Hazardous Materials Survey Report

New High School for Medowie - 6 Abundance Road, Medowie NSW 2318

Prepared for: NSW Department of Education

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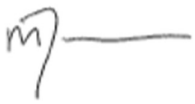

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Executive summary

ADE Consulting Group Pty Ltd (ADE) was engaged by Colliers International (NSW) Pty Ltd (Colliers) on behalf of the NSW Department of Education (DoE) to undertake a Hazardous Materials (HazMat) Survey of the above ground structures located at 6 Abundance Road, Medowie NSW 2318 (the 'site') as well as an external inspection of the ground surface within a localised area within the forested area in the southwest of the site.

Inspected areas within the Site, included:

- Residential building;
- Sheds adjacent the residential building;
- Shed located in the north of property; and
- Area with discarded household and building waste (southwestern forested area).

The inspection was commissioned to determine the presence / absence of hazardous materials.
The site inspection was undertaken on the 26th of November by Matthew Deegan, a NSW Licensed Asbestos Assessor (LAA001328) representing ADE. This report and appended Register represent the results of the inspection.

Eleven (11) representative samples were collected from the Site to determine the presence/absence of asbestos. A further one (1) sample of potential lead-based paint system was also collected. These were submitted to ALS laboratories, a National Association of Testing Authorities accredited laboratory, for analytical testing under chain of custody.

Summary of Positive Findings and Recommendations

Positive results for Asbestos Containing Material (ACM)

Location	Material	Risk score	Recommendation
Residential building, external ground floor, walls, throughout, Flat fibrous cement sheeting (FFCS)	Chrysotile Asbestos Detected (ASB01)	Medium	Remove prior to refurbishment or demolition.Air monitoring is not compulsory, but it is recommended during and after the removal. Asbestos waste must be disposed as hazardous special asbestos waste to an authorised asbestos waste facility. For further information refer to the SafeWork NSW Code of Practice: How to Safely Remove Asbestos (2022).
Residential building, external, gable ends, FFCS	Chrysotile and Amosite Asbestos Detected (ASB02)	Low	Remove prior to refurbishment or demolition.Air monitoring is not compulsory, but it is recommended during and after the removal. Asbestos waste must be disposed as hazardous special asbestos waste to an authorised asbestos waste facility.For further information refer to the SafeWork NSW Code of Practice: How to Safely Remove Asbestos (2022).

Positive results for Synthetic Mineral Fibres (SMF)

Location	Material	Risk score	Recommendation
Residential building, internal, ground floor, ceiling cavity, insulation batts	SMF fibres detected (ASB05)	Low	Encapsulate exposed sections under controlled SMF conditions and remove in accordance with The National Code of Practice for the Safe Use of Synthetic Mineral Fibres [NOHSC:2006(1990)]

Lead Containing Paint

External wall paint system sample returned a concentration of Lead less than 0.1 percent by weight of the dry film.

Lead containing dust (LCD)

No lead dust was found to be present.

Polychlorinated Biphenyls (PCB)

Fittings potentially containing polychlorinated biphenyls (PCBs) were not identified during the survey.

Ozone Depleting Substances (ODSs)

Ozone depleting substances (ODSs) were presumed / found to be present in the tabled location.

Location	Material	Risk score	Recommendation
Exterior, shed adjacent residential building decommissioned air-conditioning unit	Name plate, R22	Low	ODS in a system observed to be in sound condition and effectively sealed. No activity being conducted in the immediate area with the potential to disturb the material. Environmental risk is negligible if left undisturbed. ODS are to be removed and disposed of in accordance with the Australia and New Zealand Refrigerant Handling Code of Practice 2007 Part 1 – Self-Contained Low Charge System and the Australia New Zealand Refrigerant Handling Code of Practice 2007 Part 2 – Systems Other than Self-Contained Low Charge System.

Please read the inspection report and appended Register in its entirety, together with the limitations and restrictions within the body of this report. Specifically, the reader is referred to the Register wherein the energised installations which are presumed to contain asbestos are listed to be addressed at pre-demolition hazmat Removal works.

CONTENTS

1 Introduction

ADE Consulting Group Pty Ltd (ADE) was engaged by Colliers International (NSW) Pty Ltd (Colliers) on behalf of the NSW Department of Education (DoE) to undertake a Hazardous Materials (HazMat) Survey of the above ground structures located at 6 Abundance Road, Medowie NSW 2318 (the 'site') as well as an external inspection of the ground surface within a localised area in the southwest of the site. Inspected areas within the Site, included:

- Residential building;
- Sheds adjacent the residential building;
- Shed located in the north of property; and
- Area with discarded household and building waste (southwestern forested area).

The site inspection was undertaken on the 26th of November 2024 by Matthew Deegan, an NSW Licensed Asbestos Assessor LAA001328, representing ADE. Results are presented in this report at **Appendix A – Hazardous Building Materials Register** and photographs of the identified hazardous materials are found in **Appendix B**.

1.1 Background

This Destructive Hazardous Materials Inspection Report has been prepared to support a Review of Environmental Factors (REF) for the proposed New High School for Medowie (the activity). The purpose of the REF is to assess the potential environmental impacts of the activity prescribed by State Environmental Planning Policy (Transport and Infrastructure) 2021 (T&I SEPP) as "development permitted without consent" on land carried out by or on behalf of a public authority under Part 5 of the Environmental Planning and Assessment Act 1979 (EP&A Act). The activity is to be undertaken pursuant to Chapter 3, Part 3.4, Section 3.37A of the T&I SEPP.

1.2 Objective

The objective of the HazMat Survey was to identify and inspect the condition of hazardous building materials at the site, including the built structures and surface of the grounds of an isolated area in the southwest in the forested area where waste had been previously sighted.

For this report, hazardous material is limited to:

- Asbestos Containing Material (ACM)
- Synthetic Mineral Fibres (SMF)
- Lead Based Paint System (LCP)
- Lead containing Dust (LCD)
- Polychlorinated biphenyls (PCBs)
- Ozone Depleting Substances (ODS)

1.3 Scope of work

The scope of work included the following:

- Development of a site-specific Safety, Health & Environmental Work Method Statement prior to undertaking survey;
- Inspection of all targeted areas of potential concern at the site
- Inspection of the condition of identified materials suspected of containing asbestos
- Collection of eleven (11) representative samples for the presence / absence of asbestos
- Collection of one (1) representative sample for Lead in paint analysis
- Submission of the collected samples under Chain of Custody (CoC) conditions to ALS laboratories, a National Association of Testing Authority (NATA) accredited laboratory, for analysis
- Where suspected but inaccessible, asbestos materials were presumed to be present (e.g. where electrical hazards prevented safe sampling)
- Provision of recommendations for the removal of the hazardous materials identified or control measures/ strategies where the removal of such materials is not practicable, if demolition is not planned
- Preparation of a Hazardous Materials Register for the site to ensure compliance with the relevant legislation and Australian Standards for the demolition of structures.

1.4 Legislative Requirements

The survey inspection and production of this report with associated Register have been undertaken considering the requirements of:

- Work Health and Safety Regulation (2017)
- Work Health and Safety Act (2011)
- SafeWork NSW Code of Practice: Demolition Work (2019)
- SafeWork NSW Code of Practice: How to manage and control asbestos in the workplace (2022)
- SafeWork NSW Code of Practice: How to safely remove asbestos (2022)
- AS2601-2001 The demolition of structures
- AS4361.2-2017 Guide to Hazardous Paint Management, Part 2: Lead Paint in Residential, Public and Commercial Buildings
- NSW SafeWork information guide on the safe management of synthetic mineral fibres (SMF) – glass wool and rockwool
- *AS4874 – 2000 Guide to the Investigation of Potentially Contaminated Soil and Deposited Dust as a Source of Lead Available to Humans*
- *ANZECC (1997) Identification of PCB-containing Capacitors: An Information Booklet for Electricians and Electrical Contractors*
- Ozone Protection and Synthetic Greenhouse Gas (OSGG) Management Act 1989
- Ozone Protection and Synthetic Greenhouse Gas (OSGG) Management Regulations 1995
- National Environment Protection Measure Schedule B7, Derivation of Health Based Investigation Levels
- United Nations Environment Programmer's Division of Technology, Inventory of Trade Names of Chemical Product Containing Ozone Depleting Substances, and their Alternatives, 2001
- Queensland Department of Environmental and Heritage Protection, Guideline Waste Management, Managing Polychlorinated biphenyl 2016
- NSW SafeWork information guide on the safe management of synthetic mineral fibres (SMF) – glasswool and rockwool

- NSW SafeWork guide to handle refractory ceramic fibres
- Code of Practice for the Safe Handling of Equipment Containing Polychlorinated Biphenyls, Electrical Contractor's Associations of Australia 1993
- EPA Polychlorinated Biphenyl (PCB) chemical control order 1997
- EPA Waste Classification Guidelines Part 1.

