

Office of Sport

Asbestos and Hazardous Materials Reinspection Assessment

Lake Ainsworth Sport & Recreation Centre

Northern End Pacific Parade

Lennox Head NSW 2478

07/02/2023



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Asbestos and Hazardous Materials Reinspection Assessment

Prepared for

Office of Sport

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Executive Summary

Tetra Tech Coffey Pty Ltd (Tetra Tech) was commissioned by Office of Sport to conduct an asbestos and hazardous materials (hazmat) reinspection assessment of Lake Ainsworth Sport & Recreation Centre located at Northern End Pacific Parade, Lennox Head NSW 2478 (the site).

The purpose of the hazmat assessment was to assess and document the health risks posed by hazmat, including asbestos containing materials (ACM) which are considered accessible during normal occupation of the building. This is in order to meet the requirements of the relevant State Regulations, Compliance Codes, Codes of Practice and Guidance Notes.

State/Territory legislation and industry guidance requires that the registers be used by and made available to property owners, employers, workers, persons intending business at the premises and Health and Safety Representatives, as part of an overall hazardous materials management plan designed to control the risks of exposure to hazardous materials.

The following hazardous building materials were identified at the time of the assessment:

Property	Asbestos Containing Materials		Lead Based Paint	Lead Containing Dust	Synthetic Mineral Fibre	Poly-chlorinated Biphenyls	Ozone Depleting Substances
	Non-Friable	Friable					
Lake Ainsworth Sport & Recreation Centre	✓	✓	✓	-	✓	-	-

Full details of the material assessments can be located within **Appendix A: Asbestos and Hazardous Materials Register**.

Areas of No Access or Limited Access were present and are described in Section 2.2. It should be presumed that hazmat are present in these areas until further inspection can confirm or refute their presence.

A number of other recommendations were made in the body of this report which address the ongoing management of hazardous building materials at this site.

This executive summary must be read in conjunction with this entire report and the limitations contained therein.

The survey inspection conducted was not a destructive pre demolition/ refurbishment survey. A destructive hazardous building material survey must be carried out prior to any demolition or refurbishment works.

1. Introduction

Tetra Tech Coffey Pty Ltd (Tetra Tech) was commissioned by Office of Sport to conduct an asbestos and hazardous materials (hazmat) reinspection assessment of Lake Ainsworth Sport & Recreation Centre located at Northern End Pacific Parade, Lennox Head NSW 2478 (the Site). Simon Blanch of Tetra Tech conducted the assessment on the 10/01/2023.

The survey inspection conducted was not a destructive pre demolition/ refurbishment survey. A destructive hazardous building material survey must be carried out prior to any demolition or refurbishment works.

1.1. Site Information

The asbestos and hazardous materials reinspection assessment was undertaken of Lake Ainsworth Sport & Recreation Centre located at Northern End Pacific Parade, Lennox Head NSW 2478 (the site).

Table 1: Site Information	
Site:	Lake Ainsworth Sport & Recreation Centre, Northern End Pacific Parade, Lennox Head NSW 2478
Age (Circa):	1980
Site Description:	Sports & Recreation Centre

1.2. Objective and Scope of Works

The objectives/scope of the asbestos and hazardous materials reinspection assessment was to:

- Identify the presence of the following confirmed and or suspected hazmat building materials within accessible areas of nominated building(s):
 - Asbestos Containing Materials (ACM);
 - Lead Based Paint (LBP);
 - Lead Containing Dust (LCD);
 - Synthetic Mineral Fibres (SMF);
 - Polychlorinated Biphenyls in fluorescent light capacitors (PCBs); and
 - Ozone Depleting Substances (ODSs).
- Collect samples of suspected ACM and/or LBP and LCD, for analysis by a NATA accredited laboratory;
- Visually determine the presence of SMF, PCB-containing light fittings and ODSs;
- Assess the risks associated with identified hazmat;
- Recommend risk management strategies to mitigate risks associated with ACM and other hazmat for removal and ongoing occupancy;
- Prepare a detailed assessment report in alignment with the requirements of relevant State/Territory Regulations, Compliance Codes, Codes of Practice and Guidance Notes, and
- Provide a copy of the assessment report in electronic (PDF) format to Office of Sport.

2. Findings

The results of the asbestos and hazardous materials reinspection assessment are provided in a register format which is designed to provide readily available information about the presence of hazmat in the workplace.

2.1. Assessment Findings

The findings of this assessment are presented in tabulated format, including building materials that have been photographed and depicted in **Appendix A: Asbestos and Hazardous Materials Register**.

The following significant key findings are noted:

2.1.1. Asbestos Containing Materials

Location	Material Description	Risk Rating
Internal / Centre Managers House / Laundry / Pipework, Rope Insulation	Woven Material	High
External / Murphy's Cottage Block / Veranda and Undercover Area / Debris to the Floor From the Eave to Rear of Kitchen	Fibre Cement Debris	Medium
Internal / Centre Managers House / Garage / Ceiling Space, Packer to Timber	Fibre Cement Sheet	Medium
Internal / Centre Managers House / Garage / Timber Beams	Fibre Cement Sheet Debris	Medium
External / Centre Managers Residence / Veranda / Eave Linings	Fibre Cement Sheet	Low
External / Gym Shed / Entrance and Covered Walkway / Eaves	Fibre Cement Sheet	Low
External / Lodge 13 / Covered Walkway / Eaves	Fibre Cement Sheet	Low
External / Lodge 14 / Covered Walkway / Eaves	Fibre Cement Sheet	Low
External / Murphy's Cottage Block / Veranda and Undercover Area / Eave Linings	Fibre Cement Sheet	Low
External / Project Coordinators Residence / Entrance Area and Surrounds / Eave Linings	Fibre Cement Sheet	Low
External / Project Coordinators Residence / Rear Garage / Eaves	Fibre Cement Sheet	Low
External / Services Coordinator Residence / Entry And Covered Walkways / Electrical Box adjacent Entry	Bituminous Backing Board	Low
External / Services Coordinator Residence / Entry And Covered Walkways / Walls	Fibre Cement Sheet	Low
External / Swimming Pool Toilets and Change / Toilet Entry Area / Infill Panels Above Doors	Fibre Cement Sheet	Low
External / Toilets to the North of Murph's Cottages / Entrance and Surrounds / Eaves	Fibre Cement Sheet	Low
External / Toilets to the North of Murph's Cottages / Entrance and Surrounds / Rear of Female Toilet, Down Pipe	Moulded Fibre Cement	Low

Internal / Administration Building / Server Room / Safe	Internal Insulation	Low
Internal / Centre Managers House / Laundry / Second Skin Ceiling Lining	Fibre Cement Sheet	Low
Internal / Lodge 14 / Toilet / Behind Ceramic Tiles to Walls	Fibre Cement Sheet	Low
Internal / Program Coordinator Residence / Laundry / Ceiling Lining	Fibre Cement Sheet	Low
Internal / Program Coordinator Residence / Laundry and Shower / Wall Lining	Fibre Cement Sheet	Low
Internal / Reception / Storeroom / Safe	Internal Insulation	Low

2.1.2. Lead Based Paint

Location	Material Description	Risk Rating
External / Project Coordinators Residence / Rear Garage / Timber Window Frames	Light Brown Paint	Medium
External / Project Coordinators Residence / Entrance Area and Surrounds / Eave Linings	Beige Paint	Very Low
External / Services Coordinator Residence / Entry And Covered Walkways / Electrical Box Adjacent Entry	Purple Paint	Very Low
External / Toilets to the North of Murph's Cottages / Entrance and Surrounds / Down Pipe and Walls	Beige Paint	Very Low

2.1.3. Lead Containing Dust

No suspect lead containing dust identified at the time of the assessment.

2.1.4. Synthetic Mineral Fibres

Location	Material Description	Risk Rating
External / Beachside Lodge / Veranda and Walls / Hot Water Units	Insulation Material	Very Low
External / Murphy's Cottage Block / Veranda and Undercover Area / Hot Water Unit	Insulation Material	Very Low
External / Project Coordinators Residence / Entrance Area and Surrounds / Hot Water Unit	Insulation Material	Very Low
External / Swimming Pool Toilets and Change / Free Play Sports Store / Roof Adjacent the Entry	Sarking Insulation	Very Low

Internal / Centre Managers House / Laundry / Throughout Ceiling Void	Insulation Batts	Very Low
Internal / Reception / Ceiling Void / Flexible Ductwork	Insulation Material	Very Low
Internal / Reception / Ceiling Void / Loose Insulation	Insulation Batts	Very Low
Internal / Reception / Ceiling Void / Underside of Roof	Sarking Insulation	Very Low
Internal / Service Coordinator Residence / Ceiling Void / Underside of Roof	Sarking Insulation	Very Low
Internal / Stadium / Gym / Underside of Roof	Sarking Insulation	Very Low
Internal / Swimming Pool Change and Toilets / Free Play Ports Store / Underside of Roof	Sarking Insulation	Very Low

2.1.5. Polychlorinated Biphenyls

No suspect PCB containing capacitors identified at the time of the assessment.

2.1.6. Ozone Depleting Substances

No suspect ODS's identified at the time of the assessment.

2.1.7. Access Restrictions

Where no access or limited access areas have been identified it should be presumed that hazmat are present in these areas until further investigation can confirm or refute their presence.

No inspection can be guaranteed to locate all hazmat in specific locations. The assessment cannot be regarded as absolute, without extensive invasion of structures. Future demolition and or renovation to site structures may expose situations, which were concealed or otherwise impractical to access during this assessment.

2.1.8. No Access Areas

The following areas were not accessible at the time of the assessment:

- Within live electrics, plant and ductwork throughout
- Areas outside the scope of assessment

2.1.9. Limited Access Areas

Access to the following areas was limited at the time of the assessment:

- Ceiling voids
- Wall voids
- Below floors
- Behind ceramic wall tiles
- Beneath floor coverings

- Subfloor spaces
- Risers
- Formwork to concrete slabs
- Roof

3. Recommendations

The following recommendations are provided with respect to hazmat identified during the assessment of the site. This assessment only covers the parts of the site that have been accessed and been assessed in accordance with the approved scope.

