FOUNDATION EARTH SCIENCES

Hazardous Materials Assessment

Property Address

124-128, 132, 134-138, 3/140 Beamish Street & 16-18 Ninth Avenue Campsie NSW

Prepared for

J Group Pty Ltd

Date

April 2022

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Authorised		Benjamin Buckley-Director B.Env Sc., BSc (Forensics)	13/04/2022

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1.0 INTRODUCTION AND SCOPE

Foundation Earth Sciences (FES) was appointed by J Group Pty Ltd to conduct a Hazardous Materials Assessment of the properties located at 124-128, 132, 134-138, 3/140 Beamish Street & 16-18 Ninth Avenue Campsie NSW ("the site").

Refer to **Figure 1** - Site Location.

The site was visited on the 12th April 2022 by FES staff. All fieldwork and reporting were conducted in accordance the Workplace Health and Safety Act 2011, and WorkCover regulations.

The objectives of this assessment are to identify and, if possible, quantify any potential hazardous materials found at the site and determine if these materials present a potential health risk to people currently using the site or involved in the demolition of the site.

Our scope of works to undertake the project included:

- Conducting a site inspection to identify all areas of potential concern (such as roofing, insulation, switchboards, ventilation shafts, building materials, fire doors etc);
- Site photographs;
- Site sampling (if necessary);
- Laboratory analysis;
- Interpretation of results and findings; and
- Recommendations and final conclusions drawn from the assessment results.

2.0 SITE INFORMATION

2.1 Site Identification

Site Identifier	Site Details	
Site Location	124-128, 132, 134-138, 3/140 Beamish Street & 16-18 Ninth Avenue Campsie NSW	
Lot/DP	Lot 101 in DP739066, Lot 1 in DP575837, Lot 2 in DP4190 Lot 1 in DP4190, Lot 2 in DP176308, Lot 1 in DP176308	
Site Area (Approx.)	3900m2	
Local Government Area (LGA)	Canterbury-Bankstown	
Surrounding Land Uses	*North*	Ninth Avenue then Commercial/ Residential
	South	Campsie Street then Commercial
	East	Beamish Street then Commercial
	West	Commercial/ Residential

2.2 Site Description

The site is situated in a residential/ commercial area of the City of Canterbury-Bankstown municipality. The main features of the properties include the following:

- Four double storey commercial buildings of brick construct with metal roofs;
- Two single story commercial buildings of brick construct with metal roofs;
- Mixed material awnings along Beamish Street and Ninth Avenue

3.0 ASBESTOS

3.1 Background

Asbestos is the fibrous form of various mineral silicates, which belong to the Serpentine and Amphibole groups. The more significant species of asbestos in terms of health risks include chrysotile (white), crocidolite (blue), amosite (brown or grey). As a product, asbestos has a remarkable ability to resist heat and considerable resistance to acids, alkalines and other chemicals. It is also a very good non-conductor of electricity. Asbestos is found in a wide variety of materials which include insulation, roofing materials, floor tiling, cement products, resins and in many other building materials and structures.

Exposure to the asbestos dust will occur primarily during a disturbance of the material when dust is formed and dispersed as airborne contamination. Drilling, sawing, sanding, grinding and cracking of the materials will generally provide enough disturbances to create harmful dust.

3.2 Health Aspects and Exposure Standards

Inhalation of high concentrations of asbestos may result in asbestosis, a progressive scarring of lung tissue and lung cancer, or mesothelioma, a form of lung cancer. The destructive nature on lung tissues of asbestos fibres below 3 microns (3um) in diameter has been well documented, especially that of blue and brown forms of asbestos. Common latency periods for associated diseases to develop are within 10 to 50 years, which emphasizes the need to minimize potential exposure pathways and maximize control measures and monitoring procedures.

