HAZARDOUS MATERIALS MANAGEMENT SURVEY
HAZMAT SURVEYS - AUSTRAL

Job Number:	JN00090
Issued date:	6 April 2018
Prepared for:	Alliance Geotechnical
Client Address:	10 Welder Road, Seven Hills NSW 2147
Report by:	Mr Alex Thompson, Mr Jim Batty & Mr Aaron McElvogue, Hazmat Consultants
Approved by:	Faz Jalali
Total No of pages:	33

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EHO CONSULTING
ENVIRONMENTAL HAZMAT OCCUPATIONAL

Hazmat Surveys - Austral

Executive Summary

A hazardous material survey was carried out for Alliance Geotechnical at Hazmat Surveys - Austral. The scope of services for this investigation was to as far as reasonably practicable locate and record the location, extent and product type of any presumed or known hazardous materials and to provide the client with a workable hazardous material register. The survey was conducted on 23 March 2018 by Mr Alex Thompson, Mr Jim Batty & Mr Aaron McElvogue, Hazmat Consultants.

Representative samples were collected from materials as specified.

- asbestos containing materials (ACM)
- asbestos containing dust (ACD)
- Lead containing paint
- Lead containing dust (LCD).

Visual identification of:

- Synthetic mineral fibres
- poly-chlorinated biphenyl (PCB)-containing capacitors in fluorescent light and fan fittings

All data generated from the survey was used to create a hazardous materials register (Section 3). A summary of the survey findings is shown in Table 1 and a summary of inaccessible areas is shown in Table 2.

EHO was engaged to sample visible asbestos, No sample was taken of soil. It is noted Friable Asbestos contamination is common surrounding Corrugated sheeting. Dwelling 148 Eleventh Avenue on the WSP COC is referring to 160 Eleventh Avenue in the report due to the Google Maps street numbering.

Table 1 Summary of Findings

Hazardous material	General Location	Risk	Summary Recommendation
	135 Tenth Avenue		
Asbestos	Internal Kitchen Ceiling	Low	Maintain in current condition. Remove under controlled conditions If disturbed as part of planned works
Asbestos	Internal Kitchen Walls – Redundant House	Medium	Restrict access, Remediate by Class B Removalists
Lead	Roof Space – Dust to Timbers	Low	Restrict access, Remediate prior to demolition

Hazardous material	General Location	Risk	Summary Recommendation
Lead	To walls, doors and door frames throughout	Low	Maintain in current condition. Remove under controlled conditions If disturbed as part of planned works
Asbestos	Roof space, debris to topside of ceiling below	Low	Restrict assess, Remediate prior to demolition
Asbestos	Internal Bathroom walls	Low	Maintain in current condition. Remove under controlled conditions If disturbed as part of planned works
Asbestos	External Walls	High	Restrict access, Remediate by Class B Removalists
Asbestos	External Soffits	Low	Maintain in current condition. Remove under controlled conditions If disturbed as part of planned works
Asbestos	Debris to ground surrounding house	High	Restrict access, Remediate by Class B Removalists
Asbestos	Shed 1 - External walls to rear of property	Medium	Restrict access, Remediate by Class B Removalists
160 Eleventh Avenue			
Lead	Roof Space – Dust to Timbers	Low	Restrict access, Remediate prior to demolition
SMF	Roof Space	Low	Maintain in current condition.
Asbestos	Kitchen wall below a window at rear of property	Medium	Restrict access, Remediate by Class B Removalists
Asbestos	Laundry Walls	Low	Maintain in current condition. Remove under controlled conditions If disturbed as part of planned works
Asbestos	External Soffits	Low	Maintain in current condition. Remove under controlled conditions If disturbed as part of planned works
Asbestos	Tin Shed - Walls to rear of shed	Low	Maintain in current condition. Remove under controlled conditions If disturbed as part of planned works

Hazardous material	General Location	Risk	Summary Recommendation
		145 Tenth Avenue	
Asbestos	Internal Bathroom Walls	Low	Maintain in current condition. Remove under controlled conditions If disturbed as part of planned works
SMF	Internal Roof Cavity	Low	Maintain in current condition. Remove under controlled conditions If disturbed as part of planned works
Lead	Brown paint to electrical box	Medium	Maintain in current condition. Remove under controlled conditions If disturbed as part of planned works
		155 Tenth Avenue	
Lead	White paint to ceilings, Door Frames, & window Sills throughout	Low	Maintain in current condition. Remove under controlled conditions If disturbed as part of planned works
Lead	Detached Shed 1 – Blue Paint to door	High	Remediate by licensed painter
Lead	Detached Shed 1 – Green Paint to door	Medium	Remediate by licensed painter
Asbestos	Detached Shed 1 – Asbestos Roof	Low	Maintain in current condition. Remove under controlled conditions If disturbed as part of planned works

Table 2 Summary of Inaccessible Areas

Location	Reason for inaccessibility
Heights above 3 metres	Not accessed due to health and safety policy
Confined spaces	Not accessed due to health and safety policy
Subfloor Spaces to all site	Not accessed due to health and safety policy
Internal Roof Cavities (Inspection from Manhole only)	Not accessed due to health and safety policy