1.5 Limitations - Access Restrictions and Areas Not Accessed

It is possible that potentially hazardous materials may have been concealed within restricted or inaccessible areas/voids at the time of this inspection. No survey can be guaranteed to locate all asbestos and other hazardous building materials at a Site. Demolition or refurbishment of site structures, cavities and enclosures may uncover hazardous materials such as asbestos, which were concealed or otherwise impractical to access during this assessment.
These areas may include:

- Inaccessible areas
- In set ceilings or wall cavities
- Areas only accessible by dismantling equipment or performing localised demolition works
- Inaccessible areas such as voids and cavities created and intimately concealed within the building structure (these voids are accessible during major demolition works).

To ensure results and findings' contextual integrity, this report must be read in its entirety and should not be copied, distributed or referred to in part only.

2 Site description

The site has a street address of 6 Abundance Road, Medowie. It is 6.51ha in area, and comprises 1 allotment, legally described as Lot 3 in DP788451.

A large proportion of the site is currently unused and vacant. A small shed structure and caravan are located adjacent to the northern boundary. A cluster of buildings including a single storey dwelling, an outhouse/shed structure and temporary greenhouse are located within the south eastern corner. The site contains a largely vegetated area to the south west corner. The site is relatively flat with a gradual fall from west to east toward Abundance Road. The site has a primary frontage to Abundance Road to the east and Ferodale Road to the north. Abundance Road and Ferodale Road are both classified Local Roads. Medowie Road, approximately 1km east of the site, is a classified Regional Road.

The area surrounding the site mostly consists of industrial, rural residential, educational, and agricultural lands. Adjacent to the north western boundary is a petrol station (Pearl Energy) and mechanic garage. Adjacent to the north eastern boundary is a medical health clinic. Across Abundance Road along the eastern boundary are a number of warehouse and light industrial developments. Directly north of the site across Ferodale Road are large lots used for agricultural purposes. Medowie Public School is located on Ferodale Road, to the north west of the site, opposite the petrol station.

Site locality is presented in **Figure 1**. Details of site structures and inspected areas are presented in **Figure 2**.

Table 1 Summary of the Site Information

Site Details	
Client	NSW Department of Education
Site Address	6 Abundance Road, Medowie,, NSW 2318
Site Area	6.51 ha
Title Identification	Lot 3 in DP788451
Date of Inspection	26th November, 2024
Inspected Areas	6 Abundance Road, Medowie, NSW 2318: • Residential building; • Shed adjacent residential building. • Shed located in the Northeast of property; and • Waste sighted to the southwest of paddocks/bushland within Site

Legend

Approximate Site Boundary

0 100 m 200 m

Produced by **Datanest.earth**

Title: Site locality		
Client: SINSW		Size: A3
Project: 24.0124 SINSW Medowie	Drawn: KA	Figure No.: 1
Date: 19-04-2024	Checked: SG	
Proj No: A101024.0124	Scale: 1:7800	Version: draft

Legend

- Residential building and adjoining sheds
- Northern shed
- Discarded household and building waste
- Approximate Site Boundary

0 25 m 50 m

Produced by **Datanest.earth**

Title: Site features - Hazardous Materials Survey		
Client: SINSW		Size: A3
Project: 24.0124 SINSW Medowie	Drawn: KA	Figure No.: 2
Date: 25-11-2024	Checked: MD	
Proj No: A101024.0124	Scale: 1:1700	Version: draft

3 Survey methodology

3.1 Sampling strategy

Hazardous Building Materials surveys are performed using a risk assessment approach in agreement with the legal regulations and current Codes of Practice.

The hazmat consultant performed a visual inspection within all accessible areas to identify hazardous building materials. When the hazmat consultant suspected a building material potentially containing a hazard, a sample of the material was collected and forwarded under chain of custody to a NATA accredited laboratory for the required analysis. Where identical suspected asbestos or Lead containing materials were detected at different locations, visual confirmation is used over the collection of additional samples. The following observations were recorded at the time of the inspection:

- Location
- Description
- Quantity
- Quality
- Condition.

Noted were visually observed SMF, PCB containing fixtures (eg. lighting exciters/capacitors/ballasts) and ozone depleting substances (eg. air conditioner refrigerants) and their management for removal-deconstruction.

ADE understand that all identified hazardous building materials will become accessible during the pre-demolition or refurbishment works.

Additionally, visual inspection of the area to the southwest if the Site was completed during the inspection of the 26th of November 2024 to assess the potential for any asbestos in the waste material isolated at that location.

3.2 Hazardous building materials identification Protocol

3.2.1 Asbestos Containing Materials (ACM)

Following visual inspection, the hazmat consultant collected samples of the suspected asbestos containing materials. These samples were forwarded under CoC to a NATA accredited laboratory for identification analysis. The laboratory certificate of analysis (herein Appendix C) provided the results in regards of the presence or absence of asbestos and, where positive, the type of asbestos.

Dust is not sampled and analysed for asbestos unless a deteriorated asbestos source is suspected above or within close proximity.

3.2.2 Synthetic Mineral Fibres (SMF) containing materials

The Code of Practice for Safe Use of Synthetic Mineral Fibres [NOHSC:2006(1990)] is currently archived. The current guidelines to consult for the management of SMF are:

- NSW SafeWork information guide on the safe management of synthetic mineral fibres (SMF) – glass wool and Rockwool; and
- NSW SafeWork guide to handling refractory ceramic fibres.

Synthetic Mineral Fibres is a term to describe a fibrous product artificially manufactured from mineral raw materials into a fibrous "Woolen" product used for insulation. SMF can be classified into three groups: Glasswool, Rockwool and Refractory Ceramic Fibres (RCF).

Glasswool is manufactured by melting glass into a fibrous "wool", and Rockwool is manufactured by melting volcanic rock into fibrous "wool". Glasswool and rockwool are used as thermal, acoustic and electrical insulation in many materials in buildings. Refractory ceramic fibres (RCF) are made from Kaolin and are used in industrial sites for high-performance thermal insulation in furnaces, kilns and industrial heaters. RCF is not likely to be present in commercial sites, residential premises or public buildings. Therefore, in this hazmat survey, SMF refers to glasswool and rockwool materials only.

The hazmat consultant visually inspected the suspected SMF containing materials and documented these during the inspection and within the report.

No dust samples are collected for SMF identification. However, positive SMF fibres in dust may be revealed from laboratory results for asbestos in dust identification analysis. SMF fibres in dust are understood to be friable SMF.

3.2.3 Lead Based Paint

Paint sampling was undertaken as per the methodology described in Appendix A of AS/NZS 4361.2:2017 and submitted to a NATA accredited testing laboratory under CoC. The AS4361.2 (2017) Guide to Hazardous Paint Management, Part 2: Lead Paint in Residential, Public and Commercial Buildings defines Lead paint in which the Lead content (calculated as Lead metal) is greater than 0.1 percent by weight of the dry film.

Dust is not sampled and analysed for Lead unless a degraded Lead source is suspected above or within close proximity.

3.2.4 Polychlorinated biphenyls (PCBs)

The inspection sought also to identify the fittings such as fluorescent batten lights which may have ballast/excitor/transformer that may contain PCBs for segregation, intact, and separate, appropriate disposal.

2.2.5 Ozone Depleting Substances (ODS)

Ozone Depleting Substances were identified within an air conditioner. ODS are to be removed and disposed in accordance with the *Australia and New Zealand Refrigerant Handling Code of Practice 2007 Part 1 – Self-Contained Low Charge System and the Australia New Zealand Refrigerant Handling Code of Practice 2007 Part 2 – Systems Other than Self-Contained Low Charge System*.

3.3 Hazardous Building Materials Definitions

Friable asbestos: Asbestos-containing material that breaks and crumbles by hand pressure.

Friable asbestos in good condition: Friable asbestos within a fully sealed enclosure in good condition. For example, asbestos-containing insulation inside a fire door is the fire door in good condition.

Friable asbestos in fair condition: Friable asbestos within an enclosure fair condition or partially sealed. For example, asbestos-containing insulation inside a fire door is the fire door broken in small areas or asbestos-containing fuses being the fuses in good condition.

Friable asbestos in poor condition: Exposed friable asbestos. For example, loose asbestos insulation or loose woven materials, dust containing asbestos fibres, asbestos-containing insulation inside a fire door being the door heavily damaged and exposing the insulation.

Non-friable (bonded) asbestos: Asbestos-containing material that is mixed and bonded within a matrix with other materials.

