Health Infrastructure NSW

Hazardous Building Materials Survey

The Lodge
Labyrinth Way, Westmead NSW

28 January 2021

56200/130,973 (Rev 1)

JBS&G Australia Pty Ltd

www.jbsg.com.au

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Abbreviations

Term	Definition
AC	Asbestos Cement
ACM	Asbestos Containing Material
ACD	Asbestos Containing Dust
ANZECC	Australian and New Zealand Environment Conservation Council
AMP	Asbestos Management Plan
COC	Chain of Custody
EPA NSW	Environmental Protection Authority, New South Wales
FA	Friable Asbestos
HIL	Health Investigation Levels
HSL	Health Screening Levels
JBS&G	JBS&G Australia Pty Ltd
LAA	Licenced Asbestos Assessor
LCD	Lead Containing Dust
LOR	Limit of Reporting
LP	Lead Paint
NATA	National Association of Testing Authorities, Australia
NEPC	National Environmental Protection Council
NEPM	National Environmental Protection Measure
PCB	Polychlorinated Biphenyls
PPE	Personal Protective Equipment
SMF	Synthetic Mineral Fibre
SWA	Safe Work Australia
SWNSW	SafeWork New South Wales
WHS (WH&S)	Workplace Health and Safety

1. Introduction

1.1 Background

JBS&G Australia Pty Ltd (JBS&G) was engaged by Health Infrastructure NSW (HI, the client) to undertake a hazardous building materials survey (HBMS) of The Lodge (formerly known as old Ronald McDonald House) at The Children's Hospital Westmead, located on Labyrinth Way, Westmead, NSW 2145 (the site). The site is formally identified as Part Lot 101 in DP 1119583 and Part Lot 1 in DP 808447 and comprises an area of approximately 9,000 m^2. The site location and layout are shown on **Figures 1** and **2**, respectively.

It is understood that the client is seeking to redevelop the site into a multi storey car park (MSCP) as part of The Children's Hospital at Westmead Stage 2 Redevelopment. To facilitate the development of the MSCP, the existing old Ronald McDonald House and associated structures are required to be demolished.

This HBMS has been undertaken to address Item 19 of the Secretary's Environmental Assessment Requirements (SEARs) for State Significant Development Application (SSD-10434896) for the MSCP project.

This HBMS was requested to identify the presence of hazardous materials within the structure to assist with the demolition phase of the site redevelopment works.

This advice presents the outcomes of the inspection undertaken by JBS&G personnel and provides recommendations on requirements for the removal of identified hazardous materials in accordance with regulations and guidance in force at the time of the inspection.

The structures were inspected for the following hazardous materials:

- Asbestos containing materials (ACMs);
- Asbestos containing dust (ACD);
- Lead based paints (LP);
- Lead containing Dust (LCD)
- Synthetic mineral fibres (SMF); and
- Polychlorinated biphenyls (PCB).

No previous hazardous building materials survey reports or registers were made available to JBS&G prior to the completion of these works.

1.2 Objectives

The objective of the HBMS was to determine the presence, quantity and condition of any hazardous materials within the buildings prior to proposed demolition works.

The HBMS 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* (2017);
- *How to Safely Remove Asbestos Code of Practice*, SafeWork NSW, (2019) (SWNSW 2019a);
- *How to Manage and Control Asbestos in the Workplace Code of Practice*, SafeWork NSW (2019) (SWNSW 2019b);

- Australian Standard 4361.2 (1998) *Guide to Lead Paint Management - Part 2: Residential and Commercial Buildings* (AS4361.2-1998);
- Australian Standard 4361.2 (2017) *Guide to Hazardous Paint Management - Part 2: Lead Paint in Residential, Public and Commercial Buildings* (AS4361.2-2017);
- National Occupational Health and Safety Commission's *National Standard for Synthetic Mineral Fibres* [NOHSC:1004(1990)];
- National Occupational Health and Safety Commission's *National Code of Practice for the Safe Use of Synthetic Mineral Fibres*, [NOHSC:2006(1990)]; and
- Australian and New Zealand Environment Conservation Council's *Identification of PCB-containing Capacitors: An information booklet for Electricians and Electrical Contractors*, (ANZECC 1997).

1.3 Hazardous Materials Survey Limitations

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

- Only safely accessible areas of the site were surveyed.
- Access restrictions to operational areas such as energised services, gas, air conditioning/heating, pressurised vessels, chemical lines etc.
- Potential materials located in areas in which they could not reasonably be envisaged or anticipated.
- Limited access to internal building components e.g. set floor, walls, ceiling cavities 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 areas above 3 metres or any area deemed inaccessible without the use of specialised equipment.
- Access to restrictions to areas of structures where the structural integrity for the floor and/or ceiling has been compromised.
- Service pits, confined spaces, voids, cavities within the building structure and internal areas of plant and equipment that could not be safely accessed.

It should be noted that buildings built between the 1930s - 1980s may have general occurrences of ACMs in areas which are not readily accessible with the hand tools available for the survey. These areas and materials include, inter alia:

- Fibre Cement Sheeting (FCS) used as packing to bearers and joists in the underfloor void or as boxing/shuttering to concrete formwork;
- FCS packing between window/door frames and timber studs; and
- Compressed FCS underneath tiled floor areas.

Whilst all care is taken by the consultants to uncover hidden materials, not all areas can be accessed within the allowable timeframe without more industrial (power) tools. As such, only minor destructive sampling techniques were employed to gain access. Consequently, without substantial demolition of the building, it is not possible to guarantee that every source of hazardous material has been detected. JBS&G recommends that areas inaccessible during the survey be inspected as the demolition progresses. If suspected hazardous materials are observed, confirm the presence or absence of hazardous materials through laboratory testing.

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.

2. Methodology

2.1 Hazardous Materials

2.1.1 Asbestos Containing Materials and Asbestos Containing Dust

Representative samples of suspected ACMs and ACDs were collected where possible and placed into a zip-lock bags. These were subsequently delivered to a NATA accredited laboratory for analysis 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 asbestos cement roofs and older fibre cement sheeting) or materials not accessible may also be assumed to contain asbestos as per the relevant Code of Practice.

At the time of inspection, 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 (2017) *Guide to Hazardous Paint Management - Part 2: Lead Paint in Residential, Public and Commercial Buildings* defines lead paints as those in which the lead content (calculated as lead metal) is in excess of 0.1 percent by weight of the dry film. This can be determined by field spot tests, laboratory testing or the use of portable X-ray fluorescence (XRF) field tests. JBS&G utilises XRF technology as a screening tool for the identification of lead based paints in the field. Any detection of lead greater than 0.1 mg/cm^2 was adopted for the assessment of lead based paints for this investigation with representative samples collected where possible and delivered to a NATA accredited laboratory for analysis using inductively coupled plasma optical emission spectrometry (ICP-OES).

