mineral fibre, consisting of two groups:

- Serpentine Group – comprised of only chrysotile (white asbestos)
- Amphibole Group – comprised of anthophyllite, amosite (brown asbestos or grey asbestos), crocidolite (blue asbestos), tremolite, and actinolite.

Due to its flexibility, tensile strength, insulating properties (both heating and electrical), chemical inertness and affordability, asbestos was widely regarded as one of the most versatile materials during the mid 20th Century.

These properties made asbestos a very popular material, and it was used in many industries and applications worldwide. Australia was one of the highest users per capita in the world up until the mid- 1980s. It is approximated that one third of all homes built in Australia contain asbestos products. Raw asbestos was mined extensively throughout Australia until the mid 1980s.

Asbestos containing materials (ACMs) are categorised as friable and non-friable:

- Non-friable asbestos is usually bonded in a matrix after it has been mixed with other materials like cement or plastics. Non friable asbestos is most commonly found in the built environment.
- Friable asbestos is defined as any asbestos material in a powder form or can be crumbled, pulverised or reduced to a powder by hand pressure when dry_ and is much more likely to become airborne.

Both friable and non-friable asbestos pose a significant health risk to all workers and others, and as such are governed by strict regulations and codes of practice. Asbestos containing materials must be identified and then properly managed until a time when they are to be carefully removed.

The Work Health Safety (WHS) Regulations set out the training and competency requirements for asbestos assessors, asbestos removal workers and supervisors. Under the Regulations, two licenses have been established — Class A and Class B. Businesses with a Class A license are permitted to remove all types of asbestos, including both friable and non-friable asbestos. Businesses with a Class B license can only remove non-friable asbestos.

The WHS Regulations have also created a new license for asbestos assessors, whom must be employed to carry out air monitoring and clearance inspections following removal of friable asbestos.

In a special note to asbestos containing dusts (ACD), settled dusts can contain free fibres, in areas adjacent to friable, low density or heavily damaged non-friable products, or even in locations of large quantities of good to moderate condition non-friable products will be considered to be generated from the wear and tear or installation of the non-friable product. The level of risk of requirements for remedition of ACD will depend on the severity of the damage and the type of product (friable, non-friable or low density) that the dust is identified to have originated from. Dust sampling for asbestos can only be done in a qualitative manner, to establish presence or absence of asbestos.

LIMITATIONS

This Hazmat Register has been prepared in line with an agreement made between JMBEC and Blue Mountains City Council, and was developed following a site inspection carried out by an experienced and qualified licensed asbestos assessor. The methodology used is in accordance with the codes of practice listed in the previous section. As such this report is solely for the use of Blue Mountains City Council, and is intended for use by no other person(s) or parties. It should be presented in full, and should not be used to support other objectives or documents without written approval from JMBEC.

To the best of our knowledge, this report is thorough and correct, however JMBEC cannot guarantee complete accurateness. This report relates to the identification of asbestos containing materials and, while every attempt has been made to locate all Hazardous materials, the extent of the site inspection was limited to non-destructive sampling. This restricts any major damage to building materials such as ceilings, walls and partitions, and flooring etc.

In light of this, no guarantees are made that any area of 2-20 Lawson Road is absolutely free of asbestos materials since future refurbishment or demolition may reveal asbestos containing materials. JMBEC would strongly advise conducting a destructive survey for the presence of asbestos on specific areas of the building before any major works begin.

Specific exclusions are captured within the Register located in Appendix A. Until such a time that these areas can be accessed, the probability of the presence of asbestos containing materials must be assumed until proven otherwise.

JMBEC cannot be accountable for any omissions to this report resulting from information, data, systems or areas of the building not made readily accessible by Blue Mountains City Council.

