

Hazardous Materials Survey

UrbanGrowth NSW

Sewage Treatment Plant Former Defence Ingleburn Site Campbelltown Road Edmondson Park, NSW 2174

29 November 2013 JBS&G 43008-56110 (Rev 1) 43008-56110

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Appendices

Appendix 1 – Hazardous Materials Register

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List of Abbreviations

ACM - Asbestos Containing Material

ANZECC - The Australian and New Zealand Environment Conservation Council

AS – Australian Standard

FCS - Fibre Cement Sheeting

HMS – Hazardous Materials Survey

ICP-AES – Inductively Coupled Plasma Atomic Emission Spectroscopy

NATA – National Association of Testing Authorities

LP – Lead based paint

LD – Lead in ceiling cavity dust

PCB's – Polychlorinated Biphenyls

SMF – Synthetic Mineral Fibre



1 Introduction

1.1 Background

JBS&G (NSW&WA) Pty Ltd (JBS&G) was engaged by Urban Growth NSW to complete a hazardous materials survey (HMS) of three buildings and other areas associated with the Ingleburn sewage treatment plant located at Campbelltown Road, NSW (the site).

The HMS and site investigation were completed on 31 October and 26 November 2013 by suitably qualified JBS&G consultants. The site was inspected for the following:

- Asbestos containing materials (ACM's);
- Lead based paint (LP);
- Lead in ceiling cavity dust (LD);
- Polychlorinated biphenyls (PCB's); and
- Synthetic Mineral Fibres (SMF's).

1.2 Objectives

The objective of the HMS was to identify the presence of hazardous materials for the information of contractors and other ground work teams completing demolition works of the built structures.

The HMS and production of this report have been undertaken in accordance with the requirements of:

- Work Health and Safety Act (2011);
- Work Health and Safety Regulation (2011);
- How to Safely Remove Asbestos Code of Practice, Safe Work Australia, (SWA 2011b);
- How to Manage and Control Asbestos in the Workplace Code of Practice, Safe Work Australia, (SWA 2011a);
- AS4361.2 (1998) Guide to Lead Paint Management Part 2: Residential and Commercial Buildings;
- National Standard for Synthetic Mineral Fibres [NOHSC:1004(1990)] and National Code of Practice for the Safe Use of Synthetic Mineral Fibres [NOHSC:2006(1990)]; and
- Identification of PCB-containing Capacitors: An information booklet for Electricians and Electrical Contractors ANZECC (1997).

1.3 Limitations

Whilst all reasonable care has been taken by JBS&G during the HMS, this report is limited due to:

- only safely accessible areas of the site were surveyed;
- no below ground investigation was undertaken;
- limited access to internal building components e.g. set floors, walls, ceiling cavities, lift shafts etc., in which case only representative areas were inspected with the hand tools available to the JBS&G consultants for destructive investigation;
- access restrictions to operational areas such as energised services, gas, air conditioning/heating, pressurised vessels, chemical lines etc.;
- lack of building structural and/or layout plans; and
- materials potentially located in areas in which hazardous materials could not reasonably be envisaged or anticipated to be present.



It should also be noted that buildings built between the 1950's-1980's may have general occurrences of ACM's in areas which are not readily accessible with the hand tools available for the survey. These areas and materials may include though are not limited to:

- fibrous cement sheeting (FCS) used as boxing and shuttering to the concrete slabs;
- FCS packing between window/door frames;
- Compressed FCS underneath tiled floor areas.

Whilst all care is taken by the consultants to uncover hidden materials, not all areas can be accessed without more industrial (power) tools. JBS&G recommends that these areas be inspected as the demolition progresses to ensure they are free of potential hazardous materials. All similar materials as those listed in the hazardous materials register are to be treated as containing the same hazardous materials.

In the event suspected hazardous materials are identified during strip out or demolition which are not included in this report, JBS&G recommends that works should cease and an assessment of the materials undertaken by a competent person for further appropriate recommendations.

No one section or part of a section of this report is to be taken as giving an overall idea of this report. Each section is to be read in conjunction with the whole of this report, including the appendices and attachments.

General report limitations are provided in Section 6 and should be read in conjunction with this.