Non-friable asbestos in good condition: Asbestos-containing materials within a bonded matrix in good condition. For example, unbroken asbestos-containing compressed cement sheeting.

Non-friable asbestos in fair condition: Asbestos-containing materials within a bonded matrix in fair condition. For example, asbestos-containing compressed cement sheeting with cracks and broken edges.

Non-friable asbestos in poor condition: Asbestos-containing materials within a bonded matrix in poor condition. For example, asbestos-containing compressed cement debris.

Friable SMF: Unbonded glasswool and rockwool insulation with no adhesives, loose material packed into a package. Friable SMF can be packed loose and mixed with adhesives during installation. There are three main types of unbonded glasswool and rockwool materials:

- wet spray: Where glasswool and rockwool SMF fibres are mixed with cement and sprayed as fire protection in multi-storey buildings
- loose-fill: Where the glasswool and rockwool SMF material is sprayed into ceiling and cavity spaces of buildings and
- dry spray: When the glasswool and rockwool SMF densely packed material is blown dry into a closed stud cavity. This method should only occur where the target area is enclosed to prevent the release of loose fibres. For example, SMF dry sprayed in wall cavities and loose-fill insulation retrofit.

Friable SMF in good condition: Friable glasswool and rockwool SMF insulation within an enclosure in good condition. For example, SMF insulation pillows being the pillowcases in good condition.

Friable SMF in fair condition: Friable glasswool and rockwool SMF insulation within an enclosure fair condition. For example, SMF insulation pillows being the pillowcases broken in small areas. Also, wet sprayed SMF insulation.

Friable SMF in poor condition: Exposed friable glasswool and rockwool SMF insulation. For example, dust containing SMF fibres, Friable glasswool and rockwool SMF insulation within a heavily damaged enclosure exposing the insulation.

Non-friable SMF: Bonded glasswool and rockwool SMF insulation containing binding agents such adhesives or cement that have been cured in the manufacturing process prior to packaging, delivery and installation.

Bonded glasswool and rockwool SMF insulation have a specific shape such as in a batt or blanket form or as compressed boards. The presence of binding agents is that they significantly reduce fibre release during handling.

Non-friable SMF in good condition: Bonded glasswool and rockwool SMF insulation batts or blankets that keeps its form.

Non-friable SMF in fair condition: Bonded glasswool and rockwool SMF insulation batts or blankets that show some minor deterioration due to age.

Non-friable SMF in poor condition: Bonded glasswool and rockwool SMF insulation batts or blankets that show major deterioration due to age.

Lead-based paint: Lead-based paint defined as paint with >0.1%w/w of lead, as per *AS 4361.2 (2017) Guide to Hazardous Paint Management, Part 2: Lead Paint in Residential, Public and Commercial Buildings;[8].*

Lead-based paint in good condition: Lead-based painted surfaces that show no damage or deterioration signs. Stable paint system.

Lead-based paint in fair condition: Lead-based painted surfaces that show minor damage such as flaking or delamination in small areas.

Lead-based paint in poor condition: Lead-based painted surfaces that shows major damage on most of the surface area.

Lead containing dust: Lead containing dust requiring further health investigation established as lead with >1500 mg/kg, as per *the National Environment Protection Measure Schedule B7, Derivation of Health Based Investigation Levels.*

Polychlorinated biphenyls (PCB) containing capacitors: PCB containing capacitors listed in *ANZECC (1997) Identification of PCB-containing Capacitors: An Information Booklet for Electricians and Electrical Contractors;*[10]. Also, capacitors with the year of manufacture (YOM) before 1986 without sticker for PCB status as per described in *Queensland Department of Environmental and Heritage Protection, Guideline Waste Management, Managing Polychlorinated biphenyl 2016[15].*

Polychlorinated biphenyls in good condition: PCB containing capacitors showing no leaks of the oil content.

Polychlorinated biphenyls in poor condition: Leaking PCB containing capacitors.

Ozone Depleting Substances: Chlorofluorocarbons, Hydrochlorofluorocarbons, Hydrofluorocarbons, Fluorinated gases, Halons and Hydrobromofluorocarbons refrigerant and extinguisher gases listed in the *United Nations Environment Programmer's Division of Technology, Inventory of Trade Names of Chemical Product Containing Ozone Depleting Substances, and their Alternatives, 2001;[14] and Ozone Protection and Synthetic Greenhouse Gas (OSGG) Management Act 1989;[11].* Referred by the Australia Government Department of the Environment and Energy.

3.4 Risk descriptors and Priority Rating

The descriptors listed below are used to evaluate the risk to human health for the suspected hazardous materials within the built environment observed during the survey and confirmed in the analysis of samples.

3.4.1 Asbestos

Table 2 Asbestos Risk Descriptors

Type	Condition		
	Good	Fair	Poor
Friable asbestos	Medium	High	High
Non-friable asbestos (bonded)	Low	Medium	High
No Asbestos Detected (NAD)	Negligible	Negligible	Negligible

3.4.2 Synthetic Mineral Fibres

Table 3 SMF Risk Descriptors

Type	Accessible			Inaccessible		
	Condition			Condition		
	Good	Fair	Poor	Good	Fair	Poor
Friable SMF	Low	Low	Medium	Low	Low	Low
Non-Friable SMF (bonded)	Low	Low	Low	Low	Low	Low
No SMF Detected	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible

3.4.3 Lead Based Paint or Industrial (heavy metal containing) paint

Table 4 Lead Based Paint Risk Descriptors

Type	Accessible			Inaccessible		
	Condition			Condition		
	Good	Fair	Poor	Good	Fair	Poor
Lead-based paint (>0.1%w/w Lead)	Low	Medium	High	Low	Low	Medium
Non-Lead based paint (=<0.1%w/w Lead)	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible

3.4.4 Ozone Depleting Substances

Table 5 Ozone Depleting Substances Risk Descriptors

Type	Accessible			Inaccessible		
	Condition			Condition		
	Good	Fair	Poor	Good	Fair	Poor
Ozone depleting substances detected	Low	Medium	High	Low	Low	Medium

4 Findings

The assessment and finding of asbestos and SMF had an action score assigned. The action score was based according to the Hygienist LAA's assessment of the material and pre-demolition intent. The location of items presumed to contain asbestos, but unable to be sampled and positively identified, are listed in the Register at Appendix A. The sampled paint system did not contain Lead above 0.1%wt dry film and requires no particular attention, while the management of the ODSs is described below.

5 Recommendations

Recommendations for Asbestos

Risk score	Hazmat material	Recommended Action
Low	Non-Friable Asbestos	Remove prior to refurbishment or demolition. If the amount of non-friable asbestos containing material is greater than 10 square metres (m2), removal must be performed by a Class A or Class B licensed asbestos removal contractor who must notify SafeWork Australia.
Medium	Non-Friable Asbestos	Remove external walls (represented by positive sample ASB02) and gable ends (positive sample ASB01) prior to refurbishment or demolition. If the amount of non-friable asbestos containing material is greater than 10 square metres (m^2), removal must be performed by a Class A or Class B licensed asbestos removal contractor who must notify SafeWork Australia. Air monitoring is not compulsory, but it is recommended during and after the removal. Asbestos waste must be disposed as hazardous special asbestos waste to an authorized asbestos waste facility. Clearance is required following the removal of greater than 10 square metres (m^2) of non-friable asbestos containing material

Recommendations for SMF

Risk score	Hazmat material	Recommended Action
Low	Non-Friable SMF	Remove ceiling cavity insulation batts (sampled as ASB05) prior to refurbishment or demolition as a preventive action to minimise the generation of fibres and dust during refurbishment or demolition works. A hazardous materials removal contractor can perform the removal. SafeWork Australia does not need to be notified. Air monitoring is not necessary. The material can be disposed as a general waste construction. Clearance is not required. For further information refer to the NSW SafeWork information guide on the safe management of synthetic mineral fibres (SMF) – glass wool and Rockwool.

Recommendations for Ozone Depleting Substances

Refrigerant, chlorodifluoromethane, R22, is being phased out due to its impact on the ozone layer. It was on the name plate of the unit in the shed. A Refrigerant Handling Licence is required to decant refrigerant, manufacture, install, commission, and service equipment, irrespective of whether or not a controlled refrigerant is present and covers decommissioning or disposal of equipment containing controlled refrigerant.

Risk score	Hazmat material	Recommended Action
Low	ODS	R22 ODS in a system observed to be in sound condition and effectively sealed. No activity being conducted in the immediate area with the potential to disturb the material. Environmental risk is negligible if left undisturbed. ODS are to be removed and disposed of in accordance with the Australia and New Zealand Refrigerant Handling Code of Practice 2007 Part 1 – Self-Contained Low Charge System and the Australia New Zealand Refrigerant Handling Code of Practice 2007 Part 2 – Systems Other than Self-Contained Low Charge System.