The following areas are not regarded as ‘inaccessible areas’ and therefore inspected as part of the scope or presumed to contain asbestos subject to safe or reasonable access:

- Locked rooms;
- Crawl Spaces, that are not considered confined space by the surveyor;
- Confined spaces where safe access has been provided by Blue Mountains City Council;
- Heights below 3m;
- Heights above 3m, where safe access has been provided by Blue Mountains City Council;
- Within electrical equipment, where isolation and safe access has been proven and provided by Blue Mountains City Council;
- Basement and cellars;
- Storage areas; and
- Ceiling spaces where safe access has been provided by Blue Mountains City Council.

If safe access is not provided by Blue Mountains City Council for hazardous areas, these areas will be listed specifically for their limited access with reasons for Blue Mountains City Council reference.

Examples of inaccessible areas that may contain asbestos or ACM:

- A cavity in a building that is completely (or almost completely) enclosed and suspected of containing asbestos (based on where asbestos is located elsewhere in the building) and access is only possible through destruction of part of the walls of the cavity;

- The inner lining of an old boiler pressure vessel (information on this type of vessel suggests it contain asbestos) and the inner lining is not accessible due to the design and operation of the boiler and access can only be via partial destruction of the outer layer;
- Vinyl tiles that may contain asbestos, which have had a number of layers of non-ACM placed over them and secured - where the layers above it have been well secured and require some form of destruction in order to access to vinyl that may contain asbestos;
- Enclosed riser shafts in multi-storey buildings containing cables that may be insulated with ACM.
- Air conditioning ducts that may contain asbestos gaskets, linings or insulation panels; and
- Sub-surface soils, concrete encased form work, cable ducts or pipework (beyond survey scope).

Areas not accessed are deemed to contain HAZMATs until such a time that access can be gained and the presence, or otherwise, of HAZMAT can be confirmed.

APPENDICES

APPENDIX A: REGISTER

Photos of identified materials are included in Appendix C, and are listed by their sample/reference number in the order listed in the register below.

#	Reference #	Hazard	Results	Material Description	Location	Quantity	Friable	Overall Risk Rating[1]	Action Item	RECOMMENDED TIME FRAMES	COMMENTS
1	197612A7	Asbestos	Presumed Asbestos	Putty	External, GF, All Elevations, Window frames	. Throughout	No	Low	A4	Annual Reinspection	Unable to obtain large enough sample
2	197612A4.1	Asbestos	Presumed Asbestos	Flat cement sheets	External, GF, Toilet, Wall panels behind plasterboard	4 m^2	No	Low	A4	Annual Reinspection	Tenant advised that asbestos sheeting behind plasterboard walls. Intrusive survey required prior to any refurb/demolition work being carried out.
3	197612A4	Asbestos	Presumed Asbestos	Flat cement sheets	External, GF, Laundry, Wall panels behind plasterboard	8 m^2	No	Low	A4	Annual Reinspection	Tenant advised that asbestos sheeting behind plasterboard walls. Intrusive survey required prior to any refurb/demolition work being carried out.
4	197612A6	Asbestos	Presumed Asbestos	Compressed bitumen	External, GF, South Elevation, Electrical mounting board	0.5 m^2	No	Very Low	A4	Annual Reinspection	Unable to obtain large enough sample
5	197612A5.3	Asbestos	NAD,ORG	Flat cement sheets	External, GF, North Elevation, Eaves	8 m^2	No	-	A5	-	-
6	197612A5	Asbestos	NAD,ORG	Flat cement sheets	External, GF, East Elevation, Eaves	6 m^2	-	-	A5	-	-
7	197612A5.5	Asbestos	NAD,ORG	Flat cement sheets	External, GF, South Elevation, Eaves	8 m^2	No	-	A5	-	-
8	197612A5.2	Asbestos	NAD,ORG	Flat cement sheets	External, GF, North Elevation, Wall panels	5 m^2	No	-	A5	-	-

[1] The individual scores for material assessment and exposure captured by the assessor on site, and that create the overall risk have been omitted for clarity, but are available here (https://docsies.com//asbestos/Edit/2e72750f-5571-40ef-a1a0-7f0b33a36958)