3.1. Asbestos Containing Materials

The preference will always be to eliminate the asbestos hazards from the site and if it is practicable for the occupier to do so then asbestos removal should always be considered. ACM on site, which were found to be in a bonded and stable condition, may be managed in situ and periodically inspected if removal is not practicable.

If managed in situ, all identified or presumed ACM should be appropriately labelled, where possible, and regularly inspected to assess their condition and potential changes to health risk.

Prior to any demolition, partial demolition, renovation or refurbishment, ACM likely to be disturbed by those works should be removed in accordance with relevant codes of practices, compliance codes and legislation.

3.1.1. Asbestos Control Measures

- If the ACM is friable, in a poor/unstable condition and accessible with risk to health from exposure, immediate access restrictions should be applied, and removal is required as soon as practicable using a licensed contractor.
- If the ACM is friable, accessible but in a stable condition, removal is preferred. However, if removal is not immediately practicable, short-term control measures (i.e. restrict access, sealing, enclosure etc) may be employed until removal can be facilitated.
- If the ACM is non-friable and, in a poor/unstable condition, disturbance should be minimised. Removal or encapsulation may be appropriate controls. ACM which are found in localised areas and identified as damaged, consisting of small quantities of non-friable cement debris may not require the highest removal priority. The removal priority may be lowered due to a low risk of disturbance. Further confirmation can be obtained via asbestos fibre air monitoring where the result is found to be < 0.01 fibre/mL.
- For the instances above and further assessment of the risk, airborne fibre monitoring is recommended and can assist with decisions on the most appropriate, and urgency of, control measures.
- Where ACM is in a good, stable condition, ongoing maintenance and periodic inspection would be appropriate control measures.
- Remaining ACM identified or presumed should be appropriately labelled where possible. Those items should be regularly inspected to ensure they are not deteriorating and resulting in a potential risk to health.
- An asbestos management plan (AMP) should be created and maintained for all ACM that remain at the site to assist the persons conducting a business or undertaking (PCBU) with the management of these materials. The AMP must ensure that suitable control measures are implemented to prevent site personnel and others from being exposed to airborne asbestos fibres.

- Schedule periodic reassessment of ACM remaining on-site to monitor their aging/deterioration so that the PCBU can be alerted if any ACM require encapsulation or removal.
- A destructive hazardous building material survey must be carried out prior to any demolition or refurbishment works. All asbestos and hazardous materials identified and likely to be disturbed by those works should be removed in accordance with the legislative requirements and relevant codes of practice or compliance codes.
- During future demolition works, if any materials that are not referenced in this report and are suspected of containing asbestos are encountered, then works must cease and an asbestos hygienist should be notified to determine whether the material contains asbestos

The recommendations, conclusions or stability of asbestos materials contained in this report shall not abrogate a person of their responsibility to work in accordance with statutory requirements, codes of practice, guidelines, material safety data sheets, work instructions or reasonable work practices.

3.2. Lead Based Paint

- Any works that are likely to disturb lead based paint surface should be undertaken in accordance with the Australian Standard (AS4361.2:2017), Guide to hazardous paint management – Part 2: Lead paint in residential, public and commercial buildings.
- Prior to any disturbance of lead based paint a comprehensive risk assessment is to be conducted.
- Any loose and peeling lead based paint should be stabilised (using hand-held scrapers, drop cloths and wet misting where appropriate) and the paint chips disposed of as hazardous waste.
- Any remediation works that may generate dust or fumes (i.e. sanding, burning) must be performed under controlled conditions by a suitably resourced and experienced hazardous material/waste abatement contractor (e.g. a Class A licensed asbestos removal contractor).

3.3. 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)].

3.4. Training

Information, instruction and training must be provided to workers, contractors and others who may come into contact with hazardous materials in a workplace, either directly or indirectly.

Depending on the circumstances this hazardous materials awareness training may include:

- The purpose of the training;
- The health risks of hazardous materials;
- The types, uses and likely occurrence of hazardous materials on site, in plant and/or equipment in the workplace;
- The trainee's roles and responsibilities for hazmat management;
- Where the asbestos and hazardous materials register is located and how it can be accessed;
- The timetable for removal of hazmat from the workplace;
- The processes and procedures to be followed to prevent exposure, including exposure from any accidental release of hazmat into the workplace;
- Where applicable, the correct use of maintenance and control measures, protective equipment and work methods to minimise the risks from hazmat, limit the exposure of workers and limit the spread of hazmat outside any work area;
- The National Exposure Standard (NES) and control levels for hazmat; and

- The purpose of any air monitoring or health surveillance that may occur.

Should any further suspect asbestos and/or hazmat become evident during future disturbance/ refurbishment works which have not been addressed in this report, Tetra Tech should be contacted immediately so that a WHS consultant can confirm the status of the suspect material/s.

Tetra Tech is able to assist with all aspects of Risk Management for removal of asbestos and other hazardous materials resulting from these findings.

Appendix A: Asbestos and Hazardous Materials Register

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Area	Location	Material Description	Hazard	Reference No.	Result	Friable	Quantity	Risk Rating	Reinspect Date	Recommendations	Line ID
External	BBQ Area / Throughout / Stored in the Centre of the Floor	Compressed Cement Sheet	Asbestos	Previously Sampled: A006	No Asbestos Detected	-	4 m ²	-	-	-	1
External	BBQ Area / Throughout / Wall Lining	Fibre Cement Sheet	Asbestos	Previously Sampled: A006.1	No Asbestos Detected	-	40 m ²	-	-	-	2
External	Beachside Lodge / Veranda and Walls / Eaves	Fibre Cement Sheet	Asbestos	AI09190	No Asbestos Detected	-	100 m ²	-	-	-	3
External	Beachside Lodge / Veranda and Walls / Weatherboard Wall Lining	Fibre Cement Sheet	Asbestos	AI09188	No Asbestos Detected	-	88 m ²	-	-	-	4
External	Bike Store / Veranda / Wall Lining	Fibre Cement Sheet	Asbestos	AI09188.1	No Asbestos Detected	-	80 m ²	-	-	-	5
External	Centre Managers Residence / Veranda / Eave Linings	Fibre Cement Sheet	Asbestos	Previously Sampled: A020	Chrysotile Asbestos Detected	Non-Friable	64 m	Low	5 Yearly Reinspection	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 in accordance with relevant State Regulations, Compliance Codes, Codes of Practice and Guidance Notes.	6

Area	Location	Material Description	Hazard	Reference No.	Result	Friable	Quantity	Risk Rating	Reinspect Date	Recommendations	Line ID
External	Craft Area / Storage Shed / Wall Lining	Fibre Cement Sheet	Asbestos	Previously Sampled: A006	No Asbestos Detected	-	40 m ²	-	-	-	7
External	Gym Shed / Entrance and Covered Walkway / Eaves	Fibre Cement Sheet	Asbestos	Previously Sampled: A010.3	Chrysotile & Amosite Asbestos Detected	Non-Friable	30 m ²	Low	5 Yearly Reinspection	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 in accordance with relevant State Regulations, Compliance Codes, Codes of Practice and Guidance Notes.	8
External	Gym Shed / Entrance and Covered Walkway / Wall Lining	Fibre Cement Sheet	Asbestos	Previously Sampled: A011	No Asbestos Detected	-	100 m ²	-	-	-	9
External	Lodge 13 / Covered Walkway / Eaves	Fibre Cement Sheet	Asbestos	Previously Sampled: A003.1	Chrysotile Asbestos Detected	Non-Friable	8 m	Low	5 Yearly Reinspection	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 in accordance with relevant State Regulations, Compliance Codes, Codes of Practice and Guidance Notes.	10
External	Lodge 14 / Covered Walkway / Eaves	Fibre Cement Sheet	Asbestos	Previously Sampled: A003	Chrysotile Asbestos Detected	Non-Friable	8 m	Low	5 Yearly Reinspection	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 in accordance with	11

Area	Location	Material Description	Hazard	Reference No.	Result	Friable	Quantity	Risk Rating	Reinspect Date	Recommendations	Line ID
										relevant State Regulations, Compliance Codes, Codes of Practice and Guidance Notes.	
External	Murphy's Cottage Block / Veranda and Undercover Area / Debris to the Floor From the Eave to Rear of Kitchen	Fibre Cement Debris	Asbestos	AI09194	Chrysotile Asbestos Detected	Non-Friable	1 m ²	Medium	5 Yearly Reinspection	Removed as a sample but eave in poor condition to the Kitchen. Restrict access and isolate area. Encapsulate exposed sections under controlled non-friable asbestos removal conditions prior to refurbishment or demolition works by a Class B (non-friable) licensed asbestos removal contractor in accordance with relevant State Regulations, Compliance Codes, Codes of Practice and Guidance Notes.	12
External	Murphy's Cottage Block / Veranda and Undercover Area / Eave Linings	Fibre Cement Sheet	Asbestos	Previously Sampled: A010	Chrysotile & Amosite Asbestos Detected	Non-Friable	30 m ²	Low	5 Yearly Reinspection	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 in accordance with relevant State Regulations, Compliance Codes, Codes of Practice and Guidance Notes.	13
External	Project Coordinators Residence / Entrance Area and Surrounds / Eave Linings	Fibre Cement Sheet	Asbestos	Previously Sampled: A014	Chrysotile Asbestos Detected	Non-Friable	60 m	Low	5 Yearly Reinspection	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 in accordance with relevant State Regulations, Compliance Codes, Codes of Practice and Guidance Notes.	14

Area	Location	Material Description	Hazard	Reference No.	Result	Friable	Quantity	Risk Rating	Reinspect Date	Recommendations	Line ID
External	Project Coordinators Residence / Entrance Area and Surrounds / Wall Lining and Entrance Sheeting	Fibre Cement Sheet	Asbestos	Previously Sampled: A015	No Asbestos Detected	-	100 m ²	-	-	-	15
External	Project Coordinators Residence / Rear Garage / Eaves	Fibre Cement Sheet	Asbestos	Previously Sampled: A014.1	Chrysotile Asbestos Detected	Non-Friable	24 m	Low	5 Yearly Reinspection	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 in accordance with relevant State Regulations, Compliance Codes, Codes of Practice and Guidance Notes.	16
External	Services Coordinator Residence / Entry And Covered Walkways / Electrical Box adjacent Entry	Bituminous Backing Board	Asbestos	A109191	Chrysotile Asbestos Detected	Non-Friable	1 m ²	Low	5 Yearly Reinspection	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 in accordance with relevant State Regulations, Compliance Codes, Codes of Practice and Guidance Notes.	17
External	Services Coordinator Residence / Entry And Covered Walkways / Walls	Fibre Cement Sheet	Asbestos	Previously Sampled: A018	Chrysotile & Amosite Asbestos Detected	Non-Friable	80 m ²	Low	5 Yearly Reinspection	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 in accordance with relevant State Regulations, Compliance Codes, Codes of Practice and Guidance Notes.	18

