Hazardous Material Report

Burrah Park, 1953-2109 Elizabeth Drive, Badgerys Creek

26 September 2024

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Burrah Park, 1953 – 2109 Elizabeth Drive, Badgerys Creek

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Acronyms and Abbreviations

Acronym	Definition
ACM	Asbestos containing material
ARI	Average recurrence interval
AS	Australian Standard
CPCP	Cumberland Plain Conservation Plan
DP	Douglas Partners
EPA	Environment Protection Authority
FC	Fibre cement
Hazmat	Hazardous material
HBF	High biopersistence fibres
NATA	National Association of Testing Authorities
NHMRC	The National Health and Medical Research Council
NOHSC	National Occupational Health and Safety Commission
PCBs	Polychlorinated biphenyls
SEARs	Secretary's Environmental Assessment Requirements
SMF	Synthetic mineral fibres
SSD	State Significant Development
SSDA	State Significant Development Application
SW NSW	Safework NSW
SWA	Safe Work Australia
RCF	Refractory ceramic fibres

Executive Summary

This Hazardous Material Report has been prepared by Arcadis Australia Pacific Pty Ltd (Arcadis) to accompany a State Significant Development Application (SSDA) for a Concept and Stage 1 SSDA for a Warehouse and Logistics Estate at 1953-2109 Elizaeth Drive, Badgerys Creek. The site is legally described as Lot 1 in Deposited Plan 1287712.

This report has been prepared to address the Secretary's Environmental Assessment Requirements (SEARs) issued for the project (SSD- 70316465).

This report concludes that the proposed warehouse and distribution centre is suitable and warrants approval subject to the implementation of the following mitigation measures.

- Bonded asbestos removal to be undertaken on identified structures by a licensed asbestos removalist (Class B for Bonded asbestos) and undertaken in accordance with the requirements outlined in the *How to Safely Remove Asbestos Code of Practice* (SafeWork NSW, 2022).
- Removal works should be validated and a clearance inspection prepared in accordance with the requirements outlined in the *How to Safely Remove Asbestos Code of Practice* (SafeWork NSW, 2022). The clearance inspection should be undertaken by a competent person, or a licensed asbestos assessor following the removal works and prior to demolition. Prior to the clearance report being issued, the works area should maintain the requirement for asbestos contaminated sites.
- PCBs were considered unlikely to be present at the Site.
- Lead-based paint was previously confirmed to be present at the Site. However, given the proposed asbestos removal and demolition work, no specific lead paint removal works would be required to take place. Appropriate dust suppression should be undertaken during works to prevent mobilisation of any lead-based paints present during demolition.
- Potential SMF was identified to be present onsite and should be handled in accordance with the requirements of the WHS Regulation and subordinate Codes of Practice, Guidance Notes, and other documents.

Following the implementation of the above actions, the buildings would be suitable for demolition and removal prior to commencement of redevelopment works onsite.

1 Introduction

This report has been prepared to accompany an SSDA at 1953-2109 Elizabeth Drive, Badgerys Creek, NSW 2555 (the SSD-70316465). The application seeks consent for a concept plan including future development lots and building footprints. The development also seeks consent for the Stage 1 works which will include bulk earthworks across the site, infrastructure delivery, road access/intersections, internal road construction, civil infrastructure and utilities, stormwater infrastructure works and the construction of three (3) warehouse buildings.

Specifically, development consent is sought for:

- Concept Plan
  - Concept Masterplan for the Burrah Park comprising warehouse buildings, internal road network layout, building locations, GFA, car parking, concept landscaping, building heights, setbacks, signage strategy, public art strategy, design excellence strategy and Connection with Country framework.
  - Developable area 131.73ha.
  - Total approximate GFA 63.00ha
- Stage 1 – site preparation works
  - Demolition and removal of existing structures and vegetation.
  - Heritage salvage works (if applicable).
  - Construction of roads, access infrastructure, including a signalised intersection with Elizabeth Drive.
  - Dam de-watering and de-commissioning.
  - Bulk earthworks, cut and fill, benching, battering and retaining walls.
  - Lead in infrastructure, utilities and servicing.
  - Stormwater infrastructure including construction of Sydney Water basins and Water Sensitive Urban Design (WSUD) elements.
- Stage 1 – Development
  - Construction and fit out of 3 warehouse buildings and ancillary office space.
  - Stormwater management, fencing and landscaping.
  - Internal road network, active transport network, public domain and open space.
  - Subdivision, and
  - Estate and on lot signage.
  - Total approximate GFA 85,864sqm
    - Warehouse 1.1 – 26,860sqm
    - Warehouse 1.2 – 31,443sqm
    - Warehouse 3.1 – 27,561sqm

This report has been prepared in response to the requirements contained within the Secretary's Environmental Assessment Requirements (SEARs) dated 22 May 2024 and issued for the SSDA (SSD-70316465). Specifically, this report has been prepared to communicate findings from a hazardous materials (HazMat) survey undertaken to inform Stage 1 site preparation works including the demolition and removal of existing structures.

1.1 Purpose and Objectives

The purpose of the HazMat was to assess for the presence of hazardous materials (primarily asbestos) within onsite buildings/structures to inform Stage 1 site preparation works.

Arcadis understands that the objective was to conduct a HazMat survey to identify, as far as practicable, hazardous materials within the readily accessible areas of the buildings/structures currently located in the proposed southern lot of the SSDA site (as defined in Section 2).

1.2 Scope of Work

The scope of work undertaken to address the project objective included:

- A site visit was undertaken on June 5 and 7, 2024 to record visual observations of the readily accessible areas of the onsite structural materials, to identify the presence and location of hazardous building materials, primarily asbestos, excluding inaccessible areas such as sub-floor and confined spaces,
- Collection of representative material samples of potential asbestos containing material (ACM),
- Laboratory analysis and reporting for presence/absence of ACM in samples collected.

2 Site Identification and Description

The site is dissected by the M12 motorway and Metro and as such comprises one allotment (Lot 1 DP1287712) over three portions of land, being the southern, northern and northeast (refer Map 1 below). The proposed subdivision of the site into three separate lots was approved by Penrith Council in 2023 and is currently being registered. Map 2 below shows an aerial of the southern area which is intended to be developed as part of this SSD.

Map 1 Site subdivided into three lots

Source: Near Maps and Urbis

Map 2 Site Context – Development Area

Source: Near Maps and Urbis

The HazMat survey was limited to readily accessible buildings and structures within the proposed southern portion of the site which were clustered into three distinct areas (Area 1 – 3) as described in Section 5.

The location of the site and surveyed areas are shown in Figures 1 - 4, provided at the end of this report.

3 Material Types, Uses & Regulatory Control

3.1 Asbestos

Asbestos is the fibrous form of mineral silicates belonging to the serpentine and amphibole groups of rock-forming minerals. The most significant types include chrysotile, crocidolite, and amosite (white, blue and brown or grey asbestos respectively). Asbestos is mined as a naturally occurring rock fibre, broken down from mineral clumps to groups of loose fibres.

During the 1950s, 1960s and 1970s it was common to use asbestos as a fire retardant on structural members and for fire rating of penetration core holes. The energy conservation characteristics of asbestos also made it effective for the insulation of both hot and cold-water pipes and ducting. Later, products such as asbestos cement sheeting, bituminous mastic and membrane, vinyl tiles, Bakelite ® and Zelemite ® boards and many others utilised asbestos in their manufacture, as it increased their compression and tensile properties. Australia banned the importation, manufacturing and use of all asbestos products in December 2003.

Asbestos can be present in a range of forms, sizes and degrees of deterioration. The National Environment Protection Council (2013) N*ational Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2023,* distinguishes between bonded, non-friable ACM, and non-bonded, friable asbestos, including both fibrous asbestos and asbestos fines. The human health impacts of asbestos exposure result from inhalation of airborne (respirable) fibres which can deposit in the lungs and initiate diseases including asbestosis, lung cancer and mesothelioma.

Asbestos exposure, both personal and to the environment, is covered generally by the requirements of the National Occupational Health and Safety Commissions (NOHSC) Guidance Notes and Safework NSW (SW NSW) codes of practice, including the following key documents:

- NOHSC (2005), *Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres* [NOHSC:3003 (2005)],
- SW NSW (2022), *Code of Practice: How to Safely Remove Asbestos Code of Practice,*
- SW NSW (2022), *Code of Practice: How to Manage and Control Asbestos in Workplace*,

Other relevant NSW legislation includes:

- NSW Environment Protection Authority (EPA) (2014) *Waste Classification Guidelines – Part 1: Classifying waste*
- *Protection of the Environment Operations (Waste) Regulation 2014,*
- *Protection of the Environment Operations Act 1997,*
- *The Environmentally Hazardous Chemicals Regulation 2017,*
- *Work Health and Safety Act 2011,*
- *Work Health and Safety Regulation 2017.*

3.2 Lead Paint

Lead naturally exists in three forms including elemental lead, lead oxides and lead metal complexes.

Lead was a major constituent of paint from the late 1800s to 1970. It was used as a base, a drying agent, as colouring (often white, red, orange, yellow and scarlet) and to protect steel or iron from rust. According to current guidelines, paint is classified as lead-based paint if its lead content exceeds 1.0%. Most Australian homes and buildings constructed before 1970 contain lead-based paint.

The allowable lead content in paint was lowered to 0.25 % in 1992, and then lowered further to 0.1% in 1997 (The National Health and Medical Research Council (NHMRC), (2015) *Information Paper: Evidence on the Effects of Lead on Human Health*). Existing paints exceeding 1.0% lead content should be managed in accordance with Australian Standard (AS) *AS4361.1 – 1995 Guide to Lead Paint Management*, *Part 1: Industrial Applications* and *AS4361.2 – 1998 Guide to Lead Paint Management Part 2: Residential and Commercial Buildings*.

The current Australian Standards, Regulations and Guidelines pertaining to lead paint management, removal, stabilisation and disposal in NSW include the following:

- AS4361.1 – *1995 Guide to Lead Paint Management, Part 1: Industrial Applications*,
- AS4361.2 – *1998 Guide to Lead Paint Management Part 2: Residential and Commercial Buildings*,
- NSW EPA (2014) *Waste Classification Guidelines – Part 1: Classifying waste,*
- *Protection of the Environment Operations (Waste) Regulation 2014,*
- *Protection of the Environment Operations Act 1997,*
- Safework Australia (SWA) (2024) *Workplace Exposure Standards for Airborne Contaminants.*
- *The Environmentally Hazardous Chemicals Regulation 2017,*
- *Work Health and Safety Act 2011,*
- *Work Health and Safety Regulation 2017.*

3.3 Polychlorinated Biphenyl

Polychlorinated Biphenyls (PCBs) are produced in France, Germany, Italy and the United States of America under trade names including Phenchlor, Clophen, Fenchlor, Kanechlor, Arochlor and Sovol. The main properties of PCBs that account for their production in a variety of items include low solubility in water, miscibility with organic solvents and polymers, high dielectric constant, chemical stability, high boiling point and flame resistance.

PCBs are used in closed systems such as electrical transformers, capacitors, fluorescent light capacitors, hydraulic fluids and insulated electric wires and cables. A safe workplace airborne exposure limit (averaged over an 8 hour period) of 1 mg/m^3 for low chlorine PCBs (42% chlorine) and 0.5 mg/m^3 for high chlorine PCBs (54% chlorine) has been adopted by SWA.

The current Australian Standards, Regulations and Guidelines pertaining to PCB management, removal, stabilisation and disposal in NSW include the following:

- Environment Protection and Heritage Council (2003). *Polychlorinated Biphenyls Management Plan, Revised Edition,*
- NOHSC (1995), *Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment* [NOHSC:1003(1995)],
- NSW EPA (2014) *Waste Classification Guidelines – Part 1: Classifying waste,*
- *Polychlorinated Biphenyl (PCB) Chemical Control Order 1997,*
- *Protection of the Environment Operations (Waste) Regulation 2014,*
- *Protection of the Environment Operations Act 1997.*
- *The Environmentally Hazardous Chemicals Regulation 2017,*
- *Work Health and Safety Act 2011,*
- *Work Health and Safety Regulation 2017,*

3.4 Synthetic Mineral Fibres

Synthetic Mineral Fibres (SMF) is a term used to describe fibrous products that are manufactured by the process of blowing or spinning a molten mineral raw material into a fibrous product that is used for insulation. SMF includes glasswool, rockwool and refractory ceramic fibres (RCF).

