

Construction Hazardous Material Management Plan (CHMMP)

Kingscliff Public School Upgrade

SSD-8378620

November 2023



REV 4

RICHARD CROOKES

CONSTRUCTIONS

Document control

Approval and authorisation

Title	Kingscliff Public School Upgrade: Hazardous Material Management Plan
Approved on behalf of Richard Crookes Constructions by	Pat Wills
Signed	
Dated	27.09.2023
Approved on behalf ENV Solutions by	Ben Pieterse
Signed	
Dated	12/5/2022

Document status

Revision	Date	Description	Approval
DRAFT	18/4/2022	Draft	Jenny Hellyer
Final	12/05/2022	Deliverable	Jenny Hellyer
REV 1	8/10/2022	Deliverable	Jason Cooke
Rev 2	20/07/2023	Deliverable	Jason Cooke
Rev 3	27/09/2023	Updated Hazmat Reports	Pat Wills
Rev 4	01/11/2023	Updated Hazmat Reports and inclusion of Asbestos Removal Control Plan	Pat Wills

Contents

Glossary/ Abbreviations	4
Condition B36 and C34 Compliance Table	5
1.0 Introduction	6
1.1 Context	6
1.2 Background and project description	6
2.0 Environmental requirements	7
2.1 Legislation, Guidelines and Standards	7
3.0 Hazardous Materials	8
3.1 Hazardous Materials	8
3.2 Hazardous Material Survey	8
3.3 Lead	9
3.4 Synthetic Mineral Fibres	10
3.5 Polychlorinated Biphenyls	11
3.6 Petroleum, Oils and Lubricants	12
3.7 Unexpected Finds	12
3.8 Acid Sulfate Soils	12
4.0 Chemical Storage	13
4.1 Cleaning Up Spills	14
4.2 Spill Response	15
5.0 Disposal	15
6.0 Handling Hazardous Materials	16
6.1 Handling Hazardous Substances	16
6.2 Removal of Lead	16
7.0 Compliance management	17
7.1 Roles and responsibilities	17
7.2 Training	17
7.3 Reporting	17

Glossary/ Abbreviations

Abbreviations	Expanded text
ACM	Asbestos Containing Material
ADG	Australian Code for the Transport of Dangerous Goods by Road or Rail
ARCP	Asbestos Removal Control Plan
CEMP	Construction Environmental Management Plan
Chemical	Is a distinct compound or substance, especially one which has been artificially prepared or purified. A chemical can be a solid, liquid or gas.
Dangerous Good	Is a substance that presents an immediate threat to safety (e.g., through fire or explosion), health (e.g., toxicity) or property if spilled or involved in some sort of accident or emergency situation. Dangerous goods are allocated a dangerous goods classification under the ADG Code:
CHMMP	Construction Hazardous Material Management Plan
Decanting	Is the process of transferring a hazardous substance from one container to another - normally from a larger drum to a smaller container for use on the job
Hazardous Material	Are substances that have the potential to pose a significant risk to the health and safety of people or the environment.
Hazardous Substance	Is any substance present in the workplace, which is on the List of Designated Hazardous Substances [NOHSC:10005] or may be classified as such using the Approved Criteria for Classifying Hazardous Substances [NOHSC:10008].
HAZMAT	Pre-Demolition Hazardous Material Survey
PCB	Polychlorinated biphenyls (PCBs): Any of a family of industrial compounds produced by chlorination of biphenyl, noted primarily as an environmental pollutant that accumulates in animal tissue with resultant pathogenic and teratogenic effects
SDS	Safety Data Sheet (SDS): Is a document provided by the supplier or manufacturer of a hazardous substance, and by specialist service providers, that specifies the particular hazardous substance, how it shall be stored, handled, used and disposed of, particular precautions that should be taken, and the method of first aid treatment. SDS includes
SMF	Synthetic Mineral Fibres: Fibres such as mineral wool (rockwool and slagwool), glasswool (including superfine glass fibre) and ceramic fibres.

Table 1: Condition B36 and C34 Compliance Table

Condition	Condition Requirements	Document reference
B36	Prior to the commencement of construction, the Applicant must submit a Hazardous Materials Management Plan to the Certifier. The report must:	
	(a) address the recommendations in the Hazardous Materials Survey Kingscliff Public School, 12 Orient Street Kingscliff, NSW, dated March 2020 and prepared by Hazmat Services;	7-14
	(b) provide details of management of risks associated with demolition work and for any remaining in-situ hazardous materials located at the site;	7-14
	(c) include details of a designated storage and handling area for all hazardous and/or dangerous goods which is designed in accordance with the following requirements: (i) contains a roof and a sealed floor (ii) contains bunding and is capable of holding 110% of the largest container stored (iii) not located on land subject to flooding; and	11-14
	(d) comply with the relevant NSW Legislation, Codes and Practice and Australian Standards.	7-14
C34	<p>At the completion of any hazardous material removal work and prior to any subsequent demolition or alteration work commencing, a clearance inspection of the relevant work area must be conducted by a competent person, or in the case of asbestos, by a Licensed Asbestos Assessor.</p> <p>Where applicable, a clearance certificate issued by a licensed asbestos assessor which states that the site 'does not pose a risk to health and safety from exposure to asbestos' in accordance with Clause 47 4 of the Work Health and Safety Regulation 2017 must be submitted to the Certifier and a copy provided to Council with the clearance certificate within 7 days of completion of the clearance inspection.</p>	

1.0 Introduction

1.1 Context

This Construction Hazardous Material Management Plan (CHWMP or Plan) forms part of the Construction Environmental Management Plan (CEMP) for the Kingscliff Public School (KPS) Upgrade (the Project).

1.2 Background and project description

The KPS Upgrade Project will include the demolition of existing buildings A, C, E and F and their ancillary structures. It will also include construction of the following:

Construction includes:

- New two (2) storey building (Building 1) comprising 12 x home bases with practical activity areas and withdrawal spaces, amenities, special programs unit and library;
- New two (2) storey building (Building 3) comprising 10 x home bases with practical activity areas and withdrawal spaces, storerooms and grounds attendant office and workshops.
- New two (2) storey building (Building 4) comprising 10 x home bases with practical activity areas and withdrawal spaces, amenities, and special programs unit;
- New COLA situated between the existing hall/canteen and new building 1;
- Construction of concrete walkways connecting all new buildings and existing structures;
- Construction of new basketball/playing court; and
- Minor landscaping works and tree removal

The Project site is located in the town of Kingscliff, in the Northern Rivers region of New South Wales (NSW), within the Tweed Shire Local Government Area (LGA).

The Hazardous Materials Survey (HMS) prepared by Hazmat Services Pty Ltd on behalf of the NSW Department of Education (DoE) in support of State Significant Development Application (SSD) SSD-8378620, assessed the potential types of hazardous materials within the Kingscliff Public School.

The Hazardous Material Survey identified hazardous materials including asbestos containing material (ACM), Synthetic Material Fibre (SMF), and potentially lead paint.

This plan is to meet condition B36 of SSD-8378620. A compliance matrix is set out in Table 1.

2.0 Environmental requirements

2.1 Legislation, Guidelines and Standards

The main guidelines, specifications, and policy documents relevant to this plan include:

- *Work Health and Safety Act 2011;*
- *Work Health and Safety Regulation 2017;*
- *Demolition Work Code of Practice;*
- *How to Safely Remove Asbestos Code of Practice;*
- *How to Manage and Control Asbestos in the Workplace Code of Practice;*
- *How to Manage Health and Safety Risks Code of Practice;*
- *Managing Risks of Plant in the Workplace Code of Practice;*
- *Managing Risks of Falls at the Workplace Code of Practice;*
- *Confined Space Code of Practice;*
- *Excavation Work Code of Practice;*
- *First Aid Code of Practice;*
- *Managing the Work Environment and Facilities Code of Practice;*
- *Mobile Crane Code of Practice;*
- *Labelling Workplace Hazardous Chemicals Code of Practice;*
- *AS NZS 2601 -2001 Demolition of Structures*
- *AS 1319-1994 and amendment No. 1 "Safety Signs for the Occupational Environment";*
- *AS 1715-2009 "Selection, Use and Maintenance of Respiratory Protective Devices";*
- *AS 1716-2012 "Respiratory Protective Devices";*
- *Contaminated Land Management Act 1997;*
- *Dangerous Goods (Road and Rail Transport) Act 2008;*
- *Environmentally Hazardous Chemicals Act 1985;*
- *Waste Avoidance and Resource Recovery Act 2001;*
- *NSW EPA – Transport and Tracking Waste Guidance*
- *Bunding and Spill Management, technical bulletin (Environment Protection Authority, 1997)*

3.0 Hazardous Materials

The Hazardous Material Survey prepared by Hazmat Services Pty Ltd dated March 2020, identified asbestos containing material (ACMs), Lead and Synthetic Mineral Fibres (SMF) on site.

Further to this, potential historic use of hazardous materials during the time of construction of the Kingscliff Public School and associated structures including buildings, classrooms and timber structures), has meant hazardous materials in addition to asbestos such as lead based paints and polychlorinated Biphenyls (PCB's) may be present.

3.1 Hazardous Materials Survey

As discussed, a hazardous material survey has been undertaken by Hazmat Services Pty Ltd and is in Appendix A. This contains details on all hazardous materials on site, their condition and location.

3.2 Asbestos

The primary issue associated with works associated with asbestos containing materials is managing the risk of inhalation of respirable fibres where Site activities result in the disturbance of these materials. A secondary issue with the presence of the asbestos is the appropriate classification and disposal of asbestos containing material to a lawful facility such that asbestos fibres and/or containing material does not inadvertently contaminate materials destined for beneficial reuse and/or the surrounding environment. ACM were identified by testing at an accredited NATA laboratory and/or visual inspection using the experience of the hazardous materials surveyor. Representative dust samples were collected throughout the site, as well. A summary of the results of laboratory testing for asbestos are provided in Table 3-2 below.

ACM and assumed ACM that were identified on site are detailed in the Hazardous Materials Register in the Hazardous Materials Survey. Materials listed within the register as "assumed" should be treated as ACM unless confirmed otherwise. In its current state, all ACM and assumed ACM located at the site would meet the definition of non-friable asbestos as defined in the NSW Work Health and Safety Regulation 2017.

The following area has been identified as a High Risk requiring High Priority remedial action:

- Building B00C- Room CR9005 (subfloor) throughout: asbestos cement debris present. Poor condition, unsealed. Restrict access and signpost entries. Access under controlled asbestos conditions only. Removal to be carried out prior to demolition by Class A or Class B Licensed Asbestos Removal Contractor.

An Asbestos Removal Control Plan (ARCP) has been developed by the licensed asbestos removalist to address the requirements of the NSW Legislation and has been attached to Appendix D.

Table 3: Asbestos Identification Analysis

Sample No.	Description	Asbestos Detected
N3412/PS01	B00A Window Weather seals	No Asbestos Detected
N3412/PS02	B00A Red Vinyl Tiles & Glue	No Asbestos Detected
N3412/PS03	B00A Room 0015, Ceiling Lining, Fibrous Cement Sheet	Chrysotile Asbestos
N3412/PS04	B00A Mottled Pink Vinyl Tiles & Glue	No Asbestos Detected
N3412/PS05	B00A Room 0022 Access Panel, Fibrous Cement Sheet	Chrysotile Asbestos
N3412/PS06	B00A Blue Vinyl Tiles & Glue	No Asbestos Detected
N3412/PS07	B00A Green Vinyl Tiles & Glue	No Asbestos Detected
N3412/PS08	B00C Room 0001 Ceiling Lining, Fibrous Cement Sheet	Chrysotile Asbestos
N3412/PS09	B00C Room 0003 Wall Lining, Fibrous Cement Sheet	No Asbestos Detected
N3412/PS10	B00C Red Vinyl Tiles & Glue	No Asbestos Detected
N3412/PS11	B00C Green Vinyl Tiles & Glue	No Asbestos Detected
N3412/PS12	B00C Room 0009 Wall Lining, Fibrous Cement Sheet	No Asbestos Detected
N3412/PS13	B00C Blue Vinyl Tiles & Glue	No Asbestos Detected
N3412/PS14	B00C Mottled Pink Vinyl Tiles & Glue	No Asbestos Detected
N3412/PS15	B00C Room CR9003 Ceiling Lining, Fibrous Cement Sheet	Chrysotile & Amosite Asbestos
N3412/PS16	B00C Room CR9003 Wall Lining, Fibrous Cement Sheet	No Asbestos Detected
N3412/PS17	B00C Room CR9005, Asbestos Cement Fragments	Chrysotile Asbestos

Note: Chrysotile is a fibrous silicate mineral commonly known as white asbestos. Amosite is a fibrous silicate mineral commonly known as brown or grey asbestos.

3.3 Lead

Lead is often found in paint, old water pipes and other plumbing fittings, sheet lead, lead flashing, lead light windows and glass. The age of the structure may be directly related to the amount of lead that can be present.

Representative paint samples were collected throughout the site for laboratory testing. A summary of the results of laboratory testing for lead and provided in Table 3.3 below.

Where the percentage lead content of paint by weight exceeds 1.0 % (10 mg/kg), the paint should be stabilised or removed by either chemical means or in a manner which does not liberate dust to the atmosphere. The waste material should also be tested for total lead and lead leachate to determine the appropriate method of disposal. The paint is not to be removed by dry sanding or by electrical means. The methodology involves moistening the paint with water from an atomising or spray bottle and removal by hand or using a hand scraper or hand sander.

The precautions that will be taken when demolishing materials containing lead include:

- Minimising the generation of lead dust and fumes;
- Removing Lead Paint before hot cutting steel;

- Cleaning work areas properly during and after work;
- Wearing the appropriate PPE, and
- Maintaining good personal hygiene.

Table 3.3 Lead Based Paint Sampling

Sample No.	Description	Lead Detected
N3412/LP01	B00C External Weather Boards, Paint-Undercoat	Positive
N3412/LP02	B00C External Window Frames, Paint-Undercoat	Positive
N3412/LP03	Timber Window Sills, Paint-Undercoat	Positive
N3412/LP04	B00C Timber Window Frames, Paint-Undercoat	Positive
N3412/LP05	B00C Doors, Paint-Undercoat	Negative
N3412/LP06	B00C Skirting, Paint-Undercoat	Negative
N3412/LP07	B00C Basement, Posts & Beams, Paint-Undercoat	Positive
N3412/LP08	B00C Basement, Ceiling, Paint-Undercoat	Negative

3.4 Synthetic Mineral Fibres

Synthetic mineral fibres (SMF) are used extensively for insulation in building walls and ceilings as well as on items such as air-conditioning duct work. SMF materials should be removed if damaged or in poor condition and prior to refurbishment or demolition works if they are to be distributed as part of that work.

PPE such as P2 dust masks (combination of disposable or non-disposable and half-face & full-face) and coveralls if required, depending on the state of the material, will be provided to workers and worn when insulation is being removed during the demolition process and dust will be suppressed by damping down. Suspected SMF materials were identified in various forms throughout the site. Full details of all identified SMF materials are provided in the Hazardous Materials Survey.

Removal of SMF should be carried out in accordance with the current requirements of the legislation and the NOHSC documentation, these being:

- *Safe Management of Synthetic Fibres (SMF) – Glasswool And Rockwool (SafeWork NSW-1 May 2015);*
- *National Standard for Synthetic Mineral Fibres [NOHSC:1004(1990)];*
- *National Code for Practice for the Safe Use of Synthetic Mineral Fibres [NOHSC:2006 (1990)]; and*
- *Guidance Note on the Membrane Filter Method for the Estimation of Airborne Synthetic Mineral Fibres [NOHSC:3006(1989)].*

3.5 Polychlorinated Biphenyls

Workers can be exposed to Polychlorinated Biphenyls (PCBs) when dismantling electrical capacitors and transformers or when cleaning up spills and leaks. Appropriate control measures will be implemented when handling damaged capacitors to ensure that any spillage does not contact workers and is appropriately cleaned up and disposed of. Any equipment or parts containing PCBs will be placed in a polyethylene or suitable bag, and then placed into a marked sealable metal container. If PCBs cannot be transported immediately for disposal, all containers will be stored in a protected area which prevents any discharge of PCBs to the environment.

There were no fluorescent light fittings likely to contain PCB capacitors sighted during the time of the survey.

Where PCB containing capacitors are found, they should be handled and/ or disposed of in accordance with the *PCB Chemical Control Order In Relation to Materials and Wastes Containing Polychlorinated Biphenyl, 1997*, issued by the Environmental Protection Authority of NSW and the PCB Management Plan issued by ANZECC.

3.6 Petroleum, Oils and Lubricants

A 100L drumsmart container containing 2 x 20L drums of unleaded petrol and 2 x 20L drums of diesel will be stored at site in portable, double wall self-bunded shipping container in accordance with AS/NZ 4452:1997 – The Storage and Handling of Toxic Substances. The tank shall be inspected monthly or more frequently as deemed necessary. Any release of hazardous materials will be reported immediately, and appropriate measures will be taken to remediate the situation. Delivery records will be kept on site for examination or reference purposes if required.

The site is elevated above the surrounding floodplain and as such is free from flood risk.

3.7 Unexpected Finds

Any materials deemed to be consistent with those detailed in the Hazardous Materials Register that have not been previously identified should be assumed to have the same content and be treated accordingly. Should any additional suspected hazardous materials be observed during or prior to demolition works, works should cease until a suitably qualified occupational hygienist can assess the suspected hazardous material and provide appropriate recommendations for management and/or removal.

3.8 Acid Sulfate Soils

Acid Sulfate Soils (ASS) is a common name given to naturally occurring sediments and soils containing iron sulphides (generally as iron sulphide or iron disulphide). These soil profiles are typically located in coastal, low lying alluvial or estuarine areas such as mangroves, salt marshes, coastal rivers and creeks, estuaries, tidal lakes and coastal floodplains where historical iron rich sediment deposition in the presence of a sulphate source (commonly salt water), organic matter and microbial action over time has resulted in the formation of particular environmental conditions. ASSs are predominantly encountered in areas where the soil profile has an elevation of less than 5 m Australian Height Datum (AHD) and may be found close to the ground level or at depth in the soil profile where continued deposition actions have resulted in raising of the ground levels.

Changes in environmental conditions which result in the exposure of these materials to air, via excavation or drainage of subsurface soils, can lead to the reaction of the iron sulphides with oxygen, causing the generation of sulfuric acid.

This may result in significant environmental and infrastructure damage if the produced acid is spread by groundwater or surface water. Neutralisation techniques can be used to treat ASS by the addition of chemicals that react with the produced acid to ensure that acid is not released from the treated material. For the purposes of this plan, if acid sulfate soils are encountered all treatment is to be done in accordance with the Acid Sulfate Soils Management Plan located within the Detailed Site Investigation for Contamination Far North Coast Schools project Kingscliff Public School, 12 Orient Street, Kingscliff NSW 2487, dated August 2001 and prepared by Douglas Partners.

4.0 Chemical Storage

Correct storage of hazardous materials must consider:

- All relevant Australian Standards;
- For liquids, a minimum bund volume requirement of 110% of the volume of the largest single stored volume within the bund; and
- The Environment Protection Manual for Authorised Officers: Bunding and Spill Management, technical bulletin (Environment Protection Authority, 1997). In the event of an inconsistency between the requirements listed from a) to c) above, the most stringent requirement shall prevail to the extent of the inconsistency.

In addition to this;

- Hazardous materials shall be stored in a secure, limited access area until disposal;
- Storage is as per SDS recommendation;
- The storage area and bunding should be constructed as per Australian Standard AS1940;
- Incompatible hazardous materials must not be stored together;
- Appropriate first aid equipment must be available.

Main hazardous substances that will be used on site are

- Fuel;
- Hydraulic oil; and
- Machine grease.

A hazardous chemical storage cabinet will be used to store chemicals prior to usage.

4.1 Cleaning Up Spills

If necessary, enact emergency procedures. If the spill threatens the safety or health of people or creates a fire hazard then the site emergency procedure shall be followed. Where a chemical spill occurs, consult the SDS for spill procedures. If the SDS indicates requirement for containment and clean up then the following steps should also be considered

Stop the source and spread of the spill if safe to do so

- Check for danger;
- Prevent the spill from getting larger (turn off valves, block damaged tanks or pipes); and
- Use any suitable material or equipment to confine the spill by “damming it off” (e.g. use available spill response equipment such as booms or absorbent or if unavailable then use soil or other suitable material).

Clean up the spill

Once the spill has been contained, retrieve as much of the spilled liquid as possible and place in an appropriate onsite container (e.g. 20L drum). The liquid should then be either re-used or disposed of in an appropriate manner.

Absorb remaining spill with absorbent material and place used absorbent in the appropriate waste bin and replenish equipment used from Spill Response Kit.

Report the spill

Report and investigate all spills to the Site Supervisor.

4.2 Spill Response Kits

Clearly labelled Spill Response Kits containing the appropriate spill response equipment will be available at appropriate locations.

5.0 Disposal

The transport and disposals of hazardous waste presents a high risk to the environment. These wastes must be tracked when transported into, within or out of NSW. The waste consignor, transporter and receiving facility all have obligations to ensure that the waste is properly tracked and disposed of at an appropriately licenced facility. To ensure all Hazardous Building Materials sent for disposal offsite are tracked to their destination and RCC meet all legal and contractual obligations, RCC will employ the use of RCC Waste Register located within Appendix A of the Construction Waste Management Sub Plan.

Steps in Waste Tracking to an appropriately licensed facility include:

- Determine whether the waste to be transported requires tracking (see the Waste that must be tracked fact sheet and the current list of exemptions). Waste streams for this project are concrete, brick, bitumen, asbestos, general demolition waste & soils;
- Obtain prior approval to transport the waste in the form of a consignment authorisation (CA) issued by a person authorised to do so;
- Create a transport certificate which must accompany the waste while it is being transported;
- Complete the transport certificate when the waste has arrived and been processed by the receiving facility;
- Report any non-compliances to the Environment Protection Authority (EPA).

6.0 Handling Hazardous Materials

6.1 Handling hazardous Substances

When using and handling hazardous materials consider (as mentioned in Section 3):

- Only transport and use hazardous materials according to relevant regulations and directions given on the SDS that applies to the substance;
- Use correct PPE;
- Suitable signage will be used whenever hazardous materials or dangerous goods are transported;
- Decanting and labelling will be carried out according to the National Code of Practice for the Labelling of Workplace Substances NOHSC (1994); and
- The types of containers to be used for decanting hazardous materials are advised on the SDS that applies to the substance. All containers holding hazardous materials will be labelled appropriately.

6.2 Removal of Lead

Elevated levels of lead in dust shall be removed in accordance with the AS4361.2-2017 prior to the commencement of any demolition works. It is anticipated that a portion of the lead dust hazards will be removed in conjunction with asbestos removal works. Where peeling or deteriorated lead paint will be removed under controlled conditions. The lead-based paints, as identified should also be managed in accordance with the AS4361.2-2017. It is anticipated that lead removal work procedures may include one or a combination of the following:

- Bulk removal of lead flashing and/or painted materials where the paint is in good condition via removal of whole panels, window frames, etc.
- Stabilisation of lead in poor condition via over-painting and/or application of PVC glue prior to wholesale removal of construction materials (eg. Cladding, gutters, signage, window frames, etc), followed by bulk removal of the stabilised building material.
- Removal of paint systems in poor condition via soft water stripping, chemical stripping or similar, prior to disposal of resulting collected lead waste.
- Removal of lead dust and flaking paint via dry/wet vacuuming using industrial equipment fitted with HEPA filters. Where power tools are used, exhaust ventilators on units are required to be fitted with HEPA filters to reduce the potential distribution of lead containing dust and associated future user exposure.
- Disposal of all lead containing waste, inclusive of collected shavings, chemical stripping residues, used PPE etc is required to be appropriately bagged, or otherwise sealed. This material will require disposal in accordance with the requirements of the NSW EPA (2014) Waste Classification Guidelines.
- Collection and off-site disposal of all excess water generated by site activities is required to be collected using a wet/dry vacuum operated in conjunction with the cleaning/removal process. The water will require treatment prior to off-site disposal.

7.0 Compliance management

7.1 Roles and responsibilities

The Richard Crookes Construction Project Team's organisational structure and overall roles and responsibilities are outlined in the CEMP.

7.2 Training

The site safety induction will also include discussion of hazardous materials on site, identification of their whereabouts, and explanation of handling methods to be employed, including Personal Protective Equipment (PPE) to be used. The following areas shall be covered in the induction.

- Awareness of the hazardous materials held on site, and their potential to cause harm to people and the environment;
- Use of correct PPE and any appropriate and/ or necessary health and safety training;
- Safe and correct use of all spill clean up equipment or pollution prevention structures on site;
- Safe handling and legal disposal of contaminated materials and wastes resulting from an incident; and
- Emergency management procedures.

7.3 Reporting

Reporting requirements and responsibilities are documented in the CEMP.



Hazmat Survey Report

12 Orient St, Kingscliff NSW 2487 (B00A)

EN218269



For:

Richard Crookes Constructions Pty Ltd

By:

Kurtis Foulkes

Date:

31/10/2023

ENV Solutions

313 River Street, Ballina NSW 2478




T: 1300 861 325

E: admin@envsolutions.com.au

www.envsolutions.com.au

DOCUMENT CONTROL

Job No:	EN218269
Client:	Richard Crookes Constructions Pty Ltd
Filename:	ENV218269 - 12 Orient St, Kingscliff NSW (B00A) - Hazmat Report v1.0

	Name:	Date:	Signature:
Prepared By:	Kurtis Foulkes	31/10/2023	
Reviewed By:	Luke Meadows	31/10/2023	
Approved By:	Luke Meadows	31/10/2023	

Revision:	Date:	Details:
V2	26/09/2023	Confirmation of samples: AS06, AS10, AS13, AS22, AS23, AS24 following X-Ray diffraction analysis.
V3	31/10/2023	Further review of referenced samples to register items: 27, 34, 36, 38

SCOPE OF ENGAGEMENT AND LIMITATIONS

This report has been prepared by ENV Solutions at the request of Richard Crookes Constructions Pty Ltd for the purpose of a Non-destructive Hazmat Survey Report for building A. No other parties may rely on the contents of this report for any purposes except those stated.

