New High School for Leppington and Denham Court – Hazardous Building Materials Survey

NSW Department of Education

JBS&G 67606 | 163,954 Rev 1

13 January 2025

We acknowledge the Traditional Custodians of Country throughout Australia and their connections to land, sea and community.

We pay respect to Elders past and present and in the spirit of reconciliation, we commit to working together for our shared future.

Caring for Country The Journey of JBS&G
Artist: Patrick Caruso, Eastern Arrernte

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Abbreviations

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

1. Introduction

1.1 Background

JBS&G Australia Pty Ltd (JBS&G) was engaged by NSW Department of Education (DoE, the client), to undertake a hazardous building materials survey (HBMS) of the structures located at 128 Rickard Road, Leppington, NSW (the site). The site is legally identified as Lot A in Deposited Plan (DP) 411211 and covers an area of approximately 2.03 hectares (ha).

The site location and site layout are shown in **Figure 1** and **Figure 2**.

This HBMS Report has been prepared to support a Review of Environmental Factors (REF) for the Department of Education (DoE) for the new high school for Leppington and Denham Court (the activity). The purpose of the REF is to assess the potential environmental impacts of the activity prescribed by *State Environmental Planning Policy (Transport and Infrastructure) 2021* (T&I SEPP) as "development permitted without consent" on land carried out by or on behalf of a public authority under Part 5 of the *Environmental Planning and Assessment Act 1979* (EP&A Act). The activity is to be undertaken pursuant to Chapter 3, Part 3.4, Section 3.37A of the T&I SEPP.

The proposed activity is for the construction of a new high school for Leppington and Denham Court across two properties comprising the site and the property adjacent to the north, legally identified as Lot B in DP 411211 being 134 Rickard Road, Leppington. The new high school will accommodate up to 1,000 students across 3 new buildings that will comprise 48 permanent teaching spaces (PTS), 3 support teaching spaces (STS), 9 specialist labs/workshops/kitchens and a hall. Buildings A, B and C will wrap the western and southern boundaries of the activity site, with the hall being located in south-east corner. The activity also includes the construction of a sports field in the centre of the activity site and 3 x multipurpose courts along the northern boundary. The proposed site plan for the activity is shown in **Appendix D**.

The purposed of this HBMS was to identify the presence of hazardous building materials within structures and accessible ground surface at the site to facilitate their prior to future demolition as part of proposed activity at the site.. This HBMS was limited to the structures on the site and did not include any assessment of any structures located on Lot B.

The structures were inspected for the following hazardous materials:

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

No previous HBMS reports or registers or other site assessment reports 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 mitigation measures on the management and/or requirements for the removal of identified and suspected hazardous materials in accordance with regulations and guidance in force at the time of the inspection.

1.2 Objectives

The objective of the HBMS was to determine the presence, quantity, and condition of any hazardous materials within the site structures prior to their proposed demolition as part of the site redevelopment.

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

- *Work Health and Safety Act* (2011);
- *Work Health and Safety Regulation* (2017);
- *How to Safely Remove Asbestos Code of Practice*, SafeWork NSW, (2022) (SWNSW 2022a);
- *How to Manage and Control Asbestos in the Workplace Code of Practice*, SafeWork NSW (2022) (SWNSW 2022b);
- 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 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. Areas inaccessible during the survey should 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, it is advised that works should cease, and an assessment of the materials undertaken by a competent person for further appropriate mitigation measures.

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 mass spectrometry (ICP-MS).

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-MS.

Concentrations of lead within accumulated or settled dust were compared against the health investigation level (HIL) for commercial and industrial land uses of 1,500 mg/kg as outlined in National Environment Protection Measure (NEPC 2013) guidelines. This is considered to be a suitable assessment threshold to be protective of workers during demolition works that may disturb potential lead impacted dusts.

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 2022b, 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 23 July 2024 by Jordan Gomez, one of JBS&G's experienced hazardous materials surveyors and an accredited SafeWork NSW Licensed Asbestos Assessor (LAA 002107). Jordan was also accompanied by David Edwards-Davis (LAA 001452).

At the time of inspection, the site was utilised as an operational hobby farm, comprising twenty enclosed greenhouses with crop growing activities, two sheds, multiple chicken coops and a small caravan. A small pond was observed to the south eastern extent that was being utilised for irrigation for the greenhouse crops. The HBMS included all structures at the site and also a detailed inspection of external areas across the site area. Site features are shown in **Figures 1** and **2.**

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

Photographs taken during the HBMS are presented in **Appendix B**.

A summary of the key observations and findings made during the HBMS is provided in the following sections.

3.1 External

A summary of the key observations and findings of the detailed inspection of external areas is as follows:

- At the time of inspection, extensive amounts of building and demolition waste, putrescible waste items, vegetation waste and general debris was identified stockpiled and scattered around the site. In addition, ground surface vegetation was heavily overgrown in multiple areas. There is potential that hazardous building materials may be concealed by ground surface debris, waste and overgrown vegetation.
- Animal carcasses were identified to the ground surface surrounding the southern pond area. Improper carcass disposal can result in contamination of soil, ground water, water ways and also pose a significant biological hazard. It is further noted that this pond water is used for irrigation purposes for the hobby farms crops within the greenhouse areas of the site.
- Non-asbestos containing compressed fibre cement sheeting (A01) was identified to the electrical distribution board located at the driveway entry gate to the western extent of the site along the Rickard Road frontage.
- Non-asbestos containing fibre cement sheeting debris (A02) was identified to the ground surface along the south fence line.
- Non-asbestos containing fibre cement sheeting debris (A04) was identified to the ground surface adjacent the caravan and a large plastic sheet and plastic garden pots;
- Non-asbestos containing fibre cement sheeting debris (A05) was identified to the ground surface adjacent the large shed within the southern portion of the site;
- Non-asbestos containing fibre cement sheeting debris (A06) was identified within a rubbish stockpile south of the large shed;
- Asbestos containing fibre cement sheeting debris (A07) was identified within the large stockpile running adjacent the driveway within the south corner of the site. The stockpile comprised a mixture of soil, green waste, scrap metals and demolition waste. It is assumed that this stockpile has ACM throughout.
- Assumed SMF insulation batts was identified to the ground surface and within rubbish piles throughout the site;

3.2 Greenhouses

A summary of the key observations and findings of the HBMS of the greenhouse structures is as follows:

- Assumed SMF insulation was identified to the heating systems; and
- No other hazardous building materials were identified during the time of inspection.

3.3 Large Shed

A summary of the key observations and findings of the HBMS of the Large Shed structure is as follows:

- Associated chicken coops and smaller cages were identified to the south of the structure. No hazardous building materials were identified during the time of inspection.
- Non-asbestos containing fibre cement sheeting (A08) was identified to the wall panels of the large shed;
- Assumed SMF internal insulation was identified to the “Rheem” hot water unit; and
- Due to the modern appearance of the fluorescent lights encountered during the inspection, PCB containing capacitors are not suspected to be present within this structure.
- All accessible paint systems were screened via XRF spectrometer and classified as non-lead based paints (XRF < 0.01 mg/cm^2).

No other hazardous building materials were identified during the time of inspection.

3.4 Small Shed

No hazardous building materials were identified associated with the Small Shed at the time of inspection.

3.5 Chicken Coops (Central)

A summary of the key observations and findings of the HBMS of the Chicken Coop (Central) structure is as follows:

- Asbestos containing fibre cement sheeting (A09) was identified to the ground surface adjacent the chicken coops located within the central portion of the site.

No other hazardous building materials were identified at the time of inspection.

3.6 Caravan

A summary of the key observations and findings of the HBMS of the Caravan is as follows:

- Asbestos containing vinyl floor tiles (A03) was identified to the internal floor within the caravan.

No other hazardous building materials were identified at the time of inspection.

4. Results

4.1 Hazardous Materials

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

4.1.1 Asbestos Containing Materials

Suspected ACM samples were analysed at an accredited NATA laboratory for the presence of asbestos.

A summary of the results of laboratory testing for suspected ACM samples are provided in **Table 4.1** below.

Table 4.1: Asbestos Results Summary

Sample ID	Lab ID	Sample Location	Analysis Result	Observed Condition
A01	24-JI0061128	Electrical Distribution Board – compressed fibre cement sheet	No Asbestos Detected	N/A
A02	24-JI0061129	South fence line, ground surface – fibre cement sheeting debris	No Asbestos Detected	N/A
A03	24-JI0061130	Caravan internal floor – vinyl floor tiles	**Chrysotile Asbestos**	Non-Friable
A04	24-JI0061131	Ground surface adjacent the caravan and a large plastic sheet with plastic garden pots – fibre cement sheeting debris	No Asbestos Detected	N/A
A05	24-JI0061132	Ground surface adjacent the large shed (south) – fibre cement sheeting debris	No Asbestos Detected	N/A
A06	24-JI0061133	Rubbish stockpile south of the large shed – fibre cement sheeting debris	No Asbestos Detected	N/A
A07	24-JI0061134	Large stockpile running adjacent the driveway (south corner of the site) – fibre cement sheeting debris	**Chrysotile, Amosite & Crocidolite Asbestos**	Non-Friable
A08	24-JI0061135	Wall panels to the large sheds (south) – fibre cement sheeting	No Asbestos Detected	N/A
A09	24-JI0061136	Ground surface adjacent the chicken coops (central) – fibre cement sheeting debris	**Chrysotile, Amosite & Crocidolite Asbestos**	Non-Friable

4.1.2 Asbestos Containing Dust

No dust samples were collected at the time of the inspection.