Area	Location	Material Description	Hazard	Reference No.	Result	Friable	Quantity	Risk Rating	Reinspect Date	Recommendations	Line ID
External	Swimming Pool Toilets and Change / Swimming Pool Plant Room / Infill Panels above Walls	Fibre Cement Sheet	Asbestos	AI09201.5	No Asbestos Detected	-	24 m ²	-	-	-	19
External	Swimming Pool Toilets and Change / Toilet Entry Area / High Swimming Pool Toilets and Change Infill Panels Fascia	Fibre Cement Sheet	Asbestos	AI09201	No Asbestos Detected	-	12 m ²	-	-	-	20
External	Swimming Pool Toilets and Change / Toilet Entry Area / Infill Panels Above Doors	Fibre Cement Sheet	Asbestos	AI09200	Chrysotile and Amosite Asbestos Detected	Non-Friable	4 m ²	Low	5 Yearly Reinspection	Damage to edges and nail points. 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 in accordance with relevant State Regulations, Compliance Codes, Codes of Practice and Guidance Notes.	21
External	Toilets to the North of Murph's Cottages / Entrance and Surrounds / Eaves	Fibre Cement Sheet	Asbestos	Previously Sampled: A010.1	Chrysotile & Amosite Asbestos Detected	Non-Friable	20 m	Low	5 Yearly Reinspection	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 in accordance with relevant State Regulations, Compliance Codes, Codes of Practice and Guidance Notes.	22

Area	Location	Material Description	Hazard	Reference No.	Result	Friable	Quantity	Risk Rating	Reinspect Date	Recommendations	Line ID
External	Toilets to the North of Murph's Cottages / Entrance and Surrounds / Rear of Female Toilet, Down Pipe	Moulded Fibre Cement	Asbestos	AI09196	Chrysotile and Amosite Asbestos Detected	Non-Friable	3 m	Low	5 Yearly Reinspection	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 in accordance with relevant State Regulations, Compliance Codes, Codes of Practice and Guidance Notes.	23
Internal	Administration Building / Server Room / Safe	Internal Insulation	Asbestos	754-SYDEN311850164A1	Suspected Asbestos	Friable	1 Unit	Low	5 Yearly Reinspection	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 in accordance with relevant State Regulations, Compliance Codes, Codes of Practice and Guidance Notes.	24
Internal	Centre Managers House / Garage / Ceiling Space, Packer to Timber	Fibre Cement Sheet	Asbestos	AI09205	Chrysotile and Amosite Asbestos Detected	Non-Friable	1 m ²	Medium	As soon as reasonably practicable	Remove under controlled non-friable asbestos removal conditions prior to refurbishment or demolition works by a Class B (non-friable) licensed asbestos removal contractor in accordance with relevant State Regulations, Compliance Codes, Codes of Practice and Guidance Notes.	25
Internal	Centre Managers House / Garage / Timber Beams	Fibre Cement Sheet Debris	Asbestos	AI09204	Chrysotile Asbestos Detected	Non-Friable	1 m ²	Medium	As soon as reasonably practicable	Removal works have been completed and residue remains. Remove under controlled non-friable asbestos removal conditions prior to refurbishment or demolition works by a Class B (non-friable) licensed asbestos removal contractor in accordance with relevant State	26

Area	Location	Material Description	Hazard	Reference No.	Result	Friable	Quantity	Risk Rating	Reinspect Date	Recommendations	Line ID
										Regulations, Compliance Codes, Codes of Practice and Guidance Notes.	
Internal	Centre Managers House / Laundry / Pipework, Rope Insulation	Woven Material	Asbestos	AI09207	Chrysotile Asbestos Detected	Friable	10 m	High	As soon as reasonably practicable	Debris all around the pipe as rope has deteriorated. Restrict access and remove under controlled friable asbestos removal conditions as soon as practicable by a Class A (friable) licensed asbestos removal contractor in accordance with relevant State Regulations, Compliance Codes, Codes of Practice and Guidance Notes.	27
Internal	Centre Managers House / Laundry / Second Skin Ceiling Lining	Fibre Cement Sheet	Asbestos	AI09206	Chrysotile Asbestos Detected	Non-Friable	12 m ²	Low	5 Yearly Reinspection	Damage around the hatch entry point. 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 in accordance with relevant State Regulations, Compliance Codes, Codes of Practice and Guidance Notes.	28
Internal	Lodge 14 / Toilet / Behind Ceramic Tiles to Walls	Fibre Cement Sheet	Asbestos	Previously Sampled: A007	Chrysotile Asbestos Detected	Non-Friable	20 m ²	Low	5 Yearly Reinspection	No access at the time of the audit but looks to be refurbished. 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 in accordance with relevant State Regulations, Compliance Codes, Codes of Practice and Guidance Notes.	29

Area	Location	Material Description	Hazard	Reference No.	Result	Friable	Quantity	Risk Rating	Reinspect Date	Recommendations	Line ID
Internal	Lodge 14 / Toilet / Ceiling Lining	Fibre Cement Sheet	Asbestos	AI09187	No Asbestos Detected	-	20 m²	-	-	-	30
Internal	Program Coordinator Residence / Laundry / Ceiling Lining	Fibre Cement Sheet	Asbestos	AI09203	Chrysotile and Amosite Asbestos Detected	Non-Friable	10 m²	Low	5 Yearly Reinspection	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 in accordance with relevant State Regulations, Compliance Codes, Codes of Practice and Guidance Notes.	31
Internal	Program Coordinator Residence / Laundry and Shower / Wall Lining	Fibre Cement Sheet	Asbestos	AI09202	Chrysotile Asbestos Detected	Non-Friable	20 m²	Low	5 Yearly Reinspection	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 in accordance with relevant State Regulations, Compliance Codes, Codes of Practice and Guidance Notes.	32
Internal	Reception / Storeroom / Safe	Internal Insulation	Asbestos	754-SYDEN311850164A2	Suspected Asbestos	Friable	1 Unit	Low	5 Yearly Reinspection	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 in accordance with relevant State Regulations, Compliance Codes, Codes of Practice and Guidance Notes.	33

Area	Location	Material Description	Hazard	Reference No.	Result	Friable	Quantity	Risk Rating	Reinspect Date	Recommendations	Line ID
Internal	Swimming Pool Change and Toilets / Storeroom Adjacent Female Change / Ceiling Linings	Fibre Cement Sheet	Asbestos	AI09201.2	No Asbestos Detected	-	44 m ²	-	-	-	34
Internal	Swimming Pool Change and Toilets / Storeroom Adjacent Female Change / Wall Linings	Fibre Cement Sheet	Asbestos	AI09201.1	No Asbestos Detected	-	24 m ²	-	-	-	35
Internal	Swimming Pool Change and Toilets / Storeroom Adjacent Male Toilets / Ceiling Linings	Fibre Cement Sheet	Asbestos	AI09201.4	No Asbestos Detected	-	44 m ²	-	-	-	36
Internal	Swimming Pool Change and Toilets / Storeroom Adjacent Male Toilets / Wall Linings	Fibre Cement Sheet	Asbestos	AI09201.3	No Asbestos Detected	-	24 m ²	-	-	-	37
Internal	Toilets North of Murph's Cottages / Throughout / Ceiling	Fibre Cement Sheet	Asbestos	AI09195.1	No Asbestos Detected	-	4 m ²	-	-	-	38
Internal	Toilets North of Murph's Cottages / Throughout / Wall Lining	Fibre Cement Sheet	Asbestos	AI09195	No Asbestos Detected	-	12 m ²	-	-	-	39

Area	Location	Material Description	Hazard	Reference No.	Result	Friable	Quantity	Risk Rating	Reinspect Date	Recommendations	Line ID
External	Beachside Lodge / Veranda / Walls	Light Green Paint	Lead Paint	AI09189	Lead Detected (<0.005% w/w)	-	88 m ²	-	-	<0.1% lead content, not lead-containing paint as described in AS 4361.2, Guide to hazardous paint management - 2017 Part 2: Lead paint in residential, public and commercial buildings.	40
External	Murphy's Cottage Block / Veranda and Undercover Area / Timber Window Frames	Cream Paint	Lead Paint	AI09193	Lead Detected (0.066% w/w)	-	24 m	-	-	<0.1% lead content, not lead-containing paint as described in AS 4361.2, Guide to hazardous paint management - 2017 Part 2: Lead paint in residential, public and commercial buildings.	41
External	Project Coordinators Residence / Entrance Area and Surrounds / Eave Linings	Beige Paint	Lead Paint	AI09198	Lead Detected (0.16% w/w)	-	40 m	Very Low	-	>0.1% lead content, remove flaking sections and over paint with a lead-free paint. Remove under controlled conditions in accordance with AS 4361.2, Guide to hazardous paint management - 2017 Part 2: Lead paint in residential, public and commercial buildings. Conduct a risk assessment to determine the level of remediation controls required.	42
External	Project Coordinators Residence / Rear Garage / Timber Window Frames	Light Brown Paint	Lead Paint	AI09199	Lead Detected (0.22% w/w)	-	24 m	Medium	-	Debris evident to the floor below the window frames. >0.1% lead content, remove flaking sections and over paint with a lead-free paint. Remove under controlled conditions in accordance with AS 4361.2, Guide to hazardous paint management - 2017 Part 2: Lead paint in residential, public and commercial buildings. Conduct a risk assessment to determine the level of remediation controls required.	43