This report has been prepared based on the information provided to us and from other information obtained as a result of enquiries made by us. ENV accepts no responsibility for any loss or damage suffered howsoever arising to any person or corporation who may use or rely on this document for a purpose other than that described above.

No part of this report may be reproduced, stored, or transmitted in any form without the prior consent of ENV.

ENV declares that it does not have, nor expects to have, a beneficial interest in the subject project.

To avoid this advice being used inappropriately, it is recommended that you consult with ENV before conveying the information to another who may not fully understand the objectives of the report. This report is meant only for the subject site/project and should not be applied to any other.

TABLE OF CONTENTS

Executive Summary.....	iv
1 Introduction	5
1.1 SCOPE OF WORK	5
2 Site characteristics	5
3 Inspection procedure & Methodology.....	6
3.1 Asbestos	6
3.2 Synthetic Mineral Fibres (SMF).....	6
3.3 Polychlorinated biphenyls (PCBs)	6
3.4 Lead Containing Paint	6
3.5 Ozone Depleting Substances (ODS's).....	6
4 Findings	7
4.1 Analytical Results summary	7
4.1.1 Asbestos Bulk Sample Analysis	7
4.1.2 Lead Containing Paint Analysis	7
4.2 Assessment Findings	7
4.2.1 Asbestos containing materials	7
4.2.2 Synthetic Mineral Fibres	7
4.2.3 Polychlorinated Biphenyls.....	7
4.2.4 Lead Containing Paint	7
4.2.5 Ozone Depleting Substances.....	7
5 Reccomendations.....	8
5.1 Asbestos	8
5.2 Synthetic Mineral Fibres (SMF).....	8
5.3 Polychlorinated biphenyls (PCBs)	8
5.4 Lead Containing Paint	9
5.5 Ozone Depleting Substances (ODS)	9
6 Risk Assessment	10
7 Exclusions & Limitations	12
8 References	13

LIST OF APPENDICES

- Appendix A:** Hazmat Register
- Appendix B:** Laboratory Results
- Appendix 3:** Floor Plans

EXECUTIVE SUMMARY

ENV Services Pty Ltd (ENV) was engaged by Richard Crookes Constructions Pty Ltd to conduct a Non-destructive Hazardous Building Materials Assessment of building A located at 12 Orient St, Kingscliff NSW 2487 (B00A) (the site). ENV conducted the assessment on the 9th September 2023.

The objective of this Assessment was to identify and assess health risks posed by hazardous building materials.

The scope of this assessment included the accessible internal and immediate external areas of the property.

Hazardous building materials identified as part of this survey are as follows:

Property	Non-friable ACM's	Friable ACM's	Synthetic Mineral Fibre	Polychlorinated biphenyl's	Lead Containing Paint	Ozone Depleting Substances
12 Orient St, Kingscliff NSW 2487 (B00A)	✓	✓	✓	-	✓	-

1 INTRODUCTION

ENV Services Pty Ltd (ENV) was engaged by Richard Crookes Constructions Pty Ltd to conduct a Non-destructive Hazardous Building Materials Assessment of building (Building A B00A) located at 12 Orient St, Kingscliff NSW 2487 (the site). (ENV conducted the assessment on the 9th September 2023.

1.1 SCOPE OF WORK

The scope of the assessment included the accessible internal and external areas of the site.

- Inspect representative areas of the property to identify hazardous materials;
- Compile an up-to-date hazardous building materials register for the site; and
- Make recommendations for the on-going management/removal of the asbestos/hazardous materials.

This hazardous building materials assessment included the following Hazardous Building Materials:

- Asbestos Containing Material (ACM);
- Synthetic Mineral Fibre materials (SMF);
- Polychlorinated Biphenyls contained in capacitors in light fittings (PCB's);
- Lead containing paint (LCP); and,
- Ozone Depleting Substances (ODS).

2 SITE CHARACTERISTICS

Table 1: Site information

Details:	
Site Address:	12 Orient St, Kingscliff NSW 2487 (B00A)
Lot & DP:	Lot 1 – DP384195
Type of Building:	School Building block A (B00A)
No. of Levels:	1
Estimated Age of Construction:	1950's-1960's
Roof:	Tiled
External Walls:	Brickwork, Fibre cement
Internal walls	BrickworkPlasterboard, Masonite, Fibre cement, plasterboard
Floor & Coverings:	Concrete, Carpet, Ceramic tiles, vinyl, sheet vinyl, vinyl floor tiles

3 INSPECTION PROCEDURE & METHODOLOGY

The assessment comprised a review of relevant information provided to ENV, anecdotal information, interviews with any available site personal and visual inspections throughout accessible areas of the site. Where required, semi-destructive sampling techniques were undertaken.

The procedure for identifying each hazardous building materials for the site is summarised and presented below:

3.1 Asbestos

This component of the assessment was carried out in accordance with the *Safe Work Australia Code of Practice How to Manage and Control Asbestos in the Workplace, (June 2020)* and relevant state *Health & Safety Regulations*. Where required and if safe to do so, building material samples were collected at the discretion of the ENV consultant. Samples collected of the suspected Asbestos Containing Materials (ACM's) were then sent to a NATA accredited laboratory for formal analysis by the means of polarised light microscopy which includes dispersion staining techniques.

3.2 Synthetic Mineral Fibres (SMF)

This component of the assessment was carried out in accordance with the guidelines documented in the *"Code of practice for the safe use of synthetic mineral fibres"* [NOHSC: 2006(1990)]. This report broadly identifies SMF materials found or suspected of being present during the survey based on a visual assessment.

3.3 Polychlorinated biphenyls (PCBs)

Where safe access is permissible, detailed information on the ballasts in fluorescent tube light fittings and other electrical equipment are cross referenced to the document *"Identification of PCB containing capacitors information booklet: An information booklet for electricians and electrical contractors"*. (ANZECC 1997). Due to the immediate dangers of accessing electrical components or other risks such as heights. In these instances, a visual observation is undertaken based on age and appearance for its likelihood of containing PCB's.

3.4 Lead Containing Paint

Representative painted surfaces were tested for the presence of lead by taking samples and having NATA accredited laboratory undertaken to quantitatively determine the content of lead in the paint. In accordance with AS 4361.2:2017 *Guide to hazardous paint management, Part 2: Lead paint in residential, public and commercial buildings*. Any painting containing >0.1% w/w lead is classified as being deemed lead containing paint.

3.5 Ozone Depleting Substances (ODS's)

HCFC-22 (also known as R22) has been commonly used in residential heat pump, air conditioning and refrigeration systems since the 1990s following the phase out of chlorofluorocarbons (CFCs) in developed countries in 1995. As releases of R22, including from leaks, contributes to ozone depletion, Australia has a legislated phase out of HCFC, in line with its obligations under the Montreal Protocol.

A visual inspection was undertaken to all accessible air-conditioning units and chillers (if applicable) and their subsequent refrigerant types was noted.

4 FINDINGS

4.1 Analytical Results summary

4.1.1 Asbestos Bulk Sample Analysis

A total of Twenty-four (24) samples to materials suspected of containing asbestos were collected and sent to a NATA accredited laboratory for analysis. In summary, a total of nine (9) samples returned positive for containing asbestos. Further details of the NATA Endorsed Laboratory Sample Analysis Report is provided in **Attachment 2: Laboratory Results**.

4.1.2 Lead Containing Paint Analysis

A total of one (1) samples to materials suspected of containing lead were collected and sent to a NATA accredited laboratory for analysis. In summary, a total One (1) samples were reported to contain lead above the adopted criteria for lead content in paint. Further details of the NATA Endorsed Laboratory Sample Analysis Report is provided in **Attachment 2: Laboratory Results**.

4.2 Assessment Findings

The findings of this assessment are presented in tabulated form within Attachment 1: Hazmat register. A summary of these findings is presented below.

4.2.1 Asbestos containing materials

The full list of asbestos findings is presented within **Attachment 1: Hazmat register**.

4.2.2 Synthetic Mineral Fibres

- Suspected positive SMF was identified throughout the roof void in the form of insulation batts;
- Suspected positive SMF was identified in the form of sarking insulation to the underside of the roof;
- Suspected positive SMF was identified in the form of insulation material within the Rheem hot water heater located in the ceiling void of AR0022.

4.2.3 Polychlorinated Biphenyls

- No Polychlorinated Biphenyls (PCBS's) were suspected or identified during the assessment.

4.2.4 Lead Containing Paint

- Lead containing paint was identified to (white) upper coloured paint system to the timber barge boards throughout (0.22% w/w).

4.2.5 Ozone Depleting Substances

- No Ozone Depleting Substances (ODS) were suspected or identified during the assessment.

5 RECCOMENDATIONS

Based on the findings of this assessment, the following recommendations are provided for the control and management of hazardous building materials identified at the site. Further recommendations are also provided specific to each hazardous building material identified within the register which is included within **Attachment 1: Hazmat Register**.

5.1 Asbestos

- Asbestos containing materials (ACM) that may be disturbed should be removed prior to the commencement of any works.
- Where asbestos removal works are required, the person that commissions the removal of asbestos must ensure that works are conducted by an appropriately licensed asbestos removalist.
- If asbestos removal works are to be conducted within or adjacent from highly sensitive areas, it is recommended that airborne asbestos monitoring should be conducted during the asbestos removal process, particularly along the boundary of the asbestos removal work area.
- Where friable asbestos removal works are to be conducted a licensed asbestos assessor who is independent of the asbestos contractor must be engaged to:
 - Inspect the asbestos removal work area prior to commencement of the works;
 - Undertake asbestos fibre air monitoring before and during friable removal works in the surrounding areas and clearance asbestos fibre air monitoring at the conclusion of the asbestos removal work;
 - Complete a visual inspection of the asbestos removal area and the area immediately surrounding it and ensure these are free from visible asbestos contamination.
 - The licensed asbestos assessor must provide a Clearance Certificate that documents the visual clearance inspection, and the satisfactory completion of the asbestos removal works.
 - The Clearance Certificate should state that all visible asbestos dust and debris resulting from the asbestos removal process has been removed from the removal areas) and from areas adjacent to the removal work area (s).
- Given the constraints of this assessment being undertaken in a mostly non-destructive fashion, during any future works including demolition and refurbishment works, if any materials are identified suspected of containing asbestos which are not referenced within this report or register, then an asbestos hygienist should be notified to determine whether the subject material contains asbestos.

5.2 Synthetic Mineral Fibres (SMF)

- Synthetic Mineral Fibres (SMF) materials that are likely to be disturbed during any proposed demolition/refurbishment works should be handled in accordance with the National Code of Practice for the safe Use of Synthetic Mineral Fibres [NOHSC:2006(1990)]

5.3 Polychlorinated biphenyls (PCBs)

- Electrical fittings suspected of containing PCB oil capacitors should be treated as containing PCB oils until such time as evidence suggest otherwise e.g. further assessed.
- Electrical fittings that contain or suspected to contain PCB oil -containing capacitors should be removed as hazardous/regulated waste under controlled working conditions prior to the

demolition or refurbishment works in accordance with the Polychlorinated Biphenyls Management Plan, Revised Edition April 2003

5.4 Lead Containing Paint

- Any works that are likely to disturb lead containing paint surfaces, should be conducted in accordance with the requirements of AS 4361.2:2017 *Guide to Hazardous Paint Management - Part 2: Lead Paint in Residential, Public and Commercial Buildings*.
- If painted surfaces that have not been tested during this Assessment are subject to machine sanding/buffing or heat stripping, further sampling of subjective paints should be undertaken and samples sent to a NATA accredited laboratory for quantitative analysis.
- The safest method of dealing with LCP is to replace or remove the items in their entirety that have LCP on them and replace them with new items that do not contain lead (assuming that the lead content is <0.1% w/w of the material). This allows the items to be disposed of as regular building or demolition unsegregated waste in accordance with the SW Environment Protection Authority (EPA) *Waste Classification Guidelines 2014 Part 1 - Classifying Waste*. The advantage of this method is the reduction in labour requirements to remove the lead paint and also this reduces the risk to workers from exposure to lead dust or fumes. If the removal of the CP or coatings is the preferred or required option this may generate significant amounts of potential hazardous waste. This waste must be removed, collected and disposed of by an appropriately licensed contractor under controlled conditions that minimises the release to air, water and soil. Disposal of lead waste must be disposed of as hazardous waste at an approved waste facility.

5.5 Ozone Depleting Substances (ODS)

- If the ozone depleting substances identified on-site require removal they should be appropriately decanted and disposed of by a licensed contractor in accordance with the *Ozone Protection and Synthetic Greenhouse Gas Management Amendment Regulation Measure No. 1, 2017*;
- It is important to note that, if a system which utilises ODS-refrigerants is in good working order, there is no need to transition to an alternative refrigerant/system (until 2029)

6 RISK ASSESSMENT

Risk Rating	Significance	Recommendations
Extreme	Immediate and significant exposure risk	Evacuate area immediately and implement controls to isolate the area. Immediate removal of ACM recommended.
High	Significant potential exposure risk	Restrict access and implement controls to isolate the area. Immediate removal of ACM recommended.
Medium	Potential exposure risk under some circumstances	Implement control measures to seal or enclose and label as required. Ongoing inspections and maintenance required. Remove prior to renovations or demolition.
Low	Unlikely to result in exposure in current condition and if not disturbed.	Implement control measures to seal or enclose and label as required. Ongoing inspections and maintenance required. Remove prior to renovations or demolition.

Risk Rating	Significance	Lead	PCB	SMF	ODS
High	Significant potential exposure risk.	Flaking paint with high level of human contact. Restrict access and implement controls to isolate the area. Immediate removal of lead based paints required.	If leaking PCB oil is observed from the capacitor or component. Immediate control measures are required to suppress any potential environmental contamination and to prevent exposure to individuals. Immediate removal of PCB required.	SMF in high damage condition with high level of human contact. Restrict access and implement controls to isolate the area. Immediate removal of SMF required.	If A/C units, chillers or refrigerator units compressed gas units begin leaking. Restrict access and implement controls to isolate the area. Immediate removal of ODS required.
Low	Unlikely to result in exposure in current condition and if not disturbed.	Lead based paint is in good condition or in areas that are considered inaccessible to most individuals while at the site. Wear appropriate PPE if working on building materials that contain lead-based paint.	The PCB capacitor or component is not leaking and is in good condition. Remove prior to renovations or demolition.	SMF in good or low damage condition. Ongoing inspection and maintenance required to ensure risk rating remains low. Remove prior to renovations or demolition.	If chillers or refrigerator units compressed gas units are in good condition. Ongoing inspection and maintenance required to ensure risk rating remains low. Remove prior to renovations or demolition.

7 EXCLUSIONS & LIMITATIONS

Due to limitations imposed by the building subject to normal reoccupation conditions post assessment, this inspection has been undertaken in a non-destructive manner and as such there may be areas where ACM exists which have not been detected.

- This could include:
- within wall cavities;
- beneath floors/slabs;
- within plant and equipment (such as AC ducts);
- hidden pipe work;
- ceiling spaces and voids; and
- other encapsulated areas.

8 REFERENCES

- *New South Wales Government, Work Health and Safety Act 2011*
- *New South Wales Government, Work Health and Safety Regulation 2011*
- *New South Wales Government, How to Manage and Control Asbestos in the Workplace Code of Practice 2022*
- *New South Wales Government, How to Safely Remove Asbestos Code of Practice 2022*
- *ACG. 2017. Work Health and Safety Regulations 2017, Chapter 8: Asbestos. Amended 1 July 2019. Australian Commonwealth Government, Canberra.*
- *ANZECC. 1997. Identification of PCB containing Capacitors and information booklet for electricians and electrical contractors. Australian and New Zealand Environment and Conservation Council.*
- *National Occupational Health and Safety Commission (NOHSC). 2005. Code of practice for the management and control of asbestos in workplaces (NOHSC:2018 [2005]). Canberra: Australian Government NOHSC. pp 87.*
- *NOHSC. 1990. National Code of Practice for the safe use of Synthetic Mineral Fibres [NOHSC: 2006(1990)]. Australian Government Publishing Service, Canberra.*
- *Safe Work Australia. 2020. How to Manage and Control Asbestos in the Workplace Code of Practice. Safe Work Australia.*
- *Safe Work Australia. 2020. How to Safely Remove Asbestos Code of Practice. Safe Work Australia.*
- *Standards Australia. 2017. AS4361.2 2017 Guide to Lead Paint Management – Part 2: Residential and Commercial Properties. Standards Australia*

APPENDIX A

Hazmat Register

HAZMAT Register

Workplace address: 12 Orient Street, Kingscliff NSW 2487 (B00A)
 Client name: Richard Crookes Constructions Pty Ltd
 Asbestos Assessor: Kurtis Foulkes & Luke Meadows

T: 1300 861 325
 E: info@envsolutions.com.au
 www.envsolutions.com.au








ID	Date Identified	Hazmat Type	Area / Level	Location / Room	Feature	Item Description	Sample No.	Sample Status	Friability	Condition	Qty (m ²)	Risk Assessment	Comments	Photo
1	9/09/2023	Asbestos	External, ground level	Western side of building / perimeter of the building (all elevations)	Window mastic/putty	Mastic sealant	AS03	Positive	Non-Friable	Medium Damage	-	Medium Risk	Assumed to be present to all windows of the building. Removal methodology may include the removal of the entire frame as waste under non-friable conditions	
2	9/09/2023	Asbestos	External	Perimeter of building	Infill panels beneath windows	Fibre cement sheeting	Not sampled	Assumed Positive	Non-Friable	Low Damage	85m2	Low Risk	Previously tested positive within original building register: Parsons Brinckerhoff 08-2015	
3	9/09/2023	Asbestos	Internal, ground level	Western entrance of AR0017	Floor	Light brown vinyl floor tiles	AS06	Negative	-	-	-	-	Including Negative X Ray Diffraction Analysis.	
4	9/09/2023	Asbestos	External, ground level	Western side of building / AR009	Expansion joint to brickwork & windows	Mastic sealant	AS05 17/07/2023	Negative	-	-	-	-	-	
5	9/09/2023	Asbestos	External, ground level	Northern side of building	Low level soffit	Fibre cement sheeting	AS01	Positive	Non-Friable	Good	15m2	Low Risk	-	

*Quantities are estimates only and have not been assessed by a qualified surveyor.

ID	Date Identified	Hazmat Type	Area / Level	Location / Room	Feature	Item Description	Sample No.	Sample Status	Friability	Condition	Qty (m ²)	Risk Assessment	Comments	Photo
6	9/09/2023	Asbestos	External, level 1	Northern side of building	High level soffit	Fibre cement sheeting	Ref: AS01	Positive	Non-Friable	Good	40m2	Low Risk		
7	9/09/2023	Lead	External	From roof to brickwork	Flashing	Metal	-	Assumed Positive	-	-	-	Low Risk		
8	9/09/2023	Asbestos	External, ground level	Sports shed	Infill panel above door	Fibre cement sheeting	AS02	Negative	-	-	-	-	-	
9	9/09/2023	Asbestos	External, ground level	Southern side of building (including all elevations)	Window mastic/putty	Mastic sealant	AS03	Positive	Non-Friable	Medium Damage	Throughout all windows	Medium Risk	Assumed to be present to all windows of the building. Removal methodology may include the removal of the entire frame as waste under non-friable conditions.	
10	9/09/2023	Asbestos	External, level 1	Eastern stairwell / R1016	Ceiling	Fibre cement sheeting	AS04	Positive	Non-Friable	Good	10m2	Low Risk		

*Quantities are estimates only and have not been assessed by a qualified surveyor.

ID	Date Identified	Hazmat Type	Area / Level	Location / Room	Feature	Item Description	Sample No.	Sample Status	Friability	Condition	Qty (m ²)	Risk Assessment	Comments	Photo
11	9/09/2023	Asbestos	External, level 1	AR1016	Ceiling	Fibre cement sheeting	Ref: AS04	Positive	Non-Friable	Good	10m2	Low Risk		
12	9/09/2023	Asbestos	External, level 1	Southern side of building	High level soffit	Fibre cement sheeting	Ref: AS01/AS04	Positive	Non-Friable	Good	35m2	Low Risk		
13	9/09/2023	Asbestos	External, level 1	Western side of building / AR1002	Awning / ceilings	Fibre cement sheeting	Ref: AS01/AS04	Positive	Non-Friable	Good	85m2	Low Risk		
14	9/09/2023	Lead Paint	External, throughout	Perimeter	Timber boards	White - upper coloured paint system	LC01	Positive	N/A	Low Damage	>100	Low Risk		
15	9/09/2023	Asbestos	External, level 1	Western side of building / AR1002	Infill to balcony concrete walls	Fibre cement sheeting	AS05	Negative	-	-	-	-	-	

*Quantities are estimates only and have not been assessed by a qualified surveyor.

ID	Date Identified	Hazmat Type	Area / Level	Location / Room	Feature	Item Description	Sample No.	Sample Status	Friability	Condition	Qty (m ²)	Risk Assessment	Comments	Photo
16	9/09/2023	SMF	Internal, ground level	Or there. Riling void area to awning of rooms Ar0018 to AR0022	Ceiling Cavity	Sarking insulation	-	Assumed Positive	Non-Friable	Good	80m2	Low Risk		
17	9/09/2023	SMF	Internal, ground level	Or there. Riling void area to awning of rooms AR0018 to AR0022	Ceiling Cavity	Insulation batts	-	Assumed Positive	Non-Friable	Good	80m2	Low Risk		
18	9/09/2023	SMF	Internal, ground level	AR0022 / Male toilet hot water heater	Ceiling Cavity	Insulation material		Assumed Positive	Non-Friable	Good	1 Unit	Low Risk		
19	9/09/2023	Asbestos	Internal, ground level	AR0022 / Male Toilet	Ceiling void debris	Fibre cement sheeting	AS07	Positive	Non-Friable	High Damage	<1m2	Low Risk	Assumed to be to the locality of that area.	
20	9/09/2023	Asbestos	Internal, ground level	AR0022 / Male Toilet & Level 1 ceiling void	Ceiling void access panel	Fibre cement sheeting	AS08	Negative	Non-Friable	High Damage	1m2	Low Risk	2 units. Includes section on level 1	

*Quantities are estimates only and have not been assessed by a qualified surveyor.

ID	Date Identified	Hazmat Type	Area / Level	Location / Room	Feature	Item Description	Sample No.	Sample Status	Friability	Condition	Qty (m ²)	Risk Assessment	Comments	Photo
21	9/09/2023	Asbestos	Internal, ground level	AR0025	Floor	Blue speckled paper backed vinyl floor sheeting	AS09	Negative	-	-	-	-	-	
22	9/09/2023	Asbestos	Internal, ground level	AR0025	Floor	Orange vinyl floor tiles beneath vinyl sheeting	AS10	Negative	-	-	-	-	Including Negative X Ray Diffraction Analysis.	
23	9/09/2023	Asbestos	Internal, ground level	AR0027	Floor	Blue speckled vinyl floor sheeting (non paper backed)	AS11	Negative	-	-	-	-	-	
24	9/09/2023	Asbestos	Internal, ground level	AR0014/AR0015	Ceiling	Fibre cement sheeting	AS12	Positive	Non-Friable	Good	40m2	Low Risk	-	
25	9/09/2023	Asbestos	Internal, ground level	AR0014 / Staff toilet	Hot water heater	Insulation	-	-	Friable	Good	1 unit	Medium Risk	Due to the visual age and appearance, internal asbestos insulation may be present. Upon power insulation, further investigation inside requires.	





*Quantities are estimates only and have not been assessed by a qualified surveyor.

ID	Date Identified	Hazmat Type	Area / Level	Location / Room	Feature	Item Description	Sample No.	Sample Status	Friability	Condition	Qty (m ²)	Risk Assessment	Comments	Photo
26	9/09/2023	Asbestos	Internal, ground level	AR0013 / interview room	Floor beneath carpet	Orange vinyl floor tiles beneath carpet	AS13	Positive	Non-Friable	Good	20m2	Low Risk	Serpentine detected - Chrysotile* detected following X-ray diffraction (XRD) Analysis.	
27	9/09/2023	Asbestos	Internal, ground level	AR0016 / cleaners cupboard	Floor	Orange vinyl floor tiles	Ref: AS13	Assumed Positive	Non-Friable	Good	3m2	Low Risk	Serpentine detected - Chrysotile* detected following X-ray diffraction (XRD) Analysis.	
28	9/09/2023	Asbestos	Internal, ground level	AR0010	Floor beneath carpet	Grey vinyl floor tiles	AS14	Positive	Non-Friable	Good	20m2	Low Risk		
29	9/09/2023	Asbestos	External, ground level	AR0029 / western entrance	Packer to entrance sign	Fibre cement sheeting	AS15	Negative	-	-	-	-	-	
30	9/09/2023	Asbestos	External, ground level	AR0029 / western entrance	Entrance signage	Compressed cement sheeting	AS16	Negative	-	-	-	-	-	


*Quantities are estimates only and have not been assessed by a qualified surveyor.

