

Mirvac

Asbestos and Hazardous Materials Assessment

80 Ann Street

Brisbane QLD 4000

18/01/2023



This page has been left intentionally blank

Asbestos and Hazardous Materials Assessment

Prepared for

Mirvac

Tetra Tech Coffey Pty Ltd
Level 19, Tower B, 799 Pacific Highway
Chatswood NSW 2067 Australia
t: +61 2 9406 1000 f: +61 2 9415 1678
ABN: 55 139 460 521

Report Date: 14/01/2023

754-SYDEN228268 - 80 Ann Street - HMMR - 07122023

Quality Information

Revision History

Revision	Description	Date	Originator	Reviewer	Approver
R01	Final	18/01/2023	Ben McCann	Phoebe Quessy	Aaron Holmes

Distribution

Report Status	No. of copies	Format	Distributed to	Date
R01	1	PDF	Mirvac	18/01/2023

Table of Contents

Executive Summary	1
1. Introduction.....	2
1.1. Site Information	2
1.2. Objective and Scope of Works.....	2
2. Findings	2
2.1. Assessment Findings	3
2.1.1. Asbestos Containing Materials.....	3
2.1.2. Lead Based Paint	3
2.1.3. Lead Containing Dust.....	3
2.1.4. Synthetic Mineral Fibres.....	3
2.1.5. Polychlorinated Biphenyls	5
2.1.6. Ozone Depleting Substances.....	5
2.1.7. Access Restrictions	5
2.1.8. No Access Areas	5
2.1.9. Limited Access Areas.....	5
3. Recommendations.....	5
3.1. Asbestos Containing Materials.....	6
3.2. Lead Based Paint	6
3.3. Synthetic Mineral Fibres.....	6
3.4. Training	6

Appendices

Appendix A: Asbestos and Hazardous Materials Register

Appendix B: Laboratory Analysis Certificate

Appendix C: Photographs

Appendix D: Risk Assessment

Appendix E: Legislative Requirements

Appendix F: Methodology

Appendix G: Statement of Limitations

Executive Summary

Tetra Tech Coffey Pty Ltd (Tetra Tech) was commissioned by Mirvac to conduct an asbestos and hazardous materials (hazmat) assessment of 80 Ann Street, Brisbane QLD 4000 (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					
80 Ann Street	✓	-	✓	-	✓	-	-

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 Mirvac to conduct an asbestos and hazardous materials (hazmat) assessment of 80 Ann Street, Brisbane QLD 4000 (the Site). Ben McCann of Tetra Tech conducted the assessment on the 07/12/2023.

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 assessment was undertaken of 80 Ann Street, Brisbane QLD 4000 (the site).

Table 1: Site Information

Site:	80 Ann Street, 80 Ann Street, Brisbane QLD 4000
Age (Circa):	2020
Site Description:	The site consisted of a 35 level (approximately 60,000m ²) office building.

1.2. Objective and Scope of Works

The objectives/scope of the asbestos and hazardous materials 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 ODS's;
- 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 Mirvac.

2. Findings

The results of the asbestos and hazardous materials 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 / Level B1 / Within Building Foundations (not accessible during inspection) / South Side, Cable Conduits (previously identified at the site, refer to Octief asbestos management plan dated 9/12/2019)	Moulded Fibre Cement	Low

2.1.2. Lead Based Paint

Location	Material Description	Risk Rating
Internal / Ground Level / Turbot St Heritage Building / North Tenancy, Walls	Green Paint	Low
Internal / Ground Level / Turbot St Heritage Building / South Tenancy, Walls	Green Paint	Low
External / Ground Level / Turbot St Heritage Building / Eastern Undercover Area, Timberwork	White Paint	Very Low
Internal / Level 1 / Turbot St Heritage Building / Throughout, Original Window Frames	White Paint	Very Low
Internal / Ground Level and Level 1 / Turbot St Heritage Building / Northern Stairwell / Throughout, Walls	White Paint	Very Low
Internal / Level 1 / Turbot St Heritage Building / Throughout, Original Timberwork	White 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 / Level 32 / Roof Plant Area / Adjacent to Water Tank / Hot Water Units	Internal Insulation	Very Low

