Hazardous Materials Survey

Maitland Gaol Redevelopment

6-18 John Street, East Maitland NSW 2323

N4952_HMS_R0_161222

December 2022

OHS | WASTE | ENVIRONMENT

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PREPARED FOR

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ABBREVIATIONS

AC	Asbestos Cement
ACD	Asbestos Contaminated Dust or Debris
ACM	Asbestos-Containing Material
ALS	ALS Group
AMP	Asbestos Management Plan
ANZECC	Australian and New Zealand Environment and Conservation Council
ARCP	Asbestos Removal Control Plan
EDB	Electrical Distribution Board
EPA	Environment Protection Authority
FC	Fibre Cement
LAA	Licensed Asbestos Assessor
LARC	Licenced Asbestos Removal Contractor
LBP	Lead Based Paint
HMMP	Hazardous Materials Management Plan
HMS	Hazardous Materials Survey
NATA	National Association of Testing Authorities
PCB	Polychlorinated Biphenyl
SMF	Synthetic Mineral Fibre
TWA	Time Weighted Average

COLOUR CODE FOR HAZARDOUS MATERIALS REGISTER

Asbestos Containing materials in good condition	
Asbestos Containing Materials in fair condition	
Asbestos Containing Materials in poor condition	
Synthetic Mineral Fibre detected	
Lead Based Paint and Dust detected	
Polychlorinated Biphenyl detected	

TABLE OF CONTENTS

TABLES

APPENDICES

1 INTRODUCTION

Hazmat Services Pty Ltd ("**Hazmat**") was commissioned by Maitland City Council (the "**Client**") to undertake a Hazardous Materials Survey ("**HMS**") of the Maitland Gaol Redevelopment Project buildings (the "**Buildings**") at Maitland Gaol, located at 6-18 John Street, East Maitland NSW (the "**Site**").

Maitland Gaol is the longest continuously operating correctional institution in New South Wales. The facility closed in 1998 and was converted to a tourism facility in 2000 under the management of Maitland City Council. In January 2022, the NSW State and Federal Governments announced a funding grant for the redevelopment of the Gaol to deliver a substantial part of its 2020 Development Plan including capital investment in a new activity hub with enhance access and connectivity, innovative interpretation, along with the provision of event infrastructure and boutique accommodation. The Maitland Gaol Redevelopment will be staged across two separate Development Applications consisting of:

Development Application 1:

Redevelopment of the 'Store' building (Building 14) to provide:

- A new ticketing office and gift store;
- New administration office space;
- Upgraded amenities;
- Renovated theatre with bar, foyer, auditorium (pax:256) and back of house; and
- A new loading dock.

Redevelopment of the 'Gaol Staff / Warder's Amenities' building (Building 22) consisting of:

- Demolition of Building 22;
- Construction of a new café (pax: 76);
- Construction of basement staff parking; and
- Construction of enhanced access points.

Construction of a new 17 space gravel car park including two accessible parking spaces and associated landscaping.

Development Application 2:

Redevelopment of the 'Lieutenant Governor and Governor's residences' (Buildings 2 and 3) to provide:

- Boutique accommodation consisting of several guest rooms.

The Buildings surveyed as part of the HMS included the following:

- Building 2 – Lieutenant Governor's Residence;
- Building 3 – Governor's Residence;
- Building 14 – Stores Building; and
- Building 22 – Café/Old Warders Amenities

The areas included in the survey are the accessible exterior and interior areas of the Buildings. The Site and location of the Buildings is contained in **Appendix 1: Site Plans.**

The purpose of the survey which is required to be undertaken prior to any refurbishment or demolition works and which is also intended to meet owner/employer obligations under the *NSW Work Health*

and Safety Regulation 2017, was to identify the location, extent and condition of accessible asbestos based construction materials present at the Site and also determine the likely impact of these materials on persons accessing the Buildings or on any proposed demolition or refurbishment works.

Furthermore, the *NSW Work Health and Safety Regulation 2017* requires that all premises containing asbestos have an Asbestos Management Plan.

In addition, the SafeWork NSW *Demolition Work Code of Practice 2019*, require hazardous materials to be identified and managed in accordance with the WHS regulation 2017.

For the purpose of this report, hazardous materials include Asbestos-Containing Materials ("**ACM**"), Synthetic Mineral Fibres ("**SMF**"), Lead Based Paint ("**LBP**"), Polychlorinated Biphenyl ("**PCB**") materials and lead and asbestos in ceiling dust.

This report should be read in its entirety and with reference to the survey limitations outlined in **Section 8: Limitations and Disclaimer**.

For the purpose of this survey report north is defined as true north.

Buildings 3 and 22 were occupied at the time of the survey and Buildings 2 and 14 were vacant at the time of the survey.

This report presents the findings of the HMS undertaken on the 16th of December 2022 by Hazmat's Luke Parkins, Senior OHS&E Consultant and Licensed Asbestos Assessor (LAA001373). Photographic records of hazardous materials collected during the survey and a register of hazardous materials and an asbestos risk assessment are contained in **Appendix 2: Hazardous Materials Register**.

The following areas were inaccessible during the survey:

- Wall cavities;
- Ceiling cavities within Buildings 3 and 22;
- Sub-floor cavities and voids;
- Sub-surface concrete and soil layers of the Site;
- Underground services and conduits;
- Excessively High areas;
- Internal Ducting; and
- Concealed service ducts which can only be accessible during demolition.

2 SCOPE OF SURVEY

The survey was undertaken by way of a non-destructive visual inspection of construction materials located within visible and accessible areas of the Buildings at the Site.

2.1 Asbestos-Containing Materials

Two (2) samples of ceiling dust and twenty-nine (29) samples of material that were suspected of containing asbestos were collected and sent for analysis to ALS Group ("**ALS**") a National Association of Testing Authorities (Australia) ("**NATA**") registered laboratory. The samples were examined using a stereo microscope and selected fibres were further examined using Polarised Light Microscopy in conjunction with Dispersion Staining techniques.

The NATA endorsed asbestos identification report is contained in **Appendix 3: Laboratory Analytical Results**.

Not all surfaces and suspected ACM were sampled due to the prohibitive cost and physical damage associated with the sampling process or were unable to be sampled due to their lack of accessibility (height), good condition (without causing damage), possibility of causing contamination. Where materials appear to be identical to those physically sampled, and confirmed by analysis to contain asbestos or assumed to contain asbestos based on their age, physical appearance or fixing types (i.e. nail and screw heads, cover strips or cover battens), the term "assumed asbestos" will be used in this report and thus indicates that it is highly likely that the material contains asbestos and should be treated as such unless positively confirmed otherwise.

2.2 Synthetic Mineral Fibre

SMF materials were identified by visual means or as a result of the asbestos identification analysis.

2.3 Lead Based Paint

Determination of lead-based paints was conducted in accordance with *Appendix 1 – Standard Practice for Identification of Lead Paint* taken from *AS4361.2 – 1998 Guide to Lead Paint Management – Part 2: Residential and Commercial Buildings*.

Thirteen (13) lead paint samples were assessed using indicative testing methods which do not quantify the level of lead present but indicate levels of lead that would be expected to exceed Australian Standards.

2.4 Lead in Ceiling Dust

Determination of lead in surface dust was undertaken in accordance with *Australian Standard 4361.2-2017 Guide to hazardous paint management Part 2 Lead paint in residential, public and commercial buildings-Appendix C – Determination of lead in Surface Dust.*

Two (2) samples of lead in surface dust were taken and sent for analysis to ALS's NATA registered laboratory. The NATA endorsed report is contained in **Appendix 3: Laboratory Analytical Results**

2.5 Polychlorinated Biphenyls

Representative fluorescent light fittings were inspected where present and accessible to assess the presence of capacitors that may contain PCB's. The identification details printed on the capacitor were recorded and later compared to the Australian and New Zealand Environment and Conservation Council ("**ANZECC**") *Identification of PCB-Containing Capacitors* register to determine whether the capacitor contained PCB.

3 EXTENT OF SURVEY

Fundamental to the entire basis of an inspection of this type, where the constraints of a "non-destructive" survey are imposed, is the fact that no matter how thorough or professionally it is conducted, not all hazardous materials might be found and recorded.

Hence, the presence of hazardous materials can therefore be reported only within the constraints of these methods.

Whilst one can be reasonably confident that all hazardous materials that might be routinely encountered in the normal day-to-day activities of the Buildings can be identified and assessed, no guarantees can be made that all hazardous materials have been identified since refurbishment and demolition activities may well reveal hazardous materials in areas inaccessible to this inspection.

This report is confined to reporting the discovery and presence of hazardous materials by visual inspection and non-destructive method of those areas of the Buildings accessible to and inspected by Hazmat at the date of the inspection. Hazmat will not be liable in the event the report fails to notify the presence of any hazardous materials in any area of the Buildings (or property) which was on the date of inspection physically inaccessible for inspection using the methods employed or which was not otherwise inspected on that day. Nothing herein contained implies that any inaccessible or uninspected area of the Buildings reveals or does not reveal hazardous materials.

The survey was limited to the Building's structures and associated buildings elements. Hazardous materials which may be present in the ground associated with the former occupancies are generally not included in this report.

4 ASBESTOS RISK ASSESSMENT

The potential health risks posed by ACM in premises are due to a number of risk factors including:

- Accessibility of the material
- Condition of the material
- Friability of the material
- Location of the material

The methodology used in our risk assessment is based on the Australian Standard *AS4360-2004 Risk Management*. The hazard levels for this assessment have been assessed according to the information provided in **Table 1.**

Table 1: Asbestos Risk Assessment – Hazard Levels

Risk Factor / Description			Hazard Level
ASBESTOS TYPE	***Bonded or Non-Friable***	Materials that contain asbestos in a bonded matrix (may consist of Portland cement or various resin/ binders and cannot be crushed by hand when dry).	2
	Friable	ACM which, when dry, is or may become crumbled, pulverised or reduced to powder by hand pressure.	3
CONDITION	***Good***	No sign of damage or deterioration.	1
	Fair	Only mild damage or deterioration.	2
	Poor	Severe damage or deterioration.	3
LOCATION	***Low***	Totally enclosed behind a false ceiling or wall, sealed or painted.	1
	Moderate	Partially protected by encapsulation or enclosure.	2
	High	No encapsulation or enclosure.	3
AIRBORNE POTENTIAL	***Low***	No exposure to air movement.	1
	Moderate	Exposed to natural ventilation.	2
	High	Exposed to forced ventilation or within an air plenum (i.e. intakes/vents, air conditioners, fans).	3
EXPOSURE	***Low***	Activities undertaken in the area are not likely to result in further damage or deterioration of the material.	1
	Moderate	Activities undertaken in the area may result in further damage or deterioration of the material.	2
	High	Activities undertaken in the area are likely to result in further damage or deterioration of the material.	3

The multiplication of the hazard level from the asbestos type and each risk factor can be then used to determine the recommended health risk/action priority rating as provided in **Table 2**.

