

**Office of Sport**

**Asbestos and Hazardous Materials Reinspection Assessment**

Sydney International Shooting Centre

Range Road

Cecil Park NSW 2178

28/03/2023



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# Asbestos and Hazardous Materials Reinspection Assessment

Prepared for

Office of Sport

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Report Date: 28/03/2023

754-SYDEN311850 - Sydney International Shooting Centre - HMRR - 06032023

## Quality Information

### Revision History

Revision	Description	Date	Originator	Reviewer	Approver
R01	Final	28/03/2023	Steph Hall	Ben McCann	Ben McCann

### Distribution

Report Status	No. of copies	Format	Distributed to	Date
R01	1	PDF	Office of Sport	28/03/2023

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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 Sydney International Shooting Centre located at Range Road, Cecil Park NSW 2178 (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					
Sydney International Shooting 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 Sydney International Shooting Centre located at Range Road, Cecil Park NSW 2178 (the Site). Steph Hall and Phoebe Quessy of Tetra Tech conducted the assessment on the 06/03/2023.

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 Sydney International Shooting Centre located at Range Road, Cecil Park NSW 2178 (the site).

Table 1: Site Information	
Site:	Sydney International Shooting Centre, Range Road, Cecil Park NSW 2178
Age (Circa):	1990
Site Description:	Shooting 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
External / Michael Diamond Building / Throughout / Ductwork, Electrical Distribution Heater	Millboard Insulation	Medium

### 2.1.2. Lead Based Paint

No suspect lead based paint identified at the time of the assessment.

### 2.1.3. Lead Containing Dust

Location	Material Description	Risk Rating
Internal / Michael Diamond Building / Level 3 / East Service Riser next to Male Toilets	Dust	Medium
Internal / Michael Diamond Building / Philip Adams Range / 10m Range / Shooting Area, Floor	Dust	Low

### 2.1.4. Synthetic Mineral Fibres

Location	Material Description	Risk Rating
Internal / Maintenance Shed / Cage Area / Hot Water Heater	Insulation Material	Very Low
Internal / Michael Diamond Building / Level 2 Fire Hydrant Room / Diesel Fire Pump Pipework	Insulation Material	Very Low
Internal / Michael Diamond Building / Level 3 Canteen / Above Sink, Hot Water Heater	Insulation Material	Very Low
Internal / Michael Diamond Building / Level 3 Canteen / Under Sink, Hot Water Heater	Insulation Material	Very Low
Internal / Michael Diamond Building / Throughout / Air Conditioning Ductwork	Internal Insulation	Very Low
Internal / Michael Diamond Building / Throughout / Ceiling	Sarking Insulation	Very Low
Internal / Michael Diamond Building / Throughout / Ceiling Above Tiles	Insulation Material	Very Low

Internal / Michael Diamond Building / Throughout / Penetrations	Pillow Insulation	Very Low
Internal / Residence / Kitchen / Floor Covering	Timber Look Vinyl Sheet	Very Low
Internal / Russel Mark Control Room / Kitchen / Above Sink, Hot Water Boiler	Internal 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

Location	Material Description	Risk Rating
External / Michael Diamond Building / West Side / SunDowner AC Unit	Unknown Refrigerant	Very Low

### 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
- External, Michael Diamond Building, kiosk substation - live electricity.

### 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 Containing Dust**

- Any work processes involving lead containing dust must be undertaken in a manner to ensure that no worker is exposed to lead at concentrations above the workplace exposure standard (WES) of 0.05mg/m<sup>3</sup> over an eight-hour day.
- Prior to any disturbance of lead containing dust a comprehensive risk assessment is to be conducted.
- Lead containing dust removal works should include the use of high efficiency particulate air (HEPA) filtered vacuum cleaners and wet wiping techniques by a licensed contractor under controlled lead-containing dust conditions in conjunction with air monitoring and clearances by a competent hygienist.

## **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. Ozone Depleting Substances**

- Removal of refrigerants should be undertaken prior to any future demolition, partial demolition, renovation or refurbishment, where ODS's are likely to be disturbed. A licensed contractor who will recycle and reuse the refrigerant should decommission CFC and HCFC based equipment that is being disposed of in accordance with Association of Fluorocarbon Consumers and Manufacturers, The Australian Refrigeration and Air Conditioning Code of Good Practice – 1992 and the Australian Commonwealth Government Ozone Protection Act – 1989.