Internal / All Levels / Electrical Room / Throughout / Cable Conduits	Insulation Material	Very Low
Internal / All Levels / Office Areas / Ceiling Space, Ductwork and Pipework	Insulation Material	Very Low
Internal / All Levels / Office Areas / Ceiling Space, Lining	Insulation Material	Very Low
Internal / All Levels / Office Areas / Throughout	Compressed Ceiling Tiles	Very Low
Internal / All Levels / Service Areas and Risers / Throughout / Pipework	Insulation Material	Very Low
Internal / All Levels / Stairwells / Hydrant Pipework	Insulation Material	Very Low
Internal / Ground Level / Turbot St Heritage Building / Underside of Ceiling, Air Conditioning Ductwork	Insulation Material	Very Low
Internal / Ground Level / Turbot St Heritage Building / Underside of Ceiling, Pipework	Insulation Material	Very Low
Internal / Level 1 / Turbot St Heritage Building / Staff Room, Below Sink, Hot Water Unit	Internal Insulation	Very Low
Internal / Level 15 / Plant Room / Air Conditioning Ductwork	Insulation Material	Very Low
Internal / Level 15 / Plant Room / Ceiling Lining	Insulation Material	Very Low
Internal / Level 15 / Plant Room / Pipework	Insulation Material	Very Low
Internal / Level 31 / Plant Room / Air Conditioning Ductwork	Insulation Material	Very Low
Internal / Level 32 / Plant Room / Throughout / Air Conditioning Ductwork	Insulation Material	Very Low
Internal / Level 6 / Generator Room / Sound Attenuators	Insulation Material	Very Low
Internal / Level 6 / Generator Room / Throughout Wall and Ceiling Lining	Insulation Material	Very Low
Internal / Level 6 / HWP Room / Large Rheem Hot Water Units	Internal Insulation	Very Low
Internal / Level 6 / Plant Room / Throughout / Air Conditioning Ductwork	Insulation Material	Very Low
Internal / Level 6 / Plant Room / Throughout / Pipework	Insulation Material	Very Low
Internal / Level B1 / Fire Pump Room / 3 x Pumps, Exhaust Pipes	Insulation Material	Very Low
Internal / Level B1 / Security Room Adjacent Entrance Driveway / Below Sink, Zip Boiler	Internal Insulation	Very Low
Internal / Level B1 / Waste Room / South Side, Hot Water Heater	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

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
- Tenanted areas
- Level 1, Turbot St Heritage Building, ceiling space and roof access areas
- Level 1, Turbot St Heritage Building, north-western Espresso Engine tenanted area

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

- A destructive hazardous building material survey must be carried out prior to any demolition or refurbishment works in the Turbor St Heritage Building. 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.
- Confirm the status of the suspected asbestos moulded fibre cement cable conduits within the building foundations on the south side of the building prior to any future works in this area. Ensure the material is appropriately removed prior to any works that are likely to disturb it.
- 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

This page has been left intentionally blank

Area	Location	Material Description	Hazard	Reference No.	Result	Friable	Quantity	Risk Rating	Reinspect Date	Recommendations	Line ID
Internal	Level B1 / Within Building Foundations / South Side, Cable Conduits (previously identified at the site, refer to Octief asbestos management plan dated 9/12/2019)	Moulded Fibre Cement	Asbestos	754-SYDEN228268 339A1	Suspected Asbestos	Non-Friable	6 Units	Low	Not accessible for reinspection	<p>Not accessible during inspection.</p> <p>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.</p>	1
Internal	Level 15 / Plant Room / West Area, Pipework	Gasket Material	Asbestos	A25599	No Asbestos Detected	-	2 Units	-	-	-	2
Internal	Level 6 / Chiller Room / to Chilled Water Pump Pipework	Gasket Material	Asbestos	A25598	No Asbestos Detected	-	3 Units	-	-	-	3
Internal	Level 6 / Chiller Room / to Condenser Water Pipework	Gasket Material	Asbestos	A25596	No Asbestos Detected	-	14 Units	-	-	-	4
External	Ground Level / Turbot St Heritage Building / Eastern Undercover Area, Timberwork	White Paint	Lead Paint	L16599	Lead Detected (3.4% w/w)	-	50 m²	Very Low	-	<p>>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.</p>	5