Table 2: Asbestos Risk Assessment – Recommended Health Risk/Action Priority Rating

Rating		Definition
Health Risk	**Negligible**	Products or Bonded ACM that pose negligible health risk to employees and the general public, such as painted cement sheeting, vinyl floor tiles etc. They consist of materials that currently are in an undamaged, stable, non-friable condition within a low accessible area. The ACM does not present a health risk unless disturbed by intrusive work such as drilling, cutting, breaking or sanding. Control must be implemented to protect these materials from damage including ACM identified by warning signs. Reassessment of the priority rating will be required if any planned maintenance, refurbishment or demolition works impact on their condition. If damage, maintenance work should be carried out to stabilise and repair the damaged area.
Hazard Level	**0 - 3**	
Action Priority	**P4**	
Health Risk	**Low**	Products or materials that pose little health risk to employees and the general public. They consist of ACM that currently are in a stable, non-friable condition and have a low accessibility. These materials should be identified and warning signs erected. The material does not present a health risk unless disturbed by intrusive work such as drilling, cutting, breaking or sanding. Where planned maintenance, refurbishment or demolition works will disturb these materials, removal by a licensed asbestos removal contractor is required.
Hazard Level	**4 – 19**	
Action Priority	**P3**	
Health Risk	**Moderate**	Products or materials that pose a health risk to employees and the public in their current state. They consist of ACM that are mildly damaged, moderately friable and accessible. Removal or encapsulation and regular monitoring are recommended for these materials. Where planned maintenance, refurbishment or demolition works will disturb these materials, removal by a licensed asbestos removal contractor is required.
Hazard Level	**20 – 49**	
Action Priority	**P2**	
Health Risk	**High**	Products or materials that pose an immediate or elevated risk to employees or the public in their current state. They consist of materials that are readily accessible, in poor friable condition. Immediate actions should be taken for these materials to be removed by a licensed asbestos removal contractor is required.
Hazard Level	**> 50**	
Action Priority	**P1**	

5 SAMPLE IDENTIFICATION RESULTS

5.1 Asbestos Identification Analysis

Thirty-one (31) samples were collected for asbestos identification analysis during the survey with the results shown in **Table 3**.

The NATA endorsed report (ALS Report Ref: EN2212392) detailing the results of the asbestos identification analysis are attached in **Appendix 3: Laboratory Analytical Results**.

Table 3: Asbestos Identification Analysis Results

Sample No.	Description	Asbestos Detected
N4952/01	Building 22, external, southern (front) soffit	**Chrysotile & Amosite**
N4952/02	Building 22, external, south-eastern upper infill panel	**Chrysotile**
N4952/03	Building 22, internal, Café, southern infill panel above entry	No Asbestos Detected
N4952/04	Building 22, internal, stairwell to Ladies Toilet, floor sheeting	No Asbestos Detected
N4952/05	Building 22, internal, Ladies Toilets foyer, south-eastern wall lining	No Asbestos Detected
N4952/06	Building 22, internal, Ladies Toilet, vinyl floor sheeting	No Asbestos Detected (**SMF Detected**)
N4952/07	Building 22, internal, Ladies Toilets, stall partition wall	No Asbestos Detected
N4952/08	Building 22, internal, Café Kitchen, green vinyl floor sheeting	No Asbestos Detected
N4952/09	Building 22, internal, Café Kitchen, sheeting underneath green vinyl floor sheeting	No Asbestos Detected
N4952/10	Building 22, internal, downstairs foyer, green vinyl floor tile	No Asbestos Detected
N4952/11	Building 22, internal, downstairs Male Toilet, pitch-based ceiling panels	No Asbestos Detected
N4952/12	Building 2, external, ground floor, northern elevation, door window putty	No Asbestos Detected
N4952/13	Building 2, internal, basement, northern elevation, red vinyl floor sheeting	No Asbestos Detected
N4952/14	Building 2, internal, basement, south-eastern bathroom, ceiling panel	**Chrysotile**
N4952/15	Building 2, internal, basement, doorway connecting south-eastern bathroom and north-eastern room, doorway panel	**Chrysotile**
N4952/16	Building 2, internal, ground floor, main hallway, western wall lining render	No Asbestos Detected
N4952/17	Building 2, internal, ground floor, north-eastern room, north-eastern wall panel	No Asbestos Detected

Sample No.	Description	Asbestos Detected
N4952/18	Building 2, internal, ground floor, south-western toilets, stall partition wall	No Asbestos Detected
N4952/19	Building 2, internal, ground floor, south-eastern room, south-western enclosed cupboard panelling	No Asbestos Detected
N4952/20	Building 2, internal, first floor, north-eastern hallway, yellow vinyl floor sheeting	No Asbestos Detected
N4952/21	Building 2, internal, first floor, north-eastern bathroom, south-western wall lining	No Asbestos Detected
N4952/22	Building 2, internal, first floor, south-eastern room, green vinyl floor tile	**Chrysotile**
N4952/23	Building 3, internal, ground floor, north-western conference/meeting room, ceiling	No Asbestos Detected
N4952/24	Building 3, internal, ground floor, southern central toilet, northern wall lining	**Chrysotile**
N4952/25	Building 3, internal, ground floor, southern central toilet, yellow vinyl floor sheeting	**Chrysotile**
N4952/26	Building 14, internal, westernmost storage area, foyer, northern wall lining	No Asbestos Detected
N4952/27	Building 14, internal, westernmost storage area, toilet, western wall lining	**Chrysotile**
N4952/28	Building 14, internal, 'Store & Work Centres', western wall lining immediately adjacent doorway	No Asbestos Detected
N4952/29	Building 14, internal, 'Shower Block', stall partition wall	**Chrysotile**
N4952/30	Building 2, ceiling cavity, settled dust	No Asbestos Detected
N4952/31	Building 22, ceiling cavity, settled dust	No Asbestos Detected (**SMF Detected**)

Note: Chrysotile is a fibrous silicate mineral commonly known as white asbestos. Amosite is a fibrous silicate mineral commonly known as brown or grey asbestos. Crocidolite is a fibrous silicate mineral commonly known as blue asbestos. SMF is Synthetic Mineral Fibre.

5.2 Lead Based Paint Sampling

Thirteen (13) samples of paint were tested for the presence of lead with results shown in **Table 4**.

Table 4: Lead Based Paint Sampling Results

Sample No.	Description	Lead Detected
N4952/LP01	Building 22, external, ground floor, handrails/guardrails & pipework – Dark green/light green paint system	**Negative**
N4952/LP02	Building 22, external, ground floor, handrails/guardrails – Cream/light brown paint systems	Negative
N4952/LP03	Building 22, external, ground floor, pipework sheathing & door/door framing – White paint system	Negative

N4952/LP04	Building 22, external, ground floor, door/door framing – Red paint system	Negative
N4952/LP05	Building 22, internal, ground floor, concrete staircase stringers, wall and ceiling linings – Black paint system	Negative
N4952/LP06	Building 2, external, ground floor, door – Red paint system	Negative
N4952/LP07	Building 2, external, ground floor, window framing – Cream paint system	Negative
N4952/LP08	Building 2, internal, ground floor, south-western toilets, wall lining – Pink paint system	Negative
N4952/LP09	Building 2, internal, ground floor, hallway, lower staircase – Yellow paint system	Negative
N4952/LP10	Building 2, internal, ground floor, hallway, lower staircase – Brown paint system	Negative
N4952/LP11	Building 3, internal, basement, wall and ceiling linings – White paint system	**Positive**
N4952/LP12	Building 14, external, south-western door – Red paint system	**Positive**
N4952/LP13	Building 14, internal, ground floor, reception store, floor coverings – Dark green paint system	Negative

5.3 Lead in Ceiling Dust Sampling

Two (2) lead dust samples were tested for the presence of lead with results shown in **Table 5**.

The NATA endorsed report (ALS Report Ref: EN2212392) detailing the results of the lead in dust analysis are attached in **Appendix 3: Laboratory Analytical Results**.

Table 5: Lead Dust Sampling Results

Sample No.	Description	Lead mg/kg
N4952/32	Building 2, ceiling cavity – Settled dust	**1570**
N4952/33	**Building 22, ceiling cavity – Settled dust**	117

Note: Lead in dust levels highlighted exceeded the **1500mg/kg** which is established, and best matches a risk assessment for bulk dust in non-habitable areas (National Environment Protection (Assessment of Site Contamination) Measure (NEPM), Health *investigation* Levels (HIL)

6 RESULTS OF SURVEY

Detailed results of the hazardous materials discovered during the survey are contained **Appendix 2: Hazardous Materials Register** with a summary shown in **Table 6** below.

Table 6: Buildings and Hazardous Materials Identified

Building	Photo	Description	ACM	SMF	Lead	PCB
Building 22 – Café/Old Warders Amenities		The building exterior is primarily constructed of glass panels, brick, sandstone and fibrous cement panels with aluminium framed windows and a corrugated metal roof. The building interior is primarily constructed of brick, sandstone and concrete wall linings with plasterboard and concrete ceiling linings and ceramic tile, vinyl tile, concrete and vinyl floor sheeting throughout.	✓	✓	x	x
Building 2 – Lieutenant Governor's Residence		The building exterior is primarily constructed of sandstone and brick with timber framed windows and a tiled roof. The building interior is primarily constructed of sandstone and brick with cement render and fibrous cement and plasterboard wall linings with plasterboard, masonite and cement rendered sandstone and brick ceiling linings and timber floorboard, ceramic tile, vinyl tile and vinyl floor sheeting floor coverings.	✓	✓	✓	x

Building	Photo	Description	ACM	SMF	Lead	PCB
Building 3 – Governor's Residence		The building exterior is primarily constructed of sandstone and brick with timber framed windows and a tiled roof. The building interior is primarily constructed of sandstone and brick with cement render and fibrous cement and plasterboard wall linings with plasterboard, masonite and cement rendered sandstone and brick ceiling linings and timber floorboard, ceramic tile, vinyl tile and vinyl floor sheeting floor coverings.	✓	✓	✓	✗
Building 14 – Stores building		The building exterior is primarily constructed of sandstone and brick with the top of the building acting as a patrolling corridor between guard towers (access to this area was unavailable). The building interior is primarily constructed of sandstone, brick and fibrous cement wall linings with corrugated metal ceiling linings and concrete, carpet and vinyl tile floor coverings throughout.	✓	✗	✓	✗

7 RECOMMENDATIONS

These recommendations are made with the view that the Buildings at the Site are currently to remain occupied and in-use with future planned refurbishments to Buildings 2, 3 and 14 and demolition of Building 22 .

In relation to hazardous materials generally Hazmat recommends:

- Develop a Hazardous Materials Management Plan ("**HMMP**") to manage the risks associated during demolition and refurbishment work and for any remaining in-situ hazardous materials located at the Site and ensure compliance with relevant NSW Legislation, Codes of Practice and Australian Standards.
- All hazardous materials removal work should be undertaken prior to demolition in accordance with the Site HMMP.
- Lead based paints should be maintained in good condition. Flaking and chalking paint should be removed or remediated and overpainted by a lead abatement contractor. Ceiling cavities containing lead dust contamination should be accessed under controlled conditions for maintenance purposes only and the dust should be removed by a hazardous materials remediation contractor prior to refurbishment or demolition.
- Should any personnel come across any suspected asbestos or hazardous materials, work should cease immediately in the affected areas until further sampling and investigation is performed.
- Materials that may have been concealed during the survey inspections including beneath other surfaces, the surface of the ground and in adjacent areas, but become exposed during other works and are suspected of containing asbestos or hazardous materials, should have their composition determined prior to works in those areas continuing.
- Areas highlighted as areas of 'no access' should be assumed to contain hazardous materials. Appropriate management planning should be implemented in order to control access to and maintenance activities in these areas, until such a time as they can be inspected, and the presence or absence of hazardous materials can be confirmed.