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Abbreviations/Definition

A	Amosite asbestos (brown asbestos)
AC	Asbestos cement (asbestos-containing fibrous cement material)
ACD	Asbestos Containing Dust
ACM	Asbestos-containing material
AS 1216	Standards Association of Australia, Classification and Class Labels for Dangerous Goods
AS 1319	Standards Association of Australia, Rules for the Design and Use of Safety Signs for the Occupational Environment
AS 1715	Standards Association of Australia, Selection, Use and Maintenance of Respiratory Protective Devices
AS 1716	Standards Association of Australia, Respiratory Protective Devices
ASCC	Australian Safety & Compensation Council
C	Crocidolite asbestos (blue asbestos)
CH	Chrysotile asbestos (white asbestos)
DECC	Department of Environment and Climate Change (now NSW EPA)
EPA	Environment Protection Authority
Fibres/mL	Countable fibres per millilitre of air sampled
FC	Fibre cement (usually sheeting)
LCD	Lead Containing Dust
LCP	Lead Containing Paint
L/min	Litres per minute of air
NAD	No asbestos detected
NAI	No Asbestos Identified
NHMI	No Hazardous Material Identified
NHMD	No Hazardous Material Detected
NATA	National Association of Testing Authorities, Australia
NOHSC	National Occupational Health and Safety Commission
P	Presumed hazardous material
PCB	Polychlorinated biphenyls
PPE	Personal protective equipment
SMF	Synthetic Mineral Fibre

SP	Strongly Presumed hazardous materials
RPE	Respiratory protective equipment
WH&S	Workplace health and safety

1. Introduction

A hazardous material management survey was carried out for Alliance Geotechnical (client), at Hazmat Surveys - Austral, by Mr Alex Thompson, Mr Jim Batty & Mr Aaron McElvogue, Hazmat Consultants on 23 March 2018. The site is made up of several houses with dethatched sheds and carports.

The aim of survey was to identify accessible or presumed hazardous materials as far as reasonably practicable and to prepare a material register, provide a qualitative risk assessment and provide recommendation and procedures to allow the client to manage their risk at their premises.

1.1 Legislative requirement

This survey has been provided with reference to the following legislations and guideline documents:

- Work Health and Safety Act 2011 (Commonwealth)
- Work Health and Safety Act 2016 (Commonwealth)
- Work Health and Safety Act 2016 (NSW)
- Work Health and Safety Regulation 2016 (NSW)
- How to Manage and Control Asbestos in the Workplace: Code of Practice 2016.
- How to Safely Remove Asbestos: Code of Practice 2016.
- Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres. 2nd Edition [NOHSC:3003(2005)]
- Health and Safety Executive (UK), HSG264, Asbestos: The survey guide; 2010;
- Health and Safety Executive (UK) HSG248, Asbestos: The Analysts Guide for Sampling, Analysis and Clearance Procedures
- Health and Safety Executive (UK), HSG227, A comprehensive guide to Managing Asbestos in premises, 2002;

2. Procedure

2.1 Survey methodology

2.1.1 Asbestos

The adopted survey undertaken was in line with the Health and Safety Executive (HSE) document The Survey Guide (HSG 264); Management Survey, identification and assessment survey (presumptive and sampling survey). The identification of ACMs involves a combination of visual inspection of the accessible areas of the building/structure and the collection of representative samples of the suspect materials for the purpose of analytical confirmation. This type of survey is fundamentally intrusive but not destructive.

Asbestos analysis on the samples collected were conducted by a laboratory accredited under the National Association of Testing Authorities (NATA) to ISO/IEC 17025. The methodology adopted is polarised light microscopy (PLM) under dispersion staining.

Where visually identical suspect materials are identified at different locations, they may be referenced to previously sampled materials and considered to contain asbestos. However, where it is not possible to sample, materials that can be reasonably anticipated to contain asbestos are **presumed** as such. Furthermore, where materials are considered to be most likely asbestos, samples may not be taken and the material is **strongly presumed** to contain asbestos.

2.1.2 Lead dust and paint

Representative samples had been taken and forwarded to a NATA laboratory for analysis. Laboratory analysis of lead based paints is used to achieve a reportable weight by weight percentage of lead throughout the paint layers and is reported against the Guide to Hazardous Paint Management Part 2: Lead Paint in residential, public and commercial buildings [AS 4361.2:2017] in which the lead content (calculated as lead metal) is in excess of 0.1 % by weight of the dry film as determined by laboratory testing.

In the absence of current up to date action levels, clearance levels from *AS 4361.2 'Guide to lead Paint Management, Part 2: Commercial and Residential Buildings'* (1998) has been adopted as lead dust loadings permissible. These levels are compared against the following maximum levels:

- Bare and carpeted floors and surfaces: 1 mg/m^2
- Interior window sills: 5 mg/m^2
- Exterior surfaces: 8 mg/m^2

2.1.3 Synthetic mineral fibres (SMF) materials

Most SMF is identified using visual indicator and surveyor experience. SMF can also be identified by laboratory using Polarised Light Microscopy supplemented with Dispersion Staining techniques.