2.1.3 Lead Containing Dust

Representative samples of accumulated or settled dust were collected and delivered to a NATA accredited laboratory for analysis via ICP-OES. A conservative assessment criteria was adopted for this investigation given the potential for human exposure and the readily disturbed and uncontained nature of accumulated or settled dust.

Concentrations of lead within accumulated or settled dust were compared against the health investigation level (HIL) for residential sites with garden/accessible soil of 300 mg/kg as outlined in National Environment Protection Measure (NEPC 2013) guidelines.

2.1.4 Polychlorinated Biphenyls

Old fluorescent light fittings and other appliances which may contain capacitors containing PCB dielectric oil are identified by inspection and evaluation with the consultant's experience of similar light fittings and appliances. Alternatively, where possible and when it was 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 SWNSW 2019b, 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 (**Appendix A**).

3. Site Description

The HBMS was conducted on 25 and 26 June 2020 by Stuart Lumsden, one of JBS&G's experienced hazardous materials surveyors and a SafeWork NSW Licensed Asbestos Assessor (LAA 001140).

The site was located in northern portion of The Children's Hospital Westmead campus and was bound by Labyrinth Way to the north and east, The Children's Hospital Westmead main building to the south, and Redbank Road to the west.

The site comprised three structures and were identified as follows:

- The Lodge – large single storey structure;
- Gazebo – small structure located to the north of the Lodge; and
- Shed – small structure located to the northwest of the Lodge.

The structures on the site were constructed in 1995 and utilised as the Ronald McDonald House to provide accommodation for families at the hospital. Following construction of a new Ronald McDonald House, the structures were repurposed and now provide accommodation for medical students and offices for the Workplace Safety and Employee Wellbeing department.

The type, location, friability, accessibility and approximate quantities of identified and suspected hazardous materials are provided in the Hazardous Materials Register in **Appendix A**. Photographs taken during the HBMS are presented in **Appendix B**. A summary of the observations made during the HBMS is included in the following sections.

3.1 The Lodge

The Lodge was identified as the large single storey structure and comprised concrete tile roof, concrete floors with various floor coverings, fibre cement external walls, plasterboard ceilings, and a combination of fibre cement and plasterboard internal walls.

Internally, the Lodge was divided into three main areas:

- East portion – comprised offices for the Workplace Safety and Employee Wellbeing department;
- Centre portion – comprised the main kitchen, dining and lounge areas; and
- West portion – comprised accommodation for medical students.

A summary of the observations made during the HBMS is as follows:

- Non-asbestos containing fibre cement sheeting (A-01) was identified to the eaves and undercloak verges.
- Non-asbestos containing fibre cement sheeting (A-02) was identified to the veranda soffits.
- Non-asbestos containing moulded fibre cement (A-03) was identified to the veranda columns.
- Non-asbestos containing fibre cement sheeting (A-04) was identified to the external walls.
- Non-asbestos containing fibre cement sheeting (A-05) was identified to the walls of the east kitchen.
- Non-asbestos containing brown vinyl (A-06) was identified to the floor of the east kitchen. This material was also identified to the floors of the following rooms in the east portion:
    - hot water system (HWS) cupboard;
    - electrical distribution (DB) cupboards;

- server room;
- print room; and
- lounge room (central portion).

- Non-asbestos containing fibre cement sheeting (A-07) behind plasterboard sheeting was identified to the internal fire walls throughout the building. These fire walls were identified as the dividing walls to the following areas:
  - between the individual accommodation units in the western portion;
  - between the accommodation units and the corridors in the western portion;
  - between the individual accommodation units/offices in the eastern portion; and
  - between the accommodation units/offices and the corridors in the eastern portion.
- Non-asbestos containing grey vinyl flooring (A-08) was identified to the east disabled and unisex toilets.
- Non-asbestos containing fibre cement sheeting (A-09) was identified to the internal wall linings of all bathrooms.
- Non-asbestos containing grey vinyl flooring (A-10) was identified to the central kitchen and pantry.
- Non-asbestos containing green vinyl flooring (A-11) was identified to the floor of the west laundry. This material was also identified to the floors of the following rooms in the east portion:
  - Store 3;
  - Electrical cupboard;
  - HWS cupboard;
  - Store 1; and
  - Store 2.
- Non-asbestos containing grey vinyl flooring (A-12) was identified to the kitchens in rooms E1 and E2.
- Lead concentrations within settled dust below the adopted site criteria (LD-01, 170 mg/kg) was identified within the western portion ceiling cavity. This dust was also found not to contain asbestos (AD-01).
- Lead concentrations within settled dust below the adopted site criteria (LD-02, 240 mg/kg) was identified within the western portion ceiling cavity. This dust was also found not to contain asbestos (AD-02).
- All accessible paint systems were screened via XRF spectrometer and classified as non-lead based paints (XRF result < 0.1 mg/cm^2).
- Various assumed SMF insulation materials were identified throughout the building as follows:
  - Internal to two HWS in the east HWS cupboard;
  - Internal to two HWS in the west HWS cupboard;
  - Internal wall cavities throughout;
  - Internal to instant hot/cold water system in east kitchen;

- Batts throughout ceiling cavity;
- Air conditioning ducting throughout ceiling cavity; and
- Pipework throughout ceiling cavity.

- Fluorescent light fittings were of modern age and appearance. Based on the year of building construction (1995) these light fittings are not suspected to contain PCB containing capacitors.
- There was no internal access to rooms W1, W3, W4, W6 and W9 as they were occupied, however, are assumed to be consistent with the materials identified in Rooms W2, W5, W7 and W8.

3.2 Gazebo

The Gazebo was identified as the small north structure and comprised corrugated metal roof, timber floor, fibre cement ceiling and north wall.

A summary of the observations made during the HBMS is as follows:

- Non-asbestos containing fibre cement sheeting (A-13) was identified to the north wall. This material was also identified to the ceiling and eaves.
- All accessible paint systems were screened via XRF spectrometer and classified as non-lead based paints (XRF result < 0.1 mg/cm^2).
- No other hazardous materials were identified at the time of inspection.

3.3 Shed

The Shed was identified as the small northwest structure and comprised corrugated metal roof, concrete floor, fibre cement ceiling and walls.

A summary of the observations made during the HBMS is as follows:

- Non-asbestos containing fibre cement sheeting (A-14) was identified to the external walls. This material was also identified to the internal walls, ceiling and eaves.
- All accessible paint systems were screened via XRF spectrometer and classified as non-lead based paints (XRF result < 0.1 mg/cm^2).
- No other hazardous materials were identified at the time of inspection.