#	Reference #	Hazard	Results	Material Description	Location	Quantity	Friable	Overall Risk Rating[1]	Action Item	RECOMMENDED TIME FRAMES	COMMENTS
9	197612A5.1	Asbestos	NAD,ORG	Flat cement sheets	External, GF, East Elevation, Wall panels	13 m^2	-	-	A5	-	-
10	197612A5.4	Asbestos	NAD,ORG	Flat cement sheets	External, GF, South Elevation, Wall panels	5 m^2	No	-	A5	-	Includes panel to boxing above electrical box
11	197612A5.7	Asbestos	NAD,ORG	Flat cement sheets	External, GF, West Elevation, Eaves	5 m^2	No	-	A5	-	-
12	197612A5.6	Asbestos	NAD,ORG	Flat cement sheets	External, GF, West Elevation, Wall and ceiling panels to front porch	8 m^2	No	-	A5	-	-
13	197612La1	Limited access	Presumed to contain asbestos or hazardous materials	-	Internal, Sub-Floor, Undercroft, Undercroft	-	-	-	NA	Prior to demolition, refurbishment or operational access	Limited access due to only one entry point to confined space. Stored items also preventing full access to area
14	197612A1	Asbestos	CHR,AMO,CRO	Flat cement sheets	Internal, GF, Kitchen, Wall panels	10 m^2	No	Low	A4	Annual Reinspection	-
15	197612A2.2	Asbestos	CHR,CRO,ORG	Flat cement sheets	Internal, GF, Bath, Ceiling panels	4 m^2	No	Low	A4	Annual Reinspection	-
16	197612A1.1	Asbestos	CHR,AMO,CRO	Flat cement sheets	Internal, GF, Bath, Wall panels	10 m^2	No	Low	A4	Annual Reinspection	Assume cement sheeting also behind wall tiles
17	197612A2	Asbestos	CHR,CRO,ORG	Flat cement sheets	Internal, GF, Kitchen, Ceiling panels	8 m^2	No	Low	A4	Annual Reinspection	-
18	197612A2.1	Asbestos	CHR,CRO,ORG	Flat cement sheets	Internal, GF, Roof Space, Panels forming ceiling to kitchen and bathroom below	8 m^2	No	Very Low	A4	Annual Reinspection	-

[1]The individual scores for material assessment and exposure captured by the assessor on site, and that create the overall risk have been omitted for clarity, but are available here (https://docsies.com//asbestos/Edit/2e72750f-5571-40ef-a1a0-7f0b33a36958)

#	Reference #	Hazard	Results	Material Description	Location	Quantity	Friable	Overall Risk Rating[1]	Action Item	RECOMMENDED TIME FRAMES	COMMENTS
19	197612A3	Asbestos	CHR,CRO,ORG	Cement debris	Internal, GF, Roof Space, Adjacent manhole	0.02 m^2	No	Very Low	A3	Annual Reinspection	-

[1]The individual scores for material assessment and exposure captured by the assessor on site, and that create the overall risk have been omitted for clarity, but are available here (https://docsies.com//asbestos/Edit/2e72750f-5571-40ef-a1a0-7f0b33a36958)

APPENDIX B: RISK ASSESSMENT AND RECOMMENDATION ACTION CODES

RISK ASSESSMENT

Docsies risk assessment is explained, in tables 2 and 3. Our semi-quantitative risk assessment borrows elements from the materials risk assessment documented in HSG264: Asbestos: The survey guide – HSE and the priority risk assessment documented in HSG 227: A comprehensive guide to Managing Asbestos in premises – HSE, providing an element of quantification to the qualitative nature of site risk assessment.

Some of the elements of these well documented risk assessments have been omitted. Most notably the asbestos type from the materials risk assessment, as all types of asbestos are listed by the International Agency for Research on Cancer (IARC) as Type 1 Carcinogens. In addition we have omitted the maintenance activity from HSG 277. The reason being that human risk factors associated with maintenance activities are often difficult to assess in-situ, and require detailed input from the Person in Control of a Business of Undertaking (PCBU).