Glasswool and rockwool are made from glass and volcanic rock, respectively, and have effective thermal and acoustic insulation properties which makes them effective for use in the manufacturing and construction industries. Since 2000 – 2002, all glasswool and rockwool insulation products manufactured in Australia have been biosoluble, allowing products to be dissolved in bodily fluids and cleared from the lungs. Glasswool and rockwool can cause irritation to the skin, eyes and respiratory tract but are not classified as carcinogenic to humans.

The SWA (2020) *Guide to Handling Refractory Ceramic Fibres* states RCF are made from kaolin which is a naturally occurring aluminosilicate clay or a synthetic mix of alumina and refined beach sand. RCF are manufactured for high temperature, high performance thermal insulation applications and primarily used to line furnaces, kilns and other industrial heaters (SWA, 2020). They also have application as an insulation medium or thermal barrier in the automotive, marine, petrochemical, steel, aluminium, ceramic, glass and construction industries (SWA, 2020). RCF are considered high biopersistence fibres (HBF) because they do not break down in the lungs and are potentially carcinogenic. Other HBF which do not break down in the lungs are considered to pose similar health risks to RCF.

All SMF should be treated as HBF until investigated by a qualified occupational hygienist.

The current Australian Standards, Regulations and Guidelines pertaining to SMF management, removal, stabilisation and disposal in NSW include the following:

- Australian Institute of Occupational Hygienists (2011) *Synthetic Mineral Fibres (SMF) and Occupational Health Issues, Position Paper*,
- NOHSC (2005) *Guidance Note on the Membrane Filter Method for the Estimation of Airborne Synthetic Mineral Fibres.*
- NSW EPA (NSW EPA, 2014) *Waste Classification Guidelines – Part 1: Classifying waste,*
- *Protection of the Environment Operations (Waste) Regulation 2014,*
- *Protection of the Environment Operations Act 1997.*
- SW NSW (2015) *Safe management of synthetic mineral fibres (SMF) - glasswool and rockwool*,
- SWA (2020) *Guide to Handling Refractory Ceramic Fibres,*
- *The Environmentally Hazardous Chemicals Regulation 2017,*
- *Work Health and Safety Act 2011,*
- *Work Health and Safety Regulation 2017.*

4 Previous Investigations

Douglas Partners (DP) previously conducted a hazardous materials survey of buildings/structures within the site, with findings documented in the report DP (2022) *Report on Hazardous Building Materials Survey: Burra Park, 1953 - 2109 Elizabeth Drive, Badgerys Creek, NSW*. The survey comprised of a non-destructive survey of safely accessible areas of 22 buildings/structures on the site which included nine buildings/structures located within the southern portion of the site, applicable to this HazMat, excluding two pump houses (Pump house 1 and Pump house 2).

The DP (2022) report identified or assumed present hazardous building materials in the following buildings and structures applicable to this HazMat:

Table 4-1 Douglas Partners (2022) Hazardous Building Material Findings – Southern Portion

DP Building ID	Arcadis Building ID	Non-Friable Asbestos	SMF	Lead Paint	Lead Dust	PCB
Area 1						
GS	Auxiliary Building	✗	✓	✓	✓	✗
HS	Unoccupied House	✓	✗	✓	✓	✗
Area 2						
2	Shed 2	✗	✗	✗	✓	✗
6**	Shed 3	✗	✗	✗	✗	✗
14**	Shed 1	✗	✗	✗	✗	✗
Toilet	Toilet Block	✗	✗	✗	✗	✗
Area 3						
11	Tenanted House	✓	✓	✓	✗	✗
23a	Pump House	✓	✗	✗	✗	✗
23b**	Storage Tank	✗	✗	✗	✗	✗

✓= identified and / or suspected present

✗= not identified and/or not suspected present

** = No samples collected

The report also indicated no friable asbestos building material identified or suspected to be present within the buildings/structures.

Based on the findings of the DP (2022) survey, Arcadis' licensed asbestos assessor attended site to verify the hazardous materials during the Arcadis HazMat by visual confirmation at accessible locations within the buildings/structures, and additional samples collected to supplement the previous Douglas Partners survey and/or provide confirmation of the presence/absence of hazardous material.

5 Nature and Extent of Survey

Arcadis environmental consultants conducted a HazMat survey of buildings/structures within the southern portion of the site on June 5 and 7, 2024. The buildings and structures assessed for hazardous materials were primarily clustered in the following three defined areas:

- Area 1: Unoccupied house and adjacent auxiliary building.
- Area 2: Stockyard Sheds 1, 2 and 3 and associated toilet block and cool room. Three stockpiles immediately adjacent to Sheds 1 and 2 were also inspected in this area.
- Area 3: Tenanted house, former storage tank and associated pump house.

An additional two dam pump houses (Pumphouse 1 and 2) located outside of Areas 1 - 3 were also inspected during the HazMat as well as a stockpile of potential ACM pipe approximately 70 m north of Stockyard Shed 3. The site layout and locations of buildings, structures and assessed stockpiles are shown in Figures 2 – 4.

A summary of areas excluded from the assessment is provided in Section 6.

The survey comprised a walkthrough of buildings and structures with details and visual observations of the inspected areas provided in Section 7 of this report. Potential hazardous materials were assessed using destructive and intrusive techniques except in Area 3 due to the ongoing tenancy at the property. The survey was limited to the following discovery methods:

- ACM: Assessed primarily by visual inspection, with ten samples of potential ACM collected using hand tools (e.g. knife or pliers) and analysed for asbestos by Australian Safer Environment & Technology (ASET) Laboratory (NATA Accreditation No. 14484), a National Association of Testing Authorities (NATA) accredited laboratory.
- Lead-based paints: Assessed by visual inspection and considering the age, typology and use of the property. Given the requirements for disposal and management of lead-based paint in residential properties (see Sections 8.2 and 9), the Arcadis assessment for lead-based paint was of a general nature and did not include inspections or testing of specific surfaces.
- PCBs: Assessed by visual inspection of light fittings for the likely presence of PCB containing components such as capacitors. Light fittings were not dismantled to confirm capacitor type.
- SMF: Assessed by visual inspection.

6 Excluded Areas

The HazMat survey was limited to the buildings and structures identified in Section 5. It did not include an assessment of any additional stockpiles which were observed in paddocks across the southern portion of the site except for those immediately adjacent to buildings in Area 2 and one stockpile of potential ACM pipe identified approximately 70 m north of Stockyard Shed 3. Any other structures that may be present in the southern Lot but which were not explicitly identified in Section 5 were not included in the HazMat survey.

Access to parts of the tenanted property was limited due to the ongoing nature of the tenancy and limitations of the non-destructive methodology required in this area. As such, it was not possible to inspect subfloor voids, roof and wall cavities, fluorescent lights, and inaccessible materials such as concealed layers of paint and potential fibre cement sheeting underlying floor coverings. Hazardous materials may be present in these areas that were not identified during the survey. No sampling of building materials were undertaken in the tenanted residential property.

7 Register of Inspection

Details of observations made during the HazMat survey are presented in the tables below, with potential hazardous materials (ACM, SMF and PCBs) and sample collection details indicated where applicable. Relevant findings pertaining to the general assessment of lead-based paint have not been included in the tables below and can be found in Section 8.2.

The presence/absence of hazardous material has been described using the following:

- Confirmed: material was sampled by Arcadis and confirmed to be hazardous / not hazardous by laboratory analysis.
- Visually verified: material that was previously confirmed to be hazardous / not hazardous by laboratory analysis (as reported in by Douglas Partners (2022)) was visually assessed as consistent with the classification made.
- Potential: material was visually assessed as potentially hazardous but this was not confirmed by laboratory analysis and/or the material was not able to be inspected and has the potential to be hazardous.
- Likely: material was visually assessed to be likely hazardous but this was not confirmed by laboratory analysis.
- Not identified: hazardous material was not identified.

A photolog showing relevant locations and materials is provided in Appendix A.

7.1 Area 1

Area 1 comprised a former rural residential property which was unoccupied at the time of the HazMat survey. Two buildings were identified and inspected within the area including a weatherboard house and a smaller auxiliary building with a laundry and workshop/storage room. Both buildings were observed to be in a state of deterioration with damage throughout.

The layout of buildings in Area 1 is shown in Figure 2 and Appendix A, Print 1.

Table 7-1 Area 1 Inspection Observations

Building	Room/Area	Description	Print No.	Sample Collected	Hazardous Material Present
Unoccupied house	External roof and soffits	Metal roof construction with metal gutters, timber fascia and primarily timber soffits.	2 – 5	No	Outhouse soffit sheeting: visually verified non-ACM

Building	Room/Area	Description	Print No.	Sample Collected	Hazardous Material Present
		Fibre cement (FC) sheeting used for soffits in the semi-detached outhouse (visually verified non-ACM) and entry areas.			
Unoccupied house	External walls	Primarily timber cladding fixed to timber structure with FC wall cladding at the central northern entrance (potential ACM). Unlined brick used for the semi-detached outhouse walls.	2 – 5	No	Potential ACM
Unoccupied house	Windows	Timber windows with timber window frames. A representative sample of window putty (HS-WINDOW PUTTY) was collected for analysis and confirmed as non-ACM.	6	Yes	Confirmed non-ACM
Unoccupied house	Switchboard	Potential Zelemite backing board (known ACM) with switches/fuses affixed.	7	No	Likely ACM
Unoccupied house	Subfloor and floor construction	Combination of raised timber joist platforms with floorboards (e.g. kitchen, living and bedrooms) and concrete slabs (e.g. porch, outhouse and bathroom) on brick foundations (potential ACM packers).	8, 9	No	Potential ACM
Unoccupied house	Roof cavity	Small section of roof cavity inspected. SMF is potentially present in parts of the roof cavity not inspected.	-	No	Potential SMF
Unoccupied house	Bathroom, water closets and shower	FC ceiling and wall sheeting with wall tiles affixed in areas, and tile floor. Representative samples of wall sheeting (HS-BATHROOM WALL) and tile glue (HS-TILEGLUE) were collected for analysis and confirmed as ACM and non-ACM respectively.	10, 11	Yes	Ceiling and wall sheeting: confirmed ACM Glue: confirmed non-ACM
Unoccupied house	Living spaces and bedrooms	Primarily plasterboard walls, ceiling and cornices, with timber floorboards overlaid by carpet. An FC wall panel was identified in the loungeroom that was inconsistent with surrounding	12 – 15	Yes	Confirmed non-ACM

Building	Room/Area	Description	Print No.	Sample Collected	Hazardous Material Present
		plasterboard; a sample of the FC sheeting was collected (HS-LOUNGEPANEL) for analysis and confirmed as non-ACM.			
Unoccupied house	Sunroom	FC ceiling and wall sheeting (visually verified ACM) with timber wainscoting and floorboards overlaid by carpet.	16	No	Visually verified ACM
Unoccupied house	Kitchen	FC ceiling and wall sheeting (potential ACM) with timber wainscoting and floorboards.	17, 18	No	Potential ACM
Unoccupied house	Light fittings	Fluorescent light fittings identified (e.g. kitchen, loungeroom, sunroom) considered unlikely to contain PCBs.	16, 18	No	Not identified
Auxiliary building	External roof and soffits	Metal roof construction with metal gutters, timber fascia and timber soffits.	19, 20	No	Not identified
Auxiliary building	External walls	Mix of timber cladding fixed directly to timber structure and FC sheeting fixed to timber structure (northwest wall). FC sheeting was observed to be consistent with a representative sample of laundry wall sheeting (GS-MAINWALL) which was confirmed as non-ACM.	19 – 22	Yes	Confirmed non-ACM
Auxiliary building	Windows	Timber windows with timber window frames. A representative sample of window putty (GS-WINDOW PUTTY) was collected for analysis and confirmed as non-ACM.	23a	Yes	Confirmed non-ACM
Auxiliary building	Laundry	Plasterboard ceiling and FC wall sheeting with wall tiles affixed in areas, and tile floor. FC sheeting behind tiles on Northern wall	23a	No	Likely ACM
Auxiliary building	Eastern entrance room	Dimpled FC wall sheeting (back of laundry northern tiled wall).	23b	No	Likely ACM
Auxiliary building	Workshop / storage room	FC wall and ceiling with concrete floor. FC sheeting (representative sample GS-MAINWALL) collected and confirmed non-ACM.	24, 25	Yes	Confirmed non-ACM

Building	Room/Area	Description	Print No.	Sample Collected	Hazardous Material Present
Auxiliary building	Switchboard	Potential Zelemite backing board (known ACM) with switches/fuses affixed.	24	No	Likely ACM
Auxiliary building	Roof cavity	Potential SMF identified in roof cavity.	25	No	Potential SMF

7.2 Area 2

Area 2 comprised stockyards together with buildings and structures used to support associated stockyard activities including:

- Shed 1: Large open shed adjoining stockyards used for machinery storage and stock management activities. A stockpile immediately adjacent to Shed 1 was also inspected for potentially hazardous materials.
- Shed 2: Large shed divided into three portions:
  - Northwest portion comprising a series of open, former horse stalls along the northwest wall, currently used for building and construction material storage.
  - Central portion used for mixed storage of furniture and household items, farm equipment and tools. A storage room had been constructed in the northwest corner of the central portion using stud walls to isolate it from the main storage space.
  - Southeast portion comprising a series of storage bays constructed using stud walls and housing various household items, construction materials, farm equipment and tools.

