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Report on
Pre-Demolition Hazardous Material Survey - Buildings
3, 6, 7, 8 and 9

Proposed Aged Care, Closebourne Retirement Living
Morpeth Road, Morpeth

Prepared for
Lend Lease (Retirement Living)

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The undersigned, on behalf of Douglas Partners Pty Ltd, confirm that this document and all attached drawings, logs and test results have been checked and reviewed for errors, omissions and inaccuracies.

Signature	Date
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Executive Summary

Douglas Partners Pty Ltd (DP) conducted a sampling and identification survey (pre-demolition survey) for five existing buildings (Buildings 3, 6, 7, 8 and 9) located within the Closebourne Village, Morpeth Road, Morpeth. The survey was undertaken to facilitate the identification and location of asbestos-containing materials (ACM) and other hazardous materials (Hazmat Survey) to enable their removal prior to proposed demolition works. It involved collecting representative bulk samples from suspected ACM and recording the type, extent and location of these and other hazardous materials throughout the buildings. This type of survey has involved intrusive or destructive inspection techniques in an attempt to locate potential concealed ACM.

From the site survey and laboratory analysis results a Register of ACM and other hazardous materials has been produced with reference to the requirements of the Work Health and Safety Regulation 2011 (NSW) and other relevant legislation.

Asbestos-containing materials were identified or suspected during the survey. No friable ACM were identified in the areas surveyed. Details of the material assessments are located within the register in Appendix A.

The surveyor was unable to gain access to the following areas:

Location	Non-Accessed Area	Reason
Buildings 3 and 6	No access to internal roof space	Height restriction / limited access points and confined space
Building 3	Northern fascia	Height restrictions

All areas where access was not possible must be presumed to contain asbestos until proven otherwise. See also Limitations in Section 6.

The asbestos information in this report is supplied on the understanding that the area surveyed is subject to potential demolition works, and that all identified asbestos and other hazardous materials will be removed prior to, or as part of these works. Any asbestos or other hazardous materials remaining in situ at the conclusion of the project will need to be detailed in the site specific Register and Asbestos Management Plan as required by the Work, Health and Safety Regulation 2011 (NSW).

The client should be made aware of the limitations of a survey being conducted in a destructive manner and is referred to in Section 6 – Limitations. This report should be read in its entirety and may not be reproduced other than in full, except with the prior written approval of DP.

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Report on Pre-Demolition Hazardous Material Survey - Buildings 3, 6, 7, 8 and 9

Proposed Aged Care, Closebourne Retirement Living Morpeth Road, Morpeth

1. Introduction

This report presents the results of Pre-Demolition Hazardous Material survey a undertaken by Michael Gawn and Paulo Sebastian of Douglas Partners Pty Ltd (DP) on several existing buildings located within the area of the proposed Aged Care Facility at Closebourne Village, Morpeth Road, Morpeth. The survey was undertaken on between 15 April 2016 to 25 May 2016. The survey was commissioned in an email dated 1 April 2016 by Bruce Gould of Lend Lease (Retirement Living) and was undertaken in accordance with DP proposal NCL160058(Rev1) dated 9 March 2016.

The hazardous building materials survey was conducted on five existing buildings (Buildings 3, 6, 7, 8 and 9) are shown in Figure 1 below.



Figure 1: Aerial image of site, showing location of buildings subject to survey (sourced from Google Earth)

The survey was conducted with reference to current regulations for proposed demolition of the nominated buildings. The assessment was conducted on the basis of the condition of the materials at the time of the survey.

The survey was undertaken to identify and record the type, location and extent of hazardous building materials and involved collecting representative bulk samples from suspected ACM, and potential lead-containing paint systems throughout the building.

A Certificate of Analysis for bulk samples obtained during the survey is included within Appendix C of this report.

2. Scope of Work

The scope of the hazardous building materials survey comprised:

- A building survey to identify hazardous building materials in the accessible areas of the subject building. Hazardous building materials (HBM) include asbestos-containing building materials (ACM), synthetic mineral fibre (SMF) products, lead-containing paint (LCP) and polychlorinated biphenyl (PCB) contained in capacitors in fluorescent light fittings;
- Where accessible, collection of samples of building materials suspected of or commonly known to contain hazardous material (e.g. asbestos materials, potential lead-containing paint). SMF installations and PCBs were identified by visual assessment;
- Submit building material samples to a NATA accredited laboratory for analysis, document the results and provide photographs of positive findings; and
- Provision of an asbestos Register with reference to the requirements of WHS Regulation 2011 (NSW) and Hazardous Building Materials Assessment Report.

No survey inspection can be guaranteed to locate all asbestos and other hazardous materials without extensive destruction of the building and therefore this assessment cannot be regarded as absolute.

Planned or future demolition and or renovation to site structures may expose situations which were concealed or otherwise impractical to access during this assessment. The client should be aware that asbestos ceilings and panels etc. may conceal further ACM, for example asbestos insulated duct or lagged pipework. Removal of asbestos products to identify concealed ACM requires additional controlled conditions and is beyond the scope of a normally executed survey.

No sub-surface or soil investigations were undertaken and all sub-surface areas remain outside of the scope of this survey.

3. Site Description

The site is located at on Raworth Road, Morpeth (Figure 1) and is owned by Lend Lease Retirement Living.

A description of each of the four buildings is provided in Sections 3.1 to 3.5 below.

3.1 Building 3

Building 3 is known as the “Bishop Tyrrell Lodge” and is a single storey building in a roughly horse-shoe arrangement (refer Figure 1). It is understood to have been constructed in 1982.



Figure 2: View of northern frontage of Building 3

The building was observed to comprise the following materials:

- Brick exterior with metal roofing;
- ACM eaves surrounding the building with metal guttering;
- Combination of brick and plasterboard internal walls and plasterboard ceiling;
- Ceramic tiling bathroom areas;
- Vinyl sheet laminate comprising synthetic mineral fibre (SMF) in kitchenette and foyer flooring;
- Carpeted flooring with SMF underlay over a concrete base;
- Timber / Chipboard doors, timber window framing;
- Several large hot water systems with white cement flues assumed to comprise ACM;
- SMF lagging surrounding pipe work and sarking insulation within the roof void; and
- Fluorescent lighting.

3.2 Building 6

Building 6 is known as the “Assembly Hall” and is a single storey rectangular building (refer Figure 3). It is understood to have been constructed in 1946.



Figure 3: Building 6, looking west

The layout of the building is shown on Drawing 1-2 and includes a main hall with small stage, two seminar rooms and a storage room.

The building was observed to comprise the following materials:

- Timber clad building with a timber and steel frame;
- ACM eaves surrounding the building with metal guttering;
- Combination of plasterboard (some horse hair plaster), Masonite and paper overlaid wood panelling internal walls and plasterboard ceiling;
- A combination of carpet, vinyl sheet laminate (comprising SMF) and timber floorboards;
- Timber / Chipboard doors, timber window framing;
- Corrugated iron roof sheeting underlain by corrugated cement sheeting;
- Large hot water system;
- SMF lagging surrounding pipe work and sarking insulation within the roof void; and
- Fluorescent lighting.

3.3 Building 7

Building 7 is known as the “Cintra House” and has three main components (refer Figure 4), built at different times, as follows:

- Toilet block, built around 1940;
- Centra House, built in 1960; and
- Workshop, built in 1980.



Figure 4: View along wall of Toilet Block



Figure 5: Interior of workshop associated with Building 7

The layout of the building is shown on Drawing 1-3 and includes four main rooms in Centra House, semi-detached toilets and a separate workshop shed.

The building was observed to comprise the following materials:

- Cintra house and the toilets are a combination of corrugated iron and timber cladding;
- Metal guttering surrounds the buildings;
- Combination of timber panelling and Masonite internal walls;
- A combination of carpet and timber board flooring;
- Cement sheeting ceilings in toilet block;
- Timber / Chipboard doors, timber window framing;
- Corrugated iron roof sheeting;
- Corrugated iron walls and roofing for the shed; and
- Fluorescent lighting.

3.4 Building 8

Building 8 is known as the “Belle Vue House” and is understood to have been constructed in 1955 (refer Figure 6).



Figure 6: Building 8, looking south

The building is a roughly rectangular, single storey building. It contains eight bedrooms (Rooms 29 to 36) and two separate bathrooms.

The building was observed to comprise the following materials:

- Combination of timber and vinyl cladding on exterior walls;
- Corrugated iron roofing;
- Metal guttering surrounds the buildings;
- Combination of plasterboard (some horse hair plaster) on interior walls;
- Plasterboard ceiling;
- A combination of carpet and timber board flooring;
- Vinyl flooring over timber in toilets;
- Cement sheeting in bathrooms;

- Timber / chipboard doors, timber window framing;
- Cement sheeting for manhole to roof space;
- SMF insulation in roof space; and
- Fluorescent lighting.

The layout of the building is shown on Drawing 1-2 and includes a main hall with small stage, two seminar rooms and a storage room.

3.5 Building 9

Building 9 is known as the “Tillimby House” and is understood to have been constructed in 1957 (refer Figure 7).



Figure 7: Building 9, looking east

The building was observed to comprise the following materials:

- Timber clad building (with some hardi-plank areas) with a timber frame;
- ACM eaves surrounding the building;

- Combination of plasterboard, masonite and villaboard internal walls and plasterboard ceiling;
- Generally carpet flooring overlying timber floorboards;
- Timber / chipboard doors, timber window framing;
- Corrugated iron roof sheeting;
- Several large hot water systems in roof space; and
- Fluorescent lighting.

4. Field Work Methodology

4.1 Inspection Methods

The DP competent person undertook a systematic survey of the nominated areas with a view to identifying the type, location and extent of asbestos and other hazardous building materials prior to the proposed demolition works at the site. Hazardous building materials (HBM) include asbestos-containing building materials (ACM), synthetic mineral fibre (SMF) products, lead-containing paint (LCP) and polychlorinated biphenyl (PCB) contained in capacitors in fluorescent light fittings.

In order to expose potential concealed construction materials, survey techniques may have involved the use of destructive techniques and the opening up of holes in fixtures or fittings in an intrusive manner to facilitate sample collection. DP is not liable for any reinstatement or associated costs to make good. These techniques are employed on the understanding that the area is to be refurbished or demolished and any hazardous materials identified are removed prior to the building being reoccupied.

Where the surveyor encountered access restrictions during the survey, these situations were documented and reported.

4.2 Sampling Methodology

All sampling was undertaken with reference to DP's field procedures HAZSAMP. Asbestos bulk samples were obtained using fibre suppressant techniques in order to minimise fibre release and breaking small portions from the bulk of the suspected ACM using hand tools. Lead-paint samples were taken by scraping off paint from the suspect area. The sampling tools were decontaminated prior to collecting each sample in accordance with DP's field procedures HAZDEC. The collected samples were recorded, placed in sealed, labelled plastic bags and sent to a laboratory NATA accredited to ISO / IEC 17025 for the scientific identification methods of analysis employed. For similar or repetitive building elements, a representative bulk sampling protocol has been adopted following visual examination and assessment.

SMF materials were identified by visual inspection only. Serial numbers of fluorescent light capacitors were recorded only where it is safe to do so and the details of the capacitor identified within is checked against the 1997 ANZECC register for Identification of PCB-Containing Capacitors.

4.3 Analytical Methods

The asbestos materials were qualitatively identified in the laboratory by polarised light microscopy (PLM) in conjunction with dispersion staining in accordance with AS: 4964-2004 Method for the qualitative identification of asbestos in bulk samples. The testing of paint samples for lead content involved the quantitative analysis of lead following sample digestion using ICP-AES/MS, ICP-OES and or CV/AAS. All laboratory analytical methods employed are NATA endorsed.

The Certificate of Analysis is provided in Appendix C.

5. Recommendations Summary

Refer to Appendix A for the Asbestos Materials Register and other hazardous materials register for recommendations, comments and suggested actions. The locations referred to in the asbestos and other hazardous materials register are based on annotated Drawings 1-1 to 1-5 in Appendix D.

