



Northern Rivers Flood Recovery – Richmond River High Campus Redevelopment



Hazardous Building Materials Assessment

NSW Department of Education

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The Power of Commitment

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1. Introduction

This Hazardous Building Materials (HBM) Assessment has been prepared to support a Review of Environmental Factors (REF) for the rebuild of Richmond River High Campus (the activity) (RRHC). The REF has been prepared to support an approval for the RRHC development under Section 68 of the NSW Reconstruction Authority Act 2022 (RA Act).

The Department of Education (the Department) is the landowner, and proponent pursuant to Section 5.1 of the *Environmental Planning and Assessment Act 1979* (the Act). The activity will be determined by the Reconstruction Authority (RA) under the Ministerial powers in Section 68 of the NSW Reconstruction Authority Act 2022 (RA Act).

The activity will be carried out at Dunoon Road, North Lismore, also known as 163 and 170 Alexandra Parade, North Lismore (the site).

The purpose of this report is to assess and document the risks associated with HBM identified within the existing buildings at the site for the purpose of informing the Department of the presence of HBM prior to rebuild of the Richmond River High Campus (RRHC).

GHD Pty Ltd was engaged by the Department to undertake a hazardous building materials (HBM) assessment of the buildings and structures at the site. It is understood that the existing buildings and structures on the properties will be demolished to enable rebuilding of the RRHC. The existing buildings and structures are currently occupied for residential purposes.

The purpose of the assessment was to assess and document the risks associated with HBM identified within the nominated buildings for the purpose of informing the Department of the presence of HBM prior to proposed demolition.

For the purpose of the assessment, HBM subject to assessment have been limited to the following:

- Asbestos containing material (ACM)
- Asbestos containing dust (ACD)
- Lead based paint
- Lead in dust
- Synthetic mineral fibre (SMF)
- Polychlorinated biphenyls (PCBs)

The following site buildings and facilities were assessed for HBM:

- Farmhouse 1
 - Residential building
 - Car Port
 - Shed (south)
 - Shed (west)
- Farmhouse 2
 - Residential building
 - Dairy building
 - Shed

The HBM assessment was completed by a GHD Licenced Asbestos Assessor (LAA) on 27 August 2024.

1.1 Site description

The site is located at Dunoon Road, North Lismore, also known as 163 and 170 Alexandra Parade, North Lismore. The site comprises of three separate lots, located to the north of Alexandra Parade, with Dunoon Road running parallel to the eastern boundary of the site.

The site is legally described as:

- Lot 1 DP 539012
- Lot 2 DP 539012
- Lot 1 DP 376007

The site area is approximately 33.53 hectares. The proposed activity will be undertaken mainly within the south eastern portion of the site. The site is outlined in Figure 1.1.



Figure 1.1 Aerial image of site (Source: Nearmap)

The general site layout and the location of the buildings and facilities assessed within this HBM assessment is shown in Figure 1.2 and Figure 1.3 below.



Figure 1.2 Site layout and building locations – Farmhouse 1



Figure 1.3 Site layout and building locations – Farmhouse 2

1.2 Proposed activity description

The proposed development comprises the relocation and rebuild of the Richmond River High Campus from its existing temporary location alongside The Rivers Secondary College Lismore High Campus at East Lismore to the proposed site at 163 and 170 Alexandra Parade, North Lismore.

The school will be delivered in one stage. A detailed description of the proposal is as follows:

1. Demolition of existing features including existing buildings, cattle drinking well, cattle sheds, and wire fencing, and removal of trees to accommodate school development.
2. Construction of new 3 storey buildings on the southeastern portion of the site for the proposed public secondary school including:
 - a. General and Specialist Learning Spaces and Workshops
 - b. Administration and Staff facilities.
 - c. Library, Hall and Movement Studio.
 - d. Construction, Hospitality and Agricultural Learning Facilities.
 - e. Amenity, Plant, Circulation and Storage areas.
 - f. Outdoor Learning Spaces and play spaces.
3. Landscaping including tree planting.
4. Public domain works comprising:
 - a. Access road off Dunoon Road, comprising a separate shared bicycle/pedestrian pathway, and internal access roundabout.
 - b. Kiss and ride drop-off and pick up zones.
 - c. Bus transport arrangements with a separate bus zone.
5. Outdoor spaces including assembly zones, agricultural spaces, sports fields, games courts, dancing circles, yarning and dancing circles, seating and shade structures.

Figure 1.4 below shows the scope of works.



The objective of the HBM assessment was to locate, assess and document a risk assessment, as far as reasonably practicable, for all identified and suspected HBM within visible and accessible areas of the nominated buildings on the Site.

The scope of the HBM assessment included the following:

- Desktop review of existing Department information (including registers and/or management plans).
- Identify the presence of suspect HBM within areas that may be disturbed during demolition.
- Collection of samples of suspect ACM, lead based paint systems and accumulated dust for analysis by a National Association of Testing Authorities (NATA) accredited laboratory.
- Assess the risks associated with each identified HBM.

- Assess risk management strategies associated with the demolition works.
- Prepare an assessment report, including a Hazmat Register for the RRHC in alignment with the requirements of the *Work Health and Safety Act 2011* (NSW) and associated legislation including *Work Health and Safety Regulations 2017* (NSW).

1.5 Legislative requirements

The HBM assessment and preparation of this report have been undertaken in accordance with the requirements of:

- *Work Health and Safety Act 2011* (NSW).
- *Work Health and Safety Regulations 2017* (NSW).
- *How to Manage and Control Asbestos in the Workplace*, 2022. SafeWork NSW.
- *How to Safely Remove Asbestos*, 2022. SafeWork NSW.

Further hazardous material guidance includes:

- National Occupational Health and Safety Commission (1990) *Synthetic Mineral Fibres*; National Standard for Synthetic Mineral Fibres; and the National Code of Practice for the Safe Use of Synthetic Mineral Fibres.
- AS4361.2 (2017) *Guide to Lead Paint Management. Part 2: Residential and Commercial Buildings*.
- ANZECC (1997) *Identification of PCB-containing Capacitors: An Information Booklet for Electricians and Electrical Contractors*.
- National Environment Protection Measure (Assessment of Site Contamination) 1999, as amended May 2013 (NEPC, 2013).
- Safework Australia Workplace Exposure Standards for Airborne Contaminants (2022).

1.6 Limitations

This report has been prepared by GHD for NSW Department of Education and may only be used and relied on by NSW Department of Education for the purpose agreed between GHD and NSW Department of Education as set out in Section 1 of this report.

This report must not be copied to, altered, amended or abbreviated, issued in part or issued incomplete without the prior written consent of GHD. This report may only be used for the purpose of managing the hazardous materials identified within the nominated property assessed and must not be used for any other purpose.

GHD otherwise disclaims responsibility to any person other than NSW Department of Education arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared. The recorded condition of hazardous materials may change over time. This may be due, but not limited to, deterioration, damage or other disturbance. As such, the report records conditions at the time of inspection only.

The data and advice provided herein relate only to the project and structures described in the report and must be reviewed by a competent professional before being used for any other purpose. GHD accepts no responsibility for other use of the data. Where a third party conducted reinspection work, reports or verbal information that has been relied upon, the data are included and used in the form provided by others. The responsibility for the accuracy of such data remains with the original entity and not with GHD.

The advice tendered in this report is based on information obtained from the inspection and sampling locations and is not warranted in respect to the conditions that may be encountered across the building structure or site at other than these locations, including those actually encountered during any future maintenance, refurbishment or

demolition. Stated quantities of observed materials or items should not be inferred as being a definitive quantity reinspection of such materials or items.

The recorded condition of hazardous building materials may change over time. This may be due, but not limited to, deterioration, damage or other disturbance. As such, the report records conditions at the time of assessment only.

As the assessment is a visual inspection and a sampling process, only those hazardous materials that are physically accessible and visible can be located and identified. The possibility that unassessed hazardous materials remain in inaccessible or concealed areas cannot be ruled out. Such areas include but are not limited to, inside set ceilings or wall cavities, surface areas with high vegetation density, service shafts and ducts, height restricted areas, areas accessible only by dismantling equipment, voids or internal areas of plant or totally inaccessible areas concealed within the building structure and only accessible during demolition.

The opinions, conclusions and any recommendations in this report are based on limited input data provided by NSW Department of Education and other parties, limited field observations, and reasonable assumptions made by GHD described in this report. GHD disclaims liability arising from errors or omissions in the input data or any of the assumptions being incorrect.

The report is not intended for the general programming of asbestos removal works unless used in conjunction with a specification detailing the extent of works, recommendations for additional assessments and appropriate control measures.

It should be noted that no assessment can be regarded as absolute, and that partial or total demolition of structures may reveal instances of asbestos and other hazardous building materials in-situ that were not identified during this assessment.

2. Methodology

2.1 Desktop and field assessment

The following methodology was carried out during the HBM assessment:

- Desktop review of existing Department information (including registers and/or management plans).
- Assessment of nominated above ground buildings (as identified in Section 1) using intrusive inspection methods, where practicable, noting the condition and accessibility of potential HBM.
- Undertake static air monitoring during the HBM assessment works.
- Collection of representative samples from materials suspected of containing asbestos and/or lead based paint/dust (where deemed necessary).
- Submission of collected samples to a NATA accredited laboratory.
- Visual assessment for PCBs and SMF.
- Noting inaccessible areas during the inspection and provide a reason for the restricted access e.g. unsafe due to confined spaces, live electricity, height restrictions.
- Compilation of a HBM register and report detailing the confirmed and suspected occurrences of HBM within the nominated buildings.

2.2 Assessment limitations

The HBM inspection was undertaken only in those areas where access was available. Areas or features of the Site noted for the purpose of the assessment as inaccessible should be managed accordingly.

As the assessment was a visual inspection and sampling process, only those materials that were physically accessible and visible could be located and identified. The possibility that unsighted HBM remain in inaccessible or concealed areas cannot be ruled out. Such areas generally include but are not limited to:

- Inside set ceilings or wall cavities.
- Electrical equipment (backing boards, switches and light fittings).
- Materials on or above roof lines.
- Areas accessible only by dismantling or destroying equipment.
- Beneath concrete floors or where only restricted access is available to sub floor spaces.
- Building voids.
- Inaccessible areas concealed within the building structure and only accessible during demolition works.
- Sub-surface infrastructure such as pipework and storage tanks or containers and buried materials.
- Ground surfaces concealed by dense vegetation.

Equipment found either stored or in use was not dismantled or damaged for the purpose of inspection. Similarly, moveable chattels such as desks within offices, were not reviewed. Moveable chattels are not considered part of this assessment.

