Children's Medical Research Institute

Pre-Demolition Hazardous Building Materials Survey

Children's Medical Research Institute Gene Technologies Building,
214 Hawkesbury Road,
Westmead, NSW

26 October 2022

63529/148,264 (Rev 0)

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
NSW EPA	New South Wales Environmental Protection Authority
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
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 the Children's Medical Research Institute (CMRI, the client), care of Empire Project Management Pty Ltd (EPM), to undertake a pre-demolition hazardous building materials survey (HBMS) of the structure located at 214 Hawkesbury Road, Westmead NSW (the site). This HBMS is required by clause 18 (Waste Management) SEARS number SSD-45576956 issued on 26th June 2022, whereby if buildings are proposed to be demolished or altered, provide a hazardous materials survey. The site is legally defined as Lot 101 DP1119583. The structure is identified as the Research Building (built 1992) and is proposed to be redeveloped either by way of demolition or major refurbishment to make way for the Gene Technologies Building. The Ainsworth Tower Building adjoins the Research Building to the north east, this structure will remain and is excluded from this investigation.

The site location and site layout are shown on **Figure 1** and **Figure 2,** respectively**.**

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

1.2 Objectives

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

The pre-demolition 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)];
- Australian and New Zealand Environment Conservation Council's *Identification of PCB-containing Capacitors: An information booklet for Electricians and Electrical Contractors*, (ANZECC 1997); and
- NSW EPA *Waste Classification Guidelines Part 1: Classifying Waste* (NSW EPA 2014).

1.3 Hazardous Materials Survey Limitations

Whilst all reasonable care has been taken by JBS&G during the completed pre-demolition 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 0.01 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 15 September 2022 by Robert Sharp, one of JBS&G's experienced senior hazardous materials surveyors and a SafeWork NSW Licensed Asbestos Assessor (LAA 001343). Robert was assisted during the works by Dylan Rumsey one of JBS&G's experienced hazardous materials surveyors.

The site was located on the southern boundary of The Children's Hospital Westmead Precinct and was bound by hospital and research buildings to the north, Hawkesbury road to the east, Research lane to the south and west. At the time of inspection, the site was operational and occupied with the structure being in a good condition.

The site comprised two attached structures, the Research Building built in 1994 and Ainsworth tower built in 2014. The Ainsworth Tower was excluded from this HBMS.

Due to the active nature of the structure several areas could not be accessed safely, for example, animal storage areas, "hot" laboratories, laboratories in use, sterile areas, etc. Areas that could not be physically accessed at the time of inspection were observed via vantage point available (if any).

The Research Building comprised a three storey research facility with mixed concrete and metal roof, metal clad external walls, plaster and concrete rendered internal walls, plaster and concrete ceilings with suspended ceiling tiles, and concrete floor with various floor coverings. Internally, the building comprised office spaces, conference areas, bathroom and changeroom facilities, kitchen and lunchroom area, animal holding facilities, laboratories, loading dock and storage rooms.

A summary of the key observations made during the pre-demolition HBMS is as follows:

- Non-asbestos containing grey mastic (E-A01) was identified to the seals for the external backup generator adjacent the loading dock.
- Non-asbestos containing grey mastic (E-A02) was identified to the concrete expansion joints of the loading dock.
- Non-asbestos containing bituminous mastic (E-A03) was identified to the concrete expansion joints of the external footpath and loading dock driveway.
- Non-asbestos containing black mastic (E-A04) was identified to the external windows.
- Non-asbestos containing fibre cement sheeting (E-A05) was identified to the grey cladding panels to the Research and Ainsworth building at the external southeast interface.
- Non-asbestos containing fibre cement sheeting (E-A06) was identified to the external sofit lining and eaves.
- Non-asbestos containing fibre cement sheeting (E-A07) was identified to the Ainsworth building entrance way sofit lining.
- Various types of vinyl flooring were identified throughout the internal areas of the structure. Representative samples were collected as follows:
    - Non-asbestos containing grey speckled vinyl (G-A01) was identified to the ground level storage area.
    - Non-asbestos containing light grey speckled vinyl (G-A01a) was identified to the kitchen and lunchroom floor.
    - Non-asbestos containing grey speckled vinyl (L1-A02) was identified thought the level 1 floor and skirting.

Based on the results of the representative vinyl flooring samples collected, all vinyl flooring within the structure is assumed to be non-asbestos containing.

- Non-asbestos containing compressed fibre cement sheeting (G-A02) was identified to the basement plantroom ceiling.
- Non-asbestos containing fibre cement sheeting (G-A03) was identified to the loading dock ceiling, cable runner.
- Non-asbestos containing black/yellow/red specked textured paint (L1-A01) was identified to the level 1 walls.
- Non-asbestos containing grey mastic (L02-A01) was identified to the roof plantroom Besser Block wall expansion joint.
- Non-asbestos containing fibre cement sheeting (L02-A02) was identified to the roof west plantroom, north wall infill panel.
- Non-asbestos gasket (L2-A03) was identified to the hot water pump pipework within the roof central plantroom.
- Non-asbestos containing fibre cement sheeting (L2-A04) was identified to the western curved wall within the roof central plantroom.
- Suspected asbestos containing waterproof membrane was identified to the roof. As the site was active a sample could not be collected without damaging the integrity of the waterproof membrane. A representative sample should be collected following decommissioning of the structure and prior to demolition works commencing to confirm the presence or absence of asbestos, or, the waterproofing membrane should be assumed to contain asbestos.
- Lead concentrations within exposed soil below the adopted site criteria (G-LD01, 12 mg/kg) was identified within the sub floor cavity. This dust was also found not to contain asbestos (G-AD01).
- Lead concentrations within settled dust below the adopted site criteria (G-LD02, 8.6 mg/kg) was identified within the ground floor cable riser shaft. This dust was also found not to contain asbestos (G-AD01).
- Lead concentrations within settled dust below the adopted site criteria (L1-LD01, 160 mg/kg) was identified within the ceiling cable runner in the laboratory. This dust was also found not to contain asbestos (L1-AD01).
- Lead concentrations within settled dust equivalent to the adopted site criteria (L2-LD01, 300 mg/kg) was identified within the roof, central plantroom. This dust was also found not to contain asbestos (L2-AD01).
- Non-lead based white paint (E-L01, 0.02% w/w) was identified to the external generator shed adjacent the loading dock.
- Non-lead based blue paint (E-L02, 0.04% w/w) was identified to the external traffic bollards.
- Non-lead based light blue paint (E-L03, 0.03% w/w) was identified to the loading dock handrails.
- Lead based orange paint (G-L01, 13% w/w) was identified to the electrical distribution box within the electrical cupboard. This paint has been identified throughout the building to various services within electrical cupboards, riser shafts and plantrooms.
- Non-lead based cream paint (G-L02, 0.01% w/w) was identified to the gas bottle storage rack within the loading dock.

- Non-lead based cream/grey paint (G-L03, <0.01% w/w) was identified to the walls of the ground level.
- Non-lead based grey paint (G-L04, <0.01% w/w) was identified to the fire stairs handrail.
- Lead based blue paint (G-L05, 0.92% w/w) was identified to the metal rail over the ground level male toilet cubicles. This paint was also identified to the ground level female toilet cubicles, level 1 female toilet cubicles and level 1 male toilet cubicles.
- Lead based black paint (XRF, 1.28 mg/cm^2) was identified to the metal sewer pipework within the riser shaft.
- Non-lead based black/yellow/red specked textured paint (L1-L02, 0.03% w/w) was identified to the level 1 walls.
- Lead based brown paint (XRF, 0.50 mg/cm^2) was identified to the electrical distribution cabinet within the roof central plantroom.
- Lead based blue paint (L2-L01, 0.63%w/w) was identified to the metal framework to the building, observed within the roof plantrooms.
- All remaining accessible paint systems were screened via XRF spectrometer and classified as non-lead based paints (XRF < 0.01 mg/cm^2)
- Fluorescent light fittings were observed throughout the building, however, based on the age of construction (1994) and the new appearance of the light fittings, these light fittings are not suspected to contain PCB containing capacitors.
- Assumed SMF materials were identified throughout the structure in various forms as follows:
    - Insulation lagging to pipework;
    - Insulation to fixed and flexible air conditioning ducting;
    - Internal insulation to the instant hot water system within the kitchen;
    - Internal insulation to hot water systems;
    - Assumed insulation to sound proof walls and ceiling cavity;
    - Insulation to plant room walls;
    - Suspended ceiling tiles; and
    - Insulation to the roof sarking.

The type, location, friability, accessibility, and approximate quantities of identified and suspected hazardous materials based are provided in the Hazardous Materials Register in **Appendix A**. Photographs taken during the HBMS are presented in **Appendix B**.

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 4.1** below.