5.1 Asbestos-containing Materials Identified

Prior to any demolition, decommissioning, or refurbishment, ACM liable or likely to be disturbed by those works should be removed in accordance with the Code of Practice: How to Safely Remove Asbestos [Safe Work Australia (2011)]. The transport and disposal of asbestos waste is regulated by the EPA. According to the Waste Classification Guidelines, asbestos waste is considered Special Waste and has unique regulatory requirements. All asbestos waste must be legally disposed of at an appropriately licensed waste disposal facility and records must be kept of disposal i.e. waste dockets or receipts.

5.1.1 Friable and Bonded Asbestos

ACM are referred to as either friable or bonded. Friable ACM exhibits a greater risk to human health as fibres are released upon minimal disturbance.

Friable asbestos is in the form of a powder, or can be crumbled, pulverized or reduced to powder by hand pressure when dry. Friable asbestos includes materials such as: sprayed insulation, pipe or cylinder insulation, low density boards, woven textiles, millboard, paper and gaskets. These products can release fibres with only minimal disturbance.

Bonded asbestos products are ones in which the asbestos fibres are bound within the matrix of the material. Bonded asbestos is difficult to damage or cause the release of fibres by hand and includes materials such as asbestos cement products (fibre cement or 'fibro'), vinyl floor tiles, linoleum, mastic and 'zelemite' electrical backing boards. However, bonded ACM that have been subjected to weathering, physical damage, water damage, fire or other conditions may present exposed fibre bundles or loose fibres which could be released upon disturbance.

The asbestos information contained within this report is insufficient to meet the requirement for risk assessment for a management plan. Any asbestos or other hazardous materials remaining *in situ* at the conclusion of the demolition project will need to be detailed in the site asbestos and other hazardous materials register and management plan as required by the Work, Health and Safety Regulation 2011 (NSW) and detailed in the Code of Practice: How to Manage and Control Asbestos in the Workplace [Safe Work Australia (2011)].

5.2 Other Hazardous Materials

5.2.1 Synthetic Mineral Fibre

Prior to any demolition, decommissioning, or refurbishment, synthetic mineral fibre materials liable or likely to be disturbed by those works should be removed in accordance with the Code of Practice for the Safe Use of Synthetic Mineral Fibres [NOHSC:2006 (1990)]. SMF waste must be disposed of in accordance with EPA and local guidelines at a licensed land fill facility.

Loose or bonded SMF that has severely deteriorated has the potential of becoming airborne. Health effects that may occur with exposure to certain SMF materials include: irritation of the skin, eyes and upper respiratory tract.

5.2.2 Lead-based paint

The selection of the most appropriate removal control measures should be determined from risk assessments and detailed knowledge of the workplace and proposed activities. Removal is to be undertaken prior to any demolition, decommissioning, or refurbishment, in accordance with AS 4361.2 - 1998 Guide to lead paint management, Part 2: Residential and commercial buildings¹. Disposal of waste contaminated with lead (including lead paint waste) should be undertaken according to DECCW's Waste Classification Guidelines, Part 1 Classifying Waste (2009).

5.2.3 PCBs

All capacitors containing or suspected as containing PCB should be removed by a specialist electrical contractor prior to any demolition, decommissioning, or refurbishment, in accordance with the Code of Practice for the safe handling of equipment containing Polychlorinated Biphenyl (PCB) Electrical Contractors' Association of Australia (1993). PCB material and waste must be transported in accordance with the Australian Dangerous Goods Code, EPA guidelines, Chemical Control Order (CCO 1997) and other applicable legislative requirements. PCB waste must be legally disposed of or treated at an appropriately licensed waste disposal facility and records kept of disposal i.e. waste dockets or receipts.

Should any further suspect ACM or other hazardous materials become evident during demolition, decommissioning or refurbishment works, then works should stop in that area and the suspect material be inspected by a competent person.

6. Limitations

Douglas Partners Pty Ltd (DP) has prepared this report for a project at Closebourne Village, located on Raworth Road, Morpeth with reference to DP's proposal NCL160058(Rev1) dated 9 March 2016 and acceptance received from Mr Bruce Gould of Lend Lease Retirement Living. The work was carried out under DP's Conditions of Engagement. The report is provided for the exclusive use of Lend Lease Retirement Living. It should not be used by or relied upon for other projects or purposes on the same or other site or by a third party. Any party so relying upon this report beyond its exclusive use and purpose as stated above, and without the express written consent of DP, does so entirely at its own risk and without recourse to DP for any loss or damage. In preparing this report DP has necessarily relied upon information provided by the client and / or their agents.

The results provided in the report are indicative of the conditions observed on the date of inspection. Changes may occur after DP's inspection and field testing has been completed. Whilst the surveyors make every reasonable effort, DP cannot guarantee that every ACM has been identified and survey results are definitive. Some ACM could be present in the building that may only be discovered by extensive invasion of structures, or when the building is subject to demolition or major refurbishment works.

DP's advice is based upon the conditions encountered during this investigation and by the scope and feasibility of the investigations based on accessibility and other limitations. The accuracy of the advice provided by DP in this report may be limited by inaccessible areas and differing conditions between observed locations. The advice may also be limited by budget constraints imposed by others and the scope of works undertaken constrained as a result, or may have been limited by site accessibility. This report must be read in conjunction with all of the attached and should be kept in its entirety without separation of individual pages or sections. DP cannot be held responsible for interpretations or conclusions made by others unless they are supported by an expressed statement, interpretation, outcome or conclusion stated in this report.

The scope of the survey was to identify reasonably accessible ACM. Reasonably accessible does not extend to searching for concealed ACM within concrete encased structural beams or beneath concrete floors, behind other ACM, 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 ACM was used in the construction of buildings, some ACM may only be detected during the course of subsequent demolition.

The sampling regime is dictated by the building nature. Sufficient representative bulk samples were taken throughout the building i.e. one like sample per consistent material type, situation or item. It is advisable to assume that materials similar to those positively identified as asbestos also contain asbestos until proven to be otherwise. It should not automatically be assumed 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. 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 small length or diameter of asbestos fibres present in the material, or attributed to the fact that very fine fibres have been dispersed individually throughout the material.

Any areas within the scope of the survey but not described within the body of the report or in the asbestos and other hazardous materials register should be regarded by the client as not having been surveyed, and thus may potentially contain ACM. A competent person should assess such areas before any work affecting them is carried out.

- It must be assumed that building materials visually assessed as asbestos contain amphibole asbestos, until sampled and laboratory analysis proves otherwise. All areas where access was not possible must also be assumed to contain asbestos until proven otherwise. Subsurface drains, pipes and formwork or surrounds may be constructed of asbestos cement but subsurface areas were not accessed. Any subsurface pipes, particularly those constructed of cement, should be assumed to contain asbestos until otherwise assessed;
- This survey does not constitute an environmental site investigation (assessment) as may be envisaged under the provisions of the Contaminated Land Management Act, 1997. Testing of soil is recommended under NEPM (2013) to ensure that the site is suitable for the proposed land use.

Please note the following limitations and restrictions to specific installations and locations that are commonly found during surveys of this nature. Even if safe access can be provided through consultation with the client, this survey and report may not include the following areas:

- **Risers, ceiling, floor, 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 or structural elements** - these will not be penetrated if doing so will damage the stability of the building;
- **Roofs and external areas** - these will only be inspected if safe access can be achieved;
- **Confined spaces** - these will only be inspected if safe access can be achieved;
- **Restricted access** - areas subject to restricted or specialist access will not be inspected unless prior arrangements have been made through the client within the scope of the survey;
- **Lifts / lift shafts** – these will not be inspected for safety reasons unless a lift engineer accompanies the surveyor;
- **Live plant or electrical installations** - live electrical installations including fuse boxes, electrical control cabinets, distribution panels etc. are not routinely inspected 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;
- **Boilers** - may contain asbestos internally, or conceal further ACM, which are not accessible until the boiler is dismantled. Note: Where a bulk sample is obtained from a non-dismantled boiler it should not be regarded as definitive of all materials contained within the boiler's structure;
- **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; and
- **Safes** - the walls of some safes cannot be penetrated even where access arrangements have been made.

The recommendations and conclusions 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 industry best practices.

7. Legislation and References

- Work Health and Safety Act and Regulations 2011 (Commonwealth, NSW, ACT & QLD).

Asbestos

- Code of Practice: How to Manage and Control Asbestos in the Workplace [Safe Work Australia (2011)];
- Code of Practice: How to Safely Remove Asbestos [Safe Work Australia (2011)];
- Code of Practice for the Management and Control of Asbestos in Workplaces [NOHSC: 2018 (2005)];
- Code of Practice for the Safe Removal of Asbestos, [NOHSC: 2002 (2005)];
- AS 4964 – 2004 “Australian Standard™ Method for the qualitative identification of asbestos in bulk samples”;
- Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres 2nd Edition, [NOHSC:3003 (2005)];
- Demolition Work Code of Practice [WorkCover NSW (2014)];
- AS 2601 - 2001 “Australian Standard™ The Demolition of Structures, Section 1.6”;
- Health and Safety Laboratory UK – HSG 264 Asbestos The Survey Guide 2010;
- Health and Safety Laboratory UK - Methods for the Determination of Hazardous Substances (MDHS) 100 Surveying, sampling and assessment of asbestos-containing materials 2001; and
- Health and Safety Laboratory UK - HSG 227 A Comprehensive Guide to Managing Asbestos in Premises 2002.

SMF

- National Standard for Synthetic Mineral Fibres [NOHSC: 1004 (1990)];
- Code of Practice for the Safe Use of Synthetic Mineral Fibres [NOHSC: 2006 (1990)];
- “Position Paper on Synthetic Mineral Fibres (SMF) & Occupational Health Issues“, AIOH including exposure Standards Committee 2011; and
- “Industry Code of Practice for the Safe Use of Glass Wool and Rock Wool Products“, jointly developed by AMNWU, CFMEU, CEPU and FARIMA, 2003.

Lead in Paint

- AS 4361.2 - 1998 “Australian Standard™ Guide to lead paint management, Part 2: Residential and commercial buildings”;

- AS 4361.1—1995 “Australian Standard™ Guide to lead paint management, Part 1: Industrial applications”;
- National Code of Practice for the Control and Safe Use of Inorganic Lead at Work [NOHSC: 2015 (1994)];
- AS 4874 - 2000 “Australian Standard™ Guide to the investigation of potentially contaminated soil and deposited dust as source of lead available to humans”;
- ‘Standard for the Uniform Scheduling of Medicines and Poisons No. 3’, National Health and Medical Research Council (NHMRC), Poisons Standard 2012; and
- AS 3640 - 2009 “Australian Standard™ Workplace Atmospheres Method for Sampling and Gravimetric Determination of Inhalable Dust”.

PCBs

- Identification of PCB-containing capacitors [(ANZECC) 1997];
- Polychlorinated Biphenyls Management Plan, [(ANZECC) 1999 revised 2003];
- Code of Practice for the safe handling of equipment containing Polychlorinated Biphenyl (PCB) Electrical Contractors’ Association of Australia, 1993; and
- Polychlorinated Biphenyl (PCB) Chemical Control Order 1997.
- **Approved Criteria for Classifying Hazardous Substances, [NOHSC: 1008 (2004)].**
- DECCW (2009) ‘Waste Classification Guidelines, Part 1: Classifying Waste’.

Douglas Partners Pty Ltd

Appendix A

Asbestos and
Other Hazardous Materials Register

Asbestos Materials Register – Building 3

For Action Classification, Material Descriptions and Register Terminology please refer to GLOSSARY.

Client:	Lend Lease Retirement Living	Assessment by:	Paulo Sebastian
Site location:	Building 3, Bishop Tyrell Lodge Closebourne Village, Raworth Road, Morpeth	Assessment date:	12 April 2016

Location Description	Sample No	Photo No	Asbestos Type	Friability Status	Product Type	Extent	Recommendation (A1 - A4)*	Comments / Action
Building 3 – Bishop Tyrell Lodge								
Fibrous Cement Sheet Eaves	B3/A3	1	Chrysotile	Bonded	Fibrous Cement Sheet	~225 m ²	A1	Remove prior to any demolition or refurbishment works that may disturb the installation. Should the material not be affected by the works, leave in-situ, affix asbestos warning labels, manage and re-inspect.
Cement Flue Pipes – Hot Water System	Visual Assumed	2	Not Known	Bonded	Cement Pipe	~12m	A1	Remove prior to any demolition or refurbishment works that may disturb the installation. Should the material not be affected by the works, leave in-situ, affix asbestos warning labels, manage and re-inspect.