5.1 Mitigation Measures

Potential project risks associated with the removal of hazardous materials listed in section 1.2.

Potential Risk	Mitigation measure
Unexpected finds during demolition work	Works cease pending further sampling if materials suspected of containing asbestos or unknown hazardous materials are encountered.

6 Statement of Limitations

This report has been prepared in accordance with the agreement between the Client and ADE Consulting Group Pty Ltd. Within the limitations of the agreed upon scope of services, this work has been undertaken and performed in a professional manner, in accordance with generally accepted practices, using a degree of skill and care ordinarily exercised by members of their profession and consulting practice. No other warranty is expressed, implied, made or intended.

This report is solely for the use of the Client and any reliance on this report by third parties shall be at such party's sole risk as it may not contain sufficient information for purposes of other parties or for other uses. This report shall only be presented in full and may not be used to support any other objectives than those set out in the report, except where written approval with comments is provided by ADE Consulting Group Pty Ltd.

The following should also be noted:

While the inspection has attempted to locate the listed hazardous materials, the survey was a visual inspection and sampling process. Only those hazardous materials that were physically accessible could be located and identified. Therefore, it is possible that materials, which may be concealed within inaccessible areas/voids, may not have been located during the inspection. Such inaccessible areas fall into a number of categories:

- In set ceilings or wall cavities;
- Those areas accessible only by dismantling equipment or performing minor localised demolition works;
- Totally inaccessible areas such as voids and cavities created and intimately concealed within the building structure (these voids are only accessible during major demolition works); and
- Height restricted areas.

Destructive surveying and sampling techniques were employed to gain access to those areas listed above where reasonably practicable and safe to do so. Without substantial demolition of the built structure, and in the case of asbestos in the grounds the disturbance of the ground surface, it is not possible to guarantee that every source of asbestos has been detected.

This report is not intended to be used for the purposes of tendering, programming of works, refurbishment works, or demolition works unless used in conjunction with a specification detailing the extent of the works. To ensure its contextual integrity, the report must be read in its entirety and should not be copied, distributed or referred to in part only.

This report expressly excludes radioactive and other chemicals. It is limited to the hazardous materials identified in Section 1.2.

Appendix A - Hazardous Building Materials Register

Destructive Hazardous Materials Inspection Report **Site Address:** 6 Abundance Road, Medowie NSW 2318
Occupational Hygienist: Matthew Deegan **Inspection Date:** 26th November 2024 **Re-inspection Date: N/A**

Location				Material	Material Identification					Risk Assessment			Risk Management	
Internal / External	Level	Room	Material Type Description	Type of Hazmat	Quantity	Units	Photo Number	Sample Number	Analytical Results	Friability	Accessibility	Condition	Risk Score	Control Recommendations / Comments
External	Ground floor	Southern aspect	Presume electrical fuses	Asbestos	4	Units	2	Visual inspection - unable to sample due to electrical hazard	Assumed asbestos containing materials	Non-friable	Accessible	Good	Low	Remove prior to refurbishment or demolition. If the amount of non-friable asbestos containing material is greater than 10 square metres (m2), removal must be performed by a Class A or Class B licensed asbestos removal contractor who must notify SafeWork Australia.
External	Ground floor	Southern aspect	Electrical backing board	Asbestos	1	unit	2	Visual inspection - unable to sample due to electrical hazard	Assumed asbestos containing materials	Non-friable	Accessible	Good	Low	Remove prior to refurbishment or demolition. If the amount of non-friable asbestos containing material is greater than 10 square metres (m2), removal must be performed by a Class A or Class B licensed asbestos removal contractor who must notify SafeWork Australia.
External	Ground floor	External, Walls throughout	Flat fibrous cement sheeting	Asbestos	80	m2	3	ASB01	Chrysotile asbestos detected	Non-friable	Accessible	Fair	Medium	Remove prior to refurbishment or demolition. If the amount of non-friable asbestos containing material is greater than 10 square metres (m2), removal must be performed by a Class A or Class B licensed asbestos removal contractor who must notify SafeWork Australia. For further information refer to section 4.
External	Ground floor	External, gable ends, throughout	Flat fibrous cement sheeting	Asbestos	30	m2	4	ASB02	Chrysotile and amosite asbestos detected	Non-friable	Accessible	Fair	Low	Remove prior to refurbishment or demolition. If the amount of non-friable asbestos containing material is greater than 10 square metres (m2), removal must be performed by a Class A or Class B licensed asbestos removal contractor who must notify SafeWork Australia.

Location				Material	Material Identification					Risk Assessment			Risk Management	
Internal / External	Level	Room	Material Type Description	Type of Hazmat	Quantity	Units	Photo Number	Sample Number	Analytical Results	Friability	Accessibility	Condition	Risk Score	Control Recommendations / Comments
External	Ground floor	External, throughout	Grey paint systems	Lead paint	100	m2	5	Pb01	0.00125% (w/w)	N/A	Accessible	Good	Negligible	Lead content below 0.1% (w/w) . No further action required.
External	Ground floor	Northern aspect	Air conditioning unit, Insulation	Synthetic Mineral Fibres	1	Unit	6	-	Assumed to contain synthetic mineral fibres	N/A	Non-accessible	Good	Negligible	Maintain in current condition if to remain in-situ. Remove in accordance with The National Code of Practice for the Safe Use of Synthetic Mineral Fibres [NOHSC:2006(1990)].
External	Ground floor	Eaves, throughout	Flat fibrous cement sheeting	Asbestos	20	m2	8	ASB03	No asbestos detected.	Non friable	Accessible	Good	Negligible	No asbestos detected. No further action required.
Internal	Ground floor	Kitchen, sheeting adjacent oven	Flat fibrous cement sheeting	Asbestos	2	m2	9	ASB04	No asbestos detected.	Non friable	Accessible	Good	Negligible	No asbestos detected. No further action required.
Internal	Ground floor	Ceiling cavity	Insulation batts	Asbestos	80	m2	10	ASB05	No asbestos detected.	Non friable	Accessible	Good	Negligible	No asbestos detected. No further action required.
Internal	Ground floor	Ceiling cavity	Insulation batts	Synthetic Mineral Fibres	80	m2	10	ASB05	Synthetic Mineral Fibres Detected	N/A	Non-accessible	Good	Low	Maintain in current condition if to remain in-situ. Remove in accordance with The National Code of Practice for the Safe Use of Synthetic Mineral Fibres [NOHSC:2006(1990)].
Internal	Ground floor	Bathroom, walls	Flat fibrous cement sheeting	Asbestos	10	m2	11	ASB06	No asbestos detected.	Non friable	Accessible	Good	Negligible	No asbestos detected. No further action required.
Internal	Ground floor	Bathroom, shower	moulded fibrous cement.	Asbestos	1	Unit	-	ASB07	No asbestos detected.	Non friable	Accessible	Good	Negligible	No asbestos detected. No further action required.