4. Results

4.1 Hazardous Materials

All identified hazardous materials are recorded in the Hazardous Materials Register in **Appendix A** with relevant photographs in **Appendix B**. NATA accredited laboratory analysis reports and chain of custody are provided in **Appendix C**.

4.1.1 Asbestos Containing Materials

ACM were identified by testing at an accredited NATA laboratory and/or visual inspection using the experience of the hazardous materials surveyor. A summary of the results of laboratory testing for asbestos are provided in **Table A** below.

Table A: Asbestos Results Summary Table

Sample ID	Lab ID	Sample Location	Results	Observed Condition
The Lodge				
A-01	20-Jn47586	Eaves and undercloak verge – fibre cement sheeting	No Asbestos Detected	N/A
A-02	20-Jn47587	Veranda soffits – fibre cement sheeting	No Asbestos Detected	N/A
A-03	20-Jn47588	Veranda columns – moulded fibre cement	No Asbestos Detected	N/A
A-04	20-Jn47589	External walls – fibre cement sheeting	No Asbestos Detected	N/A
A-05	20-Jn47590	East kitchen, walls – fibre cement sheeting	No Asbestos Detected	N/A
A-06	20-Jn47591	East kitchen, floor – brown vinyl	No Asbestos Detected	N/A
A-07	20-Jn47592	Internal fire walls – fibre cement sheeting	No Asbestos Detected	N/A
A-08	20-Jn47593	East disabled and unisex toilets, floor – grey vinyl	No Asbestos Detected	N/A
A-09	20-Jn47594	Bathrooms, internal walls – fibre cement sheeting	No Asbestos Detected	N/A
A-10	20-Jn47595	Central kitchen and pantry, floor – grey vinyl	No Asbestos Detected	N/A
A-11	20-Jn47596	West laundry, floor – green vinyl	No Asbestos Detected	N/A
A-12	20-Jn47597	E1 & E2 kitchens, floor – grey vinyl	No Asbestos Detected	N/A
Gazebo				
A-13	20-Jn47598	External walls, ceiling, eaves – fibre cement sheeting	No Asbestos Detected	N/A
Shed				
A-14	20-Jn47599	External walls, ceiling, eaves – fibre cement sheeting	No Asbestos Detected	N/A

4.1.2 Asbestos Containing Dust

Representative dust samples were collected throughout the site. A summary of the results of the laboratory testing for asbestos are provided in **Table B** below:

Table B: Asbestos Dust Results Summary Table

Sample ID	Lab ID	Sample Location	Results	Observed Condition
House				
AD-01	20-Jn47600	West ceiling cavity – settled dust	No Asbestos Detected	N/A
AD-02	20-Jn47601	East ceiling cavity – settled dust	No Asbestos Detected	N/A
Garage				
No dust samples collected				
Workshop/Stables				
No dust samples collected				

4.1.3 Lead Containing Dust

Representative dust samples were collected throughout the site. A summary of the results of the laboratory testing for lead are provided in **Table C** below:

Table C: Lead Dust Results Summary Table

Sample ID	Lab ID	Sample Location	Results	Observed Condition
House				
LD-01	20-Jn47602	West ceiling cavity – settled dust	170 mg/kg	N/A
LD-02	20-Jn47603	East ceiling cavity – settled dust	240 mg/kg	N/A
Garage				
No dust samples collected				
Workshop/Stables				
No dust samples collected				

4.1.4 Lead Based Paints

All accessible paint systems were screened via XRF spectrometer and classified as non-lead based paints (XRF result < 0.1 mg/cm^2).

4.1.5 Polychlorinated Biphenyls

Fluorescent light fittings were of modern age and appearance. Based on the year of building construction (1995) these light fittings are not suspected to contain PCB containing capacitors.

4.1.6 Synthetic Mineral Fibres

Suspected SMF materials were identified in various forms throughout the site. Full details of all identified SMF materials are provided in the Hazardous Materials Register (**Appendix A**). The typical forms of SMF identified are summarised below:

- Internal insulation to hot water systems;
- Insulation lagging to ducting and pipework;
- Insulation batts within ceiling cavities; and
- Insulation batts within wall cavities.

4.2 Inaccessible Areas

At the time of inspection, there were no areas of the site deemed to be inaccessible areas in accordance with SWNSW 2019b.

5. Conclusions and Recommendations

Based on the scope of this assessment and with reference to the limitations included in **Section 6**, the following conclusions are made with respect to the Hazardous Materials Survey completed.

5.1 Hazardous Materials

Identified and suspected hazardous materials were observed throughout the building as a result of visual identification and laboratory analysis.

The following recommendations are made for the removal of the identified hazardous materials to potentially mitigate harmful effects as a result of the proposed works program. The person with management or control of the site, must ensure so far as is reasonably practicable that the identified hazardous materials are removed prior to the commencement of demolition works.

The identified and suspected hazardous materials are presented in the Hazardous Materials Register included as **Appendix A**.

5.1.1 Asbestos Containing Materials

No asbestos containing materials were identified at the time of inspection.

5.1.2 Lead Containing Dust

No lead containing dust above the adopted site criteria was identified at the time of inspection.

5.1.3 Lead Based Paints

No lead based paints were identified at the time of inspection.

5.1.4 Synthetic Mineral Fibres

The synthetic mineral fibres encountered during this inspection were generally contained and deemed to be low risk. These SMF materials can be removed with the building and demolition 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 [NOHSC: 1004(1990)] and [NOHSC: 2006(1990)].

5.1.5 Polychlorinated Biphenyls

No polychlorinated biphenyls were identified at the time of inspection.

5.2 Unexpected Finds

Any materials deemed 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 or prior to demolition works, 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 report has been prepared for use by the client who has 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 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.

JBS&G accepts no liability for use or interpretation by any person or body other than the client who commissioned the works. This report should not be reproduced without prior approval by the client, or amended in any way without prior approval by JBS&G, and should not be relied upon by other parties, who should make their own enquiries.

Sampling and chemical analysis of environmental media is based on appropriate guidance documents made and approved by the relevant regulatory authorities. Conclusions arising from the review and assessment of environmental data are based on the sampling and analysis considered appropriate based on the regulatory requirements.

Limited sampling and laboratory analyses were undertaken as part of the investigations undertaken, as described herein. 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, which 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 investigations described herein, through natural processes or through the intentional or accidental addition of contaminants. The conclusions and recommendations reached in this report are based on the information obtained at the time of the investigations.