Area	Location	Material Description	Hazard	Reference No.	Result	Friable	Quantity	Risk Rating	Reinspect Date	Recommendations	Line ID
External	Services Coordinator Residence / Entry And Covered Walkways / Electrical Box Adjacent Entry	Purple Paint	Lead Paint	AI09192	Lead Detected (0.18% w/w)	-	2 m ²	Very Low	-	>0.1% lead content, maintain in current condition, over paint with a lead-free paint as part of ongoing maintenance. Remove under controlled conditions in accordance with AS 4361.2, Guide to hazardous paint management - 2017 Part 2: Lead paint in residential, public and commercial buildings prior to renovation or demolition works. Conduct a risk assessment to determine the level of remediation controls required.	44
External	Toilets to the North of Murph's Cottages / Entrance and Surrounds / Down Pipe and Walls	Beige Paint	Lead Paint	AI09197	Lead Detected (0.18% w/w)	-	24 m ²	Very Low	-	>0.1% lead content, maintain in current condition, over paint with a lead-free paint as part of ongoing maintenance. Remove under controlled conditions in accordance with AS 4361.2, Guide to hazardous paint management - 2017 Part 2: Lead paint in residential, public and commercial buildings prior to renovation or demolition works. Conduct a risk assessment to determine the level of remediation controls required.	45
External	Beachside Lodge / Veranda and Walls / Hot Water Units	Insulation Material	SMF	754-SYDEN311850164S1	Suspected SMF	-	2 Units	Very Low	-	Maintain in current condition if to remain in-situ. Remove under controlled SMF conditions as per the Code of Practice for the Safe Use of Synthetic Mineral Fibres [NOHSC: 2006 (1990)].	46
External	Murphy's Cottage Block / Veranda and Undercover Area / Hot Water Unit	Insulation Material	SMF	754-SYDEN311850164S2	Suspected SMF	-	1 Unit	Very Low	-	Maintain in current condition if to remain in-situ. Remove under controlled SMF conditions as per the Code of Practice for the Safe Use of Synthetic Mineral Fibres [NOHSC: 2006 (1990)].	47

Area	Location	Material Description	Hazard	Reference No.	Result	Friable	Quantity	Risk Rating	Reinspect Date	Recommendations	Line ID
External	Project Coordinators Residence / Entrance Area and Surrounds / Hot Water Unit	Insulation Material	SMF	754-SYDEN311850164S6	Suspected SMF	-	1 Unit	Very Low	-	Maintain in current condition if to remain in-situ. Remove under controlled SMF conditions as per the Code of Practice for the Safe Use of Synthetic Mineral Fibres [NOHSC: 2006 (1990)].	48
External	Swimming Pool Toilets and Change / Free Play Sports Store / Roof Adjacent the Entry	Sarking Insulation	SMF	754-SYDEN311850164S7.1	Suspected SMF	-	12 m ²	Very Low	-	Maintain in current condition if to remain in-situ. Remove under controlled SMF conditions as per the Code of Practice for the Safe Use of Synthetic Mineral Fibres [NOHSC: 2006 (1990)].	49
Internal	Centre Managers House / Laundry / Throughout Ceiling Void	Insulation Batts	SMF	754-SYDEN311850164S8	Suspected SMF	-	80 m ²	Very Low	-	Maintain in current condition if to remain in-situ. Remove under controlled SMF conditions as per the Code of Practice for the Safe Use of Synthetic Mineral Fibres [NOHSC: 2006 (1990)].	50
Internal	Reception / Ceiling Void / Flexible Ductwork	Insulation Material	SMF	754-SYDEN311850164S4	Suspected SMF	-	40 m	Very Low	-	Maintain in current condition if to remain in-situ. Remove under controlled SMF conditions as per the Code of Practice for the Safe Use of Synthetic Mineral Fibres [NOHSC: 2006 (1990)].	51
Internal	Reception / Ceiling Void / Loose Insulation	Insulation Batts	SMF	754-SYDEN311850164S5	Suspected SMF	-	8 m ²	Very Low	-	Maintain in current condition if to remain in-situ. Remove under controlled SMF conditions as per the Code of Practice for the Safe Use of Synthetic Mineral Fibres [NOHSC: 2006 (1990)].	52
Internal	Reception / Ceiling Void / Underside of Roof	Sarking Insulation	SMF	754-SYDEN311850164S3	Suspected SMF	-	80 m ²	Very Low	-	Maintain in current condition if to remain in-situ. Remove under controlled SMF conditions as per the Code of Practice for the Safe Use of Synthetic Mineral Fibres [NOHSC: 2006 (1990)].	53

Area	Location	Material Description	Hazard	Reference No.	Result	Friable	Quantity	Risk Rating	Reinspect Date	Recommendations	Line ID
Internal	Service Coordinator Residence / Ceiling Void / Underside of Roof	Sarking Insulation	SMF	754-SYDEN311850164S9	Suspected SMF	-	60 m ²	Very Low	-	Maintain in current condition if to remain in-situ. Remove under controlled SMF conditions as per the Code of Practice for the Safe Use of Synthetic Mineral Fibres [NOHSC: 2006 (1990)].	54
Internal	Stadium / Gym / Underside of Roof	Sarking Insulation	SMF	754-SYDEN311850164S10	Suspected SMF	-	240 m ²	Very Low	-	Maintain in current condition if to remain in-situ. Remove under controlled SMF conditions as per the Code of Practice for the Safe Use of Synthetic Mineral Fibres [NOHSC: 2006 (1990)].	55
Internal	Swimming Pool Change and Toilets / Free Play Ports Store / Underside of Roof	Sarking Insulation	SMF	754-SYDEN311850164S7	Suspected SMF	-	4 m ²	Very Low	-	Maintain in current condition if to remain in-situ. Remove under controlled SMF conditions as per the Code of Practice for the Safe Use of Synthetic Mineral Fibres [NOHSC: 2006 (1990)].	56

Appendix B: Laboratory Analysis Certificate

Bulk Identification Report

Job No: 754-SYDEN311850 Bulk ID Report Office of Sport Lake Ainsworth Sport & Recreation Centre 19012023
Client: Office of Sport
Client Address: Level 3, 6B Figtree Drive,
 Sydney Olympic Park NSW 2127
Contact: Matt Brown
E-mail: matt.brown@sport.nsw.gov.au
Date Sampled: 11-01-23
Date Analysed: 19-01-23
Date Authorised: 24-01-23
Sampled By: Simon Blanch
Site: Lake Ainsworth Sport & Recreation Centre



Accredited for compliance with ISO/IEC 17025 - Testing
 Accreditation No:2220
 Corporate Site No:16909

Please note: Where you have provided the samples for analysis, Tetra Tech Coffey Pty Ltd (TTC) does not take any responsibility for the quality of the such samples. This report relates exclusively to the samples analysed by Tetra Tech Coffey Pty Ltd (TTC) and as such only the samples submitted or collected for analysis have been considered in presenting these results. The data and results contained in this report are not representative of the site, product or source material as a whole. Tetra Tech Coffey Pty Ltd (TTC) does not make any warranty or representation in relation to the site, product or source material as a whole. If you suspect any material to contain asbestos, then you must immediately stop the works and activities at the site or in respect of the materials and engage Tetra Tech Coffey Pty Ltd (TTC) or another suitably trained asbestos hygienist to sample, assess or re-assess (as the case may be) the material suspected to contain asbestos.

Asbestos in Bulk Samples and Non-homogenous Material

Test Method: Tetra Tech Coffey Pty Ltd (TTC) analyses bulk samples for asbestos using polarising light microscopy and dispersion staining techniques in accordance with Coffey SOP WILAB1, and Australian Standard (AS) 4964 – 2004, Method for the qualitative identification of asbestos in bulk samples (AS 4964). The detection limit for the test method as per AS 4964 is 0.1 g/kg. For non-homogenous samples a semi-quantitative aspect is adopted for the test method and is taken into account when reporting the results. As per Tetra Tech Coffey Pty Ltd (TTC)'s NATA approved SOP WILAB1 sample retention periods are set at 1 month for all samples from the date of analysis.

Analysed At: Tetra Tech Coffey Pty Ltd (TTC) Laboratory, Level 20, Tower B, Citadel Towers 799 Pacific Highway Chatswood NSW 2067.

Total Samples: 15

Approved Identifier

Panika Wongchanda

Approved Signatory

Matthew Tang

Sample No.	Location & Description	Sample Size (~)	Results
AI09187	Internal, Lodge 14, Toilet, Ceiling Lining, Fibre Cement Sheet - White painted beige layered fibre cement sheet material	27 x 7 x 3 mm	No asbestos fibres detected Organic fibres detected
AI09188	External, Beachside Lodge, Veranda and External Walls, Fake Weatherboard Wall Lining, Fibre Cement Sheet - Beige layered fibre cement sheet material	20 x 8 x 3 mm	No asbestos fibres detected Organic fibres detected
AI09190	External, Beachside Lodge, Veranda and External Walls, Eaves, Fibre Cement Sheet - Grey painted beige layered fibre cement sheet material	56 x 27 x 6 mm	No asbestos fibres detected Organic fibres detected
AI09191	External, Services Coordinator Residence, External and Entry, Electrical Box adjacent Entry, Bituminous Backing Board - Black hardened bituminous board material	17 x 9 x 3 mm	Chrysotile (white asbestos) detected Organic fibres detected
AI09194	External, Murphy's Cottage Block, Veranda and Undercover Area, Debris to the Floor From the Eave to Rear of Kitchen, Fibre Cement Debris - Grey loose fibrous insulation material	150 x 40 x 5 mm	Chrysotile (white asbestos) detected Organic fibres detected
AI09195	Internal, Toilets North of Murph's Cottages, Toilets, Wall Lining, Fibre Cement Sheet - White painted beige layered fibre cement sheet material	22 x 7 x 3 mm	No asbestos fibres detected Organic fibres detected
AI09196	External, Toilets to the North of Murph's Cortages, Externals, To Rear of Female Toilet, Preformed Down Pipe - Beige layered fibre cement sheet material	10 x 7 x 3 mm	Chrysotile (white asbestos) detected Amosite (brown asbestos) detected
AI09200	External, Swimming Pool Toilets and Change, Toilet Entry Area, Infill Panels Above Doors, Fibre Cement Sheet - Cream painted beige layered fibre cement sheet material	20 x 13 x 4 mm	Chrysotile (white asbestos) detected Amosite (brown asbestos) detected