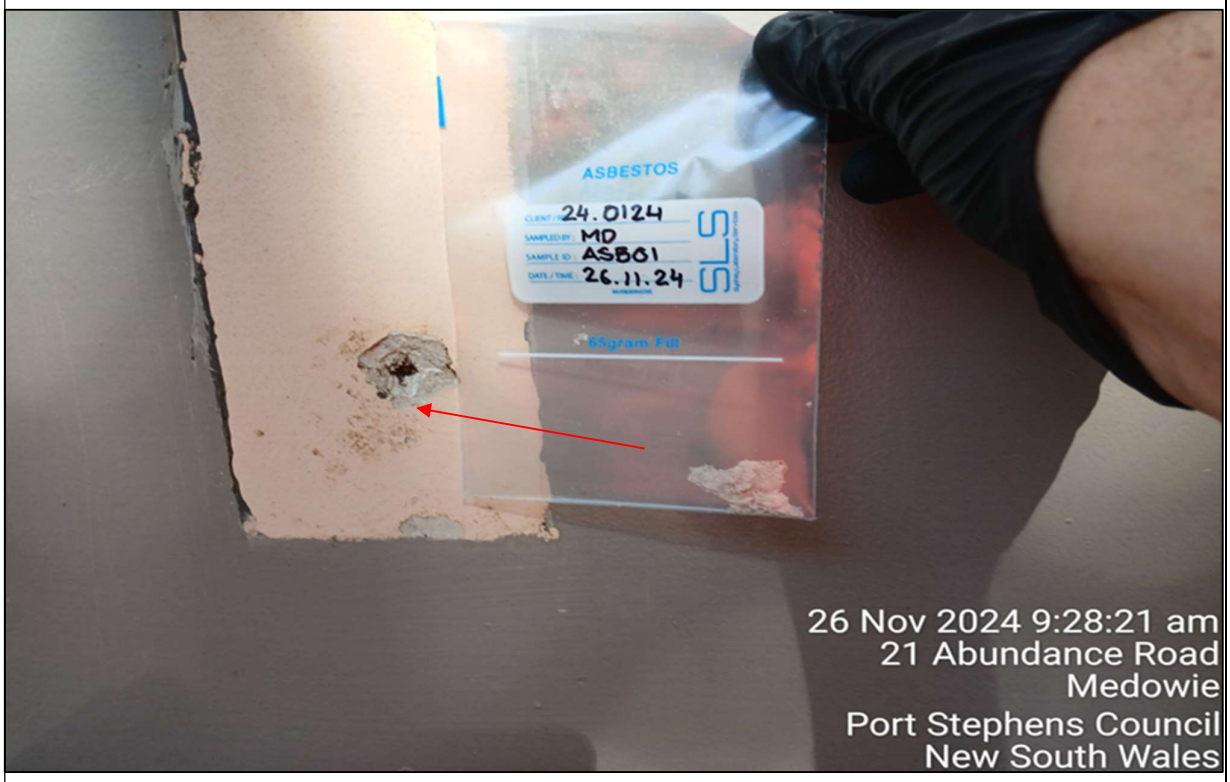
Location				Material	Material Identification					Risk Assessment			Risk Management	
Internal / External	Level	Room	Material Type Description	Type of Hazmat	Quantity	Units	Photo Number	Sample Number	Analytical Results	Friability	Accessibility	Condition	Risk Score	Control Recommendations / Comments
Internal	Ground floor	Laundry	Hot water system unit insulation	Synthetic Mineral Fibres	1	Unit	12	-	Assumed to contain synthetic mineral fibres	N/A	Non-accessible	Good	Negligible	Maintain in current condition if to remain in-situ. Remove in accordance with The National Code of Practice for the Safe Use of Synthetic Mineral Fibres [NOHSC:2006(1990)].
Internal	Ground floor	Laundry, walls	Flat fibrous cement sheeting	Asbestos	10	m2	13	ASB08	No asbestos detected.	Non friable	Accessible	Good	Negligible	No asbestos detected. No further action required.
Internal	Ground floor	Laundry, ceiling	Flat fibrous cement sheeting	Asbestos	5	m2	14	ASB09	No asbestos detected.	Non friable	Accessible	Good	Negligible	No asbestos detected. No further action required.
External	Ground floor	Rear access, ceiling lining	Flat fibrous cement sheeting	Asbestos	2	m2	15	ASB10	No asbestos detected.	Non friable	Accessible	Good	Negligible	No asbestos detected. No further action required.
External	Ground floor	Northern aspect	Air conditioning unit, Insulation	Synthetic Mineral Fibres	1	Unit	6	-	Assumed to contain synthetic mineral fibres	N/A	Non-accessible	Good	Negligible	Maintain in current condition if to remain in-situ. Remove in accordance with The National Code of Practice for the Safe Use of Synthetic Mineral Fibres [NOHSC:2006(1990)].
External	Ground floor	Residence, stand alone shed	Air conditioning unit, Insulation	Synthetic Mineral Fibres	1	Unit	17	-	Asumed to contain synthetic mineral fibres	N/A	Non-accessible	Good	Negligible	Maintain in current condition if to remain in-situ. Remove in accordance with The National Code of Practice for the Safe Use of Synthetic Mineral Fibres [NOHSC:2006(1990)].

Location				Material	Material Identification					Risk Assessment			Risk Management	
Internal / External	Level	Room	Material Type Description	Type of Hazmat	Quantity	Units	Photo Number	Sample Number	Analytical Results	Friability	Accessibility	Condition	Risk Score	Control Recommendations / Comments
External	Ground floor	Residence, stand alone shed	Air conditioning unit, Refrigerant	Ozone depleting substances	1	kg	17	-	Refrigerant R22 classified as an ozone depleting substance.	N/A	Non-accessible	Good	Low	ODS in a system observed to be in sound condition and effectively sealed. No activity being conducted in the immediate area with the potential to disturb the material. Environmental risk is negligible if left undisturbed.
External	Site ground surface (localised)	32.74236S 1518539E	Pipe lining	Asbestos	1	Unit	19	ASB11	No asbestos detected.	Non-friable	Accessible	Good	Negligible	No asbestos detected. No further action required.

Appendix B - Photographs

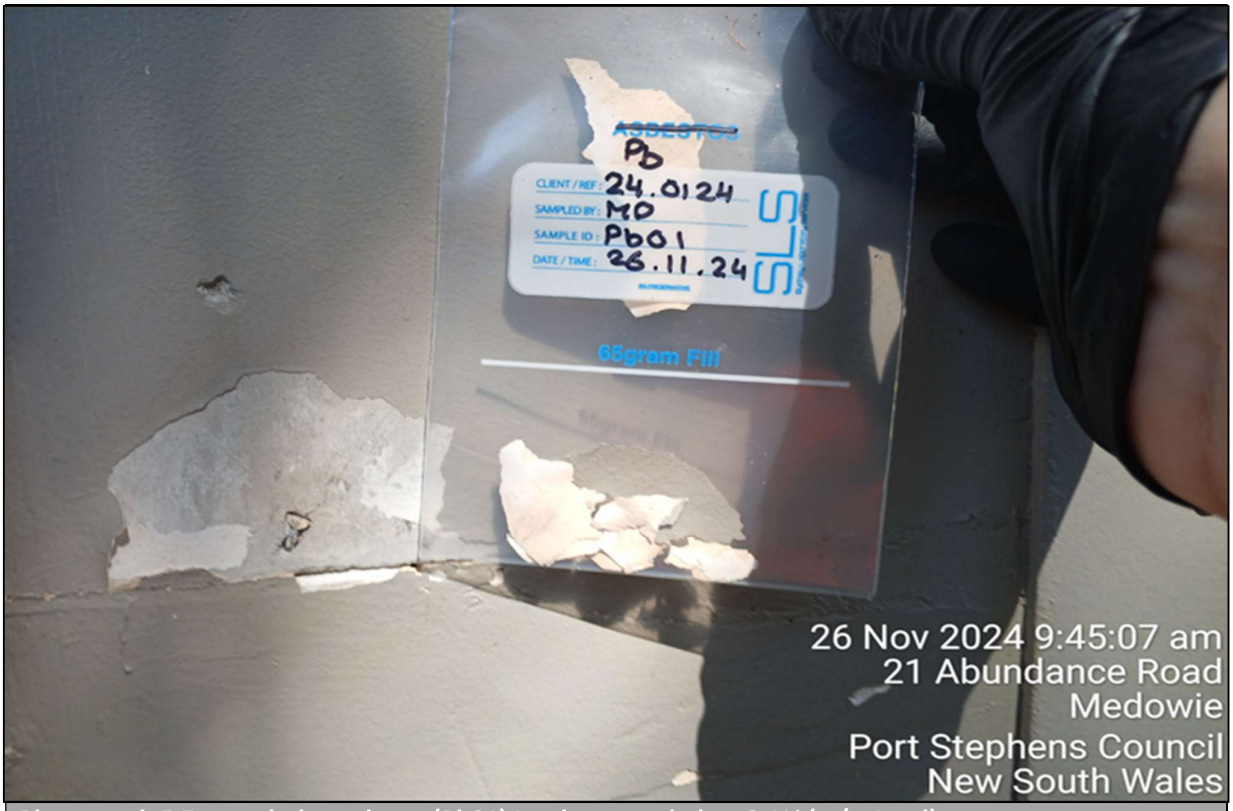
Photograph 1. 6 Abundance Road, Medowie NSW 2318, eastern aspect on 26/11/2024.