ID	Date Identified	Hazmat Type	Area / Level	Location / Room	Feature	Item Description	Sample No.	Sample Status	Friability	Condition	Qty (m ²)	Risk Assessment	Comments	Photo
31	9/09/2023	Asbestos	Internal, ground level	AR0015 / EDB	Floor	Grey vinyl floor tiles	AS17	Positive	Non-Friable	Good	4m2	Low Risk		
32	9/09/2023	Asbestos	Internal, ground level	AR0015 / EDB	Electrical backing board	Zelamite backing board	AS18	Positive	Non-Friable	Good	0.2m2	Low Risk		
33	9/09/2023	Asbestos	Internal, ground level	AR0004	Floor beneath carpet	Grey vinyl floor tiles	Ref: AS14 and AS17	Assumed Positive	Non-Friable	Good	20m2	Low Risk		
34	9/09/2023	Asbestos	Internal, ground level	AR0003	Floor beneath carpet	Orange vinyl floor tiles	Ref: AS13	Assumed Positive	Non-Friable	Good	20m2	Low Risk	Serpentine detected - Chrysotile* detected following X-ray diffraction (XRD) Analysis.	
35	9/09/2023	Asbestos	Internal, ground level	AR0001 (western side)	Floor	Blue speckled vinyl floor sheeting (non paper backed) Sheet vinyl	Ref: AS11	Assumed Negative	-	-	-	-	-	


*Quantities are estimates only and have not been assessed by a qualified surveyor.

ID	Date Identified	Hazmat Type	Area / Level	Location / Room	Feature	Item Description	Sample No.	Sample Status	Friability	Condition	Qty (m ²)	Risk Assessment	Comments	Photo
36	9/09/2023	Asbestos	Internal, ground level	AR0001 (eastern side)	Floor beneath carpet	Orange vinyl floor tiles	Ref: AS13	Assumed Positive	Non-Friable	Good	20m2	Low Risk	Serpentine detected - Chrysotile* detected following X-ray diffraction (XRD) Analysis.	
37	9/09/2023	Asbestos	Internal, ground level	AR002	Floor	Sheet vinyl	AS19	Negative	-	-	-	-	-	
38	9/09/2023	Asbestos	Internal, ground level	AR006	Floor	Orange vinyl floor tiles	Ref: AS13	Assumed Positive	Non-Friable	Good	10m2	Low Risk	Serpentine detected - Chrysotile* detected following X-ray diffraction (XRD) Analysis.	
39	9/09/2023	Asbestos	Internal, ground level	Throughout western half	Ceiling	Sprayed vermiculite	AS20	Negative	-	-	-	-	Composite sample collected from multiple rooms	
40	9/09/2023	Asbestos	Internal, ground level	Throughout western half	Ceiling	Sprayed vermiculite	AS21	Negative	-	-	-	-	Composite sample collected from multiple rooms	

*Quantities are estimates only and have not been assessed by a qualified surveyor.

ID	Date Identified	Hazmat Type	Area / Level	Location / Room	Feature	Item Description	Sample No.	Sample Status	Friability	Condition	Qty (m ²)	Risk Assessment	Comments	Photo
41	9/09/2023	Asbestos	Internal, level 1	Entrance of AR1019	Floor	Light brown vinyl floor tiles	Ref: AS06	Assumed Negative	-	-	-	-	Including Negative X Ray Diffraction Analysis.	
42	9/09/2023	SMF	Internal, level 1	Throughout	Ceiling void	Sarking insulation	-	Assumed Positive	-	-	600m2	Low Risk		
43	9/09/2023	SMF	Internal, level 1	Throughout	Ceiling void	Insulation batts	-	Assumed Positive	-	-	600m2	Low Risk		
44	9/09/2023	Asbestos	Internal, Level 1	AR1003	Floor beneath carpet	Green vinyl floor tiles	AS22	Negative	-	-	-	-	Including Negative X Ray Diffraction Analysis.	
45	9/09/2023	Asbestos	Internal, Level 1	AR1005	Floor	Orange vinyl floor tiles	AS23	Positive	Non-Friable	Good	30m2	Low Risk	Serpentine detected - Chrysotile* detected following X-ray diffraction (XRD) Analysis.	

*Quantities are estimates only and have not been assessed by a qualified surveyor.

ID	Date Identified	Hazmat Type	Area / Level	Location / Room	Feature	Item Description	Sample No.	Sample Status	Friability	Condition	Qty (m ²)	Risk Assessment	Comments	Photo
46	9/09/2023	Asbestos	Internal, Level 1	AR1006	Floor beneath carpet	Green vinyl floor tiles	Ref: AS22	Assumed Negative	-	-	-	-	Including Negative X Ray Diffraction Analysis.	
47	9/09/2023	Asbestos	Internal, Level 1	AR1001	Floor beneath carpet	Blue vinyl floor tiles	AS24	Positive	Non-Friable	Good	25m2	Low Risk	Serpentine detected - Chrysotile* detected following X-ray diffraction (XRD) Analysis.	
48	9/09/2023	Asbestos	Internal, Level 1	AR1003	Floor beneath carpet	Blue vinyl floor tiles	Ref: AS24	Assumed Positive	Non-Friable	Good	24m2	Low Risk	Serpentine detected - Chrysotile* detected following X-ray diffraction (XRD) Analysis.	
49	9/09/2023	Asbestos	Internal, Level 1	AR1015 (KLA Store)	Ceiling	Fibre cement sheeting	-	Assumed Positive	Non-Friable	Good	15	Low Risk	Previously tested positive within original building register: Parsons Brinckerhoff 08-2015	
50	9/09/2023	Asbestos	External, Ground level	Immediate footprint area of the building (Immediate Perimeter)	Other	-	-	-	-	-	-	-	No asbestos debris identified to the soils at the time of the inspection.	




*Quantities are estimates only and have not been assessed by a qualified surveyor.




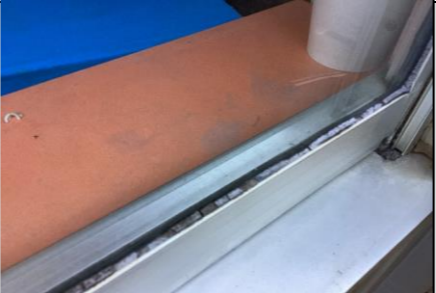
Recommendations


Workplace address: 12 Orient Street, Kingscliff NSW 2487 (B00A)
 Client name: Richard Crookes Constructions Pty Ltd
 Asbestos Assessor: Kurtis Foulkes & Luke Meadows

T: 1300 861 325
 E: info@envsolutions.com.au
 www.envsolutions.com.au




Corresponding ID	Recommendations	Additional Photograph 1:	Additional Photograph 2:	Additional Photographs 3:
1	Encapsulate exposed sections, label as containing asbestos and maintain in a good condition if to remain in-situ, remove under controlled non-friable asbestos removal conditions prior to refurbishment or demolition works by a Class B (non-friable) licensed asbestos removal contractor.			
2				
3				
4				
5	Label as containing asbestos and maintain in current condition if to remain in-situ, remove under controlled non-friable asbestos removal conditions prior to refurbishment or demolition works by a Class B (non-friable) licensed asbestos removal contractor.			

Corresponding ID	Recommendations	Additional Photograph 1:	Additional Photograph 2:	Additional Photographs 3:
6	Label as containing asbestos and maintain in current condition if to remain in-situ, remove under controlled non-friable asbestos removal conditions prior to refurbishment or demolition works by a Class B (non-friable) licensed asbestos removal contractor.			
7	Confirm status, maintain in current condition, over paint with a lead-free paint as part of ongoing maintenance. Remove under controlled conditions in accordance with AS/NZS 4361.2:2017 Guide to hazardous paint management prior to renovation or demolition works.			
8				
9	Encapsulate exposed sections, label as containing asbestos and maintain in a good condition if to remain in-situ, remove under controlled non-friable asbestos removal conditions prior to refurbishment or demolition works by a Class B (non-friable) licensed asbestos removal contractor.			
10	Label as containing asbestos and maintain in current condition if to remain in-situ, remove under controlled non-friable asbestos removal conditions prior to refurbishment or demolition works by a Class B (non-friable) licensed asbestos removal contractor.			



Corresponding ID	Recommendations	Additional Photograph 1:	Additional Photograph 2:	Additional Photographs 3:
11	Label as containing asbestos and maintain in current condition if to remain in-situ, remove under controlled non-friable asbestos removal conditions prior to refurbishment or demolition works by a Class B (non-friable) licensed asbestos removal contractor.			
12	Label as containing asbestos and maintain in current condition if to remain in-situ, remove under controlled non-friable asbestos removal conditions prior to refurbishment or demolition works by a Class B (non-friable) licensed asbestos removal contractor.			
13	Label as containing asbestos and maintain in current condition if to remain in-situ, remove under controlled non-friable asbestos removal conditions prior to refurbishment or demolition works by a Class B (non-friable) licensed asbestos removal contractor.			
14	>0.1% lead content, remove flaking sections and over paint with a lead-free paint. Remove under controlled conditions in accordance withers/NZS 4361.2:2017 Guide to hazardous paint management prior to renovation or demolition works.			
15				


Corresponding ID	Recommendations	Additional Photograph 1:	Additional Photograph 2:	Additional Photographs 3:
16	Maintain in current condition if to remain in-situ. Remove under controlled SMF conditions as per Code of Practice for the Safe Use of Synthetic Mineral Fibres [NOHSC: 2006 (1990)].			
17	Maintain in current condition if to remain in-situ. Remove under controlled SMF conditions as per Code of Practice for the Safe Use of Synthetic Mineral Fibres [NOHSC: 2006 (1990)].			
18	Maintain in current condition if to remain in-situ. Remove under controlled SMF conditions as per Code of Practice for the Safe Use of Synthetic Mineral Fibres [NOHSC: 2006 (1990)].			
19	Restrict access and isolate area, remove under controlled non-friable asbestos removal conditions prior to refurbishment or demolition works by a Class B (non-friable) licensed asbestos removal contractor.			
20	Label as containing asbestos and maintain in current condition if to remain in-situ, remove under controlled non-friable asbestos removal conditions prior to refurbishment or demolition works by a Class B (non-friable) licensed asbestos removal contractor.			


Corresponding ID	Recommendations	Additional Photograph 1:	Additional Photograph 2:	Additional Photographs 3:
21				
22	<p>Confirm Status, label as containing asbestos and maintain in current condition if to remain in-situ, remove under controlled non-friable asbestos removal conditions prior to refurbishment or demolition works by a Class B (non-friable) licensed asbestos removal contractor.</p>			
23				
24	<p>Label as containing asbestos and maintain in current condition if to remain in-situ, remove under controlled non-friable asbestos removal conditions prior to refurbishment or demolition works by a Class B (non-friable) licensed asbestos removal contractor.</p>			
25	<p>Confirm Status, label as containing asbestos and maintain in current condition if to remain in-situ, remove under controlled friable asbestos removal conditions prior to refurbishment or demolition works by a Class A (friable) licensed asbestos removal contractor.</p>			

Corresponding ID	Recommendations	Additional Photograph 1:	Additional Photograph 2:	Additional Photographs 3:
26	Label as containing asbestos and maintain in current condition if to remain in-situ, remove under controlled non-friable asbestos removal conditions prior to refurbishment or demolition works by a Class B (non-friable) licensed asbestos removal contractor.			
27	Label as containing asbestos and maintain in current condition if to remain in-situ, remove under controlled non-friable asbestos removal conditions prior to refurbishment or demolition works by a Class B (non-friable) licensed asbestos removal contractor.			
28	Label as containing asbestos and maintain in current condition if to remain in-situ, remove under controlled non-friable asbestos removal conditions prior to refurbishment or demolition works by a Class B (non-friable) licensed asbestos removal contractor.			
29				
30				

Corresponding ID	Recommendations	Additional Photograph 1:	Additional Photograph 2:	Additional Photographs 3:
31	Label as containing asbestos and maintain in current condition if to remain in-situ, remove under controlled non-friable asbestos removal conditions prior to refurbishment or demolition works by a Class B (non-friable) licensed asbestos removal contractor.			
32	Label as containing asbestos and maintain in current condition if to remain in-situ, remove under controlled non-friable asbestos removal conditions prior to refurbishment or demolition works by a Class B (non-friable) licensed asbestos removal contractor.			
33	Label as containing asbestos and maintain in current condition if to remain in-situ, remove under controlled non-friable asbestos removal conditions prior to refurbishment or demolition works by a Class B (non-friable) licensed asbestos removal contractor.			
34	Label as containing asbestos and maintain in current condition if to remain in-situ, remove under controlled non-friable asbestos removal conditions prior to refurbishment or demolition works by a Class B (non-friable) licensed asbestos removal contractor.			
35				

Corresponding ID	Recommendations	Additional Photograph 1:	Additional Photograph 2:	Additional Photographs 3:
36	Label as containing asbestos and maintain in current condition if to remain in-situ, remove under controlled non-friable asbestos removal conditions prior to refurbishment or demolition works by a Class B (non-friable) licensed asbestos removal contractor.			
37				
38	Label as containing asbestos and maintain in current condition if to remain in-situ, remove under controlled non-friable asbestos removal conditions prior to refurbishment or demolition works by a Class B (non-friable) licensed asbestos removal contractor.			
39				
40				

Corresponding ID	Recommendations	Additional Photograph 1:	Additional Photograph 2:	Additional Photographs 3:
41				
42	Maintain in current condition if to remain in-situ. Remove under controlled SMF conditions as per Code of Practice for the Safe Use of Synthetic Mineral Fibres [NOHSC: 2006 (1990)].			
43	Maintain in current condition if to remain in-situ. Remove under controlled SMF conditions as per Code of Practice for the Safe Use of Synthetic Mineral Fibres [NOHSC: 2006 (1990)].			
44				
45	Label as containing asbestos and maintain in current condition if to remain in-situ, remove under controlled non-friable asbestos removal conditions prior to refurbishment or demolition works by a Class B (non-friable) licensed asbestos removal contractor.			

Corresponding ID	Recommendations	Additional Photograph 1:	Additional Photograph 2:	Additional Photographs 3:
46				
47	Label as containing asbestos and maintain in current condition if to remain in-situ, remove under controlled non-friable asbestos removal conditions prior to refurbishment or demolition works by a Class B (non-friable) licensed asbestos removal contractor.			
48	Label as containing asbestos and maintain in current condition if to remain in-situ, remove under controlled non-friable asbestos removal conditions prior to refurbishment or demolition works by a Class B (non-friable) licensed asbestos removal contractor.			
49	Maintain in good condition if to remain in-situ, remove under controlled friable asbestos removal conditions prior to refurbishment or demolition works by a Class A (friable) licensed asbestos removal contractor.			
50	During proposed demolition works, if historical asbestos waste and contamination is identified within the soils, beneath concrete hardstand slabs, associated with footings or any other encapsulated area. A competent person shall undertake further asbestos in soil testing.			

APPENDIX B

Laboratory Results



Our ref : ASET111220 / 114400 / 1 – 5
Your ref : ENV218140 – 12 Orient St Kingscliff NSW 2487
NATA Accreditation No: 14484



20 July 2023

ENV Solutions
PO Box 248
Ballina NSW 2478

Accredited for compliance with ISO/IEC 17025 - Testing.

Attn: Mr Kurtis Foulkes

Dear Kurtis

Asbestos Identification

This report presents the results of five samples, forwarded by ENV Solutions on 20 July 2023, for analysis for asbestos.

1.Introduction:Five samples forwarded were examined and analysed for the presence of asbestos.

2. Methods: The samples were examined under a Stereo Microscope and selected fibres were analysed by Polarized Light Microscopy in conjunction with Dispersion Staining method (**Australian Standard AS 4964 - 2004 and Safer Environment Method 1 as the supplementary work instruction**) (**Qualitative Analysis only**).

3. Results : **Sample No. 1. ASET111220 / 114400 / 1. ENV218140-AS01-Internal, Ground level, Hub club, Ceiling.**
Approx dimensions 1.2 cm x 0.9 cm x 0.3 cm
The sample consisted of a fragment of a fibre cement material.
Chrysotile asbestos and Amosite asbestos detected.

Sample No. 2. ASET111220 / 114400 / 2. ENV218140-AS02-Internal, Level 1, CR0004, Yellow, Vinyl floor tile.
Approx dimensions 7.0 cm x 5.5 cm x 0.3 cm
The sample consisted of a fragment of a vinyl floor tile.
Chrysotile asbestos detected.

Sample No. 3. ASET111220 / 114400 / 3. ENV218140-AS03-Internal, Level 1, central transition room, Yellow, Vinyl floor tile.
Approx dimensions 6.5 cm x 5.0 cm x 0.3 cm
The sample consisted of a fragment of a vinyl floor tile.
Chrysotile asbestos detected.

Sample No. 4. ASET111220 / 114400 / 4. ENV218140-AS04-External, Ground level, B00A, Window putty.
Approx dimensions 0.5 cm x 0.5 cm x 0.2 cm
The sample consisted of fragments of soft mastic like material.
No asbestos detected.



Sample No. 5. ASET111220 / 114400 / 5. ENV218140-AS05-External, Ground level, B00A, Expansion joint/Membrane to brickwork walls.

Approx dimensions 2.0 cm x 1.2 cm x 0.5 cm

The sample consisted of a fragment of a bituminous material.

No asbestos detected.

Reported by,

A handwritten signature in black ink, appearing to read 'Mahen De Silva', is written over a light grey grid background.

**Mahen De Silva. BSc, MSc, Grad Dip (Occ Hyg)
Occupational Hygienist / Approved Identifier.
Approved Signatory**



Accredited for compliance with ISO/IEC 17025 - Testing.

The results contained in this report relate only to the sample/s submitted for testing. Australian Safer Environment & Technology accepts no responsibility for whether or not the submitted sample/s is/are representative. Results indicating "No asbestos detected" indicates a reporting limit specified in AS4964-2004 which is 0.1g/ Kg (0.01%). Any amounts detected at assumed lower level than that would be reported, however those assumed lower levels may be treated as "No asbestos detected" as specified and recommended by A4964-2004. Trace / respirable level asbestos will be reported only when detected.



Our ref : ASET112396 / 115576 / 1 – 24
Your ref : ENV218269 – KPS Block A
NATA Accreditation No: 14484



13 September 2023

ENV Solutions
PO Box 248
Ballina NSW 2478

Accredited for compliance with ISO/IEC 17025 - Testing.

Attn: Mr Luke Meadows

Dear Luke

Asbestos Identification

This report presents the results of twenty four samples, forwarded by ENV Solutions on 13 September 2023, for analysis for asbestos.

1.Introduction: Twenty four samples forwarded were examined and analysed for the presence of asbestos.

2. Methods: The samples were examined under a Stereo Microscope and selected fibres were analysed by Polarized Light Microscopy in conjunction with Dispersion Staining method (**Australian Standard AS 4964 - 2004 and Safer Environment Method 1 as the supplementary work instruction**) (**Qualitative Analysis only**).

3. Results : **Sample No. 1. ASET112396 / 115576 / 1. AS01-FCS-Soffit.**
Approx dimensions 3.5 cm x 1.6 cm x 0.5 cm
The sample consisted of a fragment of a fibro plaster cement material containing organic fibres.
Chrysotile asbestos detected.

Sample No. 2. ASET112396 / 115576 / 2. AS02-FCS-sports shed infill.
Approx dimensions 1.5 cm x 1.0 cm x 0.5 cm
The sample consisted of a fragment of a fibro plaster cement material containing organic fibres.
No asbestos detected.

Sample No. 3. ASET112396 / 115576 / 3. AS03-Window putty-Composite.
Approx dimensions 2.0 cm x 0.7 cm x 0.4 cm
The sample consisted of a fragment of soft mastic like material.
Chrysotile asbestos detected.

Sample No. 4. ASET112396 / 115576 / 4. AS04-FCS-Awning level 1.
Approx dimensions 1.5 cm x 1.1 cm x 0.5 cm
The sample consisted of a fragment of a fibre cement material.
Chrysotile asbestos and Amosite asbestos detected.

Sample No. 5. ASET112396 / 115576 / 5. AS05-FCS-Level 1 infill to concrete cancer.
Approx dimensions 2.0 cm x 1.3 cm x 0.5 cm
The sample consisted of a fragment of a fibro plaster cement material containing organic fibres.
No asbestos detected.



Sample No. 6. ASET112396 / 115576 / 6. AS06-Vinyl tile-Light orange entrance Ground.

Approx dimensions 8.5 cm x 4.5 cm x 0.3 cm

The sample consisted of fragments of vinyl floor tile^β material containing organic fibres having soft mastic like material as adhesive layer.

No asbestos detected (βAn independent confirmatory analytical technique is advised due to the nature of the sample).

Sample No. 7. ASET112396 / 115576 / 7. AS07-FCS-Debris ceiling cavity to male toilet ground.

Approx dimensions 10.5 cm x 6.8 cm x 0.5 cm

The sample consisted of a fragment of a fibro plaster cement material containing organic fibres.

Chrysotile asbestos detected.

Sample No. 8. ASET112396 / 115576 / 8. AS08-FCS-Manhole cover to male toilet ground.

Approx dimensions 2.0 cm x 1.1 cm x 0.5 cm

The sample consisted of a fragment of a fibre cement material.

Chrysotile asbestos detected.

Sample No. 9. ASET112396 / 115576 / 9. AS09-Vinyl sheeting-paper backed.

Approx dimensions 7.5 cm x 2.5 cm x 0.3 cm

The sample consisted of a fragment of linoleum floor covering material having a soft fibrous material containing organic fibres and synthetic mineral fibres as the backing layer.

No asbestos detected.

Sample No. 10. ASET112396 / 115576 / 10. AS10-Vinyl tile-orange AR0025.

Approx dimensions 7.0 cm x 5.0 cm x 0.3 cm

The sample consisted of fragments of vinyl floor tile^β having soft mastic like material as the adhesive layer.

No asbestos detected (βAn independent confirmatory analytical technique is advised due to the nature of the sample).

Sample No. 11. ASET112396 / 115576 / 11. AS11-Vinyl sheeting-AR0027.

Approx dimensions 10.0 cm x 3.5 cm x 0.3 cm

The sample consisted of a fragment of linoleum floor covering material.

No asbestos detected.

Sample No. 12. ASET112396 / 115576 / 12. AS12-FCS-ceiling lining AR0014/15.

Approx dimensions 1.2 cm x 1.1 cm x 0.5 cm

The sample consisted of a fragment of a fibro plaster cement material containing organic fibres.

Chrysotile asbestos detected.

Sample No. 13. ASET112396 / 115576 / 13. AS13-Vinyl tile-orange AR013.

Approx dimensions 8.0 cm x 6.0 cm x 0.3 cm

The sample consisted of fragments of vinyl floor tile.

No asbestos detected (An independent confirmatory analytical technique is advised due to the nature of the sample).

Sample No. 14. ASET112396 / 115576 / 14. AS14-Vinyl tile-Grey-AR0010.

Approx dimensions 11.0 cm x 7.0 cm x 0.3 cm

The sample consisted of fragments of vinyl floor tile* having soft mastic like material as the adhesive layer.

Chrysotile* asbestos detected.



Sample No. 15. ASET112396 / 115576 / 15. AS15-FCS-West packer to gutter at awning exterior.

Approx dimensions 12.0 cm x 6.6 cm x 0.5 cm

The sample consisted of a fragment of a fibro plaster cement material containing organic fibres.

No asbestos detected.

Sample No. 16. ASET112396 / 115576 / 16. AS16-FCS-Exterior West side entry way awning structure.

Approx dimensions 3.0 cm x 1.8 cm x 0.3 cm

The sample consisted of fragments of fibro plaster cement material containing organic fibres.

No asbestos detected.

Sample No. 17. ASET112396 / 115576 / 17. AS17-Vinyl tile-Grey EDB floor AR0005.

Approx dimensions 9.0 cm x 7.0 cm x 0.3 cm

The sample consisted of fragments of vinyl floor tile* having soft mastic like material as an adhesive layer.

Chrysotile* asbestos detected.

Sample No. 18. ASET112396 / 115576 / 18. AS18-Zelemite-EDB.

Approx dimensions 3.4 cm x 1.0 cm x 0.5 cm

The sample consisted of a fragment of hard fibrous material.

Chrysotile asbestos detected.

Sample No. 19. ASET112396 / 115576 / 19. AS19-Vinyl sheeting-Blue-AR002.

Approx dimensions 11.0 cm x 10.0 cm x 0.3 cm

The sample consisted of a fragment of a soft vinyl floor tile material having synthetic mineral fibres attached on one side.

No asbestos detected.

Sample No. 20. ASET112396 / 115576 / 20. AS20-Vermiculite-West side Ground composite.

Approx dimensions 5.0 cm x 4.0 cm x 0.3 cm

The sample consisted of fragments and powder of soft plaster material and vermiculite like material.

No asbestos detected.

Sample No. 21. ASET112396 / 115576 / 21. AS21-Vermiculite-East side Ground composite.

Approx dimensions 5.0 cm x 4.0 cm x 0.3 cm

The sample consisted of fragments and powder of soft plaster material and vermiculite like material.

No asbestos detected.

Sample No. 22. ASET112396 / 115576 / 22. AS22-Vinyl tile-Green AR1007.

Approx dimensions 8.0 cm x 6.5 cm x 0.3 cm

The sample consisted of fragments of vinyl floor tile^B having soft fibrous material containing organic fibres as a backing layer.

No asbestos detected (^BAn independent confirmatory analytical technique is advised due to the nature of the sample).



Sample No. 23. ASET112396 / 115576 / 23. AS23-Vinyl tile-Orange-AR1005.

Approx dimensions 10.0 cm x 7.0 cm x 0.3 cm

The sample consisted of fragments of vinyl floor tile^b having soft mastic like material as the adhesive layer.

No asbestos detected (^bAn independent confirmatory analytical technique is advised due to the nature of the sample).

Sample No. 24. ASET112396 / 115576 / 24. AS24-Vinyl tile-Blue-1003.

Approx dimensions 8.5 cm x 7.0 cm x 0.3 cm

The sample consisted of fragments of vinyl floor tile^b having soft mastic like material as the adhesive layer.

No asbestos detected (^bAn independent confirmatory analytical technique is advised due to the nature of the sample).

Reported by,

A handwritten signature in black ink, appearing to read "Mahen De Silva", is written over a white background.

**Mahen De Silva. BSc, MSc, Grad Dip (Occ Hyg)
Occupational Hygienist / Approved Identifier.
Approved Signatory**



Accredited for compliance with ISO/IEC 17025 - Testing.