  Two stockpiles immediately adjacent to Shed 2 were also inspected for potentially hazardous materials.
- Shed 3: Small shed adjoining a former outdoor barbecue area and gathering space.
- Toilet block
- Cool room

Additional stockpiles comprised of various construction rubble, household items, soil, rocks and other materials were observed in the paddocks surrounding the stockyards. These were not assessed as part of the HazMat.

The layout of Area 2 is shown in Figure 3 and Appendix A, Prints 25 and 26.

Table 7-2 Area 2 Inspection Observations

Building	Room/Area	Description	Print No.	Sample Collected	Hazardous Material Present
Toilet block	Roof	Metal and transparent fibreglass reinforced plastic roof panels with metal fascia.	28, 29	No	Not identified
Toilet block	External walls and floor	Brick walls and concrete slab floor construction.	28, 29	No	Not identified
Toilet block	Internal walls	FC wall sheeting (representative sample SY-TOILETBLOCK collected and confirmed non-ACM).	29	Yes	Confirmed non-ACM
Shed 1	Walls and roof	Steel structure with unlined metal roof and walls.	30, 31	No	Not identified
Shed 1	Stockpile	Stockpile of mixed waste and household items located along the southeastern wall of the shed.	32	No	Not identified
Shed 1	ACM Pipe	ACM pipe identified against external southwestern wall of the shed.	33	No	Likely ACM
Shed 2	External walls and roof	Steel and timber structure with unlined metal roof and external walls.	35 – 37	No	Not identified
Shed 2	Light fittings	Fluorescent light fittings considered unlikely to contain PCBs due to age.	36	No	Not identified
Shed 2	Internal walls and floor	Mix of unlined metal walls and FC sheeted stud walls (visually verified non-ACM) with a concrete slab floor construction.	36, 37	No	Visually verified non-ACM
Shed 2	Stockpile 1	Stockpile of mixed waste, household items and construction material including FC sheeting located to the northwest of Shed 2. Two representative samples of FC sheeting were collected: • northeast side sample (SY-SP1): confirmed as non-ACM • southeast side sample (SY-SP2): confirmed ACM	38, 39	Yes	Confirmed ACM

Building	Room/Area	Description	Print No.	Sample Collected	Hazardous Material Present
Shed 2	Stockpile 2	Stockpile of mixed building material and rubble including fragments of FC sheeting (potential ACM), located along the southwestern wall of the shed.	40	No	Potential ACM
Shed 3	Walls, roof and floor	Timber frame with metal walls, metal roof and concrete slab floor construction.	41, 42	No	Not identified
Cool room	Walls, roof and floor	Insulated panel walls and ceiling, concrete floor and timber framed metal roof.	43, 44	No	Not identified

7.3 Area 3

Area 3 comprised a tenanted rural residential property which was occupied at the time of the HazMat survey. The area included a brick house with an adjoining hay store and storage shed, as well as a detached pump house and former above ground storage tank. No inspection of the roof cavity was available.

The layout of Area 3 is shown in Figure 4 and Appendix A, Print 44.

Table 7-3 Area 3 Inspection Observations

Building	Room/Area	Description	Print No.	Sample Collected	Hazardous Material Present
Tenanted house	External roof and soffits	Tile roof construction with metal gutters and timber fascia. FC soffit sheeting (visually verified ACM).	45 – 47	No	Visually verified ACM
Tenanted house	External walls	Brick wall construction with FC sheeting (visually verified ACM) for gable walls.	45 – 47	No	Visually verified ACM
Tenanted house	Windows	Aluminium windows with aluminium frames.	45, 47	No	Not identified
Tenanted house	Hay store	Timber frame and metal roof construction lean to semi-detached from main house.	48	No	Not identified

Building	Room/Area	Description	Print No.	Sample Collected	Hazardous Material Present
Tenanted house	Detached storage shed	Unlined brick walls with timber framed metal roof and concrete slab floor construction.	49, 50	No	Not identified
Tenanted house	Living spaces and bedrooms	Plasterboard walls, ceiling and cornices with floating timber floor construction.	51 – 54	No	Visually verified non-ACM
Tenanted house	Eastern Corridor area	FC wall sheeting near bathroom.	52	No	Visually verified ACM
Tenanted house	Kitchen	Plasterboard walls, ceiling and cornices with floating timber floor construction.	55 – 58	No	Not identified
Tenanted house	Storage room	FC wall and ceiling sheeting (potential ACM) with floating timber floor and concrete floor construction.	59	No	Likely ACM
Tenanted house	Sunroom	FC walls and ceiling with timber floor.	60 – 61	No	Likely ACM
Tenanted house	Light fittings	Combination of downlights, incandescent globes and fluorescent light fittings identified (e.g. storage room) considered unlikely to contain PCBs.	55 – 64	No	Not identified
Tenanted house	Laundry area	FC wall and ceiling sheeting (potential ACM) with concrete slab floor construction.	62 – 63	No	Likely ACM
Tenanted house	Bathroom	Plasterboard wall and ceiling sheeting with wall tiles affixed in areas, and tile floor.	64	No	Not identified
Pump house	External roof and soffits	Metal roof construction with metal gutters and timber fascia. Sample of FC soffit sheeting collected (Pump house Eave; confirmed ACM).	65 – 66	Yes	Confirmed ACM
Pump house	Walls and floor	Brick wall with concrete slab floor construction.	67	No	Not identified
Pump house	Switchboard	New style switchboard – not likely ACM.	68	No	Not identified
Pump house	Piping	Metal water pipes.	66	No	Not identified

Building	Room/Area	Description	Print No.	Sample Collected	Hazardous Material Present
Former storage tank	Wall and roof	Metal wall frame and sheet construction with metal roof on concrete slab.	69-70	No	Not identified

7.4 Other Assessed Features

Other assessed features in the southern lot included two former pump houses and one potential ACM pipe stockpile. The locations of these features are shown in Figure 2.

Table 7-4 Other Features Inspection Observations

Feature	Area	Description	Print No.	Sample Collected	Hazardous Material Present
ACM pipe stockpile	NA	Stockpile of ACM pipes infilled with concrete.	71	No	Likely ACM
Pump house 1	Wall and floors	Timber structure with unlined metal walls and concrete slab floor construction.	72-73	No	Not identified
Pump house 1	Switchboards	Two switchboards with potential Zelemite backing boards (known ACM).	73-74	No	Likely ACM
Pump house 2	Wall, roof and floors	Timber structure with unlined metal roof, metal walls and concrete slab floor construction.	75-76	No	Not identified
Pump house 2	Switchboard	Switchboard with potential Zelemite backing board (known ACM).	76	No	Likely ACM

8 Hazardous Material Summary

8.1 ACM

Potential ACM was identified throughout the inspected areas in the form of fibre cement sheeting used for external and internal wall cladding, ceiling and soffit sheeting, piping and/or Zelemite switchboards. Likely ACM was identified in the following locations:

- Area 1, Unoccupied house: switchboard
- Area 1, Auxiliary building: switchboard and internal wall sheeting in the laundry and eastern entrance room
- Area 2, Shed 2: ACM pipe adjacent to Shed 2
- Area 3, Tenanted house: internal wall and ceiling sheeting in the storage room, sunroom and laundry.
- ACM pipe stockpile
- Pumphouse 1: switchboard
- Pumphouse 2: switchboard

Material that was previously confirmed by laboratory analysis as ACM (Douglas Partners, 2022) was visually verified to be present at the following locations:

- Area 1, Unoccupied house: sunroom
- Area 3, Tenanted house: soffit sheeting, external wall sheeting and internal wall sheeting near bathroom

Ten potential ACM samples were collected and sent to ASET laboratory for analysis for the presence of asbestos. Samples were examined under stereo microscope with selected fibres analysed using polarised light microscopy in conjunction with dispersion staining methods in accordance with Australian Standard AS 4964 - 2004. Laboratory analysis confirmed the presence of ACM in the following locations:

- Area 1, Unoccupied house: bathroom
- Area 2, Stockpile 1: FC sheeting from the southeast side of the stockpile
- Area 3, Pump house: soffit sheeting

A copy of the NATA Certified laboratory report is provided in Appendix B.

8.2 Lead Paint

Lead paint and/or lead dust was previously confirmed by laboratory analysis to be present in the unoccupied house and auxiliary building, the tenanted house and stockyard shed 2 (Douglas Partners, 2022). These findings were consistent with those expected for the property based on the age of the structures and the visual observations made during the Arcadis HazMat.

Arcadis did not collect samples of paint for analysis for lead as the structures at the Site are proposed for demolition, and any lead content in paint will be considered negligible in the context of the total weight of the demolition rubble. Disposal of lead paint on material removed from residential structures is pre-classified as general solid waste under the NSW EPA Waste Classification Guidelines (NSW EPA, 2014), and can be disposed of with other *building and demolition waste* as defined by the guidelines.

8.3 Polychlorinated biphenyls

Fluorescent light fittings were identified in the unoccupied house, Stockyard Shed 2 and the tenanted property. Based on a visual assessment of the fittings, the residential nature of the Site and the likely

maintenance / replacement of light fittings over the lifetime of the property, it was considered unlikely that PCB containing capacitors were present.

8.4 Synthetic Mineral Fibres

Potential SMF was identified in the roof cavity of the auxiliary building adjacent to the unoccupied house. SMF was not identified in the inspected wall cavities or the limited section of roof cavity inspected in the unoccupied house. However, based on the age and residential nature of the property, there is the potential for SMF to be present as wall/ceiling insultation not identified and other thermal insultation such as bandages for hot water lines. No access was available for inspection of the roof and wall cavities in the tenanted property due to occupation at the time of the inspection.

9 Conclusions and Recommendations

Arcadis undertook a Hazmat of buildings/structures in the southern portion of the site to assess for the presence of hazardous materials (primarily asbestos) within the readily accessible areas of the buildings at the Site. Based on the inspection, Arcadis concluded the following:

Asbestos Containing Materials

Bonded ACM was confirmed by laboratory analysis to be present at the Site in a number of samples. All asbestos identified during the inspection was of a bonded nature with no friable asbestos observed to be present.

Overall. greater than 10m^2 of asbestos has been identified at the premises and will require removal. All asbestos removal works should be undertaken by a licensed asbestos removalist (Class B for Bonded asbestos), and undertaken in accordance with the requirements outlined in the *How to Safely Remove Asbestos Code of Practice* (SafeWork NSW, 2022).

Removal works should be validated and a clearance inspection prepared in accordance with the requirements outlined in the *How to Safely Remove Asbestos Code of Practice* (SafeWork NSW, 2022). The clearance inspection should be undertaken by a competent person, or a licensed asbestos assessor following the removal works and prior to demolition. Prior to the clearance report being issued, the works area should maintain the requirement for asbestos contaminated sites.

Asbestos transporters and facilities receiving asbestos waste must report the movement of asbestos waste to the NSW EPA. Entities involved with the transport or disposal of asbestos waste in NSW, or arranging the transport of asbestos waste in NSW, must use the EPA's online tool, *WasteLocate*. All asbestos waste must be disposed at a waste collection facility licensed to receive asbestos waste.

Polychlorinated biphenyls

PCBs were considered unlikely to be present at the Site.