Any admissible exposure to airborne asbestos should be kept as low as achievable and in any case below the specified exposure standards. These standards are determined by the *National Commission for Occupational Exposures*. Below is a summary of the threshold limits for airborne concentrations measured as a time-weighted average (TWA) fibre concentration.

Table 1: Exposure Standards – TWA Fibre Concentration Limits

Asbestos Species	Concentration (fibres/mL)
Chrysotile	0.1
Crocidolite	0.1
Amosite	0.1
Other forms	0.1
Other mixtures of species	0.1

4.0 LEAD PAINT

4.1 Background

White lead (lead carbonate) was once the principal white pigment in paints for houses and public buildings. Many older Australian homes and buildings still contain lead paint, even though it may be covered with layers of more recent paint. It was used mainly on exterior surfaces and to a lesser extent on interior doors and architraves, especially in undercoats and primers where concentrations of up to 20% lead were commonly used.

4.2 Health Aspects and Exposure Standards

Lead in any form is toxic to humans when ingested and inhaled. Repeated inhalation or ingestion of lead paint particles may produce the cumulative effects of lead poisoning (plumbism).

The term “lead paint” in this survey refers to all paint that contains in excess of 1% lead by weight as defined by “Guide to Lead Paint Management – Part 2: Residential and Commercial Buildings [AS 4361.2 – 1998]”.

4.3 Management of Lead Paint

Confirmed lead containing paintwork should be managed according to the laboratory results attached to this report, the assessment of the paint condition found in the hazardous materials register, and in accordance with "Guide to Lead Paint Management – Part 2: Residential and Commercial Buildings [AS 4361.2 – 1998]".

The following skill levels are required based on the adopted management option:

- Painting contractor (Encapsulation, Overpaint & Simple Enclosure).
- Lead certified painting contractor (Paint removal, Encapsulation, Overpaint & Simple Enclosure).
- Certified lead abatement contractor (Replace components, Paint removal, Encapsulation, Overpaint & Simple Enclosure).
- Lead trained builder (Major enclosure & Replace components).

Waste produced by the removal of lead paint should be managed in accordance with "Guide to Lead Paint Management – Part 2: Residential and Commercial Buildings [AS 4361.2 – 1998]".

5.0 SAMPLING METHODOLOGY

This assessment involved a visual inspection of accessible and representative construction materials with confirmative sampling using a polarised microscope. Destructive sampling techniques were undertaken where practicable. The site was inspected for the presence of the following hazardous materials.

5.1 Asbestos

This component of the assessment was carried out in accordance with the guidelines documented in the *Code of Practice for the Management and Control of Asbestos in Workplaces* [NOHSC: 2018 (2005)]. A visual inspection targeted the areas of most concern such as floor tiles, guttering, associated piping, lagging around pipe work, cooling and insulation material, building materials, roofing, and sound proofing. Samples were taken from accessible locations suspected as containing asbestos, where destructive sampling was practical.

5.2 Synthetic Mineral Fibres (SMF)

This component broadly identifies SMF materials found or suspected of being present during the survey based on a visual assessment. A visual inspection targeted the areas of most concern such as piping, lagging around pipe work, cooling / insulation material, building materials, roofing, and sound proofing.

5.3 Polychlorinated Biphenyls (PCBs)

Where safe access could be gained, detailed information of capacitors in light fittings was noted for cross-referencing with the ANZECC Identification of PCB Containing Capacitors database – 1977. Due to the inherent hazard in accessing electrical components, or other reasons such as height restrictions, immovable equipment and furniture, light fittings may not be safely accessed. In these instances, comment is made on the likelihood of PCB-containing materials based upon age and appearance.

5.4 Lead Containing Paint

This component of the assessment was carried out in accordance with the guidelines documented in the "Guide to Lead Paint Management – Part 2: Residential and Commercial Buildings [AS 4361.2 – 1998]". A visual inspection targeted the areas of most concern such as peeling paint, door frames, and windowsills. Samples were taken from accessible locations suspected to contain lead paint, where destructive sampling was practical.

