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SUPA 88 PTY LTD

Hazardous Material Survey

22-32 Queen Street, Campbelltown NSW

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Executive Summary

Supa 88 Pty Ltd engaged EI Australia (EI) to conduct a Hazardous Material Survey for the property located at 22-32 Queen Street, Campbelltown NSW (herein referred to as 'the site').

The purpose of this Hazardous Material Survey is to present the findings of a qualitative risk assessment of the hazardous building materials located on the site. The site inspection was undertaken on 11 June 2020.

This report has been developed to assist Supa 88 Pty Ltd with the preparation for the redevelopment of the site. EI understand that proposed redevelopment of the site shall involve the demolition of existing structures.

Key Findings

The overall status of each hazardous material type is tabulated below.

Site Name	ACM (friable)	ACM (Non-friable)	SMF	LBP	PCBs
22-32 Queen Street, Campbelltown NSW	Yes	Yes	Yes	Yes	No

Note 1 Hazardous materials may be present within any inaccessible area stated in the register in **Appendix A**.

All identified hazardous building materials were ranked ***Priority 3 or 4*** (i.e. stable and posing negligible health risk under present conditions). No immediate remedial action was deemed necessary.

Refer to **Appendix A** for the formal Hazardous Materials Register.

1. Introduction

1.1 Background and Purpose

EI Australia (EI) was engaged by Supa 88 Pty Ltd to conduct a Hazardous Material Survey (HMS) for the site located at 22-32 Queen Street, Campbelltown NSW.

EI understand that proposed redevelopment of the site shall involve demolition of existing structures. As such, a HMS is required as part of a Development Application (DA) submission to Campbelltown City Council prior to demolition works.

This report documents the findings of the HMS performed by EI, which involved inspection of the building on site for the presence of hazardous materials, sampling of potential hazardous materials, and subsequent laboratory analysis for the relevant hazardous substances. In addition, this report provides recommendations for the safe management of hazardous materials during demolition works.

1.2 Scope of Works

The aim of the HMS was to:

- Ascertain whether the buildings on site contained hazardous material(s), including;
  - Asbestos-containing materials (ACM);
  - Synthetic mineral fibre (SMF) materials;
  - Polychlorinated biphenyls (PCB) containing materials;
  - Lead-based paint systems (LBP);
- Undertake a qualitative risk assessment of the hazardous materials contained within the buildings;
- Develop control strategies for the ongoing management of hazardous materials contained within the buildings;
- Identify and provide recommendations where remedial works are needed; and
- Prepare a report with the findings of the inspection, including the hazardous materials register and recommendations for the ongoing management or remedial works.

2. Site Description

2.1 Property Identification and Location

The site identification details and associated information are presented in **Table 2-1.**

Table 2-1 Site Identification and Location

Attribute	Description
Street Address	22-32 Queen Street, Campbelltown NSW
Location Description	Approx. 41.7 km south-west of Sydney CBD, the block is bound by Queen Street (north), Moore Street (east), Commercial lot (west) and recreational open space (south).
Site Coordinates	Northeast corner of site (GDA2020-MGA56) Easting: 299022.735 Northing: 6229308.358 (Source: http://maps.six.nsw.gov.au)
Site Area	Approximately 6.6 km²

2.2 Building Descriptions

A brief description of each building/structure inspected is located in **Table 2-2**.

Table 2-2 Building Descriptions

Description	
The property located at 24 Queen Street, Campbelltown NSW consists of a single storey commercial building. The ground floor contains warehouse storage, unused bowling alley, store rooms and amenities. The building has metal roof, brick external walls, brick and plasterboard internal walls, exposed SMF insulation ceilings with concrete and vinyl tile flooring.	
The property located at 32 Queens Street, Campbelltown NSW consists of a two level ground floor and basement carpark with three stories of commercial shops. The building is constructed with glass on the side facing Queens Street, concrete floors and roofs separating the floors and exposed SMF insulation on the third floor roofing.	

3. General Methodology

The survey was conducted to identify the presence and condition of hazardous building materials within the site. For the purpose of this survey, hazardous building materials included:

- Asbestos containing materials (ACMs);
- Lead based paints (LBPs) applied to building surfaces;
- Synthetic Mineral Fibre (SMF) insulation materials; and
- Fluorescent light capacitor fittings, containing polychlorinated biphenyls (PCBs).

The scope of the survey was limited to inspection of the accessible building construction materials, including finishes and operational services, with the collection of representative samples suspected of containing a hazardous substance (listed above), where it was permissible to do so.

Due to the destructive nature of the sampling process or access constraints, it is not possible to collect samples of all (suspected) materials. Where it was not possible to collect a sample, the inspector used their professional experience to make a judgement on the status of the material, or area, concerned. Where the inspector believed the material could contain asbestos, LBP, SMF and/or PCB, this was recorded in the survey report and the corresponding material should be treated as hazardous.

3.1 Asbestos

This component of the survey was carried out in accordance with the guidelines documented in the SafeWork NSW (2019) *How to Manage and Control Asbestos in the Workplace* and SafeWork NSW (2019) *How to Safely Remove Asbestos*. Below are definitions of the two (2) forms of asbestos.

Non Friable asbestos material

Non-friable (bonded) asbestos is any material that contains asbestos in a bonded matrix. It may consist of Portland cement or various resin/binders and cannot be crushed by hand when dry.

Friable asbestos material

Friable asbestos is any material that contains asbestos and is in the form of a powder or can be crumbled, pulverized or reduced to powder by hand pressure when dry.

Samples of suspected ACMs were laboratory analysed for their asbestos content (presence / absence), in accordance with Australian Standard AS4964-2004 *Method for the Qualitative Identification of Asbestos in Bulk Samples*. The reporting limit of the method was 0.1 g/kg.

3.2 Lead in Paint

Painted surfaces were sampled and laboratory analysed for their lead (Pb) content. The sampling program was representative of the various types of paints found within the site, concentrating on areas where LBPs may have been used (e.g. exterior gloss paints, window and door architraves, skirting boards, etc.).

Australian Standard AS 4361.2-2017 *Guide to Lead Paint Management, Part 2: Lead Paint in Residential, Public and Commercial Buildings* defines LBP as a paint film or component coat of a paint system in which the lead content (calculated as lead metal) is in excess of 0.1% by weight of the dry film, as determined by laboratory testing. The NSW WHS Regulation 2017

currently defines a lead process as works on paint containing more than 1.0% by dry weight of lead.

3.3 Synthetic Mineral Fibres (SMF)

This component of the survey was carried out in accordance with the guidelines documented in the SafeWork Australia *Code of Practice for the Safe Use of Synthetic Mineral Fibres* [NOHSC: 2006 (1990)]. This code broadly identifies SMF materials found or suspected of being present during the survey based on a visual assessment.