2 Hazardous Materials

2.1.1 Asbestos Containing Materials

Representative samples of suspected ACM's were collected for analysis at a NATA accredited laboratory using polarised light microscopy in conjunction with dispersion staining techniques. Similar materials to those analysed or other materials known to contain asbestos from the consultant's experience (e.g. electrical backing boards, corrugated AC roofs and older fibre cement sheeting) or materials not accessible may also be assumed to contain asbestos as per the Code of Practice (SWA 2011a).

At the time of sample collection, the following details were recorded:

- Location;
- Type of Material;
- Accessibility;
- Condition;
- Friability; and
- · Volume/Dimensions.

2.1.2 Lead Based Paint

Australian Standard AS4361.2 1998 Guide to Lead Paint Management Part 2: Residential & Commercial Buildings defines lead paints as those in which the lead content (calculated as lead metal) is in excess of 1.0 percent by weight of the dry film as determined by laboratory testing or the use of portable X-ray fluorescence (XRF) field tests.

Analysis of suspected lead based paints was conducted by scraping a small paint chip sample and placing it into a zip locked plastic bag. Paint chip samples were analysed for the presence of lead using a suitably calibrated XRF, either in the field or the JBS&G laboratory.

2.1.3 Lead in Dust

Dust suspected of containing elevated levels of lead was either swabbed with an alcohol free wet wipe and sent to a NATA accredited facility for lead analysis by ICP-AES (inductively coupled plasma atomic electron microscopy) or assumed to contain elevated levels of lead in dust from the consultant's experience of similar aged properties in the area. Where a true ceiling cavity is not accessible a swab is not able to be taken and the dust may or may not be assumed to contain elevated levels of lead in dust.

In the absence of a published guideline level for lead in dust in ceiling spaces, JBS&G uses the guideline value of 8 mg/m², which is provided as an acceptable loading for exterior surfaces in the Australian Standard, AS4361.2 (1998) *Guide to Lead Paint Management Part 2: Residential & Commercial Buildings*. A swab of a known area (0.1 m^2) is taken with the results of the total lead on the swab provided by the laboratory in micrograms per swab $(\mu g/swab)$. The result is then adjusted to milligrams per square metre (mg/m^2) for comparison against the adopted guideline level.

¹ In accordance with the Code of Practice (SWA 2011a) if a material "...is assumed to be asbestos, it is considered to be asbestos for legal purposes". Therefore, in this report, if a material is reported as assumed to contain asbestos it must be managed, including during demolition, as containing asbestos unless proven otherwise by sampling and analysis. A material is assumed to contain asbestos when a sample has not been analysed but the material is consistent with the characteristics of a similar material in the survey area that has been sampled and found to contain asbestos; or based on the experience of the competent person undertaking the survey, taking into account the age and construction of the structure and similarities of the material with known ACM.



2.1.4 Polychlorinated Biphenyls

Electrical appliances and light fittings that may contain capacitors containing PCB are identified by inspection and comparison with the consultant's experience of similar light fittings. Alternatively, where safe to do so, a representative light fitting was opened to reveal the capacitor and the make and model recorded to be compared against the ANZECC (1997) list of PCB containing capacitors.

2.1.5 Synthetic Mineral Fibres

SMF containing materials were either sampled as per the asbestos methodology or assumed to contain SMF from the consultant's experience of similar materials.

2.2 Inaccessible Areas

As per the Code of Practice for the Management and Control of Asbestos in the Workplace, any areas not accessible must be recorded as such. Where hazardous materials are suspected to be contained within inaccessible areas, these shall be documented in this report and the associated Hazardous Materials Register as 'assumed to contain [the suspected hazardous material]'.



3 Site Description

3.1 Site Overview

The site primarily consisted of three stand-alone buildings associated with the sewage treatment works located at Ingleburn, Campbelltown Road, NSW. Building 1, located in the southern portion of the site, comprised a single storey brick building with a corrugated iron roof and was utilised as an amenities block (Photograph 1). Building 2, located in the western portion of the site, comprised a two-storey brick building with a cement tiled roof and was utilised as a pump room (Photograph 2). Building 3, of brick construction with a flat cement roof, was located in the eastern portion of the site and was utilised as a chlorine gas storeroom (Photograph 3). Inaccessible areas are also reported, refer to Section 4.2.