Table 4.1: Asbestos Results Summary Table

Sample ID	Lab ID	Floor/Level	Sample Location	Results	Observed Condition
E-A01	22-Se0038219	External	Backup generator, seals – grey mastic	No Asbestos Detected	N/A
E-A02	22-Se0038220	External	Loading dock, concrete expansion joints – grey mastic	No Asbestos Detected	N/A
E-A03	22-Se0038221	External	Loading dock, concrete expansion joints – bituminous mastic	No Asbestos Detected	N/A
E-A04	22-Se0038222	External	Windows – black mastic	No Asbestos Detected	N/A
E-A05	22-Se0038223	External	Southeast interface of Research Building and Ainsworth building, infill panel – fibre cement sheeting	No Asbestos Detected	N/A
E-A06	22-Se0038224	External	Sofit lining – fibre cement sheeting	No Asbestos Detected	N/A
E-A07	22-Se0038225	External	Ainsworth, sofit lining – fibre cement sheeting	No Asbestos Detected	N/A
G-A01	22-Se0038230	Ground	Storage area, floor – grey speckled vinyl	No Asbestos Detected	N/A
G-A01a	22-Se0038231	Ground	Lunchroom, floor – light grey speckled vinyl	No Asbestos Detected	N/A
G-A02	22-Se0038232	Ground	Basement plant room, ceiling – compressed fibre cement sheeting	No Asbestos Detected	N/A
G-A03	22-Se0038233	Ground	Loading dock ceiling, cable runner – fibre cement sheeting	No Asbestos Detected	N/A
L1-A01	22-Se0038241	Level 1	Walls - black/yellow/red specked textured paint	No Asbestos Detected	N/A
L1-A02	22-Se0038242	Level 1	Hallway, floor – grey speckled vinyl	No Asbestos Detected	N/A
L2-A01	22-Se0038245	Roof	West plant room Besser Block wall, expansion joint – grey mastic	No Asbestos Detected	N/A
L2-A02	22-Se0038246	Roof	West plant room, north wall infill panel – fibre cement sheeting	No Asbestos Detected	N/A
L2-A03	22-Se0038247	Roof	Central plantroom, hot water pump pipework – gasket	No Asbestos Detected	N/A
L2-A04	22-Se0038248	Roof	Central plantroom, western curved wall – 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 4.2** below.

Table 4.2: Asbestos Dust Results Summary Table

Sample ID	Lab ID	Floor/Level	Sample Location	Results	Observed Condition
G-AD01	22-Se0038226	Subfloor	Subfloor cavity – exposed soil	No Asbestos Detected	N/A
G-AD02	22-Se0038228	Ground	Cable riser shaft – settled dust	No Asbestos Detected	N/A
L1-AD01	22-Se0038243	Level 1	Laboratory, ceiling cable runner – settled dust	No Asbestos Detected	N/A
L2-AD01	22-Se0038249	Roof	Central plantroom – settled dust	No Asbestos Detected	N/A

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 4.3** below.

Table 4.3: Lead Dust Results Summary Table

Sample ID	Lab ID	Floor/Level	Sample Location	Results	Observed Condition
G-LD01	22-Se0038227	Sub-floor	Sub-floor cavity – settled dust	12 mg/kg	N/A
G-LD02	22-Se0038229	Ground	Cable riser shaft – settled dust	8.6 mg/kg	N/A
L1-LD01	22-Se0038244	Level 1	Laboratory, ceiling cable runner – settled dust	160 mg/kg	N/A
L2-LD01	22-Se0038250	Roof	Central plantroom – settled dust	300 mg/kg	N/A

4.1.4 Lead Based Paints

Representative paint samples were collected throughout the site for laboratory testing. A summary of the results of laboratory testing for lead are provided in **Table 4.4** below.

Table 4.4: Lead Paint Results Summary Table

Sample ID	Lab ID	Floor/Level	Sample Location	Results	Observed Condition
E-L01	S22-Se0038216	External	Generator shed – white paint	0.02% w/w	N/A
E-L02	S22-Se0038217	External	Traffic bollards – blue paint	0.04% w/w	N/A
E-L03	S22-Se0038218	External	Loading dock, handrails – light blue paint	0.03% w/w	N/A
G-L01	S22-Se0038234	Ground	Electrical cupboard, electrical distribution box – orange paint	**13% w/w**	Good
G-L02	S22-Se0038235	Ground	Loading dock, gas bottle storage rack – cream paint	0.01% w/w	N/A
G-L03	S22-Se0038236	Ground	Walls – cream/grey paint	<0.01% w/w	N/A
G-L04	S22-Se0038237	Ground	Fire stairs, handrail – grey paint	<0.01% w/w	N/A
G-L05	S22-Se0038238	Ground	Male bathroom, metal rail over cubicles – blue paint	**0.92% w/w**	Good
XRF	-	Level 1	Riser shaft, metal sewer pipe – black paint	**1.28 mg/cm^2**	Good
L1-L02	S22-Se0038240	Level 1	Walls – black/yellow/red textured paint	0.03% w/w	N/A
XRF	-	Roof	Central plantroom, electrical distribution cabinet – brown paint	**0.5 mg/cm^2**	Good
L2-L01	S22-Se0038251	Roof	Metal framework – blue paint	**0.63% w/w**	Good

4.1.5 Polychlorinated Biphenyls

Detailed inspection of capacitors in light fittings could not be undertaken due to the electricity supply to the fittings being active. Due to the age of the building, and the modern appearance of the fluorescent light fitting, PCB containing capacitors are not suspected to be present.

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:

- Insulation lagging to pipework;
- Insulation to fixed and flexible air conditioning ducting;
- Internal insulation to the instant hot water system within the kitchen;
- Internal insulation to hot water systems;
- Assumed insulation to sound proof walls;
- Insulation to plant room walls;
- Suspended ceiling tiles; and

- Insulation to the roof sarking.

4.2 Inaccessible Areas

At the time of inspection, the building was occupied and several laboratories, storage spaces and offices could not be safely accessed and inspected. The spaces that could not be physically access however were visually assessed through windows and deemed consistent with other spaces physically inspected.

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 building materials were observed throughout the site as a result of visual identification and laboratory analysis. A number of the identified hazardous building materials present a significant exposure risk to future site occupants and demolition workers if they are not appropriately managed/removed.

The following broad recommendations are made for the removal of the identified hazardous materials to potentially mitigate harmful effects as a result of the proposed works program. Further detail on the appropriate removal and management methods for identified and suspected hazardous building materials shall be included in the site hazardous materials management plan. 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 the proposed 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

The waterproofing membrane to the roof level is suspected to contain asbestos. Prior to the demolition of the structures, it is recommended that the following work is undertaken:

- A suitably qualified occupational hygienist or licensed asbestos assessor is engaged to undertake an assessment of the waterproofing membrane, determine the presence or absence of asbestos within the membrane material and provide appropriate recommendations for management and/or removal (if required).

  Or

- Assume the waterproofing membrane does contain asbestos and engage a Class A or B licensed asbestos removalist to remove the assumed asbestos hazard. Removal and disposal of asbestos materials shall be undertaken in accordance with the *Work Health and Safety Act (*2011), *Work Health and Safety Regulation* (2017) and SWNSW 2019a including air monitoring and clearance certification requirements.

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

The lead based paints, as identified in Hazardous Materials Register (**Appendix A**), were observed in a good condition and should be managed in accordance with the AS4361.2-2017. Where 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 disposed as general solid waste in accordance with NSW EPA 2014 provided care is taken to minimise any potential for paint flakes to be dispersed onto ground surfaces and building and demolition waste is not proposed to be recycled.

Where building and demolition wastes are proposed to be recycled that are impacted by lead paints, the lead paints must be stripped prior to demolition works commencing . any removed lead paint waste must be disposed of as hazardous waste in accordance with NSW EPA 2014.

5.1.4 Polychlorinated Biphenyls

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

5.1.5 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)].

5.2 Inaccessible Areas

Areas inaccessible during the current HBMS should be inspected by a suitably qualified competent person prior to any works commencing. Suspected ACM should be sampled by a suitably qualified competent person prior to any works commencing.

5.3 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.