The results contained in this report relate only to the sample/s submitted for testing. Australian Safer Environment & Technology accepts no responsibility for whether or not the submitted sample/s is/are representative. Results indicating "No asbestos detected" indicates a reporting limit specified in AS4964-2004 which is 0.1g/ Kg (0.01%). Any amounts detected at assumed lower level than that would be reported, however those assumed lower levels may be treated as "No asbestos detected" as specified and recommended by A4964-2004. Trace / respirable level asbestos will be reported only when detected.

*** denotes asbestos detected in ACM in bonded form.**



AUSTRALIAN SAFER ENVIRONMENT & TECHNOLOGY PTY LTD

ABN 36 088 095 112

Our ref : ASET112396 / 115576-1
Your ref : ENV218269- KPS Block A

25 September 2023

ENV Solutions
PO Box 248
Ballina NSW 2478

Attn: Mr Luke Meadows

Asbestos Identification

This report presents the results of six samples, forwarded by ENV Solutions on 13 September 2023 for analysis for asbestos as per results issued by WSP.

1. Introduction: Six samples forwarded were examined and analysed for the presence of asbestos by X Ray Diffraction by WSP.

2. Methods : As per the external laboratory:

All sample analysis was performed using X-ray diffraction in our Laboratory by the in-house method LP8 Serpentine detection by X-ray diffraction. X-ray diffraction (XRD) is a technique for detection of crystalline substances and minerals via their crystal structure. Chrysotile is a serpentine mineral.

3. Results:

Sample ID	Lab No	Sample Description	XRD Result	Other Result
			(Serpentine detected)	(Chrysotile detected*)
AS06	06	vinyl tile	No	No
AS10	10	vinyl tile	No	No
AS13	13	vinyl tile	Serpentine detected	Chrysotile* detected
AS22	22	vinyl tile	No	No
AS23	23	vinyl tile	Serpentine detected	Chrysotile* detected
AS24	24	vinyl tile	Serpentine detected	Chrysotile* detected

*X-ray diffraction (XRD) is a technique for detecting crystalline substances and minerals via their crystal structure. Chrysotile is a Serpentine mineral. Results denoted with a * are outside our accreditation.*

Reported by,

Mahen De Silva. BSc. MSc. Grad Dip (Occ Hyg)
Occupational Hygienist

SUITE 710 / 90 GEORGE STREET, HORNSBY NSW 2077 – P.O. BOX 1644 HORNSBY WESTFIELD NSW 1635
PHONE: (02) 99872183 FAX: (02)99872151 EMAIL: info@ausset.com.au WEBSITE: www.Ausset.com.au

OCCUPATIONAL HEALTH & SAFETY STUDIES • INDOOR AIR QUALITY SURVEYS • HAZARDOUS MATERIAL SURVEYS • RADIATION SURVEYS • ASBESTOS SURVEYS ASBESTOS DETECTION & IDENTIFICATION • REPAIR & CALIBRATION OF SCIENTIFIC EQUIPMENT • AIRBORNE FIBRE & SILICA MONITORING

CERTIFICATE OF ANALYSIS 332899

Client Details

Client	ENV Services Pty Ltd
Attention	Luke Meadows
Address	313 River St, Ballina, NSW, 2478

Sample Details

Your Reference	<u>ENV218269</u>
Number of Samples	1 Paint
Date samples received	13/09/2023
Date completed instructions received	13/09/2023

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.
 Samples were analysed as received from the client. Results relate specifically to the samples as received.
 Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Report Details

Date results requested by	15/09/2023
Date of Issue	14/09/2023
NATA Accreditation Number 2901. This document shall not be reproduced except in full.	
Accredited for compliance with ISO/IEC 17025 - Testing. Tests not covered by NATA are denoted with *	

Results Approved By

Hannah Nguyen, Metals Supervisor

Authorised By

Nancy Zhang, Laboratory Manager

Lead in Paint		
Our Reference		332899-1
Your Reference	UNITS	LP01-Barge cap covering
Date Sampled		09/09/2023
Type of sample		Paint
Date prepared	-	14/09/2023
Date analysed	-	14/09/2023
Lead in paint	%w/w	0.19

Method ID	Methodology Summary
Metals-020/021/022	Digestion of Paint chips/scrapings/liquids for Metals determination by ICP-AES/MS and or CV/AAS.

Client Reference: ENV218269

QUALITY CONTROL: Lead in Paint					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			14/09/2023	1	14/09/2023	14/09/2023		14/09/2023	[NT]
Date analysed	-			14/09/2023	1	14/09/2023	14/09/2023		14/09/2023	[NT]
Lead in paint	%w/w	0.005	Metals-020/021/022	<0.005	1	0.19	0.16	17	102	[NT]

Result Definitions

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

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.
Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.	
The recommended maximums for analytes in urine are taken from "2018 TLVs and BEIs", as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.	
Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2	

Laboratory Acceptance Criteria

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

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

Spikes for Physical and Aggregate Tests are not applicable.

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

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

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

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

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

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

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

Measurement Uncertainty estimates are available for most tests upon request.

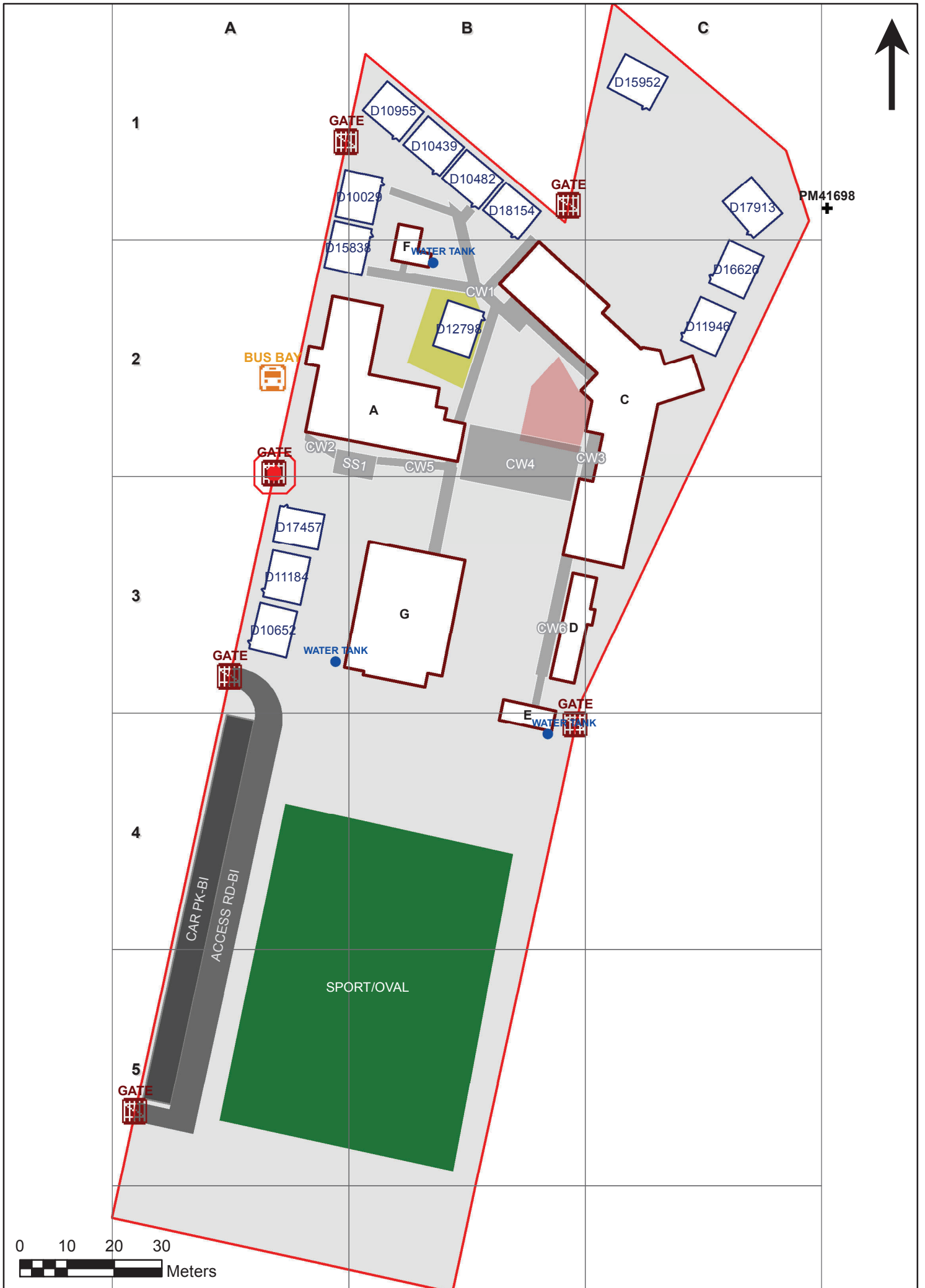
Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical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

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

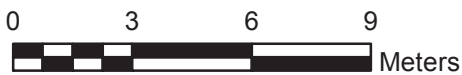


APPENDIX C
FLOOR PLANS

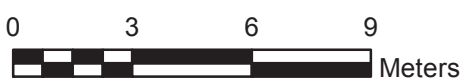
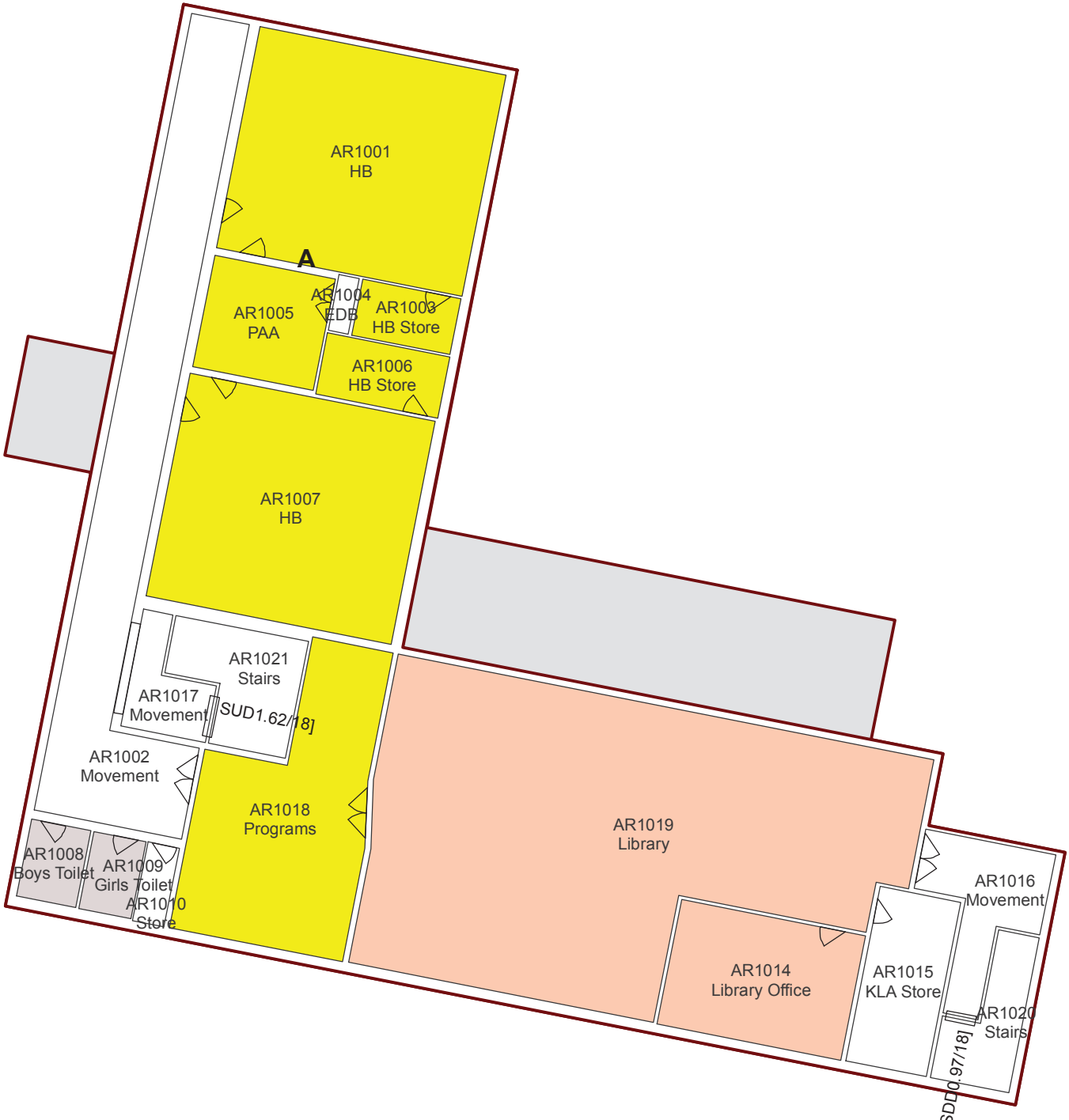
4054 - Kingscliff Public School Site Plan (10457)



4054 - Kingscliff Public School
Administration/Library (B00A) - Ground Floor (Room Function)



4054 - Kingscliff Public School
Administration/Library (B00A) - 1st Floor (Room Function)





Non-destructive Hazmat Survey Report
12 Orient St, Kingscliff NSW 2487 (B00C)
ENV218269



ENV Solutions

313 River Street, Ballina NSW 2478

T: 1300 861 325

E: admin@envsolutions.com.au

www.envsolutions.com.au

For:

Richard Crookes Constructions Pty Ltd

By:




Kurtis Foulkes

Date:

9/10/2023

DOCUMENT CONTROL

Job No:	ENV218269
Client:	Richard Crookes Constructions Pty Ltd
Filename:	ENV218269 - 12 Orient St, Kingscliff NSW (B00C) - Hazmat Report v2.0

	Name:	Date:	Signature:
Prepared By:	Kurtis Foulkes	09/10/2023	
Reviewed By:	Luke Meadows	09/10/2023	
Approved By:	Luke Meadows	09/10/2023	

Revision:	Date:	Details:
V2.0	21/09/2023	Extra XRD Analysis undertaken to vinyl samples/

SCOPE OF ENGAGEMENT AND LIMITATIONS

This report has been prepared by ENV Solutions at the request of Richard Crookes Constructions Pty Ltd for the purpose of a Non-destructive Hazmat Survey Report for building C. No other parties may rely on the contents of this report for any purposes except those stated.

This report has been prepared based on the information provided to us and from other information obtained as a result of enquiries made by us. ENV accepts no responsibility for any loss or damage suffered howsoever arising to any person or corporation who may use or rely on this document for a purpose other than that described above.

No part of this report may be reproduced, stored, or transmitted in any form without the prior consent of ENV.

ENV declares that it does not have, nor expects to have, a beneficial interest in the subject project.

To avoid this advice being used inappropriately, it is recommended that you consult with ENV before conveying the information to another who may not fully understand the objectives of the report. This report is meant only for the subject site/project and should not be applied to any other.

TABLE OF CONTENTS

Executive Summary.....	iv
1 Introduction	5
1.1 SCOPE OF WORK	5
2 Site characteristics	5
3 Inspection procedure & Methodology.....	6
3.1 Asbestos	6
3.2 Synthetic Mineral Fibres (SMF).....	6
3.3 Polychlorinated biphenyls (PCBs)	6
3.4 Lead Containing Paint	6
3.5 Ozone Depleting Substances (ODS's).....	6
4 Findings	7
4.1 Analytical Results summary	7
4.1.1 Asbestos Bulk Sample Analysis	7
4.1.2 Lead Containing Paint Analysis	7
4.2 Assessment Findings	7
4.2.1 Asbestos containing materials	7
4.2.2 Synthetic Mineral Fibres	7
4.2.3 Polychlorinated Biphenyls.....	7
4.2.4 Lead Containing Paint	7
4.2.5 Ozone Depleting Substances.....	7
5 Reccomendations.....	8
5.1 Asbestos	8
5.2 Synthetic Mineral Fibres (SMF).....	8
5.3 Polychlorinated biphenyls (PCBs)	8
5.4 Lead Containing Paint	9
5.5 Ozone Depleting Substances (ODS)	9
6 Risk Assessment	10
7 Exclusions & Limitations	12
8 References	13

LIST OF APPENDICES

- Appendix A:** Hazmat Register
- Appendix B:** Laboratory Results
- Appendix C:** Floor Plans

EXECUTIVE SUMMARY

ENV Services Pty Ltd (ENV) was engaged by Richard Crookes Constructions Pty Ltd to conduct a Non-destructive Hazardous Building Materials Assessment of the residential/commercial property located at 12 Orient St, Kingscliff NSW 2487 (B00C) (the site). ENV conducted the assessment on the 16th September 2023.

The objective of this Assessment was to identify and assess health risks posed by hazardous building materials.

The scope of this assessment included the accessible internal and immediate external areas of the property.

Hazardous building materials identified as part of this survey are as follows:

Property	Non-friable ACM's	Friable ACM's	Synthetic Mineral Fibre	Polychlorinated biphenyl's	Lead Containing Paint	Ozone Depleting Substances
12 Orient St, Kingscliff NSW 2487 (B00C)	✓	✓	✓	-	✓	-

1 INTRODUCTION

ENV Services Pty Ltd (ENV) was engaged by Richard Crookes Constructions Pty Ltd to conduct a Non-destructive Hazardous Building Materials Assessment of building (Building C B00C) located at 12 Orient St, Kingscliff NSW 2487 (the site). (ENV conducted the assessment on the 16th September 2023).

1.1 SCOPE OF WORK

The scope of the assessment included the accessible internal and external areas of the site.

- Inspect representative areas of the property to identify hazardous materials;
- Compile an up-to-date hazardous building materials register for the site; and
- Make recommendations for the on-going management/removal of the asbestos/hazardous materials.

This hazardous building materials assessment included the following Hazardous Building Materials:

- Asbestos Containing Material (ACM);
- Synthetic Mineral Fibre materials (SMF);
- Polychlorinated Biphenyls contained in capacitors in light fittings (PCB's);
- Lead containing paint (LCP); and,
- Ozone Depleting Substances (ODS).

2 SITE CHARACTERISTICS

Table 1: Site information

Details:	
Site Address:	12 Orient St, Kingscliff NSW 2487 (B00C)
Lot & DP:	Lot 1 – DP384195
Type of Building:	School Building block A (B00C)
No. of Levels:	1
Estimated Age of Construction:	1950's-1960's
Roof:	Tiled
External Walls:	Brickwork, Fibre cement, Timber cladding
Internal walls	Brickwork, Concrete rendered, Plasterboard, Masonite, Fibre cement, plasterboard
Floor & Coverings:	Concrete, Carpet, Ceramic tiles, vinyl, sheet vinyl, vinyl floor tiles

3 INSPECTION PROCEDURE & METHODOLOGY

The assessment comprised a review of relevant information provided to ENV, anecdotal information, interviews with any available site personal and visual inspections throughout accessible areas of the site. Where required, destructive sampling techniques were undertaken.

The procedure for identifying each hazardous building materials for the site is summarised and presented below:

3.1 Asbestos

This component of the assessment was carried out in accordance with the *Safe Work Australia Code of Practice How to Manage and Control Asbestos in the Workplace, (June 2020)* and relevant state *Health & Safety Regulations*. Where required and if safe to do so, building material samples were collected at the discretion of the ENV consultant. Samples collected of the suspected Asbestos Containing Materials (ACM's) were then sent to a NATA accredited laboratory for formal analysis by the means of polarised light microscopy which includes dispersion staining techniques.

3.2 Synthetic Mineral Fibres (SMF)

This component of the assessment was carried out in accordance with the guidelines documented in the *"Code of practice for the safe use of synthetic mineral fibres"* [NOHSC: 2006(1990)]. This report broadly identifies SMF materials found or suspected of being present during the survey based on a visual assessment.

3.3 Polychlorinated biphenyls (PCBs)

Where safe access is permissible, detailed information on the ballasts in fluorescent tube light fittings and other electrical equipment are cross referenced to the document *"Identification of PCB containing capacitors information booklet: An information booklet for electricians and electrical contractors"*. (ANZECC 1997). Due to the immediate dangers of accessing electrical components or other risks such as heights. In these instances, a visual observation is undertaken based on age and appearance for its likelihood of containing PCB's.

3.4 Lead Containing Paint

Representative painted surfaces were tested for the presence of lead by taking samples and having NATA accredited laboratory undertaken to quantitatively determine the content of lead in the paint. In accordance with AS 4361.2:2017 *Guide to hazardous paint management, Part 2: Lead paint in residential, public and commercial buildings*. Any painting containing >0.1% w/w lead is classified as being deemed lead containing paint.

3.5 Ozone Depleting Substances (ODS's)

HCFC-22 (also known as R22) has been commonly used in residential heat pump, air conditioning and refrigeration systems since the 1990s following the phase out of chlorofluorocarbons (CFCs) in developed countries in 1995. As releases of R22, including from leaks, contributes to ozone depletion, Australia has a legislated phase out of HCFC, in line with its obligations under the Montreal Protocol.

A visual inspection was undertaken to all accessible air-conditioning units and chillers (if applicable) and their subsequent refrigerant types was noted.

4 FINDINGS

4.1 Analytical Results summary

4.1.1 Asbestos Bulk Sample Analysis

A total of twenty-six (26) samples to materials suspected of containing asbestos were collected and sent to a NATA accredited laboratory for analysis. In summary, a total of nine (9) samples returned positive for containing asbestos. Further details of the NATA Endorsed Laboratory Sample Analysis Report is provided in **Attachment 2: Laboratory Results**.

4.1.2 Lead Containing Paint Analysis

A total of three (3) samples to materials suspected of containing lead were collected and sent to a NATA accredited laboratory for analysis (from the 17/07.2203). In summary, a total of two (2) samples were reported to contain lead above the adopted criteria for lead content in paint. Further details of the NATA Endorsed Laboratory Sample Analysis Report is provided in **Attachment 2: Laboratory Results**.

4.2 Assessment Findings

The findings of this assessment are presented in tabulated form within Attachment 1: Hazmat register. A summary of these findings is presented below.

4.2.1 Asbestos containing materials

The full list of asbestos findings is presented within **Attachment 1: Hazmat register**. A summary of these findings is presented below:

(The full list of asbestos findings is presented within **Attachment 1: Hazmat register**.)

4.2.2 Synthetic Mineral Fibres

- Suspected positive SMF was identified throughout the roof void in the form of sarking insulation, insulation batts and assumed to be present with any hot water heaters.;

4.2.3 Polychlorinated Biphenyls

- No Polychlorinated Biphenyls (PCBS's) were suspected or identified during the assessment.

4.2.4 Lead Containing Paint

- Lead containing paint was identified to Blue (dark) - upper coloured paint system to the windows frames throughout (0.13% w/w).
- Lead containing paint was identified to (cream) upper coloured paint system to external wall cladding (0.18% w/w).

4.2.5 Ozone Depleting Substances

- No Ozone Depleting Substances (ODS) were suspected or identified during the assessment.

5 RECCOMENDATIONS

Based on the findings of this assessment, the following recommendations are provided for the control and management of hazardous building materials identified at the site. Further recommendations are also provided specific to each hazardous building material identified within the register which is included within **Attachment 1: Hazmat Register**.

5.1 Asbestos

- Asbestos containing materials (ACM) that may be disturbed should be removed prior to the commencement of any works.
- Where asbestos removal works are required, the person that commissions the removal of asbestos must ensure that works are conducted by an appropriately licensed asbestos removalist.
- If asbestos removal works are to be conducted within or adjacent from highly sensitive areas, it is recommended that airborne asbestos monitoring should be conducted during the asbestos removal process, particularly along the boundary of the asbestos removal work area.
- Where friable asbestos removal works are to be conducted a licensed asbestos assessor who is independent of the asbestos contractor must be engaged to:
 - Inspect the asbestos removal work area prior to commencement of the works;
 - Undertake asbestos fibre air monitoring before and during friable removal works in the surrounding areas and clearance asbestos fibre air monitoring at the conclusion of the asbestos removal work;
 - Complete a visual inspection of the asbestos removal area and the area immediately surrounding it and ensure these are free from visible asbestos contamination.
 - The licensed asbestos assessor must provide a Clearance Certificate that documents the visual clearance inspection, and the satisfactory completion of the asbestos removal works.
 - The Clearance Certificate should state that all visible asbestos dust and debris resulting from the asbestos removal process has been removed from the removal areas) and from areas adjacent to the removal work area (s).
- Given the constraints of this assessment being undertaken in a mostly non-destructive fashion, during any future works including demolition and refurbishment works, if any materials are identified suspected of containing asbestos which are not referenced within this report or register, then an asbestos hygienist should be notified to determine whether the subject material contains asbestos.

5.2 Synthetic Mineral Fibres (SMF)

- Synthetic Mineral Fibres (SMF) materials that are likely to be disturbed during any proposed demolition/refurbishment works should be handled in accordance with the National Code of Practice for the safe Use of Synthetic Mineral Fibres [NOHSC:2006(1990)]

5.3 Polychlorinated biphenyls (PCBs)

- Electrical fittings suspected of containing PCB oil capacitors should be treated as containing PCB oils until such time as evidence suggest otherwise e.g. further assessed.

- Electrical fittings that contain or suspected to contain PCB oil -containing capacitors should be removed as hazardous/regulated waste under controlled working conditions prior to the demolition or refurbishment works in accordance with the Polychlorinated Biphenyls Management Plan, Revised Edition April 2003

5.4 Lead Containing Paint

- Inset any site-specific recommendations.
- Any works that are likely to disturb lead containing paint surfaces, should be conducted in accordance with the requirements of AS 4361.2:2017 *Guide to Hazardous Paint Management - Part 2: Lead Paint in Residential, Public and Commercial Buildings*.
- If painted surfaces that have not been tested during this Assessment are subject to machine sanding/buffing or heat stripping, further sampling of subjective paints should be undertaken and samples sent to a NATA accredited laboratory for quantitative analysis.
- The safest method of dealing with LCP is to replace or remove the items in their entirety that have LCP on them and replace them with new items that do not contain lead (assuming that the lead content is <0.1% w/w of the material). This allows the items to be disposed of as regular building or demolition unsegregated waste in accordance with the SW Environment Protection Authority (EPA) *Waste Classification Guidelines 2014 Part 1 - Classifying Waste*. The advantage of this method is the reduction in labour requirements to remove the lead paint and also this reduces the risk to workers from exposure to lead dust or fumes. If the removal of the CP or coatings is the preferred or required option this may generate significant amounts of potential hazardous waste. This waste must be removed, collected and disposed of by an appropriately licensed contractor under controlled conditions that minimises the release to air, water and soil. Disposal of lead waste must be disposed of as hazardous waste at an approved waste facility.