The risk assessment then takes into account all other Hazardous materials, and utilizes the similar algorithms to create a risk assessment for those materials.

The asbestos containing material risk score is a quantitative assessment determined by the sum of the scores based on the material assessment and the likelihood of exposure; i.e. Risk score = Material Score + Location Score (out of as possible 18).

An explanation of the material assessment and likelihood of exposure scores can be found in the further below.

Table 1 – Risk Scores

OVERALL RISK ASSESSMENT SCORE	OVERALL RISK RATING
0 - 4	Very Low
5-8	Low
9-13	Moderate
14-18	High

RECOMMENDATION ACTION CODES

Following the risk assessment of building materials for both asbestos containing and other Hazardous Materials an action score is assigned for recommended best practice to control the risk presented by the hazardous material. The action score will be assigned according to the surveyor's assessment of the situation at the time of the survey.

Table 2 – Overarching Recommended Risk Control Actions

Action Code	Risk Control Recommended Actions
A1	Restrict Access and remove under controlled conditions with licensed contractors
A2	Remove, enclose, encapsulate or seal by licensed contractors followed by a re-inspection and maintenance schedule under a management plan. Remove prior to refurbishment or Demolition by licensed contractors.
A3	Enclose, encapsulate or seal by appropriately trained general maintenance or licensed contractors. Implement re-inspection, maintenance and demolition schedule under a management plan. Remove or protect prior to refurbishment or demolition by licensed contractors or competent individuals as required.
A4	No remedial action required. Implement re-inspection and maintenance schedule under a management plan.
A5	No further action required
NA	Access to survey to be gained prior to refurbishment, demolition or modification of building materials in the area of limited or no access. In some situations access should be provided to survey prior to occupancy if a room is inaccessible.

Further interpretation of the recommended risk control actions can be found in Appendix E.

MATERIALS ASSESSMENT

Table 3 – Product Type (or debris)

EXAMPLES OF MATERIALS - ASBESTOS	SCORE
Asbestos reinforced composites (plastics, resins, mastics, roofing felts, vinyl floor tiles, semi-rigid paints or decorative finishes, asbestos cement etc)	1
Asbestos insulating board, mill boards, other low density insulation boards, asbestos textiles, gaskets, ropes and woven textiles, asbestos paper and felt	2
Thermal insulation (eg pipe and boiler lagging), sprayed asbestos, loose asbestos, asbestos mattresses and packing	3

Table 4 – Extent of the Damage or Deterioration

EXAMPLES OF MATERIALS - ASBESTOS	SCORE
Good condition: no visible damage	0
Low damage: a few scratches or surface marks; broken edges on boards, tiles etc	1
Medium damage: significant breakage of materials or several small areas where material has been damaged revealing loose asbestos fibres	2
High damage or delamination of materials, sprays and thermal insulation. Visible asbestos debris	3

Table 5 – Surface type or treatment 2

EXAMPLES OF MATERIALS - ASBESTOS	SCORE
Composite materials containing asbestos: reinforced plastics, resins, vinyl tiles	0
Enclosed sprays and lagging, asbestos insulating board (with exposed face painted or encapsulated), asbestos cement sheets etc	1
Unsealed asbestos insulating board, or encapsulated lagging and sprays	2
Unsealed laggings and sprayed asbestos	3

[2] Lead and PCB refers specifically to the analysis result

LIKELIHOOD OF EXPOSURE

Occupant Activity

Table 6 – Occupant Activity

EXAMPLE OF OCCUPANT ACTIVITY	SCORE
Rare disturbance activity (eg little used store room)	0
Low disturbance activities (eg office type activity)	1
Moderate disturbance activity (eg industrial or vehicular activity which may cause contact with ACMs)	2
High levels of disturbance, (eg fire door with asbestos insulating board sheet in constant use)	3