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

Figures

Legend:

Approximate Site Boundary

JBS&G

Job No: 56200	
Client: Health Infrastructure	
Version: R03 Rev A	Date 1/07/2020
Drawn By: RH	Checked By: JS
Scale 1:8,000	

0 100 200

metres

Coord. Sys. GDA 1994 MGA Zone 56

Westmead Children's Hospital Forecourt, Westmead, NSW

SITE LOCATION

FIGURE 1

File Name: \\JBSG-NSW-FS01\Company Data\Projects\Health Infrastructure\56200 - Westmead Kids Hospital Stage 2\GIS\Maps\R02 Rev A\56200_01_SiteLocation.mxd

Legend:

Approximate Site Boundary

JBS&G

Job No: 56200	
Client: Health Infrastructure	
Version: R03 Rev A	Date 1/07/2020
Drawn By: RH	Checked By: JS

Scale 1:1,000

0 10 20

metres

Coord. Sys. GDA 1994 MGA Zone 56

Old Ronald McDonald House
Westmead, NSW

SITE LAYOUT

FIGURE 2

File Name: \\JBSG-NSW-FS01\Company Data\Projects\Health Infrastructure\56200 - Westmead Kids Hospital Stage 2\GIS\Maps\R03 Rev A\56200_02_SiteLayout.mxd
Reference:

Appendix A Hazardous Materials Register

Hazardous Materials Register (Rev 0)
Old Ronald McDonald House
Labyrinth Way, Westmead, NSW
The Lodge
Date of Production – 10 July 2020

JBS&G SAMPLE NO.	LOCATION	MATERIAL DESCRIPTION	PHOTO NUMBER	ACCESSIBLE AREA?	FRIABILITY	ANALYTICAL RESULT	MATERIAL CONDITION	APPROX. QUANTITY	ACTION REQUIRED	DATE OF LAST INSPECTION (INCL. COMPANY NAME AND INITIALS)	DATE OF CONTROL ACTION &/OR REMOVAL
Asbestos Containing Materials (ACM)											
No Asbestos Containing Materials were identified at the time of inspection									-	26/6/2020 JBS&G SL	
No Asbestos Detected (NAD)											
A-01	Eaves and undercloak verge	Fibre cement sheeting	2	Yes	-	No Asbestos Detected	-	-	No further action required	26/6/2020 JBS&G SL	
A-02	Veranda soffits	Fibre cement sheeting	3	Yes	-	No Asbestos Detected	-	-	No further action required	26/6/2020 JBS&G SL	
A-03	Veranda columns	Moulded fibre cement	4	Yes	-	No Asbestos Detected	-	-	No further action required	26/6/2020 JBS&G SL	
A-04	External walls	Fibre cement sheeting	5	Yes	-	No Asbestos Detected	-	-	No further action required	26/6/2020 JBS&G SL	
A-05	East kitchen, walls	Fibre cement sheeting	6	Yes	-	No Asbestos Detected	-	-	No further action required	26/6/2020 JBS&G SL	
A-06	East kitchen, floor	Brown vinyl	7	Yes	-	No Asbestos Detected	-	-	No further action required	26/6/2020 JBS&G SL	
As per A-06	East HWS cupboard, floor	Brown vinyl	-	Yes	-	No Asbestos Detected	-	-	No further action required	26/6/2020 JBS&G SL	
As per A-06	East electrical DB cupboard, floor	Brown vinyl	-	Yes	-	No Asbestos Detected	-	-	No further action required	26/6/2020 JBS&G SL	
As per A-06	East server room, floor	Brown vinyl	-	Yes	-	No Asbestos Detected	-	-	No further action required	26/6/2020 JBS&G SL	
As per A-06	East print room, floor	Brown vinyl	-	Yes	-	No Asbestos Detected	-	-	No further action required	26/6/2020 JBS&G SL	
As per A-06	Central lounge, floor	Brown vinyl	-	Yes	-	No Asbestos Detected	-	-	No further action required	26/6/2020 JBS&G SL	

JBS&G SAMPLE NO.	LOCATION	MATERIAL DESCRIPTION	PHOTO NUMBER	ACCESSIBLE AREA?	FRIABILITY	ANALYTICAL RESULT	MATERIAL CONDITION	APPROX. QUANTITY	ACTION REQUIRED	DATE OF LAST INSPECTION (INCL. COMPANY NAME AND INITIALS)	DATE OF CONTROL ACTION &/OR REMOVAL
A-07	Internal fire walls between individual accommodation units in western portion	Fibre cement sheeting	-	Yes	-	No Asbestos Detected	-	-	No further action required	26/6/2020 JBS&G SL	
As per A-07	Internal fire walls between accommodation units and corridor in western portion	Fibre cement sheeting	-	Yes	-	No Asbestos Detected	-	-	No further action required	26/6/2020 JBS&G SL	
As per A-07	Internal fire walls between individual accommodation units/offices in eastern portion	Fibre cement sheeting	8	Yes	-	No Asbestos Detected	-	-	No further action required	26/6/2020 JBS&G SL	
As per A-07	Internal fire walls between individual accommodation units/office and corridor in eastern portion	Fibre cement sheeting	-	Yes	-	No Asbestos Detected	-	-	No further action required	26/6/2020 JBS&G SL	
A-08	East disabled and unisex toilets, floor	Grey vinyl	9	Yes	-	No Asbestos Detected	-	-	No further action required	26/6/2020 JBS&G SL	
A-09	Bathrooms, internal walls	Fibre cement sheeting	10	Yes	-	No Asbestos Detected	-	-	No further action required	26/6/2020 JBS&G SL	
A-10	Central kitchen and pantry, floor	Grey vinyl	11	Yes	-	No Asbestos Detected	-	-	No further action required	26/6/2020 JBS&G SL	
A-11	West laundry, floor	Green vinyl	12	Yes	-	No Asbestos Detected	-	-	No further action required	26/6/2020 JBS&G SL	
As per A-11	West store 1, floor	Green vinyl	-	Yes	-	No Asbestos Detected	-	-	No further action required	26/6/2020 JBS&G SL	
As per A-11	West store 2, floor	Green vinyl	-	Yes	-	No Asbestos Detected	-	-	No further action required	26/6/2020 JBS&G SL	
As per A-11	West store 3, floor	Green vinyl	-	Yes	-	No Asbestos Detected	-	-	No further action required	26/6/2020 JBS&G SL	
As per A-11	West HWS cupboard, floor	Green vinyl	-	Yes	-	No Asbestos Detected	-	-	No further action required	26/6/2020 JBS&G SL	