Area	Location	Material Description	Hazard	Reference No.	Result	Friable	Quantity	Risk Rating	Reinspect Date	Recommendations	Line ID
External	Ground Level and Level 1 / Turbot St Heritage Building / Throughout Perimeter, Walls	Beige Paint	Lead Paint	L16598	Lead Detected (0.072% w/w)	-	500 m²	-	-	<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.	6
Internal	Ground Level / Turbot St Heritage Building / North Tenancy, Walls	Green Paint	Lead Paint	L16591	Lead Detected (0.15% w/w)	-	200 m²	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.	7
Internal	Ground Level / Turbot St Heritage Building / South Tenancy, Walls	Green Paint	Lead Paint	L16596	Lead Detected (0.22% w/w)	-	150 m²	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.	8
Internal	Ground Level and Level 1 / Turbot St Heritage Building / Northern Stairwell / Throughout, Walls	White Paint	Lead Paint	L16594	Lead Detected (0.90% w/w)	-	100 m²	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.	9

Area	Location	Material Description	Hazard	Reference No.	Result	Friable	Quantity	Risk Rating	Reinspect Date	Recommendations	Line ID
Internal	Level 1 / Turbot St Heritage Building / Throughout, Original Timberwork	White Paint	Lead Paint	L16592	Lead Detected (4.5% w/w)	-	50 m²	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.	10
Internal	Level 1 / Turbot St Heritage Building / Throughout, Original Window Frames	White Paint	Lead Paint	L16595	Lead Detected (13% w/w)	-	20 Units	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.	11
External	Level 32 / Roof Plant Area / Adjacent to Water Tank / Hot Water Units	Internal Insulation	SMF	754-SYDEN228268 339S5	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)].	12
Internal	All Levels / Electrical Room / Throughout / Cable Conduits	Insulation Material	SMF	754-SYDEN228268 339S4	Suspected SMF	-	20 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)].	13

Area	Location	Material Description	Hazard	Reference No.	Result	Friable	Quantity	Risk Rating	Reinspect Date	Recommendations	Line ID
Internal	All Levels / Office Areas / Ceiling Space, Ductwork and Pipework	Insulation Material	SMF	754-SYDEN228268339S11	Suspected SMF	-	5,000 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)].	14
Internal	All Levels / Office Areas / Ceiling Space, Lining	Insulation Material	SMF	754-SYDEN228268339S19	Suspected SMF	-	10,000 m²	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)].	15
Internal	All Levels / Office Areas / Throughout	Compressed Ceiling Tiles	SMF	754-SYDEN228268339S10	Suspected SMF	-	15,000 m²	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)].	16
Internal	All Levels / Service Areas and Risers / Throughout / Pipework	Insulation Material	SMF	754-SYDEN228268339S2	Suspected SMF	-	500 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)].	17
Internal	All Levels / Stairwells / Hydrant Pipework	Insulation Material	SMF	754-SYDEN228268339S1	Suspected SMF	-	50 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)].	18
Internal	Ground Level / Turbot St Heritage Building / Underside of Ceiling, Air Conditioning Ductwork	Insulation Material	SMF	754-SYDEN228268339S21	Suspected SMF	-	30 m²	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)].	19