3.4 Polychlorinated Biphenyls (PCBs)

Where safe access was gained, detailed information of capacitors in light fittings and other electrical equipment were noted for cross-referencing with the Australian and New Zealand Environmental and Conservation Council (ANZECC, 1997) *Identification of PCB Containing Capacitors Information Booklet*. This document defines PCB materials and wastes as follows:

<2 mg/kg	- PCB free.
2 mg/kg - <50 mg/kg	- Non-Scheduled PCB material or waste.
>50 mg/kg	- Scheduled PCB material or waste.
>100,000 mg/kg (10%)	- Concentrated PCB material

Due to the inherent hazard in accessing electrical components, or other reasons such as height restrictions, immovable equipment and furniture, some light fittings may not be safely accessed. In these instances, comment was made on the likelihood of PCB-containing materials, based upon age and appearance.

4. Risk Assessment

The building located at 22-32 Queen Street, Campbelltown NSW was the subject of a Hazardous Material Survey. The Hazardous Materials Register, presented in **Appendix A**, assesses the risks associated with each identified hazardous material. In order to assess the health risks associated with asbestos, LBP, SMF and PCBs the following must be considered:

- Product type;
- Friability of the material;
- Condition;
- Accessibility requirements for building and/or maintenance; and
- Exposed surface area;
- Surface treatment (if any).

The purpose of the material risk assessment is to establish the relative risk posed by specific hazardous building materials identified in this assessment. The following risk factors are defined to assist in determining the relative health risk posed by each item.

4.1 Friability

The friability of a material describes the ease by which the material can be crumbled, which in turn, can increase the release of fibres into the air. Therefore, friability is only applicable to asbestos and SMF.

- **Friable asbestos** can be crumbled, pulverised, or reduced to powder by hand pressure, which makes it more dangerous than non-friable asbestos.
- **Non-friable asbestos** is typically comprised of asbestos fibres tightly bound in a non-asbestos matrix. If accidentally damaged or broken these ACMs may release fibres initially but will not continue to do so.
- **Bonded SMF** describes a synthetic fibrous material which has a specific designed shape and exists within a stable manufactured product.
- **Un-bonded SMF** is a loosely packed synthetic fibrous material which has no adhesive or cementitious binding properties.
- **Friable lead based paints** exhibit signs of severe deterioration and crumbled, pulverised, or reduced to powder by hand pressure.
- **Non-friable lead based paints** have remained adhered to the surface and are not easily removed.

4.2 Condition

The condition of the hazardous building materials identified during the assessment is reported as being **good**, **fair** or **poor**.

- **Good** refers to a material that is in sound condition with no or very minor damage or deterioration.
- **Fair** refers to a material that is generally in a sound condition, with some areas of damage or deterioration.
- **Poor** refers to a material that is extensively damaged or deteriorated.

4.3 Accessibility

- **Regular:** in an occupied space of the building and accessible to all personnel using/entering the building.
- **Occasional:** buildings or rooms that are used infrequently.
- **Maintenance Only:** accessible to maintenance personnel only.

4.4 Priority Ratings

The risk elements above are used to rate the overall health risk posed by the presence of the hazardous materials:

4.4.1 Asbestos and SMF ratings

Priority 1: Immediate Risk Level

Materials which, due to their present condition and location, present an immediate health risk. The material and area surrounding should be isolated from personnel with remedial actions recommended to be undertaken at the earliest practicable time.

Priority 2: Elevated Risk Level

Damaged or unstable materials which present an elevated health risk if disturbed to personnel within the vicinity, and have potential for contamination to be spread to other areas. The material should be stabilised immediately, with remedial actions considered for the material.

Priority 3: Low Risk Level

Stable material that have minor areas of damage requiring remedial action or is likely to be subject to damage or to degrade due environmental conditions. It is recommended that maintenance work be performed to stabilise and repair damaged areas. Controls should be implemented to protect these materials from further damage or degrading factors.

Priority 4: Negligible Risk Level

Stable material that presents a negligible health risk unless damaged. These materials should be maintained in good condition. They should be reassessed prior to any works that will impact the material.

Inaccessible:

The location was not accessed during the survey and a priority rating could not be applied. Once a location is accessed, the priority rating should be reassessed prior to any works at will be undertaken in this location.

4.4.2 Lead-based Paint and Polychlorinated Biphenyls

Priority 1: Immediate Risk Level

Materials which, due to their present condition and location, present an immediate health risk. The material and area surrounding should be isolated from personnel with remedial actions recommended to be undertaken at the earliest practicable time.

Priority 2: Potential Risk Level

Damaged or unstable materials which present an elevated health risk if disturbed to personnel within the vicinity, and have the potential for contamination to be spread to other areas. The material should be stabilised to immediately, with remedial actions considered for the material.

Priority 3: Negligible Risk Level

Stable material that presents a negligible health risk unless damaged. These materials should be maintained in good condition. They should be reassessed prior to any works that will impact the material.

Inaccessible:

The location was not accessed during the survey and a priority rating could not be applied. Once a location is accessed, the priority rating should be reassessed prior to any works at will be undertaken in this location.

5. Conclusion

Based on the inspection of the structural materials making up the building designated for demolition, the identified hazardous materials are indicated in **Table 5-1**.

Handling recommendations and material specific work plans for the relevant hazardous materials are outlined in **Section 6**. Photographs of the identified materials are presented in the register in **Appendix A**.

Table 5-1 Summary Hazardous Materials

Building	Location	Material Description
24 Queen Street	Internal, wall cavities and subfloor areas	Possible hazardous materials (not observed)
24 Queen Street	Bowling alley, south eastern store room, redundant material	Asbestos cement sheeting
24 Queen Street	Bowling alley, southern portion, floor (2 layers)	Grey vinyl tile over brown pattern vinyl floor sheeting
24 Queen Street	Bowling alley, mezzanine office, AC control distribution board “Ausbestos”	Electrical backing board
24 Queen Street	Bowling alley, kitchen, flooring (2 layers)	Grey fleck over brown vinyl floor tile
24 Queen Street	Bowling alley, northern main switch room	Electrical backing board, Assumed to contain asbestos
24 Queen Street	Bowling alley, external, western elevated section in ground service pit	Asbestos cement service pit
24 Queen Street	Underside of roof	Foil backed SMF
24 Queen Street	Internal, air conditioning ducting	Flexible SMF ducting
24 Queen Street	Internal, suspended ceiling	Compressed SMF tiles

Note 1 Hazardous materials may be present within any inaccessible area stated in the register in **Appendix A**.

6. Recommendations

6.1 Asbestos

Asbestos materials should be removed prior to the commencement of any demolition works that may cause their disturbance. The removal of these materials is to be done in accordance with *NSW Work Health and Safety Act* and *Regulations 2017* and the following SafeWork NSW approved codes of practice:

- SafeWork NSW (2019) *How to Manage and Control Asbestos in the Workplace*; and
- SafeWork NSW (2019) *How to Safely Remove Asbestos*

The asbestos removal works require a minimum *Class B* licenced asbestos removal contractor. At the completion of asbestos removal works a clearance certificate is required.