JBS&G SAMPLE NO.	LOCATION	MATERIAL DESCRIPTION	PHOTO NUMBER	ACCESSIBLE AREA?	FRIABILITY	ANALYTICAL RESULT	MATERIAL CONDITION	APPROX. QUANTITY	ACTION REQUIRED	DATE OF LAST INSPECTION (INCL. COMPANY NAME AND INITIALS)	DATE OF CONTROL ACTION &/OR REMOVAL
As per A-11	West electrical cupboard, floor	Green vinyl	-	Yes	-	No Asbestos Detected	-	-	No further action required	26/6/2020 JBS&G SL	
A-12	E1 & E2 kitchens, floor	Grey vinyl	13	Yes	-	No Asbestos Detected	-	-	No further action required	26/6/2020 JBS&G SL	
AD-01	West ceiling cavity	Settled dust	-	Yes	-	No Asbestos Detected	-	-	No further action required	26/6/2020 JBS&G SL	
AD-02	East ceiling cavity	Settled dust	-	Yes	-	No Asbestos Detected	-	-	No further action required	26/6/2020 JBS&G SL	
Lead Containing Dust											
LD-01	West ceiling cavity	Settled dust	-	Yes	-	170 mg/kg	-	-	No further action required	26/6/2020 JBS&G SL	
LD-02	East ceiling cavity	Settled dust	-	Yes	-	240 mg/kg	-	-	No further action required	26/6/2020 JBS&G SL	
Lead Based Paints											
No Lead Based Paints were identified at the time of inspection									-	26/6/2020 JBS&G SL	
Polychlorinated Biphenyls (PCBs)											
No Polychlorinated Biphenyls were identified at the time of inspection									-	26/6/2020 JBS&G SL	
Synthetic Mineral Fibres (SMF)											
-	East HWS cupboard, 2x hot water systems	Internal insulation	14	Yes	Bonded	**Assumed SMF**	Good	4 m^2	Remove in accordance with NOHSC:2006 (1990)	26/6/2020 JBS&G SL	
-	West HWS cupboard, 2x hot water systems	Internal insulation	-	Yes	Bonded	**Assumed SMF**	Good	4 m^2	Remove in accordance with NOHSC:2006 (1990)	26/6/2020 JBS&G SL	
-	East kitchen, instant hot/cold water system	Internal insulation	15	Yes	Bonded	**Assumed SMF**	Good	2 m^2	Remove in accordance with NOHSC:2006 (1990)	26/6/2020 JBS&G SL	

JBS&G SAMPLE NO.	LOCATION	MATERIAL DESCRIPTION	PHOTO NUMBER	ACCESSIBLE AREA?	FRIABILITY	ANALYTICAL RESULT	MATERIAL CONDITION	APPROX. QUANTITY	ACTION REQUIRED	DATE OF LAST INSPECTION (INCL. COMPANY NAME AND INITIALS)	DATE OF CONTROL ACTION &/OR REMOVAL
-	Internal walls cavities throughout	Insulation batts	16	Yes	Bonded	**Assumed SMF**	Good	> 400 m^2	Remove in accordance with NOHSC:2006 (1990)	26/6/2020 JBS&G SL	
-	Ceiling cavity throughout	Insulation batts	17	Yes	Bonded	**Assumed SMF**	Good	1,800 m^2	Remove in accordance with NOHSC:2006 (1990)	26/6/2020 JBS&G SL	
-	Ceiling cavity, air conditioning ducting	Insulation	18	Yes	Bonded	**Assumed SMF**	Good	300 m^2	Remove in accordance with NOHSC:2006 (1990)	26/6/2020 JBS&G SL	
-	Ceiling cavity, pipework	Insulation	19	Yes	Bonded	**Assumed SMF**	Good	50 m^2	Remove in accordance with NOHSC:2006 (1990)	26/6/2020 JBS&G SL	

Hazardous Materials Register (Rev 0)
Old Ronald McDonald House
Labyrinth Way, Westmead, NSW
Gazebo
Date of Production – 10 July 2020

JBS&G SAMPLE NO.	LOCATION	MATERIAL DESCRIPTION	PHOTO NUMBER	ACCESSIBLE AREA?	FRIABILITY	ANALYTICAL RESULT	MATERIAL CONDITION	APPROX. QUANTITY	ACTION REQUIRED	DATE OF LAST INSPECTION (INCL. COMPANY NAME AND INITIALS)	DATE OF CONTROL ACTION &/OR REMOVAL
Asbestos Containing Materials (ACM)											
No Asbestos Containing Materials were identified at the time of inspection									-	26/6/2020 JBS&G SL	
No Asbestos Detected (NAD)											
A-13	North wall	Fibre cement sheeting	21	Yes	-	No Asbestos Detected	-	-	No further action required	26/6/2020 JBS&G SL	
As per A-13	Ceiling and eaves	Fibre cement sheeting	22	Yes	-	No Asbestos Detected	-	-	No further action required	26/6/2020 JBS&G SL	
Lead Based Paints											
No Lead Based Paints were identified at the time of inspection									-	26/6/2020 JBS&G SL	
Polychlorinated Biphenyls (PCBs)											
No Polychlorinated Biphenyls were identified at the time of inspection									-	26/6/2020 JBS&G SL	
Synthetic Mineral Fibres (SMF)											
No Synthetic Mineral Fibres were identified at the time of inspection									-	26/6/2020 JBS&G SL	

Hazardous Materials Register (Rev 0)
Old Ronald McDonald House
Labyrinth Way, Westmead, NSW
Shed
Date of Production – 10 July 2020

JBS&G SAMPLE NO.	LOCATION	MATERIAL DESCRIPTION	PHOTO NUMBER	ACCESSIBLE AREA?	FRIABILITY	ANALYTICAL RESULT	MATERIAL CONDITION	APPROX. QUANTITY	ACTION REQUIRED	DATE OF LAST INSPECTION (INCL. COMPANY NAME AND INITIALS)	DATE OF CONTROL ACTION &/OR REMOVAL
Asbestos Containing Materials (ACM)											
No Asbestos Containing Materials were identified at the time of inspection									-	26/6/2020 JBS&G SL	
No Asbestos Detected (NAD)											
A-14	External walls and eaves	Fibre cement sheeting	24	Yes	-	No Asbestos Detected	-	-	No further action required	26/6/2020 JBS&G SL	
As per A-14	Internal walls and ceiling	Fibre cement sheeting	-	Yes	-	No Asbestos Detected	-	-	No further action required	26/6/2020 JBS&G SL	
Lead Based Paints											
No Lead Based Paints were identified at the time of inspection									-	26/6/2020 JBS&G SL	
Polychlorinated Biphenyls (PCBs)											
No Polychlorinated Biphenyls were identified at the time of inspection									-	26/6/2020 JBS&G SL	
Synthetic Mineral Fibres (SMF)											
No Synthetic Mineral Fibres were identified at the time of inspection									-	26/6/2020 JBS&G SL	

Appendix B Photographs

Photo 1: Overview of the Lodge

Photo 2: Lodge, non-asbestos containing fibre cement sheeting to eaves

Photo 3: Lodge, non-asbestos containing fibre cement sheeting to veranda soffits

Photo 4: Lodge, non-asbestos containing moulded fibre cement columns to veranda

Photo 5: Lodge, non-asbestos containing fibre cement sheeting to external walls

Photo 6: Lodge, non-asbestos containing fibre cement sheeting to east kitchen walls