Area	Location	Material Description	Hazard	Reference No.	Result	Friable	Quantity	Risk Rating	Reinspect Date	Recommendations	Line ID
Internal	Ground Level / Turbot St Heritage Building / Underside of Ceiling, Pipework	Insulation Material	SMF	754-SYDEN228268339S20	Suspected SMF	-	50 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)].	20
Internal	Level 1 / Turbot St Heritage Building / Staff Room, Below Sink, Hot Water Unit	Internal Insulation	SMF	754-SYDEN228268339S23	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)].	21
Internal	Level 15 / Plant Room / Air Conditioning Ductwork	Insulation Material	SMF	754-SYDEN228268339S7	Suspected SMF	-	200 m²	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)].	22
Internal	Level 15 / Plant Room / Ceiling Lining	Insulation Material	SMF	754-SYDEN228268339S17	Suspected SMF	-	500 m²	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)].	23
Internal	Level 15 / Plant Room / Pipework	Insulation Material	SMF	754-SYDEN228268339S18	Suspected SMF	-	100 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)].	24
Internal	Level 31 / Plant Room / Air Conditioning Ductwork	Insulation Material	SMF	754-SYDEN228268339S14	Suspected SMF	-	80 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)].	25

Area	Location	Material Description	Hazard	Reference No.	Result	Friable	Quantity	Risk Rating	Reinspect Date	Recommendations	Line ID
Internal	Level 32 / Plant Room / Throughout / Air Conditioning Ductwork	Insulation Material	SMF	754-SYDEN228268339S6	Suspected SMF	-	60 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)].	26
Internal	Level 6 / Generator Room / Sound Attenuators	Insulation Material	SMF	754-SYDEN228268339S13	Suspected SMF	-	300 m²	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)].	27
Internal	Level 6 / Generator Room / Throughout / Wall and Ceiling Lining	Insulation Material	SMF	754-SYDEN228268339S12	Suspected SMF	-	800 m²	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)].	28
Internal	Level 6 / HWP Room / Large Rheem Hot Water Units	Internal Insulation	SMF	754-SYDEN228268339S3	Suspected SMF	-	4 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)].	29
Internal	Level 6 / Plant Room / Throughout / Air Conditioning Ductwork	Insulation Material	SMF	754-SYDEN228268339S15	Suspected SMF	-	200 m²	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	Level 6 / Plant Room / Throughout / Pipework	Insulation Material	SMF	754-SYDEN228268339S16	Suspected SMF	-	100 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)].	31

Area	Location	Material Description	Hazard	Reference No.	Result	Friable	Quantity	Risk Rating	Reinspect Date	Recommendations	Line ID
Internal	Level B1 / Fire Pump Room / 3 x Pumps, Exhaust Pipes	Insulation Material	SMF	754-SYDEN228268339S24	Suspected SMF	-	3 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)].	32
Internal	Level B1 / Security Room Adjacent Entrance Driveway / Below Sink, Zip Boiler	Internal Insulation	SMF	754-SYDEN228268339S8	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)].	33
Internal	Level B1 / Waste Room / South Side, Hot Water Heater	Internal Insulation	SMF	754-SYDEN228268339S9	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)].	34
Internal	All Levels / Plant Areas / Various Areas, Air Conditioning Units	R32 Refrigerant	ODS	754-SYDEN228268339O2	Non ODS Refrigerant	-	50 Units	-	-	Hydrofluorocarbon (HFC) non ozone depleting substances.	35
Internal	Level 6 / Chiller Room / Chillers	R1233ZD Refrigerant	ODS	754-SYDEN228268339O1	Non ODS Refrigerant	-	3 Units	-	-	Hydrofluorocarbon (HFC) non ozone depleting substances.	36
Internal	Level 1 / Turbot St Heritage Building / Ceiling Space and Roof Areas	-	No Access	754-SYDEN228268NA1	-	-	-	-	-	No or limited access due to height restrictions. Potential hazardous materials present within inaccessible areas	37