The following recommendations must be observed as minimum requirements during the removal of all ACM.

- The work area should be barricaded and appropriate signage installed.
- The ACM should be sealed or wetted with water.
- ACM should be removed with minimal breakage and where applicable, should be lowered to the ground not dropped.
- Where ACMs are too large to fit into an asbestos labelled waste bag, the ACM should be stacked or placed on a 200µm plastic ground sheet or lined skip bin and not allowed to lie about the site where they may be further broken or crushed by machinery or workers.
- Asbestos waste is to be securely packaged and labelled. Asbestos waste bags are to be double bagged while ACM in polythene sheeting should be double wrapped with adhesive tape applied to the entire length of every overlap to secure materials to minimise the risk of the polythene sheeting tearing or splitting.
- Any dust and/or ACM debris remaining around the removal area should be cleaned up using an approved “H” type HEPA vacuum cleaner.
- All asbestos containing waste is to be disposed at an approved disposal facility (contact local council or SafeWork NSW for nearest asbestos waste facility).

Where asbestos is to be removed, the licenced asbestos removal contractor should prepare an asbestos removal control plan prior to undertaking any removal works.

6.1.1 Friable Asbestos

Friable asbestos was identified in the form of asbestos millboard backing attached to the brown vinyl sheeting beneath the grey vinyl tiles in the southern raised portion of the former bowling alley at 24 Queen Street Campbelltown. The composition of the vinyl sheeting is the millboard is encapsulated by the layers of vinyl forming the surface of the sheeting, and the glue used to adhere to the floor below. Additionally the layer of the vinyl tiles covering this sheeting is encapsulating the millboard. The vinyl sheeting is in good condition has been allocated a negligible asbestos related health risk.

6.1.2 Asbestos Removal Management Plan

A site specific Asbestos Removal Management Plan (ARMP) may be prepared by a Occupational Hygienist, or Licensed Asbestos Assessor to document the management measures required to address risk associated with potential exposure to asbestos. The ARMP must include:

- Work area isolation (barrier protection, buffer zone);
- Removal methods (friable/non-friable);
- Contamination control methods (decontamination procedures); and
- Health and safety procedures (respiratory protection).

Asbestos removal works at the site including the disturbance of soils impacted with asbestos must be managed strictly in accordance with the ARMP.

6.1.3 Asbestos Fibre Air Monitoring

There is a requirement to undertake asbestos fibre air monitoring during the removal of the friable asbestos materials on the boundary of the work areas. Asbestos fibre air monitoring is required to be undertaken by a company independent of the demolition and /or asbestos removal company. The asbestos fibre air monitoring should be undertaken by a company that is NATA (National Association of Testing Authorities) accredited.

6.1.4 Management of Asbestos Waste

The transportation and management of asbestos waste must be carried out in accordance with Part 7 of the *Protection of the Environment Operations (Waste) Regulation 2014*, which includes:

- Appropriate packaging, sealing, covering and/or wetting of the waste, as is required for the form of the asbestos contamination (i.e. bonded asbestos, friable asbestos or asbestos-contaminated soil);
- Reporting on transportation of asbestos waste by the transporter to the NSW EPA as required under Part 7, Section 79 of the *Waste Regulation 2014*; and

Disposal to an appropriately licensed (i.e. lawful) premises, with proper advice to the occupier of the premises, while incorporating measures for the prevention of dust generation, in accordance with Part 7, Section 80 of the *Waste Regulation 2014*.

Any ACM removed from the site should be tracked from the time of their removal from the structure or excavation until their disposal. Tracking of all ACM should be completed on the EPAs WasteLocate system. This system will require all details of the ACM to be transported, including but not limited to:

- Origin of material;
- Material type;
- Approximate volume; and
- Truck registration number.

Disposal locations will be determined by the remediation contractor. Disposal location, waste disposal documentation (i.e. weighbridge dockets, trip tickets and consignment disposal confirmation) and the above listed information should be provided to the remediation consultant for reporting purposes.

6.1.5 Asbestos Clearance Inspection

Under Clause 473 of the *NSW Work Health and Safety Regulation* 2017, a clearance inspection is required following the removal of any ACM. At the completion of the removal of friable asbestos, a Licenced Asbestos Assessor is required to undertake clearance Airborne Asbestos monitoring within the exclusion zone and carry a out visual inspection of the area. A clearance inspection is to be carried out and a clearance certificate issued before the area can be re-occupied. The company undertaking the clearance inspection should be independent of the demolition and / or asbestos removal company.

6.2 Lead Paint

Site structures should be managed in accordance with the procedures detailed in the following references:

- Australian Standard AS 4361.2-2017 *Guide to Lead Paint Management, Part 2: Lead* Paint *in Residential, Public and Commercial Buildings*;
- NOHSC (1994a) *National Standard for the Control of Inorganic Lead at Work*; and
- NOHSC (1994b) *National Code of Practice for the Control and Safe Use of Inorganic Lead at Work.*

There are currently no legislative requirements for the general removal of stable lead-containing painted materials for structures remaining *in situ*.

The following recommendations must be observed as a minimum requirement when working with lead paint to reduce the potential for lead dust exposure.

- LBPs on structures otherwise from residential premises, educational or child care institutions are to be removed from all surfaces prior to demolition.
- Lead paint waste arising otherwise from residential premises, educational or child care institutions has been pre-classified as *Hazardous Waste* under the NSW EPA (2014) *Waste Classification Guidelines*.
- All building materials with lead paint are to be disposed as *Hazardous Waste*, unless the lead paint is removed prior to demolition.
- Wear an approved (Australian Standard AS1716) half face respirator or dust mask with a ‘P2’ (dust and fumes) protection rating if working directly with materials coated with lead paint during the demolition works.
- Wear work clothes that do not catch dust or flakes in pockets or cuffs. Consider using disposable overalls.
- Use an industrial vacuum cleaner fitted with High Efficiency Particulate Air (HEPA) filters for dust and debris clean up.
- When working on lead paint surfaces:
  - Use heavy-duty plastic sheeting to seal off work areas and collect debris;
  - Place a plastic drop sheet under the area to be worked upon (ensuring it extends a minimum of two metres from the base of the wall or structure and an extra metre for each storey being worked on (consider height and use more plastic if needed));

  - Fold the edge of the plastic nearest the wall and/or structure and secure it with tape, in order to prevent any dust falling between the edge of the plastic and the wall or structure; and
  - Fold and brace external edges of the plastic drop sheet.
- Wet any lead paint surface to be sanded or cut. Use water sparingly and do not spray water on power tools (e.g. drills). Wet the wall or structure to dampen down for dust control.
- Do not use open flame burners on lead paint.
- At the completion of the works, plastic sheeting used during lead paint removal is to be folded and sealed to ensure the materials are contained within the plastic sheeting.