Sample No.	Location & Description	Sample Size (~)	Results
AI09201	External, Swimming Pool Toilets and Change, Toilet Entry Area, High Level Infill Panels Fascia, Fibre Cement Sheet - Cream painted beige hardened mastic material	50 x 11 x 3 mm	No asbestos fibres detected Organic fibres detected
AI09202	Internal, Program Coordinator Residence, Laundry, Wall Lining, Fibre Cement Sheet - Beige layered fibre cement sheet material	50 x 17 x 5 mm	Chrysotile (white asbestos) detected Organic fibres detected
AI09203	Internal, Program Coordinator Residence, Laundry, Ceiling Lining, Fibre Cement Sheet - Beige layered fibre cement sheet material	20 x 18 x 3 mm	Chrysotile (white asbestos) detected Amosite (brown asbestos) detected
AI09204	Internal, Centre Managers House, Garage, Timber Beams, Fibre Cement Sheet Debris - Beige layered fibre cement sheet material	10 x 8 x 3 mm	Chrysotile (white asbestos) detected Organic fibres detected
AI09205	Internal, Centre Managers House, Garage, Packer to Timber and Ceiling, Fibre Cement Sheet - Beige layered fibre cement sheet material	2 x 16 x 3 mm	Chrysotile (white asbestos) detected Amosite (brown asbestos) detected
AI09206	Internal, Centre Managers House, Laundry, Second Skin Ceiling Lining, Fibre Cement Sheet - Beige layered fibre cement sheet material	30 x 18 x 4 mm	Chrysotile (white asbestos) detected Organic fibres detected
AI09207	Internal, Centre Managers House, Laundry, Rope Insulation around Pipework, Woven Material - White fibrous woven rope material	95 x 3 x 3 mm	Chrysotile (white asbestos) detected

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CERTIFICATE OF ANALYSIS 314807

Client Details

Client	Tetra Tech Coffey Pty Ltd
Attention	Simon Blanch
Address	Level 19, Tower B, Citadel Tower, 799 Pacific Hwy, Chatswood, NSW, 2067

Sample Details

Your Reference	754-SYDEN311850, Office of Sport, Lake Ainsworth
Number of Samples	6 Paint
Date samples received	19/01/2023
Date completed instructions received	19/01/2023

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 27/01/2023

Date of Issue 27/01/2023

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Results Approved By

Loren Bardwell, Development Chemist

Authorised By

Nancy Zhang, Laboratory Manager

Lead in Paint						
Our Reference		314807-1	314807-2	314807-3	314807-4	314807-5
Your Reference	UNITS	A109189	A109193	A109197	A109198	A109192
Date Sampled		10/01/2023	10/01/2023	10/01/2023	10/01/2023	10/01/2023
Type of sample		Paint	Paint	Paint	Paint	Paint
Date prepared	-	27/01/2023	27/01/2023	27/01/2023	27/01/2023	27/01/2023
Date analysed	-	27/01/2023	27/01/2023	27/01/2023	27/01/2023	27/01/2023
Lead in paint	%w/w	<0.005	0.066	0.18	0.16	0.18

Lead in Paint		
Our Reference		314807-6
Your Reference	UNITS	A109199
Date Sampled		10/01/2023
Type of sample		Paint
Date prepared	-	27/01/2023
Date analysed	-	27/01/2023
Lead in paint	%w/w	0.22

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: 754-SYDEN311850, Office of Sport, Lake Ainsworth

QUALITY CONTROL: Lead in Paint							Duplicate		Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			27/01/2023	2	27/01/2023	27/01/2023		27/01/2023	[NT]
Date analysed	-			27/01/2023	2	27/01/2023	27/01/2023		27/01/2023	[NT]
Lead in paint	%w/w	0.005	Metals-020/021/022	<0.005	2	0.066	0.065	2	91	[NT]

QUALITY CONTROL: Lead in Paint							Duplicate		Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	6	27/01/2023	27/01/2023		[NT]	[NT]
Date analysed	-			[NT]	6	27/01/2023	27/01/2023		[NT]	[NT]
Lead in paint	%w/w	0.005	Metals-020/021/022	[NT]	6	0.22	0.21	5	[NT]	[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.

ASBESTOS IDENTIFICATION REPORT No. 74489

CLIENT:	Coffey Environmental	YOUR REF:	ENAU RHOD06240AA
ATTENTION:	Haysam Elhassan	RECEIVED IN LAB:	15 October 2013
PROJECT NAME:	Office of Communities	REPORT DATE:	17 October 2013
SAMPLED BY:	As-received		

Test Methods: In house method LOP-002 Asbestos Identification by Polarised Light Microscopy including Dispersion Staining (Based on AS4964-2004 Method for the qualitative identification of asbestos in bulk samples) and In house method LOP-005 Serpentine Detection and Chrysotile Non-detection by X-ray diffraction

Sample No	Dimensions	Description	Asbestos by PLM	Chrysotile by XRD	SMF	OF
AF473	10x10x9mm	Black resin board	Chrysotile			
AF474	10x10x9mm	Black resin board	Chrysotile			
AF475	10x5x5mm	Off-white cement sheet, painted white	No			Yes
AF476	10x5x5mm	Off-white cement sheet, painted white	No			Yes
AF478	10x5x5mm	Grey cement sheet, painted white	Chrysotile			
AF479	10x5x5mm	Off-white cement sheet, painted pale pink	No			Yes
AF480	50x10x5mm	Off-white putty strip, painted white	No			
AF481	30x30x5mm	White cement sheet	No			Yes
AF482	90x90x2mm	Green vinyl layer		No		
AF484	10x5x5mm	Pale pink cement sheet, painted white	No			Yes
AF485	10x5x5mm	Pale grey cement sheet, painted pale grey	No			Yes
AF486	10x5x5mm	Pale grey cement sheet, painted white	No			Yes
AF487	10x5x5mm	White micaceous fibrous layer, painted off-white	No			Yes
AF488	10x5x5mm	Black resin board	Chrysotile			
AF490	10x5x5mm	Pale pink cement sheet, painted white	No			Yes
AF492	10x2x2mm	White bundle of fibres	No		Yes	
AF494	10x5x5mm	Grey cement sheet	Chrysotile & Amosite			
AF495	10x10x9mm	Black resin board	Chrysotile			

Please note that the results contained in this report relate only to the sample(s) submitted for testing. Sample Dimensions and Descriptions are approximate only. PLM = Polarized Light Microscopy, XRD = X-ray diffraction.

Chrysotile is commonly known as white asbestos, Amosite is commonly known as brown asbestos and Crocidolite as blue asbestos. SMF (Synthetic Mineral Fibre) is commonly known as glass fibre. Organic Fibre includes natural fibres and synthetic organic fibre. A blank in the SMF or OF columns implies not detected. A blank in the PLM or XRD columns implies not tested by this method.

SOF062 NATA ID Report October 2011 Page 1 of 2

ASBESTOS IDENTIFICATION REPORT No. 74489

CLIENT: Coffey Environmental
ATTENTION: Haysam Elhassan
PROJECT NAME: Office of Communities
SAMPLED BY: As-received

YOUR REF: ENAURHOD06240AA
RECEIVED IN LAB: 15 October 2013
REPORT DATE: 17 October 2013

Sample No	Dimensions	Description	Asbestos by PLM	Chrysotile by XRD	SMF	OF
AF496	30x20x9mm	White cement board	Chrysotile			
AF497	40x40x5mm	Off-white cement sheet	No			Yes
CB4001	50x40x5mm	White cement sheet (curved)	Chrysotile & Crocidolite			
	40x40x5mm	White cement sheet (flat)	Chrysotile & Amosite			
CB4002	10x5x5mm	Grey cement sheet	Chrysotile & Amosite			
CB4003	10x5x5mm	Black resin board	Chrysotile			
CB4004	50x10x4mm	White putty strip	No			
CB4005	10x10x7mm	Black, slightly flexible lump	No			
CB4006	10x10x5mm	Grey cement sheet	Chrysotile & Amosite			
CB4007	0.5x0.5x0.2mm	White lump, painted blue	Chrysotile			
CB4008	10x5x5mm	Black resin board	Chrysotile			
CB4009	10x5x5mm	White cement sheet	Chrysotile			
CB4010	20x20x5mm	Off-white cement sheet, painted white	No			Yes

Approved Identifier (PLM) and Testing Officer (XRD) and Signatory (PLM/XRD)



Michael Till

Please note that the results contained in this report relate only to the sample(s) submitted for testing. Sample Dimensions and Descriptions are approximate only. PLM = Polarized Light Microscopy, XRD = X-ray diffraction.

Chrysotile is commonly known as white asbestos, Amosite is commonly known as brown asbestos and Crocidolite as blue asbestos. SMF (Synthetic Mineral Fibre) is commonly known as glass fibre. Organic Fibre includes natural fibres and synthetic organic fibre. A blank in the SMF or OF columns implies not detected. A blank in the PLM or XRD columns implies not tested by this method.

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Analytical Report

NSW Sport and Recreation
Job No : 070283
Client: Coffey Environments
Address: Property Services
Level 18, Citigroup Centre, 2 Park St
SYDNEY NSW 2000

Contact: Ben Miller
E-mail: Ben_Miller@coffey.com.au
Client Reference: ENVISYDN00994AA
Date Sampled: 15-16/01/2007
Date Received: 18/01/2007
Date Reported: 19/01/2007
Sampled By: P Blunt

Test Method: Qualitative identification of asbestos types in bulk samples by polarised light microscopy, including dispersion staining technique using MPL Laboratories Method WILAB 1. Accreditation does not cover the identification of Synthetic Mineral Fibres.