## **3.5. 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	Michael Diamond Building / Throughout / Ductwork, Electrical Distribution Heater	Millboard Insulation	Asbestos	754-SYDEN311850 Shooting Centre168A2	Suspected Asbestos	Friable	Throughout	Medium	As soon as practicable	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.	1
External	Michael Diamond Building / Throughout / Walls, Expansion Joints	Mastic	Asbestos	A24677	No Asbestos Detected	-	200 m	-	-	-	2
External	Residence / Throughout / House and Garage, Eaves	Fibre Cement Sheet	Asbestos	A24688	No Asbestos Detected	-	20 m	-	-	-	3
External	Russell Mark Control Room / West Side / High Russell Mark Control Room Boxing	Fibre Cement Sheet	Asbestos	A24689	No Asbestos Detected	-	1 m <sup>2</sup>	-	-	-	4
Internal	Maintenance Shed / Bathroom / Walls	Fibre Cement Sheet	Asbestos	A24693	No Asbestos Detected	-	5 m <sup>2</sup>	-	-	-	5
Internal	Michael Diamond Building / Level 1 / Bathrooms, Boxing to Ventilation System	Fibre Cement Sheet	Asbestos	A24683	No Asbestos Detected	-	50 m <sup>2</sup>	-	-	-	6

Area	Location	Material Description	Hazard	Reference No.	Result	Friable	Quantity	Risk Rating	Reinspect Date	Recommendations	Line ID
Internal	Michael Diamond Building / Level 1 / Toilets, Partition Walls	Fibre Cement Sheeting	Asbestos	A24681	No Asbestos Detected	-	6 m <sup>2</sup>	-	-	Sampled in the western female toilets.	7
Internal	Michael Diamond Building / Level 1 / Walls Behind Toilets	Fibre Cement Sheet	Asbestos	A24682	No Asbestos Detected	-	6 m <sup>2</sup>	-	-	-	8
Internal	Michael Diamond Building / Level 2 / Bathrooms, Boxing to Ventilation System	Fibre Cement Sheet	Asbestos	A24683.1	No Asbestos Detected	-	50 m <sup>2</sup>	-	-	-	9
Internal	Michael Diamond Building / Level 2 / Toilets, Partition Walls	Fibre Cement Sheeting	Asbestos	A24681.1	No Asbestos Detected	-	6 m <sup>2</sup>	-	-	Sampled in the western female toilets.	10
Internal	Michael Diamond Building / Level 2 / Walls Behind Toilets	Fibre Cement Sheet	Asbestos	A24682.1	No Asbestos Detected	-	6 m <sup>2</sup>	-	-	-	11
Internal	Michael Diamond Building / Level 3 Canteen / Walls	Fibre Cement Sheet	Asbestos	A25685	No Asbestos Detected	-	20 m <sup>2</sup>	-	-	-	12
Internal	Michael Diamond Building / Percy Pavey Range / First Aid Office, Floor Covering	White Vinyl Sheet	Asbestos	A24678	No Asbestos Detected	-	8 m <sup>2</sup>	-	-	-	13

Area	Location	Material Description	Hazard	Reference No.	Result	Friable	Quantity	Risk Rating	Reinspect Date	Recommendations	Line ID
Internal	Michael Diamond Building / Percy Pavey Range / First Aid Office, Skirting Board	Black Vinyl	Asbestos	A24679	No Asbestos Detected	-	10 m	-	-	-	14
Internal	Michael Diamond Building / Throughout / Fire Door	Fire Door Core	Asbestos	A24684	No Asbestos Detected	-	10 Units	-	-	Sampled in the west side switch room.	15
Internal	Michael Diamond Building / Throughout / Fire Stopping to Ventilation System	Millboard Insulation	Asbestos	A24680	No Asbestos Detected	-	Throughout	-	-	-	16
Internal	Residence / Bathrooms / Walls	Fibre Cement Sheet	Asbestos	A26487	No Asbestos Detected	-	8 m <sup>2</sup>	-	-	-	17
Internal	Residence / Kitchen / Floor Covering	Timber Look Vinyl Sheet	Asbestos	A24686	No Asbestos Detected	-	5 m <sup>2</sup>	-	-	-	18
Internal	Russel Mark Control Room / Bathrooms / Cubicle Partition Walls	Compressed Cement Sheet	Asbestos	A24691	No Asbestos Detected	-	20 m <sup>2</sup>	-	-	-	19



Area	Location	Material Description	Hazard	Reference No.	Result	Friable	Quantity	Risk Rating	Reinspect Date	Recommendations	Line ID
Internal	Russel Mark Control Room / Bathrooms / Male and Disabled Toilet, Wall Panels	Fibre Cement Sheet	Asbestos	A24690	No Asbestos Detected	-	12 m <sup>2</sup>	-	-	-	20
Internal	Russel Mark Control Room / Bathrooms / Office and Kitchen, Skirting	Black Vinyl Skirting	Asbestos	A24692	No Asbestos Detected	-	10 m	-	-	-	21
External	Michael Diamond Building / Throughout / Metal Beams	Grey (Light) Paint	Lead Paint	L16218	Lead Detected (<0.005% w/w)	-	1000 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.	22
External	Michael Diamond Building / Throughout / Walls	Grey (Light) Paint	Lead Paint	L16219	Lead Detected (0.009% w/w)	-	500 m <sup>2</sup>	-	-	<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.	23
External	Residence / Throughout / Handrails and Columns	Green Paint	Lead Paint	L16222	Lead Detected (0.02% w/w)	-	50 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.	24
External	Russell Mark Control Room / Throughout / Walls	Grey Paint	Lead Paint	L16223	Lead Detected (0.007% w/w)	-	100 m <sup>2</sup>	-	-	<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.	25