2.1.4 Polychlorinated biphenyls (PCBs)

Capacitors to most light fittings and fans are presumed to be PCB containing based on visual indicators and the age of the building and light fittings. Where safe access to capacitors is possible, the details of the brand, model of each capacitor and capacity were recorded and checked against with the ANZECC database of known PCB capacitors and PCB free capacitors.

2.2 Survey accessibility

Access was made only where it was safe to do so, such as by solid floors, decking, walkways, protected catwalks or ladders was available. Minimal to no disturbance of any equipment was undertaken as part of the survey as all plant, electrical installations, pipe-work and associated equipment that were considered live at the time of the survey.

Access through the buildings and structures on the site was made by systematic walkthrough, with the order of the items listed in the asbestos register reflective of the order of the survey.

Access is often restricted to structures such as:

- Support columns, enclosed within cladding or concealed within the fabric of the building; sealed voids (under solid floor, wall or ceiling).
- Under suspected hazardous material, i.e. nothing that would disturb possible asbestos materials and give rise to airborne fibres.
- Within live electrical fuse or switch boxes; conduits and all other live plant items, lift machinery and fire doors at the time of the survey.
- Within building voids, internal partition walls, fitted flooring, beneath ceramic tiles non-asbestos tiling and carpets
- Above 3 metres in height, or roof where safe access is not provided
- Within confined spaces

2.3 Risk Assessment

The risk assessment methodology adopted for this survey is predominantly a qualitative one and it relies on the competence and training of the surveyor and their interpretation of the risk matrix. To utilise the hazmat risk matrix found within (Appendix B – Qualitative Risk Matrix) of this report, the following factors must be considered:

- Condition of the material. This is described as being either
  - good (not been damaged or have not deteriorated),
  - medium (minor deterioration or damage) or
  - poor (materials which have been extensively damaged or their condition has deteriorated over time);
- Proximity of air plenums and direct air stream;
- Friability of the material (ease with which the material can be crumbled) listed as either friable or non-friable (If Applicable);
- Requirement for access for building or maintenance operations and accessibility (low, medium or high);
- Likelihood of disturbance of the material;
- Exposed surface areas and;
- Environmental conditions.

These aspects are in turn judged upon;

a) potential for fibre generation (Friability) and,
b) the potential for exposure.

3. Hazmat Register

Table 3 Hazmat Register

Material Identification							Risk Assessment	Risk Management	Corrective Actions
Location of Material	Description	Sample No.	Hazmat Detected/ Identified	Quantity	Friability	Risk Rating (H,M,L)	Consultant Comments	Remediation Proposed	Proposed Time Line
135 Tenth Avenue Redundant House									
Internal	Kitchen ceiling	ASB 1	A, CH	10 m^2	NF	L	Remove under controlled conditions If disturbed as part of planned works		
Internal	Kitchen walls	Refer to ASB 1	A, CH	24 m^2	NF	M	Remove under controlled conditions If disturbed as part of planned works		
Internal	Roof Space – Dust to Timbers	PB 7	0.1	Through out		L	Restrict access, Remediate prior to demolition.		
Internal	To walls, doors and door frames throughout	PB 8	0.35	Through out		L	Remove under controlled conditions If disturbed as part of planned works		
Internal	Roof space, debris to topside of ceiling below	Refer to ASB 1	A, CH	<1 m^2	NF	L	Remove under controlled conditions If disturbed as part of planned works		
Internal	Bathroom Walls	Refer to ASB 1	A, CH	30 m^2	NF	L	Remove under controlled conditions If disturbed as part of planned works		

Material Identification						Risk Assessment	Risk Management	Corrective Actions
Location of Material	Description	Sample No.	Hazmat Detected/ Identified	Quantity	Friability	Risk Rating (H,M,L)	Consultant Comments	Remediation Proposed	Proposed Time Line
External	Wall Lining	Refer to ASB 1	A, CH	180 m^2	NF	H	Observed to be in Poor Condition, Recommend removal by a Class B Removalists		
External	Soffits	Refer to ASB 1	A, CH	12 m^2	NF	L	Remove under controlled conditions If disturbed as part of planned works		
External	Debris to ground surrounding house	Refer to ASB 1	A, CH	<10m^2 in small to large pieces sporadically spread out	NF	H	Observed to be in Poor Condition, Recommend removal by a Class B Removalists		
External	Below House – Packers between Brickwork & Supports	SP 6	Asbestos	Unknown		L	No Access at time of survey. Sample prior to disturbance. Remove under controlled conditions If disturbed as part of planned works		
Shed 1	Shed walls to rear of property	Refer to ASB 1	A, CH	50 m^2	NF	M	Observed to be in Poor Condition, Recommend removal by a Class B Removalists		