The type, location, friability, accessibility and approximate quantities of identified and suspected hazardous materials are provided in the Hazardous Materials Register in **Appendix 1**.

Photograph 1 - Building 1



Photograph 2 - Building 2





Photograph 3- Building 3





4 Results

4.1 Hazardous Materials

All identified hazardous materials are recorded in the Hazardous Materials Register in **Appendix 1** with relevant photographs in **Appendix 2**. NATA accredited laboratory analysis results are provided in **Appendix 3**.

4.1.1 Asbestos Containing Materials

Non-friable ACM's were identified at the time of this inspection. Non-friable ACM's identified included fibre cement sheeting used intermittently throughout Buildings 1 and 2. Please refer to **Appendix 3** for Laboratory Analysis Results.

Materials containing friable asbestos were not encountered in any of the buildings.

4.1.2 Lead Based Paint

Lead based paints were identified at the time of this inspection.

4.1.3 Lead in Ceiling Cavity Dust

No samples were collected for lead in dust analysis at the time of the inspection as there were no true ceiling cavities in any of the buildings and no dust accumulations were encountered. Due to the site being situated in a semi-rural area lead in ceiling cavity dust is assumed to be of no concern. Refer to **Section 4.2.**

4.1.4 Polychlorinated Biphenyls

PCB containing capacitors in light fittings were assumed to be present at the time of this inspection within old fluorescent light fittings present throughout Building 1 and Building 3.

4.1.5 Synthetic Mineral Fibres

SMF containing materials were identified at the time of this inspection.

4.1.6 Chlorine Gas Cylinders

Although outside of the scope of our investigations a number of gas cylinders marked 'chlorine' and painted yellow were identified inside Building 3. Chlorine gas is a corrosive gas (*i.e.* a gas that, in contact with living tissue causes destruction of the tissue by chemical action) and as such should be handled and disposed of appropriately.

4.2 Inaccessible Areas

The following areas were inaccessible at the time of the inspection:

- The ceiling cavity in Building 2 was inaccessible as there was no ceiling access hatch Buildings 1 and 3 each had flat rooves with no ceiling spaces;
- The shower room to the western portion of Building 1 was inaccessible as it was key locked;
- The ceiling lining to level 1 of Building 2 was inaccessible as it was above height access restrictions;
- The under floor area to Building 2 was inaccessible due to confined space restrictions;
- The topside of the concrete roof to Building 3 was inaccessible due to height restrictions; and
- The water/pipe pit adjacent Building 3 was inaccessible due to the water hazard.



Limited access was available to the following areas:

• The external eaves and façades due to height restrictions.



5 Conclusions and Recommendations

5.1 Hazardous Materials

Hazardous materials were identified across the site as a result of laboratory testing of representative samples and visual identification. The following recommendations are made for implementation prior to the demolition works to mitigate any potentially harmful effects due to the presence of identified hazardous materials.

5.1.1 Asbestos Containing Materials

Non-friable asbestos containing materials were identified at the site.

Non-friable (Bonded) ACM

A Class A or Class B licensed asbestos removalist shall be engaged to remove all non-friable asbestos materials outlined in the Hazardous Materials Register, included as **Appendix 1**.

WorkCover is to be notified of all asbestos removal work prior to works commencing. Removal and disposal of asbestos materials shall be undertaken in accordance with *Work Health and Safety Act (2011), Work Health and Safety Regulation (2011)* and the Safe Work Australia publication *How to Safely Remove Asbestos Code of Practice (2011)*. The materials should be disposed of to an appropriately licensed landfill in accordance with the *Waste Classification Guidelines Part 1: Classifying Waste (DECCW 2009)*.

While not mandatory during the removal of non-friable ACM, it is considered best practice and recommended that asbestos air monitoring is undertaken during the non-friable asbestos removal works.