4.1.3 Lead Containing Dust

No dust samples were collected at the time of the inspection.

4.1.4 Lead Based Paints

No lead paint samples were collected at the time of the inspection. All paint systems were analysed using XRF spectrometer and determined to comprise non-lead based paints.

4.1.5 Polychlorinated Biphenyls

No suspected PCB containing light fittings were observed at the site.

4.1.6 Synthetic Mineral Fibres

Suspected SMF materials were identified in poor to fair condition 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 to hot water unit within the large shed;
- Internal insulation to heater systems within greenhouses; and
- Loose insulation batts to the ground surface and within rubbish stockpiles.

4.2 Inaccessible Areas

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

- Ground surfaces concealed by extensive debris and overgrown vegetation were deemed inaccessible at the time if inspection.
- Large stockpiles of building and demo waste were deemed inaccessible at the time of inspection;

5. Discussion

Based on the scope of this assessment and with reference to the limitations included in **Section 6**, hazardous materials, including non-friable ACM and SMF have been identified in various forms throughout the site as a result of visual identification and laboratory testing. The identified hazardous materials will require management and/or removal for the proposed activity at the site.

5.1 Mitigation Measures

Mitigation measures for the identified hazardous materials, as detailed in **Section 3** and **Section 4**, and presented in the Hazardous Materials Register in **Appendix A**, are summarised in **Table 5.1** below.

Table 5.1: Mitigation Measures

Mitigation Name	Aspect/Section	Mitigation Measure	Reason for Mitigation Measure
Removal of Hazardous Building Materials	Demolition/Construction	Removal of all identified hazardous building materials as presented in the Hazardous Materials Register	To comply with legislative and guideline requirements

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

5.1.1 Asbestos Containing Materials

Non-friable ACM has been identified in various forms throughout the site. Prior to the commencement of demolition works, the following mitigation measures are to be undertaken:

- A Class A or B licensed asbestos removalist shall be engaged to remove all asbestos containing materials as identified in the Hazardous Materials Register (**Appendix A**). Removal and disposal of non-friable asbestos materials shall be undertaken in accordance with the *Work Health and Safety Act* (2011), *Work Health and Safety Regulation* (2017) and SWNSW 2022a.
- A notification to remove non-friable asbestos shall be submitted to SafeWork NSW by the engaged licensed asbestos removalist prior to works commencing. No asbestos removal works may commence until receipt of the accepted notification to remove non-friable asbestos from SafeWork NSW.
- An asbestos removal control plan is to be developed by the engaged licensed asbestos removalist prior to the removal works, outlining the specific removal methodologies and control measures necessary to minimise any risk from exposure to asbestos.
- Asbestos waste and asbestos impacted waste materials shall be disposed of to an appropriately licensed landfill in accordance with NSW EPA 2014.
- Following removal works, a clearance inspection shall be completed by a competent person or licensed asbestos assessor (LAA) to ensure that the asbestos materials identified at the site have been removed to a satisfactory standard. Following the completion of the clearance inspection, a clearance certificate shall be issued by the competent person or LAA to confirm that the ACM has been successfully removed and that the site is suitable for planned demolition works to commence.

5.1.2 Synthetic Mineral Fibres

All 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 to be worn including the use of P2 respirator as minimum and appropriate removal methodology as outlined in [NOHSC: 1004(1990)] and [NOHSC: 2006(1990)].

5.1.3 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 mitigation measures for management and/or removal.

6. Conclusions

Based on the scope of this assessment and with reference to the limitations included in **Section 7**, the following conclusions are made with respect to the Hazardous Materials Survey completed:

- Non-friable ACM was identified within the Caravan, large stockpile in the southern portion of the site, and to ground surfaces adjacent the central Chicken Coops at the time of inspection;
- No lead based paints were identified at the time of inspection;
- No suspected PCB containing light fittings were identified at the time of inspection; and
- Assumed SMF insulation was identified to the hot water unit within the large shed, hot water systems within the greenhouses, and as loose insulation batts to the ground surface and within rubbish stockpiles.

It is considered that successful implementation of the mitigation measures would appropriately address and remove the identified non-friable ACM and SMF hazards from the site.

7. 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 report has been prepared specifically for the client for the purposes of the commission, and no warranties, express or implied, are offered to any third parties and no liability will be accepted for use or interpretation of this report by any third party.

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

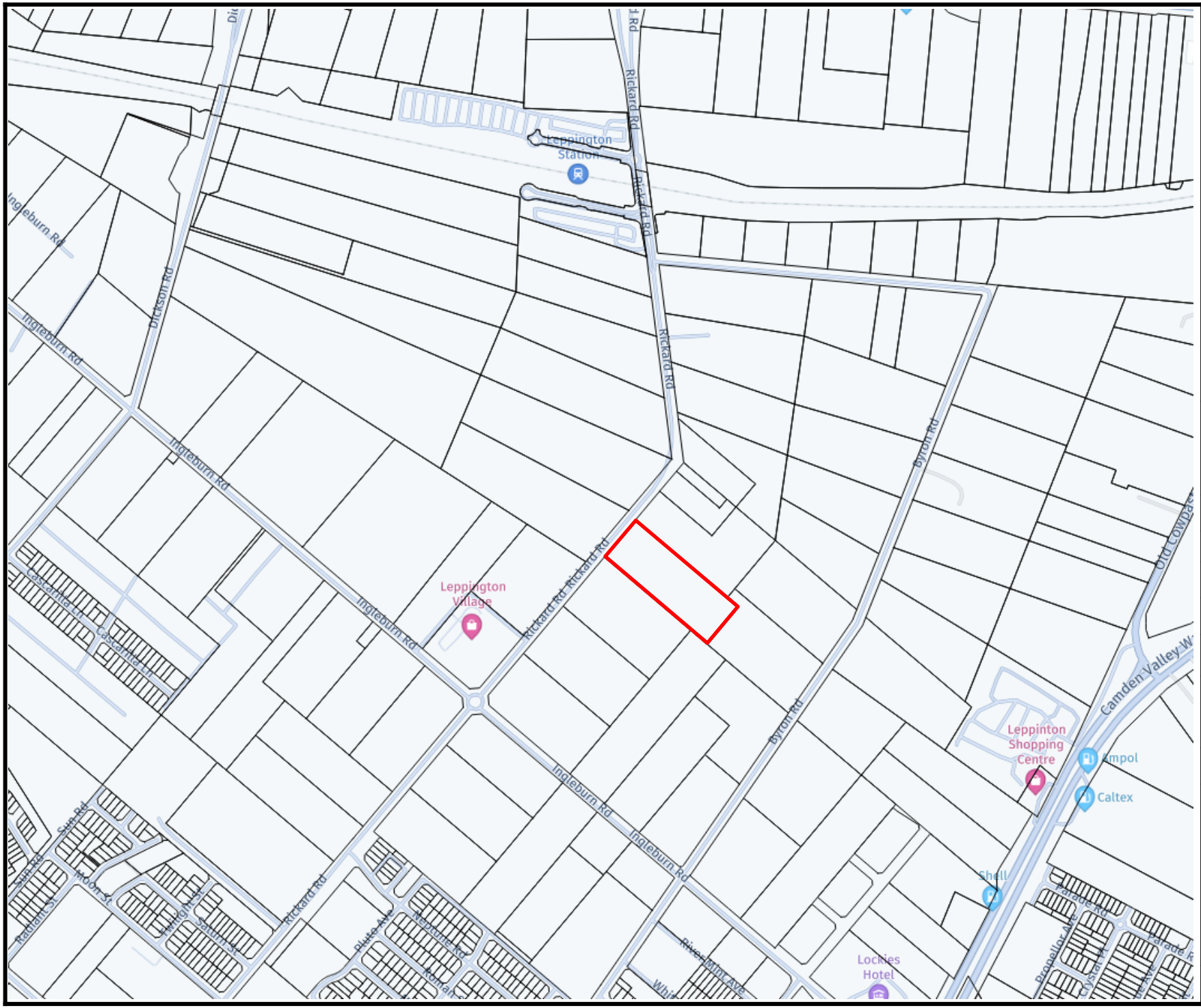
Sampling and chemical analysis of environmental media is based on appropriate guidance documents made and approved by the relevant regulatory authorities. Conclusions arising from the review and assessment of environmental data are based on the sampling and analysis considered appropriate based on the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

Limited sampling and laboratory analyses were undertaken as part of the investigations undertaken, as described herein. 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 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:

Site Boundary

JBS&G

Job No: 67606

Client: TSA Riley Pty Ltd

Version: R001 Rev A	Date: 08/08/2024
Drawn By: JG	Checked By: MS

128-132 Rickard Road, Leppington NSW

SITE LOCATION

FIGURE 1

Legend:

- Site Boundary
- Greenhouses
- Large Shed with Chicken Coop
- Large Stockpile with ACM
- Chicken Coops (Central)
- Caravan
- Small Shed
- Pond