Material Identification							Risk Assessment	Risk Management	Corrective Actions
Location of Material	Description	Sample No.	Hazmat Detected/ Identified	Quantity	Friability	Risk Rating (H,M,L)	Consultant Comments	Remediation Proposed	Proposed Time Line
135 Tenth Avenue – New Build – No Hazmat Observed at time of inspection									
135 Tenth Avenue –Shed to rear of House – No Hazmat Observed at time of inspection									
135 Tenth Avenue – Sheep Shed									
External	Wall Lining	ASB 2	NAD	16 m^2	NF	L		No further action required	
External/ Internal	Off cuts to floor within and around shed	Refer to ASB 2	NAD	2 m^2	NF	L		No further action required	
150 Eleventh Avenue									
External	Soffits	ASB 3	NAD	75 m^2	NF	L		No further action required	
Internal	Manhole Cover to First floor walk in Robe	Refer to ASB 3	NAD	<1 m^2	NF	L		No further action required	
External	Underside of Canopy above front door	Refer to ASB 3	NAD	6 m2	NF	L		No further action required	

Material Identification							Risk Assessment	Risk Management	Corrective Actions
Location of Material	Description	Sample No.	Hazmat Detected/ Identified	Quantity	Friability	Risk Rating (H,M,L)	Consultant Comments	Remediation Proposed	Proposed Time Line
160 Eleventh Avenue									
Internal	Roof Space – Dust to Timbers	PB 9	1.6 Mg/sqm	Through out	NF	L	Restrict access, Remediate prior to disturbance		
Internal	Roof Space – SMF	Visual	SMF	Through out	NA	L			
Internal	Kitchen wall below a window at rear of property	ASB 4	CH	4 m^2	NF	M	Remove under controlled conditions If disturbed as part of planned works		
Internal	Laundry Walls	Refer to ASB 4	CH	20 m^2	NF	L	Remove under controlled conditions If disturbed as part of planned works		
External	Soffits	ASB 5	CH	40 m^2	NF	L	Remove under controlled conditions If disturbed as part of planned works		
External	Subfloor – No Access at time of survey						Packing presumed Underneath floor, Inaccessible	Remove under controlled conditions If disturbed as part of planned works	

Material Identification							Risk Assessment	Risk Management	Corrective Actions
Location of Material	Description	Sample No.	Hazmat Detected/ Identified	Quantity	Friability	Risk Rating (H,M,L)	Consultant Comments	Remediation Proposed	Proposed Time Line
Tin Shed to far west of 160 Eleventh Avenue									
External	Walls to rear of shed	ASB 6	CH	12 m^2	NF	L	Remove under controlled conditions If disturbed as part of planned works		
Small outhouse to rear of 160 Eleventh Avenue									
External	Roof	Same as ASB 6	CH	30 m^2	NF	L	Remove under controlled conditions If disturbed as part of planned works		
Internal	Walls & Ceiling within large room	ASB 7	A, CH	20 m^2	NF	L	Remove under controlled conditions If disturbed as part of planned works		
External	Cladding	ASB 8	NAD	50 m^2	NF	L	No further action required		
External	Panel to wall on rear of shed connected to outhouse	ASB 9	CH	5 m^2	NF	L	Remove under controlled conditions If disturbed as part of planned works		
Chicken shed to east of 160 Eleventh Avenue – No Hazmat observed at time of Inspection									
Tin shed and Small storage shed to south of 160 Eleventh Avenue									
External	Panels to side of small storage shed	ASB 10	NAD	2 m^2	NF	L	No further action required		
External	Cladding to walls & Front Step	ASB 11	CH	4 m2	NF	L	Remove under controlled conditions If disturbed as part of planned works		

Material Identification							Risk Assessment	Risk Management	Corrective Actions
Location of Material	Description	Sample No.	Hazmat Detected/ Identified	Quantity	Friability	Risk Rating (H,M,L)	Consultant Comments	Remediation Proposed	Proposed Time Line
External	Electrical Box – Main House	ASB 12	CH	<1 m^2	NF	L	Remove under controlled conditions If disturbed as part of planned works		
External	Waste Pile to side of shed – Limited access						Inspected as far as reasonably practicable. No Hazmat Identified.	No further action required	
145 Tenth Avenue - Brick Building, Fibro eaves, pitched roof, terracotta tiles, metal window frames, single storey									
Internal sunroom ceiling	Ceiling lining	ASB 13	NAD	18 m^2	NF	L	Good condition	No further action required	
Internal Bathroom	Wall Lining	ASB 15	CH	18 m^2	NF	L	Good condition, Remove under controlled conditions If disturbed as part of planned works		
Internal roof cavity	Skylight infill linings	SP2	Asbestos	2 m^2	NF	L	Good condition, No Access at time of inspection due to electrical hazard within roof. Sample prior to disturbance. Remove under controlled conditions If disturbed as part of planned works		