The *NSW Work Health and Safety Regulation 2017* require that a person conducting a business or undertaking (PCBU) must notify SafeWork NSW of any lead risk work being undertaken. The PCBU must assess each lead process to determine whether lead risk work is being carried out. If a PCBU cannot determine whether lead risk work is being carried out, then the process is taken to include lead risk work until it can be determined that lead risk work is not being undertaken. A notification of lead risk work form must be submitted to SafeWork NSW at least seven days before lead work begins. These forms are available on the SafeWork NSW website and lodgement instructions are listed on the forms.

6.3 Synthetic Mineral Fibres

SMF materials should be removed during any demolition works that may cause their disturbance. SMF materials must be handled and removed in accordance with the *NSW Work Health and Safety Regulation 2017* and the SafeWork Australia *Synthetic Mineral Fibres National Standard* (NOHSC:1004) and *National Code of Practice* (NOHSC:2006).

The following guidance documents should be consulted for guidance regarding removal and disposal of SMF:

- *National Standard for the Safe Use of Synthetic Mineral Fibres* [NOHSC:1004 (1990)];
- *National Code of Practice for the Safe Use of Synthetic Mineral Fibres* [NOHSC:2006 (1990)]; and
- *Code of Practice for the Safe Use of Synthetic Mineral Fibres* (NOHSC, 1993).

These documents should be referred to for the disposal SMF materials. Under the EPA (2014) *Waste Classification Guidelines*, “synthetic fibre waste from materials such as fibreglass, polyesters and other plastics, being waste that is packaged securely to prevent dust emissions, but excluding asbestos waste which is a special waste”, is pre-classified as *General Solid Waste (Non Putrescible)*.

6.4 Polychlorinated Biphenyl Capacitors

All metal-cased capacitors, including fluorescent light fittings, should be assumed as containing PCBs. Any leaking PCB-containing capacitors identified should be removed and disposed prior to the commencement of any demolition works that may cause their disturbance.

The following recommendations must be observed when removing / handling PCB containing capacitors.

- Small quantities of PCBs are usually found in sealed containers known as capacitors. PCB-containing capacitors are unlikely to pose a health risk unless they become damaged

and leak. Care must be taken when handling a damaged capacitor to ensure that spillage does not occur.

- The person handling any (damaged) capacitor should use disposable gloves. Wear gloves that are made of materials that are resistant to PCBs, such as Viton, polyethylene, polyvinyl alcohol (PVA), polytetrafluoroethylene (PTFE), butyl rubber, nitrile rubber or neoprene. Mid-arm length gauntlets may be required. Do not use gloves made of polyvinyl chloride (PVC) or natural rubber (latex).
- Wear disposable overalls made of Tyvek or materials with similar chemical resistant properties.
- When working with overhead equipment (e.g. fluorescent light fixtures), wear a full face shield and appropriate hair protection.
- Wash any non-disposable contaminated equipment with kerosene and collect the kerosene for disposal as a PCB-contaminated waste.
- PCB-containing equipment (capacitors, ballasts, etc.) is to be placed in a polyethylene bag, which then is to be placed in a sealable metal container. This container must be clearly marked with the details of the contents and must be maintained in good order (that is, no visible signs of damage or corrosion). If some of these materials are leaking, the container should be partially filled with an absorbent material, such as a commercial absorbent, kitty litter or a diatomaceous earth. The plastic wrapped leaking components can then be placed in the container.
- If PCB vapours are suspected (e.g. PCB leaks onto a hot surface in a confined space), wear a suitable respirator. Use a cartridge respirator suitable for chlorinated vapours. It is always prudent to ensure adequate ventilation. NOTE: PCBs do not vaporise readily at room temperature.
- Do not smoke while handling PCB capacitors.
- After handling PCBs, even if gloves were worn, wash hands well in warm, soapy water before eating, drinking, smoking, handling food or drink, or using toilet facilities.

PCB capacitors are to be disposed at a licenced waste facility. If PCB concentration is above the threshold concentration for PCBs scheduled waste (i.e. >50mg/kg), the waste must be also be transported by a suitably licenced contractor. For further details on this, contact the NSW EPA.

7. Statement of Limitations

This report has been prepared by EI Australia (EI) pursuant to EI Australia's Terms and Conditions.

The report is for the sole use by Supa 88 Pty Ltd. No responsibility is accepted for the use of any part of this report in any other context or for any other purpose or by other third parties. This report does not purport to provide legal advice. This report is prepared in response to specific instructions from Supa 88 Pty Ltd.

Unless otherwise stated in this report, the survey evaluates the presence of hazardous materials in/on the building(s) of the identified site, and excludes buried waste materials, contaminated dusts, and soils. The findings presented in this report are the result of a site walkover inspection, sampling, laboratory analysis, interviews with site personnel, and review of any documentation provided to EI. To the best of EI's knowledge, and in view of these limitations, the findings presented in this report represent a reasonable interpretation of the building materials on the site at the time of investigation.

This report relies upon data, surveys, measurements, and/or results taken at, or under, the particular times and conditions specified in this report. Any conclusions or recommendations only apply to the findings at that particular time.

EI is not a professional quantity surveyor (QS) organisation. Any areas, volumes, tonnages or any other quantities noted in this report are indicative estimates only. The services of a professional QS organisation should be engaged if quantities are to be relied upon.

The report should not be separated or reproduced in part, and EI should be retained to assist other professionals who may be affected by the issues addressed in this report to ensure the report is not misused in any way. In the interests of Work Health and Safety, and in the absence of a comprehensive testing program, EI recommends that where there is doubt over the composition of any suspect material, it should be assumed to contain asbestos until verified otherwise by appropriate analysis.

This report must be read in its entirety, and must not be copied, distributed or referred to in part. This report is not intended to be used for the purpose of tendering, preparation of costing or budgets, programming of works, refurbishment works or demolition works, unless expressly stated. The report must not be reproduced without the written approval of EI.

This report was conducted by trained personnel who have exercised reasonable care, skill and diligence. However, except for any non-excludable statutory provision, EI gives no warranty in relation to its services or the report, and is not liable for any loss, damage, injury or death suffered by any party (whether caused by negligence or otherwise) arising from or relating to the services or the use or otherwise of this report. All conclusions and recommendations made in this report are of the professional opinions of EI personnel involved with the project, and while normal checking of the accuracy of data has been conducted, any circumstances outside the scope of this report, or which are not made known to EI personnel, and which may impact on those opinions, are not the responsibility of EI.

Inaccessible areas

It is noted that given the constraints of practicable access encountered during the HMS, the following areas were not accessed or inspected:

- Detailed inspection within wall cavities and set ceilings;

- Within those areas accessible only by dismantling equipment;
- Concealed within the building structure;
- Within voids or internal areas of plant, equipment, air-conditioning ducts, etc;
- Energised services, gas, electrical, and pressurised vessels;
- Areas deemed unsafe or hazardous at time of inspection;
- Within totally inaccessible areas such as voids and cavities created and intimately concealed within the building structure. These voids are only accessible during major demolition works; and
- Height restricted areas, including building roof areas.