Lead Paint

Lead-based paint was previously confirmed to be present at the Site. However, given the proposed asbestos removal and demolition work, no specific lead paint removal works would be required to take place. Appropriate dust suppression should be undertaken during works to prevent mobilisation of any lead-based paints present during demolition.

Synthetic Mineral Fibres

Potential SMF was identified and is considered likely to be present at the Site.

SMF work is to be undertaken in accordance with the requirements of the WHS Regulation and subordinate Codes of Practice, Guidance Notes, and other documents. These include:

- SW NSW (2015) Safe management of synthetic mineral fibres (SMF) - glasswool and rockwool,
- SWA (2020) Guide to Handling Refractory Ceramic Fibres,
- NOHSC (2005) Guidance Note on the Membrane Filter Method for the Estimation of Airborne Synthetic Mineral Fibres.

Reference should also be made to the Australian Institute of Occupational Hygienists (2011) Synthetic Mineral Fibres (SMF) and Occupational Health Issues, Position Paper (reformatted January 2018 or as otherwise revised/updated) for guidance and information.

10 References

AS4361.1 - *1995 Guide to Lead Paint Management, Part 1: Industrial Applications.*

AS4361.2 - *1998 Guide to Lead Paint Management, Part 2: Residential and Commercial Buildings.*

Australian Institute of Occupational Hygienists. (2011). *Synthetic Mineral Fibres (SMF) and Occupational Health Issues, Position Paper.*

Douglas Partners. (2022). Report on Hazardous Building Materials Survey: Burra Park, 1953 - 2109 Elizabeth Drive, Badgerys Creek, NSW.

Environment Protection and Heritage Council. (2003). *Polychorinated Biphenyls Management Plan, Revised Edition.*

The National Environment Protection Council (2013). *National Environment Protection (Assessment of Site Contamination) Measure 1999 (NEPM) as amended in May 2023.*

NHMRC. (2015). Information Paper. Evidence on the Effects of Lead on Human Health.

NOHSC. (1995). *Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment* [NOHSC:1003(1995)].

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Safework Australia. (2024). *Workplace Exposure Standards for Airborne Contaminants.*

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SafeWork NSW. (2022). *Code of Practice: How to manage and control asbestos in the workplace.* SafeWork NSW.

SafeWork NSW. (2022). *Code of Practice: How to safely remove asbestos.* SafeWork NSW.

The Environmentally Hazardous Chemicals Regulation 2017.

Work Health and Safety Act 2011.

Work Health and Safety Regulation 2017.

11 Limitations

The findings of this report are based on the Scope of Work described in this report. Arcadis performed the services in a manner consistent with the level of care and expertise exercised by members of the environmental profession. That standard of care may change, and new methods and practices of exploration, testing and analysis may develop in the future, which might produce different results.

No warranties, express or implied, are made. Subject to the Scope of Work, Arcadis' assessment is limited strictly to identifying typical environmental conditions associated with the subject property.

While normal assessments of data reliability have been made, Arcadis assumes no responsibility or liability for errors in any data obtained from regulatory agencies, statements from sources outside of Arcadis, or developments resulting from situations outside the scope of this project.

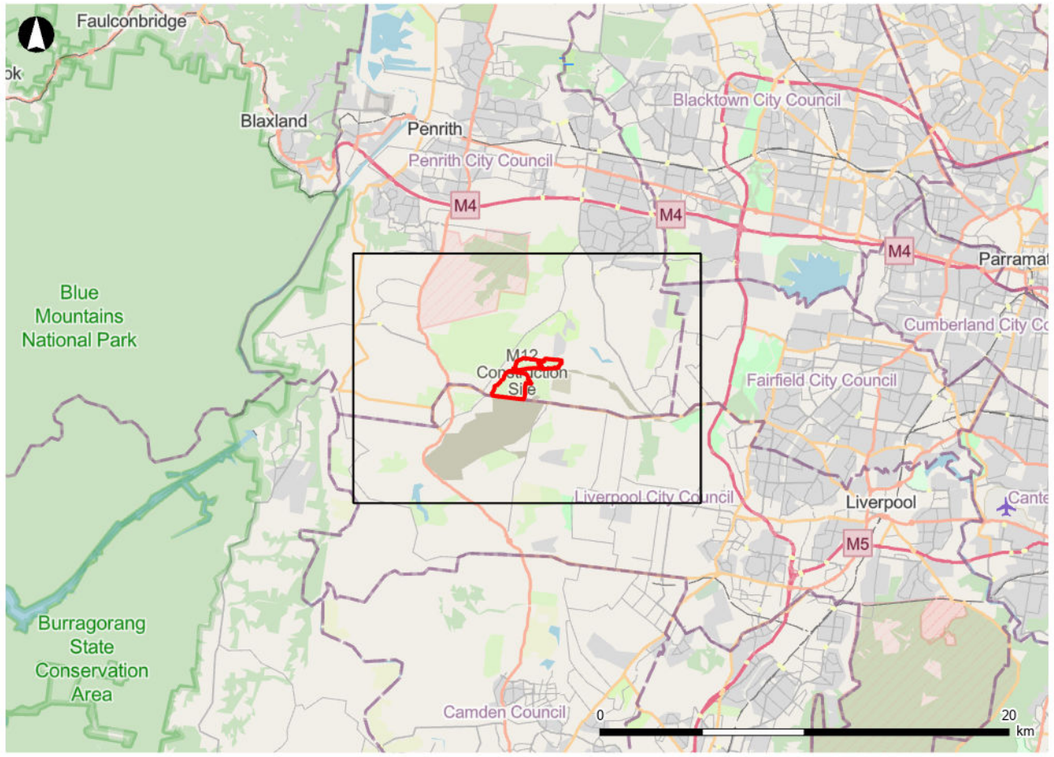
Arcadis prepared this report for the sole and exclusive benefit and use of the client. Notwithstanding delivery of this report by Arcadis or the client to any third party, any copy of this report provided to a third party is provided for informational purposes only, without the right to rely. Arcadis cannot accept any responsibility for any use of or reliance on the contents of prepared reports by any third party except where expressly agreed via an agreed and properly executed reliance letter. Subject to the terms of the reliance letter, Arcadis would disclaim all and any liability to any third person in respect of anything or in consequence of anything done or omitted to be done by that person in reliance, whether whole or partial.

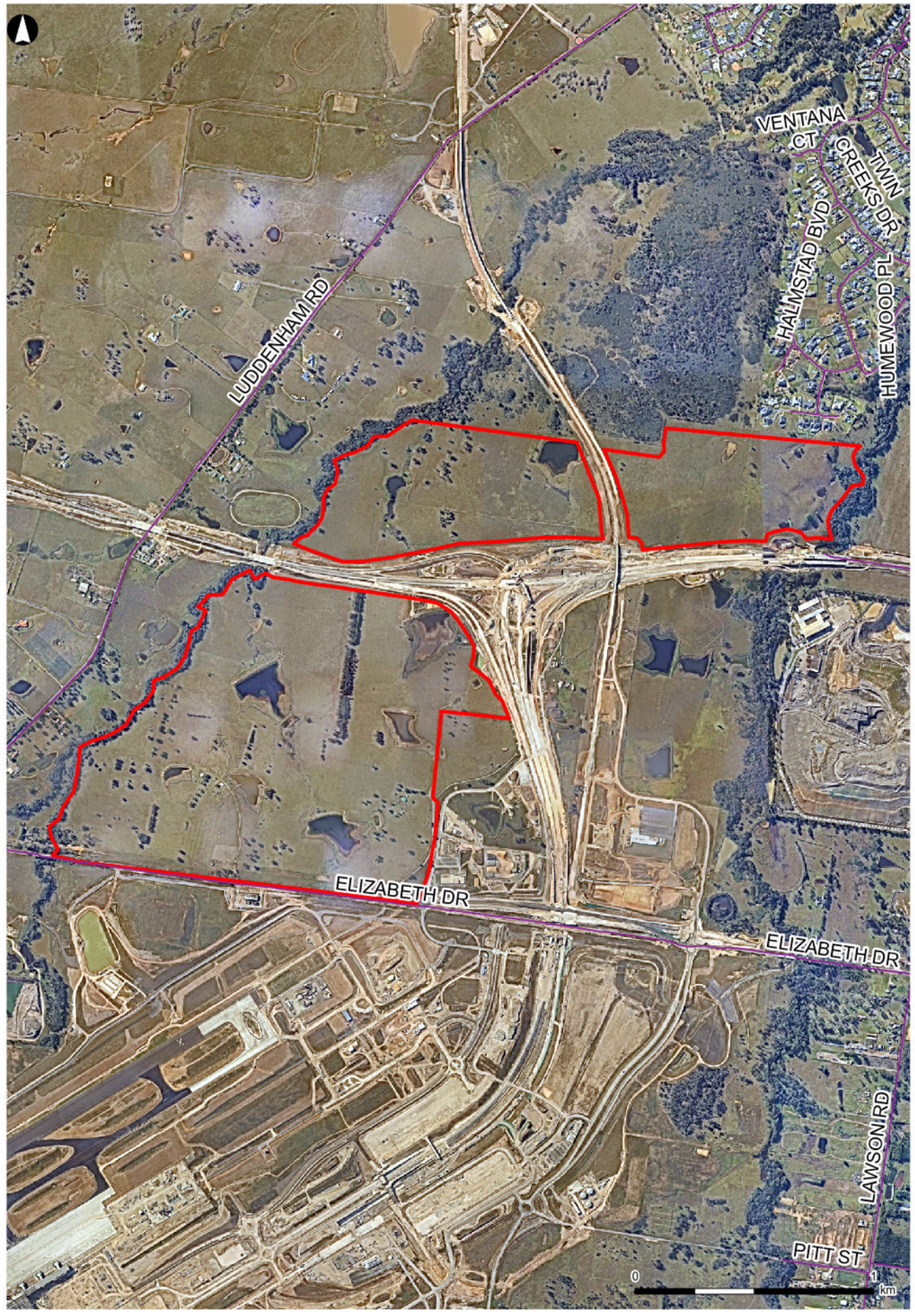
Information from samples collected by Arcadis or historical data reviewed in this document is considered to be accurate at the date of issue. The Hazmat survey was limited to a non-destructive or non-intrusive assessment of accessible areas of structures onsite with limited supplementary confirmatory sampling where possible. The survey excluded confined spaces, working at heights and limited to accessible/visible areas of the structures, hence there is a degree of uncertainty associated with the non-destructive Hazmat survey which relies primarily on visual assessment of accessible areas of the structures.

Arcadis' professional opinions are based upon its professional judgment, experience, and training. These opinions are also based upon data derived from the limited testing and analysis described in this report. It is possible that additional testing and analysis might produce different results and/or different opinions. Arcadis has limited its investigation(s) to the scope agreed upon with its client.