7.1 Asbestos-Containing Materials

ACM and assumed ACM identified at the Site are detailed in **Appendix 2: Hazardous Materials Register**. In addition, ACM may be present in areas that were inaccessible during the survey including but not limited to the areas detailed in **Section 1**.

Materials listed in the Hazardous Materials Register as "assumed asbestos" should be treated as ACM unless confirmed otherwise. Materials listed in the Hazardous Materials Register "not likely to contain asbestos" should have their composition confirmed if suspected of containing asbestos.

In its current state, the ACM identified and located at the Site would meet the definition of "**friable**" and "**non-friable**" asbestos as defined in the *NSW Work Health and Safety Regulation 2017* and on pages 9 and 10 of the *Working with Asbestos Guide - 2008* produced by the NSW WorkCover Authority (now SafeWork NSW).

Friable ACM should be removed by a Class A Licensed Asbestos Removal Contractor ("**LARC**") and Non-Friable ACM should be removed by a Class A or Class B LARC under controlled asbestos conditions in accordance with *Code of Practice: How to Safely Remove Asbestos*. A clearance certificate should be provided by a Licensed Asbestos Assessor following the asbestos removal works and the Hazardous Materials Register updated to reflect the works undertaken.

Removal of ACM is to be undertaken in accordance with the regulations and requirements of the NSW Government and Safe Work Australia, these being:

- *NSW Work Health and Safety Act 2011*;
- *NSW Work Health and Safety Regulations 2017*;
- *Code of Practice: How to Manage and Control Asbestos in the Workplace 2019*;
- *Code of Practice: How to Safely Remove Asbestos 2019*; and
- *Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres 2nd Edition [NOHSC:3003 (2005)]*.

All ACM and assumed ACM identified in **Appendix 2: Hazardous Materials Register** should be removed in accordance with the *Code of Practice: How to Safely Remove Asbestos* prior to any refurbishment or demolition works being undertaken. Any work involving the disturbance or penetration of these materials must be undertaken under controlled conditions. Following the ACM removal, visual and air clearances should be provided by competent persons (non-friable) or Licensed Asbestos Assessors (Non-friable and Friable) to validate that the ACM have indeed been removed.

An Asbestos Removal Control Plan ("**ARCP**") is to be developed by the LARC to address the requirements of NSW legislation.

Air monitoring should be undertaken during non-friable asbestos removal work and is mandatory for friable asbestos removal work. Air monitors are to be placed around the boundaries of the Asbestos Work Area by a Licensed Asbestos Assessor or Competent Person (e.g. Hazmat) during all stages of the work. All air monitoring and clearance inspections will be carried out by the Licensed Asbestos Assessor or Competent Person to Safe Work Australia and NATA Standards.

The Time Weighted Average ("**TWA**") airborne concentrations for asbestos shall not exceed the legislated exposure standard of 0.1 fibres per millilitre for Chrysotile, Amosite and Crocidolite, any mixture of these, or where the composition is unknown.

Visual clearance inspections and air clearance monitoring must be undertaken at the completion of asbestos removal works by a Licensed Asbestos Assessor or Competent Person to validate that the ACM has indeed been removed and that the affected areas are safe for re-occupation.

Asbestos waste is to be disposed at an approved waste collection facility and disposal dockets provided to record that the asbestos was disposed of in the appropriate manner.

Should any ACM remain *in-situ*, and as required under the *NSW Work Health and Safety Regulation 2017*, an Asbestos Management Plan ("**AMP**") should be initiated to ensure tradespersons undertaking works at the Site are made aware of the presence and location of all ACM.

The following recommendations apply for *in-situ* ACM:

- All ACM should be labelled to warn of the presence of asbestos in accordance with the *NSW Work Health and Safety Regulation 2017* and the *Code of Practice: How to Manage and Control Asbestos in the Workplace*.
- Any ACM identified should be regularly maintained and painted and should not be sawn, drilled or abraded. Any work involving the disturbance or penetration of these materials must be undertaken under controlled conditions.
- Broken or damaged sections of ACM should be removed and replaced with suitable non-asbestos alternatives.
- Regular monitoring of the condition of the ACM identified in this report and replacement with suitable non-asbestos alternatives if damaged or structural alteration is required.

7.2 Synthetic Mineral Fibre

SMF materials were identified as detailed in **Appendix 2: Hazardous Materials Register**.

Asbestos contaminated SMF materials or SMF contained in asbestos contaminated dust should be removed under controlled asbestos conditions as detailed in Section **7.1**.

Lead contaminated SMF materials or SMF contained in lead contaminated dust should be removed as detailed in Section **7.3.**

SMF materials should be removed if damaged or in poor condition and prior to refurbishment or demolition works if they are to be disturbed as part of that work.

Removal of SMF should be carried out in accordance with the current requirements of legislation and the NOHSC documentation, these being:

- *Safe Management of Synthetic Mineral Fibres (SMF) – Glasswool And Rockwool* (SafeWork NSW – 1 May 2015);
- *National Standard for Synthetic Mineral Fibres [NOHSC:1004(1990)];*
- *National Code of Practice for the Safe Use of Synthetic Mineral Fibres [NOHSC: 2006 (1990)]; and*
- Guidance Note on the Membrane Filter Method for the Estimation of Airborne Synthetic Mineral Fibres *[NOHSC:3006(1989)]*.

7.3 Lead Based Paint

Lead-based paints were identified as detailed in **Appendix 2: Hazardous Materials Register**.

Asbestos contaminated lead materials should be removed as detailed in Section **7.1.**

Based on the *NSW Work Health and Safety Regulation 2017*, any sanding, grinding, welding, cutting, cleaning or abrasive blasting of paint containing more than **1% (10g/kg)** lead or working with lead contaminated dust would be deemed to be a "lead process" and is considered "lead risk work".

According to current standards and guidelines, where the percentage lead content of paint by weight exceeds **0.1% (1g/kg)**, the paint should be stabilised or removed by either chemical means or in a manner, which does not liberate dust to the atmosphere. The paint is not to be removed by dry sanding or by electrical means. The waste material should be tested for total lead and lead leachate to determine the appropriate method for disposal.

The current standards and guidelines pertaining to lead paint management, removal, stabilisation, and disposal include the following:

- *NSW Work Health and Safety Regulation 2017*;
- Australian Standard AS4361.1 – 2017, Guide to Hazardous Paint Management, Part 1: Lead and other hazardous metallic pigments in industrial applications;
- *Australian Standard AS4361.2 – 2017, Guide to Hazardous Paint Management, Part 2: Lead Paint in Residential public & Commercial Buildings;*
- *NSW EPA Waste Classification Guidelines Part 1: Classifying Waste, 2014*;
- *Managing Lead Contamination in Home Maintenance, Renovation and Demolition Practices – A Guide for Council's May 2003*, published by NSW EPA and Planning NSW; and
- Safe Work Australia exposure standard for airborne lead is 0.05 mg/m^3 as an 8 hour TWA.

In the case of conflict between these procedures and any Regulation or Act, then the more stringent requirement shall apply.

It should be noted that during any lead paint removal and prior to disposal of waste materials sampling should be undertaken to assess the appropriate waste disposal criteria. Results of the sample analysis should be compared against the *NSW EPA Waste Classification Guidelines Part 1: Classifying Waste, 2014* to ensure correct disposal procedures are followed.

When demolishing buildings with lead-based paints the *NSW Code of Practice: Demolition Work 2019* states the following:

Precautions which should be taken when demolishing materials containing lead include:

- minimising the generation of lead dust and fumes

- cleaning work areas properly during and after work

- wearing the appropriate personal protective equipment (PPE), and

- maintaining good personal hygiene.

If the paint is in good condition, stable and not peeling or flaking, the building can be demolished using mechanical means but the precautions above need to be undertaken by the contractor. Stabilising by removing peeling paint and/or coating with Poly-Vinyl Acetate ("**PVA**") or similar sealant would assist in minimising lead contamination during demolition.

In relation to disposal of lead painted building materials, the *NSW EPA Waste Classification Guidelines Part 1: Classifying Waste, 2014* apply. Lead paint waste from residential premises, education or childcare institutions is pre-classified as "General Solid Waste (non-putrescible)". Lead paint waste from other premises (e.g. commercial or industrial properties) is pre-classified as "Hazardous Waste". Therefore, any lead based paints that are flaking or peeling should be removed prior to demolition or refurbishment and this waste will need to be treated as lead waste (*Hazardous waste*). Care is to be taken in accordance with the *Code of Practice : Demolition Work* 2019 advice above.

Lead painted building materials should not be recycled unless the lead paint is removed entirely.

7.4 Lead in Ceiling Dust

Areas containing elevated levels of lead in surface dust were identified as detailed in **Appendix 2: Hazardous Materials** Register

Lead is ubiquitous in the urban environment, resulting from industrial processes, lead containing paint and as a by-product from the combustion of leaded petrol and other sources. Lead can accumulate as a constituent of settled dust in areas not frequently cleaned, such as ceiling spaces, wall spaces, voids and plant rooms, particularly in older buildings.

Currently, no Australian Standards exist for surface contamination by lead. However, the National Environment Protection Council ("**NEPC**") (2013) *National Environment Protection (Assessment of Site Contamination) Measure 1999 – 2013 Amendment* ("**ASC NEPM, 2013**") provides a range of Heath-based Investigation Levels ("**HIL**") for soils which are considered to be appropriate for four broad classes of land use on urban sites in NSW.

HILs are scientifically based, generic assessment criteria designed to be used in the first stage ('screening') of a soil assessment of potential risk to human health from chronic exposure to contaminants. HIL's are intentionally conservative and are based on a reasonable worst-case scenario. Furthermore, HIL's are not intended to be clean-up levels.

HIL's for soil are commonly applied to lead in bulk dust situations in specific areas of built environments and workplaces such as roof and ceiling spaces, substations, service tunnels and other industrial locations.

Given the location and zoning of the Site and its current use as a commercial site, the HILs for the following land use criteria were adopted:

- HIL D: Commercial/Industrial – 1500mg/kg.

Lead in ceiling dust levels within Building 2, exceeded the HIL of 1500mg/kg.

Before any planned refurbishment or demolition works are conducted, removal of the lead dust should be undertaken by a lead abatement contractor in accordance with *AS/NZS 4361.2:2017 Guide to hazardous paint management – Part 2: Lead paint in residential, public and commercial buildings.*

Settled dust in ceilings, is generally more finely divided than soils, and the disturbance or removal of dust with elevated lead content has the potential to exceed exposure standards for inspirable dust and lead.

Prior to undertaking any removal work, the risk for potential exposure must be assessed and consideration to conducting health surveillance and biological monitoring should be given. Since it is difficult to use engineering controls to control.

An independent Occupational Hygiene Consultant (i.e. Hazmat Services) should be engaged to undertake lead in air monitoring during removal works to ensure works are conducted safely, and clearance dust sampling to verify the adequacy of clean up works.