Area	Location	Material Description	Hazard	Reference No.	Result	Friable	Quantity	Risk Rating	Reinspect Date	Recommendations	Line ID
Internal	Level 1 / Turbot St Heritage Building / North Western Espresso Engine Tenanted Areas	-	No Access	754-SYDEN228268 NA2	-	-	-	-	-	No or limited access to locked tenancy. Potential hazardous materials present within inaccessible areas.	38

Appendix B: Laboratory Analysis Certificate

Bulk Identification Report

Job No: 754-SYDEN228268 Bulk ID Report 80 Ann St 12122022
Client: Mirvac
Client Address: Level 28, 200 George Street, Sydney
NSW 2000 Australia
Contact: Mark Copeland
E-mail: mark.copeland@mirvac.com
Date Sampled: 07-12-22
Date Analysed: 12-12-22
Date Authorised: 12-12-22
Sampled By: Ben McCann
Site: 80 Ann St, Brisbane



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: 3

Approved Identifier
 Panika Wongchanda

Approved Signatory
 Matthew Tang

Sample No.	Location & Description	Sample Size (~)	Results
A25596	Level 6, Chiller Room, To Condenser Water Pipework - Gasket - Green painted beige fibrous gasket material	25 x 8 x 5 mm	No asbestos fibres detected Organic fibres detected Synthetic mineral fibres detected
A25598	Level 6, Chiller Room, To Chilled Water Pipework - Gasket - Orange fibrous gasket material	30 x 8 x 2 mm	No asbestos fibres detected Organic fibres detected
A25599	Level 15, Plant Room, Top Pipework - Gasket - Green painted beige fibrous gasket material	24 x 8 x 3 mm	No asbestos fibres detected Organic fibres detected Synthetic mineral fibres detected

This Document may not be reproduced except in full.

CERTIFICATE OF ANALYSIS 313045

Client Details

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

Sample Details

Your Reference	<u>754-SYDEN228268, 80 Ann St, Brisbane</u>
Number of Samples	7 PAINT
Date samples received	14/12/2022
Date completed instructions received	14/12/2022

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	21/12/2022
Date of Issue	19/12/2022
NATA Accreditation Number 2901. This document shall not be reproduced except in full.	
Accredited for compliance with ISO/IEC 17025 - Testing. Tests not covered by NATA are denoted with *	

Results Approved By

Hannah Nguyen, Metals Supervisor

Authorised By



Nancy Zhang, Laboratory Manager

Lead in Paint						
Our Reference		313045-1	313045-2	313045-3	313045-4	313045-5
Your Reference	UNITS	L16599	L16596	L16598	L16591	L16592
Type of sample		PAINT	PAINT	PAINT	PAINT	PAINT
Date Sampled		07/12/2022	07/12/2022	07/12/2022	07/12/2022	07/12/2022
Date prepared	-	16/12/2022	16/12/2022	16/12/2022	16/12/2022	16/12/2022
Date analysed	-	16/12/2022	16/12/2022	16/12/2022	16/12/2022	16/12/2022
Lead in paint	%w/w	3.4	0.22	0.072	0.15	4.5

Lead in Paint			
Our Reference		313045-6	313045-7
Your Reference	UNITS	L16594	L16595
Type of sample		PAINT	PAINT
Date Sampled		07/12/2022	07/12/2022
Date prepared	-	16/12/2022	16/12/2022
Date analysed	-	16/12/2022	16/12/2022
Lead in paint	%w/w	0.90	13

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.

QUALITY CONTROL: Lead in Paint					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	[NT]
Date prepared	-			16/12/2022	[NT]	[NT]	[NT]	[NT]	16/12/2022	[NT]
Date analysed	-			16/12/2022	[NT]	[NT]	[NT]	[NT]	16/12/2022	[NT]
Lead in paint	%w/w	0.005	Metals-020/021/022	<0.005	[NT]	[NT]	[NT]	[NT]	97	[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.