It should be noted that no assessment can be regarded as absolute, and there is a possibility that unsighted hazardous materials remain in inaccessible or concealed areas. Partial or total demolition of structures may reveal instances of hazardous materials in-situ that were not identified during this assessment.

Areas not accessed are deemed to contain HBM until such a time that access can be gained and the presence, or otherwise, of hazardous materials can be confirmed.

This report may be considered to provide an indication on the type of HBM likely to be encountered in the asset during ongoing general site use or refurbishment/demolition works, in line with the limitations of the assessments conducted.

2.3 Sample collection

Where appropriate, representative samples of suspected HBM were collected and analysed to confirm the presence (or absence) of asbestos, ACD, lead paint and lead in dust in order to form the basis for individual records in the HBM register.

Where possible, samples were collected from previously damaged or discrete locations with limited cross-referencing of similar suspect building materials. Samples were labelled with a definitive and unique sample location identifier and a material description. Where required, after sample collection, the sample location was sealed with polyvinyl acetate (PVA) adhesive to seal the sample location and prevent further disturbance.

2.4 Sample analysis

2.4.1 Asbestos

Samples of suspected ACM and ACD were collected by a GHD Licensed Asbestos Assessor (LAA) for analysis at a NATA accredited laboratory.

Asbestos samples were analysed using polarised light microscopy in conjunction with dispersion staining techniques in accordance with Australian Standard™ AS 4964-2004: Method for the qualitative identification of asbestos in bulk samples. The results of all sample analysis were interpreted by competent personnel.

2.4.2 Lead in paint

Representative samples of suspected lead-based paint systems were taken from the building and structural surfaces and analysed at a NATA Accredited Laboratory. Lead content is reported in percentage weight by weight and compared with AS4361.2-2017, Guide to Lead Paint Management, Part 2: Residential and Commercial Buildings lead containing paint system level of 0.1 per cent (w/w) of the dried film.

The HBM Register in Appendix A indicates the general locations of painted surfaces coated with suspected lead based paint systems.

2.4.3 Synthetic mineral fibres

SMF materials were not sampled for laboratory analysis as part of the site assessment and were instead visually identified by the GHD assessor.

2.4.4 Polychlorinated biphenyls

Where possible, capacitors within fluorescent light fittings are observed and cross-referenced with the publication, *Identification of PCB-containing Capacitors*, ANZECC, 1997. However internal inspection and/or sampling was not possible due to access limitations. Therefore, a general comment was made in the register on its potential to harbour a PCB capacitor.

No other electrical equipment was assessed for potential PCB containing materials.

3. Previous investigations

There were no previous reports or registers supplied for the structures on the proposed new RRHC site.

4. Risk assessment

The presence of HBM can represent a real or potential health risk to humans. Where, due to material condition and location, a pathway to human exposure does not exist, and then the risks to human health are significantly reduced.

This section details how each HBM documented by GHD was categorised in Appendix A with regards to friability, condition, accessibility, risk and control methods, as applicable. Note that the samples which were found not to contain hazardous substances were not categorised for friability, condition, accessibility or risk. The estimated volume of the material from which the sample originated is also included in the HBM register for identification purposes.

The following material classifications were given to each of the HBM identified in Appendix A.

4.1 Friability (applies to ACM only)

Each instance of confirmed ACM was categorised by GHD in accordance with the categories outlined in Table 4.1.

Table 4.1 *Friability assessment (ACM only)*

Descriptor	Decision rule
Friable	Asbestos containing material which, when dry, is or may become crumbled, pulverized or reduced to powder by hand pressure.
Non-friable	Asbestos containing material that is not friable asbestos, including material containing asbestos reinforced with a bonding compound.

4.2 Material condition

The condition of each instance of confirmed or presumed HBM was classified as one of the four categories outlined in Table 4.2.

Table 4.2 *Condition assessment*

Ranking/ Description	Non-friable ACM	Friable ACM	SMF	Lead based paint (>0.1% lead)	PCB
Very good	Sealed/ encapsulated	-	Bonded	No damage	Sealed – no damage
Good	Unsealed/ undamaged	-	Stable/ un-bonded	Stable	Sealed
Fair	Cracked or weathered	Encapsulated	-	Deteriorated	-
Poor	Damaged or debris	Unsealed	Deteriorating/ un- bonded	Dust and debris	Leaking

4.3 Likelihood of disturbance

Table 4.3 below details the classification of the likelihood of disturbance categories.

Table 4.3 *Likelihood of disturbance assessment*

Descriptor	Guideline
Low	Where activities within the area where HBM are located are unlikely to impact the material; or areas where the probability of being occupied by building users for extended periods on a regular basis are low. e.g. The material is located externally or above a suspended ceiling, in the roof space, or concealed in service ducts or piping.

Descriptor	Guideline
Medium	Where activities within the area where HBM are located may infrequently (once to three times per year) impact the material, or areas where the probability of being occupied by building users for short periods on a regular basis is high. e.g. Plant rooms and workshops containing operational plant or equipment and are occasionally visited. Corridors, lunch rooms, toilets and internal elevated surfaces where a ladder is required for access.
High	Demolition works are scheduled for the asset and therefore will disturb the HBM if not removed prior. Where activities within the area where HBM are located may frequently (greater than once a month) impact the material, or areas where the probability of being occupied by building users for extended periods on a regular basis is high. e.g. Offices and workshops which are always occupied. As part of job occupants may come into contact with damaged or deteriorated HBM.

4.4 Level of risk

A risk assessment that classifies the risk level for each particular HBM to allow informed decisions about control measures during the ongoing occupancy of the assets was undertaken. The risk assessment then identifies the risk treatment options on how to manage *in situ* HBM.

Risk values were calculated by combining the condition and likelihood of disturbance rankings, as determined during the site inspection and are presented in Table 4.4.

Table 4.4 Risk matrix

Condition	Likelihood of Disturbance		
	High	Medium	Low
Poor	Very High	High	Medium
Fair	High	Medium	Medium
Good	Medium	Medium	Low
Very Good	Medium	Low	Low

Please note that the above decision rules are a guide only and some instances of HBM may have additional risk assessment effort and outcomes, as appropriate.

All HBM items identified were given a Very High risk level as the nominated buildings are to be demolished.

A description of risk levels are described in Table 4.5.

Table 4.5 Description of risk levels

Risk level	Guideline
Low	Material stable. Reassess condition within 12 months.
Medium	Material may remain in situ under effective interim administrative controls. Material condition to be improved or likelihood of disturbance to be reduced within 12 months.
High	Material may remain in situ under effective interim administrative controls. Material condition to be improved or likelihood of disturbance to be reduced within 6 months.
Very high	Area where the material is present; is not suitable for occupancy, urgent remediation is required. Imminent risk of harm. This category also applies to demolition and/or refurbishment works that will impacting on HBM.

4.5 Control method

Each instance of HBM was categorised as requiring one of the control methods described in Table 4.6.

Table 4.6 *Control methods*

Descriptor	Guideline
None required	No HBM identified
Defer (leave and maintain)	Stable material – not prone to damage
Encapsulate (seal)	Stable material – slightly deteriorated may be prone to damage and requires protection
Enclosure	Stable or damaged material – where removal is not practicable and more protection than encapsulation is required
Remove ¹	Deteriorated/damaged material, or material prone to routine disturbance, where encapsulating is not adequate or there is a requirement to remove prior to demolition

¹ The preference will always be to eliminate the identified HBM hazards from the asset and if it is practicable for the occupier to do so then HBM removal should always be considered.

5. Results

The HBM assessment was conducted on 27 August 2024. The results of the HBM assessment are presented in a register format, which is designed to provide readily available information about the presence of HBM within nominated structures at the proposed new RRHC site. Photographs of observations made during the assessment are provided within the HBM register. The HBM register and laboratory analysis reports have been provided in Appendix A and Appendix B (respectively).

5.1 Air monitoring

Static airborne fibre monitoring was conducted in accordance with Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres 2nd Edition [NOHSC:3003(2005)].

Air monitoring was conducted during the inspection works (control) in accordance with the Department requirements. A summary of the background and control air monitoring results is provided in the following table. The air monitoring laboratory analysis report has been provided in Appendix B.

Table 5.1 Air monitoring results

Date	Sample type	Sample ID	Location around asbestos work area	Results fibres/100 fields	Result – f/ml ¹
27/08/2024	Control	CW389555	Southern boundary	0/100	<0.01 fibres/mL
		CW389593	Western boundary	0/100	
		CW389586	Northern Boundary	0/100	
		CW389931	Eastern boundary	0/100	
	Field blank	CW389545	-	-	

1 - f/mL concentration calculated in accordance with Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres 2nd Edition [NOHSC:3003(2005)].

5.2 ACM and ACD

Instances of friable and non-friable ACM were identified as part of this HBM assessment. A register providing a detailed summary of identified and suspected ACM and ACD and materials or locations deemed to contain asbestos is presented in Appendix A.

5.3 Lead based paint

Concentrations of lead in paint systems sampled during the inspection were assessed against the 0.1% w/w lead content threshold.

Lead based paint in exceedance of the 0.1% w/w lead content threshold was identified as part of this HBM assessment. A register providing a detailed summary of all identified lead based paint systems and materials or locations deemed to contain lead based paint is presented Appendix A.

5.4 Lead in dust

Lead in surface dust was not sampled as part of this assessment.

5.5 Synthetic mineral fibres

Synthetic mineral fibres were visually identified as thermal insulation within a variety of locations within the building structures and heating equipment at the site. A register providing a detailed summary of all visually and laboratory identified SMF is presented in Appendix A.

5.6 PCBs

A register of observed fluorescent light fittings potentially containing PCBs is presented in Appendix A.

5.7 Inaccessible areas

General inaccessible areas for the Site included:

- No access beneath buildings, in ceiling space/s and above roof lines
- Inside set ceilings or wall cavities
- Ground surface areas with high vegetation density
- Within sealed plant/equipment

Site specific inaccessible areas encountered during the HBM assessment are outlined in the table below and summarised in the registers provided in Appendix A.

Table 5.2 Summary of areas deemed “no access”

Nominated asset	Location	Potential for Hazmat
Farmhouse 1	Inaccessible or concealed areas including but not limited to, inside set ceilings or wall cavities, height restricted areas, areas accessible only by dismantling equipment, voids or internal areas of plant or totally inaccessible areas concealed within the building structure and only accessible during demolition.	
Farmhouse 2	No access to the damaged portion of the dairy building (un-safe) Inaccessible or concealed areas including but not limited to, inside set ceilings or wall cavities, height restricted areas, areas accessible only by dismantling equipment, voids or internal areas of plant or totally inaccessible areas concealed within the building structure and only accessible during demolition.	Potential for ACM, ACD, SMF, lead based paint or lead containing dust

6. Mitigation measures and conclusions

The following recommended mitigation measures relate to the minimum requirements for safe removal of HBM from the nominated buildings at the proposed new RRHC site prior to general demolition works commencing. A detailed methodology for the safe removal of HBM should be included in a Demolition Management Plan (or similar) for the Site.