5.5 Ozone Depleting Substances (ODS)

- If the ozone depleting substances identified on-site require removal they should be appropriately decanted and disposed of by a licensed contractor in accordance with the *Ozone Protection and Synthetic Greenhouse Gas Management Amendment Regulation Measure No. 1, 2017*;
- It is important to note that, if a system which utilises ODS-refrigerants is in good working order, there is no need to transition to an alternative refrigerant/system (until 2029)

6 RISK ASSESSMENT

Risk Rating	Significance	Recommendations
Extreme	Immediate and significant exposure risk	Evacuate area immediately and implement controls to isolate the area. Immediate removal of ACM recommended.
High	Significant potential exposure risk	Restrict access and implement controls to isolate the area. Immediate removal of ACM recommended.
Medium	Potential exposure risk under some circumstances	Implement control measures to seal or enclose and label as required. Ongoing inspections and maintenance required. Remove prior to renovations or demolition.
Low	Unlikely to result in exposure in current condition and if not disturbed.	Implement control measures to seal or enclose and label as required. Ongoing inspections and maintenance required. Remove prior to renovations or demolition.

Risk Rating	Significance	Lead	PCB	SMF	ODS
High	Significant potential exposure risk.	Flaking paint with high level of human contact. Restrict access and implement controls to isolate the area. Immediate removal of lead based paints required.	If leaking PCB oil is observed from the capacitor or component. Immediate control measures are required to suppress any potential environmental contamination and to prevent exposure to individuals. Immediate removal of PCB required.	SMF in high damage condition with high level of human contact. Restrict access and implement controls to isolate the area. Immediate removal of SMF required.	If A/C units, chillers or refrigerator units compressed gas units begin leaking. Restrict access and implement controls to isolate the area. Immediate removal of ODS required.
Low	Unlikely to result in exposure in current condition and if not disturbed.	Lead based paint is in good condition or in areas that are considered inaccessible to most individuals while at the site. Wear appropriate PPE if working on building materials that contain lead-based paint.	The PCB capacitor or component is not leaking and is in good condition. Remove prior to renovations or demolition.	SMF in good or low damage condition. Ongoing inspection and maintenance required to ensure risk rating remains low. Remove prior to renovations or demolition.	If chillers or refrigerator units compressed gas units are in good condition. Ongoing inspection and maintenance required to ensure risk rating remains low. Remove prior to renovations or demolition.

7 EXCLUSIONS & LIMITATIONS

Due to limitations imposed by the building subject to normal reoccupation conditions post assessment, this inspection has been undertaken in a non-destructive manner and as such there may be areas where ACM exists which have not been detected.

- This could include:
- within wall cavities;
- beneath floors/slabs;
- within plant and equipment (such as AC ducts);
- hidden pipe work;
- ceiling spaces and voids; and
- other encapsulated areas.

8 REFERENCES

- *New South Wales Government, Work Health and Safety Act 2011*
- *New South Wales Government, Work Health and Safety Regulation 2011*
- *New South Wales Government, How to Manage and Control Asbestos in the Workplace Code of Practice 2022*
- *New South Wales Government, How to Safely Remove Asbestos Code of Practice 2022*
- *ACG. 2017. Work Health and Safety Regulations 2017, Chapter 8: Asbestos. Amended 1 July 2019. Australian Commonwealth Government, Canberra.*
- *ANZECC. 1997. Identification of PCB containing Capacitors and information booklet for electricians and electrical contractors. Australian and New Zealand Environment and Conservation Council.*
- *National Occupational Health and Safety Commission (NOHSC). 2005. Code of practice for the management and control of asbestos in workplaces (NOHSC:2018 [2005]). Canberra: Australian Government NOHSC. pp 87.*
- *NOHSC. 1990. National Code of Practice for the safe use of Synthetic Mineral Fibres [NOHSC: 2006(1990)]. Australian Government Publishing Service, Canberra.*
- *Safe Work Australia. 2020. How to Manage and Control Asbestos in the Workplace Code of Practice. Safe Work Australia.*
- *Safe Work Australia. 2020. How to Safely Remove Asbestos Code of Practice. Safe Work Australia.*
- *Standards Australia. 2017. AS4361.2 2017 Guide to Lead Paint Management – Part 2: Residential and Commercial Properties. Standards Australia*

APPENDIX A

Hazmat Register

HAZMAT Register

Workplace address: 12 Orient Street, Kingscliff NSW 2487 (B00C)
 Client name: Richard Crookes Constructions Pty Ltd
 Asbestos Assessor: Kurtis Foulkes & Luke Meadows

T: 1300 861 325
 E: info@envsolutions.com.au
 www.envsolutions.com.au



ID	Date Identified	Hazmat Type	Area / Level	Location / Room	Feature	Item Description	Sample No.	Sample Status	Friability	Condition	Qty (m ²)	Risk Assessment	Comments	Photo
1	16/09/2023	Asbestos	External, Ground level	Perimeter of building	Soffit	Fibre cement sheeting	-	Positive	Non-Friable	Good	240	Low Risk	Previously identified positive within asbestos registers Ref: "Noel Arnold & Associates : 27 - May - 2008 Parsons Brinckerhoff : 08 - Oct - 2015"	
2	16/09/2023	Lead Paint - Chip	External, Ground level	North side building	Walls	Cream - upper coloured paint system	ENV218140-LC01 (17.07.2023)	Negative	-	-	-	-	-	
3	16/09/2023	Lead Paint	Internal, Ground level	Throughout	Window sill(s)	Blue (dark) - upper coloured paint system	ENV218140-LC02 (17.07.2023)	Positive	-	Low Damage	-	Low Risk	-	
4	16/09/2023	Lead Paint - Chip	External, Ground level	Throughout, External timber cladding	Walls	Cream - upper coloured paint system	ENV218140-LC03 (17.07.2023)	Positive	-	Low Damage	-	Low Risk	-	
5	16/09/2023	Asbestos	Internal, Lower ground level	CR9003 (Hub Club)	Ceiling	Fibre cement sheeting	ENV218140-AS01 (17.07.2023)	Positive	Non-Friable	Low Damage	50	Low Risk	-	

ID	Date Identified	Hazmat Type	Area / Level	Location / Room	Feature	Item Description	Sample No.	Sample Status	Friability	Condition	Qty (m ²)	Risk Assessment	Comments	Photo
6	16/09/2023	Asbestos	Internal, Lower ground level	CR9001 to 9002	Ceiling	Fibre cement sheeting	Refer to: ENV218140-AS01 (17.07.2023)	Assumed Positive	Non-Friable	Low Damage	35	Low Risk	-	
7	16/09/2023	Asbestos	Internal, Lower ground level	CR9003 (Hub Club)	Walls	Fibre cement sheeting	Refer to: ENV218140-AS01 (17.07.2023)	Assumed Positive	Non-Friable	Low Damage	35	Low Risk	-	
8	16/09/2023	Asbestos	Internal, Lower ground level	CR9001 to 9002 (Kitchenette)	Walls	Fibre cement sheeting	Refer to: ENV218140-AS01 (17.07.2023)	Assumed Positive	Non-Friable	Low Damage	30	Low Risk	-	
9	16/09/2023	Asbestos	Internal, Lower ground level	CR9002 (Kitchenette) Within cupboard housing, beneath HWH	HWH heat plate	Fibre cement sheeting	AS07	Positive	Non-Friable	Low Damage	1	Low Risk	-	
10	16/09/2023	Asbestos	Internal, Ground level	CR0003 to CR0010 (PAA)	Floor	Yellow Vinyl floor tiles	AS02	Positive	Non-Friable	Low Damage	70	Low Risk	-	

*Quantities are estimates only and have not been assessed by a qualified surveyor.

ID	Date Identified	Hazmat Type	Area / Level	Location / Room	Feature	Item Description	Sample No.	Sample Status	Friability	Condition	Qty (m ²)	Risk Assessment	Comments	Photo
11	16/09/2023	Asbestos	Internal, Ground level	CR0001 / CR0002	Ceiling	Fibre cement sheeting	Refer to: ENV218140-AS01 (17.07.2023)	Assumed Positive	Non-Friable	Low Damage	50	Low Risk	Debris also identified within the immediate vicinity of the ceiling void access panel.	
12	16/09/2023	Asbestos	Internal, Ground level	CR0012 and CR0013	Floor	Light orange Vinyl floor tiles	ENV218140-AS03 (17.07.2023)	Positive	Non-Friable	Low Damage	30	Low Risk	-	
13	16/09/2023	Asbestos	External, Ground level	Throughout building	Windows	Window caulking	AS01	Negative	-	-	-	-	(Timber Style Windows)	
14	16/09/2023	Asbestos	External, Ground level	North-eastern corner, EDB Cupboard	Electrical backing board	Zelamaite board	-	Assumed Positive	Non-Friable	Low Damage	-	Low Risk	-	
15	16/09/2023	Asbestos	External, Ground level	Storage area	Packer	Fibre cement sheeting	AS02	Negative	-	-	-	-	Other packers may be present throughout the building which may be positive.	

*Quantities are estimates only and have not been assessed by a qualified surveyor.

ID	Date Identified	Hazmat Type	Area / Level	Location / Room	Feature	Item Description	Sample No.	Sample Status	Friability	Condition	Qty (m ²)	Risk Assessment	Comments	Photo
16	16/09/2023	Asbestos	External, Ground level	Storage area / CR9005	Debris	Paper backing	AS03	Negative	-	-	-	-	-	
17	16/09/2023	Asbestos	External, Ground level	Undercroft area	Debris	Fibre cement sheeting	AS04	Negative	-	-	-	-	-	
18	16/09/2023	Asbestos	External, Ground level	Undercroft area	Debris	Fibre cement sheeting	AS05	Positive	Non-Friable	High Damage	Throughout entire area	High Risk	Throughout	
19	16/09/2023	Asbestos	Internal, Lower ground level	CR9001 to CR9002	Bench top lining	Tilux	AS06	Negative	-	-	-	-	-	
20	16/09/2023	Asbestos	Internal, Lower ground level	CR9001 to CR9002	Floor	Cream speckled vinyl floor sheeting	AS08	Negative	-	-	-	-	-	

*Quantities are estimates only and have not been assessed by a qualified surveyor.

ID	Date Identified	Hazmat Type	Area / Level	Location / Room	Feature	Item Description	Sample No.	Sample Status	Friability	Condition	Qty (m ²)	Risk Assessment	Comments	Photo
21	16/09/2023	Asbestos	Internal, Ground level	CR0001 / CR0002	Floor	Green vinyl floor tiles	AS09	Positive	Non-Friable	Good	40m2	Low Risk	Serpentine detected - Chrysotile* detected following X-ray diffraction (XRD) Analysis	
22	16/09/2023	Asbestos	Internal, Ground level	CR0004	Floor	Orange vinyl floor tiles	AS10	Positive	Non-Friable	Good	40m2	Low Risk	Serpentine detected - Chrysotile* detected following X-ray diffraction (XRD) Analysis	
23	16/09/2023	Asbestos	Internal, Ground level	CR0004, eastern wall to walkway	Wall	Fibre cement sheeting	AS11	Negative	-	-	-	-	-	
24	16/09/2023	Asbestos	Internal, Ground level	CR0003 to CR0010 (PAA)	Walls	Fibre cement sheeting	AS12	Negative	-	-	-	-	-	
25	16/09/2023	Asbestos	Internal, Ground level	CR0006	Floor	Green vinyl floor tiles	Ref: AS09	Assumed Positive	Non-Friable	Good	40m2	Low Risk	Serpentine detected - Chrysotile* detected following X-ray diffraction (XRD) Analysis	

*Quantities are estimates only and have not been assessed by a qualified surveyor.

ID	Date Identified	Hazmat Type	Area / Level	Location / Room	Feature	Item Description	Sample No.	Sample Status	Friability	Condition	Qty (m ²)	Risk Assessment	Comments	Photo
26	16/09/2023	Asbestos	Internal, Ground level	CR0009	Floor	Blue vinyl floor tiles	AS13	Positive	Non-Friable	Good	40m2	Low Risk	Serpentine detected - Chrysotile* detected following X-ray diffraction (XRD) Analysis	
27	16/09/2023	Asbestos	Internal, Ground level	CR0009, East elevation	Wall	Fibre cement sheeting	AS14	Negative	-	-	-	-	-	
28	16/09/2023	Asbestos	Internal, Ground level	CR0011	Wall, West elevation	Fibre cement sheeting	AS15	Assumed Positive	Non-Friable	Good	15	-	Wall also includes sections of Masonite. Laboratory requires further material to conclude its presence or absence of asbestos content in this material Further sampling required or assumed and removed as Asbestos.	
29	16/09/2023	Asbestos	Internal, Ground level	EDB / CR0033	Wall	Fibre cement sheeting	AS16	Positive	Non-Friable	Good	2	Low Risk	-	
30	16/09/2023	Asbestos	Internal, Ground level	EDB / CR0033	Ceiling	Fibre cement sheeting	AS17	Negative	-	-	-	-	-	

*Quantities are estimates only and have not been assessed by a qualified surveyor.

ID	Date Identified	Hazmat Type	Area / Level	Location / Room	Feature	Item Description	Sample No.	Sample Status	Friability	Condition	Qty (m ²)	Risk Assessment	Comments	Photo
31	16/09/2023	Asbestos	Internal, Ground level	EDB / CR0033	Electrical backing board	Zelamaite board		Assumed Positive	Non-Friable	Low Damage	1	Low Risk	-	
32	16/09/2023	Asbestos	Internal, Ground level	CR0011	Floor	Blue vinyl floor tiles	Ref: AS13	Assumed Positive	Non-Friable	Good	40m2	Low Risk	Serpentine detected - Chrysotile* detected following X-ray diffraction (XRD) Analysis	
33	16/09/2023	Asbestos	Internal, Ground level	CR0012	Steel window frame	Putty	AS18	Negative	-	-	-	-	-	
34	16/09/2023	Asbestos	Internal, Ground level	CR0013	Walls	Fibre cement sheeting	AS19	Positive	Non-Friable	Good	30		Includes all walls within this area leading into central transition room.	
35	16/09/2023	Asbestos	Internal, Ground level	CR0015 and CR0016	Walls	Fibre cement sheeting	AS20	Positive	Non-Friable	Good	40	Low Risk		


*Quantities are estimates only and have not been assessed by a qualified surveyor.

ID	Date Identified	Hazmat Type	Area / Level	Location / Room	Feature	Item Description	Sample No.	Sample Status	Friability	Condition	Qty (m ²)	Risk Assessment	Comments	Photo
36	16/09/2023	Asbestos	Internal, Ground level	CR0016 cleaners cupboard / storeroom	Floor	Orange vinyl floor tiles	Ref: AS10	Assumed Positive	Non-Friable	Good	40m2	Low Risk	Serpentine detected - Chrysotile* detected following X-ray diffraction (XRD) Analysis	
37	16/09/2023	Asbestos	Internal, Ground level	CR0016 cleaners cupboard / storeroom	Walls	Fibre cement sheeting	AS21	Positive	Non-Friable	Good	8	Low Risk	-	
38	16/09/2023	Asbestos	Internal, Ground level	CR0018	Walls	Fibre cement sheeting	AS22	Positive	Non-Friable	Good	40	Low Risk	-	
39	16/09/2023	Asbestos	Internal, Ground level	CR0017	Walls	Fibre cement sheeting	AS23	Positive	Non-Friable	Good	12	Low Risk	-	
40	16/09/2023	Asbestos	Internal, Ground level	CR0020	Floor	Blue vinyl floor sheeting	AS24	Negative	-	-	-	-	Includes rooms CR0020 to CR0028 and CR0031	

*Quantities are estimates only and have not been assessed by a qualified surveyor.

ID	Date Identified	Hazmat Type	Area / Level	Location / Room	Feature	Item Description	Sample No.	Sample Status	Friability	Condition	Qty (m ²)	Risk Assessment	Comments	Photo
41	16/09/2023	Asbestos	Internal, Ground level	CR0020	Floor beneath vinyl	Fibre cement sheeting	AS25	Negative	-	-	-	-	Includes rooms CR0020 to CR0028 and CR0031	
42	16/09/2023	Asbestos	Internal, Ground level	CR0025	Floor	Orange vinyl floor tiles	Ref: AS10	Assumed Positive	Non-Friable	Good	40m2	Low Risk	Serpentine detected - Chrysotile* detected following X-ray diffraction (XRD) Analysis	
43	16/09/2023	Asbestos	Internal, Ground level	CR0026	Floor	Orange vinyl floor tiles	Ref: AS10	Assumed Positive	Non-Friable	Good	40m2	Low Risk	Serpentine detected - Chrysotile* detected following X-ray diffraction (XRD) Analysis	
44	16/09/2023	Asbestos	Internal, Ground level	CR0020, 21, 23, 24, 27, 28, 29, 30, 31 - Walls to corridor & West side classroom & far south wall	Walls	Fibre Cement sheeting	AS26	Negative	-	-	-	-	-	
45	16/09/2023	Asbestos	Internal, Ground level	CR0024	Ceiling	Low Density Board	AS27	Positive	Friable	Good	25	Medium Risk		

*Quantities are estimates only and have not been assessed by a qualified surveyor.

ID	Date Identified	Hazmat Type	Area / Level	Location / Room	Feature	Item Description	Sample No.	Sample Status	Friability	Condition	Qty (m ²)	Risk Assessment	Comments	Photo
46	16/09/2023	Asbestos	Internal, Ground level	CR0028	Ceiling	Low Density Board	Ref: AS27	Assumed Positive	Friable	Good	10	Medium Risk		
47	16/09/2023	Asbestos	Internal, Ground level	CR0031	Ceiling	Low Density Board	Ref: AS27	Assumed Positive	Friable	Good	20	Medium Risk		
48	16/09/2023	Asbestos	Internal, Ground level	CR0030	Floor	Orange vinyl floor tiles	Ref: AS10	Assumed Positive	Non-Friable	Good	40m2	Low Risk	Serpentine detected - Chrysotile* detected following X-ray diffraction (XRD) Analysis	








Recommendations






Workplace address: 12 Orient Street, Kingscliff NSW 2487 (B00C)
 Client name: Richard Crookes Constructions Pty Ltd
 Asbestos Assessor: Kurtis Foulkes & Luke Meadows







T: 1300 861 325
 E: info@envsolutions.com.au
 www.envsolutions.com.au










Corresponding ID	Recommendations	Additional Photograph 1:	Additional Photograph 2:	Additional Photographs 3:
1	Label as containing asbestos and maintain in current condition if to remain in-situ, remove under controlled non-friable asbestos removal conditions prior to refurbishment or demolition works by a Class B (non-friable) licensed asbestos removal contractor.			
2	-	-	-	-
3	-	-	-	-
4	-	-	-	-
5	Label as containing asbestos and maintain in current condition if to remain in-situ, remove under controlled non-friable asbestos removal conditions prior to refurbishment or demolition works by a Class B (non-friable) licensed asbestos removal contractor.	-	-	-



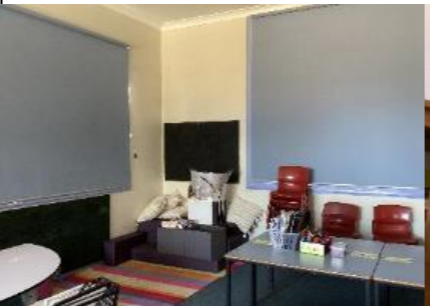


Corresponding ID	Recommendations	Additional Photograph 1:	Additional Photograph 2:	Additional Photographs 3:
6	Label as containing asbestos and maintain in current condition if to remain in-situ, remove under controlled non-friable asbestos removal conditions prior to refurbishment or demolition works by a Class B (non-friable) licensed asbestos removal contractor.			
7	Label as containing asbestos and maintain in current condition if to remain in-situ, remove under controlled non-friable asbestos removal conditions prior to refurbishment or demolition works by a Class B (non-friable) licensed asbestos removal contractor.			
8	Label as containing asbestos and maintain in current condition if to remain in-situ, remove under controlled non-friable asbestos removal conditions prior to refurbishment or demolition works by a Class B (non-friable) licensed asbestos removal contractor.			
9	Encapsulate exposed sections, label as containing asbestos and maintain in a good condition if to remain in-situ, remove under controlled non-friable asbestos removal conditions prior to refurbishment or demolition works by a Class B (non-friable) licensed asbestos removal contractor.			
10	Label as containing asbestos and maintain in current condition if to remain in-situ, remove under controlled non-friable asbestos removal conditions prior to refurbishment or demolition works by a Class B (non-friable) licensed asbestos removal contractor.			





Corresponding ID	Recommendations	Additional Photograph 1:	Additional Photograph 2:	Additional Photographs 3:
11	Label as containing asbestos and maintain in current condition if to remain in-situ, remove under controlled non-friable asbestos removal conditions prior to refurbishment or demolition works by a Class B (non-friable) licensed asbestos removal contractor.			
12	Label as containing asbestos and maintain in current condition if to remain in-situ, remove under controlled non-friable asbestos removal conditions prior to refurbishment or demolition works by a Class B (non-friable) licensed asbestos removal contractor.			
13				
14	Label as containing asbestos and maintain in current condition if to remain in-situ, remove under controlled non-friable asbestos removal conditions prior to refurbishment or demolition works by a Class B (non-friable) licensed asbestos removal contractor.			
15				




Corresponding ID	Recommendations	Additional Photograph 1:	Additional Photograph 2:	Additional Photographs 3:
16				
17				
18	<p>Restrict access and isolate area, remove under controlled non-friable asbestos removal conditions.</p>			
19				
20				

Corresponding ID	Recommendations	Additional Photograph 1:	Additional Photograph 2:	Additional Photographs 3:
21	Label as containing asbestos and maintain in current condition if to remain in-situ, remove under controlled non-friable asbestos removal conditions prior to refurbishment or demolition works by a Class B (non-friable) licensed asbestos removal contractor.			
22	Label as containing asbestos and maintain in current condition if to remain in-situ, remove under controlled non-friable asbestos removal conditions prior to refurbishment or demolition works by a Class B (non-friable) licensed asbestos removal contractor.			
23				
24				
25	Label as containing asbestos and maintain in current condition if to remain in-situ, remove under controlled non-friable asbestos removal conditions prior to refurbishment or demolition works by a Class B (non-friable) licensed asbestos removal contractor.			

Corresponding ID	Recommendations	Additional Photograph 1:	Additional Photograph 2:	Additional Photographs 3:
26	Label as containing asbestos and maintain in current condition if to remain in-situ, remove under controlled non-friable asbestos removal conditions prior to refurbishment or demolition works by a Class B (non-friable) licensed asbestos removal contractor.		-	-
27	-	-	-	-
28	Confirm Status, label as containing asbestos and maintain in current condition if to remain in-situ, remove under controlled non-friable asbestos removal conditions prior to refurbishment or demolition works by a Class B (non-friable) licensed asbestos removal contractor.	-	-	-
29	Label as containing asbestos and maintain in current condition if to remain in-situ, remove under controlled non-friable asbestos removal conditions prior to refurbishment or demolition works by a Class B (non-friable) licensed asbestos removal contractor.	-	-	-
30	-	-	-	-

Corresponding ID	Recommendations	Additional Photograph 1:	Additional Photograph 2:	Additional Photographs 3:
31	Confirm Status, label as containing asbestos and maintain in current condition if to remain in-situ, remove under controlled non-friable asbestos removal conditions prior to refurbishment or demolition works by a Class B (non-friable) licensed asbestos removal contractor.			
32	Label as containing asbestos and maintain in current condition if to remain in-situ, remove under controlled non-friable asbestos removal conditions prior to refurbishment or demolition works by a Class B (non-friable) licensed asbestos removal contractor.			
33				
34	Label as containing asbestos and maintain in current condition if to remain in-situ, remove under controlled non-friable asbestos removal conditions prior to refurbishment or demolition works by a Class B (non-friable) licensed asbestos removal contractor.			
35				

Corresponding ID	Recommendations	Additional Photograph 1:	Additional Photograph 2:	Additional Photographs 3:
36	Label as containing asbestos and maintain in current condition if to remain in-situ, remove under controlled non-friable asbestos removal conditions prior to refurbishment or demolition works by a Class B (non-friable) licensed asbestos removal contractor.	-	-	-
37	Label as containing asbestos and maintain in current condition if to remain in-situ, remove under controlled non-friable asbestos removal conditions prior to refurbishment or demolition works by a Class B (non-friable) licensed asbestos removal contractor.	-	-	-
38	Label as containing asbestos and maintain in current condition if to remain in-situ, remove under controlled non-friable asbestos removal conditions prior to refurbishment or demolition works by a Class B (non-friable) licensed asbestos removal contractor.		-	-
39	Label as containing asbestos and maintain in current condition if to remain in-situ, remove under controlled non-friable asbestos removal conditions prior to refurbishment or demolition works by a Class B (non-friable) licensed asbestos removal contractor.	-	-	-
40	-			

Corresponding ID	Recommendations	Additional Photograph 1:	Additional Photograph 2:	Additional Photographs 3:
41				
42	<p>Label as containing asbestos and maintain in current condition if to remain in-situ, remove under controlled non-friable asbestos removal conditions prior to refurbishment or demolition works by a Class B (non-friable) licensed asbestos removal contractor.</p>	-	-	-
43	<p>Label as containing asbestos and maintain in current condition if to remain in-situ, remove under controlled non-friable asbestos removal conditions prior to refurbishment or demolition works by a Class B (non-friable) licensed asbestos removal contractor.</p>	-	-	-
44				
45	<p>Label as containing asbestos and maintain in current condition if to remain in-situ, remove under controlled friable asbestos removal conditions prior to refurbishment or demolition works by a Class A (friable) licensed asbestos removal contractor.</p>			

Corresponding ID	Recommendations	Additional Photograph 1:	Additional Photograph 2:	Additional Photographs 3:
46	Label as containing asbestos and maintain in current condition if to remain in-situ, remove under controlled friable asbestos removal conditions prior to refurbishment or demolition works by a Class A (friable) licensed asbestos removal contractor.			
47	Label as containing asbestos and maintain in current condition if to remain in-situ, remove under controlled friable asbestos removal conditions prior to refurbishment or demolition works by a Class A (friable) licensed asbestos removal contractor.			
48	Label as containing asbestos and maintain in current condition if to remain in-situ, remove under controlled friable asbestos removal conditions prior to refurbishment or demolition works by a Class A (friable) licensed asbestos removal contractor.	-	-	-

APPENDIX B

Laboratory Results

ASBESTOS-FORMING MINERALS BY XRD RESULTS

Date: 3 October 2023 **Agon Job No:** JL4786-14
Client: Envirolab Services **Attention:** Anna Bui
Client Contact No: 02 9910 6200 **Sampling Date:** 16 September 2023
Job #: 333440-A **Received Date:** 29 September 2023
Sampled By: As-received **Analysis Date:** 3 October 2023

PROCEDURE

The vinyl layers were analysed by X-ray diffraction, which identifies minerals (*including chrysotile – white asbestos*) via their crystal structure.