This page has been left intentionally blank

Appendix C: Photographs

This page has been left intentionally blank



Line ID 2: Internal, Level 15, Plant Room, West Area, Pipework, Gasket Material - No Asbestos Detected



Line ID 3: Internal, Level 6, Chiller Room, to Chilled Water Pump Pipework, Gasket Material - No Asbestos Detected



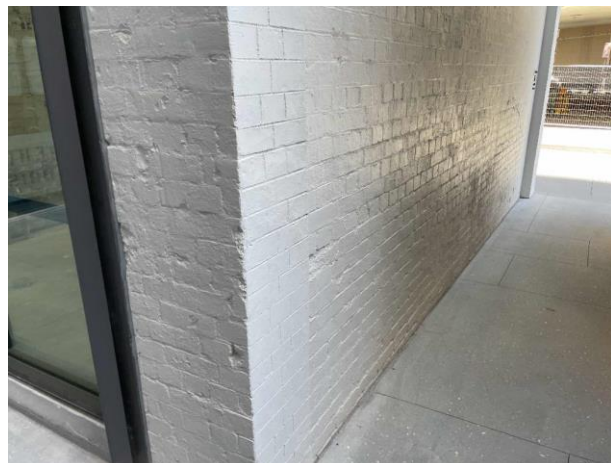
Line ID 4: Internal, Level 6, Chiller Room, to Condenser Water Pipework, Gasket Material - No Asbestos Detected



Line ID 5: External, Ground Level, Turbot St Heritage Building, Eastern Undercover Area, Timberwork, White Paint - Lead Detected (3.4% w/w)



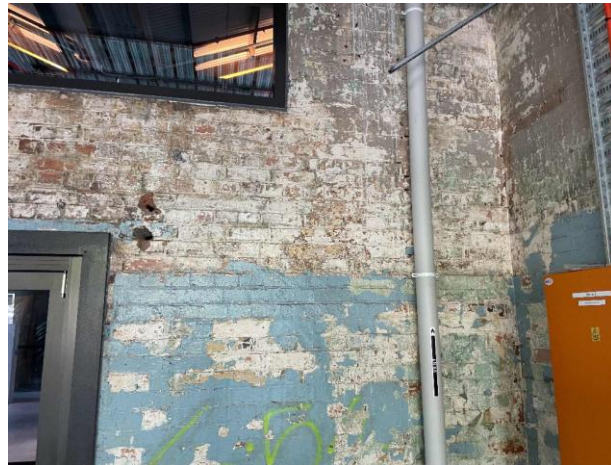
Line ID 6: External, Ground Level and Level 1, Turbot St Heritage Building, Throughout Perimeter, Walls, Beige Paint - Lead Detected (0.072% w/w)



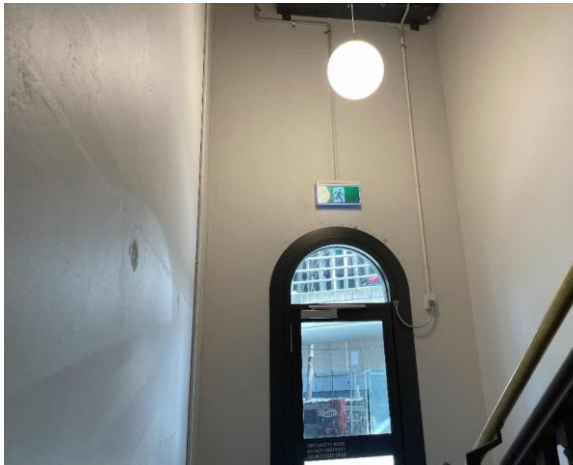
Line ID 6.1: External, Ground Level and Level 1, Turbot St Heritage Building, Throughout Perimeter, Walls, Beige Paint - Lead Detected (0.072% w/w)



Line ID 7: Internal, Ground Level, Turbot St Heritage Building, North Tenancy, Walls, Green Paint - Lead Detected (0.15% w/w)



Line ID 8: Internal, Ground Level, Turbot St Heritage Building, South Tenancy, Walls, Green Paint - Lead Detected (0.22% w/w)