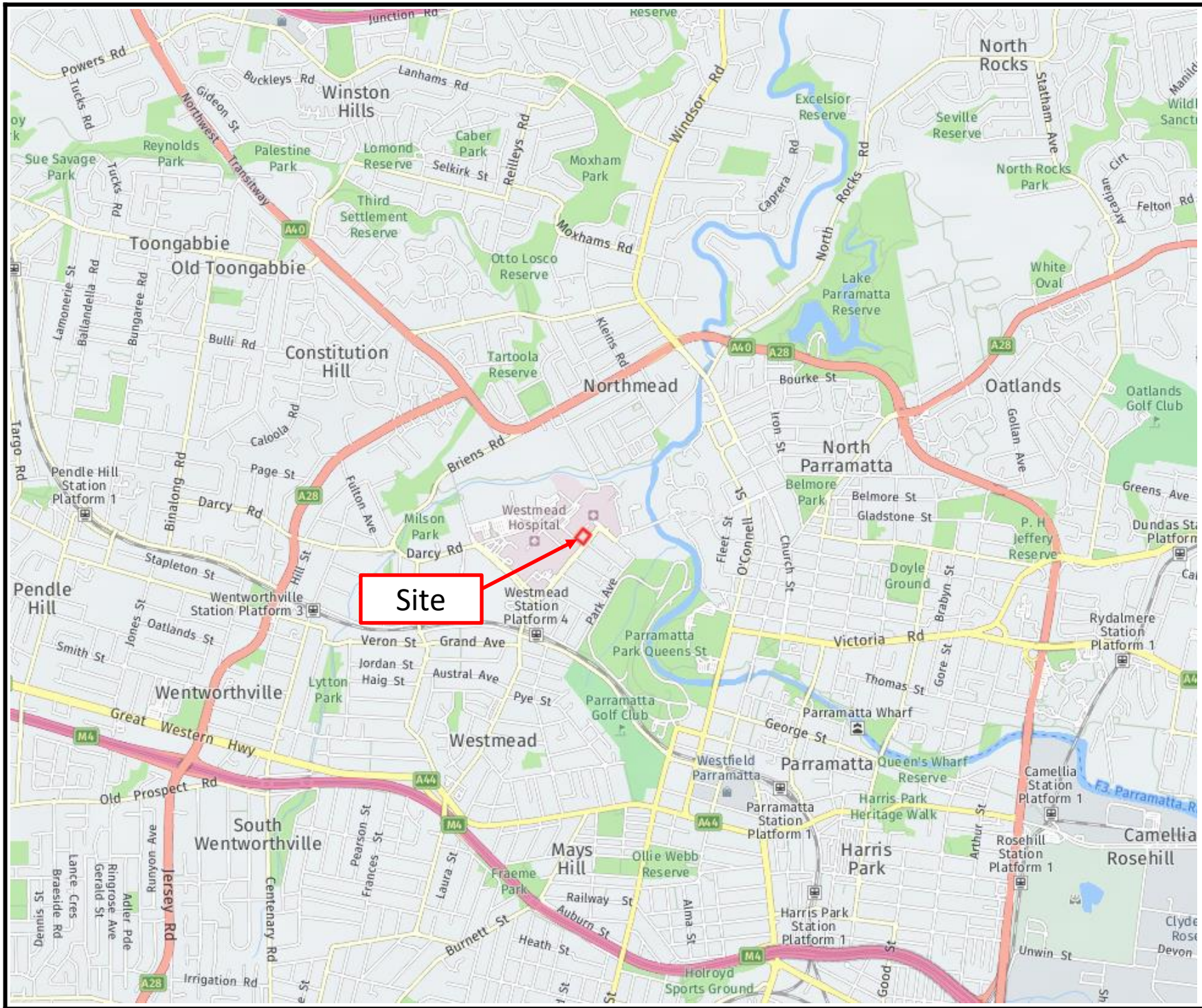
Sampling and chemical analysis of environmental media is based on appropriate guidance documents made and approved by the relevant regulatory authorities. Conclusions arising from the review and assessment of environmental data are based on the sampling and analysis considered appropriate based on the 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: 63529

Client: Children's Medical Research Institute

Version: Rev 0	Date: 26/10/2022
Drawn By: RS	Checked By: MS

Children's Medical Research Institute Gene Technologies Building
214 Hawkesbury Road, Westmead, NSW

SITE LOCATION

FIGURE 1

Legend:

- Approximate Site Boundary
- Approx Ainsworth Tower Building
- Approx Research Building

JBS&G

Job No: 63529

Client: Children's Medical Research Institute

Version: Rev 0	Date: 26/10/2022
Drawn By: RS	Checked By: MS

Children's Medical Research Institute Gene Technologies Building
214 Hawkesbury Road, Westmead, NSW

SITE LOCATION

FIGURE 2

Appendix A Hazardous Materials Register

Hazardous Materials Register (Rev 0)
Research Building – 214 Hawkesbury Road, Westmead NSW
External
Date of Production – 26 October 2022

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									-	15/09/2022 JBS&G RS/DR	-
No Asbestos Detected (NAD)											
E-A01	Adjacent loading dock backup generator, seals	Grey mastic	2	Yes	-	No asbestos detected	-	-	No further action required	15/09/2022 JBS&G RS/DR	-
E-A02	Loading dock, concrete expansion joints	Grey mastic	3	Yes	-	No asbestos detected	-	-	No further action required	15/09/2022 JBS&G RS/DR	-
E-A03	Loading dock and foot path, concrete expansion joints	Bituminous mastic	3	Yes	-	No asbestos detected	-	-	No further action required	15/09/2022 JBS&G RS/DR	-
E-A04	Windows	Black mastic	-	Yes	-	No asbestos detected	-	-	No further action required	15/09/2022 JBS&G RS/DR	-
E-A05	Southeast interface of Research building and Ainsworth building – infill panel	Fibre cement sheeting	4	Yes	-	No asbestos detected	-	-	No further action required	15/09/2022 JBS&G RS/DR	-
E-A07	soffit lining and eaves	Fibre cement sheeting	5	Yes	-	No asbestos detected	-	-	No further action required	15/09/2022 JBS&G RS/DR	-
E-A07	Ainsworth building – soffit lining	Fibre cement sheeting	-	Yes	-	No asbestos detected	-	-	No further action required	15/09/2022 JBS&G RS/DR	-
Lead Containing Dust											
No suspected Lead containing dusts were identified at the time of inspection									No further action required	15/09/2022 JBS&G RS/DR	-
Lead Based Paints											
E-L01	Generator shed	Cream paint	2	Yes	-	Non-lead based paint (0.02% w/w)	-	-	No further action required	15/09/2022 JBS&G RS/DR	-
E-L02	Traffic bollards	Blue paint	-	Yes	-	Non-lead based paint (0.04% w/w)	-	-	No further action required	15/09/2022 JBS&G RS/DR	-

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
E-L03	Loading dock – handrails	Light blue paint	-	Yes	-	Non-lead based paint (0.03% w/w)	-	-	No further action required	15/09/2022 JBS&G RS/DR	-
All other accessible paint systems were screened using the XRF spectrometer and classified as non-lead based paints (XRF < 0.0 mg/cm^2)									No further action required	15/09/2022 JBS&G RS/DR	-
Polychlorinated Biphenyls (PCBs)											
No Polychlorinated Biphenyls were identified at the time of inspection.									-	15/09/2022 JBS&G RS/DR	-
Synthetic Mineral Fibres (SMF)											
-	Pipework to nitrogen tank	Insulation	6	Yes	Non-friable	**Assumed SMF**	Good	10m lineal	Remove in accordance with NOHSC:2006 (1990)	15/09/2022 JBS&G RS/DR	-

Hazardous Materials Register (Rev 0)
Research Building – 214 Hawkesbury Road, Westmead NSW
Ground
Date of Production – 26 October 2022

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									-	15/09/2022 JBS&G RS/DR	-
No Asbestos Detected (NAD)											
G-A01	Storeroom, floor	Grey speckled vinyl	7	Yes	-	No asbestos detected	-	-	No further action required	15/09/2022 JBS&G RS/DR	-
G-A01a	Lunchroom, floor	Light grey specked vinyl	8	Yes	-	No asbestos detected	-	-	No further action required	15/09/2022 JBS&G RS/DR	-
As per L1-A02	Hallway, floor	Grey speckled vinyl	8	Yes	-	Assumed non-asbestos	-	-	No further action required	15/09/2022 JBS&G RS/DR	-
-	Throughout	Vinyl flooring	-	Yes	-	Assumed non-asbestos	-	-	No further action required	15/09/2022 JBS&G RS/DR	-
G-A02	Basement plant room, ceiling	Compressed fibre cement sheeting	9	Yes	-	No asbestos detected	-	-	No further action required	15/09/2022 JBS&G RS/DR	-
As per G-A02	Western hallway floor, under vinyl	Compressed fibre cement sheeting	-	No	-	Assumed non-asbestos	-	-	No further action required	15/09/2022 JBS&G RS/DR	-
G-A03	Loading dock, ceiling cable runner	Fibre cement sheeting	10	Yes	-	No asbestos detected	-	-	No further action required	15/09/2022 JBS&G RS/DR	-
G-AD01	Subfloor cavity	Exposed soil	-	Yes	-	No asbestos detected	-	-	No further action required	15/09/2022 JBS&G RS/DR	-
G-AD02	Cable riser shaft	Settled dust	-	Yes	-	No asbestos detected	-	-	No further action required	15/09/2022 JBS&G RS/DR	-
Lead Containing Dust											
G-LD01	Subfloor cavity	Exposed soil	-	Yes	-	12 mg/kg	-	-	No further action required	15/09/2022 JBS&G RS/DR	-
G-LD02	Cable riser shaft	Settled dust	-	Yes	-	8.6 mg/kg	-	-	No further action required	15/09/2022 JBS&G RS/DR	

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
Lead Based Paints											
G-L01	Electrical cupboard, electrical distribution box	Orange paint	11	Yes	-	**13% w/w**	Good	2m^2	Remove loose and flaking paint prior to demolition by an experienced hazardous materials removal contractor in accordance with AS4361.2-2017. Remaining paint well adhered to the building materials may be demolished if care is taken not to spread paint flakes to surrounding areas. Alternatively, remove all paint prior to demolition by an experienced hazardous materials removal contractor in accordance with AS4361.2-2017.	15/09/2022 JBS&G RS/DR	
As per G-L01	Throughout plant room, riser shafts and electrical cupboards	Orange paint	12	Yes	-	**Assumed lead based paint**	Good	50m^2	Remove loose and flaking paint prior to demolition by an experienced hazardous materials removal contractor in accordance with AS4361.2-2017. Remaining paint well adhered to the building materials may be demolished if care is taken not to spread paint flakes to surrounding areas. Alternatively, remove all paint prior to demolition by an experienced hazardous materials removal contractor in accordance with AS4361.2-2017.	15/09/2022 JBS&G RS/DR	
G-L02	Loading dock, gas bottle storage rack	Cream paint	-	Yes	-	0.01% w/w	-	-	No further action required	15/09/2022 JBS&G RS/DR	-
G-L03	Walls	Cream/grey paint	-	Yes	-	<0.01% w/w	-	-	No further action required	15/09/2022 JBS&G RS/DR	-
G-L04	Fire stairs, handrail	Grey paint	-	Yes	-	<0.01% w/w	-	-	No further action required	15/09/2022 JBS&G RS/DR	-