7.5 Polychlorinated Biphenyl's

There were no fluorescent light fittings likely to contain PCB capacitors sighted during the time of the survey.

Where PCB containing capacitors are found, they should be handled and/or disposed of in accordance with the *PCB Chemical Control Order Relation to Materials and Wastes Containing Polychlorinated Biphenyl, 1997*, issued by the Environment Protection Authority of NSW and the *PCB Management Plan* issued by ANZECC.

8 LIMITATIONS AND DISCLAIMER

The survey Hazmat conducted for you was undertaken by visual inspection and through non-destructive means of those areas of the Building (being the Building structure and associated building elements) that were accessible to us at the time of our inspection. This means, therefore, that Hazmat cannot guarantee that each and every hazardous material that exists within the Building has been located, identified and documented by us in this report.

Hazmat prepared this report for the purpose set out in **Section 1** and because this report has been prepared for that purpose, it is not appropriate for this report to be used for any other purpose, without prior written consent. It is also not appropriate for this report to be released to any other party (either in whole or in part) without Hazmat's prior written consent. Should you wish to use this report for a purpose other than the purpose for which it was prepared, or to release this report (either in whole or in part) to any other party, please contact Hazmat so that we may discuss your wishes in further detail with you.

Please note, however, that in the event that this report is used for a purpose for which it was not prepared, and you have not obtained Hazmat's prior written consent to use the report for that purpose, then neither Hazmat, nor any member or employee of Hazmat, accept responsibility or liability for the use of this report for that purpose.

Hazmat have relied upon information identified in this report and have assumed this information to be both adequate and accurate for the purpose of preparing this report for you. Hazmat have not, therefore, verified or audited any of the information you, or others, have supplied to us. If there is further information that becomes available, Hazmat may need to amend the information contained in this report. Hazmat reserves their right to do so should this become necessary.

In addition, this report does not, and does not purport to, give legal advice as to your actual or potential asbestos or hazardous material liabilities, or draw conclusions as to whether any particular circumstances constitute a breach of relevant legislation. You will appreciate that this advice can only be given by qualified legal practitioners.

Finally, Hazmat does not make any other warranty, expressed or implied, as to the professional advice contained in this report.

APPENDICES

APPENDIX 1: SITE PLANS

Source: Nearmap, 2023

LEGEND

Maitland Gaol Site Boundary

Maitland Gaol Redevelopment Project Area Boundary

HAZMAT SERVICES

OHS | WASTE | ENVIRONMENT

Title: Site Layout Plan– Maitland Gaol Redevelopment, 6-18 John Street, East Maitland NSW	
Figure: 1	Project No: N4952
Date: 16/12/2022	Revision: 0

Page Size A4

Source: Nearmap, 2023

LEGEND

Building Asset Boundary

Building 14 – Stores Building

Building 22 – Café/Old Warders Amenities Building

Building 2 – Lieutenant Governor's Residence

Building 3 – Governor's Residence

HAZMAT SERVICES

OHS | WASTE | ENVIRONMENT

Title: Building Asset Numbers– Maitland Gaol Redevelopment, 6-18 John Street, East Maitland	
Figure: 2	Project No: N4952
Date: 16/12/2022	Revision: 0

Page Size A4

APPENDIX 2: HAZARDOUS MATERIALS REGISTER

Hazardous Materials Register
Maitland Gaol - 6-18 John Street, East Maitland NSW 2323

Building Level / Floor	Location Description	Material Location	Type of Material	Hazard Type	Sample No.	Sample Result	Photos	Photo No.	Asbestos Risk Assessment							Labelled	Comments/ Condition	Action Taken
									Asbestos Type	Condition	Location	Airborne Potential	Exposure	Hazard Level	Health Risk/Action Priority Level			
Building 22 - Café/Old Warders Amenities																		
	The building exterior is primarily constructed of glass panels, brick, sandstone and fibrous cement panels with aluminium framed windows and a corrugated metal roof. The building interior is primarily constructed of brick, sandstone and concrete wall linings with plasterboard and concrete ceiling linings and ceramic tile, vinyl tile, concrete and vinyl floor sheeting throuhout.							1										
Exterior - Building 22 - Café/Old Warders Amenities																		
Ground Floor	Southern elevation	Front soffit lining	Flat AC Sheet	Sampled Asbestos	N4952/01	**Chrysotile & Amosite**		2	Non-Friable	1	1	1	1	2	P4 / Negligible	No	Good condition. Label and maintain painted and sealed, if to remain insitu. Drilling or cutting to be carried out under controlled asbestos conditions. Remove prior to refurbishment or demolition by a Licensed Asbestos Removal Contractor ("**LARC**").	
Ground Floor	South-eastern elevation - other elevations are assumed the same	Upper infill panels	Flat AC Sheet	Sampled Asbestos	N4952/02	**Chrysotile**		3	Non-Friable	2	1	1	1	4	P3 / Low	No	Fair condition. Label and maintain painted and sealed, if to remain insitu. Drilling or cutting to be carried out under controlled asbestos conditions. Remove prior to refurbishment or demolishing by a Class A or Class B Licensed Asbestos Removal Contractor ("**LARC**")	
Ground Floor	All elevations	Handrails/guardrails & pipework	Dark green/light green paint systems	Lead Based Paint	N4952/LP01	Negative		4										
Ground Floor	All elevations	Handrails/guardrails	Cream/light brown paint systems	Lead Based Paint	N4952/LP02	Negative	 	5 6										

Building Level / Floor	Location Description	Material Location	Type of Material	Hazard Type	Sample No.	Sample Result	Photos	Photo No.	Asbestos Risk Assessment							Labelled	Comments/ Condition	Action Taken
									Asbestos Type	Condition	Location	Airborne Potential	Exposure	Hazard Level	Health Risk/Action Priority Level			
Ground Floor	All elevations	Pipework sheathing & door/door framing	White paint systems	Lead Based Paint	N4952/LP03	Negative	 	7 8										
Ground Floor	All elevations	Door/door framing	Red paint systems	Lead Based Paint	N4952/LP04	Negative	 	9 10										
	No lead based paints were identified to the exterior of the building at the time of the survey																	
	No SMF materials were identified to the exterior of the building at the time of the survey																	
	No PCB containing capacitors were identified to the exterior of the building at the time of the survey																	
Interior - Building 22 - Café/Old Warders Amenities																		
Ground Floor	Café	Infill panelling above southern entryway	Flat FC Sheet	Sampled Asbestos	N4952/03	No Asbestos Detected		11										
Ground Floor	Café Kitchen	Floor covering	Green Vinyl Floor Sheet	Sampled Asbestos	N4952/08	No Asbestos Detected		12										

Hazardous Materials Register
Maitland Gaol - 6-18 John Street, East Maitland NSW 2323

Building Level / Floor	Location Description	Material Location	Type of Material	Hazard Type	Sample No.	Sample Result	Photos	Photo No.	Asbestos Risk Assessment							Labelled	Comments/ Condition	Action Taken
									Asbestos Type	Condition	Location	Airborne Potential	Exposure	Hazard Level	Health Risk/Action Priority Level			
Ground Floor	Café Kitchen	Floor coverings	Sheeting underneath green vinyl sheeting	Sampled Asbestos	N4952/09	No Asbestos Detected		13										
Ground Floor	Passageway to Ladies Toilets	Floor covering	Grey floor sheeting	Sampled Asbestos	N4952/04	No Asbestos Detected		14										
Ground Floor	Ladies Toilets Foyer	Wall linings	Flat FC Sheet	Sampled Asbestos	N4952/05	No Asbestos Detected		15										
Ground Floor	Ladies Toilets	Floor covering	Cream vinyl floor sheeting	Sampled Asbestos	N4952/06	No Asbestos Detected (**SMF Detected**)		16									Synthetic Mineral Fibre ("**SMF**") insulation should be removed under controlled conditions prior to refurbishment or demolition. Use of PPE to avoid any skin and respiratory issues.	
Ground Floor	Ladies Toilets	Stall partition wall	Compressed FC Sheet	Sampled Asbestos	N4952/07	No Asbestos Detected		17										
Ground Floor	Staircase between levels	Floor covering	Green Vinyl Floor Sheet	Not likely to contain asbestos	Visually similar to sample N4952/08	No Asbestos Detected		18										

Hazardous Materials Register
Maitland Gaol - 6-18 John Street, East Maitland NSW 2323

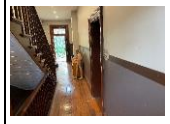
Building Level / Floor	Location Description	Material Location	Type of Material	Hazard Type	Sample No.	Sample Result	Photos	Photo No.	Asbestos Risk Assessment							Labelled	Comments/ Condition	Action Taken
									Asbestos Type	Condition	Location	Airborne Potential	Exposure	Hazard Level	Health Risk/Action Priority Level			
Basement level	Toilet/storage foyer	Floor coverings	Green Vinyl floor tile	Sampled Asbestos	N4952/10	No Asbestos Detected		19										
Ground level	Storage area adjacent kitchen	Floor coverings	Green Vinyl floor tile	Unlikely to contain asbestos	Visually similar to sample N4952/10	No Asbestos Detected		20										
Basement level	Male Toilets	Ceiling lining	Pitch-based ceiling panels	Sampled Asbestos	N4952/11	No asbestos Detected		21										
Ground Floor	All elevations	Concrete staircase stringers, wall and ceiling linings	Black paint systems	Lead Based Paint	N4952/LP05	Negative		22										
Basement level	Southern room							23									Inaccessible. Assess when access is made available. Suspected hazardous materials should be tested to determine the composition prior to refurbishment or demolition works.	
Ground Floor	Ceiling cavity	Horizontal surfaces throughout	Settled dust	Sampled Asbestos	N4952/31	No asbestos Detected (**SMF Detected**)											Synthetic Mineral Fibre ("**SMF**") should be removed under controlled conditions prior to refurbishment or demolition. Use of PPE to avoid any skin and respiratory issues.	