5.5 Lead Containing Dust

A visual inspection of areas of suspected lead-containing dust was conducted in accordance with AS4874-2000 *"Guide to the Investigation of Potentially Contaminated Soil and Deposited Dust as a Source of Lead Available to Humans"*.

5.6 Electrical Backboards

A visual assessment was conducted on the electrical backboards to check for hazardous materials. No sampling was undertaken on service access points as services were live during the inspection.

5.7 Inaccessible Areas

During the inspection the following several areas were inaccessible and therefore excluded from this report and hence the inspection was limited to those spaces available at the time of the inspection.

- The interior of the buildings;
- On the roof of the buildings;
- Within the rear lot/carpark &
- The awnings.

5.8 Sampling Identification

Samples were labelled in accordance with their type and locations and were submitted to a NATA accredited laboratory under chain of custody.

6.0 CONCLUSIONS AND RECOMMENDATIONS

6.1 Asbestos Materials

Through field examination and sampling, ***Asbestos materials were identified at the site***. Licensed removal is required for asbestos containing material. Caution should be taken during the demolition process.

If asbestos was identified refer to hazardous materials register and photos for asbestos containing materials and their locations.

6.2 Synthetic Mineral Fibres (SMF)

Confirmed SMF materials should be removed under controlled conditions prior to renovation or demolition works. Refer to hazardous materials register and site plan.

6.3 Polychlorinated Biphenyls (PCBs)

Confirmed fluorescent lights containing cadmium/PCB capacitors should be removed under controlled conditions by a licensed contractor prior to renovation or demolition works. Through field examination cadmium/PCB capacitors are expected to be present within the fluorescent lighting. A more detailed inspection and/or sample analysis requires a qualified electrician to isolate and de-energise the lights.

6.4 Chlorofluorocarbon (CFCs)

Refrigerants and air conditioning units should be removed under controlled conditions by a licensed contractor prior to renovation or demolition works. Through field examination vapour compression cycles containing CFCs are expected to be present within the refrigerates and air conditioning units. A more detailed inspection and/or laboratory analysis would require a qualified refrigeration specialist who holds a Refrigerant Handling Licence to assess the vapour compression cycle.

6.5 Paint Containing Lead

Through field examination and sampling, ***paint containing an excess of 1% lead was not identified.*** Confirmed paint containing lead should be managed in accordance with "Guide to Lead Paint Management – Part 2: Residential and Commercial Buildings [AS 4361.2 – 1998]"

If paint containing lead was identified refer to hazardous materials register and photos for sample locations.

6.6 Dust Containing Lead

Confirmed dust containing lead should be removed under controlled conditions prior to renovation or demolition works in accordance with "Guide to Lead Paint Management – Part 2: Residential and Commercial Buildings [AS 4361.2 – 1998]".

General

In conclusion, our findings have identified for a hazardous materials survey (as per the materials register below) to be conducted at the property and have determined that the site, as it currently stands, that asbestos/cadmium/lead/PCB/chemical was identified to be present within the site. Further delineation is required when access to the inaccessible areas becomes available prior to demolition. Only when the identified buildings are to be renovated or demolished do all materials containing asbestos need to be appropriately removed.

We would be pleased to provide further information on any aspects of this report.

For and on behalf of

Foundation Earth Sciences

Ben Buckley

Ben Buckley

Principal Environmental Forensic Scientist

Asbestos Assessor Licence #-LAA001012

LIMITATIONS

Whilst to the best of our knowledge, information contained in this report is accurate at the date of issue, although subsurface conditions, including groundwater levels and contaminant concentrations, can change in a limited time. This should be borne in mind if the report is used after a protracted delay.

There is always some disparity in subsurface conditions across a site that cannot be fully defined by investigation. Hence it is unlikely that measurements and values obtained from sampling and testing during environmental works carried out at a site will characterise the extremes of conditions that exist within the site.