Other Hazardous Materials Register – Building 3

Lead Paint

Location and description	Sample ID	% Lead	Photo No.	Recommendation
Ceiling - White Interior Paint	B3/P1	<0.05	-	<1.0% Not classified as lead based paint.
Interior – Beige Wall Paint	B3/P2	<0.05	-	<1.0% Not classified as lead based paint.
Lead Flashing – Vent Pipe joins	Visual Assumed	Assume positive	3	Remove during demolition without discharge to the environment.

Synthetic Mineral Fibres (SMF)

Location and description	Sample ID	Photo No.	Friability	Recommendation
Foyer and Kitchenette flooring – Beige vinyl laminate sheeting	B3 /A1	4	Bonded	Remove prior to any demolition or refurbishment works that may disturb the material. Should the material not be affected by the works, leave in-situ, affix asbestos warning labels, manage and re-inspect.
Carpet Underlay under (entire floor area ~700m ²).	Visual observation	5	Friable	Remove prior to major demolition/refurbishment works. Should the material not be affected by the proposed works, leave and maintain in good condition.
Roof void – Brown fiber lagging around pipe	Visual observation	6	Friable	Remove prior to any demolition or refurbishment works that may disturb the material. Should the material not be affected by the works, leave in-situ, affix asbestos warning labels, manage and re-inspect.
Sarking (entire roof area ~700m ²). insulation lining under roof	Visual Assumed	7	Bonded	Remove prior to any demolition or refurbishment works that may disturb the material. Should the material not be affected by the works, leave in-situ, affix asbestos warning labels, manage and re-inspect.
SMF beneath metal cladding of hot water system	Visual Assumed	2	Friable	Remove prior to any demolition or refurbishment works that may disturb the material. Should the material not be affected by the works, leave in-situ, affix asbestos warning labels, manage and re-inspect.

Asbestos Materials Register – Building 6

For Action Classification, Material Descriptions and Register Terminology please refer to GLOSSARY.

Client:	Lend Lease Retirement Living	Assessment by:	Michael Gawn
Site location:	Building 6, Closebourne Village, Raworth Road, Morpeth	Assessment date:	27 April 2016

Location Description	Sample No	Photo No	Asbestos Type	Friability Status	Product Type	Extent	Recommendation (A1 - A4)*	Comments / Action
Building 6								
External eaves around building	B6A1	8	Chrysotile Amosite Crocidolite	Bonded	Cement Sheet	~30m ²	A1	Remove prior to any demolition or refurbishment works that may disturb the installation. Should the material not be affected by the works, leave in-situ, affix asbestos warning labels, manage and re-inspect.
Corrugated cement roofing under corrugated iron	Assumed	9	Not known	Bonded	Cement Sheet	~130m ²	A1	Remove prior to any demolition or refurbishment works that may disturb the installation. Should the material not be affected by the works, leave in-situ, affix asbestos warning labels, manage and re-inspect.

Other Hazardous Materials Register – Building 6

Lead Paint and Lead

Location and description	Sample ID	% Lead	Photo No.	Recommendation
Building 6				
Heritage Green Paint on windows/doors/sills	B6P1	0.3	9	<1.0% Not classified as lead based paint.
Beige paint on external walls	B6P2	4.0	9	Remove during demolition without discharge to the environment.

Polychlorinated Biphenyls (PCB)

Location and description	Sample ID	Photo No	Recommendation
Fluorescent light fittings	Visual observation	-	-

Asbestos Materials Register – Building 7

For Action Classification, Material Descriptions and Register Terminology please refer to GLOSSARY.

Client:	Lend Lease Retirement Living	Assessment by:	Michael Gawn
Site location:	Building 7 Closebourne Village, Raworth Road, Morpeth	Assessment date:	27 April 2016

Building 7								
Patterned cement sheeting in bathroom	B7A1	10	Chrysotile	Bonded	Cement Sheet	~30m ²	A1	Remove prior to any demolition or refurbishment works that may disturb the installation. Should the material not be affected by the works, leave in-situ, affix asbestos warning labels, manage and re-inspect.
Ceiling in bathroom	B7A2	11	Chrysotile Amosite	Bonded	Cement Sheet	~16m ²	A1	Remove prior to any demolition or refurbishment works that may disturb the installation. Should the material not be affected by the works, leave in-situ, affix asbestos warning labels, manage and re-inspect.
Vertical cement sheeting dividers in showers	B7A3	12	Chrysotile Amosite	Bonded	Cement Sheet	~2m ²	A1	Remove prior to any demolition or refurbishment works that may disturb the installation. Should the material not be affected by the works, leave in-situ, affix asbestos warning labels, manage and re-inspect.

Other Hazardous Materials Register – Building 7

Lead Paint and Lead

Location and description	Sample ID	% Lead	Photo No.	Recommendation
Building 7				
External cream paint on walls	B7P1	2.2	14	Remove during demolition without discharge to the environment.
External green paint on windows	B7P2	0.3	-	<1.0% Not classified as lead based paint.

Polychlorinated Biphenyls (PCB)

Location and description	Sample ID	Photo No	Recommendation
Fluorescent light fittings in kitchens (both buildings)	Visual observation	-	-

Asbestos Materials Register – Building 8

For Action Classification, Material Descriptions and Register Terminology please refer to GLOSSARY.

Client:	Lend Lease Retirement Living	Assessment by:	Michael Gawn
Site location:	Building 8, Closebourne Village, Raworth Road, Morpeth	Assessment date:	27 April 2016

Location Description	Sample No	Photo No	Asbestos Type	Friability Status	Product Type	Extent	Recommendation (A1 - A4)*	Comments / Action
Building 8								
Vertical dividers in toilet and toilet walls	B8A1	15	Chrysotile Amosite	Bonded	Cement Sheeting	~30m ²	A1	Remove prior to any demolition or refurbishment works that may disturb the installation. Should the material not be affected by the works, leave in-situ, affix asbestos warning labels, manage and re-inspect.
Grey vinyl floor tiles in bathroom	B8A2	16	Chrysotile	Bonded	Vinyl Tiles	~6m ²	A1	Remove prior to any demolition or refurbishment works that may disturb the installation. Should the material not be affected by the works, leave in-situ, affix asbestos warning labels, manage and re-inspect.
Light grey vinyl tiles in main bathroom	B8A4	18	Chrysotile	Bonded	Vinyl Tiles	~3m ²	A1	Remove prior to any demolition or refurbishment works that may disturb the installation. Should the material not be affected by the works, leave in-situ, affix asbestos warning labels, manage and re-inspect.

Other Hazardous Materials Register – Building 8**Polychlorinated Biphenyls (PCB)**

Location and description	Sample ID	Photo No	Recommendation
Fluorescent light fittings	Visual observation	8	-

Asbestos Materials Register – Building 9

For Action Classification, Material Descriptions and Register Terminology please refer to GLOSSARY.

Client:	Lend Lease Retirement Living	Assessment by:	Michael Gawn
Site location:	Building 9, Closebourne Village, Raworth Road, Morpeth	Assessment date:	27 April 2016

Location Description	Sample No	Photo No	Asbestos Type	Friability Status	Product Type	Extent	Recommendation (A1 - A4)*	Comments / Action
Building 9 – Tillimby House								
Wall sheeting from Room 45 (in all rooms)	B9A1	20	NAD	Bonded	Cement Sheeting	~330m ²	-	-
External eaves around building	B9A2	21	Chrysotile Amosite	Bonded	Cement Sheet	~40m ²	A1	Remove prior to any demolition or refurbishment works that may disturb the installation. Should the material not be affected by the works, leave in-situ, affix asbestos warning labels, manage and re-inspect.
Electrical Board	Visual Assumed	22	Not Known	Bonded	Zelemite	~1m ²	A1	Remove prior to any demolition or refurbishment works that may disturb the installation. Should the material not be affected by the works, leave in-situ, affix asbestos warning labels, manage and re-inspect.
Water Heaters in Roof Space	Visual Assumed	23	Not Known	Bonded	Not known	~5m ²	A1	Remove prior to any demolition or refurbishment works that may disturb the installation. Should the material not be affected by the works, leave in-situ, affix asbestos warning labels, manage and re-inspect.

Other Hazardous Materials Register

Lead Paint and Lead

Location and description	Sample ID	% Lead	Photo No.	Recommendation
Building 9 – Tillimby House				
Light yellow / cream external paint on walls	B9P1	3.9	24	Lead based paint.
Dark yellow paint on window frames and sills	B9P2	<0.05	25	<1.0% Not classified as lead based paint.

Polychlorinated Biphenyls (PCB)

Location and description	Sample ID	Photo No	Recommendation
Fluorescent light fittings	Visual observation	-	Remove prior to maintenance, major refurbishment or demolition works

Glossary

The asbestos information in this report is supplied on the understanding that the area surveyed is to be subject to demolition or major refurbishment and that all the identified **ACM** and other hazardous materials will be removed as part of those works.

Action *

		Remove prior to demolition, refurbishment, decommissioning or maintenance
A1	Action 1	All asbestos and other hazardous materials likely or liable to be disturbed should be removed prior to, or during demolition, refurbishment, decommissioning or maintenance.

Douglas Partners adopt the following material assessments for asbestos in order to assess the risks associated with the **ACM** identified:

Friability

Variable	Score	Description
Friable	Y	Material which when dry may become crumbled, pulverised or reduced to powder by hand pressure. Includes severely weathered or damaged cement products.
	N	Bonded

Materials Assessment

Variable	Scores	Score Description
Asbestos Type	0	No asbestos
	1	Chrysotile only
	2	Amphibole asbestos (excluding Crocidolite)
	3	Crocidolite
Product Type	0	No asbestos detected
	1	Bonded asbestos in good condition
	2	Friable asbestos in good condition or cement in poor condition
	3	Friable asbestos in poor condition

Douglas Partners adopt the following material assessments in order to assess the risks associated with hazardous materials identified other than asbestos:

Friability

Variable	Score	Description
Friable	Y	Loose or unsealed SMF
	N	Sealed SMF
	NA	Applicable to PCB, Lead in paint

The following abbreviations or acronyms may be used in the report or register:

CH	Chrysotile (white) asbestos
CR	Crocidolite (blue) asbestos
AM	Amosite (brown) asbestos
NAD	No asbestos detected
SMF	Synthetic Mineral Fibre
PCB	Polychlorinated Biphenyls
LCP	Lead-containing paint
VO	Visual observation

Appendix B

About this Inspection Report
Site Photographs

About this Inspection Report

Douglas Partners



Introduction

These notes are provided to amplify DP's inspection report in regard to the limitations of carrying out inspection work. Not all notes are necessarily relevant to this report.

Standards

This inspection report has been prepared by qualified personnel to current engineering standards of interpretation and analysis.

Copyright and Limits of Use

This inspection report is the property of DP and is provided for the exclusive use of the client for the specific project and purpose as described in the report. It should not be used by a third party for any purpose other than to confirm that the construction works addressed in the report have been inspected as described. Use of the inspection report is limited in accordance with the Conditions of Engagement for the commission.

DP does not undertake to guarantee the works of the contractors or relieve them of their responsibility to produce a completed product conforming to the design.

Reports

This inspection report may include advice or opinion that is based on engineering and/or geological interpretation, information provided by the client or the client's agent, and information gained from:

- an investigation report for the project (if available to DP);
- inspection of the work, exposed ground conditions, excavation spoil and performance of excavating equipment while DP was on site;
- investigation and testing that was carried out during the site inspection;
- anecdotal information provided by authoritative site personnel; and

- DP's experience and knowledge of local geology.

Such information may be limited by the frequency of any inspection or testing that was able to be practically carried out, including possible site or cost constraints imposed by the client/contractor(s). For these reasons, the reliability of this inspection report is limited by the scope of information on which it relies.