Likelihood of Disturbance

Table 7 – Likelihood of Disturbance

FREQUENCY OF DISTURBANCE	SCORE
Usually inaccessible or unlikely to be disturbed	0
Minimal likelihood for disturbance	1
Likely disturbance	2
Frequent disturbance	3

Human Exposure Potential

Table 8 – Human Exposure Potential

FREQUENCY OF HUMAN EXPOSURE POTENTIAL	SCORE
Infrequent	0
Monthly	1
Weekly	2
Daily	3

APPENDIX C: PHOTOGRAPHS

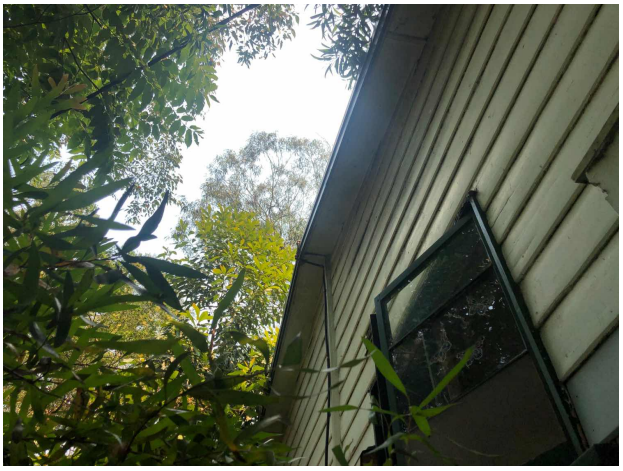
197612A4.1 Flat cement sheets External GF Toilet Wall panels behind plasterboard

197612A7 Putty External GF All Elevations Window frames

197612A4 Flat cement sheets External GF Laundry Wall panels behind plasterboard

197612A5.3 Flat cement sheets External GF North Elevation Eaves

197612A6 Compressed bitumen External GF South Elevation Electrical mounting board



197612A5.5 Flat cement sheets External GF South Elevation Eaves

197612A5 Flat cement sheets External GF East Elevation Eaves

197612A5.1 Flat cement sheets External GF East Elevation Wall panels

197612A5.2 Flat cement sheets External GF North Elevation Wall panels

197612A5.4 Flat cement sheets External GF South Elevation Wall panels

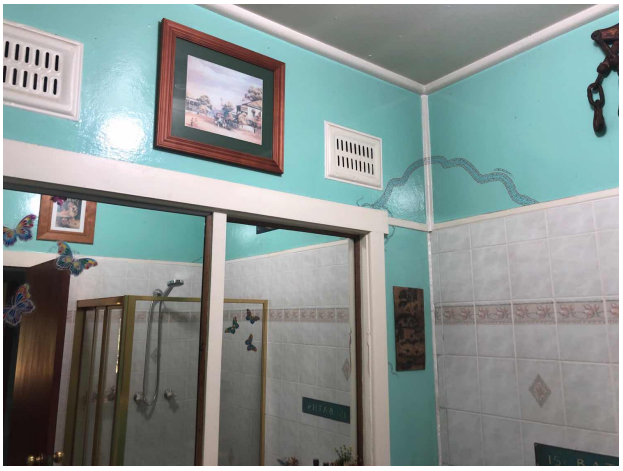
197612A5.4 Flat cement sheets External GF South Elevation Wall panels

197612A5.7 Flat cement sheets External GF West Elevation Eaves

197612A5.7 Flat cement sheets External GF West Elevation Eaves

197612A2.2 Flat cement sheets Internal GF Bath Ceiling panels

197612A5.6 Flat cement sheets External GF West Elevation Wall and ceiling panels to front porch