There is no investigation that is thorough enough to preclude the presence of material that presently or in the future, may be considered hazardous at the site. Since regulatory criteria are constantly changing, concentrations of contaminants presently considered low may, in the future, fall under different regulatory standards that require remediation.

Opinions are judgements, which are based on our understanding and interpretation of current regulatory standards and should not be construed as legal opinions. Previous testing locations are excluded from this report and should be managed in accordance with the previous soil classifications undertaken.

Areas that were inaccessible (floating ceilings and wall cavities, below floorboards, occupied tenancies, awnings etc) have not been assessed and demolition should proceed with care in inaccessible areas. Further assessment should be undertaken immediately if indicators of contamination are identified.

REFERENCES

- NSW Environment Protection Authority (July 1998), "Lead Safe, A renovators guide to the dangers of lead".
- NSW Environment Protection Authority (February 1998), "Lead Safe, A guide to keeping your family safe from lead".
- NSW Environment Protection Authority and Planning NSW (May 2003) "Managing lead contamination in home maintenance, renovation and demolition practices, A Guide for Councils"
- Standards Australia AS 4361.2 - 1998 "Guide to Lead Paint Management, Part 2: Residential and Commercial Buildings".
- NSW Environment Protection Authority and NSW Health (1992) "NSW government, Lead issues paper, NSW Environment Protection Authority".
- Enhealth (2005) *Management of asbestos in the non-occupational environment*
- City Of Sydney *Asbestos policy*
- NOHSC (2005) *Code of practice for the safe removal of asbestos*
- NOHSC (2005) *Code of Practice for the Management and Control of Asbestos in Workplaces*
- WorkCover NSW (2008) *Your guide to working with asbestos* (available from www.workcover.nsw.gov.au)
- NSW Occupational Health and Safety Regulation 2011