Following removal works, a clearance inspection shall be completed by a licensed asbestos assessor or competent person for all ACM with an area of greater than 10 m² to ensure that all ACM identified have been removed to a satisfactory industry standard. Following the completion of the clearance inspection, a clearance certificate shall be issued by the licensed asbestos assessor or competent person to confirm that the asbestos containing materials have been removed and that the area is suitable for planned works to continue.

5.1.2 Lead Based Paints

Lead based paints identified in Hazardous Materials Register (**Appendix 1**) should be managed in accordance with the Australian Standard (AS) *4361.2 Guide to Lead Paint Management; Part 2 Residential and Commercial Buildings*. If peeling or deteriorated they should be removed under controlled conditions by an experienced contractor prior to demolition. Stable lead based paints adhered to building fabric can be removed as general solid waste provided care is taken to minimise any potential for paint flakes to be dispersed onto ground surfaces.

5.1.3 Lead in Ceiling Cavity Dust

No access was available to the ceiling cavity of any site structures at the time of the inspection and as such no ceiling cavity dust swab samples were taken. JBS&G have assumed that lead in dust does not exceed the adopted criteria of 8mg/m² based on the consultant's past experience in similar situations due to the semi-rural location. It should be noted, as with all demolition works, as a precaution appropriate PPE such as P2 respirators should be worn when undertaking this type of work.



5.1.4 Polychlorinated Biphenyls

PCB containing capacitors in light fittings identified at the site should be handled and removed prior to any demolition works commencing and disposed of as scheduled waste to a suitably licensed waste facility in accordance with the ANZECC (2003) *Polychlorinated Biphenyls Management Plan*.

5.1.5 Synthetic Mineral Fibre

The materials containing synthetic mineral fibre are generally well bound and deemed not to be high risk. These SMF materials can be removed with the general building waste with care taken not to generate fibres. Appropriate PPE is recommended including the use of P2 respirator as minimum and appropriate removal methodology as outlined in the *National Standard for Synthetic Mineral Fibres [NOHSC: 1004(1990)]* and *National Code of Practice for the Safe Use of Synthetic Mineral Fibres [NOHSC: 2006(1990)]*.

5.1.6 Chlorine gas Cylinders

The gas cylinders marked 'chlorine' and painted yellow inside building 3 should be removed prior to demolition by a suitably trained person and taken to a facility licensed to accept them.

5.2 Inaccessible Areas

All areas not accessible should be assumed to contain asbestos unless further investigation and analysis confirms otherwise.

5.3 Unexpected Finds

Any materials considered to be consistent with those detailed in the Hazardous Materials Register that have not been previously identified should be assumed to have the same content and be treated accordingly.

Should any additional suspected hazardous materials be observed during demolition, works should cease until a suitably qualified occupational hygienist can assess the suspected hazardous material and provide appropriate recommendations for management and/or removal.



6 Limitations

This advice is provided for use by the client who commissioned the works in accordance with the project brief only, and has been based in part on information obtained from the client and other parties. The advice has been prepared specifically for the client for the purposes of the commission. No warranties, express or implied, are offered to any third parties and no liability will be accepted for use or interpretation of this advice by any third party.

The advice herein relates only to this project and all results conclusions and recommendations made should be reviewed by a competent person with experience in environmental investigations, before being used for any other purpose. This report should not be reproduced without prior approval by the client, or amended in any way without prior approval by JBS&G.

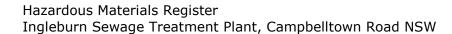
Ground conditions between sampling locations and media may vary, and this should be considered when extrapolating between sampling points. Chemical analytes are based on the information detailed in the site history. Further chemicals or categories of chemicals may exist at the site, that were not identified in the site history and which may not be expected at the site.

Changes to the subsurface conditions may occur subsequent to the advice provided herein, through natural processes or through the intentional or accidental addition of contaminants. The advice is based on the information obtained or available at the time the advice is provided.

This advice is not a complete assessment of the status of the site, and it is limited to the scope of works commissioned. Should information become available regarding conditions at the site including previously unknown sources of contamination, JBS&G reserves the right to review the advice in the context of the additional information.