Should demolition operations entail disturbance of materials in these locations, further investigation and sampling of specific areas should be conducted as part of an asbestos and lead management and abatement program, as per 'AS 2601-2001: The Demolition of structures', prior to any works proceeding.

Appendix A - Hazardous Materials Register

Table A.1 Key and Explanatory Notes to Hazardous Building Material Register

Column Heading	Description
Location	A detailed description of the location of the hazardous building material relevant to this entry.
Material Type	The specific hazardous building material type, e.g. Asbestos: asbestos cement sheet corrugated asbestos cement sheet, vinyl asbestos tiles, etc. SMF: foil backed SMF, compressed SMF ceiling tiles, SMF insulation to upper surface of ceiling, etc. Paint: Beige coloured lead-based paint system. PCB: Metal case capacitor 'Plessey 6.5 µF Type APF 265CR'. ***If inaccessible areas are noted, any of the above material types may be present.***
Friability	If the material can be crushed to a powder by hand pressure.
Sample	Sample Reference number allocated to the sample collected from this asbestos containing material
Results	Laboratory analytical results. Refer to **Appendix B** for laboratory analytical reports.
Quantity	The approximate quantity of hazardous building material relevant to this location. Depending on the nature of the material, the quantity is given as an area (m^2), length (m), number of pieces/units or not determined (ND).
Condition	**Good**: good and stable condition. **Fair**: early signs of deterioration or localised areas of damage. For PCB capacitors this would include evidence of seals deteriorating. **Poor**: the material is in poor condition and remedial action is required, e.g. deteriorated friable asbestos materials, capacitors are leaking, etc. **Unknown**: the area was inaccessible
Accessibility	**Regular**: in the occupied space of the building and accessible to all personnel using/entering the building. **Occasional**: buildings or rooms that are used infrequently. Maintenance Only: accessible to maintenance personnel only. **Inaccessible**: the area was not able to be accessed during the inspection
Risk Rating	The allocated priority rating for this entry, refer Section **4.4**. If the location was not accessible the risk rating is not able to be determined and shall be listed as inaccessible.
Recommendations	Recommended actions for demolition works or damaged material.
Photograph	Photograph of location where sample was taken.

Hazardous Materials Register
22-32 Queen Street, Campbelltown NSW

Location	Material Type	Friability	Sample	Analysis Result:	Quantity	Condition and Accessibility	Priority	Recommendations/ Comments	Photograph of material
24 Queen Street, Campbelltown									
Internal, wall cavities and subfloor areas	**Possible hazardous materials**	**Unknown**	**Inaccessible**	**NA**	**Not determined**	**Unknown** **Inaccessible**	**Inaccessible**	**No access available at time of inspection.** **When areas are accessible, confirm status of hazardous materials.**	
Asbestos									
Bowling alley, south eastern store room, redundant material	Asbestos cement sheeting	Non-friable	A01	**Chrysotile Asbestos Detected**	<1m^2	Fair Maintenance only	Priority 4: Negligible Risk Level	Remove prior to demolition works	
Bowling alley, southern portion, floor (2 layers)	Grey vinyl tile over brown pattern vinyl floor sheeting	Friable (vinyl sheeting)	A02	**Chrysotile Asbestos Detected**	30m^2	Good Maintenance only	Priority 4: Negligible Risk Level	Remove prior to demolition works	

Hazardous Materials Register
22-32 Queen Street, Campbelltown NSW

Location	Material Type	Friability	Sample	Analysis Result:	Quantity	Condition and Accessibility	Priority	Recommendations/ Comments	Photograph of material
24 Queen Street, Campbelltown									
Bowling alley, mezzanine office, AC control distribution board "Ausbestos"	Electrical backing board	Non-friable	A03	**Chrysotile Asbestos Detected**	1 unit	Good Maintenance only	Priority 4: Negligible Risk Level	Remove prior to demolition works	
Bowling alley, kitchen, flooring (2 layers)	Grey fleck over brown vinyl floor tile	Non-friable	A04	**Chrysotile Asbestos Detected**	30m^2	Good Maintenance only	Priority 4: Negligible Risk Level	Remove prior to demolition works	
Bowling alley, north of kitchen, floor	Grey vinyl floor tile	Non-friable	A05	No Asbestos Detected	NA	NA	NA	NA	

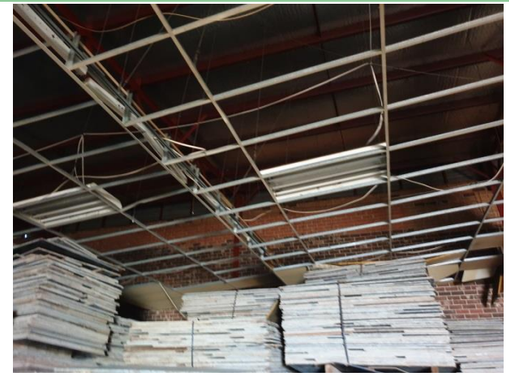
Hazardous Materials Register
22-32 Queen Street, Campbelltown NSW

Location	Material Type	Friability	Sample	Analysis Result:	Quantity	Condition and Accessibility	Priority	Recommendations/ Comments	Photograph of material
24 Queen Street, Campbelltown									
Bowling alley, northern main switch room	Electrical backing board	Non-friable	Visual inspection Similar to a03	**Assume Positive**	1 unit	Good Maintenance only	Priority 4: Negligible Risk Level	Remove prior to demolition works	
Bowling alley external storage hut, partitions wall	Fibre cement sheeting	Non-friable	A06	No Asbestos Detected Organic Fibres Detected	NA	NA	NA	NA	
Bowling alley, northern elevation, ground surface	Fibre cement sheeting	Non-friable	A07	No Asbestos Detected Organic Fibres Detected	NA	NA	NA	NA	

Hazardous Materials Register
22-32 Queen Street, Campbelltown NSW

Location	Material Type	Friability	Sample	Analysis Result:	Quantity	Condition and Accessibility	Priority	Recommendations/ Comments	Photograph of material
24 Queen Street, Campbelltown									
Bowling alley, external, western elevated section in ground service pit	Asbestos cement service pit	Non-friable	A08	**Chrysotile Asbestos Detected**	1 unit	Fair Maintenance only	Priority 4: Negligible Risk Level	Remove prior to demolition works	
SMF									
Underside of roof	Foil backed SMF	Non-friable	Visual inspection	**Assume Positive**	Not determined	Good Maintenance only	Priority 4: Negligible Risk Level	Remove during to demolition works	
Internal, air conditioning ducting	Flexible SMF ducting	Non-friable	Visual inspection	**Assume Positive**	Not determined	Good Maintenance only	Priority 4: Negligible Risk Level	Remove during to demolition works	