HAZARDOUS MATERIALS REGISTER

18-32A Darlinghurst Road, Potts Point NSW

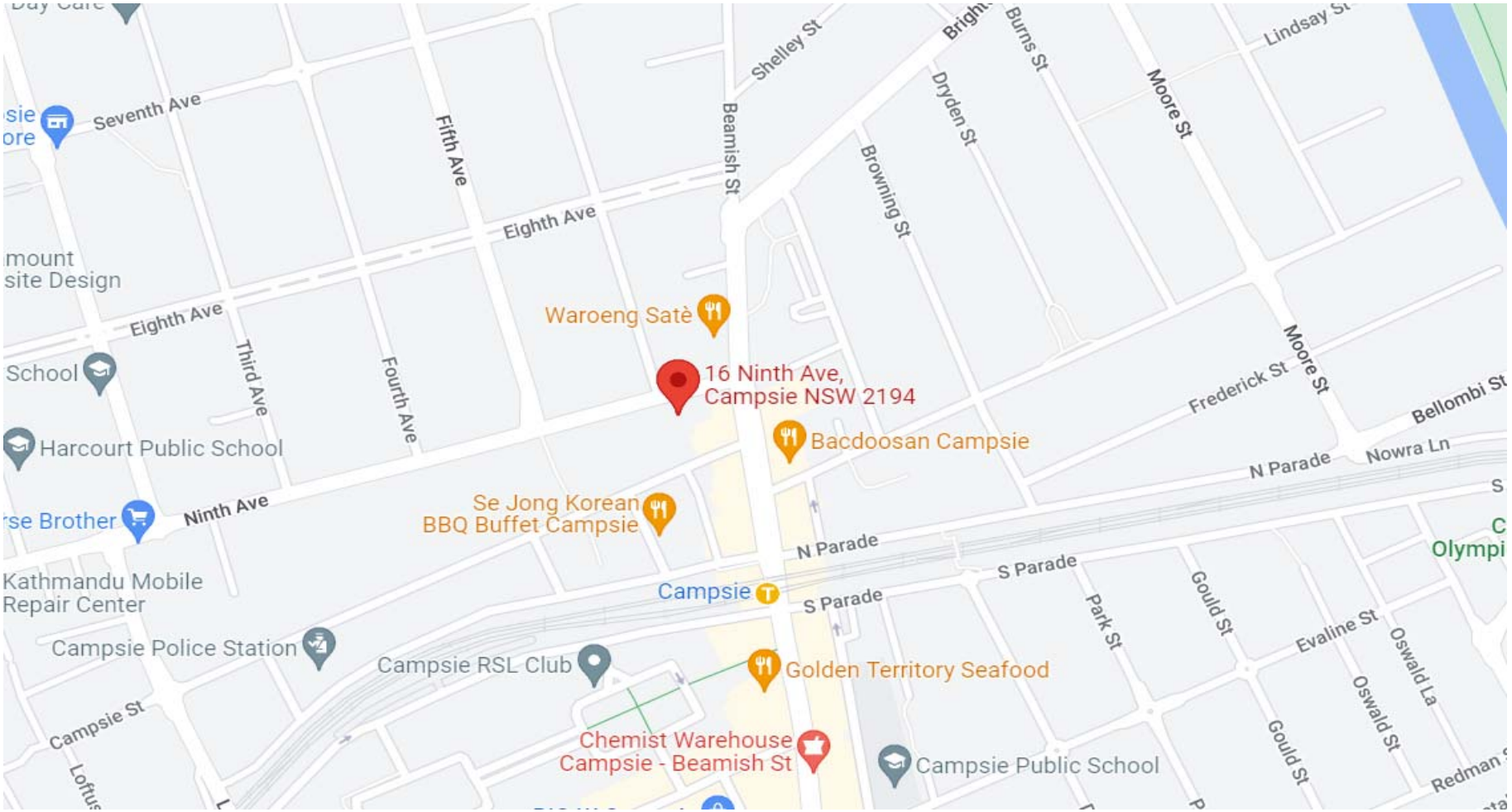
Sample	Location	Surface	Material	Result	Priority	Friable/ Non-Friable	Accessibility	Comment	Approx. Qty
N/A	Throughout the site.	Switch board backing. Auxiliary power boards.	Bituminous panels.	**All bituminous panels potentially contain asbestos.**	Medium	Non-Friable	Not accessible while power is live.	**Licensed removal prior to demolition.**	Unknown
N/A	Throughout the site.	Fire door cores.	Internal packing.	**Interior cores potentially contain asbestos.**	Medium	Friable when door is damaged.	Not accessible.	**Licensed removal prior to demolition.**	Unknown
N/A	132 Beamish Street.	Eves on front and side of building.	Fibrous cement sheeting. Fair condition.	**Asbestos assumed present.**	Medium	Non-Friable	Not accessible without equipment	**Licensed removal prior to demolition.**	Unknown
N/A	124-128 Beamish Street	Eves underneath awning.	Fibrous cement sheeting. Fair condition.	**Asbestos assumed present.**	Medium	Non-Friable	Not accessible without equipment	**Licensed removal prior to demolition.**	Unknown

Notes:

- Only when the identified buildings are to be renovated or demolished do all materials containing asbestos need to be appropriately removed.
- All Asbestos removal works shall be undertaken by licensed and WorkCover approved Asbestos Removalists
- Removal of Asbestos containing material shall be conducted in compliance with the requirements of the Workplace Health and Safety Regulations, 1997.
- Asbestos detected.
- Synthetic mineral fibres detected.
- Lead in paint >1%

Note: although the information provided by an environmental assessment could reduce exposure to risks, no assessment, however diligently conducted, can eliminate them. It must be noted that these findings are professional findings and have limitations. Even a rigorous professional assessment may fail to detect all hazardous material on a site. Hazardous materials may be present in areas that were not surveyed or sampled.