Photograph 2. Electrical backing board, assumed asbestos containing materials



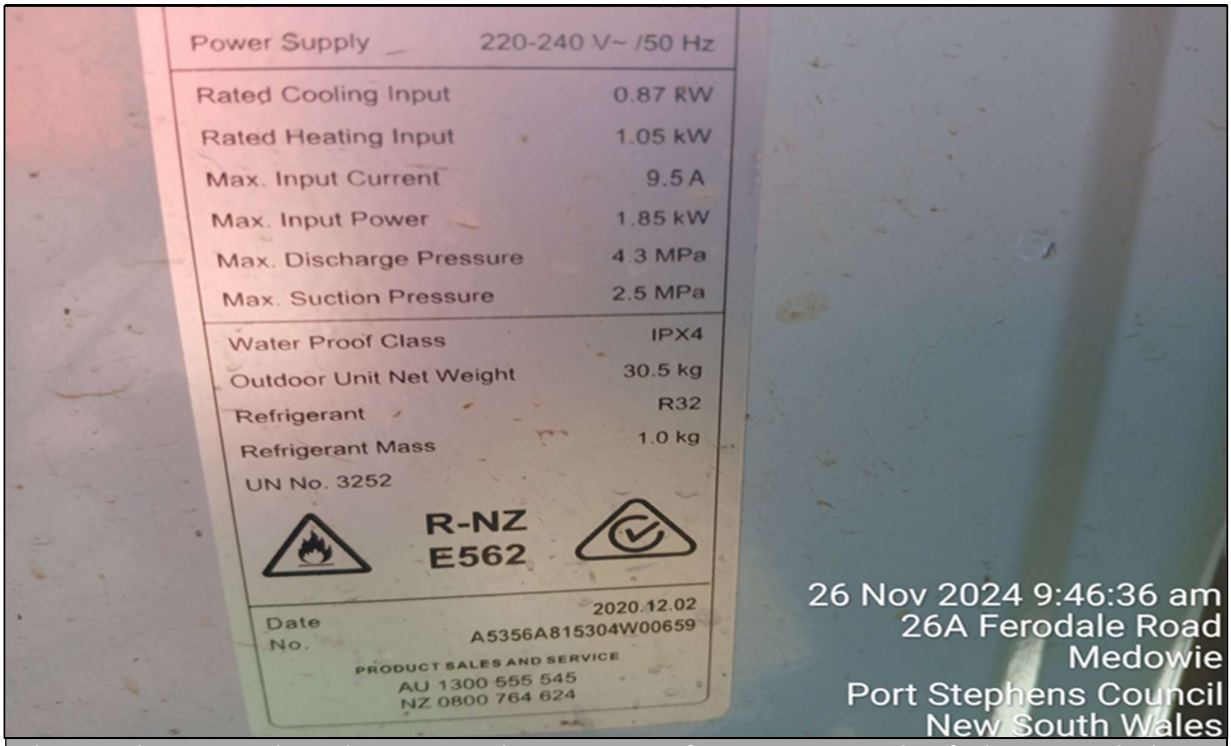
Photograph 3. External, Walls throughout (ASB01) Chrysotile asbestos detected

Photograph 4. External, gable ends, throughout (ASB02), Chrysotile and Amosite asbestos detected

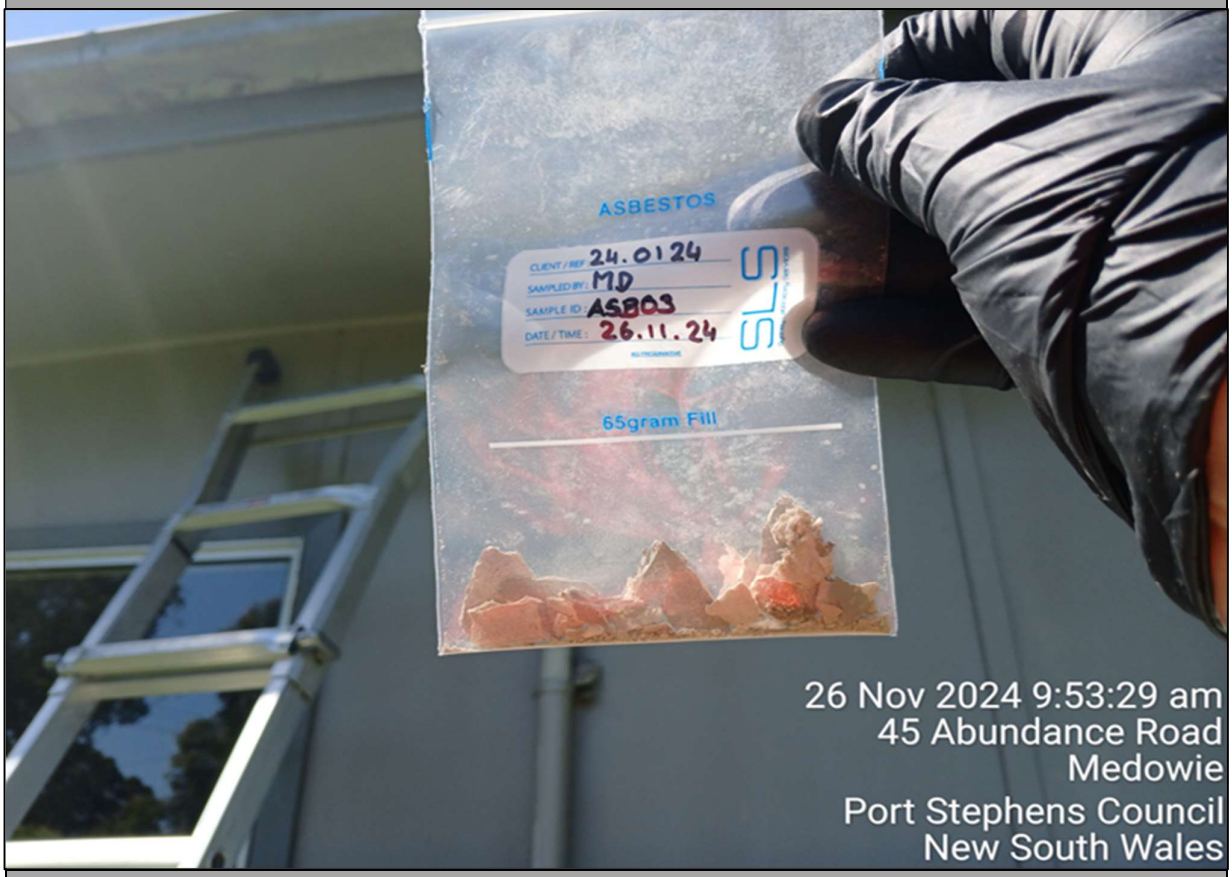


Photograph 5 External, throughout. (Pb01) Lead content below 0.1% (w/w Lead)

Photograph 6. Air conditioning unit, Insulation, assumed to contain SMF



Photograph 7. External, residence, Airconditioning unit, refrigerant R32 not classified as ozone depleting substance.



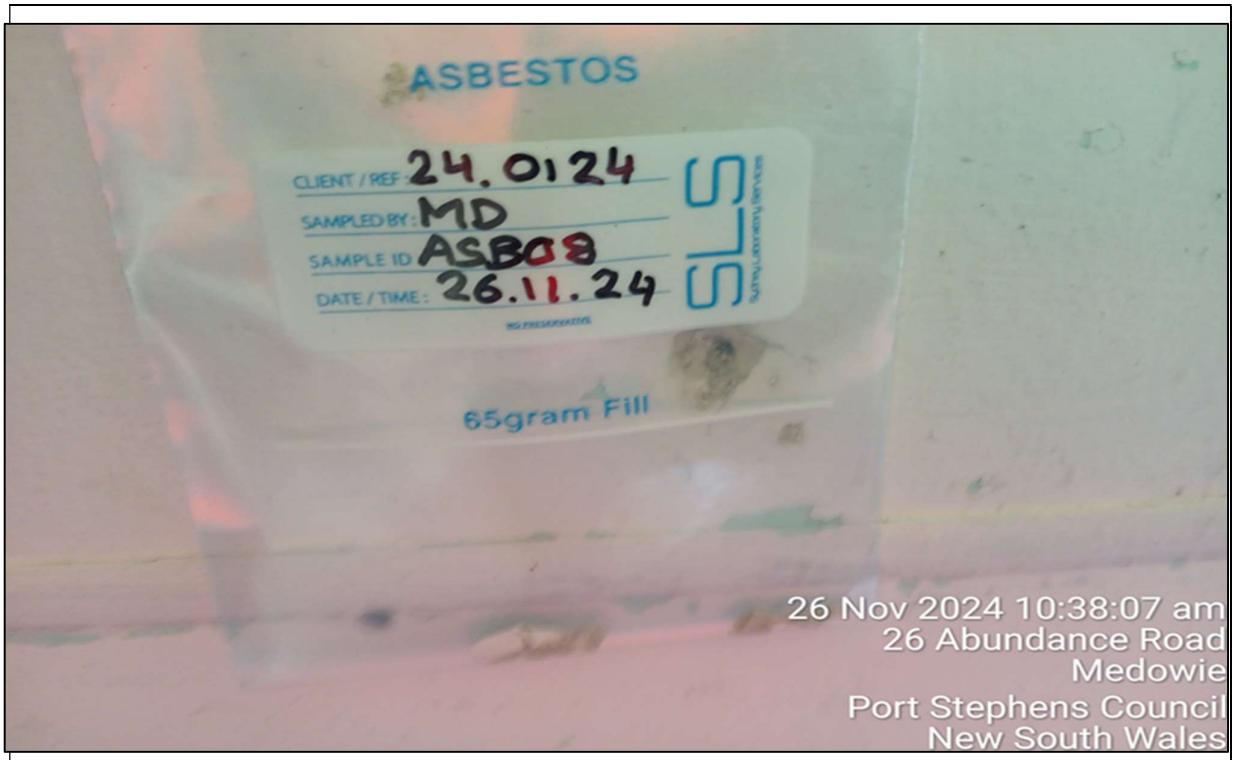
Photograph 8. Eaves, throughout (ASB03) No asbestos detected.