Hazardous Materials Register
Maitland Gaol - 6-18 John Street, East Maitland NSW 2323

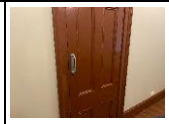
Building Level / Floor	Location Description	Material Location	Type of Material	Hazard Type	Sample No.	Sample Result	Photos	Photo No.	Asbestos Risk Assessment							Labelled	Comments/ Condition	Action Taken
									Asbestos Type	Condition	Location	Airborne Potential	Exposure	Hazard Level	Health Risk/Action Priority Level			
Ground Floor	Ceiling Cavity	Horizontal surfaces throughout	Settled dust	Lead in ceiling dust	N4952/33	117 mg/kg												
Ground Floor	Ceiling cavity	Horizontal surfaces throughout	Insulation	Synthetic Mineral Fibre		**SMF**		24									Synthetic Mineral Fibre ("**SMF**") insulation should be removed under controlled conditions prior to refurbishment or demolition. Use of PPE to avoid any skin and respiratory issues.	
Ground Floor	Ceiling cavity	Roof sarking	Sarking insulation	Synthetic Mineral Fibre		**SMF**		25									Synthetic Mineral Fibre ("**SMF**") insulation should be removed under controlled conditions prior to refurbishment or demolition. Use of PPE to avoid any skin and respiratory issues.	
	No lead based paints were identified to the interior of the building at the time of the survey																	
	No ACM or assumed ACM were identified to the interior of the building at the time of the survey																	
	No PCB containing capacitors were identified to the interior of the building at the time of the survey																	
Building 2 -Lieutenant Governor's Residence																		
	The building exterior is primarily constructed of sandstone and brick with timber framed windows and a tiled roof. The building interior is primarily constructed of sandstone and brick with cement render and fibrous cement and plasterboard wall linings with plasterboard, masonite and cement rendered sandstone and brick ceiling linings and timber floorboard, ceramic tile, vinyl tile and vinyl floor sheeting floor coverings.							26										
Exterior - Building 2 - Lieutenant Governor's Residence																		

Hazardous Materials Register
Maitland Gaol - 6-18 John Street, East Maitland NSW 2323

Building Level / Floor	Location Description	Material Location	Type of Material	Hazard Type	Sample No.	Sample Result	Photos	Photo No.	Asbestos Risk Assessment							Labelled	Comments/ Condition	Action Taken
									Asbestos Type	Condition	Location	Airborne Potential	Exposure	Hazard Level	Health Risk/Action Priority Level			
All elevations	All elevations	Window/door framing	Putty/caulking	Sampled asbestos	N4952/12	No Asbestos Detected		27										
First Floor	All elevations	Eaves lining	Flat AC Sheet	Assumed Asbestos				28									Inaccessible due to height restrictions. Assess and sample when safe access is made available.	
Ground Floor	All elevations	Door	Red paint systems	Lead Based Paint	N4952/LP06	Negative	 	29 30										
All elevations	All elevations	Pipework, handrails/guardrails and window bars	Green paint systems	Lead Based Paint	Visually similar to sample N4952/LP01	Negative		31										
All elevations	All elevations	Window framing	Cream paint systems	Lead Based Paint	N4952/LP07	Negative		32										
	No lead based paints were identified to the exterior of the building at the time of the survey																	
	No SMF materials were identified to the exterior of the building at the time of the survey																	

Building Level / Floor	Location Description	Material Location	Type of Material	Hazard Type	Sample No.	Sample Result	Photos	Photo No.	Asbestos Risk Assessment							Labelled	Comments/ Condition	Action Taken
									Asbestos Type	Condition	Location	Airborne Potential	Exposure	Hazard Level	Health Risk/Action Priority Level			
	No PCB containing capacitors were identified to the exterior of the building at the time of the survey																	
Interior - Building 2 - Lieutenant Governor's Residence																		
Basement Level	All elevations	Floor covering	Red Vinyl Floor Sheet	Sampled Asbestos	N4952/13	No Asbestos Detected		33										
Basement Level	Eastern bathroom/shower block	Ceiling lining	Flat AC ceiling tiles	Sampled Asbestos	N4952/14	**Chrysotile**		34	Non-Friable	2	1	1	1	4	P3 / Low	No	Fair condition. Label and maintain painted and sealed, if to remain insitu. Drilling or cutting to be carried out under controlled asbestos conditions. Remove prior to refurbishment or demolishing by a Class A or Class B Licensed Asbestos Removal Contractor ("**LARC**")	
Basement Level	Doorway connecting eastern bathroom/shower block and northern room	Doorway side panels	Compressed AC sheet	Sampled Asbestos	N4952/15	**Chrysotile**	 	35 36	Non-Friable	2	1	1	1	4	P3 / Low	No	Fair condition. Label and maintain painted and sealed, if to remain insitu. Drilling or cutting to be carried out under controlled asbestos conditions. Remove prior to refurbishment or demolishing by a Class A or Class B Licensed Asbestos Removal Contractor ("**LARC**")	
Ground Floor	Hallway	Wall linings	Cement render	Sampled Asbestos	N4952/16	No Asbestos Detected		37										
All elevations	Remaining cement rendered wall linings throughout	Wall linings	Cement render	Not likely to contain asbestos	Visually similar to sample N4952/16	No Asbestos Detected												

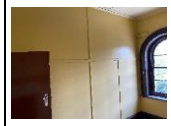
Hazardous Materials Register
Maitland Gaol - 6-18 John Street, East Maitland NSW 2323

Building Level / Floor	Location Description	Material Location	Type of Material	Hazard Type	Sample No.	Sample Result	Photos	Photo No.	Asbestos Risk Assessment							Labelled	Comments/ Condition	Action Taken
									Asbestos Type	Condition	Location	Airborne Potential	Exposure	Hazard Level	Health Risk/Action Priority Level			
Ground Floor	Northern room	North-eastern corner wall linings	Flat FC Sheet	Sampled Asbestos	N4952/17	No Asbestos Detected		38										
Ground Floor	South-western toilets	Stall partition wall	Compressed FC Sheet	Sampled Asbestos	N4952/18	No Asbestos Detected	 	39 40										
Ground Floor	North-western toilets	Stall partition wall	Compressed FCS	Not likely to contain asbestos	Visually similar to sample N4952/18	No Asbestos Detected	 	41 42										
Ground Floor	Eastern room	Southern lower enclosed cupboard panelling	Flat FC Sheet	Sampled Asbestos	N4952/19	No Asbestos Detected		43										
First Floor	Northern toilet hallway	Floor covering	Yellow Vinyl Floor Sheet	Sampled Asbestos	N4952/20	No Asbestos Detected		44										

Hazardous Materials Register
Maitland Gaol - 6-18 John Street, East Maitland NSW 2323

Building Level / Floor	Location Description	Material Location	Type of Material	Hazard Type	Sample No.	Sample Result	Photos	Photo No.	Asbestos Risk Assessment							Labelled	Comments/ Condition	Action Taken
									Asbestos Type	Condition	Location	Airborne Potential	Exposure	Hazard Level	Health Risk/Action Priority Level			
First Floor	Northern room	Floor covering	Yellow Vinyl Floor Sheet	Not likely to contain asbestos	Visually similar to sample N4952/20	No Asbestos Detected		45										
First Floor	Northern bathroom	Wall linings	Flat FC Sheet	Sampled Asbestos	N4952/21	No Asbestos Detected		46										
First Floor	Eastern room	Floor covering	Green Vinyl floor tile	Sampled Asbestos	N4952/22	**Chrysotile**		47	Non-Friable	2	1	2	1	8	P3 / Low	No	Fair condition. Label and maintain painted and sealed, if to remain insitu. Drilling or cutting to be carried out under controlled asbestos conditions. Remove prior to refurbishment or demolishing by a Class A or Class B Licensed Asbestos Removal Contractor ("**LARC**")	
First Floor	Ceiling cavity	Horizontal surfaces throughout	Settled dust	Sampled Asbestos	N4952/30	No Asbestos Detected												
Ground Floor	Hallway	Western electrical cupboard	False ceiling lining	Assumed Asbestos				48									Inaccessible due to height restrictions. Assess and sample when safe access is made available.	
Ground Floor	North-western toilets	Floor covering	Cream vinyl floor sheeting	Not likely to contain asbestos	Visually similar to sample N4952/06	No Asbestos Detected (**SMF Detected**)		49									Synthetic Mineral Fibre ("**SMF**") insulation should be removed under controlled conditions prior to refurbishment or demolition. Use of PPE to avoid any skin and respiratory issues.	

Hazardous Materials Register
Maitland Gaol - 6-18 John Street, East Maitland NSW 2323

Building Level / Floor	Location Description	Material Location	Type of Material	Hazard Type	Sample No.	Sample Result	Photos	Photo No.	Asbestos Risk Assessment							Labelled	Comments/ Condition	Action Taken
									Asbestos Type	Condition	Location	Airborne Potential	Exposure	Hazard Level	Health Risk/Action Priority Level			
Ground Floor	Eastern room	Floor covering (Visible from basement level ceiling penetrations)	Compressed FCS	Assumed Asbestos				50									Inaccessible due to height restrictions. Assess and sample when safe access is made available.	
First Floor	Northern room	Western wall lining	Flat FC Sheet	Not likely to contain asbestos	Visually similar to sample N4952/21	No Asbestos Detected		51										
First Floor	Northern toilet hallway	Ceiling access panel	Flat AC Sheet	Assumed Asbestos				52	Non-Friable	2	2	1	1	8	P3 / Low	No	Fair condition. Label and maintain painted and sealed, if to remain insitu. Drilling or cutting to be carried out under controlled asbestos conditions. Remove prior to refurbishment or demolishing by a Class A or Class B Licensed Asbestos Removal Contractor ("**LARC**")	
First Floor	Ceiling cavity	Hot water tank & associated debris	Moulded AC	Assumed Asbestos			 	53 54	Non-Friable	2	1	1	2	8	P3 / Low	No	Fair condition. Label and maintain painted and sealed, if to remain insitu. Drilling or cutting to be carried out under controlled asbestos conditions. Remove prior to refurbishment or demolishing by a Class A or Class B Licensed Asbestos Removal Contractor ("**LARC**")	
First Floor	Northern toilet hallway	Ceiling lining immediately adjacent ceiling access cover	Flat AC Sheet	Assumed Asbestos				55	Non-Friable	2	2	1	1	8	P3 / Low	No	Fair condition. Label and maintain painted and sealed, if to remain insitu. Drilling or cutting to be carried out under controlled asbestos conditions. Remove prior to refurbishment or demolishing by a Class A or Class B Licensed Asbestos Removal Contractor ("**LARC**")	

Hazardous Materials Register
Maitland Gaol - 6-18 John Street, East Maitland NSW 2323

Building Level / Floor	Location Description	Material Location	Type of Material	Hazard Type	Sample No.	Sample Result	Photos	Photo No.	Asbestos Risk Assessment							Labelled	Comments/ Condition	Action Taken
									Asbestos Type	Condition	Location	Airborne Potential	Exposure	Hazard Level	Health Risk/Action Priority Level			
Ground Floor	South-western toilets	Wall linings	Pink paint system	Lead Based Paint	N4952/LP08	Negative		56										
Ground Floor	Hallway - Lower staircase	Staircase	Yellow paint system	Lead Based Paint	N4952/LP09	Negative		57										
Ground Floor	Hallway - Lower staircase	Staircase	Brown paint system	Lead Based Paint	N4952/LP10	Negative		58										
First Floor	Ceiling cavity	Horizontal surfaces throughout	Settled dust	Lead in dust	N4952/32	**1570mg/kg**											Lead in dust in excess of **1500mg/kg** for bulk dust in non-habitable areas (NEPM),Health investigation Levels (HIL) Access under controlled conditions. Engage a lead abatement contractor to remove the lead dust before occupation, refurbishment or demolition.	
Basement Level	Southern room	Southern corner	Hot water system	Assumed SMF		**SMF**		59									Synthetic Mineral Fibre ("**SMF**") insulation should be removed under controlled conditions prior to refurbishment or demolition. Use of PPE to avoid any skin and respiratory issues.	
	No lead based paints were identified to the interior of the building at the time of the survey																	
	No PCB containing capacitors were identified to the exterior of the building at the time of the survey																	

Hazardous Materials Register
Maitland Gaol - 6-18 John Street, East Maitland NSW 2323