The recommendations, conclusions or stability of the HBM contained in this report shall not abrogate a person of their responsibility to work in accordance with Statutory Requirements, Codes of Practice, Guidelines, Material Safety Data Sheets, Work Instructions or reasonable work practices.

6.1 Asbestos containing materials

All identified ACM and ACD must be removed prior to demolition in accordance with the SafeWork NSW Code of Practice - How to Safely Remove Asbestos (2022).

Instances of friable ACM must be removed by a Class A (Friable) licenced asbestos contractor, while bonded ACM may be removed by either a Class A (Friable) or Class B (bonded) licenced asbestos contractor, in accordance with the relevant Acts, standards and guidelines.

Further, given the detection of friable ACM in floor sheeting within the internal floor areas of Farmhouse 2, and that it is occupied, GHD recommends control measures are implemented to seal damaged flooring and schedule removal works for as soon as practicable. Removal works must be undertaken by a Class A licensed asbestos removal contractor under friable asbestos controls. Appropriate warning signs should also be erected to warn of the asbestos hazard.

6.2 Lead containing materials

6.2.1 Lead based paint

Paint containing lead levels greater than 0.1% lead w/w was identified during the HBM assessment.

Prior to demolition lead based paints may be disposed of attached to the substrates as long as they are in good condition. If the lead based paints are chalking or delaminating, the paint residues should be removed from the substrates in accordance with AS/NZS 4361.2:2017; Guide to Hazardous Paint Management. Part 2: Lead and Other Hazardous Metallic Pigments in Industrial Applications. The waste generated must be disposed of as a lead containing material in accordance with NSW EPA requirements.

6.3 Synthetic mineral fibres

SMF likely to be disturbed by demolition should be removed and detailed methodology for the safe removal of SMF should be included in a Demolition Management Plan (or similar). Guidance on the management of SMF is provided in the *National Occupational Health and Safety Commission (1990) Synthetic Mineral Fibres; National Standard for Synthetic Mineral Fibres; and the National Code of Practice for the Safe Use of Synthetic Mineral Fibres*.

6.4 Polychlorinated biphenyls

Although no older fluorescent light fittings and electrical components (which are assumed to contain PCBs) were identified during the HBM assessment, any electrical transformers and/or light fittings identified during demolition preparation works that may potentially contain PCBs should be inspected by an electrician prior to demolition to confirm the presence (or otherwise) of capacitors containing PCB.

If capacitors are identified as potentially containing PCB, the capacitors must be removed and disposed in accordance with ANZECC (1997) Identification of PCB-containing Capacitors: An Information Booklet for Electricians and Electrical Contractors.

6.5 Areas not assessed

Inaccessible areas and any assets where it is unclear if assessments have been conducted should be assumed to contain HBM until further inspected. Prior to demolition or major refurbishment, a destructive pre-demolition HBM assessment is recommended.

6.6 Maintenance of the HBM register

Maintenance of the HBM Register(s) is required so that they remain current and the Department and its tenants/workers/ contractors can rely upon it as an accurate representation of HBM present at the relevant assets.

In order to continually improve the completeness and accuracy of the HBM register, it is recommended that the Department:

- Action and document the management recommendations made within the registers, particularly where an elevated risk is present.
- Add entries related to precautionary testing, if conducted.
- Undertake additional inspections(where required) to determine the presence of HBM in spaces or assets that were not accessible or may not be listed on the HBM register.
- Record removal and maintenance of instances of HBM.
- Record the demolition of assets (buildings/structures) containing HBM.
- Undertake a re-inspection once every two years (or as otherwise required) to maintain the register and review the level of risk assigned to the particular instance of HBM.
- Distribute or otherwise make available all HBM re-inspections, registers or other relevant information to all employees, visitors, contractors and maintenance people or companies with potential to disturb or work with known or presumed HBM.

6.7 Suspect materials, further advice and precautionary sampling

Any material suspected of being a hazard to health that is encountered during ongoing maintenance, refurbishment, dismantling or demolition of buildings and/or structures (but are not listed in existing HBM documentation) should be treated as suspected HBM and the material should be sampled and analysed for the suspected hazard (if applicable). Any associated works with potential to disturb the material are to cease and the area made safe. If the suspect material has already been disturbed, then the overarching provisions of a Hazardous Materials Management Plan or similar, is to be followed, including advice sought.

If in doubt or unsure of any issue involving known, presumed or suspect HBM, then works should cease and advice sought.

6.8 Planning of maintenance, refurbishment or demolition works

With respect to any known or potential HBM, the planning of ongoing maintenance, refurbishment or demolition works associated with any asset needs to be undertaken carefully. It should include consideration of the following:

- Requirements of an overarching Hazardous Materials Management Plan or similar.
- Recognition that any identified HBM is the minimum amount of material present.
- Subsequent recognition that the scope and limitations of prior HBM's may result in additional unidentified HBM being present. This may require works to:
 - Address potential information gaps as part of pre-demolition planning, such as assessing any previously inaccessible areas and assuming that HBM may be present in other areas not accessed by previous HBM assessments.

- Project team undertaking a HBM risk analysis and incorporating suitable provisions into contract/specification.
- Consider directing the works Contractor to undertake their own independent HBM of the work area (may use existing information) which adds an additional layer of assurance as well as minimising potential Contractor time and cost variations as works progress.
- Undertake an intrusive pre-demolition HBM assessment prior to any proposed demolition of the assets to verify the presence/ absence of Hazmat and verify expected quantities.

Prior to demolition or similar activities, all hazardous materials likely to be disturbed by those works must be removed, as far as reasonably practicable, from buildings and structures.

6.9 Summary

Table 6.1 summarises the mitigation measures proposed to avoid and minimise adverse environmental and human health impacts associated with HBMs.

Table 6.1 Mitigation measures

Mitigation Number/Name	Aspect/Section	Mitigation Measure	Reason for Mitigation Measure
Removal of ACM and ACD	Prior to demolition	All identified ACM and ACD will be removed prior to the demolition in accordance with the SafeWork NSW Code of Practice – How to safely remove Asbestos (2022).	Presence of friable and non-friable ACM and ACD
		Detailed methodology for the safe removal of ACM and ACD should be included in a Demolition Management Plan (or similar) for the Site.	
		Friable ACM will be removed by Class A (Friable) licenced asbestos contractor	
		Bonded ACM will be removed by either a Class A (Friable) or Class B (bonded) licenced asbestos contractor	
Lead containing materials	Prior to demolition	Lead based paints may be disposed of attached to the substrates as long as they are in good condition. If chalking or delaminating, the paint residues will be removed from the substrates in accordance with AS/NZS 4361.2:2017; Guide to Hazardous Paint Management. Part 2: Lead and other Hazardous Metallic Pigments in Industrial Applications. The waste generated will be disposed of as a lead containing material in accordance with NSW EPA requirements. Detailed methodology for the safe removal of lead based paint should be included in a Demolition Management Plan (or similar) for the Site	Presence of lead based paints
Removal of Synthetic mineral fibres	Prior to demolition	SMF likely to be disturbed will be removed. Management of SMF will be in accordance with the National Occupational Health and Safety Commission (1990) Synthetic Mineral Fibres; National Standard for Synthetic Mineral Fibres; and the National Code of Practice for the Safe Use of Synthetic Mineral Fibres. Detailed methodology for the safe removal of SMF should be included in a Demolition Management Plan (or similar) for the Site	Presence of SMF
Confirming the presence (or otherwise) of	Prior to demolition	Electrical transformers and light fittings throughout the building will be inspected by an electrician. If capacitors are identified as potentially containing	Older fluorescent light fittings and electrical components which are

Mitigation Number/Name	Aspect/Section	Mitigation Measure	Reason for Mitigation Measure
capacitors containing PCB		PCBs, they will be removed and disposed in accordance with ANZECC (1997) Identification of PCB-containing Capacitors: An Information Booklet for Electricians and Electrical Contractors. Detailed methodology for the safe removal of SMF should be included in a Demolition Management Plan (or similar) for the Site	assumed to contain PCBs were identified during the HBM assessment.
Areas not assessed	Prior to demolition	Inaccessible areas and any assets where it is unclear if assessments have been conducted will be assumed to contain HBM until further inspected. Destructive pre-demolition HBM assessment is proposed and should be included as a requirement in a Demolition Management Plan (or similar) for the Site	Potential for presence of HBM in areas not assessed
Maintenance of HBM Register	Prior to and during demolition	Maintenance of the HBM Register(s) will be undertaken so that they remain current and the Department and its tenants/workers/ contractors can rely upon it as an accurate representation of HBM present at the relevant assets. To continually improve the completeness and accuracy of the HBM register, the following is proposed: <ul style="list-style-type: none"> – Action and document the management recommendations made within the registers, particularly where an elevated risk is present with a corresponding recommended timeframe of 12 months or less. – Add entries related to precautionary testing, if conducted. – Undertake re-inspections to determine the presence of HBM in spaces or assets that were not accessible or may not be listed on the HBM register. – Record removal and maintenance of instances of HBM. – Record the demolition of assets (buildings/structures) containing HBM. – Undertake a re-inspection once every two years (or as otherwise required) to maintain the register and review the level of risk assigned to the particular instance of HBM. – Distribute or otherwise make available all HBM re-inspections, registers or other relevant information to all employees, visitors, contractors and maintenance people or companies with potential to disturb or work with known or presumed HBM. 	Improve the completeness and accuracy of the HBM register to manage risks

Mitigation Number/Name	Aspect/Section	Mitigation Measure	Reason for Mitigation Measure
Suspect materials, further advice and precautionary sampling	Prior to and during demolition	<p>Any material suspected of being a hazard to health that is encountered (but are not listed in existing HBM documentation) will be treated as suspected HBM and the material will be sampled and analysed for the suspected hazard (if applicable).</p> <p>Any associated works with potential to disturb the material will cease and the area made safe. If the suspect material has already been disturbed, then the overarching provisions of a Hazardous Materials Management Plan or similar, will be followed, including advice sought from a suitably qualified and experienced professional. If in doubt or unsure of any issue involving known, presumed or suspect HBM, then works will cease and advice sought from a suitably qualified and experienced professional.</p> <p>Detailed methodology and procedures for the identification of suspect materials, including further advice and precautionary sampling, should be included as part of a Demolition Management Plan (or similar) for the Site.</p>	Potential unexpected finds
Planning of demolition works	Prior to demolition	<p>Prior to demolition or similar activities, all hazardous materials likely to be disturbed by those works will be removed prior to the commencement of demolition works.</p> <p>Planning of demolition works will include consideration of:</p> <ul style="list-style-type: none"> – Requirements of an overarching Hazardous Materials Management Plan, Demolition Management Plan or similar. – Recognition that any identified HBM is the minimum amount of material present. – Subsequent recognition that the scope and limitations of prior HBM's may result in additional unidentified HBM being present. This may require works to: <ul style="list-style-type: none"> • Address known information gaps, such as assessing any previously inaccessible areas and assuming that HBM may be present in other areas not accessed by previous HBM assessments. • Project team undertaking a HBM risk analysis and incorporating suitable provisions into contract/specification. • Consider directing the works Contractor to undertake their own independent HBM of the work area (may use existing information) which adds an additional layer of assurance as well as minimising potential Contractor time and cost variations as works progress. • Undertake an intrusive pre-demolition HBM assessment prior to any proposed demolition of the assets to verify the presence/ absence of Hazmat and verify expected quantities. 	Disturbance of hazardous materials

The proposed activity will not have a significant effect on the environment subject to implementation of the mitigation measures as outlined in Table 6.1.