197612A1.1 Flat cement sheets Internal GF Bath Wall panels

197612La1 Internal Sub-Floor Undercroft Undercroft

197612A2 Flat cement sheets Internal GF Kitchen Ceiling panels

197612A1 Flat cement sheets Internal GF Kitchen Wall panels

197612A3 Cement debris Internal GF Roof Space Adjacent manhole

197612A2.1 Flat cement sheets Internal GF Roof Space Panels forming ceiling to kitchen and bathroom below

APPENDIX D: LABORATORY CERTIFICATES

JMB Environmental Consulting Pty Ltd
15/77-79 Bourke Road, Alexandria, NSW 2015
P:02 9545 6017
E: lab@jmbec.com.au
W: jmbec.com.au
ABN: 92 168 286 600

Certificate of Analysis – Asbestos Identification
REPORT NUMBER : 19761A20122019AID

CLIENT :	Blue Mountains City Council	**JOB NUMBER :**	19761
CLIENT CONTACT :	Brian Ashton	**DATE RECEIVED :**	18/12/2019
CLIENT REFERENCE :	2-20 Lawson Rd Springwood NSW 2777	**DATE ANALYSED :**	20/12/2019
CLIENT EMAIL :	jadams@bmcc.nsw.gov.au	**REPORT DATE :**	20/12/2019
CLIENT TELEPHONE :	0413334101	**SAMPLE DATE :**	16/12/2019

Test method:

Asbestos fibre qualitative determination in bulk & soil samples at JMB Environmental Consulting Pty Ltd (JMBEC) laboratory, is conducted by polarised light microscopy, in conjunction with the dispersion staining technique. The strategies and methods used are as per AS4964(2004) and in-house SOP JMBEC D123. All results of the tests, calibrations, and records are traceable to the Australian/national standard. Accredited for compliance with ISO/IEC 17025 - Testing. NATA accreditation number 19564

SAMPLE REFERENCE	LABORATORY REFERENCE	SAMPLE INFORMATION	SAMPLE DIMENSIONS (mm) / WEIGHT (g)	ANALYTICAL RESULT
197612A1	19761 -197612A1	Flat cement sheets	0.50	CHR, AMO, CRO
197612A2	19761 -197612A2	Flat cement sheets	2.00	CHR, CRO, ORG
197612A3	19761 -197612A3	Cement debris	0.80	CHR, CRO, ORG
197612A5	19761 -197612A5	Flat cement sheets	6.00	NAD, ORG

Legend:

NAD:	No asbestos detected
NADRL:	No asbestos found, at the reporting limit (0.1 g/kg / 0.01%)
CHR:	Chrysotile asbestos detected
AMO:	Amosite asbestos detected
CRO:	Crocidolite asbestos detected
ORG:	Organic fibre detected
SMF:	Synthetic mineral fibre detected
UMF:	Unknown mineral fibre detected

NATA WORLD RECOGNISED ACCREDITATION

Approved analyst

Name : Imran Javed

Signature :

Approved Signatory

Name : James Breslin

Signature :

Glossary and notes:

- AS4964 recommends minimum sample sizes for all materials. In particular, soil sample volume is 50-100ml (approximately 50 to 250g). It is the sampling party's responsibility to meet this recommendation.

- Other analytical reporting limits outside of mentioned scope is not cover by NATA accreditation; such as NEPM WA.

- JMBEC require receipt of all samples under a chain of custody, however JMBEC except no responsibility for the sampling method/location/transportation or packaging of samples from external sources.

*- *No asbestos detected by Polarized Light Microscopy in conjunction with Dispersion staining techniques. The client is advised to obtain a further result from an independent confirmatory analytical technique due to the nature of sample, e.g. scanning electron microscopy (SEM).*

APPENDIX E: FURTHER INTERPRETATION OF RECOMMENDED RISK CONTROL ACTIONS

The following details are designed to provide with Blue Mountains City Council guidance on recommended practices, summarized from established code of practices and standards, that designed to meet legislation and help implement actionable items identified within this report. This also provides the client with other options available to control risk presented by hazardous materials, that may not have been recommended as best practice, but due to budget and time constraints, are available to reduce the risk presented by a hazardous material.