RESULTS

CLIENT SAMPLE ID	ENVIROLAB SERVICES SAMPLE ID	DESCRIPTION	ASBESTOS DETECTED
AS09	333440-A-1	Green vinyl layer	Yes - Chrysotile
AS10	333440-A-2	Orange vinyl layer	Yes - Chrysotile
AS13	333440-A-3	Blue vinyl layer	Yes - Chrysotile
AS24	333440-A-4	Pale blue vinyl layer	No

Testing Officer: Michael Till

Any and all services carried out by Agon for the Client are subject to the Terms and Conditions provided in Agon form QFB-008 and are governed by our Statement of Limitations provided in Agon form QFB-024.



Our ref : ASET111220 / 114400 / 1 – 5
Your ref : ENV218140 – 12 Orient St Kingscliff NSW 2487
NATA Accreditation No: 14484



20 July 2023

ENV Solutions
PO Box 248
Ballina NSW 2478

Accredited for compliance with ISO/IEC 17025 - Testing.

Attn: Mr Kurtis Foulkes

Dear Kurtis

Asbestos Identification

This report presents the results of five samples, forwarded by ENV Solutions on 20 July 2023, for analysis for asbestos.

1.Introduction:Five samples forwarded were examined and analysed for the presence of asbestos.

2. Methods: The samples were examined under a Stereo Microscope and selected fibres were analysed by Polarized Light Microscopy in conjunction with Dispersion Staining method (**Australian Standard AS 4964 - 2004 and Safer Environment Method 1 as the supplementary work instruction**) (**Qualitative Analysis only**).

3. Results : **Sample No. 1. ASET111220 / 114400 / 1. ENV218140-AS01-Internal, Ground level, Hub club, Ceiling.**
Approx dimensions 1.2 cm x 0.9 cm x 0.3 cm
The sample consisted of a fragment of a fibre cement material.
Chrysotile asbestos and Amosite asbestos detected.

Sample No. 2. ASET111220 / 114400 / 2. ENV218140-AS02-Internal, Level 1, CR0004, Yellow, Vinyl floor tile.
Approx dimensions 7.0 cm x 5.5 cm x 0.3 cm
The sample consisted of a fragment of a vinyl floor tile.
Chrysotile asbestos detected.

Sample No. 3. ASET111220 / 114400 / 3. ENV218140-AS03-Internal, Level 1, central transition room, Yellow, Vinyl floor tile.
Approx dimensions 6.5 cm x 5.0 cm x 0.3 cm
The sample consisted of a fragment of a vinyl floor tile.
Chrysotile asbestos detected.

Sample No. 4. ASET111220 / 114400 / 4. ENV218140-AS04-External, Ground level, B00A, Window putty.
Approx dimensions 0.5 cm x 0.5 cm x 0.2 cm
The sample consisted of fragments of soft mastic like material.
No asbestos detected.



Sample No. 5. ASET111220 / 114400 / 5. ENV218140-AS05-External, Ground level, B00A, Expansion joint/Membrane to brickwork walls.

Approx dimensions 2.0 cm x 1.2 cm x 0.5 cm

The sample consisted of a fragment of a bituminous material.

No asbestos detected.

Reported by,

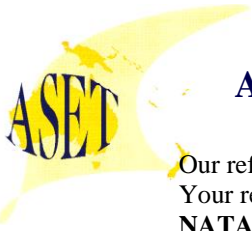
A handwritten signature in black ink, appearing to read 'Mahen De Silva', is written over a light grey rectangular background.

**Mahen De Silva. BSc, MSc, Grad Dip (Occ Hyg)
Occupational Hygienist / Approved Identifier.
Approved Signatory**



Accredited for compliance with ISO/IEC 17025 - Testing.

The results contained in this report relate only to the sample/s submitted for testing. Australian Safer Environment & Technology accepts no responsibility for whether or not the submitted sample/s is/are representative. Results indicating "No asbestos detected" indicates a reporting limit specified in AS4964-2004 which is 0.1g/ Kg (0.01%). Any amounts detected at assumed lower level than that would be reported, however those assumed lower levels may be treated as "No asbestos detected" as specified and recommended by A4964-2004. Trace / respirable level asbestos will be reported only when detected.



Our ref : ASET112545 / 115725 / 1 – 23
Your ref : ENV218269 – KPS – Bld C
NATA Accreditation No: 14484



20 September 2023

ENV Solutions
PO Box 248
Ballina NSW 2478

Accredited for compliance with ISO/IEC 17025 - Testing.

Attn: Mr Luke Meadows

Dear Luke

Asbestos Identification

This report presents the results of twenty three samples, forwarded by ENV Solutions on 20 September 2023, for analysis for asbestos.

1.Introduction: Twenty three samples forwarded were examined and analysed for the presence of asbestos.

2. Methods: The samples were examined under a Stereo Microscope and selected fibres were analysed by Polarized Light Microscopy in conjunction with Dispersion Staining method (Australian Standard AS 4964 - 2004 and Safer Environment Method 1 as the supplementary work instruction) (Qualitative Analysis only).

3. Results : **Sample No. 1. ASET112545 / 115725 / 1. AS01-Window mastic composite.**
Approx dimensions 1.6 cm x 0.7 cm x 0.3 cm
The sample consisted of fragments of soft mastic like material.
No asbestos detected.

Sample No. 2. ASET112545 / 115725 / 2. AS02-Under croft area-Packer Nth West side bld.
Approx dimensions 4.0 cm x 2.0 cm x 0.3 cm
The sample consisted of fragments of fibro plaster cement material containing organic fibres.
No asbestos detected.

Sample No. 3. ASET112545 / 115725 / 3. AS03-Under croft area-Miscellaneous paper debris to floor.
Approx dimensions 7.0 cm x 3.0 cm x 0.1 cm
The sample consisted of a soft fibrous material containing organic fibres.
No asbestos detected.

Sample No. 4. ASET112545 / 115725 / 4. AS04-Under croft debris type 1.
Approx dimensions 2.0 cm x 1.0 cm x 0.3 cm
The sample consisted of a fragment of a fibro plaster cement material containing organic fibres.
No asbestos detected.

Sample No. 5. ASET112545 / 115725 / 5. AS05-Under croft debris type 2.
Approx dimensions 6.5 cm x 4.8 cm x 0.5 cm
The sample consisted of a fragment of a fibre cement material.
Chrysotile asbestos detected.



Sample No. 6. ASET112545 / 115725 / 6. AS06-Tylux covering to countertop.
Approx dimensions 5.2 cm x 3.1 cm x 0.3 cm
The sample consisted of a fragment of a hard fibrous material containing organic fibres.
No asbestos detected.

Sample No. 7. ASET112545 / 115725 / 7. AS07-Base to HWH-CR9002.
Approx dimensions 2.0 cm x 0.8 cm x 0.3 cm
The sample consisted of a fragment of a fibre cement material.
Chrysotile asbestos and Amosite asbestos detected.

Sample No. 8. ASET112545 / 115725 / 8. AS08-Vinyl flooring CR9001 & CR9002.
Approx dimensions 8.0 cm x 2.0 cm x 0.3 cm
The sample consisted of a fragment of a vinyl floor tile containing synthetic mineral fibres having mastic like material as a backing layer.
No asbestos detected.

Sample No. 9. ASET112545 / 115725 / 9. AS11-CR0003, -004 FCS wall lining.
Approx dimensions 2.0 cm x 1.5 cm x 0.3 cm
The sample consisted of a fragment of a fibro plaster cement material containing organic fibres.
No asbestos detected.

Sample No. 10. ASET112545 / 115725 / 10. AS12-CR0005, 6, 8, 9, 10, 11 FCS wall lining.
Approx dimensions 0.8 cm x 0.7 cm x 0.2 cm
The sample consisted of a fragment of a fibro plaster cement material containing organic fibres.
No asbestos detected.

Sample No. 11. ASET112545 / 115725 / 11. AS14-CR0009 FCS east wall lining.
Approx dimensions 0.5 cm x 0.4 cm x 0.2 cm
The sample consisted of a fragment of a fibro plaster cement material containing organic fibres.
No asbestos detected.

Sample No. 12. ASET112545 / 115725 / 12. AS15-CR0011 FCS West wall lining.
Approx dimensions 0.3 cm x 0.2 cm x 0.1 cm
The sample consisted of a fragment of a fibro plaster cement material containing organic fibres.
No asbestos detected. (Submitted sample is too small and a larger sample may produce a different result).

Sample No. 13. ASET112545 / 115725 / 13. AS16-EDB CR0033 FCS wall lining.
Approx dimensions 0.4 cm x 0.3 cm x 0.2 cm
The sample consisted of a fragment of a fibro plaster cement material containing organic fibres.
Chrysotile asbestos detected.

Sample No. 14. ASET112545 / 115725 / 14. AS17-EDB CR0033 FCS ceiling lining.
Approx dimensions 0.7 cm x 0.4 cm x 0.2 cm
The sample consisted of a fragment of a fibro plaster cement material containing organic fibres.
No asbestos detected.



Sample No. 15. ASET112545 / 115725 / 15. AS18-Window mastic-Aluminium off CR0012.

Approx dimensions 1.2 cm x 1.0 cm x 0.2 cm

The sample consisted of fragments of soft mastic like material.

No asbestos detected.

Sample No. 16. ASET112545 / 115725 / 16. AS19-CR0013 FCS wall lining.

Approx dimensions 3.0 cm x 2.0 cm x 0.4 cm

The sample consisted of fragments of fibro plaster cement material containing organic fibres.

Chrysotile asbestos detected.

Sample No. 17. ASET112545 / 115725 / 17. AS20-CR0015 FCS wall lining.

Approx dimensions 1.3 cm x 1.0 cm x 0.2 cm

The sample consisted of a fragment of a fibro plaster cement material containing organic fibres.

Chrysotile asbestos detected.

Sample No. 18. ASET112545 / 115725 / 18. AS21-Cleaner store off CR0015 FCS wall.

Approx dimensions 1.2 cm x 1.0 cm x 0.5 cm

The sample consisted of a fragment of a fibro plaster cement material containing organic fibres.

Chrysotile asbestos detected.

Sample No. 19. ASET112545 / 115725 / 19. AS22-CR0018 FCS wall lining.

Approx dimensions 0.8 cm x 0.4 cm x 0.2 cm

The sample consisted of a fragment of a fibro plaster cement material containing organic fibres.

Chrysotile asbestos detected.

Sample No. 20. ASET112545 / 115725 / 20. AS23-CR0017 FCS wall lining.

Approx dimensions 0.4 cm x 0.3 cm x 0.2 cm

The sample consisted of a fragment of a fibro plaster cement material containing organic fibres.

Chrysotile asbestos detected.

Sample No. 21. ASET112545 / 115725 / 21. AS25-CR0020, 21, 22, 23, 24, 25, 26, 27 28, 31.

Approx dimensions 2.0 cm x 1.0 cm x 0.3 cm

The sample consisted of a fragment of a fibro plaster cement material containing organic fibres.

No asbestos detected.

Sample No. 22. ASET112545 / 115725 / 22. AS26-CR0022, 24, 28, 31 FCS wall lining.

Approx dimensions 1.4 cm x 1.0 cm x 0.2 cm

The sample consisted of a fragment of a fibro plaster cement material containing organic fibres.

No asbestos detected.

The logo for ASET (Australian Safer Environment & Technology) features the letters 'ASET' in a bold, blue, sans-serif font. The letters are set against a yellow background that is shaped like a stylized, curved banner or ribbon.

β Sample No. 23. ASET112545 / 115725 / 23. AS27-CR0031, 28, 24-LDB ceiling lining.

Approx dimensions 1.2 cm x 1.0 cm x 0.4 cm

The sample consisted of a fragment of a fibro plaster material.

Chrysotile asbestos and Amosite asbestos detected.

Reported by,

A handwritten signature in black ink, appearing to read 'Mahen De Silva', is written over a white rectangular background.

**Mahen De Silva. BSc, MSc, Grad Dip (Occ Hyg)
Occupational Hygienist / Approved Identifier.
Approved Signatory**



Accredited for compliance with ISO/IEC 17025 - Testing.

The results contained in this report relate only to the sample/s submitted for testing. Australian Safer Environment & Technology accepts no responsibility for whether or not the submitted sample/s is/are representative. Results indicating "No asbestos detected" indicates a reporting limit specified in AS4964-2004 which is 0.1g/ Kg (0.01%). Any amounts detected at assumed lower level than that would be reported, however those assumed lower levels may be treated as "No asbestos detected" as specified and recommended by A4964-2004. Trace / respirable level asbestos will be reported only when detected.

β denotes fibro plaster material which should be treated as "which could become friable" during any renovations and removal.



CERTIFICATE OF ANALYSIS 333440

Client Details

Client	ENV Services Pty Ltd
Attention	Luke Meadows
Address	313 River St, Ballina, NSW, 2478

Sample Details

Your Reference	<u>ENV218269 - KPS Bid C</u>
Number of Samples	4 Material
Date samples received	20/09/2023
Date completed instructions received	20/09/2023

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.
Samples were analysed as received from the client. Results relate specifically to the samples as received.
Results are reported on a dry weight basis for solids and on an as received basis for other matrices.
Please refer to the last page of this report for any comments relating to the results.

Report Details

Date results requested by	21/09/2023
Date of Issue	20/09/2023

NATA Accreditation Number 2901. This document shall not be reproduced except in full.
Accredited for compliance with ISO/IEC 17025 - Testing. **Tests not covered by NATA are denoted with ***

Asbestos Approved By

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

Results Approved By

Lucy Zhu, Asbestos Supervisor

Authorised By

Nancy Zhang, Laboratory Manager

Asbestos ID - materials					
Our Reference		333440-1	333440-2	333440-3	333440-4
Your Reference	UNITS	AS09 CR001, 0002	AS10, CR0004	AS13, CR0009	AS24, CR0020,21,22,23,24,25,26,27,28,31
Date Sampled		16/09/2023	16/09/2023	16/09/2023	16/09/2023
Type of sample		Material	Material	Material	Material
Date analysed	-	20/09/2023	20/09/2023	20/09/2023	20/09/2023
Mass / Dimension of Sample	-	38.89g	86.40g	39.72g	8.29g
Sample Description	-	Green vinyl tile & adhesive	Orange vinyl tile & adhesive	Blue vinyl tile & adhesive	Light blue vinyl tile & adhesive
Asbestos ID in materials	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected
		Organic fibres detected	Organic fibres detected	Organic fibres detected	Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Method ID	Methodology Summary
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.

Result Definitions

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

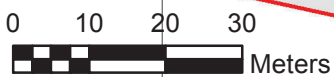
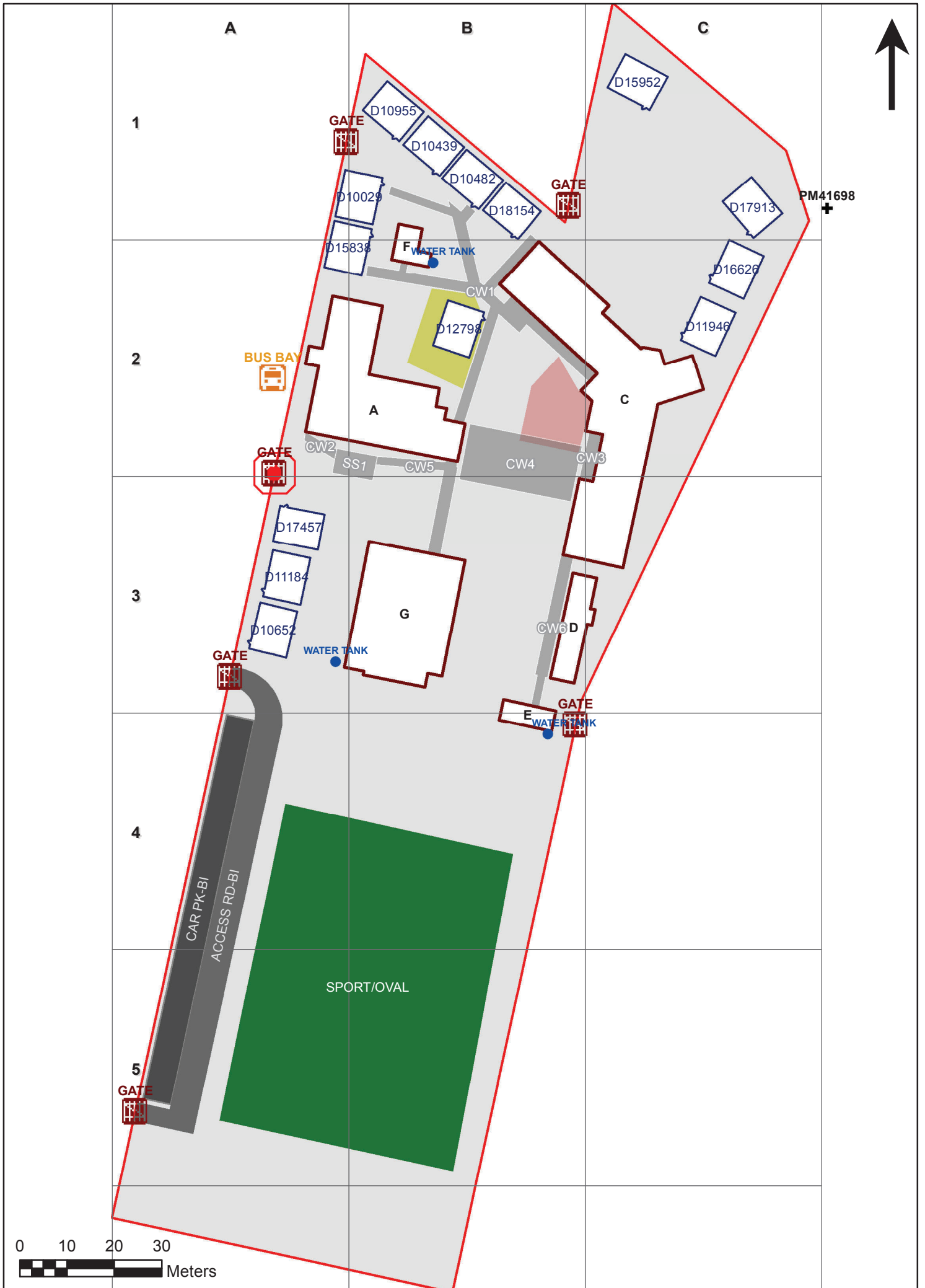
Report Comments

Note, even after disintegration, it can be difficult to detect the presence of asbestos in some asbestos containing bulk materials using PLM and dispersion staining. 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 epoxy resins and some ore samples are examples of these types of material, which are difficult to analyse.

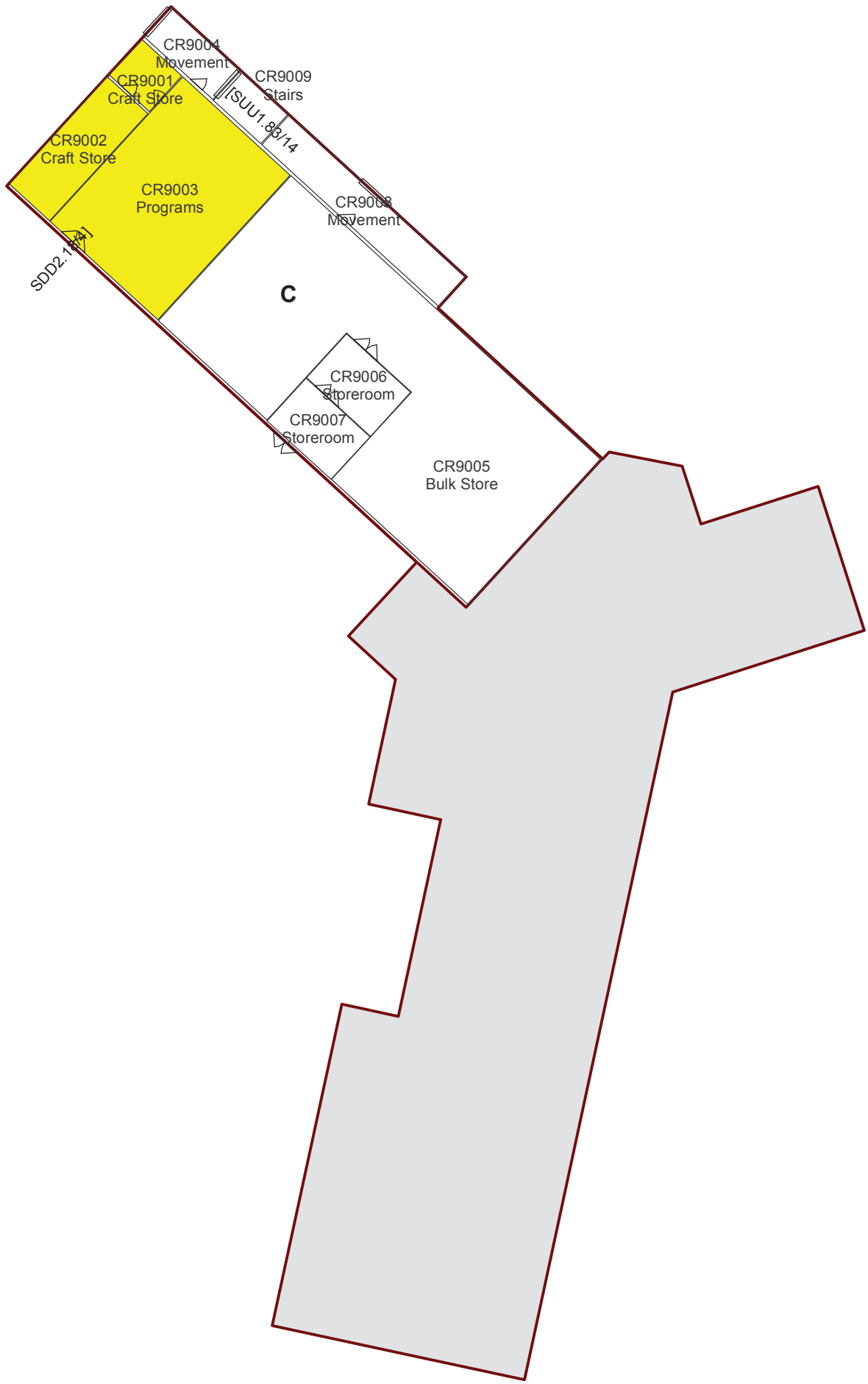
APPENDIX C

Floor Plans

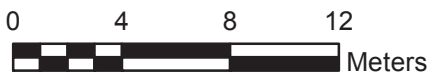
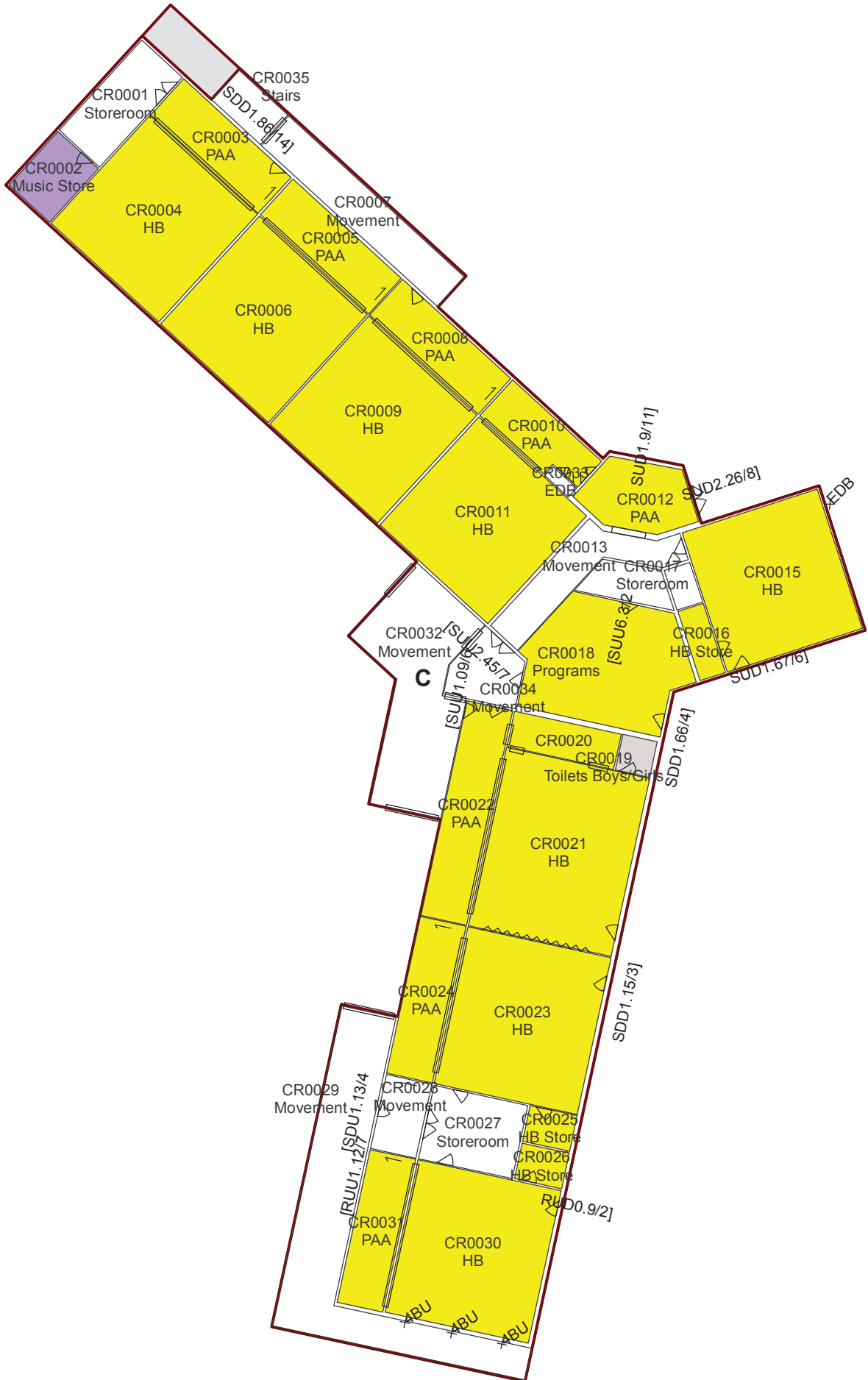
4054 - Kingscliff Public School Site Plan (10457)



4054 - Kingscliff Public School
General Learning (B00C) - Basement 1 (Room Function)



4054 - Kingscliff Public School
General Learning (B00C) - Ground Floor (Room Function)



Appendix B: Asbestos Sampling (Indigenous Test Excavations)

24 April 2023

Richard Crooke Constructions Pty Ltd
Level 3, 4 Broadcast Way
Artarmon
NSW 2064 Australia

Attn: Bradley Cox

Re: Targeted Sampling Investigation, Kingscliff Public School, 12 Orient St Kingscliff NSW

Introduction

ENV Services Pty Ltd (ENV) was engaged by Richard Crooke Constructions to undertake soil sampling of a small excavation trench and associated spoil material located within a play area of Kingscliff Public School following the discovery of a potential asbestos containing fragment (ACF). It is understood that the trench had been excavated as part of an archaeological dig and the spoil material had been sifted prior to the discovery of the ACF (Figure 1).