JBS&G

Job No: 67606

Client: TSA Riley Pty Ltd

Version: R001 Rev A	Date: 08/08/2024
Drawn By: JG	Checked By: MS

128-132 Rickard Road, Leppington NSW

SITE LAYOUT

FIGURE 2

Appendix A Hazardous Materials Register

Hazardous Materials Register
128-132 Rickard Road, Leppington NSW

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)											
A03	Caravan floor	Vinyl floor tiles	1 & 2	Yes	Non-Friable	**Chrysotile Asbestos Detected**	Fair	5m^2	Remove by a Class A or B licensed removal contractor in accordance with SWNSW 2022a.	23/7/2024 JBS&G JG & DD	
A07	Large stockpile running adjacent the driveway (south)	Fibre cement sheeting debris	3 & 4	Yes	Non-Friable	**Chrysotile, Amosite and Crocidolite Asbestos Detected**	Fair	50m^3	Remove by a Class A or B licensed removal contractor in accordance with SWNSW 2022a.	23/7/2024 JBS&G JG & DD	
A09	Ground surface, adjacent chicken coops (central)	Fibre cement sheeting debris	6	Yes	Non-Friable	**Chrysotile, Amosite and Crocidolite Asbestos Detected**	Fair	Unknown	Remove by a Class A or B licensed removal contractor in accordance with SWNSW 2022a.	23/7/2024 JBS&G JG & DD	
No Asbestos Detected											
A01	Electrical distribution board	Compressed fibre cement backing board	7	-	-	No Asbestos Detected	-	-	No further action required	23/7/2024 JBS&G JG & DD	
A02	South fence line, ground surface	Fibre cement sheeting debris	8	-	-	No Asbestos Detected	-	-	No further action required	23/7/2024 JBS&G JG & DD	
A04	Ground surface, adjacent the caravan and large plastic sheet with plastic garden pots	Fibre cement sheeting debris	-	-	-	No Asbestos Detected	-	-	No further action required	23/7/2024 JBS&G JG & DD	
A05	Ground surface, adjacent the large shed (south)	Fibre cement sheeting debris	9	-	-	No Asbestos Detected	-	-	No further action required	23/7/2024 JBS&G JG & DD	
A06	Small stockpile adjacent south pond	Fibre cement sheeting debris	-	-	-	No Asbestos Detected	-	-	No further action required	23/7/2024 JBS&G JG & DD	

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
A08	Wall panels, south sheds	Fibre cement sheeting	11	-	-	No Asbestos Detected	-	-	No further action required	23/7/2024 JBS&G JG & DD	
Lead Containing Dust											
No Lead Containing Dust was identified at the time of inspection.										23/7/2024 JBS&G JG & DD	
Lead Based Paints											
No Lead Based Paint was identified at the time of inspection.										23/7/2024 JBS&G JG & DD	
Polychlorinated Biphenyls (PCBs)											
No PCBs were identified at the time of inspection.										23/7/2024 JBS&G JG & DD	
Synthetic Mineral Fibres (SMF)											
-	Hot water Unit's	Internal Insulation	12	Yes	Bonded	**Assumed SMF**	Good	<1m^2	Remove in accordance with NOHSC:2006(1990)	23/7/2024 JBS&G JG & DD	
-	Ground surface throughout	Insulation batts	-	Yes	Bonded	**Assumed SMF**	Good	5m^2	Remove in accordance with NOHSC:2006(1990)	23/7/2024 JBS&G JG & DD	
-	Heating systems	Internal Insulation	13	Yes	Bonded	**Assumed SMF**	Unknown	Unknown	Remove in accordance with NOHSC:2006(1990)	23/7/2024 JBS&G JG & DD	
-	Wall linings, south sheds	Insulation batts	-	Yes	Bonded	**Assumed SMF**	Unknown	Unknown	Remove in accordance with NOHSC:2006(1990)	23/7/2024 JBS&G JG & DD	

Appendix B Photographic Log

Photo 1: Caravan – Overview

Photo 2: Caravan – asbestos containing vinyl floor tiles to the floor

Photo 3: Large stockpile adjacent driveway (south) – asbestos containing fibre cement debris ident6ified within stockpiled material

Photo 4: Large stockpile (south) – asbestos containing fibre cement sheeting debris within stockpiled material

Photo 5: Overview – chicken coop (central)

Photo 6: Chicken coops (central) – asbestos containing fragment identified to the ground surface

Source:			
A	Original Issue -	SL	31/05/2024
Rev	Description	Drn.	Date

Appendix B: Photographs

Client: TSA Riley Pty Ltd

Project: HBMS – 128-132 Rickard Road, Leppington, NSW

Job No: 67606 File Name: R001 - Photo Log

Photo 7: Non-asbestos containing compressed fibre cement backing board

Photo 8: Non-asbestos containing fibre cement sheeting debris to ground surface adjacent south fence line

Photo 9: Ground surface adjacent the large shed (south) – non-asbestos containing fibre cement sheeting

Photo 10: Large Shed Area - Overview

Photo 11: Large Shed Area – Non-asbestos containing fibre cement sheeting to the wall panels

Photo 12: Assumed SMF internal insulation to HWU

Source:			
A	Original Issue -	SL	31/05/2024
Rev	Description	Drn.	Date

JBS&G

Appendix B: Photographs

Client: TSA Riley Pty Ltd

Project: HBMS – 128-132 Rickard Road, Leppington, NSW

Job No: 67606 File Name: R001 - Photo Log

Photo 13: Enclosed Green Houses – Assumed SMF internal insulation to the heaters

Source:			
A	Original Issue -	SL	31/05/2024
Rev	Description	Drn.	Date

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Appendix B: Photographs

Client: TSA Riley Pty Ltd

Project: HBMS – 128-132 Rickard Road, Leppington, NSW

Job No: 67606 File Name: R001 - Photo Log

Appendix C Laboratory Analysis Reports

Certificate of Analysis

Environment Testing

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.

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

Attention:	Stuart Lumsden
Report	1121054-AID
Project Name	LEPPINGTON
Project ID	67606
Received Date	Jul 24, 2024
Date Reported	Aug 02, 2024

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 LEPPINGTON
Project ID 67606
Date Sampled Jul 24, 2024
Report 1121054-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
A01	24-Jl0061128	Jul 24, 2024	Approximate Sample 1g / 10x5x5mm Sample consisted of: Brown hard compressed fibrous material	No asbestos detected. Organic fibre detected. No trace asbestos detected.
A02	24-Jl0061129	Jul 24, 2024	Approximate Sample 2g / 15x12x5mm Sample consisted of: Brown fibre plaster cement	No asbestos detected. Organic fibre detected. No trace asbestos detected.
A03	24-Jl0061130	Jul 24, 2024	Approximate Sample 6g / 40x20x2mm Sample consisted of: a) Off-white brittle vinyl tile b) Amber glue	Chrysotile asbestos detected (a).
A04	24-Jl0061131	Jul 24, 2024	Approximate Sample 4g / 30x15x5mm Sample consisted of: Brown fibre plaster cement	No asbestos detected. Organic fibre detected. No trace asbestos detected.
A05	24-Jl0061132	Jul 24, 2024	Approximate Sample 12g / 40x25x5mm Sample consisted of: Grey fibre plaster cement	No asbestos detected. Organic fibre detected. No trace asbestos detected.
A06	24-Jl0061133	Jul 24, 2024	Approximate Sample 9g / 40x30x5mm Sample consisted of: Brown fibre plaster cement	No asbestos detected. Organic fibre detected. No trace asbestos detected.
A07	24-Jl0061134	Jul 24, 2024	Approximate Sample 2g / 15x12x5mm Sample consisted of: Grey fibre cement material	Chrysotile, amosite and crocidolite asbestos detected.
A08	24-Jl0061135	Jul 24, 2024	Approximate Sample 6g / 30x20x5mm Sample consisted of: Grey fibre plaster cement	No asbestos detected. Organic fibre detected. No trace asbestos detected.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
A09	24-Jl0061136	Jul 24, 2024	Approximate Sample 14g / 50x20x5mm Sample consisted of: Grey fibre cement material	Chrysotile, amosite and crocidolite 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	Jul 24, 2024	Indefinite

eurofins

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Eurofins Environment Testing Australia Pty Ltd
ABN: 50 005 085 521

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West
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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794 & 2780	Site# 25079

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IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

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NSW 2000

Project Name: LEPPINGTON
Project ID: 67606

Order No.:
Report #: 1121054
Phone: 02 8245 0300
Fax:

Received: Jul 24, 2024 3:44 PM
Due: Jul 31, 2024
Priority: 5 Day
Contact Name: Stuart Lumsden