Approved Identifier
Kristina Soloshenko

Approved Signatory
Monika Bürger



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Analytical Report

Job No : 070283

Lab Id	External Idents	Sample Type	Dimensions	Result
070283-001	A001	Fibre Board	25x25x5mm	NAD
070283-002	A002	Fibre Board	20x10x2mm	NAD
070283-003	A003	Fibre Board	140x50x5mm	Chrys
070283-004	A004	Vinyl Tile	35x15x3mm	NAD+
070283-005	A005	Fibre Board	40x15x5mm	NAD
070283-006	A006	Fibre Board	20x10x3mm	NAD
070283-007	A007	Fibre Board	10x5x3mm	Chrys
070283-008	A008	Fibre Board	50x40x2mm	NAD
070283-009	A009	Fibre Board	60x60x2mm	NAD
070283-010	A010	Fibre Board	70x45x5mm	Chrys, Amos
070283-011	A011	Fibre Board	30x25x5mm	NAD
070283-012	A012	Fibre Board	20x20x2mm	NAD
070283-013	A013	Fibre Board	30x20x2mm	NAD
070283-014	A014	Fibre Board	40x20x5mm	Chrys
070283-015	A015	Fibre Board	30x20x3mm	NAD
070283-016	A016	Fibre Board	45x25x5mm	NAD
070283-017	A017	Fibre Board	60x40x5mm	NAD
070283-018	A018	Fibre Board	20x15x5mm	Chrys, Amos
070283-019	A019	Fibre Board	50x20x5mm	NAD
070283-020	A020	Fibre Board	25x15x5mm	Chrys

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Date Printed

23/01/2007



Analytical Report

Job No : 070283

Report Comments

Key to results on previous pages:

NAD = No Asbestos Detected

Chrys = Chrysotile Asbestos Detected

Amos = Amosite Asbestos Detected

Croc = Crocidolite Asbestos Detected

SMF = Fibres Consistent with Synthetic Mineral Fibres

UMF = Unknown Mineral Fibres Detected

FIM = Fibrous Insulation Material

EMB = Electrical Mounting Board

Result Comments

+ - No asbestos detected by polarised light microscopy including dispersion staining. Further confirmation by another independent analytical technique is advised due to the nature of the sample.

Date Printed

23/01/2007

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Analytical Report

Job No : **070283B**
Client: NSW Sport and Recreation
Address: Coffey Environments
Property Services
Level 1, 3 Rider Boulevard
RHODES NSW 2138

Contact: Ben Miller
E-mail: Ben_Miller@coffey.com.au
Fax:
Client Reference: ENVISYDN00994AA
Date Sampled: Various
Date Received: 18/01/2007
Date Reported: 24/01/2007
Sampled By: P Blunt
Location: Unspecified

Test Method: Paint samples submitted by clients are analysed on an as received basis. Analysis performed in accordance with MPL WILAB 6 and 8.

Approved Checker
Ben Carpenter

Approved Signatory
Jackie Hams



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Analytical Report

Job No : 070283B
Client Reference: ENVISYDN00994AA

Lab Id	External Idents	Pb
Units		%
LQL		0.1
070283B-001	L001	<0.1
070283B-002	L002	<0.1
070283B-003	L003	<0.1
070283B-004	L004	<0.1
070283B-005	L005	<0.1
070283B-006	L006	<0.1

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Appendix C: Photographs

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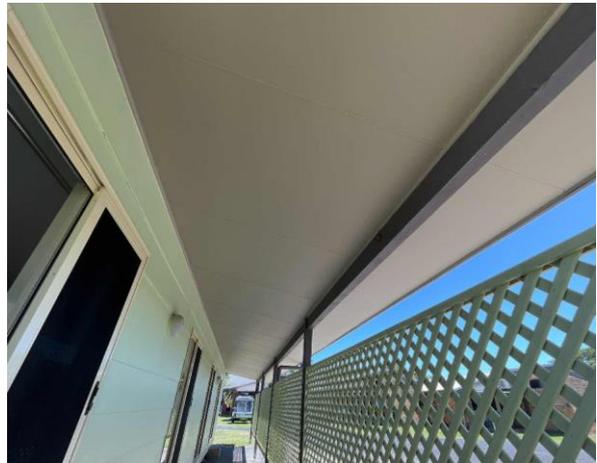
Line ID 1: External, BBQ Area, Throughout, Stored in the Centre of the Floor, Compressed Cement Sheet - No Asbestos Detected



Line ID 2: External, BBQ Area, Throughout, Wall Lining, Fibre Cement Sheet - No Asbestos Detected



Line ID 2.1: External, BBQ Area, Throughout, Wall Lining, Fibre Cement Sheet - No Asbestos Detected



Line ID 3: External, Beachside Lodge, Veranda and Walls, Eaves, Fibre Cement Sheet - No Asbestos Detected



Line ID 3.1: External, Beachside Lodge, Veranda and Walls, Eaves, Fibre Cement Sheet - No Asbestos Detected



Line ID 4: External, Beachside Lodge, Veranda and Walls, Weatherboard Wall Lining, Fibre Cement Sheet - No Asbestos Detected



Line ID 5: External, Bike Store, Veranda, Wall Lining, Fibre Cement Sheet - No Asbestos Detected



Line ID 6: External, Centre Managers Residence, Veranda, Eave Linings, Fibre Cement Sheet - Chrysotile Asbestos Detected



Line ID 6.1: External, Centre Managers Residence, Veranda, Eave Linings, Fibre Cement Sheet - Chrysotile Asbestos Detected



Line ID 7: External, Craft Area, Storage Shed, Wall Lining, Fibre Cement Sheet - No Asbestos Detected



Line ID 8: External, Gym Shed, Entrance and Covered Walkway, Eaves, Fibre Cement Sheet - Chrysotile & Amosite Asbestos Detected



Line ID 9: External, Gym Shed, Entrance and Covered Walkway, Wall Lining, Fibre Cement Sheet - No Asbestos Detected



Line ID 11: External, Lodge 14, Covered Walkway, Eaves, Fibre Cement Sheet - Chrysotile Asbestos Detected



Line ID 11.1: External, Lodge 14, Covered Walkway, Eaves, Fibre Cement Sheet - Chrysotile Asbestos Detected



Line ID 12: External, Murphy's Cottage Block, Veranda and Undercover Area, Debris to the Floor From the Eave to Rear of Kitchen, Fibre Cement Debris - Chrysotile Asbestos Detected



Line ID 12.1: External, Murphy's Cottage Block, Veranda and Undercover Area, Debris to the Floor From the Eave to Rear of Kitchen, Fibre Cement Debris - Chrysotile Asbestos Detected



Line ID 13: External, Murphy's Cottage Block, Veranda and Undercover Area, Eave Linings, Fibre Cement Sheet - Chrysotile & Amosite Asbestos Detected



Line ID 14: External, Project Coordinators Residence, Entrance Area and Surrounds, Eave Linings, Fibre Cement Sheet - Chrysotile Asbestos Detected



Line ID 15: External, Project Coordinators Residence, Entrance Area, Wall Lining and Entrance Sheeting, Fibre Cement Sheet - No Asbestos Detected



Line ID 16: External, Project Coordinators Residence, Rear Garage, Eaves, Fibre Cement Sheet - Chrysotile Asbestos Detected



Line ID 17: External, Services Coordinator Residence, Entry And Covered Walkways, Electrical Box adjacent Entry, Bituminous Backing Board - Chrysotile Asbestos Detected



Line ID 19: External, Swimming Pool Toilets and Change, Swimming Pool Plant Room, Infill Panels above Walls, Fibre Cement Sheet - No Asbestos Detected



Line ID 19.1: External, Swimming Pool Plant Room, Infill Panels above Walls, Fibre Cement Sheet - No Asbestos Detected



Line ID 20: External, Swimming Pool Toilets and Change, Toilet Entry Area, High Level Infill Panels Fascia, Fibre Cement Sheet - No Asbestos Detected



Line ID 21: External, Swimming Pool, Toilet Entry Area, Infill Panels Above Doors, Fibre Cement Sheet - Chrysotile and Amosite Asbestos Detected



Line ID 22: External, Toilets to the North of Murph's Cottages, Entrance and Surrounds, Eaves, Fibre Cement Sheet - Chrysotile & Amosite Asbestos Detected



Line ID 23: External, Toilets to the North of Murph's Cottages, Entrance and Surrounds, Rear of Female Toilet, Down Pipe, Moulded Fibre Cement - Chrysotile and Amosite Asbestos Detected



Line ID 24: Internal, Administration Building, Server Room, Safe, Internal Insulation - Suspected Asbestos



Line ID 25: Internal, Centre Managers House, Garage, Ceiling Space, Packer to Timber, Fibre Cement Sheet - Chrysotile and Amosite Asbestos Detected



Line ID 26: Internal, Centre Managers House, Garage, Timber Beams, Fibre Cement Sheet Debris - Chrysotile Asbestos Detected



Line ID 26.1: Internal, Centre Managers House, Garage, Timber Beams, Fibre Cement Sheet Debris - Chrysotile Asbestos Detected



Line ID 26.2: Internal, Centre Managers House, Garage, Timber Beams, Fibre Cement Sheet Debris - Chrysotile Asbestos Detected



Line ID 26.3: Internal, Centre Managers House, Garage, Timber Beams, Fibre Cement Sheet Debris - Chrysotile Asbestos Detected



Line ID 27: Internal, Centre Managers House, Laundry, Pipework, Rope Insulation, Woven Material - Chrysotile Asbestos Detected



Line ID 27.1: Internal, Centre Managers House, Laundry, Pipework, Rope Insulation, Woven Material - Chrysotile Asbestos Detected



Line ID 28: Internal, Centre Managers House, Laundry, Second Skin Ceiling Lining, Fibre Cement Sheet - Chrysotile Asbestos Detected



Line ID 29: Internal, Lodge 14, Toilet, Behind Ceramic Tiles to Walls, Fibre Cement Sheet - Chrysotile Asbestos Detected



Line ID 30: Internal, Lodge 14, Toilet, Ceiling Lining, Fibre Cement Sheet - No Asbestos Detected



Line ID 31: Internal, Program Coordinator Residence, Laundry, Ceiling Lining, Fibre Cement Sheet - Chrysotile and Amosite Asbestos Detected



Line ID 32: Internal, Program Coordinator Residence, Laundry and Shower, Wall Lining, Fibre Cement Sheet - Chrysotile Asbestos Detected



Line ID 33: Internal, Reception, Storeroom, Safe, Internal Insulation - Suspected Asbestos



Line ID 34: Internal, Swimming Pool Change and Toilets, Storeroom Adjacent Female Change, Ceiling Linings, Fibre Cement Sheet - No Asbestos Detected