Appendix 1: Hazardous Materials Register





JBS SAMPLE NO.	TYPE OF ASBESTOS & LOCATION	PHOTO NUMBER	FRIABILITY	MATERIAL DESCRIPTION	ACCESSIBLE AREA?	ANALYTICAL RESULT	MATERIAL CONDITION	APPROX. QUANTITY (m²)	ACTION REQUIRED	DATE OF LAST INSPECTION (INCL. COMPANY NAME AND INITIALS)	DATE OF CONTROL ACTION &/OR REMOVAL
S01	FCS to store room ceiling, building 1	3	Non-friable	FCS	Yes	Chrysotile, Amosite and Crocidolite asbestos detected	Intact	5	Remove prior to demolition	31 October 2013, JBS&G (NSW & WA) Pty Ltd RC	
S02	FCS to store room ceiling cladding strip, building 1	-	Non-friable	FCS	Yes	Chrysotile, Amosite and Crocidolite asbestos detected	Generally intact, minor damage	2	Remove prior to demolition	31 October 2013, JBS&G (NSW & WA) Pty Ltd RC	
S03	FCS to laundry ceiling, building 1	-	Non-friable	FCS	Yes	Chrysotile, Amosite and Crocidolite asbestos detected	Intact	5	Remove prior to demolition	31 October 2013, JBS&G (NSW & WA) Pty Ltd RC	
S04	Brown vinyl floor tile with adhesive backing to lunch room, building 1	-	Non-friable	Vinyl floor tile with adhesive backing	Yes	No asbestos detected	Generally intact	10	No action required	31 October 2013, JBS&G (NSW & WA) Pty Ltd RC	
S05	FCS to lunch room ceiling, building 1	-	Non-friable	FCS	Yes	Chrysotile, Amosite and Crocidolite asbestos detected	Intact	10	Remove prior to demolition	31 October 2013, JBS&G (NSW & WA) Pty Ltd RC	
S06	FCS to external eave, building 1	4	Non-friable	FCS	Yes	Chrysotile, Amosite and Crocidolite asbestos detected	Generally intact, minor damage	30	Remove prior to demolition	31 October 2013, JBS&G (NSW & WA) Pty Ltd RC	
S07	Moulded AC pipe to BBQ flue, north of building 1	5	Non-friable	AC	Yes	Chrysotile asbestos detected	Generally intact, minor damage	3	Remove prior to demolition	31 October 2013, JBS&G (NSW & WA) Pty Ltd RC	
S08	Bitumen impregnated paper sarking to underside of concrete soffit (ceiling/roof) Building 3	12	Friable	Bitumen/paper	Yes	No asbestos detected	Generally intact, some damage	16	No action required	26 November 2013, JBS&G (NSW & WA) Pty Ltd KU	
S09	Gasket to pipework in pit adjacent front entrance	10	Non-friable	Gaskets	Yes	No asbestos detected	Generally intact	1 unit	No action required	26 November 2013, JBS&G (NSW & WA) Pty Ltd KU	