Line ID 9: Internal, Ground Level and Level 1, Turbot St Heritage Building, Northern Stairwell, Throughout, Walls, White Paint - Lead Detected (0.90% w/w)



Line ID 10: Internal, Level 1, Turbot St Heritage Building, Throughout, Original Timberwork, White Paint - Lead Detected (4.5% w/w)



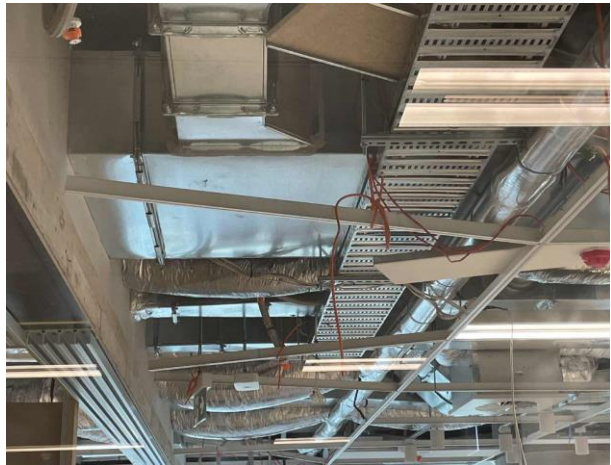
Line ID 11: Internal, Level 1, Turbot St Heritage Building, Throughout, Original Window Frames, White Paint - Lead Detected (13% w/w)



Line ID 12: External, Level 32, Roof Plant Area, Adjacent to Water Tank, Hot Water Units, Internal Insulation - Suspected SMF



Line ID 13: Internal, All Levels, Electrical Room Throughout, Cable Conduits, Insulation Material - Suspected SMF



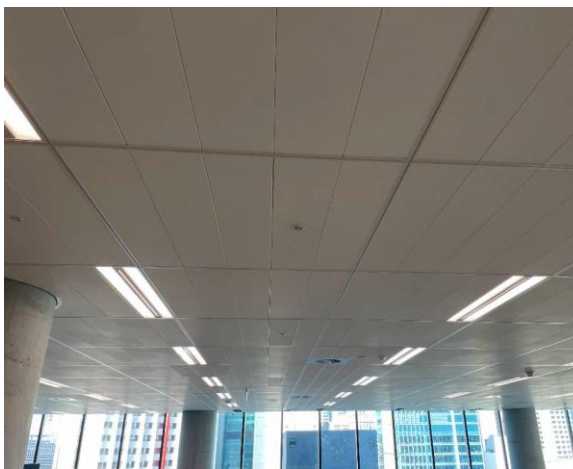
Line ID 14: Internal, All Levels, Office Areas, Ceiling Space, Ductwork and Pipework, Insulation Material - Suspected SMF



Line ID 14.1: Internal, All Levels, Office Areas, Ceiling Space, Ductwork and Pipework, Insulation Material - Suspected SMF



Line ID 15: Internal, All Levels, Office Areas, Ceiling Space, Lining, Insulation Material - Suspected SMF



Line ID 16: Internal, All Levels, Office Areas, Throughout, Compressed Ceiling Tiles - Suspected SMF



Line ID 17: Internal, All Levels, Service Areas and Risers Throughout, Pipework, Insulation Material - Suspected SMF



Line ID 18: Internal, All Levels, Stairwells, Hydrant
Pipework, Insulation Material - Suspected SMF



Line ID 19: Internal, Ground Level, Turbot St Heritage
Building, Underside of Ceiling, Air Conditioning Ductwork,
Insulation Material - Suspected SMF



Line ID 20: Internal, Ground Level, Turbot St Heritage
Building, Underside of Ceiling, Pipework, Insulation
Material - Suspected SMF



Line ID 21: Internal, Level 1, Turbot St Heritage Building, Staff
Room, Below Sink, Hot Water Unit, Internal Insulation -
Suspected SMF