Photograph 9. Kitchen, sheeting adjacent oven (ASB04). No asbestos detected.

Photograph 10. Ceiling cavity, Insulation batts, (ASB05) SMF Detected

Photograph 11. Bathroom, walls. (ASB06). No asbestos detected

Photograph 12. Laundry, Hot water system unit insulation. assumed to contain synthetic mineral fibres



Photograph 13. Laundry, walls. (ASB08) No asbestos detected**.**

Photograph 14. Laundry, ceiling. (ASB09) No asbestos detected**.**

Photograph 15. Rear access, ceiling lining (ASB11) No asbestos detected.

Photograph 16. Residential, standalone shed

Photograph 17. Air conditioning unit (R22). Insulation assumed to contain synthetic mineral fibres

Photograph 18. Air conditioning unit, (R22) ozone depleting substances

Photograph 19. "32.74236S 1518539E", Pipe lining (ASB11). No asbestos detected.

Photograph 20. Shed located in the Northeast of property. External

Photograph 21. Shed located in the Northeast of property, Internal

Appendix C – Laboratory Certificates of Analysis

CHAIN OF CUSTODY

Mandatory Fields

Page 1 of 2

CoC #: (if applicable)

CLIENT CODE:		*PROJECT MANAGER:	Matthew Deegan	SAMPLER:	Matthew Deegan
*CLIENT:	ADE Consulting	*PM MOBILE:	0449 214 497	SAMPLER MOBILE:	0449 214 497
OFFICE (Invoiced Office)		ALS QUOTE # (Client PL if blank)		PURCHASE ORDER NO.:	
PROJECT NO./PROJECT:	24.0124			SITE:	24.0124 Medowie
*INVOICE TO (client default if nil)	accounts@ade.group			☐ CC Invoice to PM	
*EMAIL REPORTS TO: (default to PM if blank)	mdeegan@ade.group				
EDD Format/Type →		EDD Email Address:			

BIOSECURITY

Country of Origin: (if not Australia)

Environmental Division
Newcastle
Work Order Reference
EN2415472

Telephone : – 61 2 4014 2500

*** STORAGE REQUIREMENTS**
Please check box →
Standard Storage time from receipt of samples
Waters - 3 weeks
Soils - 2 months

☑ Standard Storage
☐ Extended Storage

Specify Disposal Date:

Note: Extended storage incurs a fee and requires a signed agreement.

*** TURNAROUND**
Please check box →
(Not all tests can be expedited, contact Client Services for more information)

☐ 5+ days (no surcharge)
☐ 3 day (+15%)
☐ 2 day (+30%)
☑ 1 day (+50%)

***ANALYSIS REQUIRED**

(NB: ALS Quote No. and/or Analysis Suite Codes must be listed to attract suite/quoted price)
Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).
Mark an X in the boxes below analysis to indicate the parameter listed above to be tested on that sample.

Comments:

MATRIX/SUBMATRIX: Soil/Solid(S) Water(W) Sediments (SD), Dust (D), Product (P), Biota (B), Biosolid (BS)

ALS Use Only Lab ID	Sample ID	Depth/Description	Date/Time	No. Bottles	MATRIX	Pb in paint (%)	Bulk ASb Id	Lab QC (additional bottles req.) Dup	Lab QC (additional bottles req.) MS	Additional Information (Comment on hazards - e.g., asbestos, known high contamination)
	Pb01	~~Pb~~ paint	26/11/24		S	/		☐	☐	
	ASB01	FFCS					/	☐	☐	
	ASB02	↓					/	☐	☐	
	ASB03						/	☐	☐	
	ASB 04						/	☐	☐	
	ASB 05						/	☐	☐	
	ASB 06						/	☐	☐	
	ASB 07						/	☐	☐	
	ASB 08						/	☐	☐	
	ASB 09						/	☐	☐	

Receipt Detail (Lab Use ONLY)
Chilling Method: Ice: Frozen / Melted Ice Bricks: Frozen / Thawed (None)
Sample Temp at Receipt: 22.1 °C °C °C
Security Seal Intact (circle): Yes / No / NA(None)
Carrier Details: ☐ Courier/Post ☐ Client
Con Note #
Packaging: (Circle) Hard Esky Foam Esky Box/Bag/Other
Count # # #

Relinquished by:	MD	Signature:		Date/Time:	26/11/24	Received by:	Cass
Relinquished by:		Signature:		Date/Time:		Received by:	

Signature: | Date/Time: 26/11 1:25

CHAIN OF CUSTODY

Page 2 of 2

CoC #: (if applicable)

Mandatory Fields					
CLIENT CODE:		*PROJECT MANAGER:	Matthew Deegan	SAMPLER:	Matthew Deegan
*CLIENT:	ADE Consulting	*PM MOBILE:	0449 214 497	SAMPLER MOBILE:	0449 214 497
OFFICE: (Invoiced Office)		ALS QUOTE # (Client PL if blank)		PURCHASE ORDER NO.:	
PROJECT NO./PROJECT:	24.0124			SITE:	24.0124 Medowie
*INVOICE TO: (client default if nil)	accounts@ade.group			☐ CC Invoice to PM	
*EMAIL REPORTS TO: (default to PM if blank)	mdeegan@ade.group				
EDD Format/Type →		EDD Email Address:			

BIOSECURITY

Country of Origin: (if not Australia)

*** STORAGE REQUIREMENTS**
Please check box →
Standard Storage time from receipt of samples:
Waters - 3 weeks
Soils - 2 months

☑ Standard Storage
☐ Extended Storage
Specify Disposal Date:
Note: Extended storage incurs a fee and requires a signed agreement.

*** TURNAROUND**
Please check box →
(Not all tests can be expedited, contact Client Services for more information)

☐ 5+ days (no surcharge)
☐ 3 day (+15%)
☐ 2 day (+30%)
☑ 1 day (+50%)

***ANALYSIS REQUIRED**
(NB. ALS Quote No. and/or Analysis Suite Codes must be listed to attract suite/quoted price)
Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required)
Mark an X in the boxes below analysis to indicate the parameter listed above to be tested on that sample.

Comments:

ALS Use Only Lab ID	Sample ID	Depth/Description	Date/Time	No. Bottles	MATRIX/SUBMATRIX: Soil/Solid(S) Water(W) Sediments (SD), Dust (D), Product (P), Biota (B), Biosolid (BS)	Bulk Asb Id	Lab QC (additional bottles req.) Dup	Lab QC (additional bottles req.) MS	Additional Information (Comment on hazards - e.g., asbestos, known high contamination)
	ASB10	ASB FFCS	26/11/24		S		☐	☐	
	ASB11	~~A~~ S	26/11/24		S		☐	☐	
							☐	☐	
							☐	☐	
							☐	☐	
							☐	☐	
							☐	☐	
							☐	☐	
							☐	☐	
							☐	☐	
							☐	☐	

Receipt Detail (Lab Use ONLY)
Chilling Method: Ice: Frozen / Melted — Ice Bricks: Frozen / Thawed — None
Sample Temp at Receipt: 22.1 °C
Security Seal Intact (circle): Yes / No / NA(None)
Carrier Details: ☐ Courier/Post ☐ Client
Con Note #
Packaging (Circle): Hard Esky Foam Esky Box/Bag/Other
Count # # #

Relinquished by:	MD	Signature:		Date/Time:	Received by:	Cass	Signature	Date/Time: 26/11 1:30
Relinquished by:		Signature:		Date/Time:	Received by:		Signature	Date/Time:

CERTIFICATE OF ANALYSIS

Work Order	: **EN2415472**	Page	: 1 of 6
Client	: **ADE Consulting Group Pty Ltd**	Laboratory	: Environmental Division Newcastle
Contact	: M Deegan	Contact	:
Address	:	Address	: 5/585 Maitland Road Mayfield West NSW Australia 2304
Telephone	: ----	Telephone	: +61 2 4014 2500
Project	: A101024.0124	Date Samples Received	: 26-Nov-2024 01:25
Order number	: ----	Date Analysis Commenced	: 27-Nov-2024
C-O-C number	: ----	Issue Date	: 29-Nov-2024 14:58
Sampler	: MATTHEW DEEGAN		
Site	: 24.0124 Medowie		
Quote number	: EN/111		
No. of samples received	: 12		
No. of samples analysed	: 12		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Descriptive Results