JBS SAMPLE NO.	TYPE OF ASBESTOS & LOCATION	PHOTO NUMBER	FRIABILITY	MATERIAL DESCRIPTION	ACCESSIBLE AREA?	ANALYTICAL RESULT	MATERIAL CONDITION	APPROX. QUANTITY (m²)	ACTION REQUIRED	DATE OF LAST INSPECTION (INCL. COMPANY NAME AND INITIALS)	DATE OF CONTROL ACTION &/OR REMOVAL
S10	Bitumen expansion joint to concrete ramp adjacent building 3	-	Non-friable	Bitumen	Yes	No asbestos detected	Generally intact	10	No action required	26 November 2013, JBS&G (NSW & WA) Pty Ltd KU	
LP01	White paint to door frame of store room, building 1	-	N/A	Lead in Paint	Yes	0.09 mg/cm ²	Poor, peeling	3	No action required	31 October 2013, JBS&G (NSW & WA) Pty Ltd RC	
LP02	Blue paint to door of store room, building 1	-	N/A	Lead in Paint	Yes	0.1 mg/cm ²	Poor, peeling	5	No action required	31 October 2013, JBS&G (NSW & WA) Pty Ltd RC	
LP03	White paint to walls of store room, building 1	-	N/A	Lead in Paint	Yes	0.19 mg/cm ²	Poor, peeling	15	No action required	31 October 2013, JBS&G (NSW & WA) Pty Ltd RC	
LP04	White paint to window frames of store room, building 1	-	N/A	Lead in Paint	Yes	0.04 mg/cm ²	Poor, peeling	2	No action required	31 October 2013, JBS&G (NSW & WA) Pty Ltd RC	
LP05	White paint to window frame, level 1, building 2	-	N/A	Lead in Paint	Yes	3.1 mg/cm²	Poor, peeling	2	Remove prior to demolition	31 October 2013, JBS&G (NSW & WA) Pty Ltd RC	
LP06	Blue paint to door, level 1, building 2	7	N/A	Lead in Paint	Yes	3.41 mg/cm ²	Poor, peeling	3	Remove prior to demolition	31 October 2013, JBS&G (NSW & WA) Pty Ltd RC	
LP07	Blue paint to exterior barge boards, level 1, building 2	-	N/A	Lead in Paint	Yes	0.30 mg/cm ²	Poor, peeling	20	No action required	31 October 2013, JBS&G (NSW & WA) Pty Ltd RC	
LP08	White paint to external door frame of toilet, southern portion of building 2	6	N/A	Lead in Paint	Yes	1.51 mg/cm²	Poor, peeling	3	Remove prior to demolition	31 October 2013, JBS&G (NSW & WA) Pty Ltd RC	
LP09	Blue paint to door of lunch room, building 1	-	N/A	Lead in Paint	Yes	0.32 mg/cm ²	Poor, peeling	3	No action required	31 October 2013, JBS&G (NSW & WA) Pty Ltd RC	
LP10	White paint to door jamb of building 3	-	N/A	Lead in Paint	Yes	0.22 mg/cm ²	Poor, peeling	3	No action required	26 November 2013, JBS&G (NSW & WA) Pty Ltd KU	



JBS SAMPLE NO.	TYPE OF ASBESTOS & LOCATION	PHOTO NUMBER	FRIABILITY	MATERIAL DESCRIPTION	ACCESSIBLE AREA?	ANALYTICAL RESULT	MATERIAL CONDITION	APPROX. QUANTITY (m²)	ACTION REQUIRED	DATE OF LAST INSPECTION (INCL. COMPANY NAME AND INITIALS)	DATE OF CONTROL ACTION &/OR REMOVAL
LP11	Orange paint to door of building 3	-	N/A	Lead in Paint	Yes	0.11 mg/cm ²	Poor, peeling	3	No action required	26 November 2013, JBS&G (NSW & WA) Pty Ltd KU	
LP12	White paint to desk in building 3	-	N/A	Lead in Paint	Yes	0.32 mg/cm ²	Poor, peeling	3	No action required	26 November 2013, JBS&G (NSW & WA) Pty Ltd KU	
Assumed	SMF to hot water system, exterior western wall of building 1	-	N/A	SMF HWS	Yes	Assumed SMF	Damaged	2	Remove prior to demolition	31 October 2013, JBS&G (NSW & WA) Pty Ltd RC	
Assumed	PCB containing capacitors to fluorescent light fittings to lunch room, building 1	1	N/A	PCB's	No	Assumed PCB's	Intact, no leakage	Throughout	Remove prior to demolition	31 October 2013, JBS&G (NSW & WA) Pty Ltd RC	
Assumed	FCS to ceiling, level 1, building 2	ı	Non-friable	FCS	No	Assumed Asbestos	Generally intact	20	Remove prior to demolition	31 October 2013, JBS&G (NSW & WA) Pty Ltd RC	
Assumed	Old electrical componentry with fuse box adjacent front door, building 3	-	Non-friable	FCS	No	Assumed Asbestos	Concealed within	1	Remove prior to demolition	26 November 2013, JBS&G (NSW & WA) Pty Ltd KU	
Assumed	PCB containing capacitors to fluorescent light fittings to building 3	1	N/A	PCB's	No	Assumed PCB's	Intact, no leakage	2 units	Remove prior to demolition	26 November 2013, JBS&G (NSW & WA) Pty Ltd KU	
Assumed	Chlorine gas cyclinders within building 3	-	N/A	Chlorine gas	No	Assumed Chlorine	Unknown, cylinders looked intact with no obvious corrosion	7 units	Remove prior to demolition	26 November 2013, JBS&G (NSW & WA) Pty Ltd KU	

Note: FCS = Fibre Cement sheeting; SMF = Synthetic Mineral Fibre; LP = Lead Paint, HWS = Hot Water System; PCB's = Polychlorinated Biphenyls; AC = Asbestos Cement.