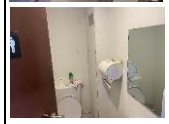
Building Level / Floor	Location Description	Material Location	Type of Material	Hazard Type	Sample No.	Sample Result	Photos	Photo No.	Asbestos Risk Assessment							Labelled	Comments/ Condition	Action Taken
									Asbestos Type	Condition	Location	Airborne Potential	Exposure	Hazard Level	Health Risk/Action Priority Level			
Building 3 -Governor's Residence																		
	The building exterior is primarily constructed of sandstone and brick with timber framed windows and a tiled roof. The building interior is primarily constructed of sandstone and brick with cement render and fibrous cement and plasterboard wall linings with plasterboard, masonite and cement rendered sandstone and brick ceiling linings and timber floorboard, ceramic tile, vinyl tile and vinyl floor sheeting floor coverings.							60										
Exterior - Building 3 - Governor's Residence																		
All elevations	All elevations	Window/door framing	Putty/caulking	Not likely to contain asbestos	Visually similar to sample N4952/12	No Asbestos Detected												
First Floor	All elevations	Eaves lining	Flat AC Sheet	Assumed Asbestos				61									Inaccessible due to height restrictions. Assess and sample when safe access is made available.	
All elevations	All elevations	Doors	Red paint systems	Lead Based Paint	Visually similar to sample N4952/LP06	Negative												
All elevations	All elevations	Pipework, handrails/guardrails and window bars	Green paint systems	Lead Based Paint	Visually similar to N4952/LP01	Negative												

HAZMAT SERVICES

Hazardous Materials Register
Maitland Gaol - 6-18 John Street, East Maitland NSW 2323

Building Level / Floor	Location Description	Material Location	Type of Material	Hazard Type	Sample No.	Sample Result	Photos	Photo No.	Asbestos Risk Assessment							Labelled	Comments/ Condition	Action Taken
									Asbestos Type	Condition	Location	Airborne Potential	Exposure	Hazard Level	Health Risk/Action Priority Level			
All elevations	All elevations	Window framing	Cream paint systems	Lead Based Paint	Visually similar to sample N4952/LP07	Negative												
	No lead based paints were identified to the exterior of the building at the time of the survey																	
	No SMF materials were identified to the exterior of the building at the time of the survey																	
	No PCB containing capacitors were identified to the exterior of the building at the time of the survey																	
Interior - Building 3 - Governor's Residence																		
Ground Floor	Western conference/meeting room	Ceiling lining	Flat FC Sheet	Sampled Asbestos	N4952/23	No Asbestos Detected		62										
Ground Floor	South-eastern toilet	Wall linings	Flat AC Sheeting	Sampled Asbestos	N4952/24	**Chrysotile**	 	63 64	Non-Friable	1	1	1	1	2	P4 / Negligible	No	Good condition. Label and maintain painted and sealed, if to remain insitu. Drilling or cutting to be carried out under controlled asbestos conditions. Remove prior to refurbishment or demolition by a Licensed Asbestos Removal Contractor ("**LARC**").	
Ground Floor	South-eastern toilet	Floor covering	Yellow Vinyl Floor Sheet	Sampled Asbestos	N4952/25	**Chrysotile**		65	Friable	2	1	1	1	6	P3 / Low	No	Friable Asbestos. Fair condition. Label and maintain sealed or encapsulated, if to remain insitu. Drilling or cutting to be carried out under controlled asbestos conditions. Remove prior to refurbishment or demolishing by a Class A Licensed Asbestos Removal Contractor ("**LARC**")	

Hazardous Materials Register
Maitland Gaol - 6-18 John Street, East Maitland NSW 2323

Building Level / Floor	Location Description	Material Location	Type of Material	Hazard Type	Sample No.	Sample Result	Photos	Photo No.	Asbestos Risk Assessment							Labelled	Comments/ Condition	Action Taken
									Asbestos Type	Condition	Location	Airborne Potential	Exposure	Hazard Level	Health Risk/Action Priority Level			
Ground Floor	South-eastern staff storage cupboard	Wall linings	Flat AC Sheeting	Assumed Asbestos	Visually similar to sample N4952/24	**Chrysotile**		66	Non-Friable	1	1	1	1	2	P4 / Negligible	No	Good condition. Label and maintain painted and sealed, if to remain insitu. Drilling or cutting to be carried out under controlled asbestos conditions. Remove prior to refurbishment or demolition by a Licensed Asbestos Removal Contractor ("**LARC**").	
Ground Floor	South-eastern staff storage cupboard	Floor covering	Remnant Yellow Vinyl Floor Sheet	Assumed Asbestos	Visually similar to sample N4952/25	**Chrysotile**		67	Friable	3	2	2	2	72	P1/ High	No	Friable Asbestos. Poor condition. Label and maintain sealed or encapsulated, if to remain insitu. Drilling or cutting to be carried out under controlled asbestos conditions. Remove prior to refurbishment or demolishing by a Class A Licensed Asbestos Removal Contractor ("**LARC**")	
First Floor	South-eastern male and female toilets	Wall linings	Flat AC Sheeting	Assumed Asbestos	Visually similar to sample N4952/24	**Chrysotile**	 	68 69	Non-Friable	1	1	1	1	2	P4 / Negligible	No	Good condition. Label and maintain painted and sealed, if to remain insitu. Drilling or cutting to be carried out under controlled asbestos conditions. Remove prior to refurbishment or demolition by a Licensed Asbestos Removal Contractor ("**LARC**").	
First Floor	South-eastern male and female toilets	Floor coverings	Yellow Vinyl Floor Sheet	Assumed Asbestos	Visually similar to sample N4952/25	**Chrysotile**	 	70 71	Friable	1	1	1	1	3	P4 / Negligible	No	Friable Asbestos. Good condition. Label and maintain sealed or encapsulated, if to remain insitu. Drilling or cutting to be carried out under controlled asbestos conditions. Remove prior to refurbishment or demolishing by a Class A Licensed Asbestos Removal Contractor ("**LARC**")	

Hazardous Materials Register
Maitland Gaol - 6-18 John Street, East Maitland NSW 2323

Building Level / Floor	Location Description	Material Location	Type of Material	Hazard Type	Sample No.	Sample Result	Photos	Photo No.	Asbestos Risk Assessment							Labelled	Comments/ Condition	Action Taken
									Asbestos Type	Condition	Location	Airborne Potential	Exposure	Hazard Level	Health Risk/Action Priority Level			
Basement Level	All elevations	Wall and ceiling linings	White paint system	Lead Based Paint	N4952/LP11	**Positive**		72 73									Poor condition. Remove flaking paint. Engage a lead abatement contractor to stabilise or remove the paint systems when required. Manage at demolition.	
Basement Level	Staircase	Stair bannister	Yellow/ off-white paint systems	Lead Based Paint	Visually similar to sample N4952/LP09	Negative		74										
First Floor	Ceiling cavity	Horizontal surfaces throughout	Ceiling insulation	Assumed SMF				75									Synthetic Mineral Fibre ("**SMF**") insulation should be removed under controlled conditions prior to refurbishment or demolition. Use of PPE to avoid any skin and respiratory issues.	
	No PCB containing capacitors were identified to the interior of the building at the time of the survey																	
Building 14 - Stores Building																		
	The building exterior is primarily constructed of sandstone and brick with the top of the building acting as a patrolling corridor between guard towers (access to this area was unavailable). The building interior is primarily constructed of sandstone, brick and fibrous cement wall linings with corrugated metal ceiling linings and concrete, carpet and vinyl tile floor coverings throughout.							76										
Exterior - Building 14 - Stores Building																		

Hazardous Materials Register
Maitland Gaol - 6-18 John Street, East Maitland NSW 2323

Building Level / Floor	Location Description	Material Location	Type of Material	Hazard Type	Sample No.	Sample Result	Photos	Photo No.	Asbestos Risk Assessment							Labelled	Comments/ Condition	Action Taken
									Asbestos Type	Condition	Location	Airborne Potential	Exposure	Hazard Level	Health Risk/Action Priority Level			
Ground Floor	South-western elevation	Door	Red paint system	Lead Based Paint	N4952/LP12	**Positive**	 	77 78									Poor condition. Remove flaking paint. Engage a lead abatement contractor to stabilise or remove the paint systems when required. Manage at demolition.	
	No ACM or assumed ACM were identified to the exterior of the building at the time of the survey																	
	No SMF materials were identified to the exterior of the building at the time of the survey																	
	No PCB containing capacitors were identified to the exterior of the building at the time of the survey																	
Interior - Building 14 - Stores Building																		
Ground Floor	Reception Store - Foyer	Wall linings	Flat FC Sheet	Sampled Asbestos	N4952/26	No Asbestos Detected		79										
Ground Floor	Reception Store - Office	Wall linings	Flat FC Sheet	Not likely to contain asbestos	Visually similar to sample N4952/26	No Asbestos Detected		80										
Ground Floor	Reception Store - Toilet	Wall linings	Flat FC Sheet	Sampled Asbestos	N4952/27	**Chrysotile**	 	81 82	Non-Friable	1	1	1	1	2	P4 / Negligible	No	Good condition. Label and maintain painted and sealed, if to remain insitu. Drilling or cutting to be carried out under controlled asbestos conditions. Remove prior to refurbishment or demolishing by a Class A or Class B Licensed Asbestos Removal Contractor ("**LARC**")	

Hazardous Materials Register
Maitland Gaol - 6-18 John Street, East Maitland NSW 2323

Building Level / Floor	Location Description	Material Location	Type of Material	Hazard Type	Sample No.	Sample Result	Photos	Photo No.	Asbestos Risk Assessment							Labelled	Comments/ Condition	Action Taken
									Asbestos Type	Condition	Location	Airborne Potential	Exposure	Hazard Level	Health Risk/Action Priority Level			
Ground Floor	Reception Store - Toilet	Ceiling lining	Flat AC Sheet	Assumed Asbestos	Visually similar to sample N4952/27	**Chrysotile**	 	83 84	Non-Friable	1	1	1	1	2	P4 / Negligible	No	Good condition. Label and maintain painted and sealed, if to remain insitu. Drilling or cutting to be carried out under controlled asbestos conditions. Remove prior to refurbishment or demolishing by a Class A or Class B Licensed Asbestos Removal Contractor ("**LARC**")	
Ground Floor	Store and work centres - western office	Wall linings	Flat AC Sheet	Sampled Asbestos	N4952/28	No Asbestos Detected		85										
Ground Floor	Store and work centres - eastern office	Wall linings	Flat AC Sheet	Not likely to contain asbestos	Visually similar to sample N4952/28	No Asbestos Detected		86										
Ground Floor	Store and work centres - Store							87									Inaccessible. Assess when access is made available. Suspected hazardous materials should be tested to determine the composition prior to refurbishment or demolition works.	
Ground Floor	Auditorium	Floor covering	Light Grey Vinyl Floor Tile	Assumed Asbestos	Previously sampled - Refer to MCC sample ALS EN1410696-003	**Chrysotile**		88	Non-Friable	1	1	1	1	2	P4 / Negligible	No	Good condition. Label and maintain painted and sealed, if to remain insitu. Drilling or cutting to be carried out under controlled asbestos conditions. Remove prior to refurbishment or demolishing by a Class A or Class B Licensed Asbestos Removal Contractor ("**LARC**")	

Hazardous Materials Register
Maitland Gaol - 6-18 John Street, East Maitland NSW 2323