Table 9 – Detailed Risk Control Actions for Guidance

	ASBESTOS	LEAD	OTHER HAZMAT
CODES OF PRACTICE & STANDARDS	• WHS Regulations 2017 • Management and Control of Asbestos in Workplaces [NOHSC:2018(2005)] • Safework Australia How to safely remove asbestos (2016) • Safework Australia – How to manage and control asbestos in the workplace (2016) • Australian Standards AS-1715(9) and AS-1716(10)	• WHS Regulations 2017 • National Code of Practice for the Safe Use of Inorganic Lead at Work [NOHSC: 2015(1994)] • AS/NZS4361 (Parts 1 and 2 [2017 & 2017]) Guide to lead paint management	• WHS Regulations 2017 • NSW EPA Polychlorinated Biphenyl (PCB) Chemical Control Order 1997 • Ozone protection and synthetic greenhouse gas management regulations 1996 (amended 2016)
REMOVAL	• Friable - Class A Licensed Asbestos removalist required. Independent LAA to carry out air monitoring and final clearance. • Non-Friable - Minimum Class B Licensed Asbestos removalist required. Independent hazardous materials consultant/competent hygienist to carry out final clearance. Air monitoring recommended, especially in sensitive areas such as schools, hospitals, residential areas etc • All licensable asbestos removal work must be notified to work cover by the licensed removal contractor prior to works undertaken. This process may take up to 5 working days. • Removal of <10m2 of non-friable asbestos can be undertaken without notification, by non-licensed individuals. However it is recommended that this is still conducted by skilled and trained contractors that are aware of the risks and control measures required to safely remove asbestos in accordance with the above codes of practice. • General Notes - Inspect and update register following completion of removal work.	• Lead abatement contractor to remove lead dust or excessive paint debris as per recommendations in the guidance and code of practice. • Removal of paint recommended prior to demolition in areas that require hot works or abrasive techniques to prevent airborne lead concentrations exceeding exposure limits. • Lead paint certified contractor required to remove under controlled lead abatement methods with an appropriate SWMS as per AS/NZS4361.2. Uncontrolled removals could cause personal exposure levels in excess of the national exposure limit • Undertake lead air control monitoring during removal works if there are neighboring sensitive receptors such as schools, residential areas, hospitals, offices, parks and playgrounds etc. • Undertake clearance surface lead loading testing in area of removal to ensure satisfactory clean for re-occupation and unrestricted use as per ASNZS4361.2. • Undertake personal exposure monitoring of similar exposure groups (SEGs) to assess occupant exposure against national exposure limits where a lead process is being undertaken. • Inspect and update register following completion of removal work.	• Remove products under controlled conditions. • RCF respirable Synthetic mineral fibres are a category 2 Carcinogen and irritant to the eyes, throat and skin. Disturbance, handling and removal of friable RCF Synthetic Mineral Fibre product should be undertaken with PPE, RPE and dust suppression. • Airborne fibre monitoring is recommended during the removal of RCF SMF, to maintain respirable fibre levels below 0.5 fibres/ml of air. • Engage a hazardous chemical remediation contractor to design a remedial action plan and safely remediate, spill and contaminated material (including contaminated soil) under controlled conditions ith PPE and RPE fit for task. • Transport and dispose of PCB ballast containing transformers and electrical capacitors at a licensed disposal facility as per the EPA guidelines. • Refrigeration and Air Conditioning equipment (RAC) should be worked on and decommissioned, as per the ozone protection and synthetic greenhouse gas management regulations 1996 (amended 2016). • Inspect and update register following completion of removal work.