Source:

Rev	Description	Drn.	Date
0	Original Issue -	SL	10/7/2020

JBS&G

Appendix B: Photographs

Client: Health Infrastructure

Project: Old Ronald McDonald House HBMS

Job No: 56200 File Name: R03 App B - Photo Log

Photo 7: Lodge, non-asbestos containing brown vinyl flooring to east kitchen

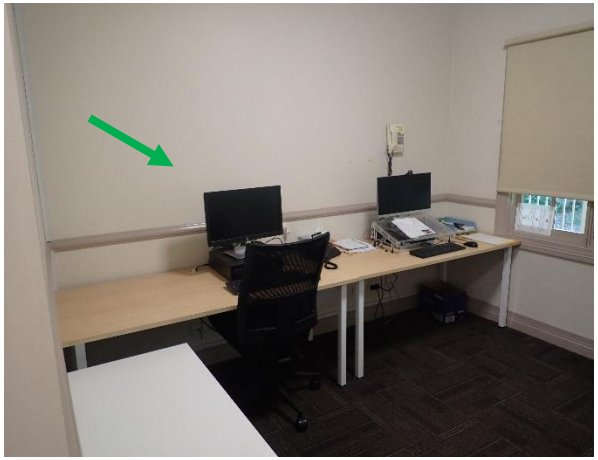

Photo 8: Lodge, non-asbestos containing fibre cement sheeting to internal fire walls (behind plasterboard)

Photo 9: Lodge, non-asbestos containing grey vinyl flooring to east disabled toilet

Photo 10: Lodge, non-asbestos containing fibre cement sheeting to bathroom walls throughout

Photo 11: Lodge, non-asbestos containing grey vinyl flooring to central kitchen

Photo 12: Lodge, non-asbestos containing green vinyl flooring to west laundry

Source:

Rev	Description	Drn.	Date
0	Original Issue -	SL	10/7/2020

JBS&G

Appendix B: Photographs

Client: Health Infrastructure

Project: Old Ronald McDonald House HBMS

Job No: 56200 File Name: R03 App B - Photo Log

Photo 13: Lodge, non-asbestos containing grey vinyl flooring to E1 kitchen

Photo 14: Lodge, assumed internal SMF insulation to hot water systems in east HWS cupboard

Photo 15: Lodge, assumed internal SMF insulation to instant hot/cold water system in east kitchen

Photo 16: Lodge, assumed SMF insulation batts to internal wall cavities

Photo 17: Lodge, assumed SMF insulation batts throughout the ceiling cavity

Photo 18: Lodge, assumed SMF insulation to air conditioning ducting throughout ceiling cavity

Source:			
0	Original Issue -	SL	10/7/2020
Rev	Description	Drn.	Date

JBS&G

Appendix B: Photographs

Client: Health Infrastructure

Project: Old Ronald McDonald House HBMS

Job No: 56200 File Name: R03 App B - Photo Log

Photo 19: Lodge, assumed SMF insulation to pipework throughout ceiling cavity

Photo 20: Overview of the Gazebo

Photo 21: Gazebo, non-asbestos containing fibre cement sheeting to the north wall

Photo 22: Gazebo, non-asbestos containing fibre cement sheeting to the ceiling

Photo 23: Overview of the Shed

Photo 24: Shed, non-asbestos containing fibre cement sheeting to the external walls

Source:

Rev	Description	Drn.	Date
0	Original Issue -	SL	10/7/2020

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Appendix B: Photographs

Client: Health Infrastructure

Project: Old Ronald McDonald House HBMS

Job No: 56200 File Name: R03 App B - Photo Log

Appendix C Laboratory Analysis Reports and Chain of Custody Documentation

JBS & G Australia (NSW) P/L
Level 1, 50 Margaret St
Sydney
NSW 2000

Attention:	Stuart Lumsden
Report	728250-AID
Project Name	WESTMEAD
Project ID	56200
Received Date	Jun 26, 2020
Date Reported	Jul 03, 2020

Methodology:

Asbestos Fibre Identification	Conducted in accordance with the Australian Standard AS 4964 – 2004: Method for the Qualitative Identification of Asbestos in Bulk Samples and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques. *NOTE: Positive Trace Analysis results indicate the sample contains detectable respirable fibres.*
Unknown Mineral Fibres	Mineral fibres of unknown type, as determined by PLM with DS, may require another analytical technique, such as Electron Microscopy, to confirm unequivocal identity. *NOTE: While Actinolite, Anthophyllite and Tremolite asbestos may be detected by PLM with DS, due to variability in the optical properties of these materials, AS4964 requires that these are reported as UMF unless confirmed by an independent technique.*
Subsampling Soil Samples	The whole sample submitted is first dried and then passed through a 10mm sieve followed by a 2mm sieve. All fibrous matter greater than 10mm, greater than 2mm as well as the material passing through the 2mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 to 60g then a sub-sampling routine based on ISO 3082:2009(E) is employed. *NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be sub-sampled for trace analysis, in accordance with AS 4964-2004.*
Bonded asbestos-containing material (ACM)	The material is first examined and any fibres isolated for identification by PLM and DS. Where required, interfering matrices may be removed by disintegration using a range of heat, chemical or physical treatments, possibly in combination.The resultant material is then further examined in accordance with AS 4964 - 2004. *NOTE: Even after disintegration it may be difficult to detect the presence of asbestos in some asbestos-containing bulk materials using PLM and DS. 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 sealants and mastics, asbestos-containing epoxy resins and some ore samples are examples of these types of material, which are difficult to analyse.*
Limit of Reporting	The performance limitation of the AS 4964 (2004) method for non-homogeneous samples is around 0.1 g/kg (equivalent to 0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis, this is considered to be at the nominal reporting limit of 0.01% (w/w). The NEPM screening level of 0.001% (w/w) is intended as an on-site determination, not a laboratory Limit of Reporting (LOR), per se. Examination of a large sample size (e.g. 500 mL) may improve the likelihood of detecting asbestos, particularly AF, to aid assessment against the NEPM criteria. Gravimetric determinations to this level of accuracy are outside of AS 4964 and hence NATA Accreditation does not cover the performance of this service (non-NATA results shown with an asterisk). *NOTE: NATA News March 2014, p.7, states in relation to AS 4964: "This is a qualitative method with a nominal reporting limit of 0.01 % " and that currently in Australia "there is no validated method available for the quantification of asbestos".This report is consistent with the analytical procedures and reporting recommendations in the NEPM and the WA DoH.*