7. References

AS4361.2 (2017) Guide to Lead Paint Management. Part 2: Residential and Commercial Buildings.

ANZECC (1997) Identification of PCB-containing Capacitors: An Information Booklet for Electricians and Electrical Contractors.

EJE. (2025). Richmond River High Campus Architectural Drawings - Overall Site Context Plan - REV F - Issue for REF.

National Occupational Health and Safety Commission (1990) Synthetic Mineral Fibres; National Standard for Synthetic Mineral Fibres; and the National Code of Practice for the Safe Use of Synthetic Mineral Fibres.

NEPC (2013). National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended by the National Environment Protection (Assessment of Site Contamination) Amendment Measure 2013 (No. 1), National Environment Protection Council, May 2013.

NOHSC:3003 (2005). Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres 2nd Edition.

NSW EPA (2003) Managing Lead Contamination in Home Maintenance, Renovation and Demolition Practices: A Guide to Councils, February 2003.

SafeWork NSW Code of Practice: How to Manage and Control Asbestos in the Workplace, SafeWork NSW 2022.

SafeWork NSW Code of Practice: How to Safely Remove Asbestos, SafeWork NSW 2022.

Safework Australia Workplace Exposure Standards for Airborne Contaminants (2022).

Work Health and Safety Act 2011 (NSW).

Work Health and Safety Regulations 2017 (NSW).

Appendices







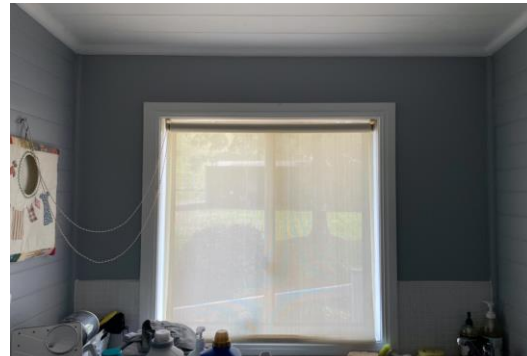



Appendix A










HBM Register



Hazardous Materials Register

Site Location: Richmond River High School - Farmhouse 1 - 163 Alexandra Parade, North Lismore, NSW
Inspection Date: 27-Aug-24

Consultant			Location / Description										Risk Assessment										
Inspection date	Reinspection Date	Consultant and Surveyor Reference	Building Ref	Floor	Room or Space	Material description	Primary location	Secondary location	Application	Surface treatment	Sample identification	Laboratory results	Friability	Material condition	Likelihood of disturbance	Risk	Control method	Labelling	Estimated quantity	Units	Comments	Photograph reference	Photograph reference
Building Description			Farmhouse 1 - Timber construction on timber piers with corrugated metal roof. Fibre cement eaves to rear of property. Internal wall and ceiling linings are timber in front bedrooms, hallways, kitchen and lounge. Fibre cement sheet linings in bathroom (walls and ceilings), laundry (behind taps) and bathroom off porch (walls and ceiling).										 										
Asbestos detected or assumed																							
27-Aug-24		GHD	FH1	GF	External	Resin-based materials	Electrical box	Fixed to side of house	Backing board	Sealed	Not sampled	Presumed to contain asbestos until proven otherwise	Non-friable	Good	Low	Low	Defer. Monitor and maintain current condition	Labels required (not affixed or not sufficient)	<1	m2			
No asbestos detected																							
27-Aug-24		GHD	FH1	GF	Internal	Flat cement product	Bathroom	Rear porch bathroom	Wall and ceiling linings	Sealed	FH1-A01	No Asbestos Fibres Detected	N/A	N/A	N/A	N/A	Not required	N/A	-	-			
27-Aug-24		GHD	FH1	GF	Internal	Flat cement product	Laundry	Behind taps	Lining	Sealed	Refer FH1-A01	No Asbestos Fibres Detected	N/A	N/A	N/A	N/A	Not required	N/A	-	-			
27-Aug-24		GHD	FH1	GF	Internal	Flat cement product	Bathroom	Ceiling and wall linings	Lining	Sealed	Refer FH1-A01	No Asbestos Fibres Detected	N/A	N/A	N/A	N/A	Not required	N/A	-	-			
27-Aug-24		GHD	FH1	GF	External	Flat cement product	Eaves linings	External eaves to rear	Lining	Sealed	Refer FH1-A01	No Asbestos Fibres Detected	N/A	N/A	N/A	N/A	Not required	N/A	-	-			









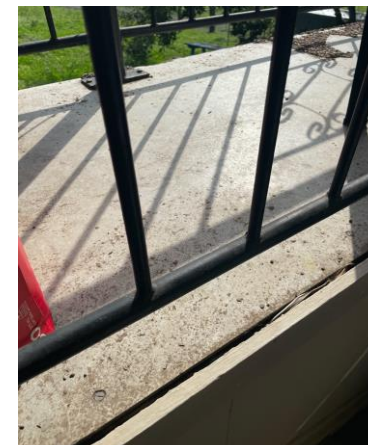



Inspection date	Reinspection Date	Consultant and Surveyor Reference	Building Ref	Floor	Room or Space	Material description	Primary location	Secondary location	Application	Surface treatment	Sample identification	Laboratory results	Friability	Material condition	Likelihood of disturbance	Risk	Control method	Labelling	Estimated quantity	Units	Comments	Photograph reference	Photograph reference
Lead paint systems																							
27-Aug-24		GHD	FH1	GF	External	Paint	External walls	Blue coloured wall paint	Paint	Sealed	FH1-P01	No lead paint detected <0.1% w/w (0.01% w/w detected)	N/A	N/A	N/A	N/A	Not required	-	-	-	-		
27-Aug-24		GHD	FH1	GF	Internal	Paint	Bannister	White paint	Paint	Sealed	FH1-P02	No lead paint detected <0.1% w/w (<0.01% w/w)	N/A	N/A	N/A	N/A	Not required	-	-	-	-		
27-Aug-24		GHD	FH1	GF	Internal	Paint	Internal wall paint	White paint	Paint	Sealed	Refer FH1-P02	No lead paint detected <0.1% w/w (<0.01% w/w detected)	N/A	N/A	N/A	N/A	Not required	-	-	-	-		
No PCB capacitors observed																							
Synthetic mineral fibre observed																							
27-Aug-24		GHD	FH1	GF	Internal	Thermal insulation	Roof space	Sarking below roof	Insulation	N/A	Not sampled	SMF observed	N/A	Good	Low	Low	Not required	N/A	250	m2	-		
Building Description			<div>Carport - Metal structure on concrete</div> 																				
No hazardous materials detected																							
Building Description			<div>Shed (south) - Metal construction on concrete slab</div>  																				
No hazardous materials observed or detected																							
Building Description			<div>Shed (west) - Metal construction on dirt floor</div>  																				
No hazardous materials observed or detected																							
Inaccessible Areas																							
Inside set ceilings or wall cavities, subfloor spaces, surface areas with high vegetation density, height restricted areas, areas accessible only by dismantling equipment, voids or internal areas of plant/appliances or totally inaccessible areas concealed within the building structure and only accessible during demolition. Inaccessible areas identified during the HBM assessment should be investigated prior to refurbishment/demolition works commencing to confirm the presence (or otherwise) of HBM materials.																							



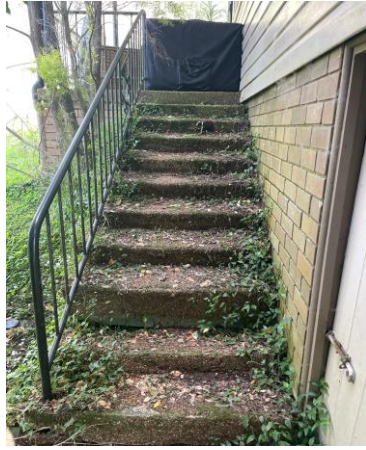



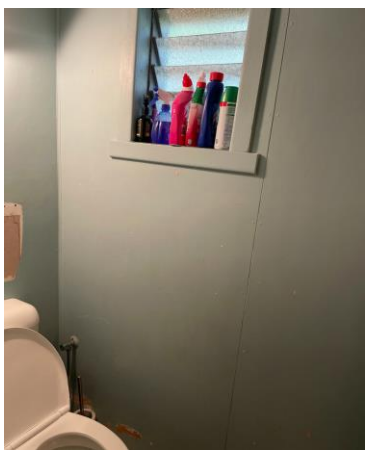
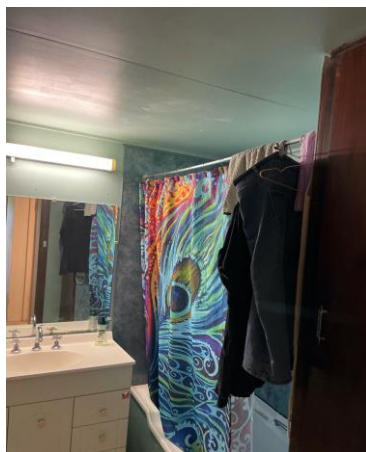















Hazardous Materials Register






Site Location: Richmond River High School - Farmhouse 2 - 170 Alexandra Parade, North Lismore, NSW