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
G-L05	Male and female bathroom, metal rail over cubicles	Blue paint	13	Yes	-	**0.92% w/w**	Good	4 lineal meters	Remove loose and flaking paint prior to demolition by an experienced hazardous materials removal contractor in accordance with AS4361.2-2017. Remaining paint well adhered to the building materials may be demolished if care is taken not to spread paint flakes to surrounding areas. Alternatively, remove all paint prior to demolition by an experienced hazardous materials removal contractor in accordance with AS4361.2-2017.	15/09/2022 JBS&G RS/DR	-
All accessible paint systems were screened using the XRF spectrometer and classified as non-lead based paints (XRF < 0.0 mg/cm^2)									No further action required	15/09/2022 JBS&G RS/DR	-
Polychlorinated Biphenyls (PCBs)											
No Polychlorinated Biphenyls were identified at the time of inspection.									-	15/09/2022 JBS&G RS/DR	-
Synthetic Mineral Fibres (SMF)											
-	Room G53 animal storeroom, Hot water heater x 2	Internal insulation	14	Yes	Non-friable	**Assumed SMF**	Good	<3m^2	Remove in accordance with NOHSC:2006 (1990)	15/09/2022 JBS&G RS/DR	
-	Room G53 animal storeroom, refrigeration	Insulation	-	Yes	Non-friable	**Assumed SMF**	Good	5m^2	Remove in accordance with NOHSC:2006 (1990)	15/09/2022 JBS&G RS/DR	
-	Laboratory offices, ceiling	Suspended ceiling tile	-	Yes	Non-friable	**Assumed SMF**	Good	250m^2	Remove in accordance with NOHSC:2006 (1990)	15/09/2022 JBS&G RS/DR	
-	Kitchen, Zipp instant hot water x 2	Insulation	15	Yes	Non-friable	**Assumed SMF**	Good	<1m^2	Remove in accordance with NOHSC:2006 (1990)	15/09/2022 JBS&G RS/DR	
-	Sound proofing to wall and ceiling cavities	Assumed insulation batts	-	No	Non-friable	**Assumed SMF**	Good	Unknown	Remove in accordance with NOHSC:2006 (1990)	15/09/2022 JBS&G RS/DR	

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
-	Pipework	Insulation	-	Partially	Non-friable	**Assumed SMF**	Good	Unknown	Remove in accordance with NOHSC:2006 (1990)	15/09/2022 JBS&G RS/DR	
-	Fixed and flexible air conditioning ducting	Insulation	-	Yes	Non-friable	**Assumed SMF**	Good	300m^2	Remove in accordance with NOHSC:2006 (1990)	15/09/2022 JBS&G RS/DR	

Hazardous Materials Register (Rev 0)
Research Building – 214 Hawkesbury Road, Westmead NSW
Level 1
Date of Production – 26 October 2022

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									-	15/09/2022 JBS&G RS/DR	-
No Asbestos Detected (NAD)											
L1-A01	Walls throughout	Black/yellow/red textured paint	16	Yes	-	No asbestos detected	-	-	No further action required	15/09/2022 JBS&G RS/DR	-
L1-A02	Hallway, floor	Grey speckled vinyl	-	Yes	-	No asbestos detected	-	-	No further action required	15/09/2022 JBS&G RS/DR	-
As per G-A01 and G-A01a	Throughout	Vinyl flooring	-	Yes	-	Assumed non-asbestos	-	-	No further action required	15/09/2022 JBS&G RS/DR	-
L1-AD01	Laboratory ceiling, cable runner	Settled dust	-	Yes	-	No asbestos detected	-	-	No further action required	15/09/2022 JBS&G RS/DR	-
Lead Containing Dust											
G-LD01	Laboratory ceiling, cable runner	Settled dust	-	Yes	-	160 mg/kg	-	-	No further action required	15/09/2022 JBS&G RS/DR	-
Lead Based Paints											
XRF	Riser shaft, metal sewer pipework	Black paint	17	Partially	-	**1.28mg/cm²**	Good	Unknown	Remove loose and flaking paint prior to demolition by an experienced hazardous materials removal contractor in accordance with AS4361.2-2017. Remaining paint well adhered to the building materials may be demolished if care is taken not to spread paint flakes to surrounding areas. Alternatively, remove all paint prior to demolition by an experienced hazardous materials removal contractor in accordance with AS4361.2-2017.	15/09/2022 JBS&G RS/DR	
L1-L02	Walls throughout	Black/yellow/red textured paint	16	Yes	-	0.03% w/w	-	-	No further action required	15/09/2022 JBS&G RS/DR	-

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 G-L01	Throughout plant rooms, riser shafts and electrical cupboards	Orange paint	18	Yes	-	**Assumed lead based paint**	Good	75m^2	Remove loose and flaking paint prior to demolition by an experienced hazardous materials removal contractor in accordance with AS4361.2-2017. Remaining paint well adhered to the building materials may be demolished if care is taken not to spread paint flakes to surrounding areas. Alternatively, remove all paint prior to demolition by an experienced hazardous materials removal contractor in accordance with AS4361.2-2017.	15/09/2022 JBS&G RS/DR	-
As per G-L05	Male and female bathroom, metal rail over cubicles	Blue paint	-	Yes	-	**Assumed lead based paint**	Good	4 lineal meters	Remove loose and flaking paint prior to demolition by an experienced hazardous materials removal contractor in accordance with AS4361.2-2017. Remaining paint well adhered to the building materials may be demolished if care is taken not to spread paint flakes to surrounding areas. Alternatively, remove all paint prior to demolition by an experienced hazardous materials removal contractor in accordance with AS4361.2-2017.	15/09/2022 JBS&G RS/DR	-
All accessible paint systems were screened using the XRF spectrometer and classified as non-lead based paints (XRF < 0.0 mg/cm^2)									No further action required	15/09/2022 JBS&G RS/DR	-
Polychlorinated Biphenyls (PCBs)											
No Polychlorinated Biphenyls were identified at the time of inspection.									-	15/09/2022 JBS&G RS/DR	-
Synthetic Mineral Fibres (SMF)											
-	Sound proofing to wall and ceiling cavities	Assumed insulation batts	-	No	Non-friable	**Assumed SMF**	Good	Unknown	Remove in accordance with NOHSC:2006 (1990)	15/09/2022 JBS&G RS/DR	

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
-	Pipework	Insulation	-	Partially	Non-friable	**Assumed SMF**	Good	Unknown	Remove in accordance with NOHSC:2006 (1990)	15/09/2022 JBS&G RS/DR	
-	Fixed and flexible air conditioning ducting	Insulation	-	Yes	Non-friable	**Assumed SMF**	Good	300m^2	Remove in accordance with NOHSC:2006 (1990)	15/09/2022 JBS&G RS/DR	

Hazardous Materials Register (Rev 0)
Research Building – 214 Hawkesbury Road, Westmead NSW
Roof
Date of Production – 26 October 2022

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)											
Visual	Roof	Waterproofing membrane	20	Yes	Non-friable	**Assumed asbestos**	Good	750 m^2	Remove prior to demolition in accordance with SWNSW 2019a **Or** Sample for laboratory analysis prior to demolition by a suitably qualified occupational hygienist	15/09/2022 JBS&G RS/DR	-
No Asbestos Detected (NAD)											
L2-A01	Besser Block wall, expansion joint	Grey mastic	-	Yes	-	No asbestos detected	-	-	No further action required	15/09/2022 JBS&G RS/DR	-
L2-A02	West plantroom, north wall	Fibre cement sheeting	-	Yes	-	No asbestos detected	-	-	No further action required	15/09/2022 JBS&G RS/DR	-
L2-A03	Central plantroom, hot water pump, pipework	Gasket	-	Yes	-	No asbestos detected	-	-	No further action required	15/09/2022 JBS&G RS/DR	-
L2-A04	Central plantroom, western curved wall	Fibre cement sheeting	-	Yes	-	No asbestos detected	-	-	No further action required	15/09/2022 JBS&G RS/DR	
L2-AD01	Central plantroom	Settled dust	-	Yes	-	No asbestos detected	-	-	No further action required	15/09/2022 JBS&G RS/DR	-
Lead Containing Dust											
G-LD01	Central plantroom	Settled dust	-	Yes	-	300 mg/kg	-	-	No further action required	15/09/2022 JBS&G RS/DR	-

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
Lead Based Paints											
XRF	Central plantroom, electrical distribution cabinet	Brown paint	21	Yes	-	**0.50 mg/cm^2**	Good	4m^2	Remove loose and flaking paint prior to demolition by an experienced hazardous materials removal contractor in accordance with AS4361.2-2017. Remaining paint well adhered to the building materials may be demolished if care is taken not to spread paint flakes to surrounding areas. Alternatively, remove all paint prior to demolition by an experienced hazardous materials removal contractor in accordance with AS4361.2-2017.	15/09/2022 JBS&G RS/DR	
L2-L02	Metal framework to building	Blue paint	22	Yes	-	**0.63% w/w**	-	-	Remove loose and flaking paint prior to demolition by an experienced hazardous materials removal contractor in accordance with AS4361.2-2017. Remaining paint well adhered to the building materials may be demolished if care is taken not to spread paint flakes to surrounding areas. Alternatively, remove all paint prior to demolition by an experienced hazardous materials removal contractor in accordance with AS4361.2-2017.	15/09/2022 JBS&G RS/DR	-
As per G-L01	Throughout plant rooms and electrical cupboards	Orange paint	23	Yes	-	**Assumed lead based paint**	Good	60m^2	Remove loose and flaking paint prior to demolition by an experienced hazardous materials removal contractor in accordance with AS4361.2-2017. Remaining paint well adhered to the building materials may be demolished if care is taken not to spread paint flakes to surrounding areas. Alternatively, remove all paint prior to demolition by an experienced hazardous materials removal contractor in accordance with AS4361.2-2017.	15/09/2022 JBS&G RS/DR	-