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos Absence /Presence
Sydney Laboratory - NATA # 1261 Site # 18217						X
External Laboratory						
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**	
1	A01	Jul 24, 2024		Building Materials	S24-Jl0061128	X
2	A02	Jul 24, 2024		Building Materials	S24-Jl0061129	X
3	A03	Jul 24, 2024		Building Materials	S24-Jl0061130	X
4	A04	Jul 24, 2024		Building Materials	S24-Jl0061131	X
5	A05	Jul 24, 2024		Building Materials	S24-Jl0061132	X
6	A06	Jul 24, 2024		Building Materials	S24-Jl0061133	X
7	A07	Jul 24, 2024		Building Materials	S24-Jl0061134	X
8	A08	Jul 24, 2024		Building Materials	S24-Jl0061135	X
9	A09	Jul 24, 2024		Building	S24-Jl0061136	X

eurofins

web: www.eurofins.com.au
email: EnviroSales@eurofins.com

Eurofins Environment Testing Australia Pty Ltd
ABN: 50 005 085 521

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Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West
VIC 3175	VIC 3216	NSW 2145	ACT 2911	QLD 4172	NSW 2304
+61 3 8564 5000	+61 3 8564 5000	+61 2 9900 8400	+61 2 6113 8091	T: +61 7 3902 4600	+61 2 4968 8448
NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794 & 2780	Site# 25079

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Penrose,	Mount Wellington,	Rolleston,	Gate Pa,
Auckland 1061	Auckland 1061	Christchurch 7675	Tauranga 3112
+64 9 526 4551	+64 9 525 0568	+64 3 343 5201	+64 9 525 0568
IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

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

Project Name: LEPPINGTON
Project ID: 67606

Order No.:
Report #: 1121054
Phone: 02 8245 0300
Fax:

Received: Jul 24, 2024 3:44 PM
Due: Jul 31, 2024
Priority: 5 Day
Contact Name: Stuart Lumsden

Eurofins Analytical Services Manager : Andrew Black

Sample Detail	Asbestos Absence /Presence
Sydney Laboratory - NATA # 1261 Site # 18217	X
Materials	
Test Counts	9

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. 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**). This estimate is not NATA-accredited.
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.
Sampling	Unless otherwise stated Eurofins are not responsible for sampling equipment or the sampling process.
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

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:

Bennel Jiri	Senior Analyst-Asbestos

Glenn Jackson
Managing Director

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.

Appendix D Proposed Site Plan

ISSUE	DATE	SUBJECT	AUTHORISED
01	29/11/2024	FINAL DRAFT ISSUE FOR REF	EF
02	04/12/2024	UPDATED DRAFT ISSUE FOR REF	EF
03	16/12/2024	ISSUED FOR INFORMATION	SS
04	17/12/2024	ISSUED FOR INFORMATION	SS
05	19/12/2024	ISSUED FOR INFORMATION	EF
06	20/12/2024	ISSUE FOR REF	EF
07	08/01/2024	ISSUE FOR REF	SS

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Daniel Beekwilder 6192
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THIS DRAWING IS INTENDED TO BE PRINTED IN COLOUR

DISCLAIMER
This drawing should be read in conjunction with all the standard notes & abbreviations in the drawing pack, relevant contracts, specifications and drawings. Dimensions are in millimetres. Levels are metres. Do not scale off drawings. Use figured dimensions only. Check dimensions on Site. Report discrepancies immediately.

PROJECT
NEW HIGH SCHOOL FOR LEPPINGTON AND DENHAM COURT
128-134 RICKARD RD, LEPPINGTON NSW 2179

0 5 10 15 25 1:500
SCALE: As indicated @ A1
DATE PRINTED: 9/01/2025 2:15:45 PM

DESCRIPTION
SITE PLAN

PROJECT No	DRAWING No	REVISION
24 408	LHS-DJRD-00-00-REF-A-0103	07

PURPOSE OF ISSUE	STATUS	DRAWN BY	SHEET SIZE	ORIGIN DATE
ISSUE FOR REF	S4	CT	A1	29/11/24

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Document Status

Rev No.	Author	Reviewer	Approved for Issue		
		Name	Name	Signature	Date
A	Jordan Gomez	Stuart Lumsden	Michael Samuel		15/08/2024
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1	Jordan Gomez	Stuart Lumsden	Michael Samuel		13/01/2025

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REPORT TO

DEPARTMENT OF EDCUATION

ON

HAZARDOUS BUILDING MATERIALS SURVEY

FOR

NEW HIGH SCHOOL IN LEPPINGTON AND DENHAM COURT

AT

134 RICKARD ROAD, LEPPINGTON, NSW

Date: 22 January 2025
Ref: E37066PLrpt-HAZRev2

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Report prepared by:

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Associate | Environmental Scientist

Report reviewed by:

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For and on behalf of
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PO BOX 976
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DOCUMENT REVISION RECORD

Report Reference	Report Status	Report Date
E37066PLrpt-HAZ	Final Report	26 November 2024
E37066PLrpt-HAZRev1	Revised Final Report	17 December 2024
E37066PLrpt-HAZRev2	Final Report – additional revisions	22 January 2025

Table of Contents

List of Tables

Attachments

Abbreviations

Asbestos Containing Material	**ACM**
Chain of Custody	**COC**
Department of Education	**DoE**
JK Environments	**JKE**
National Association of Testing Authorities	**NATA**
Personal Protective Equipment	**PPE**
Polychlorinated Biphenyls	**PCB**
Permanent Teaching Spaces	**PTS**
Practical Quantitation Limit	**PQL**
Review of Environmental Factors	**REF**
Synthetic Mineral Fibre	**SMF**
Support Teaching Spaces	**STP**

1 INTRODUCTION

This Hazardous Building Materials Survey report has been prepared to support a Review of Environmental Factors (REF) for the Department of Education (DoE) for the new high school for Leppington and Denham Court (the activity). The purpose of the REF is to assess the potential environmental impacts of the activity prescribed by State Environmental Planning Policy (Transport and Infrastructure) 2021 (T&I SEPP) as "development permitted without consent" on land carried out by or on behalf of a public authority under Part 5 of the Environmental Planning and Assessment Act 1979 (EP&A Act). The activity is to be undertaken pursuant to Chapter 3, Part 3.4, Section 3.37A of the T&I SEPP.

The proposed activity is for the construction of a new high school located at 128-134 Rickard Road, Leppington, NSW, 2179 (the site).

JKE note that this report is applicable to the property at 134 Rickard Road only. The adjacent property at 128 Rickard Road was surveyed by another consultant and is provided in a separate report.

The purpose of this report is to identify and document the type, location and condition of hazardous building materials within the existing buildings at the site.

1.1 Site Description

The site is known as 128-134 Rickard Road, Leppington, NSW, 2179 and is legally described as Lots A and B in Deposited Plan 411211. The site is located on the eastern side of Rickard Road and is approximately 4.1ha in area. The site is located immediately south of the existing Leppington Public School at 144 Rickard Road and is approximately 700m south of Leppington Train Station. Figure 1 below provides an aerial image of the site.

Figure 1 - Aerial image of site (source: NearMap)

The northern portion of the site is currently used for residential purposes. The southern portion of the site is used for agricultural purposes, with multiple greenhouses and an existing pond on the property.

1.2 Proposed Activity Description

The proposed activity is for a new high school for Leppington and Denham Court. The new high school will accommodate up to 1,000 students across 3 new buildings that will comprise 48 permanent teaching spaces (PTS), 3 support teaching spaces (STS), 9 specialist labs/workshops/kitchens and a hall. Buildings A, B and C will wrap the western and southern boundaries of the site, with the hall being located in south-east corner. The activity also includes the construction of a sports field in the centre of the site and 3 x multipurpose courts along the northern boundary. The proposed scope of works is illustrated in Figure 2 below.

Figure.2 - New Leppington High School for Leppington and Denham court (source: djrd architects)

2 JKE INTRODUCTION

Department of Education ('the client') commissioned JK Environments (JKE) to undertake a hazardous building materials survey for the proposed demolition works at 134 Rickard Road, Leppington, NSW (referred to herein as 'the site'). The site location is shown on Figure 1 and the survey was confined to the site boundaries as shown on Figure 2 attached in the appendices.

JKE note that this report is applicable to the property at 134 Rickard Road only. The adjacent property at 128 Rickard Road was surveyed by another consultant and is provided in a separate report.

This document was prepared specifically for the proposed site development works at the site and should not be considered a hazardous building materials management plan or removal control plan.

The document does not contain information regarding an assessment of risk, safe work procedures or control measures associated with hazardous building materials. In the event that hazardous building materials remain within the buildings/structures at the site a hazardous building materials management plan must be prepared.

2.1 Proposed Activity Details

The proposed activity requires the demolition of the existing residential building and associated sheds and outbuildings at the site.

2.2 Scope of Work

The scope of work included the following:

- A detailed inspection of the existing building and structures shown on Figure 2;
- Sampling of representative materials in accordance with the assessment criteria and inspection procedure outlined in Section 5;
- Documentation of inspection finds including sample location, material type, condition, friability, photographic evidence and site location;
- Laboratory analysis of selected representative materials; and
- Preparation of a report presenting the results of the hazardous building materials survey.

3 JKE SITE DESCRIPTION

Field work for this survey was undertaken on 30 October 2024. The site description at the time of the field work is outlined below. The site location is shown on Figure 1 and the site layout plan is shown on Figure 2. JKE note that the below site description was written at the time of the survey and we have been notified that all buildings and structures are still in situ at the time of writing this report.

JKE note that this report is applicable to the property at 134 Rickard Road only. The adjacent property at 128 Rickard Road was surveyed by another consultant and is provided in a separate report.