Area	Location	Material Description	Hazard	Reference No.	Result	Friable	Quantity	Risk Rating	Reinspect Date	Recommendations	Line ID
Internal	Russel Mark Control Room / Bathrooms / High Russel Mark Control Room Boxing	White Paint	Lead Paint	L16224	Lead Detected (<0.005% w/w)	-	10 m <sup>2</sup>	-	-	<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.	26
Internal	Michael Diamond Building / Level 3 / East Service Riser next to Male Toilets	Dust	Lead Dust	L16221	Lead Detected (4,800 mg/kg)	-	1 m <sup>2</sup>	Medium	-	>1,500 mg/kg for industrial or commercial sites based on the soil contamination criteria of the National Environment Protection Measure 1999. Implement intermediate control measures. Conduct a risk assessment to determine the level of remediation controls required prior to any activities including refurbishment or demolition that may disturb the dust.	27
Internal	Michael Diamond Building / Philip Adams Range 10m Range / Shooting Area, Floor	Dust	Lead Dust	L16220	Lead Detected (410 mg/kg)	-	100 m <sup>2</sup>	Low	-	<1,500 mg/kg for industrial or commercial sites based on the soil contamination criteria of the National Environment Protection Measure 1999. Manage in-situ, conduct a risk assessment to determine the level of remediation controls required prior to any activities including refurbishment or demolition that may disturb the dust.	28
Internal	Maintenance Shed / Cage Area / Hot Water Heater	Insulation Material	SMF	754- SYDEN311850 Shooting Centre168S9	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)].	29

Area	Location	Material Description	Hazard	Reference No.	Result	Friable	Quantity	Risk Rating	Reinspect Date	Recommendations	Line ID
Internal	Michael Diamond Building / Level 2 Fire Hydrant Room / Diesel Fire Pump Pipework	Insulation Material	SMF	754-SYDEN311850 Shooting Centre168S3	Suspected SMF	-	10 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)].	30
Internal	Michael Diamond Building / Level 3 Canteen / Above Sink, Hot Water Heater	Insulation Material	SMF	754-SYDEN311850 Shooting Centre168S6	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)].	31
Internal	Michael Diamond Building / Level 3 Canteen / Under Sink, Hot Water Heater	Insulation Material	SMF	754-SYDEN311850 Shooting Centre168S7	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)].	32
Internal	Michael Diamond Building / Throughout / Air Conditioning Ductwork	Internal Insulation	SMF	754-SYDEN311850 Shooting Centre168S5	Suspected SMF	-	1000 m <sup>2</sup>	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)].	33
Internal	Michael Diamond Building / Throughout / Ceiling	Sarking Insulation	SMF	754-SYDEN311850 Shooting Centre168S4	Suspected SMF	-	1000 m <sup>2</sup>	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)].	34

Area	Location	Material Description	Hazard	Reference No.	Result	Friable	Quantity	Risk Rating	Reinspect Date	Recommendations	Line ID
Internal	Michael Diamond Building / Throughout / Ceiling Above Tiles	Insulation Material	SMF	754-SYDEN311850 Shooting Centre168S1	Suspected SMF	-	10000 m <sup>2</sup>	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)].	35
Internal	Michael Diamond Building / Throughout / Penetrations	Pillow Insulation	SMF	754-SYDEN311850 Shooting Centre168S2	Suspected SMF	-	1 m <sup>2</sup>	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)].	36
Internal	Residence / Kitchen / Floor Covering	Timber Look Vinyl Sheet	SMF	A24686.1	SMF Detected	-	5 m <sup>2</sup>	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)].	37
Internal	Russel Mark Control Room / Kitchen / Above Sink, Hot Water Boiler	Internal Insulation	SMF	754-SYDEN311850 Shooting Centre168S8	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)].	38
External	Michael Diamond Building / North Side / Daikin AC Unit	R410A Hydrofluorocarbon (HFC)	ODS	754-SYDEN311850 Shooting Centre168O5	Non ODS Refrigerant	-	1 Unit	-	-	Hydrofluorocarbon (HFC) non ozone depleting substances.	39

Area	Location	Material Description	Hazard	Reference No.	Result	Friable	Quantity	Risk Rating	Reinspect Date	Recommendations	Line ID
External	Michael Diamond Building / North Side / Hitachi AC Units	R407C Refrigerant	ODS	754-SYDEN311850 Shooting Centre168O4	Non ODS Refrigerant	-	3 Units	-	-	Hydrofluorocarbon (HFC) non ozone depleting substances.	40
External	Michael Diamond Building / West Side / Hitachi AC Units	R407C Refrigerant	ODS	754-SYDEN311850 Shooting Centre168O3	Non ODS Refrigerant	-	2 Units	-	-	Hydrofluorocarbon (HFC) non ozone depleting substances.	41
External	Michael Diamond Building / West Side / on Wall, Panasonic AC Unit	R410A Hydrofluorocarbon (HFC)	ODS	754-SYDEN311850 Shooting Centre168O1	Non ODS Refrigerant	-	1 Unit	-	-	Hydrofluorocarbon (HFC) non ozone depleting substances.	42
External	Michael Diamond Building / West Side / SunDowner AC Unit	Unknown Refrigerant	ODS	754-SYDEN311850 Shooting Centre168O2	Suspected ODS	-	1 Unit	Very Low	-	No data was visible at the time of the assessment. Confirm status of suspected ozone depleting substances identified in the assessment.	43
External	Residence / North East Side / Daikin AC Unit	R410A Hydrofluorocarbon (HFC)	ODS	754-SYDEN311850 Shooting Centre168O7	Non ODS Refrigerant	-	1 Unit	-	-	Hydrofluorocarbon (HFC) non ozone depleting substances.	44