Inspection Date: 27-Aug-24

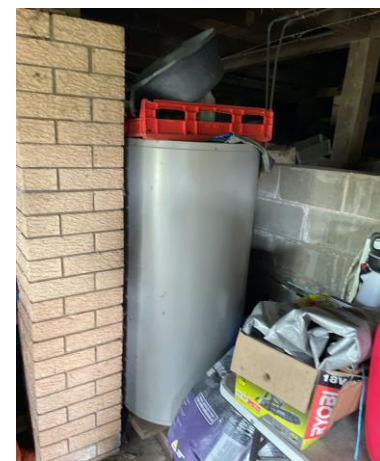










Consultant			Location / Description										Risk Assessment												
Inspection date	Reinspection Date	Consultant and Surveyor Reference	Building Ref	Floor	Room or Space	Material description	Primary location	Secondary location	Application	Surface treatment	Sample identification	Laboratory results	Friability	Material condition	Likelihood of disturbance	Risk	Control method	Labelling	Estimated quantity	Units	Comments	Photograph reference	Photograph reference		
Building Description			Farmhouse 2 - Timber frame on timber piers with corrugated metal roof, weatherboard external linings, garage on ground floor with concrete slab. Internal wall and ceiling linings are predominantly fibre cement sheet. <div></div>																						
Asbestos detected or assumed																									
27-Aug-24		GHD	FH2	GF	External	Resin-based materials	Electrical board	Electrical box	Backing board	Sealed	Not sampled	Presumed to contain asbestos until proven otherwise	Non-friable	Good	Low	Low	Defer. Monitor and maintain current condition	Labels required (not affixed or not sufficient)	<1	m2					
27-Aug-24		GHD	FH2	01	External	Flat cement product	Eaves / porch	Ceiling	Linings	Sealed	FH2-A01	Chrysotile Detected	Non-friable	Good	Low	Low	Defer. Monitor and maintain current condition	Labels required (not affixed or not sufficient)	45	m2					
27-Aug-24		GHD	FH2	01	External	Flat cement product	Porch	Flooring	Compressed cement sheet flooring	Sealed	FH2-A02	Chrysotile Detected	Non-friable	Poor	Low	Low	Defer. Monitor and maintain current condition	Labels required (not affixed or not sufficient)	35	m2	Beneath pebble crete				
27-Aug-24		GHD	FH2	GF	External	Flat cement product	Garage stairs	Leading to porch	Sides of stairs	Sealed	FH2-A03	Chrysotile Detected	Non-friable	Good	Low	Low	Defer. Monitor and maintain current condition	Labels required (not affixed or not sufficient)	15	m2					
27-Aug-24		GHD	FH2	GF	External	Debris	North external stairs	Ground surface	Debris	Unsealed	FH2-A04	Chrysotile Detected	Non-friable	Poor	Medium	Medium	Removal	Labels required (not affixed or not sufficient)	<1	m2					
27-Aug-24		GHD	FH2	01	External	Flat cement product	South porch	Ceiling	Linings	Sealed	Refer FH2-A01	Chrysotile Detected	Non-friable	Good	Low	Low	Defer. Monitor and maintain current condition	Labels required (not affixed or not sufficient)	8	m2					
27-Aug-24		GHD	FH2	01	External	Flat cement product	South porch	Flooring	Compressed cement sheet flooring	Sealed	Refer FH2-A02	Chrysotile Detected	Non-friable	Fair	Medium	Medium	Encapsulate (seal)	Labels required (not affixed or not sufficient)	8	m2	Compressed cement sheet located beneath pebblecrete finish				

Inspection date	Reinspection Date	Consultant and Surveyor Reference	Building Ref	Floor	Room or Space	Material description	Primary location	Secondary location	Application	Surface treatment	Sample identification	Laboratory results	Friability	Material condition	Likelihood of disturbance	Risk	Control method	Labelling	Estimated quantity	Units	Comments	Photograph reference	Photograph reference
27-Aug-24		GHD	FH2	01	External	Moulded cement product	South wall	Pipe	Septic vent pipe	Unsealed	FH2-A05	Chrysotile Detected	Non-friable	Poor	Low	Medium	Encapsulate (seal)	Labels required (not affixed or not sufficient)	5	Lm			
27-Aug-24		GHD	FH2		External	Flat cement product	South stairs to porch	Flooring / stair treads	Compressed cement sheet	Unsealed	FH2-A06	Chrysotile Detected	Non-friable	Poor	Medium	Medium	Encapsulate (seal)	Labels required (not affixed or not sufficient)	10	m2	Compressed cement sheet located beneath pebblecrete finish		
27-Aug-24		GHD	FH2	01	Internal	Flat cement product	Rear entryway	Walls and ceiling	Linings	Sealed	FH2-A07	Chrysotile Detected	Non-friable	Good	Low	Low	Defer. Monitor and maintain current condition	Labels required (not affixed or not sufficient)	15	m2			
27-Aug-24		GHD	FH2	01	Internal	Flat cement product	Laundry	Walls and ceiling	Linings	Sealed	Refer to FH2-A07	Chrysotile Detected	Non-friable	Good	Low	Low	Defer. Monitor and maintain current condition	Labels required (not affixed or not sufficient)	20	m2			
27-Aug-24		GHD	FH2	01	Internal	Flat cement product	Hallway to bathroom	Walls and ceiling	Linings	Sealed	Refer to FH2-A07	Chrysotile Detected	Non-friable	Good	Low	Low	Defer. Monitor and maintain current condition	Labels required (not affixed or not sufficient)	32	m2			
27-Aug-24		GHD	FH2	01	Internal	Flat cement product	Toilet	Walls and ceiling	Linings	Sealed	Refer to FH2-A07	Chrysotile Detected	Non-friable	Good	Low	Low	Defer. Monitor and maintain current condition	Labels required (not affixed or not sufficient)	12	m2			
27-Aug-24		GHD	FH2	01	Internal	Flat cement product	Bathroom	Walls and ceiling	Linings	Sealed	Refer to FH2-A07	Chrysotile Detected	Non-friable	Good	Low	Low	Defer. Monitor and maintain current condition	Labels required (not affixed or not sufficient)	22	m2			
27-Aug-24		GHD	FH2	01	Internal	Floor sheeting	Kitchen/dining	Vinyl sheet - cream/brown/green (top layer)	Floor covering and backing	Sealed	FH2-A10	Chrysotile Detected	Friable	Poor	High	Very high	Removal	Labels required (not affixed or not sufficient)	12	m2			
27-Aug-24		GHD	FH2	01	Internal	Flat cement product	Kitchen/dining	Tilux style wall linings	Linings	Sealed	Visual inspection	Presumed to contain asbestos until proven otherwise	Non-friable	Good	Low	Low	Defer. Monitor and maintain current condition	Labels required (not affixed or not sufficient)	45	m2			

Inspection date	Reinspection Date	Consultant and Surveyor Reference	Building Ref	Floor	Room or Space	Material description	Primary location	Secondary location	Application	Surface treatment	Sample identification	Laboratory results	Friability	Material condition	Likelihood of disturbance	Risk	Control method	Labelling	Estimated quantity	Units	Comments	Photograph reference	Photograph reference
27-Aug-24		GHD	FH2	01	Internal	Floor sheeting	Hallway to bathroom	Remnant vinyl sheet	Floor covering	Sealed	FH2-A12	Chrysotile Detected	Friable	Poor	High	Very high	Removal	Labels required (not affixed or not sufficient)	<5	m2			
27-Aug-24		GHD	FH2	01	Internal	Flat cement product	Bedroom	Walls and ceiling	Linings	Sealed	FH2-A13	Chrysotile Detected	Non-friable	Good	Low	Low	Defer. Monitor and maintain current condition	Labels required (not affixed or not sufficient)	65	m2			
27-Aug-24		GHD	FH2	01	Internal	Flat cement product	Southern entry way	Ceiling	Linings	Sealed	FH2-A14	Chrysotile Detected	Non-friable	Good	Low	Low	Defer. Monitor and maintain current condition	Labels required (not affixed or not sufficient)	10	m2			
27-Aug-24		GHD	FH2	01	Internal	Flat cement product	Lounge/bedroom	Walls	Linings	Sealed	FH2-A15	Chrysotile Detected	Non-friable	Good	Low	Low	Defer. Monitor and maintain current condition	Labels required (not affixed or not sufficient)	95	m2			
27-Aug-24		GHD	FH2	01	Internal	Flat cement product	Front bedroom - south east	Ceiling	Linings	Sealed	FH2-A16	Chrysotile Detected	Non-friable	Good	Low	Low	Defer. Monitor and maintain current condition	Labels required (not affixed or not sufficient)	65	m2			
27-Aug-24		GHD	FH2	01	Internal	Flat cement product	Office	Ceiling	Linings	Sealed	Refer to FH2-A16	Chrysotile Detected	Non-friable	Good	Low	Low	Defer. Monitor and maintain current condition	Labels required (not affixed or not sufficient)	11	m2			

Inspection date	Reinspection Date	Consultant and Surveyor Reference	Building Ref	Floor	Room or Space	Material description	Primary location	Secondary location	Application	Surface treatment	Sample identification	Laboratory results	Friability	Material condition	Likelihood of disturbance	Risk	Control method	Labelling	Estimated quantity	Units	Comments	Photograph reference	Photograph reference
No asbestos detected																							
27-Aug-24		GHD	FH2	01	Internal	Flat cement product	Bathroom	Bath surrounds	Linings	Sealed	FH2-A08	No Asbestos Fibres Detected	N/A	N/A	N/A	N/A	Not required	N/A	-	-	-		
27-Aug-24		GHD	FH2	01	Internal	Flat cement product	Bathroom	"Tilux" sheet around shower	Linings	Sealed	FH2-A09	No Asbestos Fibres Detected	N/A	N/A	N/A	N/A	Not required	N/A	-	-	-		
27-Aug-24		GHD	FH2	01	Internal	Floor sheeting	Kitchen/dining	Vinyl sheet - yellow/green (bottom layer)	Floor covering and backing	Sealed	FH2-A11	No Asbestos Fibres Detected	N/A	N/A	N/A	N/A	Not required	N/A	-	-	-		
27-Aug-24		GHD	FH2	01	Internal	Textiles - ropes, yarns, cloth	Front rooms	Flooring	Carpet underlay and backing	Unsealed	FH2-A17	No Asbestos Fibres Detected	N/A	N/A	N/A	N/A	Not required	N/A	-	-	-	 	
27-Aug-24		GHD	FH2		Internal	Dust	Kitchen	Dust on kitchen floor	Dust / debris	Unsealed	FH2-LD01	No Asbestos Fibres Detected	N/A	N/A	N/A	N/A	Not required	N/A	-	-	-		
27-Aug-24		GHD	FH2		Internal	Dust	Ceiling space	Accumulated dust	Dust / debris	Unsealed	FH2-LD02	No Asbestos Fibres Detected	N/A	N/A	N/A	N/A	Not required	N/A	-	-	-		