Every care is taken with the inspection report as it relates to interpretation of subsurface conditions and any recommendations or suggestions for construction or design. However, DP cannot anticipate or assume responsibility for:

- unexpected variations in subsurface conditions that are not evident from the inspection; and
- the actions of contractors responding to commercial pressures.

Should these issues occur, then additional advice should be sought from DP and, if required, amendments made.

This inspection report must be read in conjunction with any attached information. This inspection report should be kept in its entirety without separation of individual pages or sections. DP cannot be held responsible for interpretations or conclusions from review by others of this inspection report or test data, which are not otherwise supported by an expressed statement, interpretation, outcome or conclusion stated in this inspection report.



Photo 1: Building 3 - Fibrous Cement Sheet Eaves



Photo 2: Building 3 - Cement Flue Pipes – Hot Water System



Hazardous Building Material		PROJECT:	81251.13
Building 3		Plate	1
Closebourne Village		REV:	A
Client	Lend Lease Retirement Living	DATE:	12-Apr-16



Photo 3: Building 3 - Lead Flashing – Vent Pipe joins



Photo 4: Building 3 - Foyer and Kitchenette flooring – Beige vinyl laminate

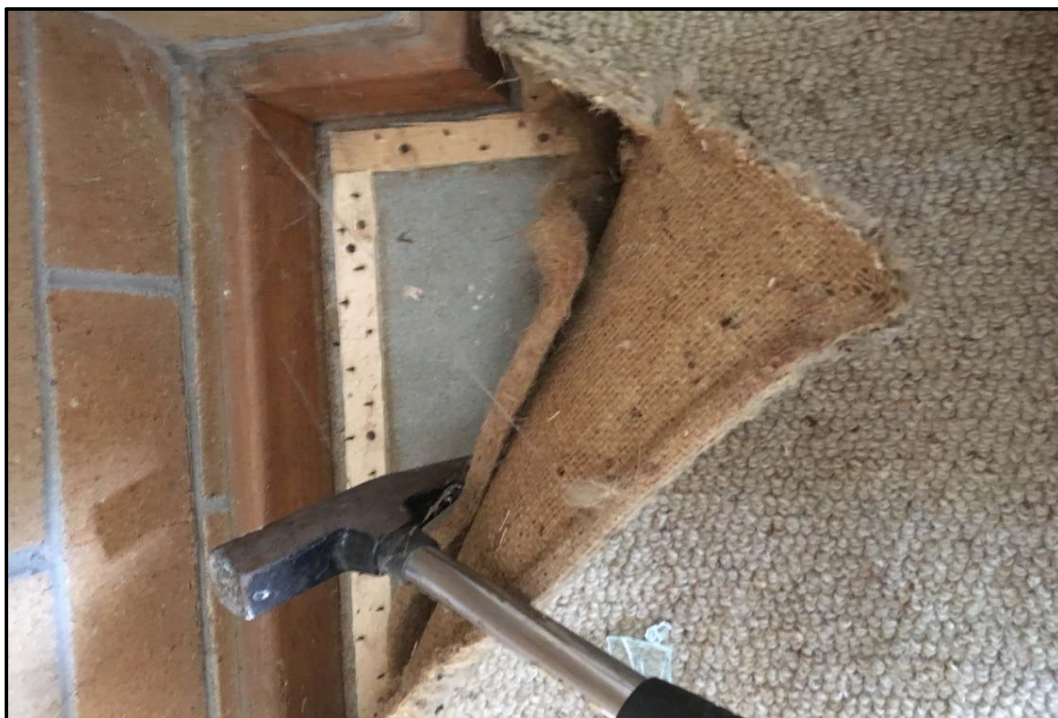


Photo 5: Building 3 - Carpet Underlay under (entire floor area ~700m2).



Photo 6: Building 3 - Roof void – Brown fibre lagging around pipe



Photo 7: Building 3 - Sarking (entire roof area) insulation lining under roof



Photo 8: Building 6 - External eaves around building



Photo 9: Building 6 - Asbestos corrugated roofing under corrugated iron



Hazardous Material Assessment

Building 6
Closebourne Village, Morpeth

Client Lend Lease Retirement Living

PROJECT: 81251.13

Plate 5

REV: A

DATE: 2-May-16



Photo 10: Building 7 - Patterned cement sheeting in bathroom



Photo 11: Building 7 - Ceiling sheets in bathroom



Photo 12: Building 7 - Vertical cement sheeting dividers in shower



Photo 13: Building 7 - Vertical board in front of sink in bathroom



Photo 14: Building 7 - Exterior paint



Photo 15: Building 8 - Vertical dividers in toilet and toilet walls



Photo 16: Building 8 - Grey vinyl floor tiles in bathroom



Photo 17: Building 8 - Blue wall sheeting in bathroom



Photo 18: Building 8 - Light grey vinyl tiles in main bathroom



Photo 19: Building 8 - Electrical board



Photo 20: Building 9 - Wall sheeting in Room 45 (similar in all rooms)



Photo 21: Building 9 - External eaves around building



Photo 22: Building 9 - Electrical board



Photo 23: Building 9 - Water Heater in roof space



Photo 24: Building 9 - Light yellow / cream exterior paint



Photo 25: Building 9 - Dark yellow paint on window frames and sills

Appendix C

Laboratory Certificate of Analysis
Chain of Custodies – Field and Dispatch
Sample Receipts



12 Ashley Street, Chatswood, NSW 2067
tel: +61 2 9910 6200

email: sydney@envirolab.com.au
envirolab.com.au

Envirolab Services Pty Ltd - Sydney | ABN 37 112 535 645

CERTIFICATE OF ANALYSIS

147470

Client:

Douglas Partners Newcastle
Box 324 Hunter Region Mail Centre
Newcastle
NSW 2310

Attention: Michael Gawn

Sample log in details:

Your Reference:	81251.13, Hazardous Material Assessment
No. of samples:	46 Materials, 30 Paints
Date samples received / completed instructions received	27/05/16 / 27/05/16

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.
Please refer to the last page of this report for any comments relating to the results.

Report Details:

Date results requested by: / Issue Date:	3/05/16 / 2/06/16
Date of Preliminary Report:	Not Issued

NATA accreditation number 2901. This document shall not be reproduced except in full.
Accredited for compliance with ISO/IEC 17025. **Tests not covered by NATA are denoted with *.**

Results Approved By:


Jacinta Hurst
Laboratory Manager

Envirolab Reference: 147470
Revision No: R 00



Asbestos ID - materials Our Reference: Your Reference	UNITS ----- -	147470-1 B1A1	147470-2 B1A2	147470-3 B1A3	147470-4 B1A4	147470-5 B1A5
Type of sample	-----	Material	Material	Material	Material	Material
Date analysed	-	1/06/2016	1/06/2016	1/06/2016	1/06/2016	1/06/2016
Mass / Dimension of Sample	-	16x16x4mm	110x90x7mm	50x17x3mm	15x15x1mm	30x24x11mm
Sample Description	-	Blue/grey fibre cement material	Beige plaster material	Blue/grey fibre cement material	Beige fibre cement material	Brown compressed bituminous material
Asbestos ID in materials	-	Chrysotile asbestos detected Amosite asbestos detected Crocidolite asbestos detected	No asbestos detected Organic fibres detected	Chrysotile asbestos detected Crocidolite asbestos detected	Chrysotile asbestos detected Organic fibres detected	Chrysotile asbestos detected

Asbestos ID - materials Our Reference: Your Reference	UNITS ----- -	147470-6 B1A6	147470-7 B1A7	147470-8 B3A1	147470-9 B3A3	147470-10 B4A1
Type of sample	-----	Material	Material	Material	Material	Material
Date analysed	-	1/06/2016	1/06/2016	1/06/2016	1/06/2016	1/06/2016
Mass / Dimension of Sample	-	15x8x2mm	25x10x3mm	43x30x2mm	55x35x3mm	23x22x5mm
Sample Description	-	Grey fibre cement material	Grey fibre cement material	Beige pebbled flexible vinyl sheet	Beige layered fibre cement material	Beige layered fibre cement material
Asbestos ID in materials	-	Chrysotile asbestos detected	Chrysotile asbestos detected	No asbestos detected Synthetic mineral fibre detected	Chrysotile asbestos detected Organic fibres detected	No asbestos detected Organic fibres detected

Asbestos ID - materials Our Reference: Your Reference	UNITS ----- -	147470-11 B4A2	147470-12 B4A3	147470-13 B4A4	147470-14 B4A5	147470-15 B4A6
Type of sample	-----	Material	Material	Material	Material	Material
Date analysed	-	1/06/2016	1/06/2016	1/06/2016	1/06/2016	1/06/2016
Mass / Dimension of Sample	-	32x18x4mm	65x28x2mm	33x22x4mm	50x27x10mm	50x18x8mm
Sample Description	-	Beige fibre cement material	Green flexible vinyl sheet	Grey compressed fibre cement material	Beige layered fibre cement material	Beige fibre cement material
Asbestos ID in materials	-	No asbestos detected Organic fibres detected	No asbestos detected Synthetic mineral fibre detected	Chrysotile asbestos detected Amosite asbestos detected	Chrysotile asbestos detected Organic fibres detected	No asbestos detected Organic fibres detected

Asbestos ID - materials Our Reference: Your Reference	UNITS ----- -	147470-16 B4A7	147470-17 B5A1	147470-18 B6A1	147470-19 B7A1	147470-20 B7A2
Type of sample	-----	Material	Material	Material	Material	Material
Date analysed	-	1/06/2016	1/06/2016	1/06/2016	1/06/2016	1/06/2016
Mass / Dimension of Sample	-	25x15x2mm	40x17x4mm	163x70x5mm	140x70x4mm	50x50x4mm
Sample Description	-	Grey fibre cement material	Grey fibre cement material	Grey compressed fibre cement material	Grey compressed fibre cement material	Grey compressed fibre cement material
Asbestos ID in materials	-	Chrysotile asbestos detected Amosite asbestos detected	Chrysotile asbestos detected	Chrysotile asbestos detected Amosite asbestos detected Crocidolite asbestos detected	Chrysotile asbestos detected	Chrysotile asbestos detected Amosite asbestos detected

Asbestos ID - materials Our Reference: Your Reference	UNITS ----- -	147470-21 B7A3	147470-22 B7A4	147470-23 B8SMF1	147470-24 B8A1	147470-25 B8A2
Type of sample	-----	Material	Material	Material	Material	Material
Date analysed	-	1/06/2016	1/06/2016	1/06/2016	1/06/2016	1/06/2016
Mass / Dimension of Sample	-	105x70x4mm	75x72x4mm	40x30x3mm	37x27x5mm	70x30x3mm
Sample Description	-	Grey compressed fibre cement material	Beige layered fibre cement material	Beige vitreous fibrous material	Beige compressed fibre cement material	Grey brittle vinyl tile
Asbestos ID in materials	-	Chrysotile asbestos detected Amosite asbestos detected	No asbestos detected Organic fibres detected	No asbestos detected Synthetic mineral fibre detected	Chrysotile asbestos detected Amosite asbestos detected	Chrysotile asbestos detected

Asbestos ID - materials Our Reference: Your Reference	UNITS ----- -	147470-26 B8A3	147470-27 B8A4	147470-28 B8A5	147470-29 B9A1	147470-30 B9A2
Type of sample	-----	Material	Material	Material	Material	Material
Date analysed	-	1/06/2016	1/06/2016	1/06/2016	1/06/2016	1/06/2016
Mass / Dimension of Sample	-	70x43x5mm	55x27x1mm	45x10x5mm	80x40x6mm	50x45x4mm
Sample Description	-	Beige layered fibre cement material	Beige flexible vinyl tile	Brown resinous fibre cement material	Beige layered fibre cement material	Grey compressed fibre cement material
Asbestos ID in materials	-	No asbestos detected Organic fibres detected	Chrysotile asbestos detected	No asbestos detected Organic fibres detected	No asbestos detected Organic fibres detected	Chrysotile asbestos detected Amosite asbestos detected