Area	Location	Material Description	Hazard	Reference No.	Result	Friable	Quantity	Risk Rating	Reinspect Date	Recommendations	Line ID
Internal	Michael Diamond Building / Level 3 / Above Offices	R410A Hydrofluorocarbon (HFC)	ODS	754-SYDEN311850 Shooting Centre168O6	Non ODS Refrigerant	-	2 Units	-	-	Hydrofluorocarbon (HFC) non ozone depleting substances.	45
External	Michael Diamond Building / Kiosk Substation	-	No Access	754-SYDEN311850 Shooting CentreNA1	-	-	-	-	-	Live electricity. No or limited access potential hazardous materials present within inaccessible areas	46
Internal	Clubhouse and Toilets / Club House and Toilet	-		-	-	-	-	-	-	New build 2020	47

## **Appendix B: Laboratory Analysis Certificate**

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## Bulk Identification Report

**Job No:** 754-SYDEN311850 Bulk ID Report Office of Sport Sydney International Shooting Range 08032023  
**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](mailto:matt.brown@sport.nsw.gov.au)  
**Date Sampled:** 6-7/03/2023  
**Date Analysed:** 08-03-23  
**Date Authorised:** 08-03-23  
**Sampled By:** Steph Hall & Phoebe Quessy  
**Site:** Sydney International Shooting Range



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 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 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 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 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 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'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 Laboratory, Level 20, Tower B, Citadel Towers 799 Pacific Highway Chatswood NSW 2067

**Total Samples:** 17

**Approved Identifier**  
 Panika Wongchanda & Matthew Tang

**Approved Signatory**  
 Matthew Tang

Sample No.	Location & Description	Sample Size (~)	Results
A24677	External, Michael Diamond Building, Throughout, Walls, Mastic - Grey painted white rubbery mastic material	25 x 21 x 3 mm	No asbestos fibres detected
A24678	Internal, Micheal Diamond Building, Percy Pavey Range, Floor Covering in First Aid Office, Vinyl Sheet - Grey vinyl sheet & amber adhesive	28 x 19 x 3 mm	No asbestos fibres detected
A24679	Internal, Micheal Diamond Building, Percy Pavey Range, Skirting Board in First Aid Office, Black Vinyl - Black vinyl sheet & amber adhesive	34 x 16 x 2 mm	No asbestos fibres detected
A24680	Internal, Micheal Diamond Building, Throughout, Fire Stopping to Ventilation System, Millboard Insulation - Beige powdery mica vermiculite material	20 x 17 x 3 mm	No asbestos fibres detected Organic fibres detected
A24681	Internal, Micheal Diamond Building, Level 1, Partition Walls to Toilets, Fibre Cement Sheeting - Grey painted beige layered fibre cement sheet material	11 x 10 x 2 mm	No asbestos fibres detected Organic fibres detected
A24682	Internal, Micheal Diamond Building, Level 1, Walls Behind Toilets, Fibre Cement Sheet - Grey painted beige layered fibre cement sheet material	28 x 21 x 4 mm	No asbestos fibres detected Organic fibres detected
A24683	Internal, Micheal Diamond Building, Level 1, Boxing to Ventilation System Throughout Bathrooms, Fibre Cement Sheet - White painted beige layered fibre cement sheet material	18 x 17 x 3 mm	No asbestos fibres detected Organic fibres detected
A24684	Internal, Micheal Diamond Building, Throughout, Fire Doors, Fire Door Core - Beige powdery mica vermiculite material	27 x 22 x 3 mm	No asbestos fibres detected Organic fibres detected
A24685	Internal, Micheal Diamond Building, Level 3 Canteen, Walls, Fibre Cement Sheet - White painted beige layered fibre cement sheet material	30 x 21 x 3 mm	No asbestos fibres detected Organic fibres detected
A24686	Internal, Residence, Kitchen, Floor Covering, Timber Look Vinyl Sheet - White vitreous vinyl sheet & amber adhesive	81 x 15 x 3 mm	No asbestos fibres detected Synthetic mineral fibres detected