Figures

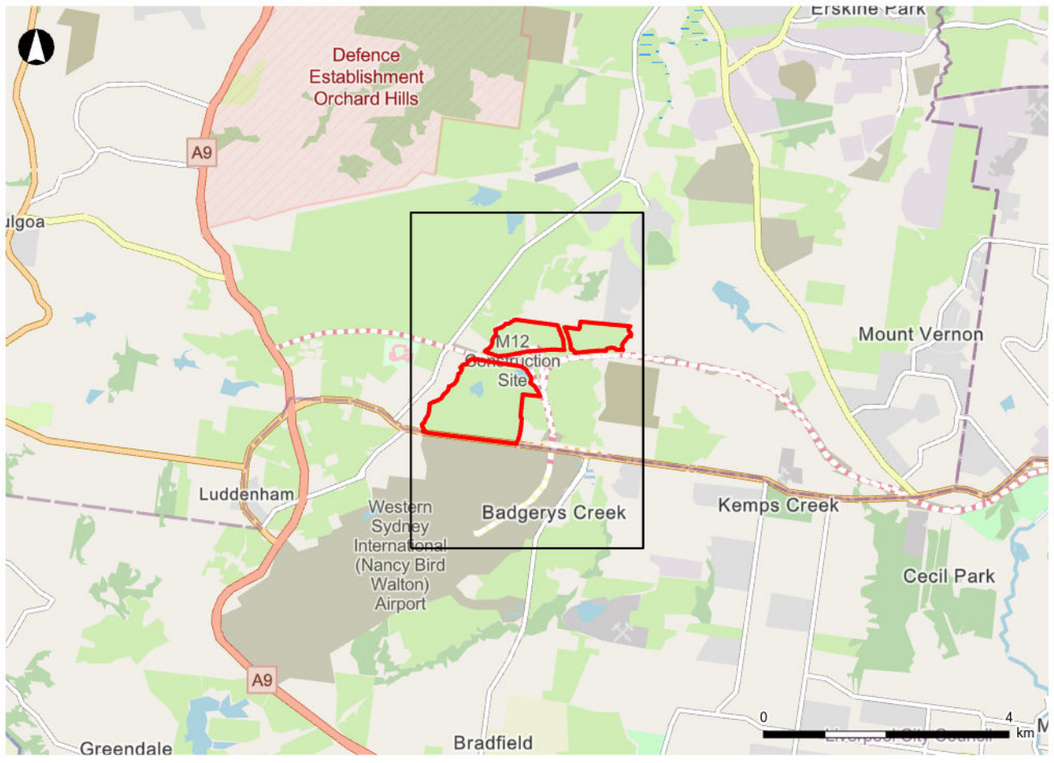
30206389 - Burrah Park HazMat





LEGEND

Site Boundary



ARCADIS AUSTRALIA PACIFIC PTY LTD
ABN 76 104 485 289
Level 16, 580 George St | Sydney NSW 2000
P: +61 (0) 2 8907 9000 | F: +61 (0) 2 8907 9001

Coordinate System: GDA2020 MGA Zone 56
Date Issued: June 21, 2024
Topographic Service Layer Credits: OpenStreetMap
Imagery: Nearmap, captured on 30/03/2024

Figure 1 - Site Location

LEGEND

Site Boundary

1:3,500 at A3

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ABN 76 104 485 289
Level 16, 580 George St | Sydney NSW 2000
P: +61 (0) 2 8907 9000 | F: +61 (0) 2 8907 9001

Coordinate System: GDA2020 MGA Zone 56
Date Issued: June 14, 2024
Topographic Service Layer Credits: OpenStreetMap
Imagery: Nearmap, captured on 30/03/2024

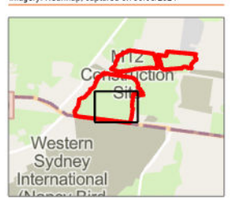

Figure 2 - Site Layout

LEGEND

- Site Boundary
- Assessed Stockpiles
- Potential ACM Pipe

1:500 at A3

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Coordinate System: GDA2020 MGA Zone 56
Date Issued: June 14, 2024
Topographic Service Layer Credits: OpenStreetMap
Imagery: Nearmap, captured on 30/03/2024

Figure 3 - Area 2 Layout

LEGEND

Site Boundary

1:400 at A3

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Coordinate System: GDA2020 MGA Zone 56
Date Issued: June 21, 2024
Topographic Service Layer Credits: OpenStreetMap
Imagery: Nearmap, captured on 30/03/2024

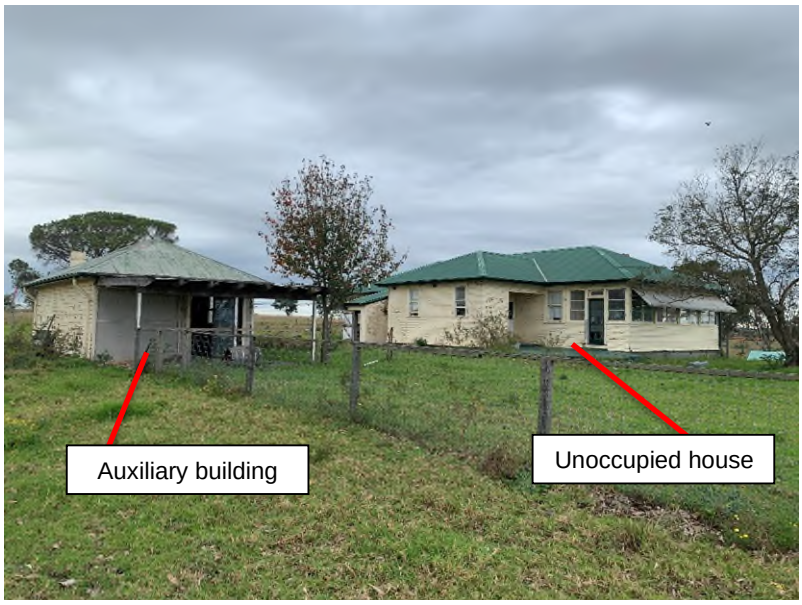
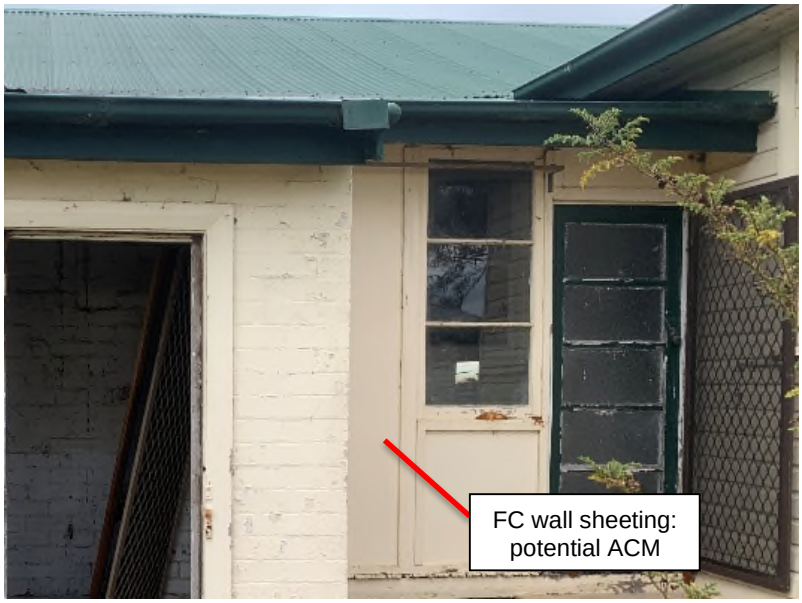
Figure 4 - Area 3 Layout

Date: 21/06/2024 Path: C:\Users\bm102350\ARCADIS\30206389 - Burra Park - Project Documents\F-Env\HazMat\1 HazMat Report\Figures\A3 Landscape Project Template\30206389 - Burra Park HazMat.aprx
Created by : BM
QA by : SS

Appendix A

Photographic Log

ARCADIS Design & Consultancy for natural and built assets	SITE PHOTOGRAPHS	
Client Name HB+B Pty Ltd | ISPT Pty Ltd	**Site Location:** 1953 – 2109 Elizabeth Drive, Badgerys Creek	**Project No.** 30206389

	**Print 1** *Unoccupied house* and *auxilary building* View of the unoccupied house and adjacent auxiliary building from the north.
	**Print 2** *Unoccupied house* View of the house from the south.
	**Print 3** *Unoccupied house* View of the central northeast entrance showing FC wall sheeting.

Print 4

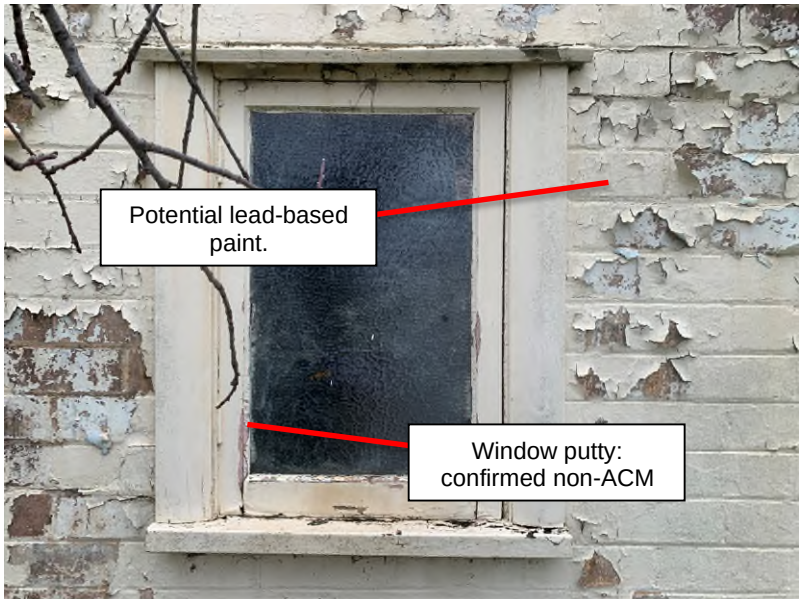
Unoccupied house

View of the semi-detached outhouse showing FC soffit sheeting (visually verified non-ACM).

Print 5

Unoccupied house

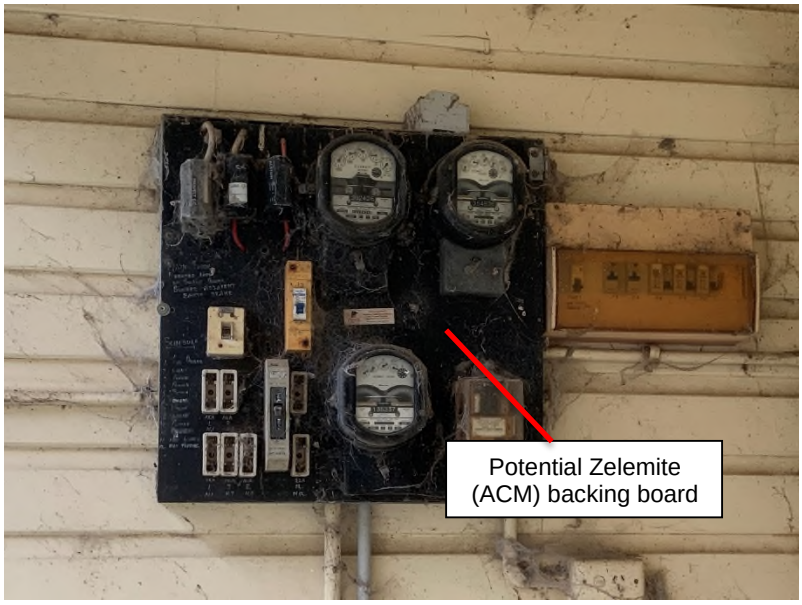
View of the southwest entrance to the house.



Print 6

Unoccupied house

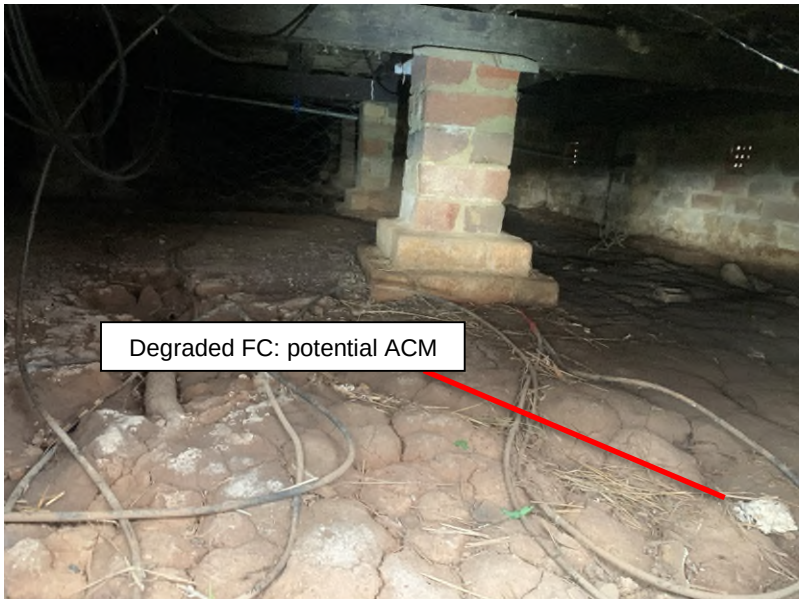
Southeast window of the former outhouse. Sample of window putty (HS-WINDOW-PUTTY) collected for analysis and confirmed as non-ACM.



Print 7

Unoccupied house

Switchboard near the northern entry of the house.



Print 8

Unoccupied house

View of the underside of the house at the western corner showing brick pier construction.

Print 9

Unoccupied house

View of the underside of the house at the northern entry showing brick pier construction and general rubbish under structure.