Line ID 35: Internal, Swimming Pool Change and Toilets, Storeroom Adjacent Female Change, Wall Linings, Fibre Cement Sheet - No Asbestos Detected



Line ID 36: Internal, Swimming Pool Change and Toilets, Storeroom Adjacent Male Toilets, Ceiling Linings, Fibre Cement Sheet - No Asbestos Detected



Line ID 37: Internal, Swimming Pool Change and Toilets, Storeroom Adjacent Male Toilets, Wall Linings, Fibre Cement Sheet - No Asbestos Detected



Line ID 38: Internal, Toilets North of Murph's Cottages, Throughout, Ceiling, Fibre Cement Sheet - No Asbestos Detected



Line ID 39: Internal, Toilets North of Murph's Cottages, Throughout, Wall Lining, Fibre Cement Sheet - No Asbestos Detected



Line ID 40: External, Beachside Lodge, Veranda, Walls, Light Green Paint - Lead Detected (<0.005% w/w)



Line ID 41: External, Murphy's Cottage Block, Veranda and Undercover Area, Timber Window Frames, Cream Paint - Lead Detected (0.066% w/w)



Line ID 42: External, Project Coordinators Residence, Entrance Area and Surrounds, Eave Linings, Beige Paint - Lead Detected (0.16% w/w)



Line ID 43: External, Project Coordinators Residence, Rear Garage, Timber Window Frames, Light Brown Paint - Lead Detected (0.22% w/w)



Line ID 43.1: External, Project Coordinators Residence, Rear Garage, Timber Window Frames, Light Brown Paint - Lead Detected (0.22% w/w)



Line ID 44: External, Services Coordinator Residence, Entry And Covered Walkways, Electrical Box Adjacent Entry, Purple Paint - Lead Detected (0.18% w/w)



Line ID 45: External, Toilets to the North of Murph's Cottages, Entrance and Surrounds, Down Pipe and Walls, Beige Paint - Lead Detected (0.18% w/w)



Line ID 46: External, Beachside Lodge, Veranda and Walls, Hot Water Units, Insulation Material - Suspected SMF



Line ID 47: External, Murphy's Cottage Block, Veranda and Undercover Area, Hot Water Unit, Insulation Material - Suspected SMF



Line ID 48: External, Project Coordinators Residence, Entrance Area and Surrounds, Hot Water Unit, Insulation Material - Suspected SMF



Line ID 49: External, Swimming Pool Toilets and Change, Free Play Sports Store, Roof Adjacent the Entry, Sarking Insulation - Suspected SMF



Line ID 50: Internal, Centre Managers House, Laundry, Throughout Ceiling Void, Insulation Batts - Suspected SMF



Line ID 50.1: Internal, Centre Managers House, Laundry, Throughout Ceiling Void, Insulation Batts - Suspected SMF



Line ID 51: Internal, Reception, Ceiling Void, Flexible Ductwork, Insulation Material - Suspected SMF



Line ID 52: Internal, Reception, Ceiling Void, Loose Insulation, Insulation Batt - Suspected SMF



Line ID 53: Internal, Reception, Ceiling Void, Underside of Roof, Sarking Insulation - Suspected SMF



Line ID 54: Internal, Service Coordinator Residence, Ceiling Void, Underside of Roof, Sarking Insulation - Suspected SMF



Line ID 55: Internal, Stadium, Gym, Underside of Roof, Sarking Insulation - Suspected SMF



Line ID 56: Internal, Swimming Pool Change and Toilets, Free Play Ports Store, Underside of Roof, Sarking Insulation - Suspected SMF

Appendix D: Risk Assessment

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Risk Assessment

The risk assessment is explained, in the tables below. Our semi-quantitative risk assessment borrows elements from the materials risk assessment documented in HSG264: Asbestos: The survey guide – HSE and the priority risk assessment documented in HSG 227: A comprehensive guide to Managing Asbestos in premises – HSE, providing an element of quantification to the qualitative nature of site risk assessment.

Some of the elements of these well documented risk assessments have been omitted. Most notably the asbestos type from the materials risk assessment, as all types of asbestos are listed by the International Agency for Research on Cancer (IARC) as Type 1 Carcinogens. In addition, we have omitted the maintenance activity from HSG 277. The reason being that human risk factors associated with maintenance activities are often difficult to assess in-situ and require detailed input from the Person in Control of a Business of Undertaking (PCBU).

The risk assessment then takes into account all other Hazardous materials and utilizes similar algorithms to create a risk assessment for those materials.

The asbestos containing material risk score is a quantitative assessment determined by the sum of the scores based on the material assessment and the likelihood of exposure, i.e. Risk score = Material Score + Location Score (out of as possible 18).

An explanation of the material assessment and likelihood of exposure scores can be found in the tables below.

Table 2 - Risk Scores

Overall Risk Assessment Score	Overall Risk Rating
0 – 4	Very Low
5 – 8	Low
9 – 13	Moderate
14 – 18	High

Table 3 – Product Type (or debris)

Examples of Materials – Asbestos	Examples of Materials - Hazmat	Score
Asbestos reinforced composites (plastics, resins, mastics, roofing felts, vinyl floor tiles, semi-rigid paints or decorative finishes, asbestos cement etc.)	SMF composite products / insulation batts / woven products, Lead paint, Lead Compounds/Alloys/Products, Small PCB containing electrical capacitors	1
Asbestos insulating board, mill boards, other low-density insulation boards, asbestos textiles, gaskets, ropes and woven textiles, asbestos paper and felt	RCF woven/treated products, Lead paint flakes, Industrial PCB containing industrial transformers	2
Thermal insulation (e.g. pipe and boiler lagging), sprayed asbestos, loose asbestos, asbestos mattresses and packing	RCF loose fill products, Lead dust, PCB containing oils in bulk storage, or uncontained spills.	3

Table 4 – Extent of Damage or Deterioration

Examples of Materials – Asbestos	Examples of Materials - Hazmat	Score
Good condition: no visible damage	Good condition: no visible damage	0
Low damage: a few scratches or surface marks; broken edges on boards, tiles etc.	Low damage: a few scratches or surface marks; Peeling paint, Large paint flakes, Redundant PCB container in accessible area out of electrical product	1
Medium damage: significant breakage of materials or several small areas where material has been damaged revealing loose asbestos fibres	Medium damage: significant breakage of materials or several small areas where material has been damaged, good condition sprays and insulation, large amounts of fine flaking paint and debris, Leaking PCB containing electrical equipment	2
High damage or delamination of materials, sprays and thermal insulation. Visible asbestos debris	High damage or delamination of materials. Visible debris, Lead dust, Pooling PCB oils, leaking oil bulk containers	3

Table 5 – Surface type and treatment

Examples of Materials – Asbestos	Examples of Materials - Hazmat	Score
Composite materials containing asbestos: reinforced plastics, resins, vinyl tiles	SMF/RCF composite products, insulation products sealed behind a non-friable barrier, Lead paints <0.1%w/w, lead, compounds/ alloys/ products <0.1%w/w lead, PCB oils <2mg/kg	0
Enclosed sprays and lagging, asbestos insulating board (with exposed face painted or encapsulated), asbestos cement sheets etc.	SMF/RCF woven and insulation products, Lead paints ≥0.1%w/w and <0.25%w/w, PCB ≥2mg/kg and <50mg/kg in oil	1
Unsealed asbestos insulating board, or encapsulated lagging and sprays	SMF/RCF heat-treated insulation products, Lead paints ≥0.25%w/w and <1.0%w/w, Lead dusts above recommended clearance indicator based on AS/NZS4361.2. PCB ≥50mg/kg and <10,000mg/kg in oil	2
Unsealed laggings and sprayed asbestos	Lead dusts a multiple of at least 5 times above recommended clearance indicator based on AS/NZS4361.2, Lead paint >1.0%, ≥10,000mg/kg in oil (10%w/w)	3

² Lead and PCB refers specifically to the analysis result

Appendix E: Legislative Requirements

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Legislative Requirements

The assessment, and preparation of this report have been undertaken in accordance with the requirements of State/Territories legislation and standards outlined below.

State/Territories Relevant Legislation

States & Territories	Acts	Legislation
Australian Capital Territory (ACT)	ACT Work Health & Safety Act 2011	ACT Work Health & Safety Regulation 2011
New South Wales (NSW)	NSW Work Health & Safety Act 2011	NSW Work Health & Safety Regulation 2017
Northern Territory (NT)	NT Work Health & Safety Act 2011	NT Work Health & Safety Regulation 2017
Queensland (QLD)	QLD Work Health & Safety Act 2011	QLD Work Health & Safety Regulation 2011
South Australia (SA)	SA Work Health & Safety Act 2012	SA Work Health & Safety Regulation 2012
Tasmania (TAS)	Tasmanian Work Health & Safety Act 2012	Tasmanian Work Health & Safety Regulation 2012
Victoria (VIC)	Victorian Occupational Health and Safety Act 2004	Victorian Occupational Health and Safety Regulation 2017
Western Australia (WA)	Occupational Safety and Health Act 1984	Occupational Safety and Health Regulation 1996

States/Territories Code of Practices & Compliance Codes

States & Territories	Codes of Practices & Compliance Codes	
Australian Capital Territory (ACT)	Code of Practice: How to Manage and Control Asbestos in the Workplace.	Code of Practice: How to Safely Remove Asbestos.
New South Wales (NSW)	Code of Practice: How to Manage and Control Asbestos in the Workplace.	Code of Practice: How to Safely Remove Asbestos.
Northern Territory (NT)	Code of Practice: How to Manage and Control Asbestos in the Workplace.	Code of Practice: How to Safely Remove Asbestos.
Queensland (QLD)	Code of Practice: How to Manage and Control Asbestos in the Workplace.	Code of Practice: How to Safely Remove Asbestos.
South Australia (SA)	Code of Practice: How to manage and Control asbestos in the Workplace.	Code of Practice: How to Safely Remove Asbestos.
Tasmania (TAS)	Code of Practice: How to Manage and Control Asbestos in the Workplace.	Code of Practice: How to Safely Remove Asbestos.
Victoria (VIC)	Compliance Code: Managing Asbestos in Workplaces.	Compliance Code: Removing Asbestos in Workplaces.