Hazardous Materials Register
22-32 Queen Street, Campbelltown NSW

Location	Material Type	Friability	Sample	Analysis Result:	Quantity	Condition and Accessibility	Priority	Recommendations/ Comments	Photograph of material
24 Queen Street, Campbelltown									
Internal, suspended ceiling	Compressed SMF tiles	Non-friable	Visual inspection	**Assume Positive**	Not determined	Good Maintenance only	Priority 4: Negligible Risk Level	Remove during to demolition works	
Paints									
South western amenities, walls	Yellow	NA	P01	0.002	NA	NA	NA	NA	
PCBs									
Internal, fluorescent light fittings (4 tube)	Plessey 427/1/00809/001, 13.0µF	NA	Visual inspection	Does not contain PCBs	NA	NA	NA	NA	

Hazardous Materials Register
22-32 Queen Street, Campbelltown NSW

Location	Material Type	Friability	Sample	Analysis Result:	Quantity	Condition and Accessibility	Priority	Recommendations/ Comments	Photograph of material
32 Queen Street, Campbelltown									
Asbestos, lead based paints and PCBs									
				Building constructed in 2009.					
SMF									
Underside of roof	Foil backed SMF	Non-friable	Visual inspection	**Assume Positive**	Not determined	Good Maintenance only	Priority 4: Negligible Risk Level	Remove during to demolition works	

Appendix B - Laboratory CoC and Analytical Results

Sheet 1 of _____

Site: 2232 Queen Street Campbelltown

Project No: E24711. E10

Laboratory: SGS Australia
Unit 16, 33 Maddox Street,
ALEXANDRIA NSW 2015
P: 02 8594 0400 F: 02 8594 0499

Sample ID	Laboratory ID	Container Type	Sampling Date	Sampling Time	Sample Matrix: WATER	SOIL	OTHERS (i.e. Fibro, Paint, etc.)	Analysis: HM A /TRH/BTEX/PAHs OCP/OP/PCB/Asbestos	HM A /TRH/BTEX/PAHs	HM A /TRH/BTEX	BTEX	VOCs	Asbestos	Asbestos Quantification	pH / CEC (cation exchange)	pH / EC (electrical conductivity)	Dewatering Suite	sPOCAS	PFAS	Lead in Paint			TCLP HM B / PAH
A01	1	ZLB	11/6				X						X										
A02	2												X										
A03	3												X										
A04	4												X										
A05	5												X										
A06	6												X										
A07	7												X										
A08	8												X										
P01	9																		X				

Comments

HM A
Arsenic
Cadmium
Chromium
Copper
Lead
Mercury
Nickel
Zinc

HM B
Arsenic
Cadmium
Chromium
Lead
Mercury
Nickel

Dewatering Suite
pH & EC
TDS / Turbidity NTU
Hardness
Total Cyanide
Metals (Al, As, Cd, Cr, Cu, Pb, Hg, Ni, Zn)
TRH (F1, F2, F3, F4)
BTEX
PAH
Total Phenol

LABORATORY TURNAROUND

- [x] Standard
- [ ] 24 Hours
- [ ] 48 Hours
- [ ] 72 Hours
- [ ] Other_____

Container Type:
J= solvent washed, acid rinsed,Teflon sealed, glass jar
S= solvent washed, acid rinsed glass bottle
P= natural HDPE plastic bottle
VC= glass vial, Teflon Septum
ZLB = Zip-Lock Bag

Investigator: I attest that these samples were collected in accordance with standard EI field sampling procedures.

Report with EI Waste Classification Table ☐

Sampler's Name (EI):	Received by (SGS):
Print: Kate Warton	Print:
Signature:	Signature:
Date: 15/6/2020	Date:

Sampler's Comments:

SGS EHS Sydney COC
SE207494

IMPORTANT:
Please e-mail laboratory results to: lab@eiaustralia.com.au

eiaustralia
Contamination | Remediation | Geotechnical
Suite 6.01, 55 Miller Street,
PYRMONT NSW 2009
Ph: 9516 0722
lab@eiaustralia.com.au

SAMPLE RECEIPT ADVICE

SE207494

CLIENT DETAILS

Contact	Kate Warton
Client	EI AUSTRALIA
Address	SUITE 6.01 55 MILLER STREET PYRMONT NSW 2009
Telephone	61 2 95160722
Facsimile	(Not specified)
Email	Kate.Warton@eiaustralia.com.au
Project	**E24711.E10 22-32 Queen St Campbelltown**
Order Number	**E24711.E10**
Samples	9

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
Samples Received	Mon 15/6/2020
Report Due	Mon 22/6/2020
SGS Reference	**SE207494**

SUBMISSION DETAILS

This is to confirm that 9 samples were received on Monday 15/6/2020. Results are expected to be ready by COB Monday 22/6/2020. Please quote SGS reference SE207494 when making enquiries. Refer below for details relating to sample integrity upon receipt.

Samples clearly labelled	Yes	Complete documentation received	Yes
Sample container provider	Client	Sample cooling method	None
Samples received in correct containers	Yes	Sample counts by matrix	8 Material, 1 Paint
Date documentation received	15/6/2020	Type of documentation received	COC
Samples received in good order	Yes	Samples received without headspace	N/A
Sample temperature upon receipt	19°C	Sufficient sample for analysis	Yes
Turnaround time requested	Standard		

Unless otherwise instructed, water and bulk samples will be held for one month from date of report, and soil samples will be held for two months.

COMMENTS

SAMPLE RECEIPT ADVICE

SE207494

CLIENT DETAILS

Client EI AUSTRALIA

Project E24711.E10 22-32 Queen St Campbelltown

SUMMARY OF ANALYSIS

No.	Sample ID	Fibre ID in bulk materials	Metals in Paint by ICPOES
001	A01	1	-
002	A02	1	-
003	A03	1	-
004	A04	1	-
005	A05	1	-
006	A06	1	-
007	A07	1	-
008	A08	1	-
009	P01	-	1

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.
The numbers shown in the table indicate the number of results requested in each package.
Please indicate as soon as possible should your request differ from these details .
Testing as per this table shall commence immediately unless the client intervenes with a correction .

ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS

Contact	Kate Warton
Client	EI AUSTRALIA
Address	SUITE 6.01 55 MILLER STREET PYRMONT NSW 2009
Telephone	61 2 95160722
Facsimile	(Not specified)
Email	Kate.Warton@eiaustralia.com.au
Project	**E24711.E10 22-32 Queen St Campbelltown**
Order Number	**E24711.E10**
Samples	9

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
SGS Reference	**SE207494 R0**
Date Received	15/6/2020
Date Reported	22/6/2020

COMMENTS

Accredited for compliance with ISO/IEC 17025 - Testing. NATA accredited laboratory 2562(4354).

Sample #2 (vinyl tile), 4 (Grey vinyl tile), 5-7: No trace asbestos fibres detected using trace analysis technique.

Sample #2: Asbestos found only in fibrous underlay
Sample #4: Asbestos found only in brown vinyl tile fragments

Asbestos analysed by Approved Identifier Ravee Sivasubramaniam .