Print 10

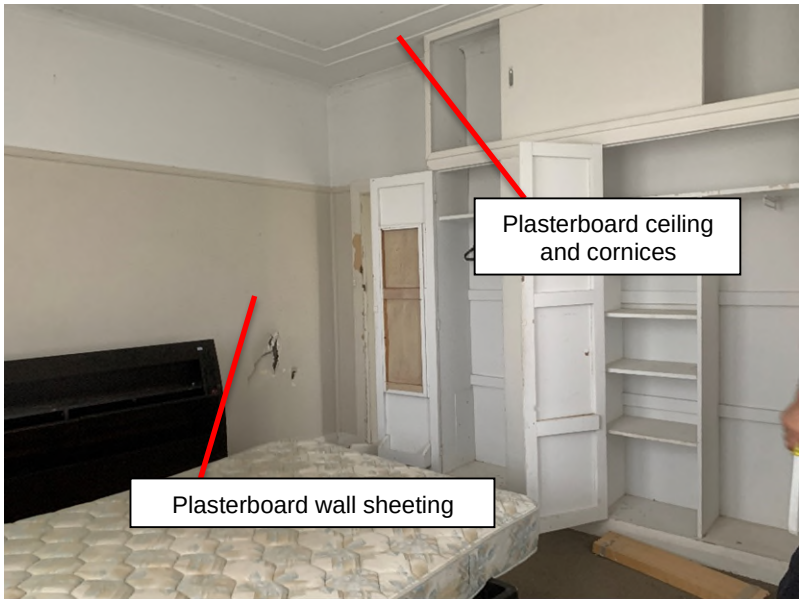
Unoccupied house

Bathroom tiles fixed to FC sheeting in bathroom (consistent with adjoining shower and water closet). Sample of wall sheeting collected (HS-BATHROOM WALL) and confirmed as ACM.

Print 11

Unoccupied house

Tiles fixed to FC sheeting in toilet. Sample of tile glue (HS-TILEGLUE) collected and confirmed as non-ACM.



Print 12

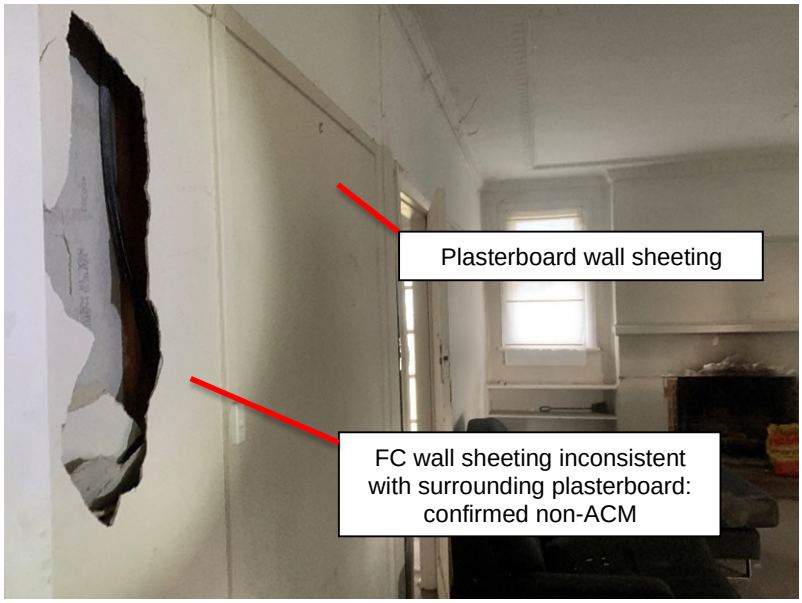
Unoccupied house

Lined plasterboard internal walls and ceilings in bedroom and main living spaces.

Print 13

Unoccupied house

Damaged internal wall in bedroom showing plasterboard composition.



Print 14

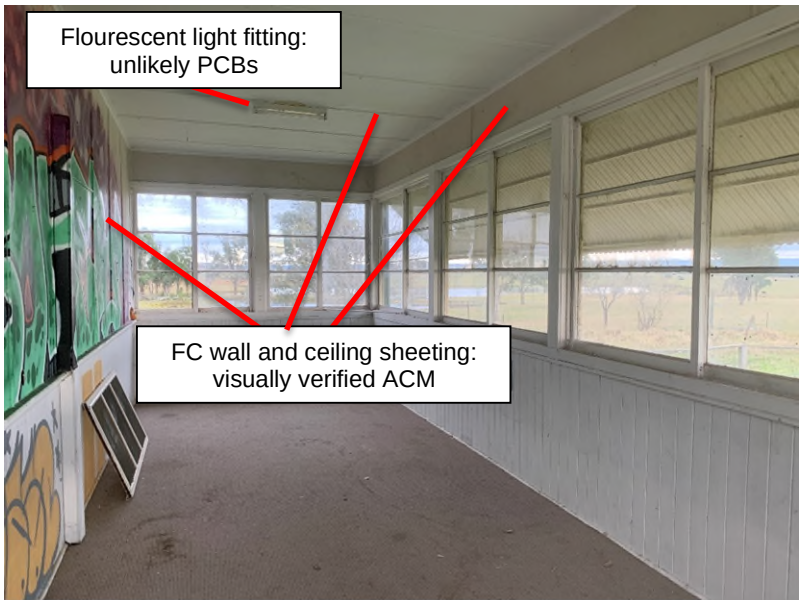
Unoccupied house

Lined internal walls in loungeroom showing broken panel inconsistent with surrounding wall sheeting. Sample of panel collected (HS-LOUNGEPANEL) and confirmed as non-ACM.

Print 15

Unoccupied house

Carpet floor covering over timber floorboards throughout living spaces and bedrooms.



Print 16

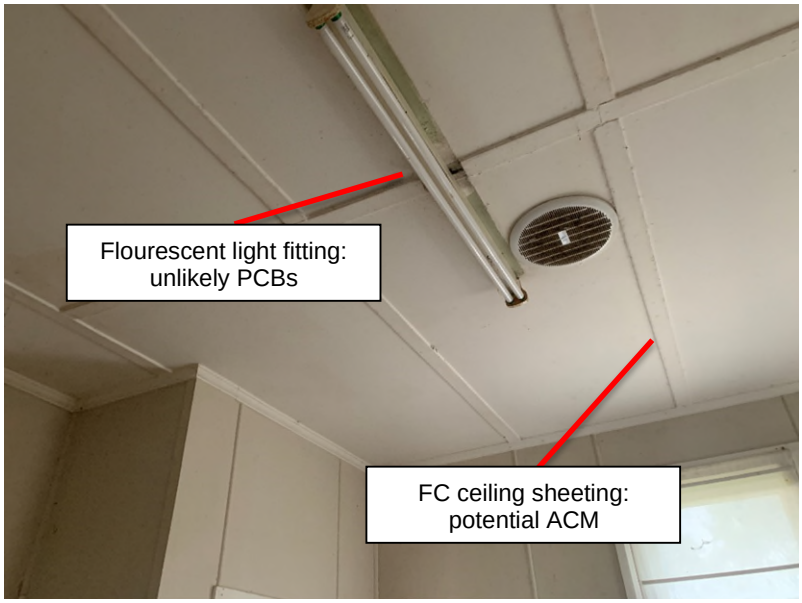
Unoccupied house

Sunroom at the northwest of the house.

Print 17

Unoccupied house

Kitchen and pantry area.



Print 18

Unoccupied house

Kitchen ceiling.

Print 19

Auxilary building

View of the auxiliary building from the east.

Print 20

Auxilary building

View of the eastern corner of the auxiliary building.

Print 21

Auxilary building

View of the eastern entry to the auxiliary building showing external timber cladding fixed directly to studs.

Print 22

Auxilary building

View of the adjoining covered area at the northwest of the auxiliary building. Wall sheeting consistant with internal sheeting identifed as non-ACM.

Print 23a

Auxilary building

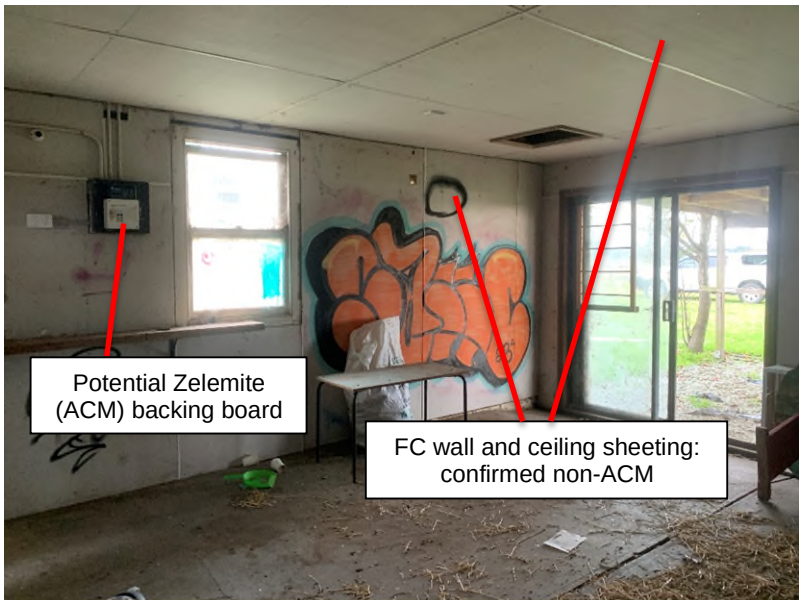
Laundry area at the southeast of the building. Sample of window putty (GS-WINDOW-PUTTY) collected and confirmed non-ACM.

Wall sheeting behind wall tiles is likely ACM along northern wall (back of wall visable in Print 23b)

Print 23b

Auxilary building

Likely ACM wall in eastern entrance room, behind tiled, northern wall in laundry.



Print 24

Auxilary building

Workshop / storage room at the northwest of the building. Sample of wall sheeting (GS-MAINWALL) collected and confirmed as non-ACM.

Print 25

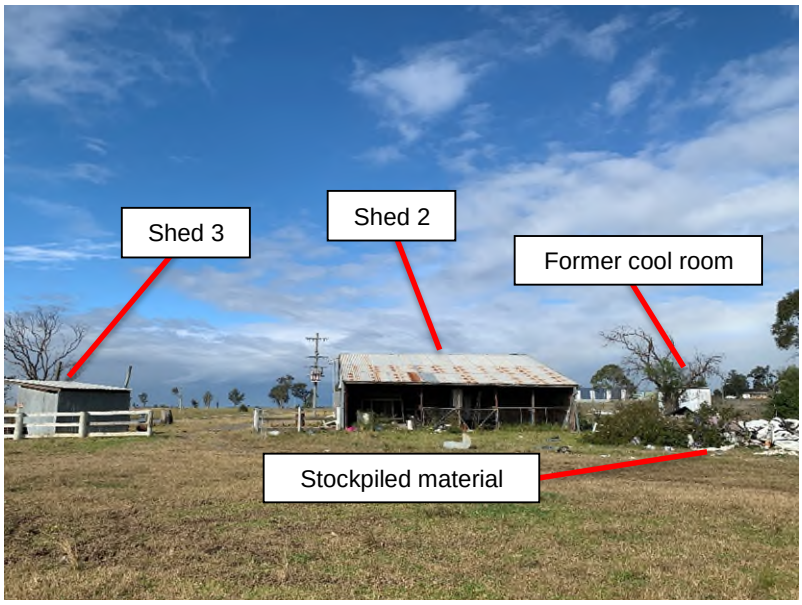
Auxilary building

View into the roof cavity.

Print 26

Shed 1 and *Toilet Block*

View of the stockyard toilet block and shed 1 from the southeast.



Print 27

Shed 2 and *Shed 3*

View of stockyard shed 2 and shed 3 from the northwest with a former cool room and stockpiled material also shown.

Print 28

Toilet block

View of the toilet block from the north.

Print 29

Toilet block

Internal view of the toilet block. Sample of wall sheeting (SY-TOILETBLOCK) collected and confirmed non-ACM.

Print 30

Shed 1

View of the northeast façade of stockyard shed 1.

Print 31

Shed 1

Internal view of stockyard shed 1 from the northwest corner.

Print 32

Shed 1 Stockpile

Stockpiled mixed waste and household items along the southeastern wall of stockyard shed 1.

Print 33

Shed 1 ACM Pipe

ACM pipe against the southwestern wall of stockyard shed 1.