Sample No.	Location & Description	Sample Size (-)	Results
A24687	Internal, Residence, Bathrooms, Walls, Fibre Cement Sheet - Beige layered fibre cement sheet material	16 x 15 x 2 mm	No asbestos fibres detected Organic fibres detected
A24688	External, Residence, Throughout, Eaves to House and Garage, Fibre Cement Sheet - White painted beige layered fibre cement sheet material	16 x 15 x 3 mm	No asbestos fibres detected Organic fibres detected
A24689	External, Russell Mark Control Room, West Side, High Level Boxing, Fibre Cement Sheet - Peach layered fibre cement sheet material	17 x 16 x 4 mm	No asbestos fibres detected Organic fibres detected
A24690	Internal, Russel Mark Control Room, Bathrooms, Wall Panels in Male and Disabled Toilet, Fibre Cement Sheet - Grey painted peach layered fibre cement sheet material	15 x 13 x 4 mm	No asbestos fibres detected Organic fibres detected
A24691	Internal, Russel Mark Control Room, Bathrooms, Cubicle Partition Walls, Compressed Cement Sheet - Beige layered fibre cement sheet material	11 x 8 x 3 mm	No asbestos fibres detected Organic fibres detected
A24692	Internal, Russel Mark Control Room, Bathrooms, Skirting in Office and Kitchen, Black Vinyl Skirting - Grey vinyl sheet & amber adhesive	21 x 19 x 3 mm	No asbestos fibres detected
A24693	Internal, Maintenance Shed, Bathroom, Walls, Fibre Cement Sheet - Beige fibrous mica vermiculite sheet material	27 x 20 x 2 mm	No asbestos fibres detected Organic fibres detected

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## CERTIFICATE OF ANALYSIS 318301

### Client Details

<b>Client</b>	Tetra Tech Coffey Pty Ltd
<b>Attention</b>	Steph Hall
<b>Address</b>	Level 19, Tower B, Citadel Tower, 799 Pacific Hwy, Chatswood, NSW, 2067

### Sample Details

<b>Your Reference</b>	<b><u>754-SYDEN311850,OOS, Shooting Centre</u></b>
<b>Number of Samples</b>	5 Paint, 2 Dust
<b>Date samples received</b>	09/03/2023
<b>Date completed instructions received</b>	09/03/2023

### 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** 17/03/2023

**Date of Issue** 17/03/2023

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

Loren Bardwell, Development Chemist

#### Authorised By

Nancy Zhang, Laboratory Manager

Lead in Paint						
Our Reference		318301-1	318301-2	318301-5	318301-6	318301-7
Your Reference	UNITS	L16218	L16219	L16222	L16223	L16224
Date Sampled		06/03/23	06/03/23	06/03/23	06/03/23	06/03/23
Type of sample		Paint	Paint	Paint	Paint	Paint
Date prepared	-	15/03/2023	15/03/2023	15/03/2023	15/03/2023	15/03/2023
Date analysed	-	16/03/2023	16/03/2023	16/03/2023	16/03/2023	16/03/2023
Lead in paint	%w/w	<0.005	0.009	0.02	0.007	<0.005

Lead (dust)			
Our Reference		318301-3	318301-4
Your Reference	UNITS	L16220	L16221
Date Sampled		06/03/23	06/03/23
Type of sample		Dust	Dust
Date prepared	-	13/03/2023	13/03/2023
Date analysed	-	13/03/2023	13/03/2023
Lead	mg/kg	410	4,800

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

Client Reference: 754-SYDEN311850,OOS, Shooting Centre

QUALITY CONTROL: Lead in Paint					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			15/03/2023	2	15/03/2023	15/03/2023		15/03/2023	[NT]
Date analysed	-			16/03/2023	2	16/03/2023	16/03/2023		16/03/2023	[NT]
Lead in paint	%w/w	0.005	Metals-020/021/022	<0.005	2	0.009	0.007	25	113	[NT]

Client Reference: 754-SYDEN311850,OOS, Shooting Centre

QUALITY CONTROL: Lead (dust)				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			13/03/2023	[NT]	[NT]	[NT]	[NT]	13/03/2023	[NT]
Date analysed	-			13/03/2023	[NT]	[NT]	[NT]	[NT]	13/03/2023	[NT]
Lead	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	123	[NT]



**Result Definitions**

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

## Quality Control Definitions

<b>Blank</b>	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.
<b>Duplicate</b>	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.
<b>Matrix Spike</b>	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.
<b>LCS (Laboratory Control Sample)</b>	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.
<b>Surrogate Spike</b>	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: Photographs**

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Line ID 1: External, Michael Diamond Building, Throughout, Ductwork, Electrical Distribution Heater, Millboard Insulation - Suspected Asbestos



Line ID 2: External, Michael Diamond Building, Throughout, Walls, Expansion Joints, Mastic - No Asbestos Detected



Line ID 3: External, Residence, Throughout, House and Garage, Eaves, Fibre Cement Sheet - No Asbestos Detected



Line ID 4: External, Russell Mark Control Room, West Side, High Level Boxing, Fibre Cement Sheet - No Asbestos Detected



Line ID 5: Internal, Maintenance Shed, Bathroom, Walls, Fibre Cement Sheet - No Asbestos Detected