Project Name WESTMEAD
Project ID 56200
Date Sampled Jun 26, 2020
Report 728250-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
A-01	20-Jn47586	Jun 26, 2020	Approximate Sample 3g / 40x30x2mm Sample consisted of: Grey layered fibrous plaster cement	No asbestos detected. Organic fibre detected. No trace asbestos detected.
A-02	20-Jn47587	Jun 26, 2020	Approximate Sample 4g / 70x30x3mm Sample consisted of: Grey layered fibrous plaster cement	No asbestos detected. Organic fibre detected. No trace asbestos detected.
A-03	20-Jn47588	Jun 26, 2020	Approximate Sample 11g / 35x20x12mm Sample consisted of: Grey compressed fibre cement	No asbestos detected. Organic fibre detected. No trace asbestos detected.
A-04	20-Jn47589	Jun 26, 2020	Approximate Sample 8g / 70x40x4mm Sample consisted of: Grey layered fibrous plaster cement	No asbestos detected. Organic fibre detected. No trace asbestos detected.
A-05	20-Jn47590	Jun 26, 2020	Approximate Sample 3g / 30x35x2mm Sample consisted of: Grey layered fibrous plaster cement	No asbestos detected. Organic fibre detected. No trace asbestos detected.
A-06	20-Jn47591	Jun 26, 2020	Approximate Sample 3g / 30x25x2mm Sample consisted of: Light blue flexible vinyl floor tile	No asbestos detected. No trace asbestos detected.
A-07	20-Jn47592	Jun 26, 2020	Approximate Sample 2g / 50x20x2mm Sample consisted of: Grey fibrous plaster cement	No asbestos detected. Organic fibre detected. No trace asbestos detected.
A-08	20-Jn47593	Jun 26, 2020	Approximate Sample 3g / 45x18x2mm Sample consisted of: Grey flexible vinyl floor tile	No asbestos detected. No trace asbestos detected.

NATA Accredited
Accreditation Number 1261
Site Number 18217

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 standards.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
A-09	20-Jn47594	Jun 26, 2020	Approximate Sample 3g / 55x30x2mm Sample consisted of: Grey layered fibrous plaster cement and white plaster	No asbestos detected. Synthetic mineral fibre detected. Organic fibre detected. No trace asbestos detected.
A-10	20-Jn47595	Jun 26, 2020	Approximate Sample 4g / 35x20x2mm Sample consisted of: Grey flexible vinyl floor tile	No asbestos detected. No trace asbestos detected.
A-11	20-Jn47596	Jun 26, 2020	Approximate Sample 3g / 30x28x3mm Sample consisted of: Light blue flexible vinyl floor tile	No asbestos detected. No trace asbestos detected.
A-12	20-Jn47597	Jun 26, 2020	Approximate Sample 3g / 30x20x3mm Sample consisted of: Grey flexible vinyl floor tile	No asbestos detected. No trace asbestos detected.
A-13	20-Jn47598	Jun 26, 2020	Approximate Sample 3g / 35x25x3mm Sample consisted of: Grey layered fibre cement	No asbestos detected. Organic fibre detected. No trace asbestos detected.
A-14	20-Jn47599	Jun 26, 2020	Approximate Sample 4g / 40x15x5mm Sample consisted of: Grey plaster cement material	No asbestos detected. No trace asbestos detected.
AD01	20-Jn47600	Jun 26, 2020	Approximate Sample 4g / 70x65x3mm Sample consisted of: Dust particles, bitumen, plaster, organic matter and debris	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
AD02	20-Jn47601	Jun 26, 2020	Approximate Sample 2g / 50x25x2mm Sample consisted of: Dust particles, bitumen, plaster, organic matter and debris	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	Jun 27, 2020	Indefinite
Asbestos - LTM-ASB-8020	Sydney	Jun 27, 2020	Indefinite

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Site # 1254 & 14271

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NATA # 1261 Site # 18217

Brisbane
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Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Perth
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Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

New Zealand

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Phone : +64 9 526 45 51
IANZ # 1327

Christchurch
43 Detroit Drive
Rolleston, Christchurch 7675
Phone : 0800 856 450
IANZ # 1290

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000

Project Name: WESTMEAD
Project ID: 56200

Order No.:
Report #: 728250
Phone: 02 8245 0300
Fax:

Received: Jun 26, 2020 5:06 PM
Due: Jul 3, 2020
Priority: 5 Day
Contact Name: Stuart Lumsden

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - AS4964	Asbestos Absence /Presence	Lead
Melbourne Laboratory - NATA Site # 1254 & 14271								
Sydney Laboratory - NATA Site # 18217						X	X	X
Brisbane Laboratory - NATA Site # 20794								
Perth Laboratory - NATA Site # 23736								
External Laboratory								
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**			
1	A-01	Jun 26, 2020		Building Materials	S20-Jn47586		X	
2	A-02	Jun 26, 2020		Building Materials	S20-Jn47587		X	
3	A-03	Jun 26, 2020		Building Materials	S20-Jn47588		X	
4	A-04	Jun 26, 2020		Building Materials	S20-Jn47589		X	
5	A-05	Jun 26, 2020		Building Materials	S20-Jn47590		X	
6	A-06	Jun 26, 2020		Building Materials	S20-Jn47591		X	

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Melbourne Laboratory - NATA Site # 1254 & 14271								
Sydney Laboratory - NATA Site # 18217						X	X	X
Brisbane Laboratory - NATA Site # 20794								
Perth Laboratory - NATA Site # 23736								
7	A-07	Jun 26, 2020		Building Materials	S20-Jn47592		X	
8	A-08	Jun 26, 2020		Building Materials	S20-Jn47593		X	
9	A-09	Jun 26, 2020		Building Materials	S20-Jn47594		X	
10	A-10	Jun 26, 2020		Building Materials	S20-Jn47595		X	
11	A-11	Jun 26, 2020		Building Materials	S20-Jn47596		X	
12	A-12	Jun 26, 2020		Building Materials	S20-Jn47597		X	
13	A-13	Jun 26, 2020		Building Materials	S20-Jn47598		X	
14	A-14	Jun 26, 2020		Building	S20-Jn47599		X	

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Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - AS4964	Asbestos Absence /Presence	Lead
Melbourne Laboratory - NATA Site # 1254 & 14271								
Sydney Laboratory - NATA Site # 18217						X	X	X
Brisbane Laboratory - NATA Site # 20794								
Perth Laboratory - NATA Site # 23736								
				Materials				
15	AD01	Jun 26, 2020		Dust	S20-Jn47600	X		
16	AD02	Jun 26, 2020		Dust	S20-Jn47601	X		
17	LD01	Jun 26, 2020		Dust	S20-Jn47602			X
18	LD02	Jun 26, 2020		Dust	S20-Jn47603			X
Test Counts						2	14	2