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
All accessible paint systems were screened using the XRF spectrometer and classified as non-lead based paints (XRF < 0.0 mg/cm^2)									No further action required	15/09/2022 JBS&G RS/DR	-
Polychlorinated Biphenyls (PCBs)											
No Polychlorinated Biphenyls were identified at the time of inspection.									-	15/09/2022 JBS&G RS/DR	-
Synthetic Mineral Fibres (SMF)											
-	Underside of plantroom roof	Sarking	-	Yes	Non-friable	**Assumed SMF**	Good	70m^2	Remove in accordance with NOHSC:2006 (1990)	15/09/2022 JBS&G RS/DR	
-	Plantroom walls	Insulation batts	-	Yes	Non-friable	**Assumed SMF**	Good	50m^2	Remove in accordance with NOHSC:2006 (1990)	15/09/2022 JBS&G RS/DR	
-	Hot water heater x 4	Internal insulation	24	No	Non-friable	**Assumed SMF**	Good	<5m^2	Remove in accordance with NOHSC:2006 (1990)	15/09/2022 JBS&G RS/DR	
-	Pipework	Insulation	-	Partially	Non-friable	**Assumed SMF**	Good	Unknown	Remove in accordance with NOHSC:2006 (1990)	15/09/2022 JBS&G RS/DR	
-	Fixed and flexible air conditioning ducting	Insulation	-	Yes	Non-friable	**Assumed SMF**	Good	150m^2	Remove in accordance with NOHSC:2006 (1990)	15/09/2022 JBS&G RS/DR	

Appendix B Photographs

Photo 1: Overview of Research building.

Photo 2: External – Non-asbestos containing grey mastic seals to generator and non-lead based cream paint to generator shed.

Photo 3: External – Non-asbestos containing bituminous mastic and grey mastic to loading dock and footpath expansion joint.

Photo 4: External – Non-asbestos containing fibre cement grey sheet cladding panel to the southeast interface of Research building and Ainsworth building

Photo 5: External – Non-asbestos containing fibre cement sheeting to the sofit lining and eaves

Photo 6: External – Assumed SMF insulation to nitrogen tank pipework

Source:

Rev	Description	Drn.	Date
0	Original Issue -	RS	26/10/2022

JBS&G

Appendix B: Photographs

Client: Children's Medical Research Institute

Project: CMRI HBMS

Job No: 63529 File Name: Rev 0 App B - Photo Log

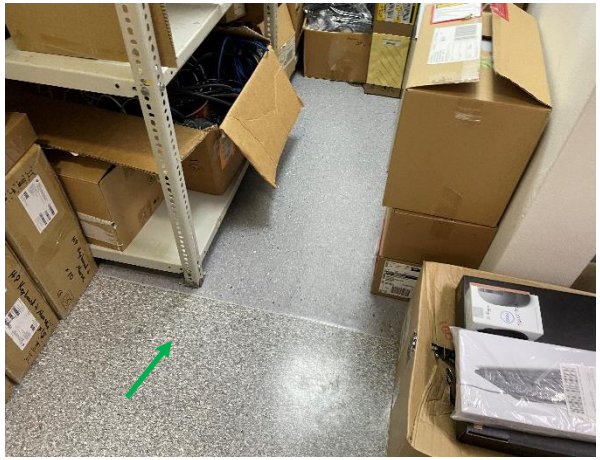


Photo 7: Ground – Non-asbestos containing grey speckled vinyl floor

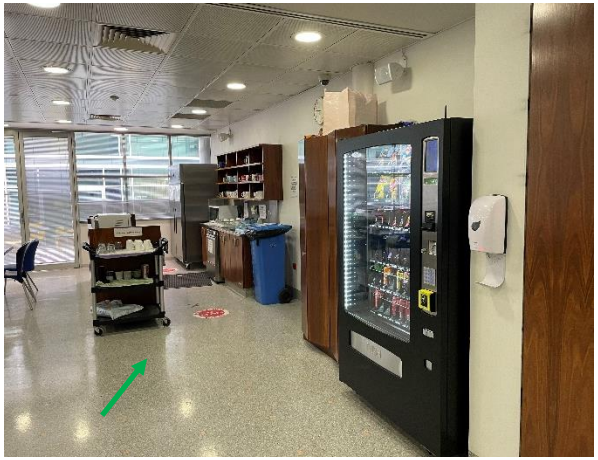


Photo 8: Non-asbestos containing light grey speckled vinyl floor

Photo 9: Basement – Non-asbestos containing compressed fibre cement to the ceiling

Photo 10: Ground – Non-asbestos containing fibre cement sheeting to ceiling cable runner within the loading dock

Photo 11: Ground – Lead based orange paint to electrical distribution box

Photo 12: Ground – Assumed lead based orange paint to electrical distribution box

Source:			
0	Original Issue -	RS	26/10/2022
Rev	Description	Drn.	Date

JBS&G

Appendix B: Photographs

Client: Children's Medical Research Institute

Project: CMRI HBMS

Job No: 63529 File Name: Rev 0 App B - Photo Log

Photo 13: Ground – Lead based blue paint to metal rail over toilet cubical within the male bathroom

Photo 14: Ground – Assumed SMF internal insulation to hot water units within room G53

Photo 15: Ground – Assumed SMF internal insulation to Zipp instant unit within kitchen

Photo 16: Level 1 – Non-asbestos containing or Lead based textured paint to the walls

Photo 17: Level 1 – Lead based black paint to metal sewer pipework

Photo 18: Level 1 – Assumed lead based orange paint to electrical distribution box

Source:			
0	Original Issue -	RS	26/10/2022
Rev	Description	Drn.	Date

JBS&G

Appendix B: Photographs

Client: Children's Medical Research Institute

Project: CMRI HBMS

Job No: 63529 File Name: Rev 0 App B - Photo Log

Photo 19: Overview of the roof and associated plant rooms

Photo 20: Roof – Assumed asbestos containing waterproofing membrane

Photo 21: Roof – Lead based brown paint to electrical distribution box within the central plant room

Photo 22: Roof – Lead based blue paint to metal framework of building

Photo 23: Roof – Assumed lead based orange paint to electrical distribution box

Photo 24: Roof – Assumed SMF insulation core to hot water heater

Source:			
0	Original Issue -	RS	26/10/2022
Rev	Description	Drn.	Date

JBS&G

Appendix B: Photographs

Client: Children's Medical Research Institute

Project: CMRI HBMS

Job No: 63529 File Name: Rev 0 App B - Photo Log

Appendix C Laboratory Analysis Reports and Chain of Custody Documentation

Chain of Custody

1/1

JBS&G

PROJECT NO.: 63529	LABORATORY BATCH NO.:
PROJECT NAME: CMRI	SAMPLERS: Robert Sharp, Dylan Rumsey
DATE NEEDED BY: STD TAT	QC LEVEL: NEPM (2013)

PHONE: Sydney 02 8245 0300 | Perth 08 9488 0100 | Brisbane 07 3112 2688 | Melbourne 03 9642 0599 | Adelaide 08 8431 7113

SEND REPORT & INVOICE TO: (1) adminnsw@jbsg.com.au; (2 Rsharp@jbsg.com.au; (3) Drumsey@jbsg.com.au

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	Lead Paint	Lead Dust	Asbestos ID	TYPE OF ASBESTOS ANALYSIS: IDENTIFICATION	TYPE OF ASBESTOS ANALYSIS: NEPM/WA	NOTES:
E-L01	Paint	15/09		Bag		X					
E-L02	Paint	15/09		Bag		X					
E-L03	Paint	15/09		Bag		X					
E-A01	Material	15/09		Bag				X			
E-A02	Material	15/09		Bag				X			
E-A03	Material	15/09		Bag				X			
E-A04	Material	15/09		Bag				X			
E-A05	Material	15/09		Bag				X			
E-A06	Material	15/09		Bag				X			
E-A07	Material	15/09		Bag				X			
G-AD01	Dust	15/09		Bag				X			
G-LD01	Dust	15/09		Bag			X				
G-AD02	Dust	15/09		Bag				X			
G-LD02	Dust	15/09		Bag			X				
G-A01	Material	15/09		Bag				X			
G-A01a	Material	15/09		Bag				X			
G-A02	Material	15/09		Bag				X			
G-A03	Material	15/09		Bag				X			
G-L01	Paint	15/09		Bag		X					

RELINQUISHED BY:	METHOD OF SHIPMENT:	RECEIVED BY:	FOR RECEIVING LAB USE ONLY:
NAME: Robert Sharp DATE: 16/09 OF: JBS&G	CONSIGNMENT NOTE NO. TRANSPORT CO.	NAME: 16/09/22 Rani D DATE: 5:40PM Courier OF:	COOLER SEAL – Yes..... No ..... Intact ..... Broken ..... 29,4 °C COOLER TEMP ..... deg C
NAME: DATE: OF:	CONSIGNMENT NOTE NO. TRANSPORT CO	NAME: DATE: OF:	COOLER SEAL – Yes..... No ..... Intact ..... Broken ..... COOLER TEMP ..... deg C