Building Level / Floor	Location Description	Material Location	Type of Material	Hazard Type	Sample No.	Sample Result	Photos	Photo No.	Asbestos Risk Assessment							Labelled	Comments/ Condition	Action Taken
									Asbestos Type	Condition	Location	Airborne Potential	Exposure	Hazard Level	Health Risk/Action Priority Level			
Ground Floor	Auditorium - Upper level	Lower ceiling lining	Flat AC Sheet	Assumed Asbestos				89	Non-Friable	1	1	1	1	2	P4 / Negligible	No	Good condition. Label and maintain painted and sealed, if to remain insitu. Drilling or cutting to be carried out under controlled asbestos conditions. Remove prior to refurbishment or demolishing by a Class A or Class B Licensed Asbestos Removal Contractor ("**LARC**")	
Ground Floor	Shower Block	Stall partition walls	Compressed AC Sheet	Sampled Asbestos	N4952/29	**Chrysotile**		90	Non-Friable	2	1	1	1	4	P3 / Low	No	Fair condition. Label and maintain painted and sealed, if to remain insitu. Drilling or cutting to be carried out under controlled asbestos conditions. Remove prior to refurbishment or demolishing by a Class A or Class B Licensed Asbestos Removal Contractor ("**LARC**")	
Ground Floor	Laundry - Office	Wall linings	Flat AC Sheeting	Assumed Asbestos				91	Non-Friable	2	2	1	1	8	P3 / Low	No	Fair condition. Label and maintain painted and sealed, if to remain insitu. Drilling or cutting to be carried out under controlled asbestos conditions. Remove prior to refurbishment or demolishing by a Class A or Class B Licensed Asbestos Removal Contractor ("**LARC**")	
Ground Floor	Laundry - Toilets	Wall linings	Flat AC Sheeting	Assumed Asbestos				92	Non-Friable	2	2	1	1	8	P3 / Low	No	Fair condition. Label and maintain painted and sealed, if to remain insitu. Drilling or cutting to be carried out under controlled asbestos conditions. Remove prior to refurbishment or demolishing by a Class A or Class B Licensed Asbestos Removal Contractor ("**LARC**")	
Basement Level	Toilets							93									Inaccessible. Assess when access is made available. Suspected hazardous materials should be tested to determine the composition prior to refurbishment or demolition works.	

Hazardous Materials Register
Maitland Gaol - 6-18 John Street, East Maitland NSW 2323

Building Level / Floor	Location Description	Material Location	Type of Material	Hazard Type	Sample No.	Sample Result	Photos	Photo No.	Asbestos Risk Assessment							Labelled	Comments/ Condition	Action Taken
									Asbestos Type	Condition	Location	Airborne Potential	Exposure	Hazard Level	Health Risk/Action Priority Level			
Ground Floor	Reception Store	Floor	Dark green paint system	Lead Based Paint	N4952/LP13	Negative		94										
	No lead based paints were identified to the interior of the building at the time of the survey																	
	No SMF materials were identified to the interior of the building at the time of the survey																	
	No PCB containing capacitors were identified to the interior of the building at the time of the survey																	

APPENDIX 3: LABORATORY ANALYTICAL RESULTS

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **EN2212392**	Page	: 1 of 13
Client	: **HAZMAT SERVICES PTY LTD**	Laboratory	: Environmental Division Newcastle
Contact	: Luke Parkins	Contact	:
Address	: Level 1 45C Fitzroy St Carrington 2294	Address	: 5/585 Maitland Road Mayfield West NSW Australia 2304
Telephone	: ----	Telephone	: +61 2 4014 2500
Project	: N4952	Date Samples Received	: 20-Dec-2022 17:15
Order number	: 6431	Date Analysis Commenced	: 22-Dec-2022
C-O-C number	: ----	Issue Date	: 05-Jan-2023 17:22
Sampler	: Luke Parkins		
Site	: ----		
Quote number	: EN/333		
No. of samples received	: 33		
No. of samples analysed	: 33		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Descriptive Results

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Alana Smylie	Team Leader - Asbestos	Newcastle - Asbestos, Mayfield West, NSW
Jake Spooner	Laboratory Technician	Newcastle - Asbestos, Mayfield West, NSW
Wisam Marassa	Inorganics Coordinator	Sydney Inorganics, Smithfield, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- EA200: Asbestos Identification Samples were analysed by Polarised Light Microscopy including dispersion staining.
- **EA200 Legend**
- EA200 'Am' Amosite (brown asbestos)
- EA200 'Cr' Crocidolite (blue asbestos)
- EA200 'Ch' Chrysotile (white asbestos)
- EA200: 'UMF' Unknown Mineral Fibres. "-" indicates fibres detected may or may not be asbestos fibres. Confirmation by alternative techniques is recommended.
- EA200: Analysis of asbestos from swabs and tapes is not covered under the current scope of NATA accreditation.
- EA200: N/A - Not Applicable

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	N4952/32 Building 2, ceiling cavity, settled dust	N4952/33 Building 22, ceiling cavity, settled dust	----	----	----
			Sampling date / time	20-Dec-2022 00:00	20-Dec-2022 00:00	----	----	----
Compound	CAS Number	LOR	Unit	EN2212392-032	EN2212392-033	--------	--------	--------
				Result	Result	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	0.1	%	**5.4**	**----**	**----**	**----**	**----**
EG005(ED093)T: Total Metals by ICP-AES								
Lead	7439-92-1	5	mg/kg	**1570**	**117**	**----**	**----**	**----**

Analytical Results

Sub-Matrix: **SOLID**
(Matrix: **SOLID**)

				Sample ID	N4952/01 Building 22, external, southern (front) soffit	N4952/02 Building 22, external, south-eastern upper infill panel	N4952/03 Building 22, Internal 'Cafe', southern infill panel above entry	N4952/04 Building 22, Internal stairwell to Ladies Toilet, floor sheeting	N4952/05 Building 22, internal, Ladies toilet foyer, south-eastern wall lining
				Sampling date / time	20-Dec-2022 00:00	20-Dec-2022 00:00	20-Dec-2022 00:00	20-Dec-2022 00:00	20-Dec-2022 00:00
Compound	CAS Number	LOR	Unit		EN2212392-001	EN2212392-002	EN2212392-003	EN2212392-004	EN2212392-005
					Result	Result	Result	Result	Result
EA200: AS 4964 - 2004 Identification of Asbestos in bulk samples									
Asbestos Detected	1332-21-4	0.1	g/kg		**Yes**	**Yes**	**No**	**No**	**No**
Asbestos Type	1332-21-4	-	--		**Ch + Am**	**Ch**	**-**	**-**	**-**
Asbestos (Trace)	1332-21-4	5	Fibres		**N/A**	**N/A**	**No**	**No**	**No**
Sample weight (dry)	----	0.01	g		**0.01**	**1.62**	**0.01**	**2.40**	**0.01**
Synthetic Mineral Fibre	----	-	-		**No**	**No**	**No**	**No**	**No**
Organic Fibre	----	-	-		**No**	**No**	**Yes**	**No**	**Yes**
APPROVED IDENTIFIER:	----	-	--		**J.SPOONER**	**J.SPOONER**	**J.SPOONER**	**J.SPOONER**	**J.SPOONER**

Analytical Results

Sub-Matrix: **SOLID**
(Matrix: **SOLID**)

Compound	CAS Number	LOR	Unit	Sample ID	N4952/06 Building 22, internal, Ladies toilet, vinyl floor sheeting	N4952/07 Building 22, internal, Ladies toilet, stall partition wall	N4952/08 Building 22, internal, 'Cafe kitchen', green vinyl floor sheeting	N4952/09 Building 22, internal, 'Cafe Kitchen', sheeting underneath green vinyl floor sheeting	N4952/10 Building 22, internal, downstairs foyer, green vinyl floor tile
				Sampling date / time	20-Dec-2022 00:00	20-Dec-2022 00:00	20-Dec-2022 00:00	20-Dec-2022 00:00	20-Dec-2022 00:00
					EN2212392-006	EN2212392-007	EN2212392-008	EN2212392-009	EN2212392-010
					Result	Result	Result	Result	Result
EA200: AS 4964 - 2004 Identification of Asbestos in bulk samples									
Asbestos Detected	1332-21-4	0.1	g/kg		**No**	**No**	**No**	**No**	**No**
Asbestos Type	1332-21-4	-	--		**-**	**-**	**-**	**-**	**-**
Asbestos (Trace)	1332-21-4	5	Fibres		**No**	**No**	**No**	**No**	**No**
Sample weight (dry)	----	0.01	g		**3.25**	**0.01**	**4.91**	**0.05**	**12.6**
Synthetic Mineral Fibre	----	-	-		**Yes**	**No**	**No**	**No**	**No**
Organic Fibre	----	-	-		**Yes**	**Yes**	**No**	**No**	**No**
APPROVED IDENTIFIER:	----	-	--		**J.SPOONER**	**J.SPOONER**	**J.SPOONER**	**J.SPOONER**	**J.SPOONER**

Analytical Results

Sub-Matrix: **SOLID**
(Matrix: **SOLID**)

Compound	CAS Number	LOR	Unit	Sample ID	N4952/11 Building 22, internal, downstairs Male Toilet, pitch-based ceiling panels	N4952/12 Building 2, external, ground floor, northern elevation, door window putty	N4952/13 Building 2, internal, basement, northern elevation, red vinyl floor sheeting	N4952/14 Building 2, Internal, basement, south-eastern nathroom ceiling panel	N4952/15 Building 2, internal, basement, doorway connecting SE bathroom and NE room, doorway panel
				Sampling date / time	20-Dec-2022 00:00	20-Dec-2022 00:00	20-Dec-2022 00:00	20-Dec-2022 00:00	20-Dec-2022 00:00
					EN2212392-011	EN2212392-012	EN2212392-013	EN2212392-014	EN2212392-015
					Result	Result	Result	Result	Result
EA200: AS 4964 - 2004 Identification of Asbestos in bulk samples									
Asbestos Detected	1332-21-4	0.1	g/kg		**No**	**No**	**No**	**Yes**	**Yes**
Asbestos Type	1332-21-4	-	--		**-**	**-**	**-**	**Ch**	**Ch**
Asbestos (Trace)	1332-21-4	5	Fibres		**No**	**No**	**No**	**N/A**	**N/A**
Sample weight (dry)	----	0.01	g		**0.01**	**0.29**	**7.06**	**0.22**	**0.01**
Synthetic Mineral Fibre	----	-	-		**No**	**No**	**No**	**No**	**No**
Organic Fibre	----	-	-		**Yes**	**Yes**	**No**	**Yes**	**Yes**
APPROVED IDENTIFIER:	----	-	--		**J.SPOONER**	**J.SPOONER**	**J.SPOONER**	**J.SPOONER**	**J.SPOONER**

Analytical Results

Sub-Matrix: **SOLID**
(Matrix: **SOLID**)