Asbestos ID - materials Our Reference: Your Reference	UNITS ----- -	147470-31 B10A1	147470-32 B10A2	147470-33 B10A3	147470-34 B11A1	147470-35 B11A2
Type of sample	-----	Material	Material	Material	Material	Material
Date analysed	-	1/06/2016	1/06/2016	1/06/2016	1/06/2016	1/06/2016
Mass / Dimension of Sample	-	80x40x4mm	70x70x4mm	90x80x4mm	90x80x4mm	50x32x4mm
Sample Description	-	Beige compressed fibre cement material	Beige compressed fibre cement material	Grey compressed fibre cement material	Grey compressed fibre cement material	Grey compressed fibre cement material
Asbestos ID in materials	-	Chrysotile asbestos detected	Chrysotile asbestos detected	Chrysotile asbestos detected	Chrysotile asbestos detected	Chrysotile asbestos detected

Asbestos ID - materials Our Reference: Your Reference	UNITS ----- -	147470-36 B11A3	147470-37 B11A4	147470-38 B12A1	147470-39 B12A2	147470-40 B13A1
Type of sample	-----	Material	Material	Material	Material	Material
Date analysed	-	1/06/2016	1/06/2016	1/06/2016	1/06/2016	1/06/2016
Mass / Dimension of Sample	-	30x30x2mm	40x25x12mm	35x27x2mm	35x20x6mm	120x80x2mm
Sample Description	-	A)Beige brittle tile B)Brown masonite	Grey layered fibre cement material	Blue flexible vinyl tile	Grey compressed fibre cement material	Brown brittle vinyl tile & woven backing
Asbestos ID in materials	-	A) Chrysotile asbestos detected B) No asbestos detected Organic fibres detected	No asbestos detected Organic fibres detected	No asbestos detected	No asbestos detected Organic fibres detected	No asbestos detected Organic fibres detected

Asbestos ID - materials Our Reference: Your Reference	UNITS ----- -	147470-41 B13A2	147470-42 B13A3	147470-43 B14A1	147470-44 B14A2	147470-45 B14A3
Type of sample	-----	Material	Material	Material	Material	Material
Date analysed	-	1/06/2016	1/06/2016	1/06/2016	1/06/2016	1/06/2016
Mass / Dimension of Sample	-	70x50x4mm	60x35x4mm	70x50x4mm	75x55x4mm	30x25x2mm
Sample Description	-	Beige compressed fibre cement material	Grey compressed fibre cement material	Grey compressed fibre cement material	Grey compressed fibre cement material	Grey flexible vinyl tile & paper sheet
Asbestos ID in materials	-	Chrysotile asbestos detected Organic fibres detected	Chrysotile asbestos detected Amosite asbestos detected	Chrysotile asbestos detected	Chrysotile asbestos detected	No asbestos detected

Asbestos ID - materials		
Our Reference:	UNITS	147470-76
Your Reference	-----	B11SMF1
	-	
Type of sample	-----	Material
Date analysed	-	1/06/2016
Mass / Dimension of Sample	-	110x50x5mm
Sample Description	-	A) Grey rope B) Vitreous fibrous material
Asbestos ID in materials	-	A) Chrysotile asbestos detected Organic fibres detected B) No asbestos detected Synthetic mineral fibre detected

Lead in Paint Our Reference: Your Reference	UNITS ----- -	147470-46 B1P1	147470-47 B1P2	147470-48 B1P3	147470-49 B2P1	147470-50 B3P1
Type of sample	-----	Paint	Paint	Paint	Paint	Paint
Date prepared	-	27/06/2016	27/06/2016	27/06/2016	27/06/2016	27/06/2016
Date analysed	-	30/05/2016	30/05/2016	30/05/2016	30/05/2016	30/05/2016
Lead in paint	% w / w	0.2	0.3	<0.05	<0.05	<0.05

Lead in Paint Our Reference: Your Reference	UNITS ----- -	147470-51 B3P2	147470-52 B4P1	147470-53 B4P2	147470-54 B5P1	147470-55 B5P2
Type of sample	-----	Paint	Paint	Paint	Paint	Paint
Date prepared	-	27/06/2016	27/06/2016	27/06/2016	27/06/2016	27/06/2016
Date analysed	-	30/05/2016	30/05/2016	30/05/2016	30/05/2016	30/05/2016
Lead in paint	% w / w	<0.05	6.0	1.7	<0.05	<0.05

Lead in Paint Our Reference: Your Reference	UNITS ----- -	147470-56 B5P3	147470-57 B5P4	147470-58 B5P5	147470-59 B6P1	147470-60 B6P2
Type of sample	-----	Paint	Paint	Paint	Paint	Paint
Date prepared	-	27/06/2016	27/06/2016	27/06/2016	27/06/2016	27/06/2016
Date analysed	-	30/05/2016	30/05/2016	30/05/2016	30/05/2016	30/05/2016
Lead in paint	% w / w	5.0	0.1	0.2	0.3	4.0

Lead in Paint Our Reference: Your Reference	UNITS ----- -	147470-61 B7P1	147470-62 B7P2	147470-63 B9P1	147470-64 B9P2	147470-65 B10P1
Type of sample	-----	Paint	Paint	Paint	Paint	Paint
Date prepared	-	27/06/2016	27/06/2016	27/06/2016	27/06/2016	27/06/2016
Date analysed	-	30/05/2016	30/05/2016	30/05/2016	30/05/2016	30/05/2016
Lead in paint	% w / w	2.2	0.3	3.9	<0.05	<0.05

Lead in Paint Our Reference: Your Reference	UNITS ----- -	147470-66 B11P1	147470-67 B12P1	147470-68 B12P2	147470-69 B13P1	147470-70 B13P2
Type of sample	-----	Paint	Paint	Paint	Paint	Paint
Date prepared	-	27/06/2016	27/06/2016	27/06/2016	27/06/2016	27/06/2016
Date analysed	-	30/05/2016	30/05/2016	30/05/2016	30/05/2016	30/05/2016
Lead in paint	% w / w	2.4	<0.05	0.1	<0.05	0.4

Lead in Paint Our Reference: Your Reference	UNITS ----- -	147470-71 B13P3	147470-72 B13P4	147470-73 B13P5	147470-74 B14P1	147470-75 B14P2
Type of sample	-----	Paint	Paint	Paint	Paint	Paint
Date prepared	-	27/06/2016	27/06/2016	27/06/2016	27/06/2016	27/06/2016
Date analysed	-	30/05/2016	30/05/2016	30/05/2016	30/05/2016	30/05/2016
Lead in paint	% w/w	1.8	<0.05	0.1	1.9	3.3

Method ID	Methodology Summary
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.
Metals-004	Digestion of Paint chips/scrapings/liquids for Metals determination by ICP-AES/MS and or CV/AAS.

Client Reference: 81251.13, Hazardous Material Assessment

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Lead in Paint						Base Duplicate %RPD		
Date prepared	-			27/06/2016	147470-61	27/06/2016 27/06/2016	LCS-5	27/06/2016
Date analysed	-			30/05/2016	147470-61	30/05/2016 30/05/2016	LCS-5	30/05/2016
Lead in paint	% w / w	0.05	Metals-004	<0.05	147470-61	2.2 2.1 RPD: 5	LCS-5	104%
QUALITY CONTROL	UNITS	Dup. Sm#		Duplicate		Spike Sm#	Spike % Recovery	
Lead in Paint				Base + Duplicate + %RPD				
Date prepared	-	147470-62		27/06/2016 27/06/2016		LCS-6	27/05/2016	
Date analysed	-	147470-62		30/05/2016 30/05/2016		LCS-6	30/05/2016	
Lead in paint	% w / w	147470-62		0.3 0.4 RPD: 29		LCS-6	102%	
QUALITY CONTROL	UNITS	Dup. Sm#		Duplicate				
Lead in Paint				Base + Duplicate + %RPD				
Date prepared	-	147470-69		27/06/2016 27/06/2016				
Date analysed	-	147470-69		30/05/2016 30/05/2016				
Lead in paint	% w / w	147470-69		<0.05 <0.05				

Report Comments:

Sample 147470-36 & 76; The supplied sample was sub-sampled (A & B) in order to accurately report the analytical results representative of the entire sample, as per AS4964-2004.

Asbestos ID was analysed by Approved Identifier: Paul Ching

Asbestos ID was authorised by Approved Signatory: Paul Ching

INS: Insufficient sample for this test

NR: Test not required

<: Less than

PQL: Practical Quantitation Limit

RPD: Relative Percent Difference

>: Greater than

NT: Not tested

NA: Test not required

LCS: Laboratory Control Sample

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.

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: <5xPQL - any RPD is acceptable; >5xPQL - 0-50% RPD is acceptable.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics (+/-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.

Project Name: Hazardous Material Assessment.....
Project No: 81251.13.....
DP Contact Person: Michael Gawn.....
Prior Storage: shelved.....

To: Envirolab Services Pty Ltd
12 Ashley Street
Chatswood NSW 2067
Ph: 02 9910 6200

Attn:

Sample ID	Sample Type P-paint F- fibrous sheeting S - Synthetic fibre	Lab ID	Analytes										Notes
			Asbestos	Lead in Paint									
B1A1	F	1	x										
B1A2	F	2	x										
B1A3	F	3	x										
B1A4	F	4	x										
B1A5	F	5	x										
B1A6	F	6	x										
B1A7	F	7	x										
B3A1	F	8	x										
B3A3	F	9	x										
B4A1	F	10	x										
PQL (S)	mg/kg												
PQL (W)	mg/L												

Envirolab Services
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200

Job No: 147470
Date Received: 27/5
Time Received: 13:30
Received by: PH
Temp: Cool/Ambient
Cooling: Ice/icepack
Security: Intact/Broken/None

PQL = practical quantitation limit, *As per Laboratory Method
Detection Limit

Date relinquished: 15/3/16.....
Total number of samples in container: 76
Results required by: Standard turnaround

SAMPLES RECEIVED

Please sign and date to acknowledge
receipt of samples and return by fax

Signature:

Date: 27/5 Lab Ref: ELS

Send results to:
Douglas Partners Pty Ltd
Address: 15 Callistemon Close
Warabrook NSW 2304

Fax:

Project Name: Hazardous Material Assessment.....
 Project No: 81251.13.....
 DP Contact Person: Michael Gawn.....
 Prior Storage: shelved.....

To: Envirolab Services Pty Ltd
 12 Ashley Street
 Chatswood NSW 2067
 Ph: 02 9910 6200

Attn:

Sample ID	Sample Type P-paint F- fibrous sheeting S - Synthetic fibre	Lab ID	Analytes											Notes
			Asbestos	Lead in Paint	Synthetic Mineral Fibre									
B4A2	F	11	x											
B4A3	F	12	x											
B4A4	F	13	x											
B4A5	F	14	x											
B4A6	F	15	x											
B4A7	F	16	x											
B5A1	F	17	x											
B6A1	F	18	x											
B7A1	F	19	x											
B7A2	F	20	x											
PQL (S)	mg/kg													
PQL (W)	mg/L													

PQL = practical quantitation limit, *As per Laboratory Method
 Detection Limit

Date relinquished: 26/5/16.....

Total number of samples in container: 76

Results required by: Standard turnaround

SAMPLES RECEIVED

Please sign and date to acknowledge receipt of samples and return by fax

Signature:

Date: 27/5.....Lab Ref: 147470.....

Send results to:
 Douglas Partners Pty Ltd
 Address: 15 Callistemon Close
 Warabrook NSW 2304

Fax:

Project Name: Hazardous Material Assessment

Project No: 81251.13

DP Contact Person: Michael Gawn.....

Prior Storage: shelved.....

To: Envirolab Services Pty Ltd
12 Ashley Street
Chatswood NSW 2067
Ph: 02 9910 6200

Attn:

Sample ID	Sample Type P-paint F- fibrous sheeting S - Synthetic fibre	Lab ID	Analytes										Notes
			Asbestos	Lead in Paint	Synthetic Mineral Fibre								
B7A3	F	21	x										
B7A4	F	22	x										
B8SMF1	S	23			x								
B8A1	F	24	x										
B8A2	F	25	x										
B8A3	F	26	x										
B8A4	F	27	x										
B8A5	F	28	x										
B9A1	F	29	x										
B9A2	F	30	x										
PQL (S)	mg/kg												
PQL (W)	mg/L												

PQL = practical quantitation limit, *As per Laboratory Method Detection Limit

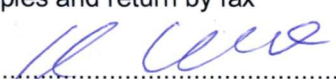
Date relinquished: 26/5/16.....