Inspection date	Reinspection Date	Consultant and Surveyor Reference	Building Ref	Floor	Room or Space	Material description	Primary location	Secondary location	Application	Surface treatment	Sample identification	Laboratory results	Friability	Material condition	Likelihood of disturbance	Risk	Control method	Labelling	Estimated quantity	Units	Comments	Photograph reference	Photograph reference
Lead in paint																							
27-Aug-24		GHD	FH2		External	Paint	External walls	Cream coloured wall paint	Paint	Sealed	FH2-P01	No lead paint detected <0.1% w/w (0.02% w/w)	N/A	N/A	N/A	N/A	Not required	-	-	-	-		
27-Aug-24		GHD	FH2		External	Paint	External trims	Brown paint	Paint	Sealed	FH2-P02	No lead paint detected <0.1% w/w (0.04% w/w)	N/A	N/A	N/A	N/A	Not required	-	-	-	-		
27-Aug-24		GHD	FH2		Internal	Paint	Kitchen wall paint	Cream paint	Paint	Sealed	FH2-P03	No lead paint detected <0.1% w/w (0.03% w/w)	N/A	N/A	N/A	N/A	Not required	-	-	-	-		

Inspection date	Reinspection Date	Consultant and Surveyor Reference	Building Ref	Floor	Room or Space	Material description	Primary location	Secondary location	Application	Surface treatment	Sample identification	Laboratory results	Friability	Material condition	Likelihood of disturbance	Risk	Control method	Labelling	Estimated quantity	Units	Comments	Photograph reference	Photograph reference		
No PCB capacitors observed																									
Synthetic mineral fibre observed or assumed																									
27-Aug-24		GHD	FH2		Internal	Thermal insulation	Garage	Hot water system	Insulation	Sealed	Not sampled	Assumed positive	N/A	Good	Low	Low	Defer. Monitor and maintain current condition	Labels required (not affixed or not sufficient)	1	Item					
27-Aug-24		GHD	FH2		Internal	Thermal insulation	Air conditioning unit	-	Insulation	Sealed	Not sampled	Assumed positive	N/A	Good	Low	Low	Defer. Monitor and maintain current condition	Labels required (not affixed or not sufficient)	1	Item					
Building Description			Dairy - Timber structure on concrete slab. One portion fallen in. No access to damaged area.																						
No potential asbestos materials detected or assumed																									
Lead paint																									
27-Aug-24		GHD	Dairy	GF	External	Paint	Wall paint	Cream paint	Paint	Sealed	FH2-P04	Lead paint detected >0.1% w/w (8.6% w/w)	N/A	Poor	Low	Low	Removal	N/A	25	m2					
No PCB capacitors observed																									
No synthetic mineral fibre observed or assumed																									
Building Description			Shed - Timber structure on concrete slab																						
No potential asbestos materials detected or assumed																									
Lead paint																									
27-Aug-24		GHD	Shed	GF	External	Paint	Door and external weatherboards	Cream paint	Paint	Sealed	FH2-P05	Lead paint detected >0.1% w/w (20% w/w)	N/A	Poor	Medium	Medium	Removal	N/A	35	m2					
No PCB capacitors observed																									
No synthetic mineral fibre observed or assumed																									
Inaccessible Areas																									
<div><div></div><div>Inside set ceilings or wall cavities, subfloor spaces, surface areas with high vegetation density, height restricted areas, areas accessible only by dismantling equipment, voids or internal areas of plant/appliances or totally inaccessible areas concealed within the building structure and only accessible during demolition. No access to damaged area of dairy. Inaccessible areas identified during the HBM assessment should be investigated prior to refurbishment/demolition works commencing to confirm the presence (or otherwise) of HBM materials.</div></div> <div></div>																									

Appendix B

Laboratory Reports

GHD Pty Ltd
3/24 Honeysuckle Dve
Newcastle
NSW 2300



NATA Accredited
Accreditation Number 1261
Site Number 25079

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

Attention: Oliver Hoschke
Report 1134584-AID
Project Name RICHMOND RIVER HIGH SCHOOL - HAZMAT
Project ID 12640941
Received Date Aug 30, 2024
Date Reported Sep 10, 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 RICHMOND RIVER HIGH SCHOOL - HAZMAT
Project ID 12640941
Date Sampled Aug 27, 2024
Report 1134584-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
28	24-Se0000102	Aug 27, 2024	Approximate Sample <1g / 10 x 10 x 5mm Sample consisted of: Brown fibre cement fragments	No asbestos detected. Organic fibre detected. No trace asbestos detected.
FH2-A01	24-Se0000105	Aug 27, 2024	Approximate Sample <1g / 30 x 15 x 5mm Sample consisted of: Brown fibre cement fragments	Chrysotile asbestos detected. Organic fibre detected
FH2-A02	24-Se0000106	Aug 27, 2024	Approximate Sample <1g / 10 x 10 x 5mm Sample consisted of: Brown fibre cement fragments	Chrysotile asbestos detected. Organic fibre detected
FH2-A03	24-Se0000107	Aug 27, 2024	Approximate Sample <1g / 20 x 10 x 5mm Sample consisted of: Grey fibre cement material	Chrysotile asbestos detected. Organic fibre detected
FH2-A04	24-Se0000108	Aug 27, 2024	Approximate Sample 2g / 45 x 20 x 5mm Sample consisted of: Brown fibre cement fragments	Chrysotile asbestos detected.
FH2-A05	24-Se0000109	Aug 27, 2024	Approximate Sample <1g / 5 x 5 x 3mm Sample consisted of: Brown fibre cement fragments	Chrysotile asbestos detected. Organic fibre detected.
FH2-A06	24-Se0000110	Aug 27, 2024	Approximate Sample <1g / 25 x 20 x 3mm Sample consisted of: Brown fibre cement fragments	Chrysotile asbestos detected. Organic fibre detected.
FH2-A07	24-Se0000111	Aug 27, 2024	Approximate Sample <1g / 10 x 10 x 5mm Sample consisted of: Grey fibre cement material	Chrysotile asbestos detected. Organic fibre detected.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
FH2-A08	24-Se0000112	Aug 27, 2024	Approximate Sample <1g / 20 x 5 x 5mm Sample consisted of: Brown fibre cement fragments	No asbestos detected. Organic fibre detected. No trace asbestos detected.
FH2-A09	24-Se0000113	Aug 27, 2024	Approximate Sample <1g / 15 x 10 x 5mm Sample consisted of: Brown fibre cement fragments	No asbestos detected. Organic fibre detected. No trace asbestos detected.
FH2-A10	24-Se0000114	Aug 27, 2024	Approximate Sample <1g / 25 x 5 x 3mm Sample consisted of: Brown fibre cement fragments	Chrysotile asbestos detected. Organic fibre detected.
FH2-A11	24-Se0000115	Aug 27, 2024	Approximate Sample 1g / 85 x 30 x 3mm Sample consisted of: Brown and pink fibre cement fragments	No asbestos detected. Organic fibre detected. No trace asbestos detected.
FH2-A12	24-Se0000116	Aug 27, 2024	Approximate Sample <1g / 25 x 25 x 5mm Sample consisted of: Brown fibre cement fragments	Chrysotile asbestos detected. Organic fibre detected.
FH2-A13	24-Se0000117	Aug 27, 2024	Approximate Sample <1g / 20 x 12 x 5mm Sample consisted of: Brown fibre cement fragments	Chrysotile asbestos detected. Organic fibre detected.
FH2-A14	24-Se0000118	Aug 27, 2024	Approximate Sample <1g / 10 x 10 x 5mm Sample consisted of: Brown fibre cement fragments	Chrysotile asbestos detected. Organic fibre detected.
FH2-A15	24-Se0000119	Aug 27, 2024	Approximate Sample <1g / 25 x 10 x 5mm Sample consisted of: White fibre cement material	Chrysotile asbestos detected. Organic fibre detected.
FH2-A16	24-Se0000120	Aug 27, 2024	Approximate Sample <1g / 10 x 5 x 5mm Sample consisted of: Grey fibre cement material	Chrysotile asbestos detected. Organic fibre detected.
FH2-A17	24-Se0000121	Aug 27, 2024	Approximate Sample 5g / 90 x 35 x 10mm Sample consisted of: Brown fibre cement fragments	No asbestos detected. Organic fibre detected. No trace asbestos detected.
FH2-P01	24-Se0000122	Aug 27, 2024	Approximate Sample <1g / 30x15x2mm Sample consisted of: Brown wooden strip with brown paint	No asbestos detected. Organic fibre detected. No trace asbestos detected.
FH2-P02	24-Se0000123	Aug 27, 2024	Approximate Sample <1g / 22x10x2mm Sample consisted of: Brown wooden strip with dark brown paint	No asbestos detected. Organic fibre detected. No trace asbestos detected.
FH2-P03	24-Se0000124	Aug 27, 2024	Approximate Sample <1g / 12x8x2mm Sample consisted of: Brown compressed fibrous material with off-white paint and cement material	No asbestos detected. Organic fibre detected. No trace asbestos detected.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
FH2-P04	24-Se0000125	Aug 27, 2024	Approximate Sample 2g / 40x20x1mm Sample consisted of: Yellow brown paint flakes	No asbestos detected. No trace asbestos detected.
FH2-P05	24-Se0000126	Aug 27, 2024	Approximate Sample <1g / 15x10x1mm Sample consisted of: Off-white brown paint flakes	No asbestos detected. No trace asbestos detected.
FH2-LD01	24-Se0000127	Aug 27, 2024	Approximate Sample <1g / 140x140x<1mm Sample consisted of: Dust particles and debris on swab	No asbestos detected*. Organic fibre detected. No trace asbestos detected.
FH2-LD02	24-Se0000128	Aug 27, 2024	Approximate Sample <1g / 140x140x<1mm Sample consisted of: Dust particles, fragments of adhesive material and paint flakes on swab	No asbestos detected*. Organic fibre detected. No trace asbestos detected.
FH2-Blank	24-Se0000129	Aug 27, 2024	Approximate Sample <1g / 140x140x<1mm Sample consisted of: Dust particles on swab	No asbestos detected*. No trace asbestos detected.