Container & Preservative Codes: P = Plastic; J = Soil Jar; B = Glass Bottle; N = Nitric Acid Prsvd.; C = Sodium Hydroxide Prsvd; VC = Hydrochloric Acid Prsvd Vial; VS = Sulfuric Acid Prsvd Vial; S = Sulfuric Acid Prsvd; Z = Zinc Prsvd; E = EDTA Prsvd; ST = Sterile Bottle; O = Other

924413

Chain of Custody 1/2

JBS&G

PROJECT NO.: 63529	LABORATORY BATCH NO.:
PROJECT NAME: CMRI	SAMPLERS: Robert Sharp, Dylan Rumsey
DATE NEEDED BY: STD TAT	QC LEVEL: NEPM (2013)
PHONE: Sydney 02 8245 0300 | Perth 08 9488 0100 | Brisbane 07 3112 2688 | Melbourne 03 9642 0599 | Adelaide 08 8431 7113	
SEND REPORT & INVOICE TO: (1) adminnsw@jbsg.com.au; (2 Rsharp@jbsg.com.au; (3) Drumsey@jbsg.com.au	

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	Lead Paint	Lead Dust	Asbestos ID	TYPE OF ASBESTOS ANALYSIS: IDENTIFICATION	TYPE OF ASBESTOS ANALYSIS: NEPM/WA	NOTES:
G-L02	Paint	15/09		Bag		X					
G-L03	Paint	15/09		Bag		X					
G-L04	Paint	15/09		Bag		X					
G-L05	Paint	15/09		Bag		X					
L1-L01	Paint	15/09		Bag		X					
L1-L02	Paint	15/09		Bag		X					
L1-A01	Material	15/09		Bag				X			
L1-A02	Material	15/09		Bag				X			
L1-AD01	Dust	15/09		Bag				X			
L1-LD01	Dust	15/09		Bag			X				
L2-A01	Material	15/09		Bag				X			
L2-A02	Material	15/09		Bag				X			
L2-A03	Material	15/09		Bag				X			
L2-A04	Material	15/09		Bag				X			
L2-AD01	Dust	15/09		Bag				X			
L2-LD01	Dust	15/09		Bag			X				
L2-L01	Paint	15/09		Bag		X					

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NAME: DATE: 16/09. OF: JBS&G	CONSIGNMENT NOTE NO. TRANSPORT CO.	NAME: DATE: OF:	COOLER SEAL – Yes..... No ..... Intact ..... Broken ..... COOLER TEMP ..... deg C
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NATA# 1261 Site# 1254	NATA# 1261 Site# 1254	NATA# 1261 Site# 18217		NATA# 1261 Site# 20794	NATA# 1261 Site# 25079

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IANZ# 1327	IANZ# 1290

Sample Receipt Advice

Company name:	JBS & G Australia (NSW) P/L
Contact name:	Rob Sharp
Project name:	CMRI
Project ID:	63529
Turnaround time:	5 Day
Date/Time received	Sep 16, 2022 5:40 PM
Eurofins reference	924413

Sample Information

✓	A detailed list of analytes logged into our LIMS, is included in the attached summary table.
✓	All samples have been received as described on the above COC.
✓	COC has been completed correctly.
N/A	Attempt to chill was evident.
✓	Appropriately preserved sample containers have been used.
✓	All samples were received in good condition.
✓	Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
✓	Appropriate sample containers have been used.
✓	Sample containers for volatile analysis received with zero headspace.
X	Split sample sent to requested external lab.
X	Some samples have been subcontracted.
N/A	Custody Seals intact (if used).

Notes

Samples received by the laboratory after 5.30pm are deemed to have been received the following working day.

Contact

If you have any questions with respect to these samples, please contact your Analytical Services Manager:

Andrew Black on phone : (+61) 2 9900 8490 or by email: AndrewBlack@eurofins.com

Results will be delivered electronically via email to Rob Sharp - RSharp@jbsg.com.au.

Global Leader - Results you can trust

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

Attention:	Rob Sharp
Report	924413-AID
Project Name	CMRI
Project ID	63529
Received Date	Sep 16, 2022
Date Reported	Sep 21, 2022

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 CMRI
Project ID 63529
Date Sampled Sep 15, 2022
Report 924413-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
E-A01	22-Se0038219	Sep 15, 2022	Approximate Sample 1g / 15x5x2mm Sample consisted of: White sealant material	No asbestos detected. No trace asbestos detected.
E-A02	22-Se0038220	Sep 15, 2022	Approximate Sample 1g / 35x5x4mm Sample consisted of: Grey sealant material	No asbestos detected. No trace asbestos detected.
E-A03	22-Se0038221	Sep 15, 2022	Approximate Sample 7g / 40x20x10mm Sample consisted of: Black fibro bituminous material	No asbestos detected. Organic fibre detected. No trace asbestos detected.
E-A04	22-Se0038222	Sep 15, 2022	Approximate Sample <1g / 5x5x2mm Sample consisted of: Black rubber material	No asbestos detected. No trace asbestos detected.
E-A05	22-Se0038223	Sep 15, 2022	Approximate Sample <1g / 10x7x3mm Sample consisted of: Brown fibre plaster cement material with grey coating	No asbestos detected. Organic fibre detected. No trace asbestos detected.
E-A06	22-Se0038224	Sep 15, 2022	Approximate Sample 2g / 30x20x5mm Sample consisted of: Brown fibre plaster cement material	No asbestos detected. Organic fibre detected. No trace asbestos detected.
E-A07	22-Se0038225	Sep 15, 2022	Approximate Sample <1g / 20x10x3mm Sample consisted of: Grey fibre plaster cement material	No asbestos detected. Organic fibre detected. No trace asbestos detected.
G-AD01	22-Se0038226	Sep 15, 2022	Approximate Sample 56g / 90x45x10mm Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
G-AD02	22-Se0038228	Sep 15, 2022	Approximate Sample 2g Sample consisted of: Dust particles, fragments of soft fibrous material, plaster, plastic, paint flakes, sand particles and organic debris	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
G-A01	22-Se0038230	Sep 15, 2022	Approximate Sample 2g / 30x10x2mm Sample consisted of: Grey flexible linoleum with amber glue	No asbestos detected. Synthetic mineral fibre detected. No trace asbestos detected.
G-A01A	22-Se0038231	Sep 15, 2022	Approximate Sample 1g / 15x12x2mm Sample consisted of: Grey flexible linoleum with amber glue	No asbestos detected. Synthetic mineral fibre detected. No trace asbestos detected.
G-A02	22-Se0038232	Sep 15, 2022	Approximate Sample 5g / 60x15x5mm Sample consisted of: Grey fibre plaster cement	No asbestos detected. Organic fibre detected. No trace asbestos detected.
G-A03	22-Se0038233	Sep 15, 2022	Approximate Sample 3g / 50x10x2mm Sample consisted of: Grey fibre plaster cement material	No asbestos detected. Organic fibre detected. No trace asbestos detected.
L1-A01	22-Se0038241	Sep 15, 2022	Approximate Sample <1g / 4x3x1mm Sample consisted of: Grey/ white paint like material and cement material	No asbestos detected. No trace asbestos detected.
L1-A02	22-Se0038242	Sep 15, 2022	Approximate Sample 2g / 30x25x2mm Sample consisted of: Grey flexible linoleum with amber glue	No asbestos detected. Synthetic mineral fibre detected. No trace asbestos detected.
L1-AD01	22-Se0038243	Sep 15, 2022	Approximate Sample 1g Sample consisted of: Dust particles, fragments of soft fibrous material, cement and plaster fragments, cement and plaster in powder form	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
L2-A01	22-Se0038245	Sep 15, 2022	Approximate Sample 1g / 20x7x5mm Sample consisted of: Grey sealant and cement material	No asbestos detected. No trace asbestos detected.
L2-A02	22-Se0038246	Sep 15, 2022	Approximate Sample <1g / 10x8x2mm Sample consisted of: Brown fibre plaster cement material	No asbestos detected. Organic fibre detected. No trace asbestos detected.
L2-A03	22-Se0038247	Sep 15, 2022	Approximate Sample <1g / 12x7x2mm Sample consisted of: Brown compressed fibrous material	No asbestos detected. Organic fibre detected. No trace asbestos detected.
L2-A04	22-Se0038248	Sep 15, 2022	Approximate Sample 29g / 90x40x5mm Sample consisted of: Grey fibre plaster cement material	No asbestos detected. Organic fibre detected. No trace asbestos detected.
L2-AD01	22-Se0038249	Sep 15, 2022	Approximate Sample 1g Sample consisted of: Dust particles, fragments of soft fibrous material, foam like material, paint flakes, wood residue, sand particles and organic 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 is reported.