Internal Quality Control Review and Glossary

General

1. QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Samples were analysed on an 'as received' basis.
4. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
5. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Advice.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

Units

% w/w: weight for weight basis	grams per kilogram
Filter loading:	fibres/100 graticule areas
Reported Concentration:	fibres/mL
Flowrate:	L/min

Terms

Dry	Sample is dried by heating prior to analysis
LOR	Limit of Reporting
COC	Chain of Custody
SRA	Sample Receipt Advice
ISO	International Standards Organisation
AS	Australian Standards
WA DOH	Reference document for the NEPM. Government of Western Australia, Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia (2009), including supporting document Recommended Procedures for Laboratory Analysis of Asbestos in Soil (2011)
NEPM	National Environment Protection (Assessment of Site Contamination) Measure, 2013 (as amended)
ACM	Asbestos Containing Materials. Asbestos contained within a non-asbestos matrix, typically presented in bonded and/or sound condition. For the purposes of the NEPM, ACM is generally restricted to those materials that do not pass a 7mm x 7mm sieve.
AF	Asbestos Fines. Asbestos containing materials, including friable, weathered and bonded materials, able to pass a 7mm x 7mm sieve. Considered under the NEPM as equivalent to “non-bonded / friable”.
FA	Fibrous Asbestos. Asbestos containing materials in a friable and/or severely weathered condition. For the purposes of the NEPM, FA is generally restricted to those materials that do not pass a 7mm x 7mm sieve.
Friable	Asbestos-containing materials of any size that may be broken or crumbled by hand pressure. For the purposes of the NEPM, this includes both AF and FA. It is outside of the laboratory’s remit to assess degree of friability.
Trace Analysis	Analytical procedure used to detect the presence of respirable fibres in the matrix.

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	N/A
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N/A	Not applicable

Asbestos Counter/Identifier:

Laxman Dias	Senior Analyst-Asbestos (NSW)

Authorised by:

Chamath JHM Annakkage	Senior Analyst-Asbestos (NSW)

Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

JBS & G Australia (NSW) P/L
Level 1, 50 Margaret St
Sydney
NSW 2000

NATA Accredited
Accreditation Number 1261
Site Number 18217

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 standards.

Attention: **Stuart Lumsden**

Report **728250-S**
Project name WESTMEAD
Project ID 56200
Received Date Jun 26, 2020

Client Sample ID			**LD01**	**LD02**
Sample Matrix			**Dust**	**Dust**
Eurofins Sample No.			**S20-Jn47602**	**S20-Jn47603**
Date Sampled			**Jun 26, 2020**	**Jun 26, 2020**
Test/Reference	LOR	Unit		
Heavy Metals				
Lead	5	mg/kg	170	240

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Heavy Metals	Sydney	Jul 03, 2020	180 Days

- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS

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Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
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NSW 2000

Project Name: WESTMEAD
Project ID: 56200

Order No.:
Report #: 728250
Phone: 02 8245 0300
Fax:

Received: Jun 26, 2020 5:06 PM
Due: Jul 3, 2020
Priority: 5 Day
Contact Name: Stuart Lumsden

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - AS4964	Asbestos Absence /Presence	Lead
Melbourne Laboratory - NATA Site # 1254 & 14271								
Sydney Laboratory - NATA Site # 18217						X	X	X
Brisbane Laboratory - NATA Site # 20794								
Perth Laboratory - NATA Site # 23736								
External Laboratory								
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**			
1	A-01	Jun 26, 2020		Building Materials	S20-Jn47586		X	
2	A-02	Jun 26, 2020		Building Materials	S20-Jn47587		X	
3	A-03	Jun 26, 2020		Building Materials	S20-Jn47588		X	
4	A-04	Jun 26, 2020		Building Materials	S20-Jn47589		X	
5	A-05	Jun 26, 2020		Building Materials	S20-Jn47590		X	
6	A-06	Jun 26, 2020		Building Materials	S20-Jn47591		X	

eurofins | Environment Testing

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Perth Laboratory - NATA Site # 23736								
7	A-07	Jun 26, 2020		Building Materials	S20-Jn47592		X	
8	A-08	Jun 26, 2020		Building Materials	S20-Jn47593		X	
9	A-09	Jun 26, 2020		Building Materials	S20-Jn47594		X	
10	A-10	Jun 26, 2020		Building Materials	S20-Jn47595		X	
11	A-11	Jun 26, 2020		Building Materials	S20-Jn47596		X	
12	A-12	Jun 26, 2020		Building Materials	S20-Jn47597		X	
13	A-13	Jun 26, 2020		Building Materials	S20-Jn47598		X	
14	A-14	Jun 26, 2020		Building	S20-Jn47599		X	

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Sydney Laboratory - NATA Site # 18217						X	X	X
Brisbane Laboratory - NATA Site # 20794								
Perth Laboratory - NATA Site # 23736								
				Materials				
15	AD01	Jun 26, 2020		Dust	S20-Jn47600	X		
16	AD02	Jun 26, 2020		Dust	S20-Jn47601	X		
17	LD01	Jun 26, 2020		Dust	S20-Jn47602			X
18	LD02	Jun 26, 2020		Dust	S20-Jn47603			X
Test Counts						2	14	2

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
9. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram
mg/L: milligrams per litre
ug/L: micrograms per litre
ppm: Parts per million
ppb: Parts per billion
%: Percentage
org/100mL: Organisms per 100 millilitres
NTU: Nephelometric Turbidity Units
MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.3
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries: Recoveries must lie between 20-130% Phenols & 50-150% PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling.Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Lab Sample ID	QA Source	Units	Result 1	Result 2	RPD	Acceptance Limits	Pass Limits	Qualifying Code
Method Blank									
Heavy Metals									
Lead			mg/kg	< 5			5	Pass	
LCS - % Recovery									
Heavy Metals									
Lead			%	98			70-130	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Spike - % Recovery									
Heavy Metals				Result 1					
Lead	N20-JI03444	NCP	%	91			70-130	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Lead	N20-JI03443	NCP	mg/kg	9.6	11	10	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	N/A
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Authorised By

Ursula Long	Analytical Services Manager
Gabriele Cordero	Senior Analyst-Metal (NSW)
Nibha Vaidya	Senior Analyst-Asbestos (NSW)

Glenn Jackson
General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

Document Distribution

Rev No.	Copies	Recipient	Date
0	1 x electronic	Hanan Husaini	13/7/2020
1	1 x electronic	Hanan Husaini	28/01/2021

Document Status

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		Name	Name	Signature	Date
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1	Stuart Lumsden / Mitchell Hodgins	Michael Samuel	Michael Samuel		28/01/2021

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