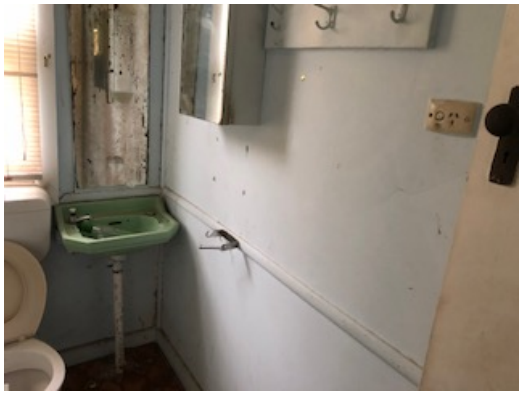
Material Identification							Risk Assessment	Risk Management	Corrective Actions
Location of Material	Description	Sample No.	Hazmat Detected/ Identified	Quantity	Friability	Risk Rating (H,M,L)	Consultant Comments	Remediation Proposed	Proposed Time Line
Internal Bathroom	Manhole Cover	SP3	Asbestos	<1 m^2	NF	L	Good condition, exposed edges. Sample prior to disturbance. Remove under controlled conditions If disturbed as part of planned works.		
External Eastern wall	Electrical Backing Board	SP1	Asbestos	<1m^2	NF	L	Previously labeled Asbestos containing. No sample electrical hazard		
External Surrounding	Eave Lining	ASB 14	NAD	26m^2	NF	L	Good condition	No further action required	
Internal Roof Cavity	Insulation Batts	Visual	SMF	Through out		L	Yellow Batts observed throughout		
External northern wall linings	Suspect Beneath external wall lining	Visual	Asbestos	20 m^2	NF	L	Suspect ACM beneath external wall lining due to age and appearance		
External northern wall	Door infill strip	Visual	Asbestos	<1 m^2	NF	L	Observed not painted. Recommend paint and then maintain in good condition		
External Eastern wall	Brown paint to electrical box	PB6	Lead	<1m^2		M	Observed peeling	Remove under controlled conditions.	

Material Identification						Risk Assessment	Risk Management	Corrective Actions	
Location of Material	Description	Sample No.	Hazmat Detected/ Identified	Quantity	Friability	Risk Rating (H,M,L)	Consultant Comments	Remediation Proposed	Proposed Time Line
155 tenth avenue - Single level dwelling with attached single car garage, timber clad external walls, metal frame windows, corrugated tin roofing, brick foundation									
External Surrounding	Eave lining	ASB 16	NAD	45m^2	NF	L	Good condition overall, observed paint flaking; < 1m2 northern elevation	No further action required	
External Surrounding	Roof & Gutter (Red Paint)	PB 1	<0.01%	Through out		L	Observed flaking in areas, Low risk as outside	No further action required	
External Surrounding	Eave lining (pink paint)	PB 2	<0.01	Through out		L	Observed flaking in areas, Low risk as outside	No further action required	
Internal	Sound dampening pad	ASB 19	NAD	<1 m^2	NF	L	Previously removed, evidence remains	No further action required	
Internal	**White paint to ceilings, Door Frames, & window Sills throughout**	**PB 5**	**0.10%**	**Through out**		**L**	**Minor flaking in dining room.**	**Remediate during planed works**	
Internal	**Within Roof Cavity**	**SP5**	**Asbestos, Lead, SMF**	**Through out**		**L**	**No access at time of survey, presume**		

Material Identification							Risk Assessment	Risk Management	Corrective Actions
Location of Material	Description	Sample No.	Hazmat Detected/ Identified	Quantity	Friability	Risk Rating (H,M,L)	Consultant Comments	Remediation Proposed	Proposed Time Line
							positive until proven otherwise		
External	Garage wall, Air Conditioning Unit	SP4	ODS	1		L	Maintain in current condition, Confirm by Licensed Air Conditioner Installer		
Detached Shed 1, corrugated cement roof, profiled steel extension									
Internal	Blue paint to door	PB3	0.63%	6 m^2		H	Severe flaking on door	Remediate by licensed painter	
External	Green paint to door	PB4	6.1%	6 m^2		M	Faking on door	Remediate by licensed painter	
External roof	Corrugated cement sheeting	ASB 17	CH	25m^2	NF	L	Observed minor fungi growth		
External walls	Fibre cement sheeting	ASB 18	NAD	50m^2	NF	L	Observed minor damage	No further action required	
Detached shed 2, Profiled steel - No Hazmat Detected									
Detached Pergola - No Hazmat Detected									

4. Representative Photographs

Photograph number: 1	Photograph number: 2
Item Found: 135 Tenth Avenue - Kitchen walls & ceiling	**Item Found:** 135 Tenth Avenue - To walls, doors and door frames throughout
	

Photograph number: 3	Photograph number: 4
Item Found: 135 Tenth Avenue – Bathroom Wall	**Item Found:** 135 Tenth Avenue – External Walls & Eaves
	

Photograph number: 5	Photograph number: 6
Item Found: 135 Tenth Avenue – Shed walls to rear of property	**Item Found:** 160 Eleventh Avenue - Kitchen wall below window at rear of property
	

Photograph number: 7	Photograph number: 8
Item Found: 160 Eleventh Avenue – Rear Shed	**Item Found:** 145 Tenth Avenue – Internal Bathroom wall lining
	

Photograph number: 9

Item Found: 145 Tenth Avenue – External Electrical board

Photograph number: 10

Item Found: 145 Tenth Avenue – Internal roof cavity Insulation batts

Photograph number: 11

Item Found: 155 tenth avenue – External Storage Shed

5. Discussions and Recommendations

Following the completion of the asbestos survey:

135 Tenth Avenue:

- Low risk asbestos was detected and identified in the Kitchen Ceiling, Bathroom walls, External Soffits. Remove prior to refurbishment if likely to be disturbed by a licensed asbestos removalist.
- Medium risk asbestos was detected and identified in the Kitchen walls and shed walls to rear of the property. Remove prior to refurbishment if likely to be disturbed by a licensed asbestos removalist.
- High risk asbestos was detected and identified in the external wall linings and debris to the ground surrounding the house. It is recommended these are remediated by a Class B Removalist.
- Low risk Lead in dust in roof space was detected. If disturbed likely to contaminate occupied areas and expose contractors to lead dust. Limit access to roof space and remove under controlled conditions by a competent contractor.
- Lead paint observed to walls, doors and door frames throughout the building. Some damage and flaking observed. Repair damage paint. Remove under controlled condition by a competent person if likely to be disturbed.
- Suspected Asbestos Packers below the house between brickwork & supports. Recommend sampling prior to disturbance.

148 Eleventh Avenue:

- Low risk lead in dust in the roof space was detected. If disturbed likely to contaminate occupied areas and expose contractors to lead dust. Limit access to roof space and remove under controlled conditions by a competent contractor.
- Low risk SMF was observed in the roof space. Remove prior to refurbishment if likely to be disturbed by a competent person under controlled conditions.
- Low risk asbestos was detected and identified in the laundry walls, external soffits, external walls to rear shed, external roof to small outhouse, internal wall & ceilings within large room of outhouse, external panel to wall on rear of outhouse, external cladding to walls and front step of tin/storage shed and Electrical box to the main house. Remove prior to refurbishment if likely to be disturbed by a licensed asbestos removalist.
- Medium risk asbestos was detected and identified in the kitchen wall below window at rear of property. Remove prior to refurbishment if likely to be disturbed by a licensed asbestos removalist.

145 Tenth Avenue:

- Low risk asbestos was detected and identified in the bathroom wall lining. Remove prior to refurbishment if likely to be disturbed by a licensed asbestos removalist.
- Low risk SMF was observed in the roof space. Remove prior to refurbishment if likely to be disturbed by a competent person under controlled conditions.

- Suspected Asbestos was observed in the roof cavity skylight infill linings, Manhole cover, Electrical backing board, external northern wall lining beneath cladding, northern wall infill strip around rear door. Recommend sampling prior to disturbance.
- Medium risk Lead paint observed on the external electrical box. Recommend sealing peeling paint and Remove under controlled conditions by a competent contractor prior additional works.

155 Tenth Avenue:

- Low risk Lead paint observed to the internal ceilings, door frames & window sills throughout. Remove under controlled conditions by a competent contractor prior additional works.
- High risk lead paint was detected and identified to the detached shed. Severe blue paint was flaking from the door. Recommend sealing peeling paint and Remove under controlled conditions by a competent contractor prior additional works.
- Medium risk lead paint was detected and identified to the detached shed. Green paint was flaking from the door. Recommend sealing peeling paint and Remove under controlled conditions by a competent contractor prior additional works.
- Low risk asbestos was detected and identified in the external corrugated sheeting to the roof of the detached shed. Remove prior to refurbishment if likely to be disturbed by a licensed asbestos removalist.

Appendix A – NATA Analysis Certificates

WSP Australia Pty Limited

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NCSI Certified Quality System ISO 9001

Certificate of Analysis

LOCATION:	**Austral**	**CERTIFICATE NO:**	**SYD-PS102315-0027-92669**
CLIENT:	EHO Consulting	DATE\S SAMPLED:	23/03/2018
CLIENT ADDRESS:	Unit 16/380 Pennant Hills Road, Pennant Hills NSW 2020	DATE RECEIVED:	27/03/2018
TELEPHONE:	0425282330	DATE ANALYSED:	3/04/2018
EMAIL:	alex@ehoc.com.au	ORDER NUMBER:	JN00090
CONTACT:	Alex Thompson	SAMPLED BY:	As Received

TEST METHOD: Qualitative identification of Asbestos fibre in bulk and soil samples at WSP Corporate Laboratories, by polarised light microscopy, including dispersion staining techniques using AS4964 (2004) and supplementary in house laboratory procedure (LP3 - Identification of Asbestos Fibres). This document is issued in accordance with NATA's requirements under NATA accreditation No. 17199, accredited for compliance with ISO/IEC: 17025 - Testing. The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standard.