Client: Richard Crooke Constructions Pty Ltd
Targeted Sampling Investigation, Kingscliff Public School
Date: 21/04/2023



Figure 1–Site Location
Kingscliff Public School, 12 Orient St Kingscliff NSW

Figure 1: Excavation area of Kingscliff Public School

Methodology

Carson Clark of ENV collected two soil samples of the spoil material and two samples from the excavation trench for analysis for asbestos fibres. The soil samples were collected in laboratory-supplied sample containers, and labelled with sample location, sample identification and sample date. The samples were then transferred to the laboratory under chain-of-custody (COC) documentation. The samples were analysed in accordance with the requirements of the National Environmental Protection (Assessment of Site Contamination) Measure (NEPM), Schedule B1 for asbestos by Octief, a NATA accredited laboratory. The ACF was transferred to a clip lock bag for Asbestos Bulk ID by Octief.

Results and Recommendations

All four soil samples returned negative results for asbestos. The ACF returned a positive result for asbestos.

Given the negative sample results for asbestos in all four soil samples, and the removal of the asbestos fragment from the site, ENV considers that the area is safe for re-occupation if the following recommendations are applied:

- An asbestos finds management procedure should be developed for any future excavations at the site which includes the following:
 - A search and 'emu-pick' of the area for surficial ACM fragments should take place in the works area prior to the commencement of excavation works. Any suspected asbestos fragments should be placed in cliplock bags to be disposed of as asbestos waste.
 - All excavation material should be turned over prior to sifting to check for ACFs within the soils.
 - A P2 respirator should be worn during excavation works.
 - If any ACFs or other suspected asbestos materials are found, works should cease pending an investigation by an occupational hygienist.
- School students and staff should be discouraged from undertaking any excavation within the area.
 - If any ACFs or other suspected asbestos materials are found by school staff, the areas should be cordoned off pending investigations by an occupational hygienist.

If you have any queries regarding the provided information, please feel free to contact me at the office.

Yours faithfully,



Kirsten Hartshorne

Environmental Scientist

ENV Services Pty Ltd

Appendices:

- A. Photographs
- B. Laboratory Documents

Appendix A: Photographs



Photo 1: Site location with trench and stockpiles in background



Photo 2: Stockpiled material excavated from trench



Photo 3: Covered stockpile before sampling event



Photo 4: Covered trench with asbestos warning signage and tape



Photo 5: Four soil samples collected from stockpile and trench



Photo 6: Asbestos fragments found within trench

Appendix B: Laboratory Documents

CERTIFICATE OF ANALYSIS

Report No. 23-1784

Rev No. 00

Client: ENV Solutions
Client Contact: Kirsten Hartshorne
Telephone: 0490 310 832
Client Project / Site Reference: 217862 Kingscliff Public School
Purchase Order #: Not Provided
Sampled By: Carson Clark
Date Sampled: 20/04/2023
Number of Samples Submitted: 4

Laboratory Location: Yatala Branch
Date Samples Received: 21/04/2023
Date Analysed: 24/04/2023
Samples Analysed By: Donna Bolstad
Date Report Issued: 24/04/2023

Report Approved By:



Maulika Amin

Test Methodology: Samples submitted to the laboratory are analysed by polarised light microscopy including dispersion staining techniques for the presence of asbestos in accordance with the methodology outlined in AS4964 and OCTIEF in-house method LAB-105. Detection limit – 0.1g/kg (equivalent to 0.01% w/w).

Notes

- I. Please refer to page 2 onwards for results
- II. NATA Accreditation does not cover the sampling performance
- III. OCTIEF accepts no responsibility for the collection, packaging and transportation of samples submitted by external parties
- IV. All samples are analysed as received (unless otherwise indicated) and the results contained within this report relate only to the sample(s) as received
- V. Sample material descriptions and results reported may be limited by the size and condition of the sample submitted for analysis
- VI. Sizes and weights are approximate only
- VII. Due to their nature, if no asbestos is detected in vinyl tiles, adhesives, mastics, sealants, paints, epoxy resins and ore samples, confirmation by another independent analytical technique may be required
- VIII. Where 'unknown mineral fibres detected' is reported, the fibres detected may or may not be asbestos fibres. To confirm the identities, another independent analytical technique may be required
- IX. Where trace asbestos is reported, respirable asbestos fibres were detected within the sample material
- X. Any sub-sampling carried out by the laboratory is conducted in accordance with ISO23909. Where sub-sampling is conducted, there is the potential for invalid results because of the high probability that small amounts of asbestos materials may be unintentionally omitted due to the sub-sampling process

ACCREDITED FOR
TECHNICAL
COMPETENCE

NATA Accreditation Number: 15172

Yatala Branch Site Number: 15729

Accredited for compliance with ISO/IEC 17025 – Testing

This document may not be reproduced, except in full and with the approval of the issuing laboratory

Tests not covered by NATA are denoted with *

Lab Ref No.	Client Sample ID / Information	Sample Type	Approximate Sample Dry Weights (g)	Result
23-1784/1	EP-01	Sand	Total Sample: 312.24 <2mm Sub Sample: 37.97	No asbestos detected at or above the reporting limit of 0.1g/kg Organic fibres detected No trace asbestos detected
23-1784/2	EP-02	Sand	Total Sample: 290.99 <2mm Sub Sample: 47.48	No asbestos detected at or above the reporting limit of 0.1g/kg Organic fibres detected No trace asbestos detected
23-1784/3	SP-01	Sand	Total Sample: 335.07 <2mm Sub Sample: 47.70	No asbestos detected at or above the reporting limit of 0.1g/kg Organic fibres detected No trace asbestos detected
23-1784/4	SP-02	Sand	Total Sample: 318.74 <2mm Sub Sample: 59.81	No asbestos detected at or above the reporting limit of 0.1g/kg Organic fibres detected No trace asbestos detected

CERTIFICATE OF ANALYSIS

Report No. 23-1785

Rev No. 00

Client: ENV Solutions
Client Contact: Kirsten Hartshorne
Telephone: 0490 310 832
Client Project / Site Reference: 217862 - Kingscliff Public School
Purchase Order #: Not Provided
Sampled By: Carson Clark
Date Sampled: 20/04/2023
Number of Samples Submitted: 4

Laboratory Location: Yatala Branch
Date Samples Received: 21/04/2023
Date Report Issued: 24/04/2023

Report Approved By:



Maulika Amin

Test Methodology: Quantification of asbestos is calculated in accordance with the requirements of the National Environmental Protection (Assessment of Site Contamination) Measure (NEPM), Schedule B1. Limit of reporting – 0.001% w/w).

Notes

- I. Please refer to page 2 onwards for results
- II. OCTIEF accepts no responsibility for the collection, packaging and transportation of samples submitted by external parties
- III. All samples are analysed as received (unless otherwise indicated) and the results contained within this report relate only to the sample(s) as received
- IV. Sample results reported may be limited by the size and condition of the sample submitted for analysis
- V. Sizes and weights are approximate only
- VI. This document may not be reproduced, except in full and with the approval of the issuing laboratory

Lab Ref No.	Client Sample ID / Information	>7mm Weight of Asbestos Material (g)	>7mm % (w / w)	>2mm Weight of Asbestos Material (g)	>2mm % (w / w)	<2mm Weight of Asbestos Material (g)	<2mm % (w / w)
23-1785/1	EP-01	N/A	N/A	0.0000	<0.001	0.0000	<0.001
23-1785/2	EP-02	N/A	N/A	0.0000	<0.001	0.0000	<0.001
23-1785/3	SP-01	N/A	N/A	0.0000	<0.001	0.0000	<0.001
23-1785/4	SP-02	N/A	N/A	0.0000	<0.001	0.0000	<0.001

CERTIFICATE OF ANALYSIS

Report No. 23-1809

Rev No. 00

Client: ENV Solutions
Client Contact: Kirsten Hartshorne
Telephone: 0490 310 832
Client Project / Site Reference: 217862 - Kingscliff Public School
Purchase Order #: Not Provided
Sampled By: Carson Clark
Date Sampled: 20/04/2023
Number of Samples Submitted: 1

Laboratory Location: Yatala Branch
Date Samples Received: 21/04/2023
Date Analysed: 24/04/2023
Samples Analysed By: Donna Bolstad
Date Report Issued: 24/04/2023

Report Approved By:



Maulika Amin

Test Methodology: Samples submitted to the laboratory are analysed by polarised light microscopy including dispersion staining techniques for the presence of asbestos in accordance with the methodology outlined in AS4964 and OCTIEF in-house method LAB-103. Detection limit – 0.1 g/kg.

Notes

- I. Please refer to page 2 onwards for results
- II. NATA Accreditation does not cover the sampling performance
- III. OCTIEF accepts no responsibility for the collection, packaging and transportation of samples submitted by external parties
- IV. All samples are analysed as received (unless otherwise indicated) and the results contained within this report relate only to the sample(s) as received
- V. Sample material descriptions and results reported may be limited by the size and condition of the sample submitted for analysis
- VI. Sizes and weights are approximate only
- VII. Hand-picked refers to small discrete amounts of asbestos distributed unevenly in a large body of non-asbestos material
- VIII. Due to their nature, if no asbestos is detected in vinyl tiles, adhesives, mastics, sealants, paints, epoxy resins and ore samples, confirmation by another independent analytical technique may be required
- IX. Where 'unknown mineral fibres detected' is reported, the fibres detected may or may not be asbestos fibres. To confirm the identities, another independent analytical technique may be required
- X. Where trace asbestos is reported, respirable asbestos fibres were detected within the sample material
- XI. Analysis of dust samples collected using adhesive tape, swabs or wipes is not covered by the NATA scope of accreditation as they fall outside AS4964 definition of a bulk sample



NATA Accreditation Number: 15172

Yatala Branch Site Number: 15729

Accredited for compliance with ISO/IEC 17025 – Testing

*This document may not be reproduced, except in full and with the approval of the issuing laboratory***Tests not covered by NATA are denoted with ***

Lab Ref No.	Client Sample ID / Information	Sample Type	Approximate Sample Size or Weight	Asbestos Detected (Yes / No)	Result
23-1809/1	AS-01	Bulk	60x47x3mm	Yes	<p>Sample Material Detected: Millboard Sample Material Size/Weight: ~60x47x3mm Asbestos Detected in Sample Material: Yes Fibre Types Detected: Chrysotile fibres detected Trace analysis not required</p>

LAB-001F – OCTIEF CHAIN OF CUSTODY – ASBESTOS

SECTION A – Client Details

Client Company Name: _____
 Client Company Address: _____
 Contact Name: _____
 Contact Phone Number: _____ Contact Email: _____

SECTION B – Project Details

Client Project / Site Reference (Lab Report Title): _____
 Purchase Order Number: _____
 Email Results to*: _____
 Email Invoice to*: _____

** sent to Contact Email listed in SECTION A if not provided*

Notes: _____

SECTION C – Sample Details (please provide your sample ID(s) and other information overleaf)

Sampled By: _____
 Date Sampled: _____
 Date Samples Submitted: _____
 Number of Samples Submitted: _____

<u>Analysis Type</u>	<u>Turnaround Time</u>
Asbestos Bulk ID (OCT002) <input type="checkbox"/>	Same Day (100% Surcharge) <input type="checkbox"/> Next Day (Standard) <input type="checkbox"/>
Asbestos Fibre Count (OCT001) <input type="checkbox"/>	3 Day QBuild Use Only <input type="checkbox"/>
Asbestos Soil ID – Grab Sample (OCT003) <input type="checkbox"/>	3 Day (Standard) <input type="checkbox"/>
Asbestos Soil ID (OCT004) <input type="checkbox"/>	2 Day (50% Surcharge) <input type="checkbox"/>
Asbestos Soil ID and NEPM / WA Calculation (OCT004 & OCT005) <input type="checkbox"/>	1 Day (100% Surcharge) <input type="checkbox"/>

SECTION D – Payment Method

Account Credit Card** Electronic Funds Transfer Cash

**** Payment by credit card incurs a 2.5% surcharge – OCTIEF will contact client for credit card details**

For Laboratory Use Only	
Received By:	
Name:	_____
Day, Date and Time Received:	_____
LIMS Reference Number:	_____
Date Due:	_____
Report Approved By:	_____
Date Report Sent:	_____
Invoice Number:	_____

LAB-001F – OCTIEF CHAIN OF CUSTODY – ASBESTOS

SECTION C – Sample Details (continued)		
Lab Ref #	Client Sample ID / Information	Monitoring Type (for Asbestos Fibre Count samples only)
1		Background / Control / Clearance Personal / Field Blank
2		Background / Control / Clearance Personal / Field Blank
3		Background / Control / Clearance Personal / Field Blank
4		Background / Control / Clearance Personal / Field Blank
5		Background / Control / Clearance Personal / Field Blank
6		Background / Control / Clearance Personal / Field Blank
7		Background / Control / Clearance Personal / Field Blank
8		Background / Control / Clearance Personal / Field Blank
9		Background / Control / Clearance Personal / Field Blank
10		Background / Control / Clearance Personal / Field Blank
11		Background / Control / Clearance Personal / Field Blank
12		Background / Control / Clearance Personal / Field Blank
13		Background / Control / Clearance Personal / Field Blank
14		Background / Control / Clearance Personal / Field Blank

APPENDIX C: Training

|



CERTIFICATE OF COMPLETION

Awarded to

BRAD PERSKE

For successfully completing KINNECT Training's Asbestos Awareness

22/06/2023

Never

Issued Date

Expiry Date

A handwritten signature in black ink, appearing to read "Jonathan Wilson".

Jonathan Wilson
(Director)

Certificate ID: f292-0f66-86e3-d945



CERTIFICATE OF COMPLETION

Awarded to

BRAD PERSKE

For successfully completing KINNECT Training's Silica Awareness

14/08/2023

Never

Issued Date

Expiry Date

A handwritten signature in black ink, appearing to read "Jonathan Wilson".

Jonathan Wilson
(Director)

Certificate ID: 7972-cf04-8418-417a

Chubb

POWERED BY **API GROUP**



Statement of Attainment

This is a statement that

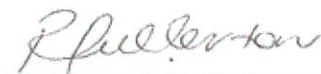
Bradley Perske

Has attained the following units of competency:

PUAFER005 Operate as part of an emergency control organisation



Scan to validate the authenticity of this certificate

A handwritten signature in black ink, appearing to read "Rebecca Fullerton".

Rebecca Fullerton
General Manager

Certificate Number: 14233027-9235962

Date: 29-May-23

Issued by: Chubb Training Group RTO Number 21411

A Statement of Attainment is issued by a Registered Training Organisation when an individual has completed one or more accredited units

APPENDIX D: Asbestos Removal Control Plan (ARCP)



ASBESTOS REMOVAL CONTROL PLAN (HAZARDOUS MATERIAL MANAGEMENT PLAN)

PF 879

KINGSCLIFF PUBLIC
SCHOOL



12 ORIENT STREET,
KINGSCLIFF NSW



WWW.DEMEX.COM.AU | 1300 634 777

ASBESTOS REMOVAL CONTROL PLAN (ARCP)

DOCUMENT CONTROL			
Business Name	Demex Pty Ltd	Phone	1300 634 777
ABN	17 635 279 640	ACN	635 279 640
Address	78 Union Circuit, Yatala QLD 4207		
Asbestos License	2321934	Expiry Date	23/10/2024
Notification Date	23/02/2023	Regulator	SafeWork NSW
PF Number	PF 879	Version Number	1.0
Project Manager	Garren Holdsworth	Site Supervisor	Aidan Te Paa
Start Date	25/09/2023	Project Duration	6 months
Project Name	Kingscliff Public School		
Project Address	12 Orient Street		

DOCUMENT APPROVAL					
Prepared By	Carl Pump		Approved By	Jay Spencer	

RECORD OF REVIEW & AMENDMENTS			
Version	Date of Review	Revision Description	Approving Authority
1.0	09/03/2022	For issue	J. Spencer
2.0	15/9/23	Updated and reviewed	M.Kent
3.0	17/10/23	Updated to include soil related works	M.Kent
4.0	25/10/23	Updated to include soil related works	M.Kent

ASBESTOS REMOVAL CONTROL PLAN (ARCP)

Table of Contents

DOCUMENT CONTROL2

DOCUMENT APPROVAL2

RECORD OF REVIEW & AMENDMENTS2

1.0 INTRODUCTION4

2.0 MANAGEMENT SYSTEM4

3.0 PROJECT DETAILS5

 3.1 SUMMARY OF IDENTIFIED ACM5

 3.2 PROPOSED WORK PROGRAM5

4.0 REGULATIONS AND LEGISLATION5

 4.1 NEW SOUTH WALES5

5.0 ROLES AND RESPONSIBILITIES5

 5.1 PRINCIPAL CONTRACTOR5

 5.2 INDEPENDENT LICENSED ASBESTOS ASSESSOR6

 5.3 LICENSED ASBESTOS REMOVAL CONTRACTOR6

6.0 SITE SAFETY7

 6.1 CONSULTATION7

 6.2 EMERGENCY PLANS7

 6.3 SITE RULES7

 6.4 SAFE WORK METHOD STATEMENTS8

 6.5 TOOLBOX TALKS / PRESTART MEETINGS8

 6.6 CONTAMINANT EXPOSURE PATHWAYS8

 6.7 PERSONAL PROTECTIVE EQUIPMENT8

 6.8 SERVICE DISCONNECTIONS9

7.0 REMOVAL EQUIPMENT9

8.0 SITE ESTABLISHMENT10

 8.1 SITE SET UP10

 8.2 DECONTAMINATION ZONE10

 8.3 ASBESTOS REMOVAL ENCLOSURES10

9.0 REMOVAL METHODOLOGY11

 9.1 ASBESTOS CEMENT SHEETING11

 9.2 ASBESTOS VINYL FLOORING PRODUCTS11

 9.3 FRIABLE ACM11

 9.4 SYNTHETIC MINERAL FIBRES12

 9.5 LEAD BASED PAINT12

10.0 DECONTAMINATION13

11.0 DUTIES OF THE INDEPENDENT ASBESTOS ASSESSOR14

 11.1 ASBESTOS AIR MONITORING14

 11.2 CLEARANCE ASSESSMENT16

12.0 WASTE REMOVAL16

ASBESTOS REMOVAL CONTROL PLAN (ARCP)

1.0 INTRODUCTION

Demex has been engaged as the Asbestos Removal Contractor (ARC) to conduct licensed asbestos removal works at Kingscliff Public School (the 'Site'). In accordance with the requirements outlined in the *Code of Practice How to Safely Remove Asbestos*, this Asbestos Removal Control Plan (ARCP) has been prepared and includes provisions for the removal, transportation and disposal of asbestos containing materials (ACM) in relation to the asbestos removal works to be conducted at this site.

This ARCP has been prepared to ensure the asbestos removal works are planned and carried out in a safe manner. This ARCP is considered a dynamic document and may be amended onsite based on onsite observations and changes to site conditions. All changes are to be implemented by the asbestos removal supervisor. This ARCP has been prepared based on consultation with key stakeholders

Prior to the commencement of construction, the applicant has submitted a Hazardous Materials Management Plan to the Certifier. The report consists of addressing the recommendation in Hazardous Materials Survey Kingscliff Public School, 12 OrientStreet, Kingscliff, NSW dated March 2022 and prepared by Hazmat Services.

We have provided details of Management of risk associated with demolition works and for any remaining in-situ hazardous materials located at the site.

Demex have included details of a designated storage and handling area for all hazardous and dangerous goods which is designated in accordance with the Australian requirements.

2.0 MANAGEMENT SYSTEM

Demex operates under an independently certified Integrated Management System (IMS) for the provision of demolition, excavation, site remediation and the removal of asbestos and hazardous materials. The Demex IMS has been certified by ATLAS Certification Pty Ltd to comply with the following standards:



- ISO 9001:2015 – Quality Management Systems – Requirements (Certificate number: Q418081)
- ISO 14001:2015 – Environmental Management Systems – Requirements with Guidance for use (Certificate number: E418081)
- ISO 45001:2018 – Occupational Health and Safety Management Systems – Requirements with Guidance for use (Certificate number: 418081S)

Work Health and Safety Accreditation Scheme – Federal Safety Commission (FSC)



Demex have received Federal Safety Accreditation (FSC) for the completion of projects that fall under the scope of the Australian Government building and construction Work Health and Safety Accreditation Scheme (Accreditation number 598).

<http://www.fsc.gov.au/sites/fsc/resources/pages/accreditationregister>

ASBESTOS REMOVAL CONTROL PLAN (ARCP)

3.0 PROJECT DETAILS

3.1 Summary of Identified ACM

Demex has been provided with the most recent Asbestos Management Plan & Register (AMP) for the site. Refer to 164536_AS_RS_20012022 as prepared by Site Environmental & Remediation Services (SERS). A copy of this report is to be maintained onsite and available to all personnel at all times.

The following types of ACM have been identified within Demex's defined scope of works for this project:

- Fibre cement sheeting
- Low density board;
- Vinyl flooring products and associated adhesives;

3.2 Proposed Work Program

Asbestos removal works are proposed to commence on 25st September 2023 and are expected to have duration of approximately 4 weeks.

4.0 REGULATIONS AND LEGISLATION

4.1 New South Wales

- Work Health & Safety Regulation 2011;
- Work Health & Safety Act 2011;
- How to Safely Remove Asbestos Code of Practice 2016;
- How to Manage & Control Asbestos in the Workplace Code of Practice 2016;
- Hazardous Manual Tasks Code of Practice 2016;
- Managing Risks of Plant in the Workplace Code of Practice 2014;
- Managing the Risk of Falls at Workplaces Code of Practice 2016;
- AS1715 Selection, Use and Maintenance of Respiratory Protective Devices;
- AS1716 Respiratory Protective Devices;
- AS1319 Safety signs for the occupational environment;
- AS3012 Electrical Installation – Construction and Demolition Sites; and
- AS3544 Industrial Vacuum Cleaners for Particulates Hazardous to Health.

5.0 ROLES AND RESPONSIBILITIES

5.1 Principal Contractor

Company Name: Richard Crookes Constructions
Address: Level 3, 4 Broadcast Way, Artarmon NSW 2064
Phone Number: 0416 050 471
Contact: Brad Cox

The responsibilities of the Principal Contractor are defined below:

- Advise the following stakeholders that licensed asbestos removal works are to commence and provide the anticipated dates of work:
 - The Principal Contractors workers any personnel at the work site;
 - The person who commissioned the asbestos removal works;
 - Any Person Conducting a Business or Undertaking (PCBU) in the immediate vicinity;

ASBESTOS REMOVAL CONTROL PLAN (ARCP)

- Anyone occupying the premises in the immediate vicinity.
- Conduct site inductions for all personnel;
- Provide a safe and secure site with suitable site access;
- Provide temporary hoarded fencing for the duration of the asbestos removal works;
- Provide documented evidence to the ARC that all associated services have been disconnected.