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	Sep 21, 2022	Indefinite
Asbestos - LTM-ASB-8020	Sydney	Sep 21, 2022	Indefinite

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Company Name: JBS & G Australia (NSW) P/L
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NSW 2000

Project Name: CMRI
Project ID: 63529

Order No.:
Report #: 924413
Phone: 02 8245 0300
Fax:

Received: Sep 16, 2022 5:40 PM
Due: Sep 21, 2022
Priority: 3 Day
Contact Name: Rob Sharp

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - AS4964	Asbestos Absence /Presence	CANCELLED	Lead	Lead (% w/w)
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X
External Laboratory										
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**					
1	E-L01	Sep 15, 2022		Paint	S22-Se0038216					X
2	E-L02	Sep 15, 2022		Paint	S22-Se0038217					X
3	E-L03	Sep 15, 2022		Paint	S22-Se0038218					X
4	E-A01	Sep 15, 2022		Building Materials	S22-Se0038219		X			
5	E-A02	Sep 15, 2022		Building Materials	S22-Se0038220		X			
6	E-A03	Sep 15, 2022		Building Materials	S22-Se0038221		X			
7	E-A04	Sep 15, 2022		Building Materials	S22-Se0038222		X			
8	E-A05	Sep 15, 2022		Building Materials	S22-Se0038223		X			
9	E-A06	Sep 15, 2022		Building Materials	S22-Se0038224		X			

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NSW 2000

Project Name: CMRI
Project ID: 63529

Order No.:
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Phone: 02 8245 0300
Fax:

Received: Sep 16, 2022 5:40 PM
Due: Sep 21, 2022
Priority: 3 Day
Contact Name: Rob Sharp

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - AS4964	Asbestos Absence /Presence	CANCELLED	Lead	Lead (% w/w)
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X
10	E-A07	Sep 15, 2022		Building Materials	S22-Se0038225		X			
11	G-AD01	Sep 15, 2022		Soil	S22-Se0038226	X				
12	G-LD01	Sep 15, 2022		Dust	S22-Se0038227				X	
13	G-AD02	Sep 15, 2022		Dust	S22-Se0038228	X				
14	G-LD02	Sep 15, 2022		Dust	S22-Se0038229				X	
15	G-A01	Sep 15, 2022		Building Materials	S22-Se0038230		X			
16	G-A01A	Sep 15, 2022		Building Materials	S22-Se0038231		X			
17	G-A02	Sep 15, 2022		Building Materials	S22-Se0038232		X			
18	G-A03	Sep 15, 2022		Building Materials	S22-Se0038233		X			
19	G-L01	Sep 15, 2022		Paint	S22-Se0038234					X
20	G-L02	Sep 15, 2022		Paint	S22-Se0038235					X
21	G-L03	Sep 15, 2022		Paint	S22-Se0038236					X

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Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - AS4964	Asbestos Absence /Presence	CANCELLED	Lead	Lead (% w/w)
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X
22	G-L04	Sep 15, 2022		Paint	S22-Se0038237					X
23	G-L05	Sep 15, 2022		Paint	S22-Se0038238					X
24	L1-L01	Sep 15, 2022		Paint	S22-Se0038239			X		
25	L1-L02	Sep 15, 2022		Paint	S22-Se0038240					X
26	L1-A01	Sep 15, 2022		Building Materials	S22-Se0038241		X			
27	L1-A02	Sep 15, 2022		Building Materials	S22-Se0038242		X			
28	L1-AD01	Sep 15, 2022		Dust	S22-Se0038243	X				
29	L1-LD01	Sep 15, 2022		Dust	S22-Se0038244				X	
30	L2-A01	Sep 15, 2022		Building Materials	S22-Se0038245		X			
31	L2-A02	Sep 15, 2022		Building Materials	S22-Se0038246		X			
32	L2-A03	Sep 15, 2022		Building Materials	S22-Se0038247		X			
33	L2-A04	Sep 15, 2022		Building Materials	S22-Se0038248		X			

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Project ID: 63529

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Fax:

Received: Sep 16, 2022 5:40 PM
Due: Sep 21, 2022
Priority: 3 Day
Contact Name: Rob Sharp

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - AS4964	Asbestos Absence /Presence	CANCELLED	Lead	Lead (% w/w)
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X
34	L2-AD01	Sep 15, 2022		Dust	S22-Se0038249	X				
35	L2-LD01	Sep 15, 2022		Dust	S22-Se0038250				X	
36	L2-L01	Sep 15, 2022		Paint	S22-Se0038251					X
Test Counts						4	17	1	4	10

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 the colour **blue** indicates data provided by customer that may have an impact on the results.
5. Information identified on this report with the colour **orange** indicates sections of the report not covered by the laboratory's scope of NATA accreditation.
6. This report replaces any interim results previously issued.

Holding Times

Please refer to the most recent version of the 'Sample Preservation and Container Guide' for holding times (QS3001).
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:	Percentage weight-for-weight basis, e.g. of asbestos in asbestos-containing finds in soil samples (**% w/w**)
F/fld	Airborne fibre filter loading as Fibres (**N**) per Fields counted (**n**)
F/mL	Airborne fibre reported concentration as Fibres per millilitre of air drawn over the sampler membrane (**C**)
g, kg	Mass, e.g. of whole sample (**M**) or asbestos-containing find within the sample (**m**)
g/kg	Concentration in grams per kilogram
L, mL	Volume, e.g. of air as measured in AFM (**V** = **r** x **t**)
L/min	Airborne fibre sampling Flowrate as litres per minute of air drawn over the sampler membrane (**r**)
min	Time (**t**), e.g. of air sample collection period

Calculations

Airborne Fibre Concentration: $C = \left(\frac{A}{a}\right) \times \left(\frac{N}{n}\right) \times \left(\frac{1}{r}\right) \times \left(\frac{1}{t}\right) = K \times \left(\frac{N}{n}\right) \times \left(\frac{1}{V}\right)$

Asbestos Content (as asbestos): $\%\, w/w = \frac{(m \times P_A)}{M}$

Weighted Average (of asbestos): $\%_{WA} = \sum \frac{(m \times P_A)_x}{x}$

Terms

%asbestos	Estimated percentage of asbestos in a given matrix. May be derived from knowledge or experience of the material, informed by HSG264 *Appendix 2*, else assumed to be 15% in accordance with WA DOH *Appendix 2* (**P_A**).
ACM	Asbestos Containing Materials. Asbestos contained within a non-asbestos matrix, typically presented in bonded (non-friable) condition. For the purposes of the NEPM and WA DOH, ACM corresponds to material larger than 7 mm x 7 mm.
AF	Asbestos Fines. Asbestos contamination within a soil sample, as defined by WA DOH. Includes loose fibre bundles and small pieces of friable and non-friable material such as asbestos cement fragments mixed with soil. Considered under the NEPM as equivalent to "non-bonded / friable".
AFM	Airborne Fibre Monitoring, e.g. by the MFM.
Amosite	Amosite Asbestos Detected. Amosite may also refer to Fibrous Grunerite or Brown Asbestos. Identified in accordance with AS 4964-2004.
AS	Australian Standard.
Asbestos Content (as asbestos)	Total % w/w asbestos content in asbestos-containing finds in a soil sample (**% w/w**).
Chrysotile	Chrysotile Asbestos Detected. Chrysotile may also refer to Fibrous Serpentine or White Asbestos. Identified in accordance with AS 4964-2004.
COC	Chain of Custody.
Crocidolite	Crocidolite Asbestos Detected. Crocidolite may also refer to Fibrous Riebeckite or Blue Asbestos. Identified in accordance with AS 4964-2004.
Dry	Sample is dried by heating prior to analysis.
DS	Dispersion Staining. Technique required for Unequivocal Identification of asbestos fibres by PLM.
FA	Fibrous Asbestos. Asbestos containing material that is wholly or in part friable, including materials with higher asbestos content with a propensity to become friable with handling, and any material that was previously non-friable and in a severely degraded condition. For the purposes of the NEPM and WA DOH, FA generally corresponds to material larger than 7 mm x 7 mm, although FA may be more difficult to visibly distinguish and may be assessed as AF.
Fibre Count	Total of all fibres (whether asbestos or not) meeting the counting criteria set out in the NOHSC:3003
Fibre ID	Fibre Identification. Unequivocal identification of asbestos fibres according to AS 4964-2004. Includes Chrysotile, Amosite (Grunerite) or Crocidolite asbestos.
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.
HSG248	UK HSE HSG248, *Asbestos: The Analysts Guide*, 2nd Edition (2021).
HSG264	UK HSE HSG264, *Asbestos: The Survey Guide* (2012).
ISO (also ISO/IEC)	International Organization for Standardization / International Electrotechnical Commission.
K Factor	Microscope constant (**K**) as derived from the effective filter area of the given AFM membrane used for collecting the sample (**A**) and the projected eyepiece graticule area of the specific microscope used for the analysis (**a**).
LOR	Limit of Reporting.
MFM (also NOHSC:3003)	Membrane Filter Method. As described by the Australian Government National Occupational Health and Safety Commission, *Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres*, 2nd Edition [NOHSC:3003(2005)].
NEPM (also ASC NEPM)	National Environment Protection (Assessment of Site Contamination) Measure, (2013, as amended).
Organic	Organic Fibres Detected. Organic may refer to Natural or Man-Made Polymeric Fibres. Identified in accordance with AS 4964-2004.
PCM	Phase Contrast Microscopy. As used for Fibre Counting according to the MFM.
PLM	Polarised Light Microscopy. As used for Fibre Identification and Trace Analysis according to AS 4964-2004.
SMF	Synthetic Mineral Fibre Detected. SMF may also refer to Man Made Vitreous Fibres. Identified in accordance with AS 4964-2004.
SRA	Sample Receipt Advice.
Trace Analysis	Analytical procedure used to detect the presence of respirable fibres (particularly asbestos) in a given sample matrix.
UK HSE HSG	United Kingdom, Health and Safety Executive, Health and Safety Guidance, publication.
UMF	Unidentified Mineral Fibre Detected. Fibrous minerals that are detected but have not been unequivocally identified by PLM with DS according the AS 4964-2004. May include (but not limited to) Actinolite, Anthophyllite or Tremolite asbestos.
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* (updated 2021), including Appendix Four: *Laboratory analysis*
Weighted Average	Combined average % w/w asbestos content of all asbestos-containing finds in the given aliquot or total soil sample (**$\%_{WA}$**).