Sample History

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

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

Description	Testing Site	Extracted	Holding Time
Air -	Newcastle	Sep 03, 2024	Indefinite
Air - Asbestos - LTM-ASB-8020	Sydney	Sep 03, 2024	Indefinite
Solid - Asbestos - LTM-ASB-8020	Newcastle	Sep 03, 2024	Indefinite
Solid - Asbestos - LTM-ASB-8020	Sydney	Sep 03, 2024	Indefinite



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ABN: 50 005 085 521

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road Dandenong South VIC 3175 +61 3 8564 5000 NATA# 1261 Site# 1254	19/8 Lewalan Street Grovedale VIC 3216 +61 3 8564 5000 NATA# 1261 Site# 25403	179 Magowar Road Girraween NSW 2145 +61 2 9900 8400 NATA# 1261 Site# 18217	Unit 1,2 Dacre Street Mitchell ACT 2911 +61 2 6113 8091 NATA# 1261 Site# 25466	1/21 Smallwood Place Murarrie QLD 4172 T: +61 7 3902 4600 NATA# 1261 Site# 20794 & 2780	1/2 Frost Drive Mayfield West NSW 2304 +61 2 4968 8448 NATA# 1261 Site# 25079

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Perth ProMicro
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NZBN: 9429046024954

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Company Name: GHD Pty Ltd NEWCASTLE
Address: 3/24 Honeysuckle Dve
Newcastle
NSW 2300

Project Name: RICHMOND RIVER HIGH SCHOOL - HAZMAT
Project ID: 12640941

Order No.:
Report #: 1134584
Phone: 02 4979 9999
Fax: 02 4979 9988

Received: Aug 30, 2024 4:00 PM
Due: Sep 10, 2024
Priority: 5 Day
Contact Name: Oliver Hoschke

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - AS4964	Asbestos Absence / Presence	Asbestos Absence / Presence*	Lead (% w/w)
Sydney Laboratory - NATA # 1261 Site # 18217						X	X		X
Mayfield West Laboratory - NATA # 1261 Site # 25079								X	
External Laboratory									
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID				
1	28	Aug 27, 2024		Building Materials	X24-Se0000102			X	
2	FH1-P01	Aug 27, 2024		Paint	X24-Se0000103				X
3	FH1-P02	Aug 27, 2024		Paint	X24-Se0000104				X
4	FH2-A01	Aug 27, 2024		Building Materials	X24-Se0000105			X	
5	FH2-A02	Aug 27, 2024		Building Materials	X24-Se0000106			X	
6	FH2-A03	Aug 27, 2024		Building Materials	X24-Se0000107			X	
7	FH2-A04	Aug 27, 2024		Building Materials	X24-Se0000108			X	
8	FH2-A05	Aug 27, 2024		Building Materials	X24-Se0000109			X	
9	FH2-A06	Aug 27, 2024		Building	X24-Se0000110			X	



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Project ID: 12640941

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Due: Sep 10, 2024
Priority: 5 Day
Contact Name: Oliver Hoschke

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - AS4964	Asbestos Absence / Presence	Asbestos Absence / Presence*	Lead (% w/w)
Sydney Laboratory - NATA # 1261 Site # 18217						X	X		X
Mayfield West Laboratory - NATA # 1261 Site # 25079								X	
				Materials					
10	FH2-A07	Aug 27, 2024		Building Materials	X24-Se0000111			X	
11	FH2-A08	Aug 27, 2024		Building Materials	X24-Se0000112			X	
12	FH2-A09	Aug 27, 2024		Building Materials	X24-Se0000113			X	
13	FH2-A10	Aug 27, 2024		Building Materials	X24-Se0000114			X	
14	FH2-A11	Aug 27, 2024		Building Materials	X24-Se0000115			X	
15	FH2-A12	Aug 27, 2024		Building Materials	X24-Se0000116			X	
16	FH2-A13	Aug 27, 2024		Building Materials	X24-Se0000117			X	
17	FH2-A14	Aug 27, 2024		Building Materials	X24-Se0000118			X	
18	FH2-A15	Aug 27, 2024		Building Materials	X24-Se0000119			X	



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Priority: 5 Day
Contact Name: Oliver Hoschke

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - AS4964	Asbestos Absence / Presence	Asbestos Absence / Presence*	Lead (% w/w)
Sydney Laboratory - NATA # 1261 Site # 18217						X	X		X
Mayfield West Laboratory - NATA # 1261 Site # 25079								X	
19	FH2-A16	Aug 27, 2024		Building Materials	X24-Se0000120			X	
20	FH2-A17	Aug 27, 2024		Building Materials	X24-Se0000121			X	
21	FH2-P01	Aug 27, 2024		Paint	X24-Se0000122		X		X
22	FH2-P02	Aug 27, 2024		Paint	X24-Se0000123		X		X
23	FH2-P03	Aug 27, 2024		Paint	X24-Se0000124		X		X
24	FH2-P04	Aug 27, 2024		Paint	X24-Se0000125		X		X
25	FH2-P05	Aug 27, 2024		Paint	X24-Se0000126		X		X
26	FH2-LD01	Aug 27, 2024		Wipes	X24-Se0000127	X			
27	FH2-LD02	Aug 27, 2024		Wipes	X24-Se0000128	X			
28	FH2-Blank	Aug 27, 2024		Wipes	X24-Se0000129	X			
Test Counts						3	23	23	7

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

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

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

Terms

%asbestos	Estimated percentage of asbestos in a given matrix may be derived from knowledge or experience of the material, informed by HSG264 <i>Appendix 2</i> , else assumed to be 15% in accordance with WA DOH <i>Appendix 2 (PA)</i> . 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, <i>Asbestos: The Analysts Guide</i> , 2nd Edition (2021).
HSG264	UK HSE HSG264, <i>Asbestos: The Survey Guide</i> (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, <i>Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres</i> , 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 to 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, <i>Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia</i> (updated 2021), including Appendix Four: <i>Laboratory analysis</i>
Weighted Average	Combined average %w/w asbestos content of all asbestos-containing finds in the given aliquot or total soil sample (% _{WA}).

Comments

24-Se0000127 - 24-Se0000129: Dust collected using adhesive tape, swabs or wipes fall outside of the definition of a bulk sample and therefore are not covered by the scope of AS 4964 2004 and are not accredited by NATA.

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
Anita Weinberg	Senior Analyst-Asbestos

Authorised by:

Sayeed Abu	Senior Analyst-Asbestos
Bryce Keegan	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](#).

Eurofins shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

GHD Pty Ltd
3/24 Honeysuckle Dve
Newcastle
NSW 2300



NATA Accredited
Accreditation Number 1261
Site Number 18217

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

Attention: **Oliver Hoschke**

Report **1134584-S**
Project name **RICHMOND RIVER HIGH SCHOOL - HAZMAT**
Project ID **12640941**
Received Date **Aug 30, 2024**

Client Sample ID			FH1-P01	FH1-P02	FH2-P01	FH2-P02
Sample Matrix			Paint	Paint	Paint	Paint
Eurofins Sample No.			X24-Se0000103	X24-Se0000104	X24-Se0000122	X24-Se0000123
Date Sampled			Aug 27, 2024	Aug 27, 2024	Aug 27, 2024	Aug 27, 2024
Test/Reference	LOR	Unit				
Lead (% w/w)	0.01	%	M11 0.01	M11 < 0.01	0.02	0.04

Client Sample ID			FH2-P03	FH2-P04	FH2-P05
Sample Matrix			Paint	Paint	Paint
Eurofins Sample No.			X24-Se0000124	X24-Se0000125	X24-Se0000126
Date Sampled			Aug 27, 2024	Aug 27, 2024	Aug 27, 2024
Test/Reference	LOR	Unit			
Lead (% w/w)	0.01	%	0.03	8.6	20

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

Lead (% w/w)

Testing Site

Sydney

Extracted

Sep 03, 2024

Holding Time

6 Months

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



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Company Name: GHD Pty Ltd NEWCASTLE
Address: 3/24 Honeysuckle Dve
Newcastle
NSW 2300

Project Name: RICHMOND RIVER HIGH SCHOOL - HAZMAT
Project ID: 12640941

Order No.:
Report #: 1134584
Phone: 02 4979 9999
Fax: 02 4979 9988

Received: Aug 30, 2024 4:00 PM
Due: Sep 6, 2024
Priority: 5 Day
Contact Name: Oliver Hoschke

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - AS4964	Asbestos Absence / Presence	Asbestos Absence / Presence*	Lead (% w/w)
Sydney Laboratory - NATA # 1261 Site # 18217						X	X		X
Mayfield West Laboratory - NATA # 1261 Site # 25079								X	
External Laboratory									
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID				
1	28	Aug 27, 2024		Building Materials	X24-Se0000102			X	
2	FH1-P01	Aug 27, 2024		Paint	X24-Se0000103				X
3	FH1-P02	Aug 27, 2024		Paint	X24-Se0000104				X
4	FH2-A01	Aug 27, 2024		Building Materials	X24-Se0000105			X	
5	FH2-A02	Aug 27, 2024		Building Materials	X24-Se0000106			X	
6	FH2-A03	Aug 27, 2024		Building Materials	X24-Se0000107			X	
7	FH2-A04	Aug 27, 2024		Building Materials	X24-Se0000108			X	
8	FH2-A05	Aug 27, 2024		Building Materials	X24-Se0000109			X	
9	FH2-A06	Aug 27, 2024		Building	X24-Se0000110			X	



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Project ID: 12640941

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Due: Sep 6, 2024
Priority: 5 Day
Contact Name: Oliver Hoschke

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - AS4964	Asbestos Absence / Presence	Asbestos Absence / Presence*	Lead (% w/w)
Sydney Laboratory - NATA # 1261 Site # 18217						X	X		X
Mayfield West Laboratory - NATA # 1261 Site # 25079								X	
				Materials					
10	FH2-A07	Aug 27, 2024		Building Materials	X24-Se0000111			X	
11	FH2-A08	Aug 27, 2024		Building Materials	X24-Se0000112			X	
12	FH2-A09	Aug 27, 2024		Building Materials	X24-Se0000113			X	
13	FH2-A10	Aug 27, 2024		Building Materials	X24-Se0000114			X	
14	FH2-A11	Aug 27, 2024		Building Materials	X24-Se0000115			X	
15	FH2-A12	Aug 27, 2024		Building Materials	X24-Se0000116			X	
16	FH2-A13	Aug 27, 2024		Building Materials	X24-Se0000117			X	
17	FH2-A14	Aug 27, 2024		Building Materials	X24-Se0000118			X	
18	FH2-A15	Aug 27, 2024		Building Materials	X24-Se0000119			X	



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Project Name: RICHMOND RIVER HIGH SCHOOL - HAZMAT
Project ID: 12640941