SIGNATORIES

Bennet LO
Senior Organic Chemist/Metals Chemist

Yusuf KUTHPUDIN
Asbestos Analyst

Fibre ID in bulk materials [AN602] Tested: 22/6/2020

PARAMETER	UOM	LOR	A01 MATERIAL - 11/6/2020 SE207494.001	A02 MATERIAL - 11/6/2020 SE207494.002	A03 MATERIAL - 11/6/2020 SE207494.003	A04 MATERIAL - 11/6/2020 SE207494.004	A05 MATERIAL - 11/6/2020 SE207494.005
Asbestos Detected	No unit	-	Yes	Yes	Yes	Yes	No

PARAMETER	UOM	LOR	A06 MATERIAL - 11/6/2020 SE207494.006	A07 MATERIAL - 11/6/2020 SE207494.007	A08 MATERIAL - 11/6/2020 SE207494.008
Asbestos Detected	No unit	-	No	No	Yes

Metals in Paint by ICPOES [AN065/AN320] Tested: 16/6/2020

PARAMETER	UOM	LOR	P01 PAINT - 11/6/2020 SE207494.009
Lead, Pb	%w/w	0.001	**0.002**

METHOD SUMMARY

SE207494 R0

METHOD	METHODOLOGY SUMMARY
AN065/AN320	A portion of paint chips sample is digested with nitric acid to solubilise the metals into solution. Digest then analysed by ICP OES with result calculated back to the as received paint sample basis .
AN602	Qualitative identification of chrysotile, amosite and crocidolite in bulk samples by polarised light microscopy (PLM) in conjunction with dispersion staining (DS). AS4964 provides the basis for this document. Unequivocal identification of the asbestos minerals present is made by obtaining sufficient diagnostic `clues`, which provide a reasonable degree of certainty, dispersion staining is a mandatory `clue` for positive identification. If sufficient `clues` are absent, then positive identification of asbestos is not possible. This procedure requires removal of suspect fibres/bundles from the sample which cannot be returned.
AN602	Fibres/material that cannot be unequivocably identified as one of the three asbestos forms, will be reported as unknown mineral fibres (umf). The fibres detected may or may not be asbestos fibres.
AN602	AS4964.2004 Method for the Qualitative Identification of Asbestos in Bulk Samples, Section 8.4, Trace Analysis Criteria, Note 4 states:"Depending upon sample condition and fibre type, the detection limit of this technique has been found to lie generally in the range of 1 in 1,000 to 1 in 10,000 parts by weight, equivalent to 1 to 0.1 g/kg."

FOOTNOTES

*	NATA accreditation does not cover the performance of this service.	-	Not analysed.	UOM	Unit of Measure.
		NVL	Not validated.	LOR	Limit of Reporting.
**	Indicative data, theoretical holding time exceeded.	IS	Insufficient sample for analysis.	↑↓	Raised/lowered Limit of Reporting.
		LNR	Sample listed, but not received.		

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received.
Solid samples expressed on a dry weight basis.

Where "Total" analyte groups are reported (for example, Total PAHs, Total OC Pesticides) the total will be calculated as the sum of the individual analytes, with those analytes that are reported as <LOR being assumed to be zero. The summed (Total) limit of reporting is calculated by summing the individual analyte LORs and dividing by two. For example, where 16 individual analytes are being summed and each has an LOR of 0.1 mg/kg, the "Totals" LOR will be 1.6 / 2 (0.8 mg/kg). Where only 2 analytes are being summed, the " Total" LOR will be the sum of those two LORs.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

If reported, measurement uncertainty follow the ± sign after the analytical result and is expressed as the expanded uncertainty calculated using a coverage factor of 2, providing a level of confidence of approximately 95%, unless stated otherwise in the comments section of this report.

Results reported for samples tested under test methods with codes starting with ARS-SOP, radionuclide or gross radioactivity concentrations are expressed in becquerel (Bq) per unit of mass or volume or per wipe as stated on the report. Becquerel is the SI unit for activity and equals one nuclear transformation per second.
Note that in terms of units of radioactivity:

a. 1 Bq is equivalent to 27 pCi
b. 37 MBq is equivalent to 1 mCi

For results reported for samples tested under test methods with codes starting with ARS-SOP, less than (<) values indicate the detection limit for each radionuclide or parameter for the measurement system used. The respective detection limits have been calculated in accordance with ISO 11929.

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-gb/environment-health-and-safety.

ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS

Contact	Kate Warton
Client	EI AUSTRALIA
Address	SUITE 6.01 55 MILLER STREET PYRMONT NSW 2009
Telephone	61 2 95160722
Facsimile	(Not specified)
Email	Kate.Warton@eiaustralia.com.au
Project	**E24711.E10 22-32 Queen St Campbelltown**
Order Number	**E24711.E10**
Samples	8

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
SGS Reference	**SE207494 R0**
Date Received	15 Jun 2020
Date Reported	22 Jun 2020

COMMENTS

Accredited for compliance with ISO/IEC 17025 - Testing. NATA accredited laboratory 2562(4354).

Sample #2 (vinyl tile), 4 (Grey vinyl tile), 5-7: No trace asbestos fibres detected using trace analysis technique.

Sample #2: Asbestos found only in fibrous underlay
Sample #4: Asbestos found only in brown vinyl tile fragments

Asbestos analysed by Approved Identifier Ravee Sivasubramaniam .

SIGNATORIES

Bennet LO
Senior Organic Chemist/Metals Chemis

Yusuf KUTHPUDIN
Asbestos Analyst

ANALYTICAL REPORT

SE207494 R0

RESULTS

Fibre ID in bulk materials — Method AN602

Laboratory Reference	Client Reference	Matrix	Sample Description	Date Sampled	Fibre Identification	Est.%w/w*
SE207494.001	A01	Other	50x40x3mm Cement sheet fragment	11 Jun 2020	Chrysotile Asbestos Detected	
SE207494.002	A02	Other	100x20x2mm Vinyl tile attached to fibrous underlay	11 Jun 2020	Chrysotile Asbestos Detected	
SE207494.003	A03	Other	<1g Resinous board fragments	11 Jun 2020	Chrysotile Asbestos Detected	
SE207494.004	A04	Other	80x40x2mm Brown vinyl tile fragments & 80x60x2mm Grey vinyl tile fragments	11 Jun 2020	Chrysotile Asbestos Detected	
SE207494.005	A05	Other	120x80x3mm Vinyl tile fragments	11 Jun 2020	No Asbestos Detected	
SE207494.006	A06	Other	20x10x3mm Cement sheet fragment	11 Jun 2020	No Asbestos Detected Organic Fibres Detected	
SE207494.007	A07	Other	40x30x4mm Cement sheet fragment	11 Jun 2020	No Asbestos Detected Organic Fibres Detected	
SE207494.008	A08	Other	15x10x3mm Cement sheet fragment	11 Jun 2020	Chrysotile Asbestos Detected	