The site was located to the south-east of Rickard Road and to the south of Leppington Public School. The site generally consisted of the main residence, an outside brick shed and a metal shed as shown on the attached Figure 2.

Main Residence

The main residence was situated on the north-western extent of the property and was occupied at the time of inspection. The rectangular, one-storey, brick walled building with roof tiles was constructed around the late 1970s and generally consisted of gyprock, brick and fibre cement interiors.

Brick Shed

The brick shed was situated to the south of the main residence and appeared to previously be used as an outdoor pizza oven. The small brick walled building with metal shed was used as storage at the time of inspection. No suspected hazardous building materials were observed at the time of inspection.

Metal Shed

The metal shed was situated to the south-east of the main residence and appeared to be partially collapsed. No suspected hazardous building materials were observed at the time of inspection.

4 REGULATORY BACKGROUND INFORMATION

All work associated with the inspection and reporting of hazardous building materials is generally undertaken in accordance with the following legislation, guidelines and standards:

Table 4-1: Guidelines / Documents

GUIDELINES / REGULATIONS / DOCUMENTS
Asbestos
Code of Practice How to Manage and Control Asbestos in the Workplace, Safe Work NSW, December 2022
Code of Practice How to Safely Remove Asbestos, Safe Work NSW, December 2022
SMF
National Standard for the Safe Use of Synthetic Mineral Fibres [National Occupational Health and Safety Commission:1004 (1990)]
National Code of Practice for the Safe Use of Synthetic Mineral Fibres [National Occupational Health and Safety Commission:2006 (1990)]
Code of Practice for the Safe Use of Synthetic Mineral Fibres, WorkCover: 1993.
Lead
Guide to Lead Paint Management - Part 2: Residential and Commercial Buildings, Australian Standard AS4361.2, 1998
Guide to Hazardous Paint Management, Part 2: Lead Paint in Residential, Public and Commercial Buildings, Australian Standard AS4361.2, 2017
PCBs
Identification of PCB-Containing Capacitors, Australian and New Zealand Environment and Conservation Council (ANZECC), 1997
General
Work Health and Safety Act 2011 (NSW)
Work Health and Safety Regulation 2017 (NSW)
The Demolition of Structures, Australian Standard AS2601 (2001)

5 ASSESSMENT CRITERIA AND INSPECTION PROCEDURE

The survey included a visual inspection of the buildings/structures at the site as shown on Figure 2, and sampling and laboratory analysis as described in the following sections.

5.1 Asbestos Fibre Containing Materials

Representative samples of construction materials identified as potentially containing asbestos were obtained using hand tools by personnel wearing suitable personal protective equipment (PPE). The samples were placed in sealed plastic bags and labelled with a unique job number, sampling location and date. All samples were recorded on the chain of custody (COC) record presented in Appendix C.

Following the completion of the field inspection, the samples were forwarded to a National Association of Testing Authorities (NATA) registered laboratory, Envirolab Services Pty Ltd (NATA Accreditation No. 2901), for analysis. The asbestos samples were analysed using stereo and polarising light microscopy methods with dispersion staining techniques.

5.2 Lead Containing Materials

Representative samples of deteriorated paint films and accumulated dust that potentially contain elevated lead concentrations were obtained using hand tools by personnel wearing suitable PPE.

Only significantly deteriorated paint systems that are considered likely to impact on demolition/refurbishment practices or that are considered a health or environmental hazard were sampled and recorded.

The paint flakes obtained included all layers of paint on a particular surface and so are considered to be composites of the materials at each location. The paint flake samples were placed in sealed plastic bags and labelled with a unique job number, sampling location and date. All samples were recorded on the COC record presented in Appendix C.

In accordance with the Australian Standard AS4361.2, 2017 *"Guide to Hazardous Paint Management, Part 2: Lead Paint in Residential, Public and Commercial Buildings,* a lead in paint concentration greater than 0.1% w/w is considered to be lead based paint.

Settled dust sampling involved the collection of settled dust from a known surface area by wet wipe. The area should preferably be 0.09m^2 (which corresponds to an area 30 cm × 30cm) and in any event not less than 0.01m^2, depending on the amount of dust present. A non-alcoholic moistened wipe is folded to form a firm swab. The swab is placed flat onto the surface in one corner of the area to be sampled and rubbed across the entire area in an 'S' pattern. The wipe is re-folded so that the collected dust is on the inside and is again rubbed across the area at 90° to the first 'S'. The wipe is again folded with the dust inside and placed in the sterile sample container.

The lead concentration per m^2 is calculated using the equation (µg/swab ÷ 0.09) ÷ 1000.

Following the completion of the field inspection, the samples were forwarded to a NATA registered laboratory for analysis. Analysis for lead content is performed using a nitric and hydrochloric acid digest followed by ICP-AES (Inductively Coupled Plasma – Atomic Emission Spectroscopy) quantification methods.

The result, when received from the laboratory, is converted to milligrams, and then divided by the area sampled (in square metres) to give a lead loading expressed in mg/m^2.

5.2.1 Lead Materials Assessment Criteria

As stated above, a lead in paint concentration greater than 0.1% w/w is considered to be lead based paint.

In the absence of current published lead levels in dust, the acceptance level of 8 mg/m^2 for exterior surfaces as published in *Australian Standard AS4361.2, 1998 Guide to Lead Paint Management - Part 2: Residential and Commercial Buildings*, is considered the most appropriate guideline for comparison for lead in ceiling dust, and has been adopted for the assessment.

5.3 Polychlorinated Biphenyls (PCBs) Containing Electrical Equipment

The major use of PCBs in the electrical industry has been inside transformers and capacitors. Transformers may include relatively small transformers inside electrical mains/fuse cabinets. Capacitors containing PCBs were installed in numerous types of fluorescent light fittings during the 1950's, 60's and 70's.

Representative samples of each type of electrical equipment identified within the existing structure were visually examined to assess whether the equipment is insulated with PCBs. Details on the make, type, capacitance, dimensions, date and power were recorded and checked with the ANZECC database of known PCB containing electrical equipment and the results of the review were noted.

5.4 Synthetic Mineral Fibre Containing Materials

Construction materials identified as potentially containing synthetic mineral fibre (SMF) were examined by site personnel and their location was noted. In the event that the materials were suspected to contain asbestos fibres, representative samples were obtained using hand tools by personnel wearing suitable PPE. The material samples were placed in sealed plastic bags and labelled with a unique job number, sampling location and date. All samples were recorded on the COC record presented in Appendix C.

Following the completion of the field inspection, the samples were forwarded to a NATA registered laboratory for asbestos fibre analysis. The samples were analysed using stereo and polarising light microscopy methods with dispersion staining techniques.

6 RESULTS OF THE INSPECTION

The results of the inspection and subsequent laboratory analysis are summarised in the following sections. For specific locations and details of materials identified during the inspection, please refer to the Hazardous Building Materials Register in Appendix B and the laboratory analysis report in Appendix C

6.1 Asbestos

Asbestos containing materials were identified within the interior and the exterior of the main residence building at the site at the time of the inspection. Only bonded (i.e. non-friable) asbestos containing materials were encountered at the site.

Refer to Section 7.1 of this report for mitigation measures on asbestos and the Hazardous Building Materials Register for details of material sampled and inspected for asbestos.

6.2 Lead in Paint

Not identified within the scope and limitations of the report.

6.3 Lead in Accumulated Dust

Not identified within the scope and limitations of the report.

6.4 Polychlorinated Biphenyls (PCBs)

Not identified within the scope and limitations of the report.

6.5 Synthetic Mineral Fibre (SMF)

Materials containing SMF were identified in the form of foil backed insulation and internal insulation at the site. All materials were in good condition at the time of the inspection. Refer to Section 7.5 of this report for mitigation measures on SMF containing materials.

6.6 Site Access Limitations

Access throughout the site was generally unrestricted within the scope and limitations of the report. However, JKE note that the residence was used for extensive storage of various items that partially obscured visual inspection of some areas including floors and walls through the building.

7 COMMENTS AND MITIGATION MEASURES

7.1 Asbestos Materials

Asbestos fibre containing construction materials have been identified within the interior and the exterior of the main residence building at the site. All asbestos materials were considered to be non-friable. Any materials presumed to contain asbestos must be treated as such.

Prior to demolition or refurbishment work this document must be provided as a register to the demolition/building contractor.

All works associated with the disturbance and removal of asbestos containing materials must be undertaken by a Licenced *Class B* Asbestos Removalist.

The asbestos removalist must prepare an Asbestos Removal Control Plan for the proposed works. The control plan should include an allowance for asbestos air fibre monitoring during the removal and thorough clean up works upon completion of the removal works due to the site's proximity to Leppington Public School.

An asbestos management plan must be prepared for the proposed works in areas containing asbestos. A clearance inspection must be undertaken on completion of works and prior to any other construction activities being undertaken.

If previously unidentified materials (suspected of containing asbestos) are identified during the demolition phase, works should cease and the material should be inspected and classified by an experienced consultant. The area should be isolated and barricaded until the material has been classified as non-hazardous or removed and the area cleared.