Order No.:
Report #: 1134584
Phone: 02 4979 9999
Fax: 02 4979 9988

Received: Aug 30, 2024 4:00 PM
Due: Sep 6, 2024
Priority: 5 Day
Contact Name: Oliver Hoschke

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - AS4964	Asbestos Absence / Presence	Asbestos Absence / Presence*	Lead (% w/w)
Sydney Laboratory - NATA # 1261 Site # 18217						X	X		X
Mayfield West Laboratory - NATA # 1261 Site # 25079								X	
19	FH2-A16	Aug 27, 2024		Building Materials	X24-Se0000120			X	
20	FH2-A17	Aug 27, 2024		Building Materials	X24-Se0000121			X	
21	FH2-P01	Aug 27, 2024		Paint	X24-Se0000122		X		X
22	FH2-P02	Aug 27, 2024		Paint	X24-Se0000123		X		X
23	FH2-P03	Aug 27, 2024		Paint	X24-Se0000124		X		X
24	FH2-P04	Aug 27, 2024		Paint	X24-Se0000125		X		X
25	FH2-P05	Aug 27, 2024		Paint	X24-Se0000126		X		X
26	FH2-LD01	Aug 27, 2024		Wipes	X24-Se0000127	X			
27	FH2-LD02	Aug 27, 2024		Wipes	X24-Se0000128	X			
28	FH2-Blank	Aug 27, 2024		Wipes	X24-Se0000129	X			
Test Counts						3	23	23	7

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

Units

mg/kg: milligrams per kilogram	mg/L: milligrams per litre	ppm: parts per million
µg/L: micrograms per litre	ppb: parts per billion	%: Percentage
org/100 mL: Organisms per 100 millilitres	NTU: Nephelometric Turbidity Units	MPN/100 mL: Most Probable Number of organisms per 100 millilitres
CFU: Colony Forming Unit	Colour: Pt-Co Units (CU)	

Terms

APHA	American Public Health Association
CEC	Cation Exchange Capacity
COC	Chain of Custody
CP	Client Parent - QC was performed on samples pertaining to this report
CRM	Certified Reference Material (ISO17034) - reported as percent recovery.
Dry	Where moisture has been determined on a solid sample, the result is expressed on a dry weight basis.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
LOR	Limit of Reporting.
LCS	Laboratory Control Sample - reported as percent recovery.
Method Blank	In the case of solid samples, these are performed on laboratory-certified clean sands and in the case of water samples, these are performed on de-ionised water.
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC represents the sequence or batch that client samples were analysed within.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
SRA	Sample Receipt Advice
Surr - Surrogate	The addition of a similar compound to the analyte target is reported as percentage recovery. See below for acceptance criteria.
TBTO	Tributyltin oxide (<i>bis</i> -tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment; however, free tributyltin was measured, and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.
TCLP	Toxicity Characteristic Leaching Procedure
TEQ	Toxic Equivalency Quotient or Total Equivalence
QSM	US Department of Defense Quality Systems Manual Version 6.0
US EPA	United States Environmental Protection Agency
WA DWER	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC - Acceptance Criteria

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

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

Results <10 times the LOR:	No Limit
Results between 10-20 times the LOR:	RPD must lie between 0-50%
Results >20 times the LOR:	RPD must lie between 0-30%

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

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS. SVOCs recoveries 20 – 150%, VOC recoveries 50 – 150%

PFAS field samples containing surrogate recoveries above the QC limit designated in QSM 6.0, where no positive PFAS results have been reported or reviewed, and no data was affected.

QC Data General Comments

1. Where a result is reported as less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown are not data from your samples.
3. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore, laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
4. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery, the term "INT" appears against that analyte.
5. For Matrix Spikes and LCS results, a dash "-" in the report means that the specific analyte was not added to the QC sample.
6. Duplicate RPDs are calculated from raw analytical data; thus, it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Lead (% w/w)	%	< 0.01			0.01	Pass	

Comments

Sample Integrity

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

Qualifier Codes/Comments

Code	Description
M11	NATA/IANZ accreditation does not cover the performance of this service.

Authorised by:

Nileshni Goundar	Analytical Services Manager
Mickael Ros	Senior Analyst-Metal
Sayeed Abu	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](#).

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GHD Pty Ltd
3/24 Honeysuckle Dve
Newcastle
NSW 2300



NATA Accredited
Accreditation Number 1261
Site Number 25079

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

Attention: Oliver Hoschke
Report 1134589-AFC
Project Name **RICHMOND RIVER HS HAZMAT**
Project ID **12640941**
Received Date Aug 30, 2024
Date Reported Sep 03, 2024

METHODOLOGY:

Asbestos Sampling	Sampling as per the National Occupational Health & Safety Commission – Guidance Note on The Membrane Filter Method For Estimating Airborne Asbestos Fibres 2nd Edition [NOHSC:3003(2005)] and the NATA Specific Accreditation Criteria, ISO/IEC 17025 Application Document Life Sciences – Annex, Asbestos sampling and testing, Issued: March 2022.
Pump Calibration	Air sampling pump performance has been assessed in accordance with Australian Institute of Occupational Hygiene (AIOH) Technical Paper Air Sampling Pumps: Equipment Calibration Requirements. Pump flow rate measurement equipment (e.g. Field Rotameter) has been calibrated in accordance with AIOH Technical Paper Flow Measurement Equipment: Calibration Requirements.
Asbestos Counting	Fibre counting is conducted in accordance with the National Occupational Health & Safety Commission Guidance Note on the Membrane Filter Method For Estimating Airborne Asbestos Fibres 2nd Edition , [NOHSC:3003(2005)] (MFM) and supplementary work instruction in-house LTM-ASB-8010. Unless specifically noted, analysis is undertaken by approved analysts at the base facility. Fibre counts (Fibres/fields) are covered by the facility's NATA scope of accreditation. The requirements of the NATA Specific Accreditation Criteria, ISO/IEC 17025 Application Document Life Sciences – Annex, Asbestos sampling and testing, Issued: March 2022 are realised.

Project Name

Project ID

Date Sampled

Report

RICHMOND RIVER HS HAZMAT

12640941

Aug 27, 2024

1134589-AFC

Eurofins Sample No.	Client Sample ID	Pump ID	Location	Start (time)	End (time)	Start Flow Rate (L/min)	End Flow Rate (L/min)	Result (Fibres/Fields)	Result (Fibres/mL)
24-Se0000136	CW389555	GHD001		8:30	13:15	2.0	2.0	0/100	< 0.01
24-Se0000137	CW389931	GHD002		8:31	13:16	2.0	2.0	0/100	< 0.01
24-Se0000138	CW389593	GHD003		8:32	13:17	2.0	2.0	0/100	< 0.01
24-Se0000139	CW389586	GHD004		8:32	13:18	2.0	2.0	1/100	< 0.01
24-Se0000140	CW389545	--	FIELD BLANK	--	--	--	--	0/100	--

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-8010	Newcastle	Sep 02, 2024	Indefinite



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Received: Aug 30, 2024 4:00 PM
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Contact Name: Oliver Hoschke

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos Fibre Count & Concentration
Mayfield West Laboratory - NATA # 1261 Site # 25079						X
External Laboratory						
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID	
1	CW389555	Aug 27, 2024		Air	X24-Se0000136	X
2	CW389931	Aug 27, 2024		Air	X24-Se0000137	X
3	CW389593	Aug 27, 2024		Air	X24-Se0000138	X
4	CW389586	Aug 27, 2024		Air	X24-Se0000139	X
5	CW389545	Aug 27, 2024		Air	X24-Se0000140	X
Test Counts						5

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

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

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

Terms

%asbestos	Estimated percentage of asbestos in a given matrix may be derived from knowledge or experience of the material, informed by HSG264 <i>Appendix 2</i> , else assumed to be 15% in accordance with WA DOH <i>Appendix 2 (P_A)</i> . 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, <i>Asbestos: The Analysts Guide</i> , 2nd Edition (2021).
HSG264	UK HSE HSG264, <i>Asbestos: The Survey Guide</i> (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 Estimating. As described by the Australian Government National Occupational Health and Safety Commission, <i>Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres</i> , 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 to 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, <i>Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia</i> (updated 2021), including Appendix Four: <i>Laboratory analysis</i>
Weighted Average	Combined average %w/w asbestos content of all asbestos-containing finds in the given aliquot or total soil sample (% _{WA}).

Comments

Volume Measurement : , GHD Pty Ltd NEWCASTLE, has been trained by Eurofins and they conducted the sampling in accordance with the National Occupational Health & Safety Commission - Guidance Note on The Membrane Filter Method For Estimating Airborne Asbestos Fibres 2nd Edition [NOHSC:3003(2005)] methodology. Sampling pumps used by GHD Pty Ltd NEWCASTLE were calibrated by Eurofins Environment Testing and therefore volume measurements contained in this report are traceable back to Eurofins Environment Testing. Eurofins Environment Testing are responsible for all data contained in this report.

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:

Anita Weinberg Senior Analyst-Asbestos

Authorised by:

Bryce Keegan 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](#).

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Appendix C

Photographs



Photograph 1: Farmhouse 1 looking east



Photograph 2: Farmhouse 1 carport



Photograph 3: Farmhouse 1 southern shed



Photograph 4: Farmhouse 1 western shed



Photograph 5: Farmhouse 2 looking west



Photograph 6: rear of Farmhouse 2 looking south east



Photograph 1: Farmhouse 1 looking east



Photograph 2: Farmhouse 1 carport



Photograph 3: Farmhouse 1 southern shed



Photograph 4: Farmhouse 1 western shed



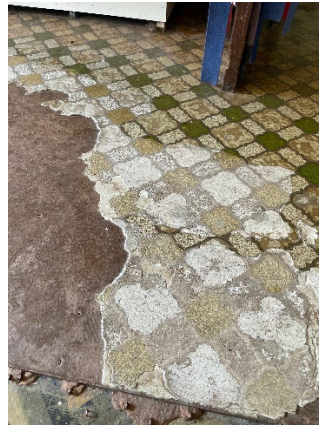
Photograph 5: Farmhouse 2 looking west



Photograph 6: rear of Farmhouse 2 looking south east



Photograph 7: Farmhouse 2 southern stairway and porch



Photograph 8: Farmhouse2 internal kitchen/dining area flooring (Friable asbestos detected)



Photograph 9: Farmhouse 2 hallway floor to bathroom (friable asbestos detected)



Photograph 10: Farmhouse 2 Shed



Photograph 11: Farmhouse 2 Dairy



Photograph 12: Farmhouse 2 Dairy – collapsed roof area



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