^{1.} Lead paint samples tested by trained and experienced environmental scientist/hygienist using a calibrated X-ray fluorescence (XRF) spectrometer.

⁽¹⁾ In accordance with the Code of Practice (SWA 2011a) if a material "...is assumed to be asbestos, it is considered to be asbestos for legal purposes". Therefore, in this report, if a material is reported as assumed to contain asbestos it must be managed, including during demolition, as containing asbestos unless proven otherwise by sampling and analysis. A material is assumed to contain asbestos when a sample has not been analysed but the material is consistent with the characteristics of a similar material in the survey area that has been sampled and found to contain asbestos; or based on the experience of the competent person undertaking the survey, taking into account the age and construction of the structure and similarities of the material with known ACM



Appendix 2: Photographs





Photograph 1:

Building 1 located in the southern portion of the site



Photograph 2:

Building 2 located in the northern portion of the site



Photograph 3:

FCS panels to store room ceiling, eastern portion Building 1

Contains asbestos



Photograph 4:

FCS to external eaves surrounding Building 1

Contains asbestos





Photograph 5:

Moulded AC pipe to BBQ flue, north of Building 1

Contains asbestos



Photograph 6:
White paint to door frame of toilet, Building 2
Contains lead in paint >1%



Photograph 7:
Blue paint to door, Building 2
Contains lead in paint >1%



Photograph 8: Building 3 located to the eastern portion of the site





Photograph 9:

Old electrical componentry with fuse box adjacent entrance door, Building 3

Assumed to contain asbestos



Photograph 10:

Gaskets to the pipework within pit adjacent front entrance, Building 3.

Noted to be either metallic or rubber. A sample of the metallic type gasket had no asbestos detected.

The small pipes within the wall were also inspected and noted to be metal.

No access was available to the bottom of the pit due to the water hazard.



Photograph 11:

Chlorine gas bottles within Building 3.



Photograph 12:

Bitumen paper sarking to underside of concrete soffit, Building 3. No asbestos detected in sample.

Old florescent light fitting, Building 3.

Assumed may contain PCB capacitors.



Appendix 3: Laboratory Analysis Reports and Chain of Custody Documentation



Envirolab Services Pty Ltd ABN 37 112 535 645

12 Ashley St Chatswood NSW 2067 ph 02 9910 6200 fax 02 9910 6201 enquiries@envirolabservices.com.au www.envirolabservices.com.au

CERTIFICATE OF ANALYSIS 99924

Client:

JBS & G (NSW & WA) Pty Ltd Level 1, 50 Margaret St Sydney

NSW 2000

Attention: R Clark

Sample log in details:

Your Reference: 43008, Ed. Park Hazmat

No. of samples:7 materialsDate samples received:31/10/13Date completed instructions received:31/10/13

Analysis Details:

Please refer to the following pages for results and methodology summary.

Samples were analysed as received from the client. Results relate specifically to the samples as received. Note, even after disintegration it can be difficult to detect the presence of asbestos in some asbestos containing bulk materials using PLM and dispersion staining. This is due to the low grade or small length or diameter of the asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials. Vinyl/asbestos floor tiles, some asbestos containing epoxy resins and some ore samples are examples of these types of material, which are difficult to analyse.

Report Details:

Date results requested by: 4/11/13

Date of Preliminary Report: Not Issued Issue Date: 5/11/13

NATA accreditation number 2901. This document shall not be reproduced except in full.

Accredited for compliance with ISO/IEC 17025. Tests not covered by NATA are denoted with *.