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Brendan Schrader	Laboratory Technician	Newcastle - Asbestos, Mayfield West, NSW
Ivan Taylor	Analyst	Sydney Inorganics, Smithfield, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- EA200: Asbestos Identification Samples were analysed by Polarised Light Microscopy including dispersion staining.
- **EA200 Legend**
- EA200 'Am' Amosite (brown asbestos)
- EA200 'Cr' Crocidolite (blue asbestos)
- EA200 'Ch' Chrysotile (white asbestos)
- EA200: 'UMF' Unknown Mineral Fibres. "-" indicates fibres detected may or may not be asbestos fibres. Confirmation by alternative techniques is recommended.
- EA200: Analysis of asbestos from swabs and tapes is not covered under the current scope of NATA accreditation.
- EA200: N/A - Not Applicable

Analytical Results

Sub-Matrix: **PAINT** (Matrix: **SOIL**)			Sample ID	**Pb01**	----	----	----	----
			Sampling date / time	26-Nov-2024 00:00	----	----	----	----
Compound	*CAS Number*	*LOR*	*Unit*	**EN2415472-001**	--------	--------	--------	--------
				Result	----	----	----	----
EG005(ED093)T: Total Metals by ICP-AES								
Lead	7439-92-1	0.000500	% (w/w)	**0.00125**	**----**	**----**	**----**	**----**

Analytical Results

Sub-Matrix: SOLID (Matrix: SOLID)			Sample ID	ASB01	ASB02	ASB03	ASB04	ASB05
			Sampling date / time	26-Nov-2024 00:00	26-Nov-2024 00:00	26-Nov-2024 00:00	26-Nov-2024 00:00	26-Nov-2024 00:00
Compound	CAS Number	LOR	Unit	EN2415472-002	EN2415472-003	EN2415472-004	EN2415472-005	EN2415472-006
				Result	Result	Result	Result	Result
EA200: AS 4964 - 2004 Identification of Asbestos in bulk samples								
Asbestos Detected	1332-21-4	0.1	g/kg	**Yes**	**Yes**	**No**	**No**	**No**
Asbestos Type	1332-21-4	-	--	**Ch**	**Ch + Am**	**-**	**-**	**-**
Asbestos (Trace)	1332-21-4	-	-	**N/A**	**N/A**	**No**	**No**	**No**
Sample weight (dry)	----	0.01	g	**0.48**	**25.4**	**4.34**	**0.38**	**1.85**
Synthetic Mineral Fibre	----	-	-	**No**	**No**	**No**	**No**	**Yes**
Organic Fibre	----	-	-	**No**	**No**	**Yes**	**Yes**	**No**
APPROVED IDENTIFIER:	----	-	--	**J. PAGE**	**J. PAGE**	**J. PAGE**	**J. PAGE**	**J. PAGE**

Analytical Results

Sub-Matrix: SOLID (Matrix: SOLID)			Sample ID	ASB06	ASB07	ASB08	ASB09	ASB10
			Sampling date / time	26-Nov-2024 00:00	26-Nov-2024 00:00	26-Nov-2024 00:00	26-Nov-2024 00:00	26-Nov-2024 00:00
Compound	CAS Number	LOR	Unit	EN2415472-007	EN2415472-008	EN2415472-009	EN2415472-010	EN2415472-011
				Result	Result	Result	Result	Result
EA200: AS 4964 - 2004 Identification of Asbestos in bulk samples								
Asbestos Detected	1332-21-4	0.1	g/kg	**No**	**No**	**No**	**No**	**No**
Asbestos Type	1332-21-4	-	--	**-**	**-**	**-**	**-**	**-**
Asbestos (Trace)	1332-21-4	-	-	**No**	**No**	**No**	**No**	**No**
Sample weight (dry)	----	0.01	g	**0.28**	**0.22**	**0.24**	**0.97**	**0.29**
Synthetic Mineral Fibre	----	-	-	**No**	**Yes**	**No**	**No**	**No**
Organic Fibre	----	-	-	**Yes**	**No**	**Yes**	**Yes**	**No**
APPROVED IDENTIFIER:	----	-	--	**J. PAGE**	**J. PAGE**	**J. PAGE**	**J. PAGE**	**J. PAGE**

Analytical Results

Sub-Matrix: SOLID (Matrix: SOLID)			Sample ID	ASB11	----	----	----	----
			Sampling date / time	26-Nov-2024 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	EN2415472-012	--------	--------	--------	--------
				Result	----	----	----	----
EA200: AS 4964 - 2004 Identification of Asbestos in bulk samples								
Asbestos Detected	1332-21-4	0.1	g/kg	**No**	----	----	----	----
Asbestos Type	1332-21-4	-	--	**-**	----	----	----	----
Asbestos (Trace)	1332-21-4	-	-	**No**	----	----	----	----
Sample weight (dry)	----	0.01	g	**2.91**	----	----	----	----
Synthetic Mineral Fibre	----	-	-	**No**	----	----	----	----
Organic Fibre	----	-	-	**Yes**	----	----	----	----
APPROVED IDENTIFIER:	----	-	--	**J. PAGE**	----	----	----	----

Analytical Results

Descriptive Results

Sub-Matrix: **SOLID**

Method: Compound	Sample ID - Sampling date / time	Analytical Results
EA200: AS 4964 - 2004 Identification of Asbestos in bulk samples		
EA200: Description	ASB01 - 26-Nov-2024 00:00	Several pieces of asbestos cement sheeting approximately 25x15x2mm.
EA200: Description	ASB02 - 26-Nov-2024 00:00	Several pieces of asbestos cement sheeting approximately 70x60x5mm.
EA200: Description	ASB03 - 26-Nov-2024 00:00	Several pieces of cement sheeting.
EA200: Description	ASB04 - 26-Nov-2024 00:00	Several pieces of cement sheeting.
EA200: Description	ASB05 - 26-Nov-2024 00:00	A collection of synthetic mineral fibre insulation.
EA200: Description	ASB06 - 26-Nov-2024 00:00	Several pieces of cement sheeting.
EA200: Description	ASB07 - 26-Nov-2024 00:00	Several pieces of synthetic mineral fibre board.
EA200: Description	ASB08 - 26-Nov-2024 00:00	Several pieces of cement sheeting.
EA200: Description	ASB09 - 26-Nov-2024 00:00	Several pieces of cement sheeting.
EA200: Description	ASB10 - 26-Nov-2024 00:00	Several pieces of cement-like material.
EA200: Description	ASB11 - 26-Nov-2024 00:00	Several pieces of cement sheeting.

Inter-Laboratory Testing

Analysis conducted by ALS Sydney, NATA accreditation no. 825, site no. 10911 (Chemistry / Biology).

(SOIL) EG005(ED093)T: Total Metals by ICP-AES

QUALITY CONTROL REPORT

Work Order	: **EN2415472**	Page	: 1 of 3
Client	: **ADE Consulting Group Pty Ltd**	Laboratory	: Environmental Division Newcastle
Contact	: M Deegan	Contact	:
Address	:	Address	: 5/585 Maitland Road Mayfield West NSW Australia 2304
Telephone	: ----	Telephone	: +61 2 4014 2500
Project	: A101024.0124	Date Samples Received	: 26-Nov-2024
Order number	: ----	Date Analysis Commenced	: 27-Nov-2024
C-O-C number	: ----	Issue Date	: 29-Nov-2024
Sampler	: MATTHEW DEEGAN		
Site	: 24.0124 Medowie		
Quote number	: EN/111		
No. of samples received	: 12		
No. of samples analysed	: 12		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Brendan Schrader	Laboratory Technician	Newcastle - Asbestos, Mayfield West, NSW
Ivan Taylor	Analyst	Sydney Inorganics, Smithfield, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
# = Indicates failed QC
* = The final LOR has been raised due to dilution or other sample specific cause; adjusted LOR is shown in brackets. The duplicate ranges for Acceptable RPD% are applied to the final LOR where applicable.

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 6222540)									
EN2415472-001	Pb01	EG005P: Lead	7439-92-1	10 (5.00)*	mg/kg	0.00125 % (w/w)	12.3	1.4	No Limit

Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **SOIL**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 6222540)								
EG005P: Lead	7439-92-1	10	mg/kg	<10.0	50 mg/kg	103	81.0	119
				<10.0	999 mg/kg	97.1	70.0	130

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 6222540)							
EN2415472-001	Pb01	EG005P: Lead	7439-92-1	2500 mg/kg	103	70.0	130

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