All asbestos containing materials (and materials presumed to contain asbestos) must be removed in accordance with the regulations and codes outlined in Section 3 and by an experienced asbestos removal contractor.

7.2 Lead in Paint

Not identified within the scope and limitations of the report.

7.3 Lead in Accumulated Dust

Not identified within the scope and limitations of the report.

7.4 PCB Containing Electrical Equipment

Representative samples of each major type of fluorescent light fitting were visually inspected to determine which lights are fitted with PCB containing ballast capacitors.

No PCB containing capacitors within electrical equipment were identified during the site inspection.

7.5 SMF Materials

Sources of SMF containing materials are present as foil backed insulation and internal insulation in the main residence building. These SMF materials were in a stable condition at the time of the site inspection.

All SMF containing materials must be removed in accordance with the national Standard and code outlined in Section 3 and by an experienced hazardous materials removal contractor.

7.6 Mitigation Measures – REF Requirement

It is a REF requirement to include a table to support the hazardous building material-related risk mitigation measures to be included in the REF. Mitigation measures are outlined in the table below:

Table 7-1: Mitigation Measures Relating to Hazmat Survey Findings

Mitigation Number / Name	Aspect / Section	Mitigation Measure	Reason for Mitigation Measure
Hazardous Building Materials Survey and Register.	For demolition of the existing buildings and structures.	Safe and effective removal of hazardous materials. References is to be made to the hazardous building materials register (see Appendix B). Any unexpected conditions/ previously unidentified materials discovered during demolition must be managed appropriately.	The survey identified hazardous building materials that must be appropriately managed and removed during demolition.
Asbestos Materials	Asbestos fibre containing construction materials have been identified within the interior and the exterior of the main residence building at the site. All asbestos materials were considered to be non-friable. Any materials presumed to contain asbestos must be treated as such.	• Prior to demolition or refurbishment work this document must be provided as a register to the demolition/building contractor. • All works associated with the disturbance and removal of asbestos containing materials must be undertaken by a Licenced *Class B* Asbestos Removalist. • The asbestos removalist must prepare an Asbestos Removal Control Plan for the proposed works. The control plan should include an allowance for asbestos air fibre monitoring during the removal and thorough clean up works upon completion of the removal works due to the site's proximity to Leppington Public School. • An asbestos management plan must be prepared for the proposed works in areas containing asbestos. A clearance inspection must be undertaken on completion of works and prior to any other construction activities being undertaken. • If previously unidentified materials (suspected of containing asbestos) are identified during the demolition phase, works should cease and the material	

Mitigation Number / Name	Aspect / Section	Mitigation Measure	Reason for Mitigation Measure
		should be inspected and classified by an experienced consultant. The area should be isolated and barricaded until the material has been classified as non-hazardous or removed and the area cleared. • All asbestos containing materials (and materials presumed to contain asbestos) must be removed in accordance with the regulations and codes outlined in Section 3 and by an experienced asbestos removal contractor.	
SMF Materials	Sources of SMF containing materials are present as foil backed insulation and internal insulation in the main residence building. These SMF materials were in a stable condition at the time of the site inspection.	All SMF containing materials must be removed in accordance with the national Standard and code outlined in Section 3 and by an experienced hazardous materials removal contractor.	

7.7 Evaluation of Environmental Impacts – REF Requirement

It is considered that potential risks associated with the materials identified in the hazardous building materials survey report can be adequately mitigated during demolition through the above mitigation measures.

8 LIMITATIONS

The conclusions developed in this report are based on site conditions which existed at the time of the site survey. They are based on investigation of conditions at specific locations, chosen to be as representative as possible under the given circumstances, and visual observations of the site and vicinity, together with the interpretation of available documents reviewed as described in this report.

Surveys are conducted in a conscientious and professional manner. The nature of the task however, and the likely disproportion between any damage or loss which might arise from the work or reports prepared as a result, and the cost of our services, is such that JKE cannot guarantee that all hazardous building materials have been identified and/or addressed.

Due to the possibility of renovations and additions to the building structures over time, hazardous building materials may have been hidden behind new walls and ceilings. Such areas were inaccessible during the inspection. If any suspect materials are found during further renovation of the buildings, the material should be sent for identification and expert advice sought.

Therefore, while we carry out the work to the best of our ability, we totally exclude any loss or damages which may arise from services we have provided to our client and/or any other associated parties.

Unless specifically noted, the survey did not cover:

- Hidden and/or inaccessible locations such as in or under concrete slabs, wall cavities, hidden storage areas and the like;
- Lift wells and inaccessible/unidentified shafts, cavities and the like;
- Air conditioning, heating, mechanical, electrical or other equipment;
- General exterior ground surfaces and subsurface areas e.g. asbestos in fill/soil;
- Materials dumped, hidden, or otherwise placed in locations which one could not reasonably anticipate;
- Materials other than normal building fabric, materials in laboratories or special purpose facilities and building materials that cannot be reasonably and safely assessed without assistance;
- Areas where access was limited during the time of the site inspection as outlined in Section 6; and
- Materials other than asbestos, lead, PCBs and SMF are generally outside the scope as identification can require specialised analysis/inspection techniques.

Where other potentially hazardous materials are identified these are normally reported on to the best of the consultant's ability. Analysis is not normally included and there is no guarantee that all such materials have been identified and/or addressed.

All work conducted and reports produced by JKE are prepared for a particular Client's objective and are based on a specific scope, conditions and limitations, as agreed upon between JKE and the Client. Information and/or report(s) prepared by JKE may therefore not be suitable for any use other than the intended objective. No parties other than the Client should use any information and/or report(s) without first conferring with JKE.

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If you have any questions concerning the contents of this report please do not hesitate to contact us.

Important Information About This Report

These notes have been prepared by JKE to assist with the assessment and interpretation of this report.

The Report is based on a Unique Set of Project Specific Factors
This report has been prepared in response to specific project requirements as stated in the JKE proposal document which may have been limited by instructions from the client. This report should be reviewed, and if necessary, revised if any of the following occur:

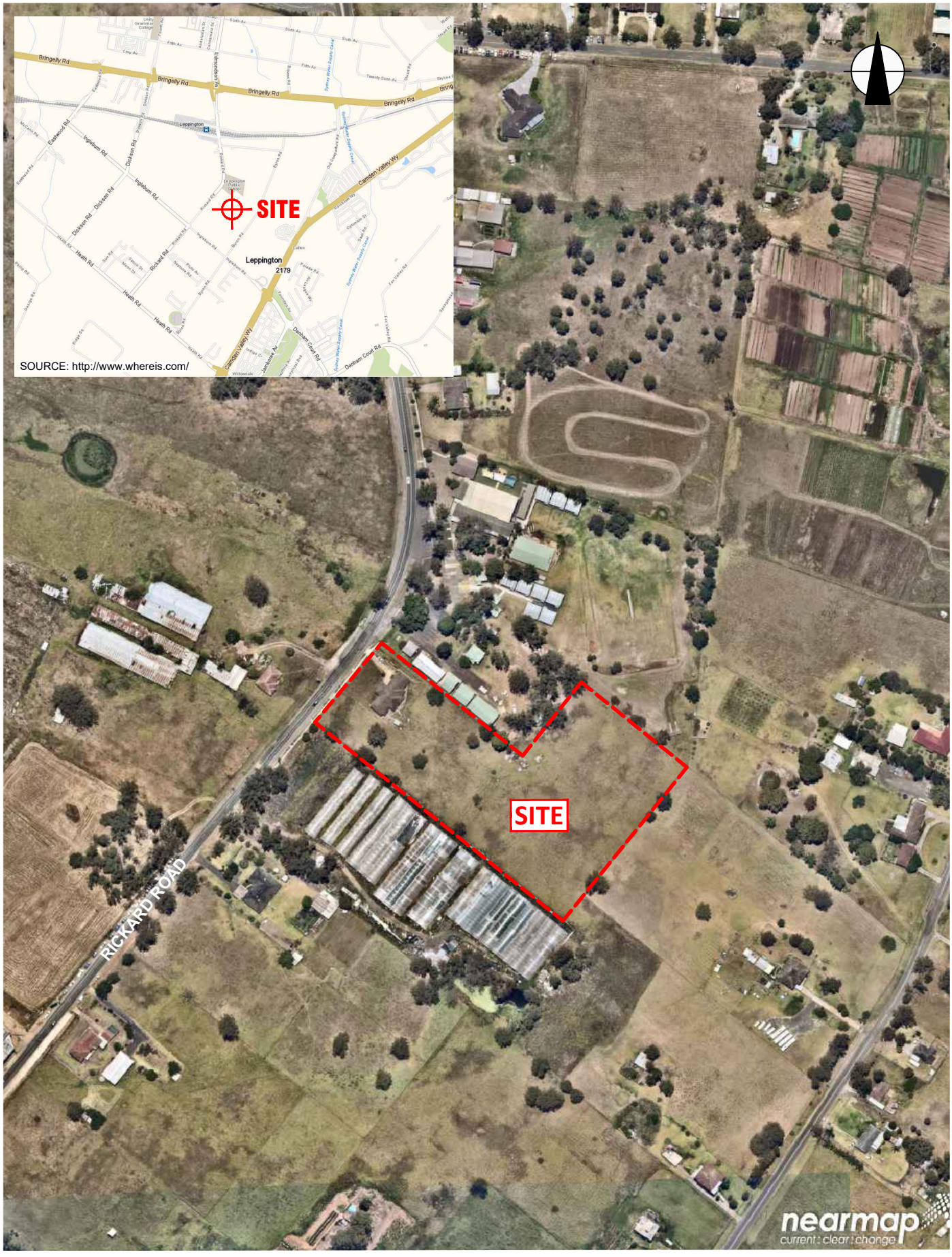
- The defined subject site is increased or sub-divided; or
- Ownership of the site changes.