5.2 Independent Licensed Asbestos Assessor

Company Name: SERS
ABN: 36 167 799 635
Address: 95 Sandgate Road Albion QLD 4010
Phone Number: 1300 320 696 | 0499 172 602
Contact: Richard Southam
LAA #: 453499 (NT)

The responsibilities of the Independent Licensed Asbestos Assessor (LAA) are defined below:

- Conduct all asbestos air monitoring for the duration of the project where required;
- Conduct all clearance assessments for the duration of the project where required;
- Conduct periodic inspections for the duration of the project where required;
- Conduct all settled-dust sampling, bulk sampling and validation soil sampling for the duration of the project where required and submit samples to a NATA accredited testing laboratory for analysis;
- Conduct a visual inspection including smoke testing of any asbestos removal enclosures established for the project; and
- Notify the ARC, Principal Contactor or other relevant parties should asbestos removal works fail to comply this ARCP and the *Code of Practice How to Safely Remove Asbestos*.

5.3 Licensed Asbestos Removal Contractor

Company Name: Demex
ABN: 17 635 279 640
Address: 78 Union Circuit, Yatala QLD 4207
Phone Number: 1300 634 777
Contact: Jacob Mobbs
License #: 2321934

The responsibilities of the Licensed Asbestos Removal Contractor are defined below:

- Notify the regulator at least 5 days prior to commencement of asbestos removal works;
- All personnel to be aware with the requirements outlined in this ARCP and the *Code of Practice How to Safely Remove Asbestos*;
- Obtain a copy of any relevant asbestos documentation prepared for the site such an Asbestos Management Plan, Asbestos Register or an Asbestos Assessment Report.
- Asbestos Removal Supervisor to liaise with key stakeholders regarding the proposed works;
- Liaise with the Principal Contractor to ensure that the entrance ways to work zones are secure and have appropriate barriers installed to prevent public or unauthorized access to the work area;
- Liaise with the Principal Contractor to establish the appropriate work areas for loading / unloading of plant, equipment and materials including waste bins;
- Liaise with the Principal Contractor to ensure all services have been disconnected and ensure all necessary mechanical, electrical and fire services are isolated; and
- Establish the asbestos removal work area including appropriate exclusion zones, decontamination zones, signage and work barriers.

ASBESTOS REMOVAL CONTROL PLAN (ARCP)

6.0 SITE SAFETY

6.1 Consultation

The person in control of the workplace is required to consult with health and safety representatives and other workers at the workplace on workplace health and safety issues.

In asbestos removal works, there should be information-sharing and involvement by everyone in the workplace including the responsible key stakeholders.

6.2 Emergency Plans

In the event of an emergency during the course of the project that requires the evacuation of the work area, the following procedure is to apply:

- Comply with any site-specific emergency procedures provided in the Principal Contractor's site induction if conducted;
- Immediately notify to the Site Supervisor and Principal Contractor's site representative;
- Decontamination procedures can be temporarily waived in the event of an emergency;
- If safe to do so, quickly make the immediate work area safe by turning off any running plant and equipment;
- If conditions are unsafe, evacuate to the designated emergency assembly point;
- Encourage people to remain calm and move off in an orderly manner;
- Do not reenter the emergency zone;
- Administer first aid if required; and
- If required, call the appropriate Emergency Services on 000 or 112 from a mobile device out of service.

A first aid kit and first aid officer should be readily available at all times, and sufficient suitable fire extinguishers and hoses should be made available.

The ARC is to inform the office of the details of any workplace accidents or injuries sustained within 24 hours.

6.3 Site Rules

All personnel on site must follow the site rules as outlined in the site-specific Induction prepared by the principal contractor.

In addition to site specific instructions, the following rules are to be applied:

1. All incidents, injuries and emergency situations must be reported to the site supervisor;
2. Workers must wear correct PPE during specific work activities (as per SWMS, safety datasheets or manufacturer's recommendations) including mandatory site-specific PPE;
3. Place rubbish in the appropriate bin / skip provided before leaving the site each day;
4. Work areas to be kept clean and access ways free from hazards at all times;
5. No alcohol or illegal drugs permitted on site;
6. Any person affected by alcohol or drugs will not be tolerated and will be denied access to the site;
7. Toilets are to be used and good hygiene is to be adhered to at all times;
8. Before using or storing any hazardous substances, a copy of the respective SDS is to be given to the site supervisor (or included in the SWMS);
9. Only personnel trained and deemed competent to operate specific plant and equipment are to operate this plant and equipment. This includes holding certificates and licenses as required;
10. No person without specific approval is to alter or remove any plant, equipment or safety device on site. This includes scaffolds, handrails, barricades, signage, guards, etc.;

ASBESTOS REMOVAL CONTROL PLAN (ARCP)

11. Electrical equipment including leads are to be inspected and tagged at intervals not exceeding three months in QLD and every month in NSW and maintained in locations where they are not likely to be damaged or create a trip hazard;
12. No piggy back leads or double adaptors to be used on site;
13. Work above 2m will require a means of fall protection unless using mobile scaffold with a height of no more than 4m;
14. Theft of any kind will not be tolerated and will be reported directly to the site supervisor; and
15. All safety signs are to be complied with in full.

6.4 Safe Work Method Statements

The performance of any high-risk work such as asbestos removal, must be conducted in accordance a Safe Work Method Statement (SWMS). The SWMS is to be prepared before the proposed works starts and is to be supplied to the Principal Contractor.

6.5 Toolbox Talks / Prestart Meetings

All associated personnel on site are to attend a daily Toolbox Talk / Prestart Meeting carried out by the Site Supervisor / Asbestos Removal Supervisor prior to the commencement of works.

Topics to be raised include but are not limited to:

- Identifying hazards with the intention of minimising the risk to personnel, plant and the general public during the course of the job;
- Identifying contaminated work areas and emergency evacuation or muster points; and
- Workplace relations including the management of fatigue and dehydration.

Records will be made and kept of all toolbox talks / prestart meetings. All workers and site personnel are encouraged raise to any issues or concerns.

6.6 Contaminant Exposure Pathways

The following exposure pathways are to be considered;

- Inhalation of respirable asbestos fibres;
- Inhalation of respirable SMF fibres;
- Inhalation of lead particulates;
- Ingestion of lead particulates; and
- Dermal contact with PCB oils.

The applicable containment measures to minimise the exposure pathways include:

- Ensure site is established with appropriate exclusion zone and signage;
- All workers within the work area to where Personal Protective Equipment;
- Apply control measures as detailed in the project SWMS;
- Minimise disturbance of ACM;
- Measuring the effectiveness of the control measures via asbestos air monitoring;
- Utilising safe work practices i.e. do not overfill excavator bucket and dust suppression;
- Maintain adequate decontamination facilities / procedures;
- Personnel awareness to avoiding cross contamination of clean work areas.

6.7 Personal Protective Equipment

ASBESTOS REMOVAL CONTROL PLAN (ARCP)

In addition to any mandatory site specific Personal Protective Equipment (PPE), the following PPE is required when whilst within any designated removal zones.

- Respiratory Protective Equipment (RPE):
 - Full-face, particulate filter (cartridge) respirator; or
 - Half-face, particulate filter (cartridge) respirator.
- Disposable rated coveralls Type 5/6;
- Disposable gloves;
- Safety footwear;
- Disposable shoe covers if appropriate; and
- Safety glasses if appropriate.

The level of respiratory protection is to be determined by a competent person and should factor the nature of the asbestos removal work, possible maximum concentrations of asbestos within the asbestos removal work area and any personal characteristics of the wearer.

Each worker wearing a respirator is to have an in date fit test record for that particular respirator.

6.8 Service Disconnections

Prior to commencement of works, all impacted services must be disconnected by a licensed contractor and written confirmation received.

7.0 REMOVAL EQUIPMENT

Tool selection is to be biased towards tools that prevent or minimise the generation and dispersion of airborne dust / fibres as much as possible. Tools and equipment that generate of dust such as the following are not to be used:

- High-speed abrasive power and pneumatic tools such as angle grinders, sanders, saws or high-speed drills;
- Brooms and brushes;
- High-pressure water spray, jets, power or similar tools; and
- Compressed air.

The following equipment and materials are available for the removal works and should be selected based on the scope of works, type of material to be removed and site conditions:

- H class HEPA vacuum;
- Multiple stage decontamination unit;
- Negative air units;
- Water filtration systems;
- Hand tools;
- Platform ladder;
- Mobile scaffold systems;
- Spray bottles;
- Diesel generator;
- Hook bins and trucks;
- Excavators;
- 200µm thick plastic; and
- Tape and adhesives.

ASBESTOS REMOVAL CONTROL PLAN (ARCP)

8.0 SITE ESTABLISHMENT

8.1 Site Set Up

Asbestos removal warning signs will be installed on the site boundary in a manner that clearly indicates that asbestos removal work is being carried out. Signs will be placed at main entry point to ensure that anyone entering the site is aware of the works being conducted. All signage will be installed in accordance with *AS 1319-1994 Safety signs for the occupational environment*.

Asbestos removal exclusion zones will be isolated using barricades to delineate the asbestos removal area from other work areas. The type of barricade selected will reflect the level of risk, site conditions and other works being conducted onsite. Asbestos warning signs will be installed on the asbestos removal exclusion zones to ensure site personnel are aware of the asbestos removal works being conducted onsite.

Prior to the commencement of works, ensure that all services have been disconnected by a licensed person and a disconnection certificate provided.

8.2 Decontamination Zone

A decontamination zone will be established. The decontamination zone will be clearly defined and where possible will be located away from the asbestos removal area and on the boundary of the asbestos removal exclusion zone.

The decontamination zone will comprise of a layer 200µm plastic acting as the base that is appropriately weighed down. It will be equipped with all relevant supplies to ensure sufficient personnel decontamination, such as:

- Asbestos waste bags;
- Alcohol wipes / wet wipes;
- Spare PPE, tools and equipment;
- Adhesive tape to seal asbestos waste bags.

8.3 Asbestos Removal Enclosures

Where required, asbestos removal enclosures will be constructed for the removal of all friable ACM that cannot be removed using the wrap and cut technique or glove bag method. Design and construction of the asbestos removal enclosure will be managed by the site supervisor based on site conditions, the staging of the works and in consideration of the advice provided by the LAA. The asbestos removal enclosure will:

- Be constructed out 200µm thick heavy-duty plastic;
- Include a multiple stage decontamination chamber positioned in a suitable location;
- Include a decontamination chamber water capture and filtration system;
- Include a Negative Air System which maintains a constant air flow through the decontamination chamber;
- Have adequate task lighting; and
- Be visually inspected and smoke tested by the LAA.

ASBESTOS REMOVAL CONTROL PLAN (ARCP)

9.0 REMOVAL METHODOLOGY

The number of personnel present will be limited to those who are required onsite. All tools, equipment, materials and replacement PPE are to be readily available. Ensure there is adequate lighting, either naturally or by using lighting rigs.

Where possible, the wet spray method of asbestos removal will be implemented as it provides safe and practical solution for managing the liberation of asbestos fibres during the asbestos removal works.

In general, the following removal methods will be applied. Variations to the methodology may be required based on the type of ACM to be removed, site conditions, nearest receptors and experience of the site supervisor.

Where excavators are utilised for the asbestos removal works, the excavator is to be operated in an enclosed cabin with the air conditioning set to recycled air at all times, this will ensure that no air is drawn through air conditioning intake. At no time is the excavator operator to enter or exit from the cabin within the asbestos removal zone. Excavator operator is to drive the plant to the decontamination area at every break and then exit the plant safely then decontaminate themselves. The only exception to this process is in the event of an emergency, in which the asbestos removal supervisor will oversee the process.

9.1 Asbestos Cement Sheeting

1. Set up drop sheets below work areas to collect any dust, debris and fragments;
2. Sheeting to be wet down prior to removal;
3. Where possible remove sheeting in whole sheets and minimise breakage;
4. Sheeting be removed using various hand tools;
5. Wet down the back of the removed sheeting;
6. Wrap removed sheeting in batches in 200µm thick plastic.

9.2 Asbestos Vinyl Flooring Products

1. Vinyl flooring to be wet down prior to removal;
2. Scrape, chip and lift tiles with a wide bladed tool or scraper;
3. A mallet or hammer may be used to assist separating tile from floor;
4. Minimise breakage to tiles where possible;
5. Use scraper to remove any adhesive stuck to floor. A heat source or chemical stripper may be required to soften or remove adhesive;
6. Place vinyl flooring and associated adhesive into asbestos waste bags.

9.3 Friable ACM

1. Removal of friable ACM is to be conducted within an asbestos removal enclosure;
2. Design the asbestos removal enclosure based on the site conditions;
3. Construct asbestos removal enclosure out of heavy duty 200µm thick plastic and timber for support;
4. Asbestos removal enclosure should contain viewing panels;
5. Install staged personal decontamination unit;
6. Install negative air unit/s opposite decontamination unit to create smooth laminar flow;
7. Negative air units to operate 24 hours per day until all asbestos removal works are complete and a clearance is received;
8. Seal all air ingress points;
9. Have asbestos removal enclosure visually assessed and smoke tested by the LAA;
10. LAA to conduct control monitoring at all times during asbestos removal works;
11. Friable ACM to be removed gently prying, scraping or chipping material;
12. Friable ACM is placed in to asbestos waste bags or wrapped in batches in 200µm thick plastic;

ASBESTOS REMOVAL CONTROL PLAN (ARCP)

13. Internal area of the asbestos removal enclosure is to be thoroughly decontaminated utilising a variety of methods such as wet wiping and vacuuming;
14. LAA to conduct a visual assessment of the asbestos removal enclosure;
15. Upon receipt of clearance of the asbestos removal enclosure, all internal surfaces are to be thoroughly coated in PVA / water-based solution;
16. Following adequate time for PVA to dissipate and dry, LAA is to conduct preliminary clearance asbestos air monitoring within the asbestos removal enclosure;
17. Upon receipt of satisfactory preliminary clearance asbestos air monitoring results, the asbestos removal enclosure is dismantled;
18. All asbestos removal enclosure construction materials are to be treated as contaminated and disposed of accordingly;
19. The asbestos removal area is to be recleaned and assessed;
20. LAA to conduct final clearance asbestos air monitoring within the asbestos removal area.

9.4 Synthetic Mineral Fibres

1. SMF are to be removed utilising the wet spray method;
2. Avoid or minimise breaking the SMF materials and remove the product as whole items under controlled conditions; and
3. All large pieces of waste should be double-wrapped in polythene sheeting and sealed with duct tape. Small pieces of debris are to be placed into an appropriately labelled 40 litre polythene bags and duct taped closed.

9.5 Lead Based Paint

Lead based paint will be removed by utilising either the Wet Scraping and Wet Sanding method or the On-site Chemical Stripping method based on small spot tests to assess suitability.

9.6 Removal of asbestos contained within the soil (where present on site)

Any initial finds for asbestos fragments located within soil on site, must be notified to RCC, zoned off with asbestos caution tape, and have samples collected for testing and validation that it is in fact asbestos. The exclusion zone must be 10m. As a precautionary measure, any location with visible potential asbestos fragments should have PVA bonding applied via spray to ensure no airborne opportunity arises for exposed fragments. Once fragments have returned a positive result, a direction is sought from the hygienist on the extent of removal to be undertaken to ensure clearance, typically a soil scrape and disposal. Prior to the disposal of the soil, permits must be obtained to move the soil to another location for disposal. This permit requires environmental testing of the soil to confirm there are no other contaminants within the soil, other than asbestos. This process takes around 10 days to receive results after test pitting. During the testing, asbestos containing soil will be test pitted in 1 10x10m grid formation, and stockpiled on site, with geofabric applied to stockpiles.

Once the disposal permit is received, a clean and dirty zone is to be setup on site for labour and trucks. The zone delineation on site is to be agreed with RCC prior to setup. The trucks are lined with plastic by labourers in the clean zone (clear of asbestos), then they will enter the dirty zone (zone with asbestos) to be loaded. A 30t excavator will load the trucks with an asbestos trained operator, constant dust suppression to be applied during loading and stockpiling. Once the trucks are loaded, the tarp is then sealed by an asbestos labourer while in the dirty zone. The truck then passes over a rumble grid on departure of the site to ensure it is clean again. Once in the dirty zone, any machinery must be cleaned and decontaminated prior to leaving the dirty soil zone, to avoid cross contamination.

Dust control measures to be implemented during soil related asbestos works are as follows: water sprinkler suppression, direct applied water suppression, PVA bonding applied when soil is likely to remain untouched for a period of 48 hours or more.

For test pitting and removal of ACM soil under Building C near the perimeter fence of the school, a 10m exclusion zone must be maintained. As the perimeter fence is less than 10m from the edge of the works zone, Demex will require the

ASBESTOS REMOVAL CONTROL PLAN (ARCP)

temporary diversion of pedestrians only from the footpath to the path across the road, for the duration of the test pitting work or the removal work only.

9.7 Removal of remainder of Building C

Under class B asbestos conditions, the floor of building C must be progressively removed and disposed of using a 30t excavator with grabs. Further testing will need to be done to confirm if the floor is contaminated or not. Once the excavator has entered the zone where asbestos in the soil has been identified, and sufficient volumes of the floor have been removed, the team will commence test pitting and environmental testing for soil categorization.

Wet Scraping and Wet Sanding

Wet scraping and wet sanding involves moistening the paint with water from a spray bottle, or similar device, and then removing the paint from the surface using a scraper or a wet abrasive paper. Drop-sheets of thick, impervious plastic are used to catch the waste for collection and disposal.

This method generates a minimum of dust. Scraping and sanding can be slow and further cleaning or smoothing may be needed to remove residues or to feather edges. Scraping and sanding may also result in damage of soft substrates such as plaster or softwood. Care should be taken near electrical outlets.

The run-off from wet sanding and scraping will carry suspended particles which will be controlled. Run-off will not be allowed to escape between floor-boards, into or under floor coverings or behind architraves.

On-site Chemical Stripping

Chemical paint strippers will soften and swell the paint, allowing it to be easily removed with a scraper. The residue is usually a gel-like paste that is easily contained and handled. Chemical stripping is suitable for most surfaces such as timber, render or steel.

Some chemical strippers may cause damage to certain substrates and should be tested for compatibility before use. Waste from chemical strippers will be collected and prevented from entering the sewer or storm water drains.

Removal

Where appropriate, building materials painted with lead-based paint will be manually removed from the structure and placed in a lined waste bin for removal and disposal.

10.0 DECONTAMINATION

Decontamination of Work Areas

Decontamination of the removal areas are to be conducted utilising wet decontamination methods such wet wiping. Damp rags and disposable alcohol wipes can be utilised to decontaminate associated surfaces. HEPA filter vacuums are to be utilised to remove areas of high dust and / or debris.

Decontamination works are to be thorough, detailed and are to be inclusive of all affected areas.

Personal Decontamination within the Decontamination Zone

Personal decontamination is to be conducted within the decontamination zone. This is achieved by wet wiping all exposed skin, footwear and external parts of the RPE. All disposable PPE is removed and placing into asbestos waste bags. Once the user believes they are thoroughly decontaminated, the RPE may be removed and the internal areas wet wiped.

ASBESTOS REMOVAL CONTROL PLAN (ARCP)

Personal Decontamination within an Asbestos Removal Enclosure (for friable works)

Dirty Area:

1. Remove shoes (store upside down);
2. Shower whilst wearing PPE and clothing;
3. Leave on respirator and remove all clothing; and
4. Place in labelled bins (waste or laundry).

Clean Area:

1. Shower;
2. Wash respirator thoroughly;
3. Wash face, head, hands and fingernails thoroughly;
4. Remove and thoroughly wash respirator; and
5. Dry and store respirator in labelled container.

Clean Changing:

1. Use a clean towel to dry off;
2. Change into normal clothes; and
3. Do not re-enter the clean/dirty areas.

Decontamination of Tools & Equipment

Tools and equipment must not be removed from asbestos work area. If these items are to be reused, they must be decontaminated using wet wiping / vacuuming or sealed within asbestos bags for reuse.

Decontamination of Excavators

If excavators were utilised during asbestos removal works, sections of machines making contact with the ground are to have all soil removed using hoses, wet wipes and manual tools to dislodge the material. Other areas of the machine are to be thoroughly inspected and decontaminated where material is identified utilising hoses and wet wipes.

Decontamination should pay attention to all aspects of the plant. Excavators are to be inspected by the LAA prior to it leaving the decontamination area.

Decontamination of EWP's

If elevated work platforms were utilised during asbestos removal works, machines are to be thoroughly decontaminated utilising HEPA filter vacuum cleaner and wet wipes. Decontamination should pay attention to all aspects of the plant including engine bays, platforms & tyres.

11.0 DUTIES OF THE INDEPENDENT ASBESTOS ASSESSOR

11.1 Asbestos Air Monitoring

Based on the defined scope of works for the project, the following asbestos air monitoring program has been proposed:

- Daily asbestos air monitoring will be conducted throughout the asbestos removal works.

Asbestos Air Monitoring Background Information

ASBESTOS REMOVAL CONTROL PLAN (ARCP)

Asbestos air monitoring is achieved by passing a known volume of air through a membrane filter using a calibrated sampling pump. The membrane filter is then analysed at a NATA accredited laboratory to determine a fibre count. Using the known volume of air and the fibre count, an airborne fibre concentration can be determined.

The limitation of this method is that all airborne fibres that meet the characteristics of a respirable fibre (fibres that are >5µm long, <3 µm wide with a length to width ratio of 3:1) are counted in the fibre count. This includes synthetic mineral fibres (SMF) such as ceiling insulation batts and organic fibres such as carpet, cloth, vegetation. This can lead to elevated fibre counts that are not attributed to asbestos fibre release.

Control asbestos air monitoring is conducted on the boundary of the asbestos removal work areas during asbestos removal works with the overall aim to assess the effectiveness of the control measures applied. For friable asbestos removal works, control monitors will be positioned on the clean side of the decontamination chamber and in the vicinity of the negative air unit exhaust.

Clearance asbestos air monitoring is conducted within the asbestos removal work area upon completion of the asbestos removal works to ensure airborne levels of asbestos fibres are below the clearance limit. For friable asbestos removal works, clearance monitors will be positioned within the asbestos removal enclosure upon completion of the asbestos removal works. Upon receipt of airborne asbestos concentrations below the clearance limit, the asbestos removal enclosure will be dismantled in a controlled manner. The asbestos removal area will then be subjected to a follow up round clearance asbestos air monitoring.

The position, flow rate, duration and number of air monitoring stations will be determined by the LAA. All asbestos air monitoring should be conducted in accordance with NOHSC:3003 (2005) Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres 2nd Edition.

All asbestos air monitoring and associated fibre counts will be conducted in the designated onsite NATA accredited asbestos testing laboratory. Airborne asbestos concentration will be calculated and compared to the air monitoring limits and required actions are outlined in the table below:

Action Level	Control	Action
< 0.01 fibres/mL	No new control measures are necessary	Continue with current control measures
≤ 0.02 fibres/mL and ≥ 0.01 fibres/mL	1. Review	Review existing control measures
	2. Investigate	Investigate the cause
	3. Implement	Implement additional control measures to eliminate or minimise exposure and prevent further release
> 0.02 fibres/mL	1. Stop asbestos removal work	Stop all asbestos removal works
	2. Notify the regulator	Notify the relevant regulator by phone followed by a written statement that work has ceased and the result of the air monitoring
	3. Investigate the cause	Conduct a thorough visual assessment of the work area and associated equipment in consultation with all workers involved with the asbestos removal work.
	4. Implement controls to eliminate or minimise exposure and prevent further release	Extend the exclusion zone around the asbestos removal works and apply additional control measures based on results of visual assessment such as sealing leaks and wet wiping / vacuuming surrounding area
		Do not recommence asbestos removal works until airborne asbestos fibre levels are at or below 0.01 fibres/mL

ASBESTOS REMOVAL CONTROL PLAN (ARCP)

11.2 Clearance Assessment

The LAA is to conduct a visual clearance assessment upon the completion of the asbestos removal works.

The methodology for conducting clearance assessments is to be based on the expertise of the LAA and may incorporate the collection of settled dust samples or validation soil samples where deemed appropriated by the LAA.

For cases involving the removal of friable asbestos, clearance asbestos air monitoring will be conducted within the asbestos removal enclosure upon completion of removal works. Upon receipt of air monitoring results below the clearance limit, the asbestos removal enclosure will be deconstructed in a controlled manner and the asbestos removal area will be subjected to another round of clearance asbestos air monitoring to further validate the removal area.

A written clearance report or validation report is to be issued upon completion of visual assessment. The asbestos removal area is to remain isolated with exclusion zones and signage in place until a clearance has been received.

12.0 WASTE REMOVAL

Bulk Waste / Consumables

All removed ACM items, asbestos waste and disposable PPE is to be double wrapped and sealed in 200µm polythene sheeting or placed within appropriately labelled heavy-duty asbestos waste bags and sealed by goose necking the top of the bag & sealing with tape.

Construction & Demolition Waste

Asbestos contaminated construction and demolition waste material may be loaded into a skip bin, vehicle tray or truck that has been double lined with 200µm thick heavy-duty plastic sheeting and will be sealed prior to departing the work area. Truck tarps are utilised at all time during transportation. This procedure will be adopted for friable asbestos contaminated soil.

Soil Impacted with Non-Friable / Friable Asbestos

Due to the relatively low risk of asbestos contamination within clean soil opposed to the risks associated with wrapping and sealing the trucks trailers, asbestos contaminated soil may be loaded directly into an unlined truck trailers providing the following measures are adopted:

- The asbestos contaminated soil must be adequately sealed / encapsulated before departing site by either:
 - Sealing the contaminated material with a capping layer of clean soil; or
 - Encapsulating the top surface of the contaminated material with a binding.
- Truck tarps such as envirotarps are utilised at all times during transportation
- Prior to departing site, truck tarps are to be inspected to ensure adequate seal and that they are in correct working order;

Asbestos waste is to be transported by EPA accredited vehicles to a lawfully approved landfill site. Appropriate waste tracking documentation will be maintained.