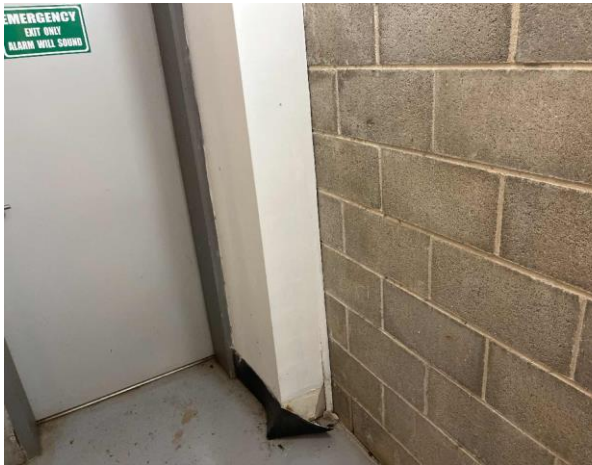
Line ID 6: Internal, Michael Diamond Building, Level 1, Bathrooms, Boxing to Ventilation System, Fibre Cement Sheet - No Asbestos Detected



Line ID 7: Internal, Michael Diamond Building, Level 1, Toilets, Partition Walls, Fibre Cement Sheeting - No Asbestos Detected



Line ID 8: Internal, Michael Diamond Building, Level 1, Walls Behind Toilets, Fibre Cement Sheet - No Asbestos Detected



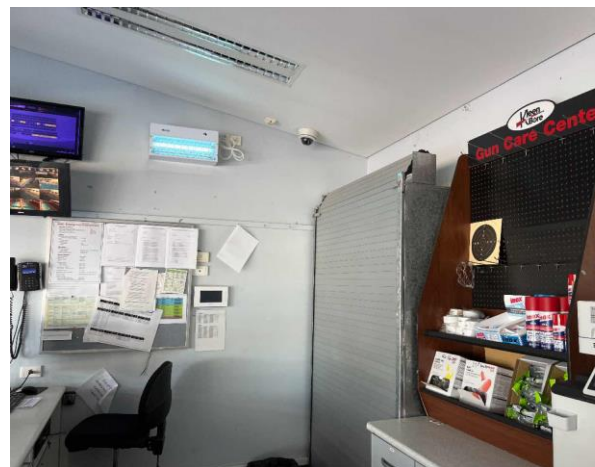
Line ID 9: Internal, Michael Diamond Building, Level 2, Bathrooms, Boxing to Ventilation System, Fibre Cement Sheet - No Asbestos Detected



Line ID 10: Internal, Michael Diamond Building, Level 2, Toilets, Partition Walls, Fibre Cement Sheeting - No Asbestos Detected



Line ID 11: Internal, Michael Diamond Building, Level 2, Walls Behind Toilets, Fibre Cement Sheet - No Asbestos Detected



Line ID 12: Internal, Michael Diamond Building, Level 3 Canteen, Walls, Fibre Cement Sheet - No Asbestos Detected



Line ID 13: Internal, Michael Diamond Building, Percy Pavey Range, First Aid Office, Floor Covering, White Vinyl Sheet - No Asbestos Detected



Line ID 14: Internal, Michael Diamond Building, Percy Pavey Range, First Aid Office, Skirting Board, Black Vinyl - No Asbestos Detected



Line ID 15: Internal, Michael Diamond Building, Throughout, Fire Door, Fire Door Core - No Asbestos Detected



Line ID 15.1: Internal, Michael Diamond Building, Throughout, Fire Door, Fire Door Core - No Asbestos Detected



Line ID 16: Internal, Michael Diamond Building, Throughout, Fire Stopping to Ventilation System, Millboard Insulation - No Asbestos Detected



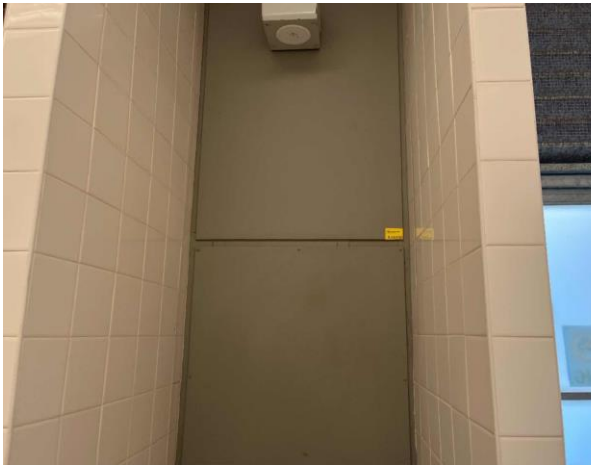
Line ID 17: Internal, Residence, Bathrooms, Walls, Fibre Cement Sheet - No Asbestos Detected



Line ID 18: Internal, Residence, Kitchen, Floor Covering, Timber Look Vinyl Sheet - No Asbestos Detected



Line ID 19: Internal, Russel Mark Control Room, Bathrooms, Cubicle Partition Walls, Compressed Cement Sheet - No Asbestos Detected



Line ID 20: Internal, Russel Mark Control Room, Bathrooms, Male and Disabled Toilet, Wall Panels, Fibre Cement Sheet - No Asbestos Detected



Line ID 20.1: Internal, Russel Mark Control Room, Bathrooms, Male and Disabled Toilet, Wall Panels, Fibre Cement Sheet - No Asbestos Detected



Line ID 21: Internal, Russel Mark Control Room, Bathrooms, Office and Kitchen, Skirting, Black Vinyl Skirting - No Asbestos Detected