ISOLATION	• Prevent uncontrolled access to contaminated area. Conduct reassurance or background asbestos air monitoring depending on situation of access and/or disturbance. • Access only permitted with preferable face fitted, P2 half face mask, PPE (that includes CE marked Cat3, type 5/6 coveralls, boot covers, disposable gloves) and decontamination procedure in place. • Consider implementation of permit to work system to monitor access. • Consider personal exposure air monitoring during access.	• Prevent uncontrolled access to contaminated area. • Access only permitted with preferable face fitted, P2 half face mask, PPE (that includes CE marked Cat3, type 5/6 coveralls, boot covers, disposable gloves) and decontamination procedure in place. • Consider implementation of permit to work system to monitor access. • Consider personal exposure air monitoring during access.	• Isolate PCB Spill to prevent uncontrolled access. • Use spill kit to contain spill, and sand bags/drainage barriers to prevent run off, further leaching and/or contamination of soil, watercourses, service lines and ground water.
ENCLOSE / SEAL / ENCAPSULATE / REPAIR	• Construct solid sealed enclosure around product and label. Manage friable and badly damaged non-friable materials in situ. • Repair/patch material with non-abrasive or penetrative methods if damage is not significant and access for further damage is limited. • Consider encapsulation of product with general purpose paint as a minimum. • Encapsulate with industrial barrier paint such as Emer-clad or Bostik ET -150, if damage is not significant and access for further damage is limited. • Consider either personal exposure air monitoring or control air • Monitoring during work around material. • Maintain condition and re-inspect in accordance with management plan. Label as per AS1319 • Inspections may be required more regularly depending on condition and location of material.	• Enclose contamination permanently behind physical barrier and label product as per AS1319. • Remove paint flakes and associated debris and repaint painted surface to encapsulate lead paint layer. • Maintain condition and inspect annually due to high risk receptors. • Maintain condition and inspect at a minimum interval of 5 years or in line with other hazardous materials. Do not perform abrasive or hot works that create dust, fumes or particulates from product in uncontrolled conditions.	• Consider encapsulation or enclosing SMF insulations to prevent accidental disturbance and irritation of occupants from airborne fibres.
ADDITIONAL DEMOLITION / REFURBISHMENT INFORMATION	• Removal of all asbestos products is required prior to any demolition/refurbishment works which may damage or impact the material.	• Although lead content as a %w/w component of demolition waste will be relatively minimal, lead in demolition waste may affect the classification or recyclability of the waste and should be assessed and potentially removed prior to demolition to avoid additional contaminated waste disposal costs. • Lead particulates and debris from uncontrolled demolition may cause personal exposure levels in excess of the national exposure limit.	• PCBs and ODS products remove and dispose of appropriately prior to demolition via use of a qualified contractor, to prevent uncontrolled exposure to the environment (ODS and PCBs) in addition to human exposure for (PCBs only) • SMF products to be appropriately handled with dust suppression to prevent excessive respirable fibre levels during demolition. Preferably soft stripped prior to uncontrolled demolition.

MAINTENANCE SCHEDULE AND MANAGEMENT PLAN	• Asbestos containing materials should be re-inspected for changes in material condition and risk assessed a minimum of every 5 years as per the WHS regulations. However materials in locations likely to be disturbed or in damaged condition may need to be inspected more frequently. Re-inspection and maintenance schedule should be detailed in an asbestos management plan. • Label Product as per AS1319	• Lead containing paints should be repainted as necessary to maintain condition and inspect at a minimum interval of 5 years or in line with other hazardous materials. Do not perform abrasive or hot works that create dust, fumes or particulates from product in uncontrolled conditions. • Where multiple paint layers are present, individual layers may actually contain lead to a higher concentration.	• Re-inspected as necessary to ensure maintenance of condition. • Risk management program for the systematic removal and disposal of PCB containing capacitors stored on the facility. • Put into place a plan to recover and dispose of ozone depleting refrigerants appropriately at the end of the equipment life prior to disposal of the air conditioning equipment. Refrigeration and Air Conditioning equipment (RAC) should be worked on and decommissioned, as per the ozone protection and synthetic greenhouse gas management regulations 1996 (amended 2016). • Label product as per AS1319.

APPENDIX F: SITE PLAN