Lab No	Sample ID	Location	Sample Description	Sample Dimensions	Identification Type
001	JN00090-A1	135 Tenth Ave (Redundant House) - Kitchen Ceiling	Fibre Cement Sheet	1 gm	A, CH, OF
002	JN00090-A2	135 Tenth Ave (Sheep Shed) - Walls	Fibre Cement Sheet	16 gm	OF, NAD
003	JN00090-A3	150 Eleventh Ave - Soffits to externals of property	Compressed Sheet	1 gm	OF, NAD
004	JN00090-A4	140 Eleventh Ave - Kitchen wall below window at rear of property	Compressed Sheet	2 gm	CH, OF
005	JN00090-A5	148 Eleventh Ave - Soffits	Compressed Sheet	2 gm	CH, OF
006	JN00090-A6	148 Eleventh Ave -Tin shed far west - walls to rear of shed	Fibre Cement Sheet	1 gm	CH, OF
007	JN00090-A7	148 Eleventh Ave -outhouse - walls and ceiling within large room	Compressed Sheet	1 gm	A, CH, OF
008	JN00090-A8	148 Eleventh Ave -outhouse - cladding to externals	Compressed Sheet	1 gm	OF, NAD
009	JN00090-A9	148 Eleventh Ave -outhouse - panel to wall on rear of shed	Fibre Cement Sheet	1 gm	CH, OF

LEGEND:

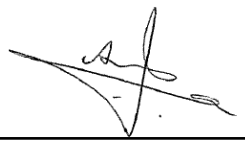
NAD	-	No Asbestos Detected
CH	-	Chrysotile Asbestos Detected
A	-	Amosite Asbestos Detected
C	-	Crocidolite Asbestos Detected
UMF	-	Unknown Mineral Fibres Detected
SMF	-	Synthetic Mineral Fibres Detected
OF	-	Organic Fibres Detected

Hand picked refers to small discrete amounts of asbestos distributed unevenly in a large body of non asbestos material.

NATA
ACCREDITED FOR
TECHNICAL
COMPETENCE

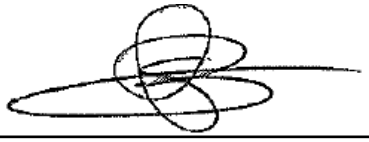
Approved Identifier

Name: Sneha Shakya



Approved Signatory

Name: Shannon Byrne



AUTHORISATION DATE

3/04/2018

Notes:
If no asbestos is detected in vinyl tiles, mastics, sealants, epoxy resins and ore samples then confirmation by another independent analytical technique is advised due to the nature of the samples.
The results contained within this report relate only to the sample(s) submitted for testing. WSP accepts no responsibility for the initial collection, packaging or transportation of samples submitted by external persons. NATA does not accredit the sampling process, therefore sampling is not covered by the scope of accreditation. This document may not be reproduced except in full.

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ABN 80 078 004 798

NCSI Certified Quality System ISO 9001

Certificate of Analysis

LOCATION: **Austral**

CERTIFICATE NO: **SYD-PS102315-0027-92669**

Lab No	Sample ID	Location	Sample Description	Sample Dimensions	Identification Type
010	JN00090-A10	148 Eleventh Ave Tin shed and small storage shed - panels to side of small storage shed	Compressed Sheet	2 gm	OF, NAD
011	JN00090-A11	148 Eleventh Ave - tin shed and small storage shed - cladding to walls and front of step	Fibre Cement Sheet	34 gm	CH, OF
012	JN00090-A12	148 Eleventh Ave - external electrical box main house	Electrical Board	2 gm	CH
013	JN00090-A13	145 Tenth Ave - Sun room ceiling	Fibre Cement Sheet	1 gm	OF, NAD
014	JN00090-A14	145 Tenth Ave - Eave	Fibre Cement Sheet	1 gm	OF, NAD
015	JN00090-A15	145 Tenth Ave - bathroom wall	Fibre Cement Sheet	1 gm	CH, OF
016	JN00090-A16	155 Tenth Ave - Eave Lining	Fibre Cement Sheet	1 gm	OF, NAD
017	JN00090-A17	155 Tenth Ave - Shed 1 - roof	Corrugated Sheeting	2 gm	CH, OF
018	JN00090-A18	155 Tenth Ave - Shed 1 - external wall lining	Fibre Cement Sheet	10 gm	OF, NAD
019	JN00090-A19	155 Tenth Ave - sound damp pad under sink	Mastic	1 gm	OF, NAD

LEGEND:

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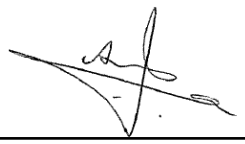

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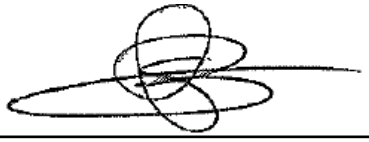

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A.C.N. 003 614 695
A.B.N. 81 829 182 852
NATA No: 1884

ANALYTICAL REPORT for:

EHO CONSULTING

16/380 PENNANT HILLS RD
PENNANT HILLS 2020

ATTN: FAZ JALALI

JOB NO:	SAL26693N
CLIENT ORDER:	JN00090
DATE RECEIVED:	27/03/18
DATE COMPLETED:	28/03/18
TYPE OF SAMPLES:	PAINTS/DUST WIPES
NO OF SAMPLES:	9

NATA Accredited for compliance with ISO/IEC 17020

.....
Issued on 28/03/18
Lance Smith
(Chief Chemist)