Line ID 22: External, Michael Diamond Building, Throughout, Metal Beams, Grey (Light) Paint - Lead Detected (<0.005% w/w)





Line ID 23: External, Michael Diamond Building, Throughout, Walls, Grey (Light) Paint - Lead Detected (0.009% w/w)



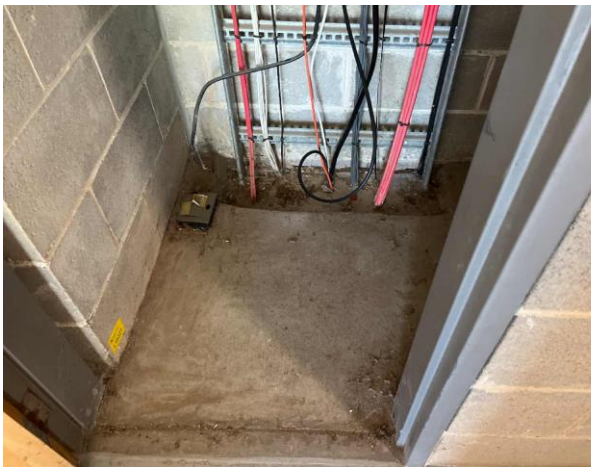
Line ID 24: External, Residence, Throughout, Handrails and Columns, Green Paint - Lead Detected (0.02% w/w)



Line ID 25: External, Russell Mark Control Room, Throughout, Walls, Grey Paint - Lead Detected (0.007% w/w)



Line ID 26: Internal, Russel Mark Control Room, Bathrooms, High Level Boxing, White Paint - Lead Detected (<0.005% w/w)



Line ID 27: Internal, Michael Diamond Building, Level 3, East Service Riser next to Male Toilets, Dust - Lead Detected (4,800 mg/kg)



Line ID 28: Internal, Michael Diamond Building, Philip Adams Range 10m Range, Shooting Area, Floor, Dust - Lead Detected (410 mg/kg)



Line ID 29: Internal, Maintenance Shed, Cage Area, Hot Water Heater, Insulation Material - Suspected SMF



Line ID 30: Internal, Michael Diamond Building, Level 2 Fire Hydrant Room, Diesel Fire Pump Pipework, Insulation Material - Suspected SMF



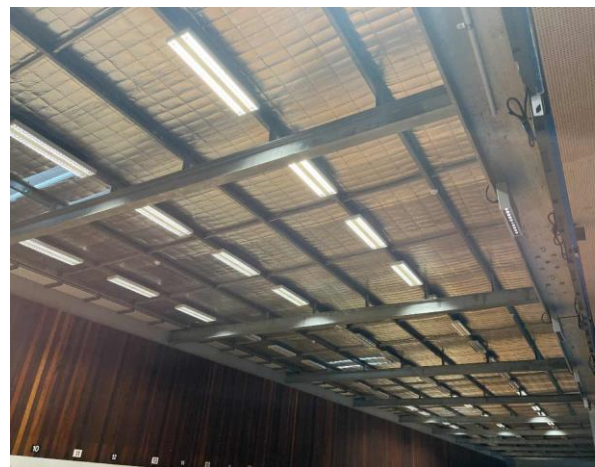
Line ID 31: Internal, Michael Diamond Building, Level 3 Canteen, Above Sink, Hot Water Heater, Insulation Material - Suspected SMF



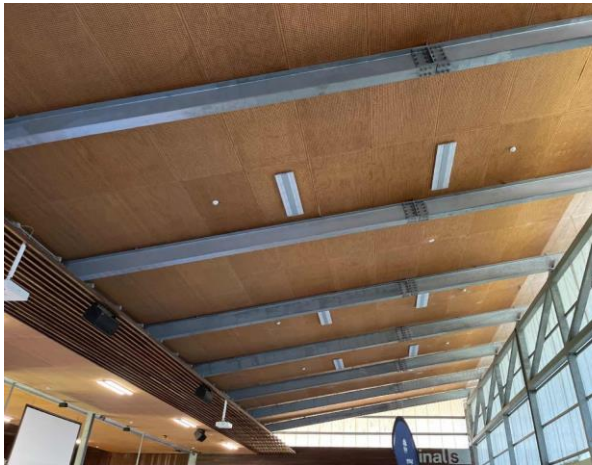
Line ID 32: Internal, Michael Diamond Building, Level 3 Canteen, Under Sink, Hot Water Heater, Insulation Material - Suspected SMF



Line ID 33: Internal, Michael Diamond Building, Throughout, Air Conditioning Ductwork, Internal Insulation - Suspected SMF



Line ID 34: Internal, Michael Diamond Building, Throughout, Ceiling, Sarking Insulation - Suspected SMF



Line ID 35: Internal, Michael Diamond Building, Throughout, Ceiling Above Tiles, Insulation Material - Suspected SMF