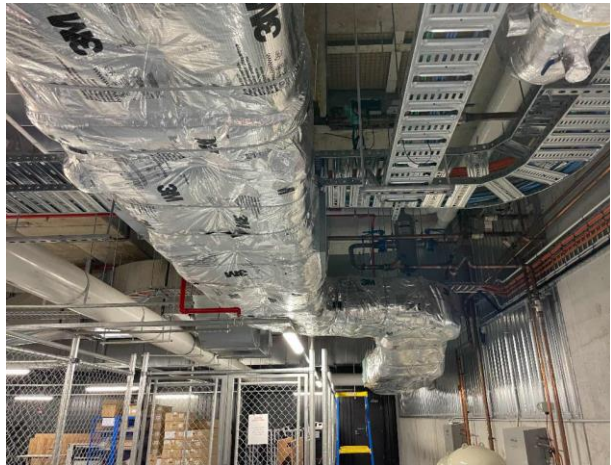
Line ID 22: Internal, Level 15, Plant Room, Air
Conditioning Ductwork, Insulation Material -
Suspected SMF



Line ID 23: Internal, Level 15, Plant Room, Ceiling Lining,
Insulation Material - Suspected SMF



Line ID 24: Internal, Level 15, Plant Room, Pipework, Insulation Material - Suspected SMF



Line ID 25: Internal, Level 31, Plant Room, Air Conditioning Ductwork, Insulation Material - Suspected SMF



Line ID 26: Internal, Level 32, Plant Room Throughout, Air Conditioning Ductwork, Insulation Material - Suspected SMF



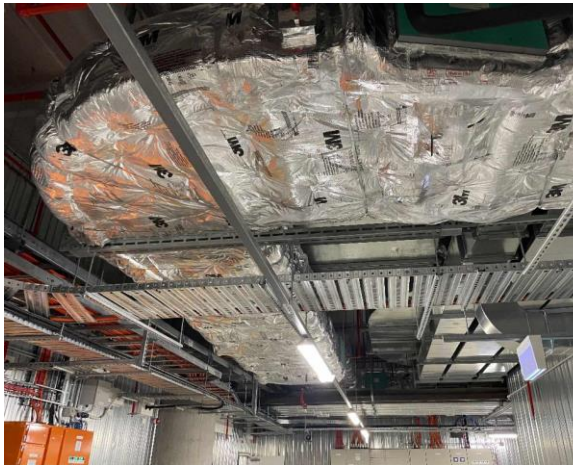
Line ID 27: Internal, Level 6, Generator Room, Sound Attenuators, Insulation Material - Suspected SMF



Line ID 28: Internal, Level 6, Generator Room, Throughout Wall and Ceiling Lining, Insulation Material - Suspected SMF



Line ID 29: Internal, Level 6, HWP Room, Large Rheem Hot Water Units, Internal Insulation - Suspected SMF



Line ID 30: Internal, Level 6, Plant Room Throughout, Air Conditioning Ductwork, Insulation Material - Suspected SMF



Line ID 31: Internal, Level 6, Plant Room Throughout, Pipework, Insulation Material - Suspected SMF



Line ID 32: Internal, Level B1, Fire Pump Room, 3x Pumps, Exhaust Pipes, Insulation Material - Suspected SMF



Line ID 33: Internal, Level B1, Security Room Adjacent Entrance Driveway, Below Sink, Zip Boiler, Internal Insulation - Suspected SMF



Line ID 34: Internal, Level B1, Waste Room, South Side, Hot Water Heater, Internal Insulation - Suspected SMF



Line ID 35: Internal, All Levels, Plant Areas, Various Areas, Air Conditioning Units, R32 Refrigerant - Non ODS Refrigerant



Line ID 36: Internal, Level 6, Chiller Room, Chillers,
R1233ZD Refrigerant - Non ODS Refrigerant

Appendix D: Risk Assessment

This page has been left intentionally blank

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

This page has been left intentionally blank

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)]
-------------------------------	---	--

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

This page has been left intentionally blank

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

This page has been left intentionally blank

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.