Print 34

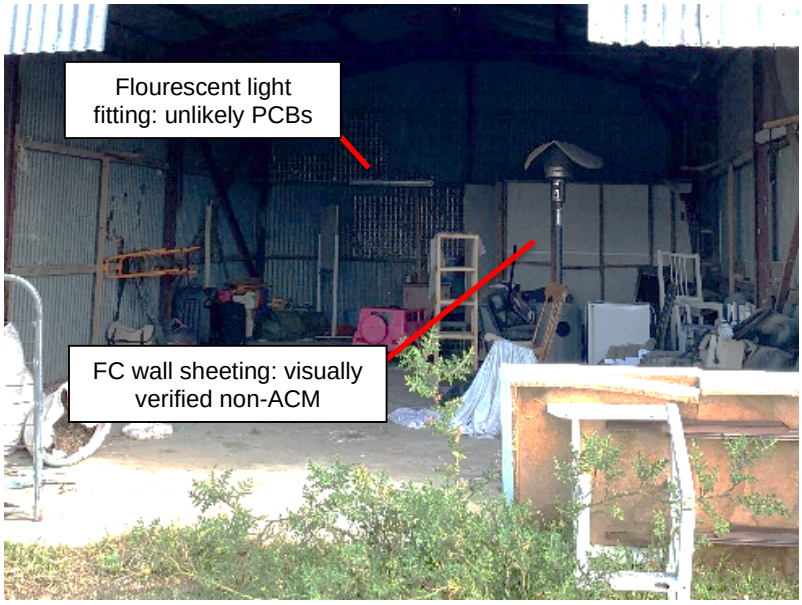
Shed 2

Stockyard shed 2 viewed from the north showing open stalls on the northwest side and the main shed storage entrance on the northeast side.

Print 35

Shed 2

Open stalls in the northwest portion of the shed used for mixed storage.



Print 36

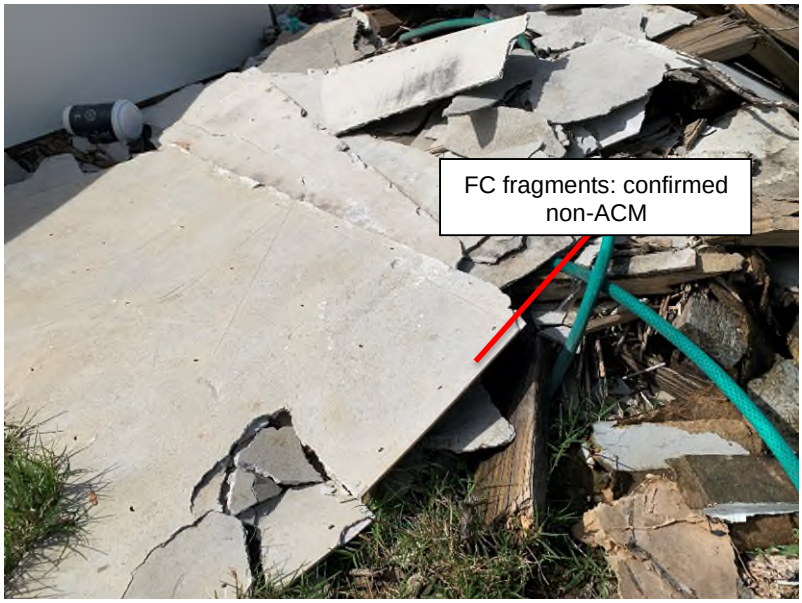
Shed 2

Main shed area used for mixed storage, and including a small storage room with stud walls.

Print 37

Shed 2

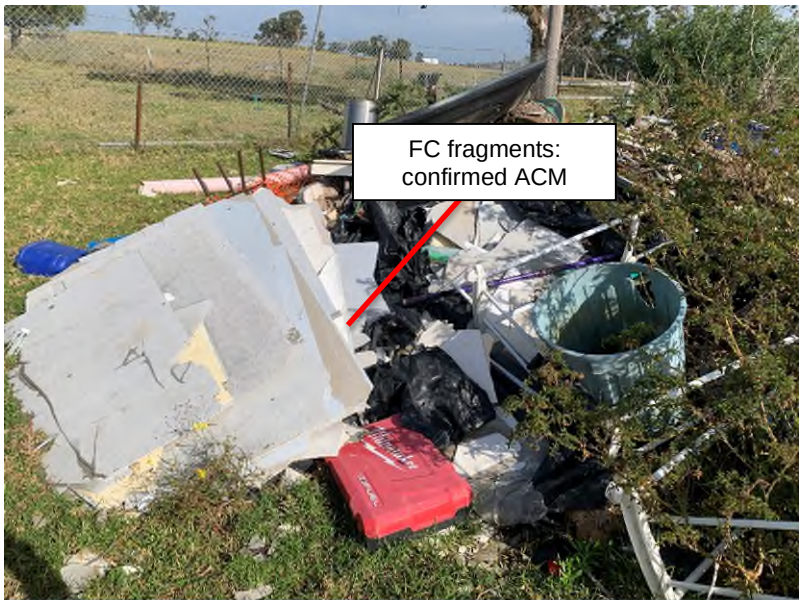
One of a series of storage bays separated by stud walls in the southeast portion of the shed.



Print 38

Shed 2 Stockpile 1

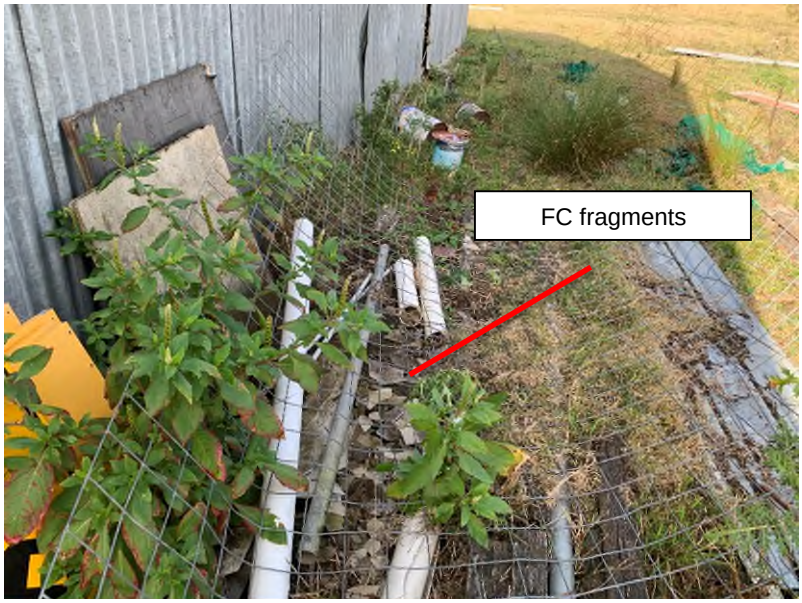
Stockpile of mixed building material and rubble northwest of shed 2. One sample of FC sheeting (SY-SP1) collected from northwest side of stockpile and confirmed non-ACM.



Print 39

Shed 2 Stockpile 1

One sample of FC sheeting (SY-SP2) collected from southeast side of stockpile and confirmed ACM.



Print 40

Shed 2 Stockpile 2

Mixed building material and rubble along the southwest wall of shed 2. Not likely ACM.

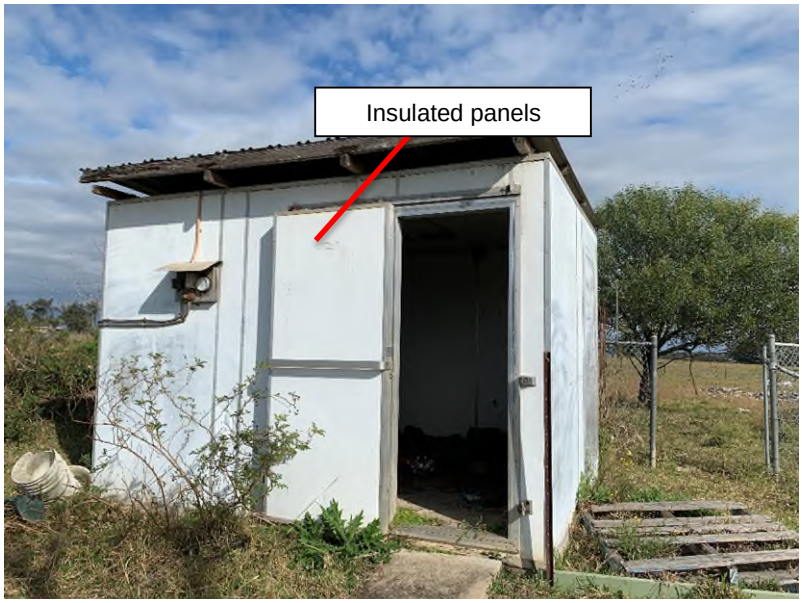
Print 41

Shed 3

Print 42

Shed 3

Internal view of stockyard shed 3.



Print 43

Cool Room

Print 44

Cool Room

Internal view of the stockyard cool room.

Print 45

Tenanted house

View of the tenanted house along the northern façade, with the pump house and former storage tank at rear.

Print 46

Tenanted house

View of the tenanted house from the northeast.

Print 47

Tenanted house

View of the entrance porch.

Print 48

Tenanted house

View along the western façade showing the adjoining hay store.

Print 49

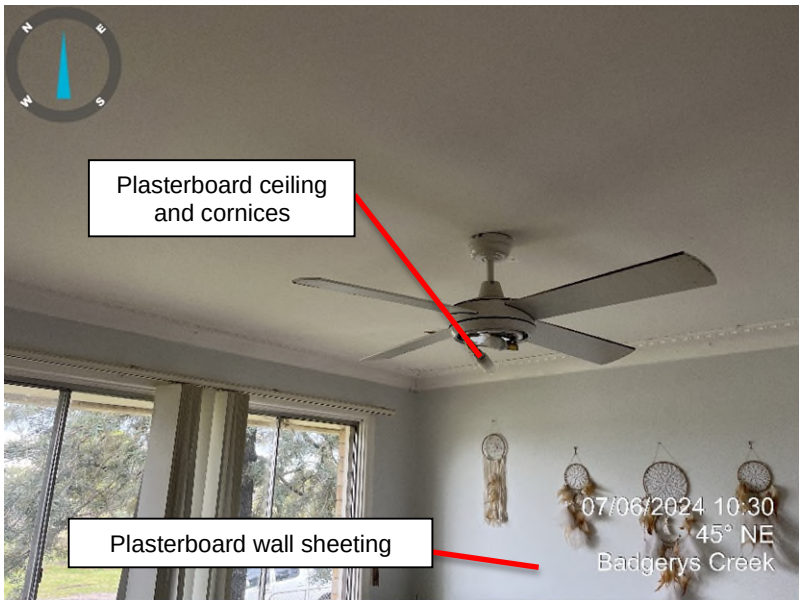
Tenanted house

Semi-detached storage shed at the southwest corner of the main house.

Print 50

Tenanted house

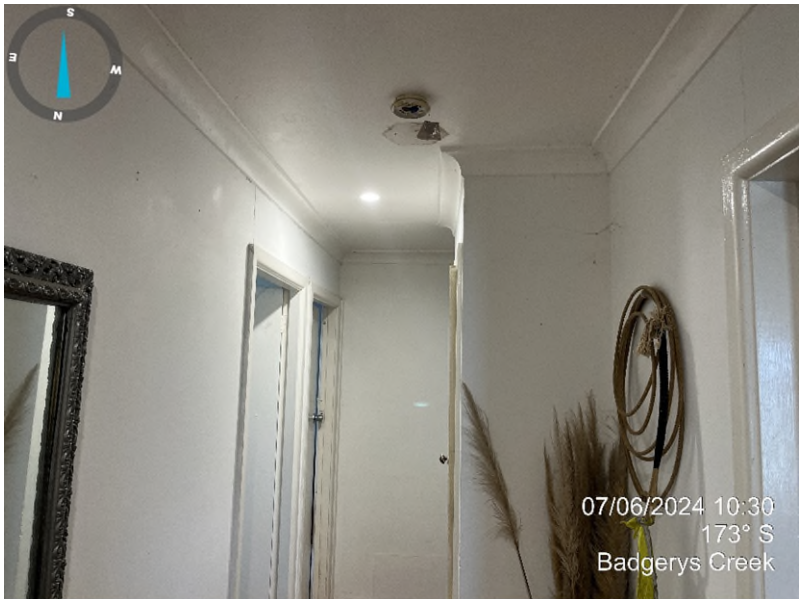
Internal view of the semi-detached storage shed.