METHOD SUMMARY

METHOD	METHODOLOGY SUMMARY
AN602	Qualitative identification of chrysotile, amosite and crocidolite in bulk samples by polarised light microscopy (PLM) in conjunction with dispersion staining (DS). AS4964 provides the basis for this document. Unequivocal identification of the asbestos minerals present is made by obtaining sufficient diagnostic `clues`, which provide a reasonable degree of certainty, dispersion staining is a mandatory `clue` for positive identification. If sufficient `clues` are absent, then positive identification of asbestos is not possible. This procedure requires removal of suspect fibres/bundles from the sample which cannot be returned.
AN602	Fibres/material that cannot be unequivocably identified as one of the three asbestos forms, will be reported as unknown mineral fibres (umf). The fibres detected may or may not be asbestos fibres.
AN602	AS4964.2004 Method for the Qualitative Identification of Asbestos in Bulk Samples , Section 8.4, Trace Analysis Criteria, Note 4 states:"Depending upon sample condition and fibre type, the detection limit of this technique has been found to lie generally in the range of 1 in 1,000 to 1 in 10,000 parts by weight, equivalent to 1 to 0.1 g/kg."

FOOTNOTES

Amosite	-	Brown Asbestos	NA	-	Not Analysed
Chrysotile	-	White Asbestos	LNR	-	Listed, Not Required
Crocidolite	-	Blue Asbestos	*	-	NATA accreditation does not cover the performance of this service .
Amphiboles	-	Amosite and/or Crocidolite	**	-	Indicative data, theoretical holding time exceeded.

(In reference to soil samples only) This report does not comply with the analytical reporting recommendations in the Western Australian Department of Health Guidelines for the Assessment and Remediation and Management of Asbestos Contaminated sites in Western Australia - May 2009.

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received.

Where reported: 'Asbestos Detected': Asbestos detected by polarised light microscopy, including dispersion staining.
Where reported: 'No Asbestos Found': No Asbestos Found by polarised light microscopy, including dispersion staining.
Where reported: 'UMF Detected': Mineral fibres of unknown type detected by polarised light microscopy, including dispersion staining. Confirmation by another independent analytical technique may be necessary.

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

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-gb/environment-health-and-safety .

STATEMENT OF QA/QC PERFORMANCE

SE207494 R0

CLIENT DETAILS

Contact	Kate Warton
Client	EI AUSTRALIA
Address	SUITE 6.01 55 MILLER STREET PYRMONT NSW 2009
Telephone	61 2 95160722
Facsimile	(Not specified)
Email	Kate.Warton@eiaustralia.com.au
Project	**E24711.E10 22-32 Queen St Campbelltown**
Order Number	**E24711.E10**
Samples	9

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
SGS Reference	**SE207494 R0**
Date Received	15 Jun 2020
Date Reported	22 Jun 2020

COMMENTS

All the laboratory data for each environmental matrix was compared to SGS' stated Data Quality Objectives (DQO). Comments arising from the comparison were made and are reported below.

The data relating to sampling was taken from the Chain of Custody document.
This QA/QC Statement must be read in conjunction with the referenced Analytical Report.
The Statement and the Analytical Report must not be reproduced except in full.

All Data Quality Objectives were met (within the SGS Alexandria Environmental laboratory).

SAMPLE SUMMARY

HOLDING TIME SUMMARY

SE207494 R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

Fibre ID in bulk materials — Method: ME-(AU)-[ENV]AN602

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
A01	SE207494.001	LB202409	11 Jun 2020	15 Jun 2020	11 Jun 2021	22 Jun 2020	11 Jun 2021	22 Jun 2020
A02	SE207494.002	LB202409	11 Jun 2020	15 Jun 2020	11 Jun 2021	22 Jun 2020	11 Jun 2021	22 Jun 2020
A03	SE207494.003	LB202409	11 Jun 2020	15 Jun 2020	11 Jun 2021	22 Jun 2020	11 Jun 2021	22 Jun 2020
A04	SE207494.004	LB202409	11 Jun 2020	15 Jun 2020	11 Jun 2021	22 Jun 2020	11 Jun 2021	22 Jun 2020
A05	SE207494.005	LB202409	11 Jun 2020	15 Jun 2020	11 Jun 2021	22 Jun 2020	11 Jun 2021	22 Jun 2020
A06	SE207494.006	LB202409	11 Jun 2020	15 Jun 2020	11 Jun 2021	22 Jun 2020	11 Jun 2021	22 Jun 2020
A07	SE207494.007	LB202409	11 Jun 2020	15 Jun 2020	11 Jun 2021	22 Jun 2020	11 Jun 2021	22 Jun 2020
A08	SE207494.008	LB202409	11 Jun 2020	15 Jun 2020	11 Jun 2021	22 Jun 2020	11 Jun 2021	22 Jun 2020

Metals in Paint by ICPOES — Method: ME-(AU)-[ENV]AN065/AN320

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
P01	SE207494.009	LB202030	11 Jun 2020	15 Jun 2020	08 Dec 2020	16 Jun 2020	08 Dec 2020	16 Jun 2020

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

No surrogates were required for this job.

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Sample Number	Parameter	Units	LOR

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

No duplicates were required for this job.

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

No laboratory control standards were required for this job.

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub -sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

No matrix spikes were required for this job.

Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The original result is the analyte concentration of the matrix spike. The Duplicate result is the analyte concentration of the matrix spike duplicate.

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

No matrix spike duplicates were required for this job.

Samples analysed as received.

Solid samples expressed on a dry weight basis.

QC criteria are subject to internal review according to the SGS QA/QC plan and may be provided on request or alternatively can be found here: https://www.sgs.com.au/~/media/Local/Australia/Documents/Technical Documents/MP-AU-ENV-QU-022 QA QC Plan.pdf

*	NATA accreditation does not cover the performance of this service.
**	Indicative data, theoretical holding time exceeded.
-	Sample not analysed for this analyte.
IS	Insufficient sample for analysis.
LNR	Sample listed, but not received.
LOR	Limit of reporting.
QFH	QC result is above the upper tolerance.
QFL	QC result is below the lower tolerance.

①	At least 2 of 3 surrogates are within acceptance criteria.
②	RPD failed acceptance criteria due to sample heterogeneity.
③	Results less than 5 times LOR preclude acceptance criteria for RPD.
④	Recovery failed acceptance criteria due to matrix interference.
⑤	Recovery failed acceptance criteria due to the presence of significant concentration of analyte (i.e. the concentration of analyte exceeds the spike level).
⑥	LOR was raised due to sample matrix interference.
⑦	LOR was raised due to dilution of significantly high concentration of analyte in sample.
⑧	Reanalysis of sample in duplicate confirmed sample heterogeneity and inconsistency of results.
⑨	Recovery failed acceptance criteria due to sample heterogeneity.
⑩	LOR was raised due to high conductivity of the sample (required dilution).
†	Refer to relevant report comments for further information.