Results Approved By:

Asbestos was analysed by Approved Identifier: Paul Ching
Asbestos was authorised by Approved Signatory: Paul Ching

Paul Ching Approved Signatory



Client Reference: 43008, Ed. Park Hazmat

Envirolab Ref:	Sample ID:	Date analysed	Mass / Dimension of Sample	Sample Description	Asbestos ID in materials
	_	-	-	-	-
99924-1	S01	4/11/2013	88x34x4mm	Ivory compressed fibre cement material	Chrysotile asbestos detected Amosite asbestos detected Crocidolite asbestos detected
99924-2	S02	4/11/2013	56x43x7mm	Ivory compressed fibre cement material	Chrysotile asbestos detected Amosite asbestos detected Crocidolite asbestos detected
99924-3	S03	4/11/2013	53x30x5mm	Ivory compressed fibre cement material	Chrysotile asbestos detected Amosite asbestos detected Crocidolite asbestos detected
99924-4	S04	4/11/2013	170x103x1mm	Grey flexible vinyl sheet & adhesive	No asbestos detected
99924-5	S05	4/11/2013	37x23x4mm	Ivory compressed fibre cement material	Chrysotile asbestos detected Amosite asbestos detected Crocidolite asbestos detected
99924-6	S06	4/11/2013	42x39x5mm	Beige compressed fibre cement material	Chrysotile asbestos detected Amosite asbestos detected Crocidolite asbestos detected

Envirolab Reference: 99924 Revision No: R 00 ACCREDITED FOR TECHNICAL COMPETENCE

Client Reference: 43008, Ed. Park Hazmat

Envirolab Ref:	Sample ID:	Date analysed -	Mass / Dimension of Sample	Sample Description	Asbestos ID in materials
99924-7	S07	4/11/2013	16x13x1mm	Beige fibre cement material	Chrysotile asbestos detected



Envirolab Reference: 99924 Revision No: R 00

Client Reference: 43008, Ed. Park Hazmat

Method ID	Methodology Summary
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.



Envirolab Reference: 99924 Revision No: R 00

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Envirolab Services Pty Ltd ABN 37 112 535 645

ABN 37 112 535 645 12 Ashley St Chatswood NSW 2067 ph 02 9910 6200 fax 02 9910 6201 enquiries@envirolabservices.com.au www.envirolabservices.com.au

# **CERTIFICATE OF ANALYSIS 101394**

Client:

JBS & G (NSW & WA) Pty Ltd

Level 1, 50 Margaret St Sydney NSW 2000

Attention: Kynan Usback

Sample log in details:

Your Reference: 43008, Ingleburn STP

No. of samples: 3 Materials
Date samples received: 26/11/2013
Date completed instructions received: 26/11/2013

#### **Analysis Details:**

Please refer to the following pages for results and methodology summary.

Samples were analysed as received from the client. Results relate specifically to the samples as received. Note, even after disintegration it can be difficult to detect the presence of asbestos in some asbestos containing bulk materials using PLM and dispersion staining. This is due to the low grade or small length or diameter of the asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials. Vinyl/asbestos floor tiles, some asbestos containing epoxy resins and some ore samples are examples of these types of material, which are difficult to analyse.

# **Report Details:**

Date results requested by: 28/11/13

Date of Preliminary Report: Not Issued Issue Date: 28/11/13

NATA accreditation number 2901. This document shall not be reproduced except in full.

Accredited for compliance with ISO/IEC 17025. Tests not covered by NATA are denoted with *.

#### **Results Approved By:**

Asbestos was analysed by Approved Identifier: Alex Tam
Asbestos was authorised by Approved Signatory: Matt Mansfield

Matt Mansfield Approved Signatory

M. Maugjeld



Client Reference: 43008, Ingleburn STP

Envirolab Ref: -	Sample ID:	Date analysed -	Mass / Dimension of Sample -	Sample Description	Asbestos ID in materials
101394-1	S/08	27/11/2013	67x41x1mm	Brown fibrous sheet & bituminous layer	No asbestos detected
101394-2	S/09	27/11/2013	8x3x1mm	Metallic grey soft mastic-like material	No asbestos detected
101394-3	S/10	27/11/2013	73x49x14mm	Brown bituminous fibrous material	No asbestos detected



# Client Reference: 43008, Ingleburn STP

MethodID	Methodology Summary
	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.



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