Print 51

Tenanted house

Example of bredrooms - Lined plasterboard internal walls and ceilings in bedroom and main living spaces.



Print 52

Tenanted house

Eastern corridor area

Print 53

Tenanted house

Living area / dinning area plasterboard ceiling and cornices

Print 54

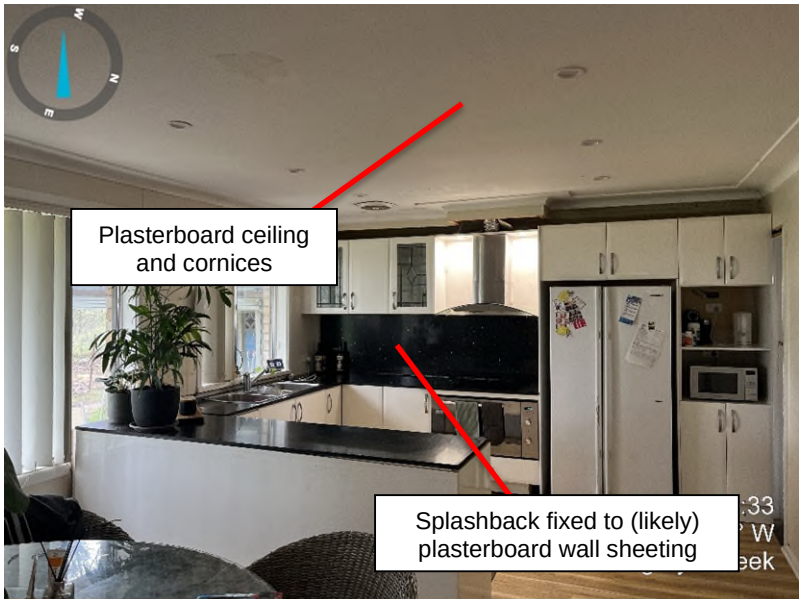
Tenanted house

Exposed internal wall structure showing plasterboard composition.

Print 55

Tenanted house

Plasterboard walls in kitchen area



Print 56

Tenanted house

View of the kitchen from the living / dinning space.

Print 57

Tenanted house

Kitchen tiles fixed to plasterboard wall sheeting.

Print 58

Tenanted house

Kitchen fause ceiling and original ceiling - plasterboard

Print 59

Tenanted house

View of the storage room into the kitchen and laundry areas.

Print 60

Tenanted house

Storage room wall. ACM Sheeting present.

Print 61

Tenanted house

Sunroom

Print 62

Tenanted house

Laundry area looking back to store room

Print 63

Tenanted house

View of the laundry area looking toward the rear door.

Print 64

Tenanted house

View of the bathroom.

Print 65

Pump house and *former storage tank*

Print 66

Pump house

View of the pump house looking north showing the pipe between the pump house and former storage tank to the west. Sample of the FC sheet from below the eave collected (Pump house Eave) and confirmed ACM.

Print 67

Pump house

Internal view of the pump house.

Print 68

Pump house

Switchboard within the pump house.

Print 69

Former Storage Tank

View of the former storage tank from the southeast.

Print 70

Former Storage Tank

Internal view of the former storage tank, currently used for mixed storage and experi water ingress.

Print 71

Potential ACM pipe stockpile

Stockpiled ACM pipes infilled with concrete.

Print 72

Pump house 1

View of pump house 1 from the northeast.

Print 73

Pump house 1

Switchboard on the inside wall.

Print 74

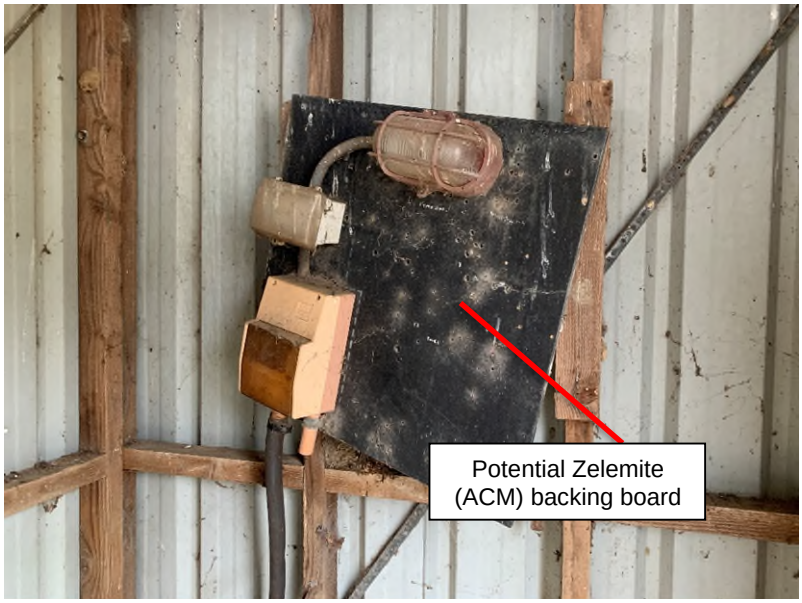
Pump house 1

Switchboard adjacent to the pump house.

Print 75

Pump house 2

View of pump house 2 from the west.



Print 76

Pump house 2

Swtichboard on the inside wall.

Appendix B

Laboratory Report

ASET 118633/121873/1-910.

CLIENT:	Arcadis	TURNAROUND REQUIREMENTS : (Standard TAT may be longer for some tests e.g.. Ultra Trace Organics)	☐ Standard TAT (List due date): 13/06/2024	FOR LABORATORY USE ONLY (Circle)	
OFFICE:	Level 16/580 George Street, Sydney 2000		☐ Non Standard or urgent TAT (List due date):	Custody Seal Intact?	Yes No N/A
PROJECT:	Barra Park			Free Ice / frozen ice bricks present upon receipt?	Yes No N/A
ORDER NUMBER:	34206389		COC SEQUENCE NUMBER (Circle) COC: 1 2 3 4 5 6 7	Random Sample Temperature on Receipt:	°C
PROJECT MANAGER:	simon.spyrdz@arcadis.com	CONTACT PH: 0401451828	OF: 1 2 3 4 5 6 7	Other comment:	
SAMPLER:	Simon Spyrdz	SAMPLER MOBILE: 0401451828	RELINQUISHED BY: Maddy Phillips	RECEIVED BY: Sunny go logistics	RELINQUISHED BY:
COC emailed to ASET? (YES / NO)		EDD FORMAT (or default):	DATE/TIME: 06/06/2024	DATE/TIME: 06/06	DATE/TIME:
Email Reports to (will default to PM if no other addresses are listed):					RECEIVED BY: ET
Email Invoice to (will default to PM if no other addresses are listed):					DATE/TIME: 9:45

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).								Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE *(refer to codes below)*	TOTAL BOTTLES	ASBESTOS ID								Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
1	HS-WINDOW-PUTTY	5/06/2024	Fragment	Small ziplock bag	1	X								
2	HS-BATHROOMWALL	5/06/2024	Fragment	Small ziplock bag	1	X								
3	HS-TILEGLUE	5/06/2024	Fragment	Small ziplock bag	1	X								
4	HS-LOUNGEPANEL	5/06/2024	Fragment	Small ziplock bag	1	X								
5	GS-MAINWALL	5/06/2024	Fragment	Small ziplock bag	1	X								
6	GS-WINDOW-PUTTY	5/06/2024	Fragment	Small ziplock bag	1	X								
7	SY-TOILETBLOCK	5/06/2024	Fragment	Small ziplock bag	1	X								
8	SY-SP1	5/06/2024	Fragment	Small ziplock bag	1	X								
9	SY-SP2	5/06/2024	Fragment	Small ziplock bag	1	X								
10	Pump House Eave.		"	"	1	X								
				TOTAL										

URGENT

RECEIVED 07 JUN 2024 KD

Water Container Codes: P =Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag.

AUSTRALIAN SAFER ENVIRONMENT & TECHNOLOGY PTY LTD

ABN 36 088 095 112

Our ref : ASET118633 / 121813 / 1 – 10
Your ref : Barra Park
NATA Accreditation No: 14484

11 June 2024

Arcadis Australia
Level 16/ 580 George St
Sydney NSW 2000

Accredited for compliance with ISO/IEC 17025 - Testing.

Attn: Mr Simon Spyrdz

Dear Simon

Asbestos Identification
This report presents the results of ten samples, forwarded by Arcadis Australia on 7 and 11 June 2024, for analysis for asbestos.

1.Introduction: Ten samples forwarded were examined and analysed for the presence of asbestos on 7 and 11 June 2024.

2. Methods: The samples were examined under a Stereo Microscope and selected fibres were analysed by Polarized Light Microscopy in conjunction with Dispersion Staining method **(Australian Standard AS 4964 - 2004 and Safer Environment Method 1 as the supplementary work instruction) (Qualitative Analysis only).**

3. Results :

Sample No. 1. ASET118633 / 121813 / 1. HS-WINDOW-PUTTY.
Approx dimensions 1.5 cm x 1.0 cm x 0.5 cm
The sample consisted of a fragment of soft mastic like material.
No asbestos detected.

Sample No. 2. ASET118633 / 121813 / 2. HS-BATHROOMWALL.
Approx dimensions 2.7 cm x 2.0 cm x 0.4 cm
The sample consisted of a fragment of a fibre cement material.
Chrysotile asbestos detected.

Sample No. 3. ASET118633 / 121813 / 3. HS-TILEGLUE.
Approx dimensions 4.0 cm x 2.0 cm x 0.3 cm
The sample consisted of fragments and powder of soft plaster material.
No asbestos detected.

Sample No. 4. ASET118633 / 121813 / 4. HS-LOUNGEPANEL.
Approx dimensions 5.0 cm x 2.0 cm x 0.5 cm
The sample consisted of a fragment of a fibro plaster cement material containing organic fibres.
No asbestos detected.

Sample No. 5. ASET118633 / 121813 / 5. GS-MAINWALL.
Approx dimensions 2.5 cm x 1.4 cm x 0.4 cm
The sample consisted of a fragment of a fibro plaster cement material containing organic fibres.
No asbestos detected.

Sample No. 6. ASET118633 / 121813 / 6. GS-WINDOW-PUTTY.
Approx dimensions 4.5 cm x 1.0 cm x 0.5 cm
The sample consisted of a fragment of soft mastic like material.
No asbestos detected.

Sample No. 7. ASET118633 / 121813 / 7. SY-TOILETBLOCK.
Approx dimensions 5.0 cm x 2.6 cm x 0.5 cm
The sample consisted of a fragment of a fibro plaster cement material containing organic fibres.
No asbestos detected.

Sample No. 8. ASET118633 / 121813 / 8. SY-SP1.
Approx dimensions 4.5 cm x 2.0 cm x 0.5 cm
The sample consisted of a fragment of a fibre cement material.
Chrysotile asbestos, Amosite asbestos and Crocidolite asbestos detected.

Sample No. 9. ASET118633 / 121813 / 9. SY-SP2.
Approx dimensions 6.5 cm x 4.2 cm x 0.5 cm
The sample consisted of a fragment of a fibro plaster cement material containing organic fibres.
No asbestos detected.

Sample No. 10. ASET118633 / 121813 / 10. Pump House Eave.
Approx dimensions 4.5 cm x 2.0 cm x 0.5 cm
The sample consisted of a fragment of a fibro plaster cement material containing organic fibres.
Chrysotile asbestos detected.

Reported by,

Mahen De Silva. BSc, MSc, Grad Dip (Occ Hyg)
Occupational Hygienist / Approved Identifier.
Approved Signatory

WORLD RECOGNISED ACCREDITATION

Accredited for compliance with ISO/IEC 17025 - Testing.

The results contained in this report relate only to the sample/s submitted for testing. Australian Safer Environment & Technology accepts no responsibility for whether or not the submitted sample/s is/are representative. Results indicating "No asbestos detected" indicates a reporting limit specified in AS4964-2004 which is 0.1g/ Kg (0.01%). Any amounts detected at assumed lower level than that would be reported, however those assumed lower levels may be treated as "No asbestos detected" as specified and recommended by A4964-2004. Trace / respirable level asbestos will be reported only when detected.

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