JKE will not accept any responsibility whatsoever for situations where one or more of the above factors have changed since completion of the assessment. If the subject site is sold, ownership of the assessment report should be transferred by JKE to the new site owners who will be informed of the conditions and limitations under which the assessment was undertaken. No person should apply an assessment for any purpose other than that originally intended without first conferring with the consultant.

Misinterpretation of Site Assessments by Design Professionals
Costly problems can occur when other design professionals develop plans based on misinterpretation of an assessment report. To minimise problems associated with misinterpretations, the environmental consultant / asbestos assessor should be retained to work with appropriate professionals to explain relevant findings and to review the adequacy of plans and specifications relevant to hazardous building materials.

Read Responsibility Clauses Closely
Because an environmental site assessment is based extensively on judgement and opinion, it is necessarily less exact than other disciplines. This situation has resulted in wholly unwarranted claims being lodged against consultants. To help prevent this problem, model clauses have been developed for use in written transmittals. These are definitive clauses designed to indicate consultant responsibility. Their use helps all parties involved recognise individual responsibilities and formulate appropriate action. Some of these definitive clauses are likely to appear in the environmental site assessment, and you are encouraged to read them closely. Your consultant will be pleased to give full and frank answers to any questions.

Appendix A: Report Figures



AERIAL IMAGE SOURCE: MAPS.AU.NEARMAP.COM

This plan should be read in conjunction with the Environmental report.

Title: **SITE LOCATION PLAN**

Location: 134 RICKARD ROAD, LEPPINGTON, NSW

Project No: E37066PL-HAZ

Figure No: 1

JKEnvironments

PLOT DATE: 13/11/2024 9:41:52 AM DWG FILE: K:\SC EIS JOBS\37000\SIE37066PL LEPPINGTON\CAD\E37066PL-HAZ.DWG

LEGEND

APPROXIMATE SITE BOUNDARY

BUILDINGS INCLUDED IN THE SURVEY

AERIAL IMAGE SOURCE: MAPS.AU.NEARMAP.COM

0 10 20 30 40 50

SCALE 1:1000 @A3 METRES

This plan should be read in conjunction with the Environmental report.

Title: **SITE LAYOUT PLAN**

Location: 134 RICKARD ROAD, LEPPINGTON, NSW

Project No: E37066PL-HAZ

Figure No: 2

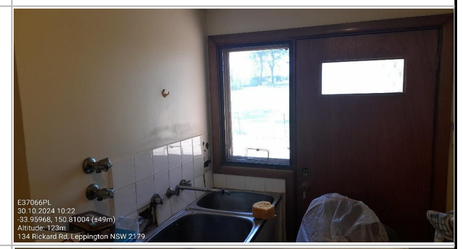
JKEnvironments

PLOT DATE: 13/11/2024 9:42:02 AM DWG FILE: K:\5C EIS JOBS\37000'S\E37066PL LEPPINGTON\CAD\E37066PL-HAZ.DWG

Appendix B: Hazardous Building Materials Register

134 Rickard Road, Leppington, NSW
Hazardous Building Materials Register - October 2024

Location	Material Type	Sample ID	Laboratory result	Condition	Friable / Non-Friable	Approximate extent	Recommendation	Is the area accessible	Photograph
ASBESTOS MATERIALS									
Building exterior, Veranda and Carport, Ceiling lining	Fibre Cement Sheeting	ASB1	Chrysotile asbestos detected: Organic fibres detected	Generally Intact	Non-Friable	50m²	Remove prior to refurbishment / demolition by appropriately licensed asbestos removal contractor in accordance with the relevant standard/code of practice/guidelines.	No (Ladder Only)	
Building exterior, Northern extent, Electrical distribution box	Electrical Backing Board	N/A - Electrical Hazard	N/A - Assumed to contain Asbestos (Item is labelled with asbestos containing sticker)	Generally Intact	Non-Friable	1m²	Confirm presence of asbestos through laboratory testing OR assume to contain asbestos and remove prior to refurbishment / demolition by appropriately licensed asbestos removal contractor in accordance with the relevant standard/code of practice/guidelines.	Yes	
Building exterior, Eaves	Fibre Cement Sheeting	ASB2	Chrysotile asbestos detected: Amosite asbestos detected	Generally Intact	Non-Friable	60m²	Remove prior to refurbishment / demolition by appropriately licensed asbestos removal contractor in accordance with the relevant standard/code of practice/guidelines.	No (Ladder Only)	
Building exterior, Eastern extent, Under eaves, Fibre cement debris	Fibre Cement Sheeting Debris	ASB3	Chrysotile asbestos detected: Amosite asbestos detected	Generally Intact	Non-Friable	<1m²	Remove prior to refurbishment / demolition by appropriately licensed asbestos removal contractor in accordance with the relevant standard/code of practice/guidelines.	Yes	
Building exterior, Eastern extension extent, Verge lining between Roof tiles and Fascia	Fibre Cement Sheeting	ASB4	No asbestos detected: Organic fibres detected	-	-	-	-	-	-
Building exterior, Laundry, Ceiling lining	Fibre Cement Sheeting	Same as ASB1	Chrysotile asbestos detected: Organic fibres detected	Generally Intact	Non-Friable	5m²	Remove prior to refurbishment / demolition by appropriately licensed asbestos removal contractor in accordance with the relevant standard/code of practice/guidelines.	No (Ladder Only)	

Location	Material Type	Sample ID	Laboratory result	Condition	Friable / Non-Friable	Approximate extent	Recommendation	Is the area accessible	Photograph
ASBESTOS MATERIALS (Cont.)									
Building exterior, Outside toilet and Washroom, Ceiling lining	Fibre Cement Sheeting	Same as ASB1	Chrysotile asbestos detected: Organic fibres detected	Generally Intact	Non-Friable	5m²	Remove prior to refurbishment / demolition by appropriately licensed asbestos removal contractor in accordance with the relevant standard/code of practice/guidelines.	No (Ladder Only)	
Building interior, Southern toilet, All internal walls	Fibre Cement Sheeting	ASB5	No asbestos detected: Organic fibres detected	-	-	-	-	-	
Building interior, Southern bathroom, All internal walls and Bath	Fibre Cement Sheeting	Same as ASB5	Assumed to not contain Asbestos	-	-	-	-	-	-
Building interior, South-eastern Laundry, Eastern, western and southern internal walls	Fibre Cement Sheeting	Same as ASB5	No asbestos detected: Organic fibres detected	-	-	-	-	-	-
Building interior, Hallway adjacent southern bathroom and toilet, Section of southern internal wall	Fibre Cement Sheeting	Same as ASB5	No asbestos detected: Organic fibres detected	-	-	-	-	-	-
Building interior, North-eastern Laundry room, All internal walls	Fibre Cement Sheeting	ASB6	Chrysotile asbestos detected: Organic fibres detected	Generally Intact	Non-Friable	5m²	Remove prior to refurbishment / demolition by appropriately licensed asbestos removal contractor in accordance with the relevant standard/code of practice/guidelines.	Yes	
Building interior, North-eastern bathroom/ shower, All internal walls	Fibre Cement Sheeting	ASB7	Chrysotile asbestos detected: Organic fibres detected	Generally Intact	Non-Friable	20m²	Remove prior to refurbishment / demolition by appropriately licensed asbestos removal contractor in accordance with the relevant standard/code of practice/guidelines.	Yes	
Building interior, Main bedroom ensuite, All internal walls	Fibre Cement Sheeting	Same as ASB7	Chrysotile asbestos detected: Organic fibres detected	Generally Intact	Non-Friable	10m²	Remove prior to refurbishment / demolition by appropriately licensed asbestos removal contractor in accordance with the relevant standard/code of practice/guidelines.	Yes	