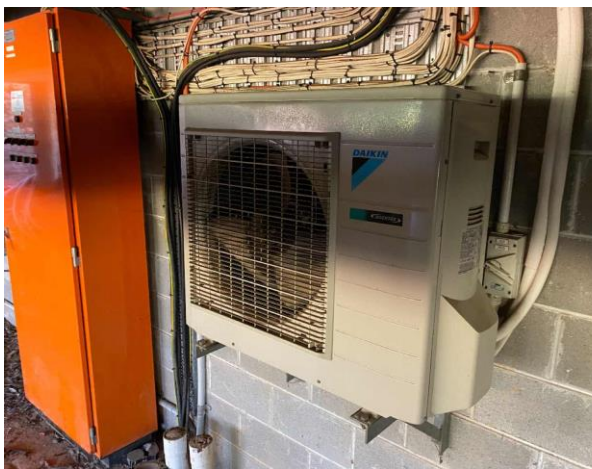
Line ID 36: Internal, Michael Diamond Building, Throughout, Penetrations, Pillow Insulation - Suspected SMF



Line ID 36.1: Internal, Michael Diamond Building, Throughout, Penetrations, Pillow Insulation - Suspected SMF



Line ID 38: Internal, Russel Mark Control Room, Kitchen, Above Sink, Hot Water Boiler, Internal Insulation - Suspected SMF



Line ID 39: External, Michael Diamond Building, North Side, Daikin AC Unit, R410A Hydrofluorocarbon (HFC) - Non ODS Refrigerant



Line ID 40: External, Michael Diamond Building, North Side, Hitachi AC Units, R407C Refrigerant - Non ODS Refrigerant



Line ID 41: External, Michael Diamond Building, West Side, Hitachi AC Units, R407C Refrigerant - Non ODS Refrigerant



Line ID 42: External, Michael Diamond Building, West Side, on Wall, Panasonic AC Unit, R410A Hydrofluorocarbon (HFC) - Non ODS Refrigerant



Line ID 43: External, Michael Diamond Building, West Side, SunDowner AC Unit, Unknown Refrigerant - Suspected ODS



Line ID 44: External, Residence, North East Side, Daikin AC Unit, R410A Hydrofluorocarbon (HFC) - Non ODS Refrigerant



Line ID 45: Internal, Michael Diamond Building, Level 3, Above Offices, R410A Hydrofluorocarbon (HFC) - Non ODS Refrigerant



Line ID 47: Internal, Clubhouse and Toilets, Club House and Toilet

## **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

<sup>2</sup> 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
<b>Australian Capital Territory (ACT)</b>	ACT Work Health & Safety Act 2011	ACT Work Health & Safety Regulation 2011
<b>New South Wales (NSW)</b>	NSW Work Health & Safety Act 2011	NSW Work Health & Safety Regulation 2017
<b>Northern Territory (NT)</b>	NT Work Health & Safety Act 2011	NT Work Health & Safety Regulation 2017
<b>Queensland (QLD)</b>	QLD Work Health & Safety Act 2011	QLD Work Health & Safety Regulation 2011
<b>South Australia (SA)</b>	SA Work Health & Safety Act 2012	SA Work Health & Safety Regulation 2012
<b>Tasmania (TAS)</b>	Tasmanian Work Health & Safety Act 2012	Tasmanian Work Health & Safety Regulation 2012
<b>Victoria (VIC)</b>	Victorian Occupational Health and Safety Act 2004	Victorian Occupational Health and Safety Regulation 2017
<b>Western Australia (WA)</b>	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	
<b>Australian Capital Territory (ACT)</b>	Code of Practice: How to Manage and Control Asbestos in the Workplace.	Code of Practice: How to Safely Remove Asbestos.
<b>New South Wales (NSW)</b>	Code of Practice: How to Manage and Control Asbestos in the Workplace.	Code of Practice: How to Safely Remove Asbestos.
<b>Northern Territory (NT)</b>	Code of Practice: How to Manage and Control Asbestos in the Workplace.	Code of Practice: How to Safely Remove Asbestos.
<b>Queensland (QLD)</b>	Code of Practice: How to Manage and Control Asbestos in the Workplace.	Code of Practice: How to Safely Remove Asbestos.
<b>South Australia (SA)</b>	Code of Practice: How to manage and Control asbestos in the Workplace.	Code of Practice: How to Safely Remove Asbestos.
<b>Tasmania (TAS)</b>	Code of Practice: How to Manage and Control Asbestos in the Workplace.	Code of Practice: How to Safely Remove Asbestos.
<b>Victoria (VIC)</b>	Compliance Code: Managing Asbestos in Workplaces.	Compliance Code: Removing Asbestos in Workplaces.

<b>Western Australia (WA)</b>	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**

<b>Hazardous Material</b>	<b>Guidance Notes</b>
<b>Lead Based Paint</b>	AS/NZS 4361.2:2017 Guide to hazardous paint management – Part 2: Lead paint in residential, public and commercial buildings
<b>Lead Containing Dust</b>	National Environmental Protection Measure (NEPM) (NEPC,1999) as updated in 2013.
<b>Synthetic Mineral Fibres</b>	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
<b>Polychlorinated Biphenyls</b>	ANZECC (1997) Identification of PCB-containing Capacitors: An Information Booklet for Electricians and Electrical Contractors
<b>Ozone Depleting Substances</b>	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.**