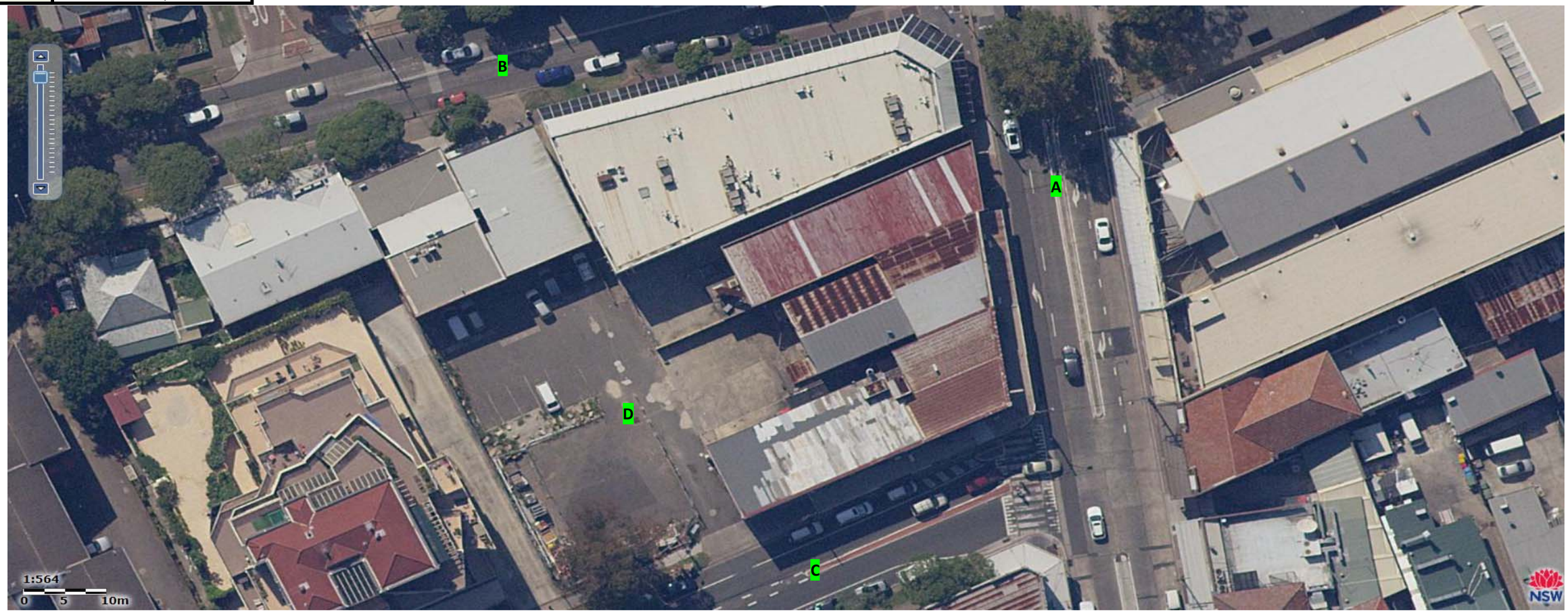
FIGURE 1: SITE LOCATION



Key Site Location	FOUNDATION EARTH SCIENCES	**DRAWN** DG	**SITE LOCATION**
		Figure 1	Hazardous Materials Assessment
		Job # E2803	124-128, 132, 134-138, 3/140 Beamish Street & 16-18 Ninth Avenue Campsie NSW

FIGURE 2: SITE PLAN

Feature No	Details
A	Beamish Street
B	Ninth Avenue
C	Campsie Street
D	Lot/Car park



Key

Site Location

FOUNDATION EARTH SCIENCES

DRAWN DG	**Site Features Plan**
Figure 2	Hazardous Materials Assessment
Job # E2803	124-128, 132, 134-138, 3/140 Beamish Street & 16-18 Ninth Avenue Campsie NSW