Location	Material Type	Sample ID	Laboratory result	Condition	Friable / Non-Friable	Approximate extent	Recommendation	Is the area accessible	Photograph
ASBESTOS MATERIALS (Cont.)									
Building interior, Subfloor, Packers between foundation	Fibre Cement Sheeting	ASB8	Chrysotile asbestos detected: Amosite asbestos detected: Organic fibres detected	Generally Intact	Non-Friable	<1m²	Remove prior to refurbishment / demolition by appropriately licensed asbestos removal contractor in accordance with the relevant standard/code of practice/guidelines.	Yes	
SYNTHETIC MINERAL FIBRE (SMF)									
Building exterior, Hot water units	Internal Insulation	N/A - Electrical Hazard	NA - Assumed to contain SMF	Generally Intact	-	2 Units	Remove prior to refurbishment / demolition by appropriately licensed hazardous materials contractor in accordance with the relevant standard/code of practice/guidelines.	No	
Building exterior, Ceiling space, Foil backed insulation	Internal Insulation	N/A - Height Restriction	NA - Assumed to contain SMF	Generally Intact	-	350m²	Remove prior to refurbishment / demolition by appropriately licensed hazardous materials contractor in accordance with the relevant standard/code of practice/guidelines.	No (Ladder Only)	
LEAD IN PAINT									
Building exterior, Eaves, columns, porch ceiling lining & downpipes	Peeling White Paint	LP1	0.03% (less than the criteria of 0.1%)	-	-	-	-	-	-
Building exterior, Door to Garage, Door to subfloor & Electrical distribution Box	Peeling Maroon Paint	LP3	0.076% (less than the criteria of 0.1%)	-	-	-	-	-	-
Building interior, All internal walls	Peeling Yellow Paint	LP2	<0.005% (less than the criteria of 0.1%)	-	-	-	-	-	-
LEAD IN DUST									
Building interior, Hallway adjacent front door, Floor	Settled Dust	LD1	<0.1mg/m² (lower than the adopted criteria of 8mg/m²)	-	-	-	-	-	-
POLYCHLORINATED BIPHENYLS									
Not identified within the scope of the survey									

Appendix C: Laboratory Report & COC Documents

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

CERTIFICATE OF ANALYSIS 365178

Client Details

Client	JK Environments
Attention	Harry Leonard
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	**E37066PL, Leppington NSW**
Number of Samples	8 Material, 3 Paint, 1 Swab
Date samples received	30/10/2024
Date completed instructions received	30/10/2024

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Report Details

Date results requested by	07/11/2024
Date of Issue	06/11/2024

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

Asbestos Approved By
Analysed by Asbestos Approved Analyst: Lucy Zhu
Authorised by Asbestos Approved Signatory: Lucy Zhu

Results Approved By
Giovanni Agosti, Group Technical Manager
Lucy Zhu, Asbestos Supervisor

Authorised By
Nancy Zhang, Laboratory Manager

Asbestos ID - materials						
Our Reference		365178-1	365178-2	365178-3	365178-4	365178-5
Your Reference	UNITS	ASB1	ASB2	ASB3	ASB4	ASB5
Date Sampled		30/10/2024	30/10/2024	30/10/2024	30/10/2024	30/10/2024
Type of sample		Material	Material	Material	Material	Material
Date analysed	-	06/11/2024	06/11/2024	06/11/2024	06/11/2024	06/11/2024
Mass / Dimension of Sample	-	0.83g	2.40g	7.87g	8.26g	1.15g
Sample Description	-	Beige fibre cement material	Grey fibre cement material	Grey fibre cement material	Grey fibre cement material	Grey fibre cement material
Asbestos ID in materials	-	Chrysotile asbestos detected Organic fibres detected	Chrysotile asbestos detected Amosite asbestos detected	Chrysotile asbestos detected Amosite asbestos detected	No asbestos detected Organic fibres detected	No asbestos detected Organic fibres detected
Trace Analysis	-	[NT]	[NT]	[NT]	No asbestos detected	No asbestos detected

Asbestos ID - materials				
Our Reference		365178-6	365178-7	365178-8
Your Reference	UNITS	ASB6	ASB7	ASB8
Date Sampled		30/10/2024	30/10/2024	30/10/2024
Type of sample		Material	Material	Material
Date analysed	-	06/11/2024	06/11/2024	06/11/2024
Mass / Dimension of Sample	-	0.34g	1.41g	5713g
Sample Description	-	Grey fibre cement material & paint	Grey fibre cement material & paint	Grey fibre cement material
Asbestos ID in materials	-	Chrysotile asbestos detected Organic fibres detected	Chrysotile asbestos detected Organic fibres detected	Chrysotile asbestos detected Amosite asbestos detected Organic fibres detected
Trace Analysis	-	[NT]	[NT]	[NT]

Lead in Paint				
Our Reference	UNITS	365178-9	365178-10	365178-11
Your Reference		LP1	LP2	LP3
Date Sampled		30/10/2024	30/10/2024	30/10/2024
Type of sample		Paint	Paint	Paint
Date prepared	-	01/11/2024	01/11/2024	01/11/2024
Date analysed	-	01/11/2024	01/11/2024	01/11/2024
Lead in paint	%w/w	0.03	<0.005	0.076

Lead in swab		
Our Reference		365178-12
Your Reference	UNITS	LD1
Date Sampled		30/10/2024
Type of sample		Swab
Date prepared	-	01/11/2024
Date analysed	-	04/11/2024
Lead in Swabs	µg/swab	<1

Method ID	Methodology Summary
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.
Metals-020/021/022	Digestion of Paint chips/scrapings/liquids for Metals determination by ICP-AES/MS and or CV/AAS.
Metals-020/021/022	Acid digestion of Dust wipes/swabs and /or miscellaneous samples for metals determination by ICP-AES/MS and/or CV-AAS

QUALITY CONTROL: Lead in Paint						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	[NT]
Date prepared	-			01/11/2024	9	01/11/2024	01/11/2024		01/11/2024	[NT]
Date analysed	-			01/11/2024	9	01/11/2024	01/11/2024		01/11/2024	[NT]
Lead in paint	%w/w	0.005	Metals-020/021/022	<0.005	9	0.03	0.02	40	108	[NT]

QUALITY CONTROL: Lead in swab						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			01/11/2024	[NT]	[NT]	[NT]	[NT]	01/11/2024	[NT]
Date analysed	-			04/11/2024	[NT]	[NT]	[NT]	[NT]	04/11/2024	[NT]
Lead in Swabs	µg/swab	1	Metals-020/021/022	<1	[NT]	[NT]	[NT]	[NT]	101	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

The recommended maximums for analytes in urine are taken from “2018 TLVs and BEIs”, as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.

Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Where matrix spike recoveries fall below the lower limit of the acceptance criteria (e.g. for non-labile or standard Organics <60%), positive result(s) in the parent sample will subsequently have a higher than typical estimated uncertainty (MU estimates supplied on request) and in these circumstances the sample result is likely biased significantly low.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

SAMPLE RECEIPT ADVICE

Client Details

Client	JK Environments
Attention	Harry Leonard

Sample Login Details

Your reference	E37066PL, Leppington NSW
Envirolab Reference	365178
Date Sample Received	30/10/2024
Date Instructions Received	30/10/2024
Date Results Expected to be Reported	07/11/2024

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	8 Material, 3 Paint, 1 Swab
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	20
Cooling Method	None
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Aileen Hie	Jacinta Hurst
Phone: 02 9910 6200	**Phone: 02 9910 6200**
Fax: 02 9910 6201	**Fax: 02 9910 6201**
Email: ahie@envirolab.com.au	**Email: jhurst@envirolab.com.au**

Analysis Underway, details on the following page:

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
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Sample ID	Asbestos ID - materials	Lead in Paint	Lead in swab
ASB1	✓		
ASB2	✓		
ASB3	✓		
ASB4	✓		
ASB5	✓		
ASB6	✓		
ASB7	✓		
ASB8	✓		
LP1		✓	
LP2		✓	
LP3		✓	
LD1			✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.
Requests for longer term sample storage must be received in writing.
Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.
TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

SAMPLE AND CHAIN OF CUSTODY FORM

TO:		FROM:
ENVIROLAB SERVICES PTY LTD 12 ASHLEY STREET CHATSWOOD NSW 2067 P: (02) 99106200 F: (02) 99106201 Attention: Aileen	JKE Job Number: E37066PL Date Results Required: STANDARD Page: 1 of 1	JKEnvironments REAR OF 115 WICKS ROAD MACQUARIE PARK, NSW 2113 P: 02-9888 5000 F: 02-9888 5001 Attention: Harry Leonard

Location:	Leppington, NSW				Sample Preserved in Esky on Ice								
Sampler:	LR				Tests Required								
Date Sampled	Lab Ref:	Sample Number	Sample Container	Sample Description	Asbestos	Lead (mg/kg)	Lead (µg/swab)						
30.10.2024	1	ASB1	P	Material	x								
30.10.2024	2	ASB2	P	Material	x								
30.10.2024	3	ASB3	P	Material	x								
30.10.2024	4	ASB4	P	Material	x								
30.10.2024	5	ASB5	P	Material	x								
30.10.2024	6	ASB6	P	Material	x								
30.10.2024	7	ASB7	P	Material	x								
30.10.2024	8	ASB8	P	Material	x								
30.10.2024	9	LP1	P	Paint		x							
30.10.2024	10	LP2	P	Paint		x							
30.10.2024	11	LP3	P	Paint		x							
30.10.2024	12	LD1	P	Dust swab			x						

ENVIROLAB GROUP

Envirolab Services
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200

Job No: 365179
Date Received: 30/10/24
Time Received: 1720
Received By:
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: ~~Intact/Broken/None~~

Remarks (comments/detection limits required):	Sample Containers:
PLEASE REPORT LEAD IN PAINT AS mg/kg	G - 250mg Glass Jar A - Ziplock Asbestos Bag P - Plastic Bag

Relinquished By: LR	Date: 30.10.2024	Time:	Received By: Dilhyun Lee	Date: 30/10/24 1720