Total number of samples in container: 76

Results required by: Standard turnaround

SAMPLES RECEIVED

Please sign and date to acknowledge receipt of samples and return by fax

Signature: 

Date: 27/5 Lab Ref: 147470

Send results to:
Douglas Partners Pty Ltd
Address: 15 Callistemon Close
Warabrook NSW 2304

Fax:

Project Name: Hazardous Material Assessment.....
Project No: 81251.13.....
DP Contact Person: Michael Gawn.....
Prior Storage: shelved.....

To: Envirolab Services Pty Ltd
12 Ashley Street
Chatswood NSW 2067
Ph: 02 9910 6200

Attn:

Sample ID	Sample Type P-paint F- fibrous sheeting S - Synthetic fibre	Lab ID	Analytes											Notes
			Asbestos	Lead in Paint	Synthetic Mineral Fibre									
B10A1	F	31	x											
B10A2	F	32	x											
B10A3	F	33	x											
B11A1	F	34	x											
B11A2	F	35	x											
B11A3	F	36	x											
B11A4	F	37	x											
B12A1	F	38	x											
B12A2	F	39	x											
B13A1	F	40	x											
PQL (S)	mg/kg													
PQL (W)	mg/L													

PQL = practical quantitation limit, *As per Laboratory Method
Detection Limit

Date relinquished: 26/5/16.....

Total number of samples in container: 76

Results required by: Standard turnaround

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Project No: 81251.13
DP Contact Person: Michael Gawn
Prior Storage: shelved

To: Envirolab Services Pty Ltd
12 Ashley Street
Chatswood NSW 2067
Ph: 02 9910 6200

Attn:

Sample ID	Sample Type P-paint F- fibrous sheeting S - Synthetic fibre	Lab ID	Analytes											Notes
			Asbestos	Lead in Paint	Synthetic Mineral Fibre									
B13A2	F	41	x											
B13A3	F	42	x											
B14A1	F	43	x											
B14A2	F	44	x											
B14A3	F	45	x											
B1P1	P	46		x										
B1P2	P	47		x										
B1P3	P	48		x										
B2P1	P	49		x										
B3P1	P	50		x										
PQL (S)	mg/kg													
PQL (W)	mg/L													

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Detection Limit

Date relinquished: 26/5/16

Total number of samples in container: 76

Results required by: Standard turnaround

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To: Envirolab Services Pty Ltd
12 Ashley Street
Chatswood NSW 2067
Ph: 02 9910 6200

Attn:

Sample ID	Sample Type P-paint F- fibrous sheeting S – Synthetic fibre	Lab ID	Analytes											Notes
			Asbestos	Lead in Paint	Synthetic Mineral Fibre									
B3P2	P	51		x										
B4P1	P	52		x										
B4P2	P	53		x										
B5P1	P	54		x										
B5P2	P	55		x										
B5P3	P	56		x										
B5P4	P	57		x										
B5P5	P	58		x										
B6P1	P	59		x										
B6P2	P	60		x										
PQL (S)	mg/kg													
PQL (W)	mg/L													

PQL = practical quantitation limit, *As per Laboratory Method
Detection Limit

Date relinquished: 26/5/16.....

Total number of samples in container: 76

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To: Envirolab Services Pty Ltd
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 Chatswood NSW 2067
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Attn:

Sample ID	Sample Type P-paint F- fibrous sheeting S - Synthetic fibre	Lab ID	Analytes											Notes
			Asbestos	Lead in Paint	Synthetic Mineral Fibre									
B7P1	P	61		x										
B7P2	P	62		x										
B9P1	P	63		x										
B9P2	P	64		x										
B10P1	P	65		x										
B11P1	P	66		x										
B12P1	P	67		x										
B12P2	P	68		x										
B13P1	P	69		x										
B13P2	P	70		x										
PQL (S)	mg/kg													
PQL (W)	mg/L													

PQL = practical quantitation limit, *As per Laboratory Method
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Date relinquished: 26/5/16.....

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To: Envirolab Services Pty Ltd
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Chatswood NSW 2067
Ph: 02 9910 6200

Attn:

Sample ID	Sample Type P-paint F- fibrous sheeting S – Synthetic fibre	Lab ID	Analytes											Notes
			Asbestos	Lead in Paint	Synthetic Mineral Fibre									
B13P3	P	71		x										
B13P4	P	72		x										
B13P5	P	73		x										
B14P1	P	74		x										
B14P2	P	75		x										
B11SMF1	S	76			x									
PQL (S)	mg/kg													
PQL (W)	mg/L													

PQL = practical quantitation limit, *As per Laboratory Method
Detection Limit

Date relinquished: 26/5/16.....

Total number of samples in container: 76

Results required by: Standard turnaround

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Please sign and date to acknowledge
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Warabrook NSW 2304

Fax:

Appendix D

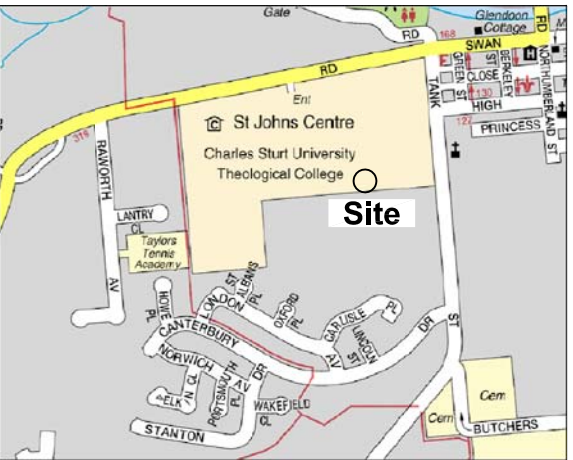
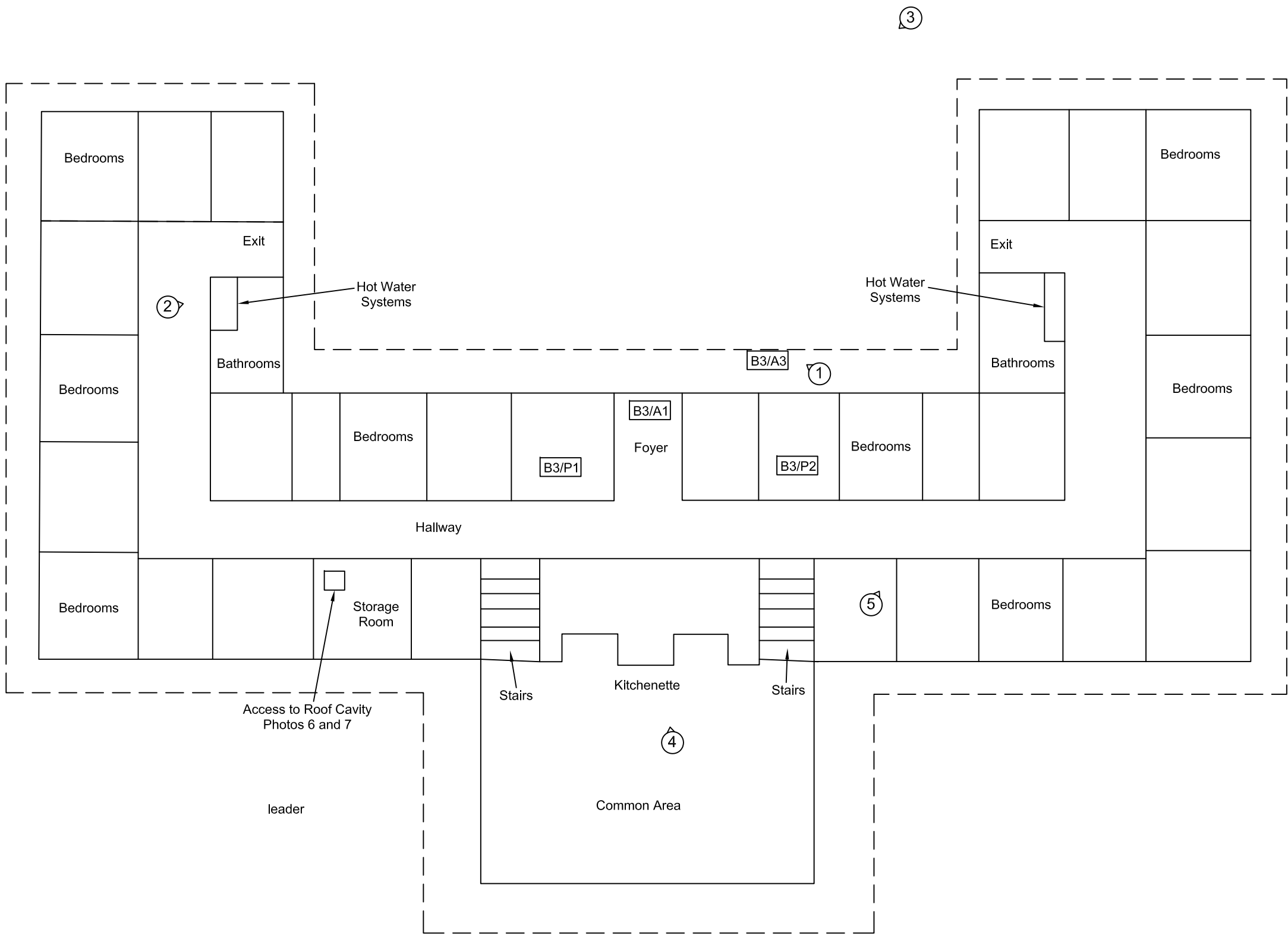
Drawing 1-1 Survey Area – Building 3