Comments

22-Se0038241: The sample submitted was too small. Results may be different for enough sample size.

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

Asbestos Counter/Identifier:

Chamath JHM Annakkage	Senior Analyst-Asbestos

Authorised by:

Sayeed Abu	Senior Analyst-Asbestos

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
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NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration, inspection, proficiency testing scheme providers and reference materials producers reports and certificates.

Attention: **Rob Sharp**

Report **924413-S**
Project name CMRI
Project ID 63529
Received Date Sep 16, 2022

Client Sample ID			**E-L01**	**E-L02**	**E-L03**	**G-LD01**
Sample Matrix			**Paint**	**Paint**	**Paint**	**Dust**
Eurofins Sample No.			**S22-Se0038216**	**S22-Se0038217**	**S22-Se0038218**	**S22-Se0038227**
Date Sampled			**Sep 15, 2022**	**Sep 15, 2022**	**Sep 15, 2022**	**Sep 15, 2022**
Test/Reference	LOR	Unit				
Lead (% w/w)	0.01	%	0.02	0.04	0.03	-
Heavy Metals						
Lead	5	mg/kg	-	-	-	12

Client Sample ID			**G-LD02**	**G-L01**	**G-L02**	**G-L03**
Sample Matrix			**Dust**	**Paint**	**Paint**	**Paint**
Eurofins Sample No.			**S22-Se0038229**	**S22-Se0038234**	**S22-Se0038235**	**S22-Se0038236**
Date Sampled			**Sep 15, 2022**	**Sep 15, 2022**	**Sep 15, 2022**	**Sep 15, 2022**
Test/Reference	LOR	Unit				
Lead (% w/w)	0.01	%	-	13	0.01	< 0.01
Heavy Metals						
Lead	5	mg/kg	8.6	-	-	-

Client Sample ID			**G-L04**	**G-L05**	**L1-L02**	**L1-LD01**
Sample Matrix			**Paint**	**Paint**	**Paint**	**Dust**
Eurofins Sample No.			**S22-Se0038237**	**S22-Se0038238**	**S22-Se0038240**	**S22-Se0038244**
Date Sampled			**Sep 15, 2022**	**Sep 15, 2022**	**Sep 15, 2022**	**Sep 15, 2022**
Test/Reference	LOR	Unit				
Lead (% w/w)	0.01	%	< 0.01	0.92	0.03	-
Heavy Metals						
Lead	5	mg/kg	-	-	-	160

Client Sample ID			L2-LD01	L2-L01
Sample Matrix			Dust	Paint
Eurofins Sample No.			S22-Se0038250	S22-Se0038251
Date Sampled			Sep 15, 2022	Sep 15, 2022
Test/Reference	LOR	Unit		
Lead (% w/w)	0.01	%	-	0.63
Heavy Metals				
Lead	5	mg/kg	300	-

Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

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
Lead (% w/w)	Sydney	Sep 21, 2022	6 Months
- Method: LTM-MET-3040 Metals in Waters Soils & Sediments by ICP-MS			
Heavy Metals	Sydney	Sep 21, 2022	28 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
Sydney
NSW 2000

Project Name: CMRI
Project ID: 63529

Order No.:
Report #: 924413
Phone: 02 8245 0300
Fax:

Received: Sep 16, 2022 5:40 PM
Due: Sep 26, 2022
Priority: 5 Day
Contact Name: Rob Sharp

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos Absence /Presence	Lead	Lead (% w/w)
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X
External Laboratory								
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**			
1	E-L01	Sep 15, 2022		Paint	S22-Se0038216			X
2	E-L02	Sep 15, 2022		Paint	S22-Se0038217			X
3	E-L03	Sep 15, 2022		Paint	S22-Se0038218			X
4	E-A01	Sep 15, 2022		Building Materials	S22-Se0038219	X		
5	E-A02	Sep 15, 2022		Building Materials	S22-Se0038220	X		
6	E-A03	Sep 15, 2022		Building Materials	S22-Se0038221	X		
7	E-A04	Sep 15, 2022		Building Materials	S22-Se0038222	X		
8	E-A05	Sep 15, 2022		Building Materials	S22-Se0038223	X		
9	E-A06	Sep 15, 2022		Building Materials	S22-Se0038224	X		

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Sample Detail						Asbestos Absence /Presence	Lead	Lead (% w/w)
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X
10	E-A07	Sep 15, 2022		Building Materials	S22-Se0038225	X		
11	G-AD01	Sep 15, 2022		Dust	S22-Se0038226	X		
12	G-LD01	Sep 15, 2022		Dust	S22-Se0038227		X	
13	G-AD02	Sep 15, 2022		Dust	S22-Se0038228	X		
14	G-LD02	Sep 15, 2022		Dust	S22-Se0038229		X	
15	G-A01	Sep 15, 2022		Building Materials	S22-Se0038230	X		
16	G-A01A	Sep 15, 2022		Building Materials	S22-Se0038231	X		
17	G-A02	Sep 15, 2022		Building Materials	S22-Se0038232	X		
18	G-A03	Sep 15, 2022		Building Materials	S22-Se0038233	X		
19	G-L01	Sep 15, 2022		Paint	S22-Se0038234			X
20	G-L02	Sep 15, 2022		Paint	S22-Se0038235			X
21	G-L03	Sep 15, 2022		Paint	S22-Se0038236			X

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Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos Absence /Presence	Lead	Lead (% w/w)
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X
22	G-L04	Sep 15, 2022		Paint	S22-Se0038237			X
23	G-L05	Sep 15, 2022		Paint	S22-Se0038238			X
24	L1-L01	Sep 15, 2022		Paint	S22-Se0038239			X
25	L1-L02	Sep 15, 2022		Paint	S22-Se0038240			X
26	L1-A01	Sep 15, 2022		Building Materials	S22-Se0038241	X		
27	L1-A02	Sep 15, 2022		Building Materials	S22-Se0038242	X		
28	L1-AD01	Sep 15, 2022		Dust	S22-Se0038243	X		
29	L1-LD01	Sep 15, 2022		Dust	S22-Se0038244		X	
30	L2-A01	Sep 15, 2022		Building Materials	S22-Se0038245	X		
31	L2-A02	Sep 15, 2022		Building Materials	S22-Se0038246	X		
32	L2-A03	Sep 15, 2022		Building Materials	S22-Se0038247	X		
33	L2-A04	Sep 15, 2022		Building Materials	S22-Se0038248	X		

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Contact Name: Rob Sharp

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos Absence /Presence	Lead	Lead (% w/w)
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X
34	L2-AD01	Sep 15, 2022		Dust	S22-Se0038249	X		
35	L2-LD01	Sep 15, 2022		Dust	S22-Se0038250		X	
36	L2-L01	Sep 15, 2022		Paint	S22-Se0038251			X
Test Counts						21	4	11

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.

Units

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

Terms

APHA	American Public Health Association
COC	Chain of Custody
CP	Client Parent - QC was performed on samples pertaining to this report
CRM	Certified Reference Material (ISO17034) - reported as percent recovery.
Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
LOR	Limit of Reporting.
LCS	Laboratory Control Sample - 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.
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.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
SRA	Sample Receipt Advice
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
TBTO	Tributyltin oxide (*bis*-tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment however free tributyltin was measured and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.
TCLP	Toxicity Characteristic Leaching Procedure
TEQ	Toxic Equivalency Quotient or Total Equivalence
QSM	US Department of Defense Quality Systems Manual Version 5.4
US EPA	United States Environmental Protection Agency
WA DWER	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC - Acceptance Criteria

The acceptance criteria should be used as a guide only and may be different when site specific Sampling Analysis and Quality Plan (SAQP) have been implemented

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%

NOTE: pH duplicates are reported as a range not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.4 where no positive PFAS results have been reported have been reviewed and no data was affected.

.

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. 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.
4. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery the term "INT" appears against that analyte.
5. For Matrix Spikes and LCS results a dash "-" in the report means that the specific analyte was not added to the QC sample.
6. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test			Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank									
Lead (% w/w)			%	< 0.01			0.01	Pass	
Method Blank									
Heavy Metals									
Lead			mg/kg	< 5			5	Pass	
LCS - % Recovery									
Heavy Metals									
Lead			%	93			80-120	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Spike - % Recovery									
Heavy Metals				Result 1					
Lead	S22-Se0038547	NCP	%	95			75-125	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	S22-Se0038550	NCP	mg/kg	29	29	1.9	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:

Andrew Black	Analytical Services Manager
Gabriele Cordero	Senior Analyst-Metal
Sayeed Abu	Senior Analyst-Asbestos

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

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Document Status

Rev No.	Author	Reviewer	Approved for Issue		
		Name	Name	Signature	Date
A	Robert Sharp	Michael Samuel	Michael Samuel		7/10/2022
0	Robert Sharp	Michael Samuel	Michael Samuel		26/10/2022