Western Australia (WA)	Code of Practice for Management and Control of Asbestos in Workplaces [NOHSC:2018(2005)].	Code of Practice for the Safe Removal of Asbestos [NOHSC:2002(2005)]
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The Victorian Compliance Codes align with the intent of the SafeWork Australia Model Code of Practice

Hazardous Materials Standard & Guidance Notes

Hazardous Material	Guidance Notes
Lead Based Paint	AS/NZS 4361.2:2017 Guide to hazardous paint management – Part 2: Lead paint in residential, public and commercial buildings
Lead Containing Dust	National Environmental Protection Measure (NEPM) (NEPC,1999) as updated in 2013.
Synthetic Mineral Fibres	National Occupational Health and Safety Commission (1990) Synthetic Mineral Fibres; National Standard for Synthetic Mineral Fibres; and the National Code of Practice for the Safe Use of Synthetic Mineral Fibres
Polychlorinated Biphenyls	ANZECC (1997) Identification of PCB-containing Capacitors: An Information Booklet for Electricians and Electrical Contractors
Ozone Depleting Substances	UNEP (2001) Inventory of Trade Names of Chemical Products containing Ozone Depleting Substances and their Alternatives

Each section is to be read in conjunction with the whole of this report, including the appendices.

Appendix F: Methodology

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Methodology

Hazmat surveys are undertaken considering a risk management approach, in accordance with relevant statutory regulations and relevant Codes of Practice. A risk assessment was conducted based on a number of factors associated with hazmat identified during the survey and prioritised through Risk and Action Classifications.

The assessment involved the onsite investigation for the presence of ACM, LBP systems, LCD, SMF, PCB and ODS including chlorofluorocarbons (CFCs), hydrochlorofluorocarbons (HCFCs) and hydrofluorocarbons (HFCs). Information was collected from the site owners/occupiers/tenants where available on relevant issues pertaining to the site. Based on the available data and the status at the time of inspection, where items were identified, visual and/or analytical characterisation (where required) was performed and reported in **Appendix A: Asbestos and Hazardous Materials Register**.

The assessment was conducted on the basis of the condition, type and location of the materials at the time of inspection. The scope of this investigation did not allow intrusive sampling techniques to be undertaken in all locations, and consequently the register may have limitations as a reference document for the purposes of renovation or demolition.

Only 'typical' suspected material occurrences are inspected and sampled. Sampling is undertaken on a representative basis, for example, the inspection of one fire door of the same type within the same area is undertaken (i.e. not every 'matching' fire door is examined), unless specifically instructed. Sample collection was performed in a non-destructive and non-invasive manner by competent persons. Presumptions, based on knowledge and experience, that inaccessible areas contain asbestos materials may also be made and stated within the register.

Samples collected are representative of the material sampled, individually identified, transported, analysed and reported in accordance with relevant Statutory Regulations, Codes of Practice and Tetra Tech's Work Instructions. Laboratories undertaking analysis are appropriately NATA certified for the analysis conducted. LCD thresholds are adopted from lead in soil thresholds found in the National Environment Protection Assessment of Site Contamination (ASC) Measure (1999) as amended in 2013 (NEPM).

The presence of asbestos in bulk samples is determined by Polarised Light Microscopy (PLM) with dispersion staining techniques. Where asbestos was found to exist, a risk assessment was conducted on each item and a priority rating applied. This was conducted in accordance with the protocols described in **Appendix D: Risk Assessment**.

The asbestos and hazmat register is made up of relevant information gathered on site plus Tetra Tech's assessment of risk and assignment of action ratings. Reference to photographs, where available, is made in the register along with sample identification and analysis results, where applicable. Sample analysis results from previous assessments may be utilised and referenced in this register.

Appendix G: Statement of Limitations

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Statement of Limitations

The survey inspection conducted was not a destructive pre demolition/ refurbishment survey. A destructive hazardous building material survey must be carried out prior to any demolition or refurbishment works.

Tetra Tech has conducted work concerning the environmental status of the property which is the subject of this report and has prepared this report on the basis of that assessment.

The work was conducted, and the report has been prepared, in response to specific instructions from the client to whom this report is addressed, within the time and budgetary requirements of the client, and in reliance on certain data and information made available to Tetra Tech. The analyses, evaluations, opinions and conclusions presented in this report are based on those instructions, requirements, data or information, and they could change if such instructions etc. are in fact inaccurate or incomplete.

Investigations have been based on inspections conducted in accordance with relevant guidelines and standards, and normal industry practice, having regard to the client's instruction, and interpretations of conditions are based on the data from those inspections and, where relevant and conducted, testing. To the best of our knowledge, they represent a reasonable interpretation of the condition of the site as able to be inspected.

This report has been provided by Tetra Tech for the sole use of the client and only for the purpose for which it was prepared. Any representation contained in the report is made only for the client.

No inspection can be guaranteed to locate all asbestos in a specific location. The assessment cannot be regarded as absolute, without extensive invasion of structures. Future demolition and or renovation to site structures may expose situations, which were concealed or otherwise impractical to access during this assessment.

The assessment brief is to identify every reasonably accessible hazmat. Reasonably accessible does not extend to searching for concealed hazmat beneath concrete encased structural beams or beneath concrete floors, behind another hazmat, or any other locations which, to access, would cause structural damage that could potentially destabilise the structure or the building. Given the way in which hazmat was used in the construction of buildings, some may only be detected during the course of subsequent demolition.

Any areas within the remit of the assessment but not described within the body of the report or in the hazmat register should be regarded by the client as un-assessed, and suspected as ACM potentially containing amphibole asbestos. A competent person should assess such areas before any work affecting them is carried out.

It must be assumed that materials visually assessed as presumed asbestos contain amphibole asbestos, unless sampled and analysed to prove otherwise. All areas where access was not possible must also be presumed to contain asbestos until proven otherwise.

Asbestos Containing Materials

Tetra Tech assessors take samples at any situations known, or suspected, to contain Asbestos. Where the analysis determines that No Asbestos is Detected (NAD) the samples are listed in the report to provide information for potential future assessments.

Representative sampling is defined as one like sample per consistent material type, situation or item. In these instances, only one test sample will be collected for analytical confirmation and the results expressed as consistent and typical of the building. It is advisable to presume that materials similar to those positively identified as asbestos also contain asbestos until proved otherwise. It should not be presumed that materials similar in appearance to those tested and found not to contain asbestos also do not contain asbestos.

Due to the very low concentration of asbestos fibres and the non-homogenous matrix of vinyl floor tiles, false negative results may be obtained. Therefore, the accuracy of all results cannot be guaranteed.

Notably, with some asbestos-containing bulk material it can be very difficult, or impossible to detect the presence of asbestos using the polarised light microscopy analytical method, even after ashing or disintegration of samples. This is due to the low grade or small length or diameter of asbestos fibres present in the material, or attributed to the fact that, very fine fibres have been distributed individually throughout the materials.

The analysis of many asbestos products used as a component of insulation materials, may be compromised in instances where the material has been heat affected, as heat may alter the morphology of the fibrous material.

Internal building materials should be assumed to contain asbestos until otherwise assessed.

Subsurface drains and pipes may be constructed of asbestos cement, but this could not be assessed. Any subsurface pipes, particularly those constructed of fibre-cement or concrete, should be assumed to contain asbestos until otherwise assessed.

It is also noted that sub-surface conditions can change with time, and the report is based on data that was gathered at the time of the report. Tetra Tech will not update the report and has not taken into account events occurring after the time the assessment was conducted.

The following limitations and restrictions to specific materials, installations and locations are commonly found during assessments of this nature, even if safe access can be provided through consultation with the client this inspection and report may not include the following areas:

- **Risers / Ceiling, Floor or Wall Cavities, and Voids** - may be completely blocked or bricked in. Occasionally may only be detected if shown on building construction plans or during demolition
- **Columns / Structural Elements** - these will not be penetrated if doing so will damage the stability of the building
- **Roofs / External Areas** - these will not be checked if safe access cannot be achieved
- **Confined Spaces** - these will not be checked if safe access cannot be achieved
- **Restricted Access** - areas subject to restricted access will not be checked unless special arrangements have been made through the client within the remit of the assessment
- **Live Plant or Electrical Installations** - live electrical installations including fuse boxes, electrical control cabinets, distribution panels etc. are not routinely checked for safety reasons. Electrical equipment will only be examined if it is locked off and an isolation certificate has been issued. Under exceptional circumstances, when arranged by the client, examination of non-isolated equipment may take place under the supervision of an electrician
- **Live Refrigerators / Cold Rooms / Mechanical Equipment / Heater Units / Kilns** - may contain asbestos internally, which is not visible or accessible until the unit is isolated and dismantled

The Client must not rely on an inspection or report as indicating that a site or a building is "asbestos free". All that the report can be relied upon to show is that no asbestos was found (or that only such asbestos was found as was reported to be found) in the course of the inspection. The findings of the report must be considered together with the specific scope and limitations of the type of inspection undertaken.

This report does not comment on, or present information regarding regulatory waste disposal practices and the associated waste disposal legislative requirements for hazardous materials. Prior to the disposal of any hazardous materials from site, clarification from the EPA should be sought by you, the client or the controller of the site (PCBU).

As part of the site inspection, materials may be suspected to be non-hazardous based on age and/or appearance. If any of these materials are damaged or likely to be disturbed, due to (but not limited to) maintenance activities or building inspections, a risk assessment and sampling of this material, with analytical confirmation should be undertaken in conjunction with the processes outlined in the Asbestos Management Plan (AMP) for the site.

Materials including (but not limited to) e.g. fire retardants, vermiculite, sprayed coatings and insulations cannot be feasibly sampled in their entirety due to the heterogeneous nature of such materials. Sample results provided are only representative of the material sampled, and in that particular sample location.

If any such materials are damaged or likely to be disturbed, due to (but not limited to) maintenance activities or building inspections, a risk assessment and targeted area sampling, with analytical confirmation should be undertaken in conjunction with the processes outlined in the Asbestos Management Plan (AMP) for the site.

Should any other material suspected to contain asbestos or hazmat be found at the site, then works should cease and a suitably trained asbestos hygienist should be engaged to sample or assess the material.