SYDNEY ANALYTICAL LABORATORIES

ANALYTICAL REPORT

JOB NO: SAL26693N
CLIENT ORDER: JN00090

	SAMPLES	Pb %	Pb mg
23/3	Pb-1	<0.01	
	Pb-2	<0.01	
	Pb-3	0.63	
	Pb-4	6.1	
	Pb-5	0.10	
	Pb-6	0.35	
	Pb-7		0.26
	Pb-8	0.06	
	Pb-9		0.16
MDL		0.01	0.001
Method Code		A8	A9
Preparation		P1	P1

SYDNEY ANALYTICAL LABORATORIES

ANALYTICAL REPORT

JOB NO: SAL26693N
CLIENT ORDER: JN00090

METHODS OF PREPARATION AND ANALYSIS

The tests contained in this report have been carried out on the samples as received by the laboratory.

P1	Analysis performed on sample as received
A8	Lead - Total in Paint/Dust (HNO3 Digest) Determined by APHA 3111B (Flame AAS)
A9	Lead - Total on Dust Wipe (HNO3 Digest) Determined by APHA 3111B (Flame AAS)

EHO CONSULTING
ENVIRONMENTAL HAZMAT OCCUPATIONAL

Appendix B – Qualitative Risk Matrix

Table 4 Condition and Disturbance Assessment

CONDITION		
1	GOOD	NO OBVIOUS DETERIORATION, SECURED IN PLACE, SEALED AND ENCAPSULATED.
2	FAIR	MINOR DAMAGE OR DETERIORATION, NOT SEALED OR ENCAPSULATED
3	MODERATE	MAJOR DAMAGE THROUGHOUT, NO DEBRIS OR DUST, NOT BE SEALED / ENCAPSULATED
4	POOR	OBVIOUS DAMAGED OR DETERIORATION, EXTENSIVE DUST AND CONTAMINATION
5	UNKNOWN	NO ACCESS TO ASSESS CONDITION.
DISTURBANCE POTENTIAL		
A	PUBLIC	PUBLIC ACCESS AREAS, USED BY CHILDREN AND THE ELDERLY
B	CERTAIN	VERY LIKELY TO OCCUR DUE HIGHT AND TRASIT ROUT
C	HIGH	DISTURBANCE MAY OCCUR DURING TYPICAL OCCUPANCY OF THE BUILDING AND IS LIKELY DURING MAINTENANCE WORKS
D	MEDIUM	DISTURBANCE UNLIKELY DURING TYPICAL OCCUPANCY OF THE BUILDING HOWEVER MAY OCCUR DURING MAINTENANCE WORKS
E	LOW	DISTURBANCE UNLIKELY DURING TYPICAL OCCUPATION OF THE BUILDING

Table 5 Risk Assessment Chart

MATERIAL CONDITION		PROBABILITY DISTURBANCE				
		PUBLIC	CERTAIN	LIKELY	POSSIBLE	UNLIKELY
		A	B	C	D	E
GOOD	1	15	10	6	3	1
FAIR	2	19	14	9	5	2
MODERATE	3	22	18	13	8	4
POOR	4	24	21	17	12	7
UNKNOWN	5	25	23	20	16	11

LEGEND: 1-10 LOW RISK 11-19 MEDIUM RISK 20-25 HIGH RISK

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Appendix C – Limitations

Scope of Services

This asbestos management plan ('the report') has been prepared in accordance with the scope of services set out in the contract, or as otherwise agreed, between the Client and EHOC ('scope of services'). In some circumstances the scope of services may have been limited by a range of factors such as time, budget, access and/or site disturbance constraints.

Reliance on Data

In preparing the report, EHOC has relied upon data, surveys, analyses, designs, plans and other information provided by the Client and other individuals and organisations, most of which are referred to in the report ('the data'). Except as otherwise stated in the report, EHOC has not verified the accuracy or completeness of the data. To the extent that the statements, opinions, facts, information, conclusions and/or recommendations in the report ('conclusions') are based in whole or part on the data, those conclusions are contingent upon the accuracy and completeness of the data. EHOC will not be liable in relation to incorrect conclusions should any data, information or condition be incorrect or have been concealed, withheld, misrepresented or otherwise not fully disclosed to EHOC.

Report for Benefit of Client

The report has been prepared for the benefit of the Client and no other party. EHOC assumes no responsibility and will not be liable to any other person or organisation for or in relation to any matter dealt with or conclusions expressed in the report, or for any loss or damage suffered by any other person or organisation arising from matters dealt with or conclusions expressed in the report (including without limitation matters arising from any negligent act or omission of EHOC or for any loss or damage suffered by any other party in relying upon the matters dealt with or conclusions expressed in the report). Other parties should not rely upon the report or the accuracy or completeness of any conclusions and should make their own enquiries and obtain independent advice in relation to such matters.

Other Limitations

EHOC will not be liable to update or revise the report to take into account any events, emergent circumstances or facts occurring or becoming apparent after the date of the report.

The scope of services did not include any assessment of the title to nor ownership of the properties, buildings and structures referred to in the report, nor the application or interpretation of laws in the jurisdiction in which those properties, buildings and structures are located.