Drawing 1-2 Survey Area – Building 6

Drawing 1-3 Survey Area – Building 7

Drawing 1-4 Survey Area – Building 8

Drawing 1-5 Survey Area – Building 9



Locality Plan



Aerial View of Site

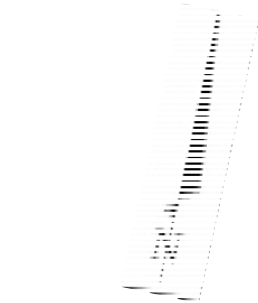
NOTES

1. Test locations are approximate only and are shown with reference to existing site features.

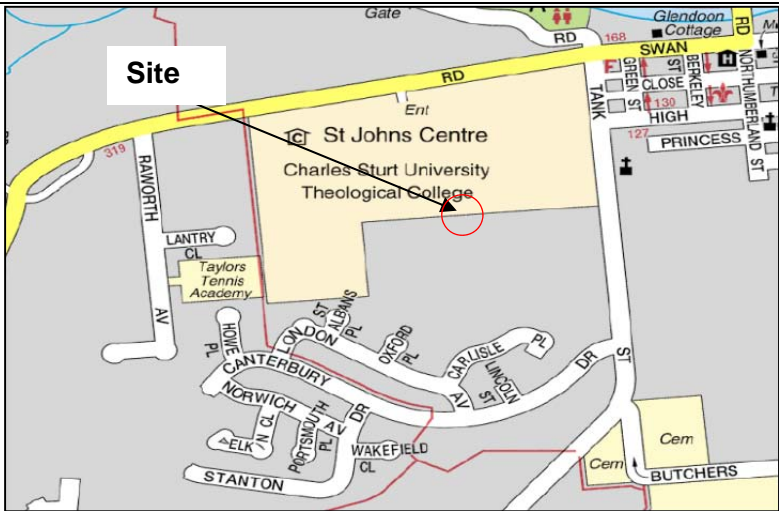
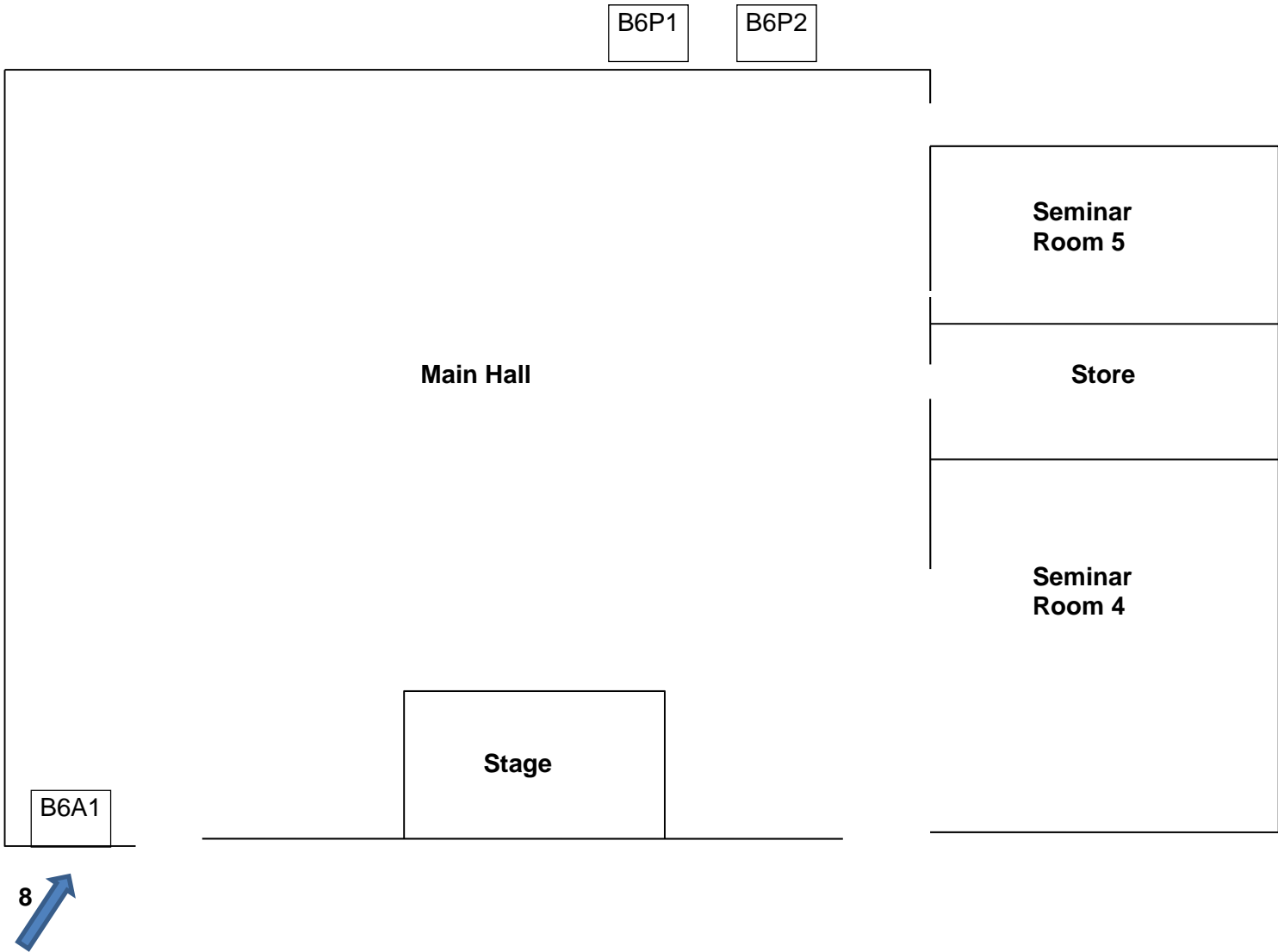
LEGEND

- B3/A1 Sample Location
— Approximate Location of Eaves
<10 Photo Locations and Orientation (approx.)

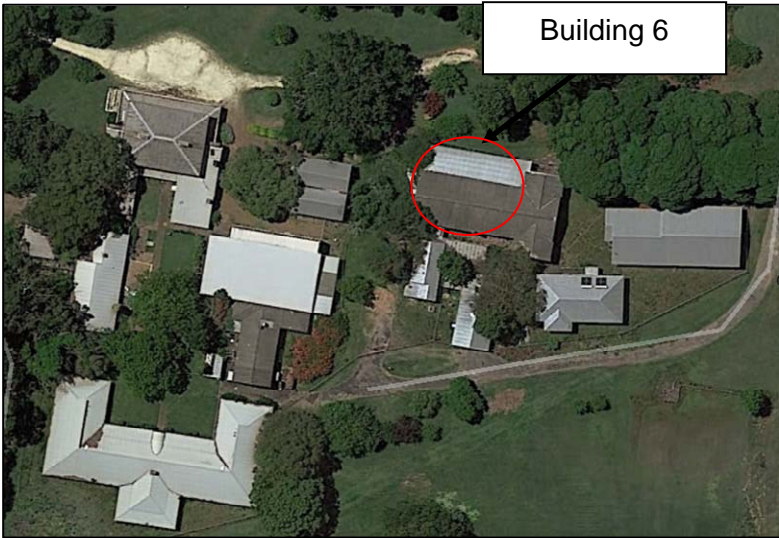




0



LOCALITY



Aerial View of Site

Legend:

P(x)

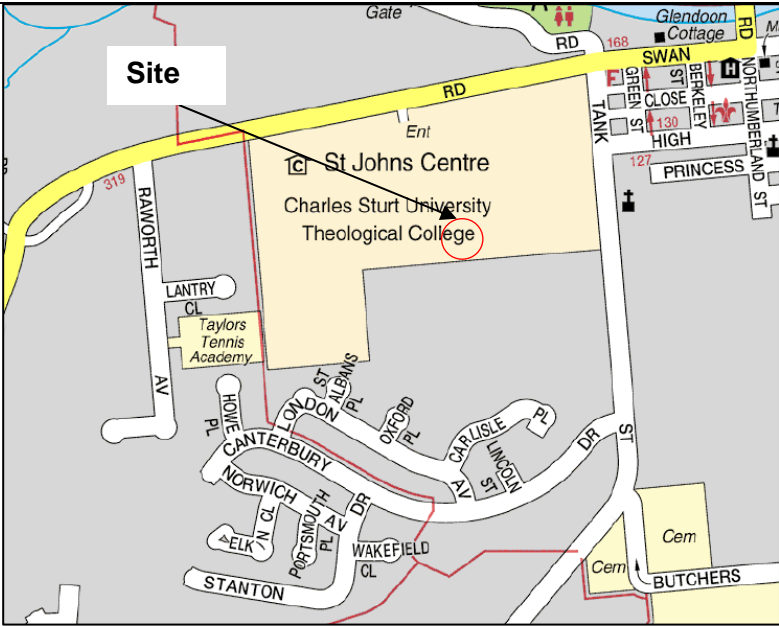
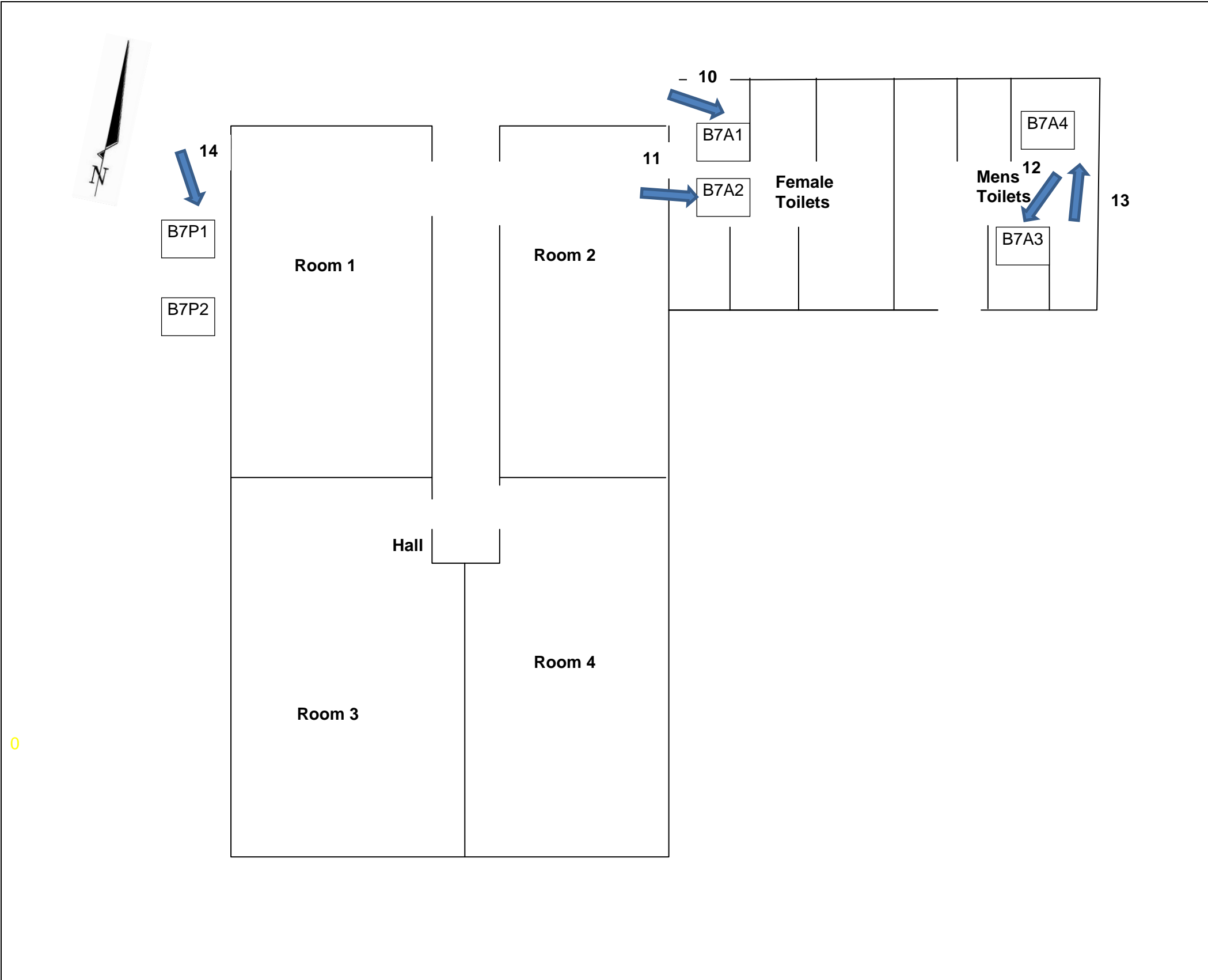
Approximate location and number of tested paint sample

B(x)A(x)

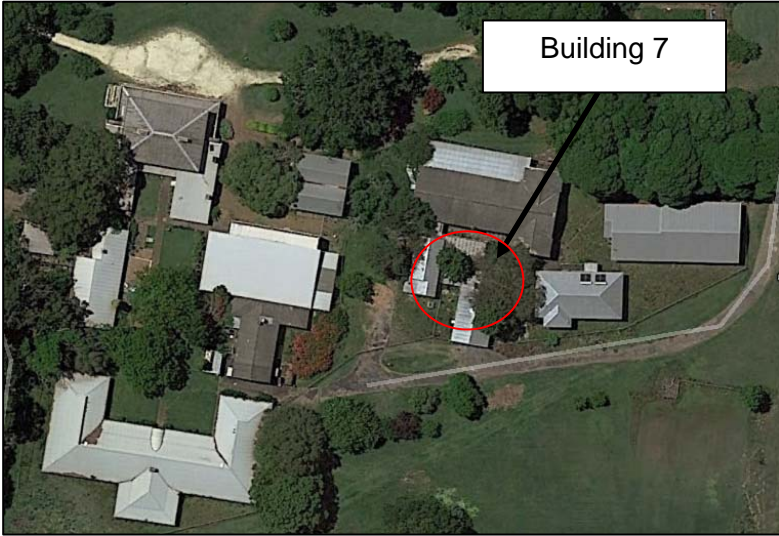
Approximate location and number of tested possible asbestos containing material sample

8

Photo direction and number



LOCALITY PLAN



Aerial View of Site

Legend:

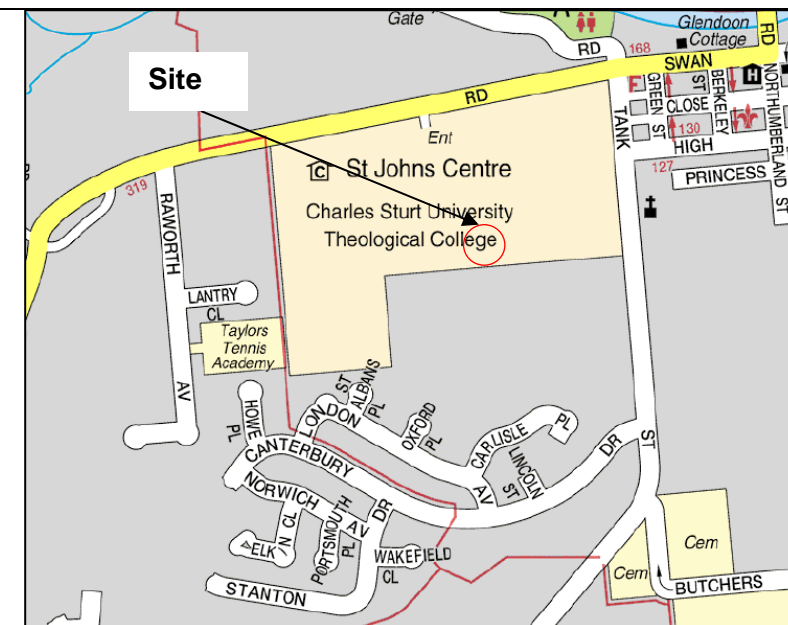
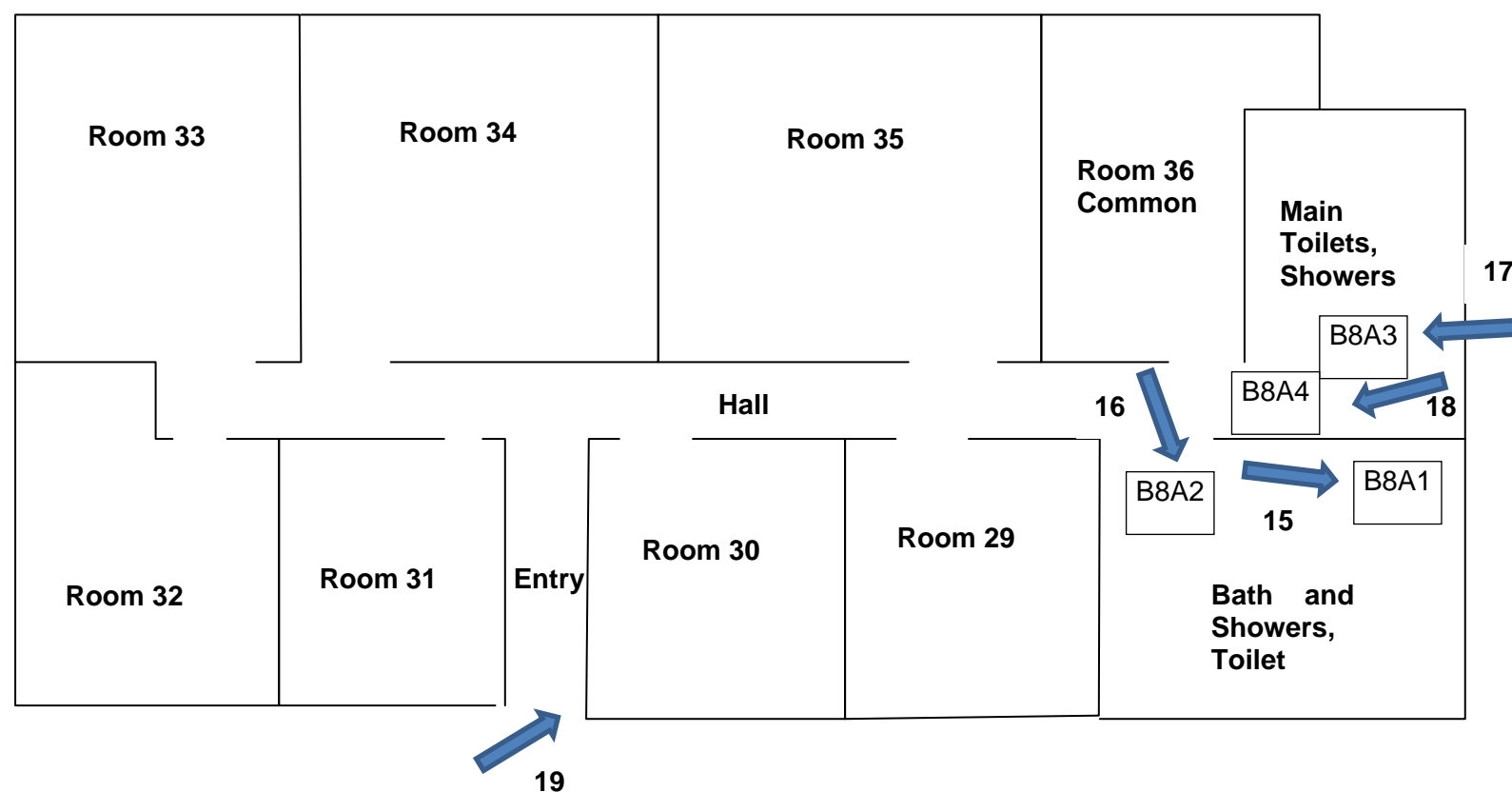
P(x)

Approximate location and number of tested paint sample

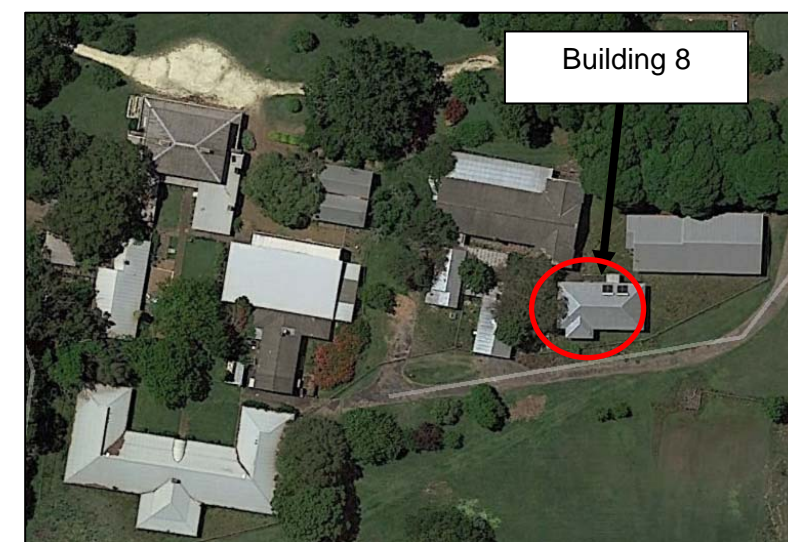
B(x)A(x)

Approximate location and number of tested possible asbestos containing material sample

Photo direction and number



LOCALITY PLAN

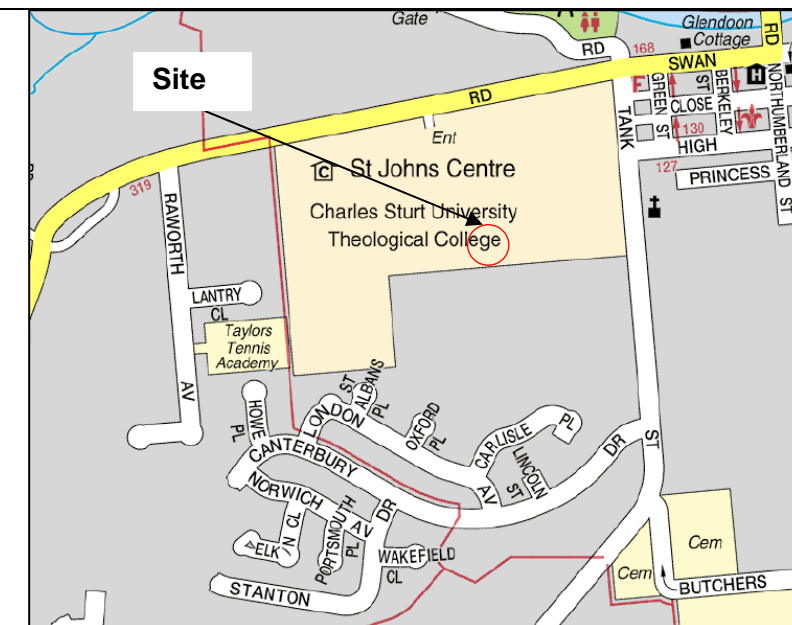
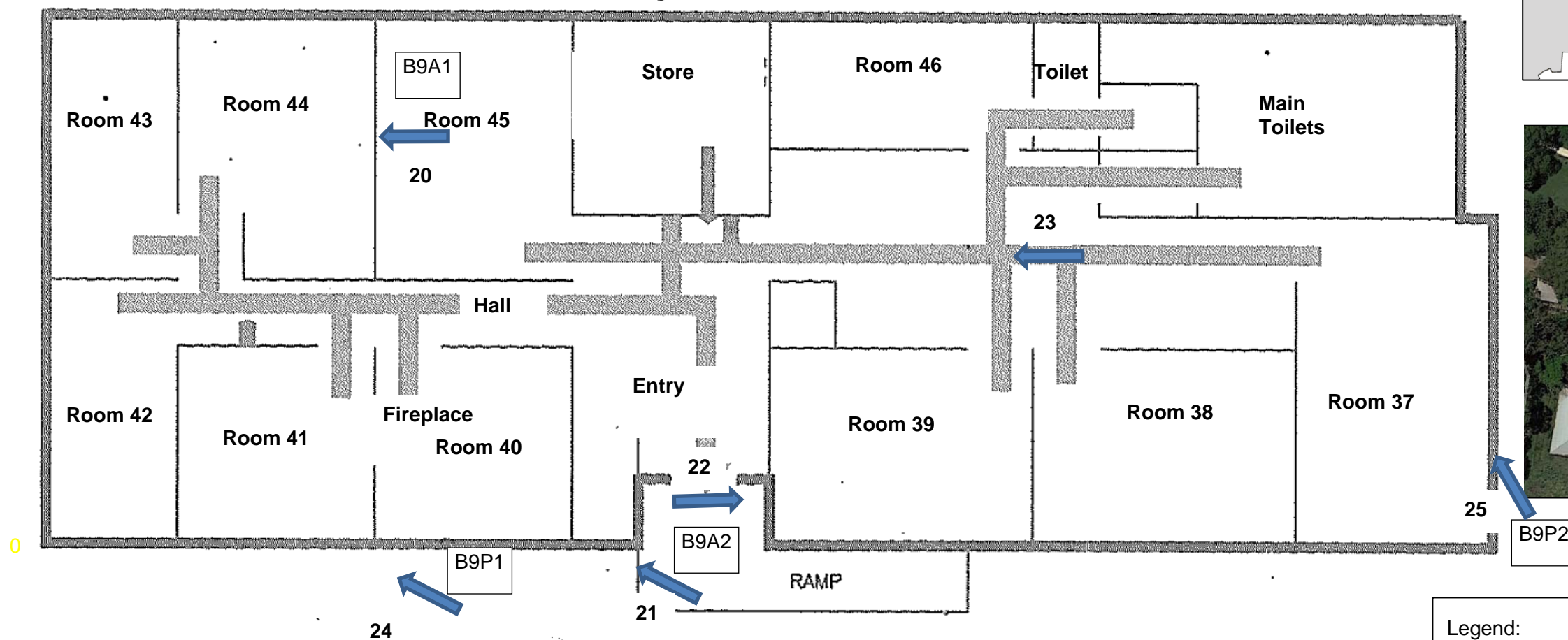


Aerial View of Site

Legend:

- P(x) Approximate location and number of tested paint sample
- B(x)A(x) Approximate location and number of tested possible asbestos containing material sample
- Photo direction and number





LOCALITY



Aerial View of Site

Legend:

- P(x) Approximate location and number of tested paint sample
- B(x)A(x) Approximate location and number of tested possible asbestos containing material sample
- Photo direction and number