Compound	CAS Number	LOR	Unit	Sample ID	N4952/16 Building 2, internal ground floor, main hallway, western wall lining render	N4952/17 Building 2, internal, ground floor, north-eastern room, north eastern wall panel	N4952/18 Building 2, internal, ground floor, south-western toilets, stall partition wall	N4952/19 Building 2, internal, ground floor, south-eastern room, south western enclosed cupboard panelling	N4952/20 Building 2, internal, first floor, north-eastern hallway, yellow vinyl floor sheeting
				Sampling date / time	20-Dec-2022 00:00	20-Dec-2022 00:00	20-Dec-2022 00:00	20-Dec-2022 00:00	20-Dec-2022 00:00
					EN2212392-016	EN2212392-017	EN2212392-018	EN2212392-019	EN2212392-020
					Result	Result	Result	Result	Result
EA200: AS 4964 - 2004 Identification of Asbestos in bulk samples									
Asbestos Detected	1332-21-4	0.1	g/kg		**No**	**No**	**No**	**No**	**No**
Asbestos Type	1332-21-4	-	--		**-**	**-**	**-**	**-**	**-**
Asbestos (Trace)	1332-21-4	5	Fibres		**No**	**No**	**No**	**No**	**No**
Sample weight (dry)	----	0.01	g		**0.16**	**0.09**	**0.01**	**0.01**	**3.53**
Synthetic Mineral Fibre	----	-	-		**No**	**No**	**No**	**No**	**No**
Organic Fibre	----	-	-		**No**	**Yes**	**Yes**	**Yes**	**No**
APPROVED IDENTIFIER:	----	-	--		**J.SPOONER**	**J.SPOONER**	**J.SPOONER**	**J.SPOONER**	**J.SPOONER**

Analytical Results

Sub-Matrix: **SOLID**
(Matrix: **SOLID**)

Compound	CAS Number	LOR	Unit	Sample ID	N4952/21 Building 2, internal first floor, north-eastern bathroom, south-western wall lining	N4952/22 Building 2, internal, first floor, south-eastern room, green vinyl tile	N4952/23 Building 3, internal, ground floor, north-western conference/meeting room, ceiling	N4952/24 Building 3, internal, ground floor, southern central toilet, northern wall lining	N4952/25 Building 3, internal, ground floor, southern central troilet, yellow vinyl floor sheeting
				Sampling date / time	20-Dec-2022 00:00	20-Dec-2022 00:00	20-Dec-2022 00:00	20-Dec-2022 00:00	20-Dec-2022 00:00
					EN2212392-021	EN2212392-022	EN2212392-023	EN2212392-024	EN2212392-025
					Result	Result	Result	Result	Result
EA200: AS 4964 - 2004 Identification of Asbestos in bulk samples									
Asbestos Detected	1332-21-4	0.1	g/kg		**No**	**Yes**	**No**	**Yes**	**Yes**
Asbestos Type	1332-21-4	-	--		**-**	**Ch**	**-**	**Ch**	**Ch**
Asbestos (Trace)	1332-21-4	5	Fibres		**No**	**Yes**	**No**	**N/A**	**N/A**
Sample weight (dry)	----	0.01	g		**0.01**	**30.8**	**0.01**	**0.01**	**2.21**
Synthetic Mineral Fibre	----	-	-		**No**	**No**	**No**	**No**	**No**
Organic Fibre	----	-	-		**Yes**	**No**	**No**	**Yes**	**Yes**
APPROVED IDENTIFIER:	----	-	--		**J.SPOONER**	**J.SPOONER**	**J.SPOONER**	**J.SPOONER**	**J.SPOONER**

Analytical Results

Sub-Matrix: **SOLID**
(Matrix: **SOLID**)

Compound	CAS Number	LOR	Unit	Sample ID	N4952/26 Building 14, internal, westernmost storage area, foyer, northern wall lining	N4952/27 Building 14, internal, westernmost storage area, toilet, western wall lining	N4952/28 Building 14, internal, 'Store & Work ceontres', western wall lining immediately adjacent doorway	N4952/29 Building 14, internal, 'Shower Block', stall partition wall	N4952/30 Building 2, ceiling cavity, settled dust
				Sampling date / time	20-Dec-2022 00:00	20-Dec-2022 00:00	20-Dec-2022 00:00	20-Dec-2022 00:00	20-Dec-2022 00:00
					EN2212392-026	EN2212392-027	EN2212392-028	EN2212392-029	EN2212392-030
					Result	Result	Result	Result	Result
EA200: AS 4964 - 2004 Identification of Asbestos in bulk samples									
Asbestos Detected	1332-21-4	0.1	g/kg		**No**	**Yes**	**No**	**Yes**	**No**
Asbestos Type	1332-21-4	-	--		**-**	**Ch**	**-**	**Ch**	**-**
Asbestos (Trace)	1332-21-4	5	Fibres		**No**	**N/A**	**No**	**N/A**	**No**
Sample weight (dry)	----	0.01	g		**0.01**	**0.02**	**0.03**	**0.02**	**7.13**
Synthetic Mineral Fibre	----	-	-		**No**	**No**	**No**	**No**	**No**
Organic Fibre	----	-	-		**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
APPROVED IDENTIFIER:	----	-	--		**J.SPOONER**	**J.SPOONER**	**J.SPOONER**	**J.SPOONER**	**A. SMYLIE**

Analytical Results

Sub-Matrix: **SOLID** (Matrix: **SOLID**)				Sample ID	**N4952/31 Building 22, ceiling cavity, settled dust**	**----**	**----**	**----**	**----**
				Sampling date / time	20-Dec-2022 00:00	----	----	----	----
Compound	*CAS Number*	*LOR*	*Unit*		**EN2212392-031**	**--------**	**--------**	**--------**	**--------**
					Result	----	----	----	----
EA200: AS 4964 - 2004 Identification of Asbestos in bulk samples									
Asbestos Detected	1332-21-4	0.1	g/kg		**No**	**----**	**----**	**----**	**----**
Asbestos Type	1332-21-4	-	--		**-**	**----**	**----**	**----**	**----**
Asbestos (Trace)	1332-21-4	5	Fibres		**No**	**----**	**----**	**----**	**----**
Sample weight (dry)	----	0.01	g		**1.18**	**----**	**----**	**----**	**----**
Synthetic Mineral Fibre	----	-	-		**Yes**	**----**	**----**	**----**	**----**
Organic Fibre	----	-	-		**Yes**	**----**	**----**	**----**	**----**
APPROVED IDENTIFIER:	----	-	--		**J.SPOONER**	**----**	**----**	**----**	**----**

Analytical Results

Descriptive Results

Sub-Matrix: **SOLID**

Method: Compound	Sample ID - Sampling date / time	Analytical Results
EA200: AS 4964 - 2004 Identification of Asbestos in bulk samples		
EA200: Description	N4952/01Building 22, external, southern (front) soffit - 20-Dec-2022 00:00	A collection of asbestos cement sheeting debris approximately 10x10x2mm.
EA200: Description	N4952/02Building 22, external, south-eastern upper infill panel - 20-Dec-2022 00:00	One piece of asbestos cement sheeting approximately 40x30x5mm.
EA200: Description	N4952/03Building 22, Internal 'Cafe', southern infill panel above entry - 20-Dec-2022 00:00	A collection of cement sheeting debris.
EA200: Description	N4952/04Building 22, Internal stairwell to Ladies Toilet, floor sheeting - 20-Dec-2022 00:00	Several pieces of vinyl tile.
EA200: Description	N4952/05Building 22, internal, Ladies toilet foyer, south-eastern wall lining - 20-Dec-2022 00:00	A collection of cement sheeting debris.
EA200: Description	N4952/06Building 22, internal, Ladies toilet, vinyl floor sheeting - 20-Dec-2022 00:00	One piece of linoleum.
EA200: Description	N4952/07Building 22, internal, Ladies toilet, stall partition wall - 20-Dec-2022 00:00	A collection of cement sheeting debris.
EA200: Description	N4952/08Building 22, internal, 'Cafe kitchen', green vinyl floor sheeting - 20-Dec-2022 00:00	One piece of vinyl tile.
EA200: Description	N4952/09Building 22, internal, 'Cafe Kitchen', sheeting underneath green vinyl floor sheeting - 20-Dec-2022 00:00	A collection of glue debris.
EA200: Description	N4952/10Building 22, internal, downstairs foyer, green vinyl floor tile - 20-Dec-2022 00:00	One piece of vinyl tile.
EA200: Description	N4952/11Building 22, internal, downstairs Male Toilet, pitch-based ceiling panels - 20-Dec-2022 00:00	One piece of black building material debris.
EA200: Description	N4952/12Building 2, external, ground floor, northern elevation, door window putty - 20-Dec-2022 00:00	A collection of putty debris.
EA200: Description	N4952/13Building 2, internal, basement, northern elevation, red vinyl floor sheeting - 20-Dec-2022 00:00	Several pieces of vinyl tile.
EA200: Description	N4952/14Building 2, Internal, basement, south-eastern nathroom ceiling panel - 20-Dec-2022 00:00	A collection of asbestos cement sheeting debris.
EA200: Description	N4952/15Building 2, internal, basement, doorway connecting SE bathroom and NE room, doorway panel - 20-Dec-2022 00:00	A collection of asbestos cement sheeting debris.
EA200: Description	N4952/16Building 2, internal ground floor, main hallway, western wall lining render - 20-Dec-2022 00:00	A collection of cement sheeting debris.

Sub-Matrix: **SOLID**

Method: Compound	*Sample ID - Sampling date / time*	*Analytical Results*
EA200: Description	N4952/17Building 2, internal, ground floor, north-eastern room, north eastern wall panel - 20-Dec-2022 00:00	A collection of cement sheeting debris.
EA200: Description	N4952/18Building 2, internal, ground floor, south-western toilets, stall partition wall - 20-Dec-2022 00:00	A collection of cement sheeting debris.
EA200: Description	N4952/19Building 2, internal, ground floor, south-eastern room, south western enclosed cupboard panelling - 20-Dec-2022 00:00	A collection of cement sheeting debris.
EA200: Description	N4952/20Building 2, internal, first floor, north-eastern hallway, yellow vinyl floor sheeting - 20-Dec-2022 00:00	One piece of vinyl tile.
EA200: Description	N4952/21Building 2, internal first floor, north-eastern bathroom, south-western wall lining - 20-Dec-2022 00:00	A collection of cement sheeting debris.
EA200: Description	N4952/22Building 2, internal, first floor, south-eastern room, green vinyl tile - 20-Dec-2022 00:00	One piece of asbestos vinyl tile approximately 100x80x2mm.
EA200: Description	N4952/23Building 3, internal, ground floor, north-western conference/meeting room, ceiling - 20-Dec-2022 00:00	A collection of putty debris.
EA200: Description	N4952/24Building 3, internal, ground floor, southern central toilet, northern wall lining - 20-Dec-2022 00:00	A collection of asbestos cement sheeting debris.
EA200: Description	N4952/25Building 3, internal, ground floor, southern central troilet, yellow vinyl floor sheeting - 20-Dec-2022 00:00	Two pieces of linoleum with asbestos fibre backing approximately 50x50x1mm.
EA200: Description	N4952/26Building 14, internal, westernmost storage area, foyer, northern wall lining - 20-Dec-2022 00:00	A collection of cement sheeting debris.
EA200: Description	N4952/27Building 14, internal, westernmost storage area, toilet, western wall lining - 20-Dec-2022 00:00	A collection of asbestos cement sheeting debris approximately 10x10x1mm.
EA200: Description	N4952/28Building 14, internal, 'Store & Work ceontres', western wall lining immediately adjacent doorway - 20-Dec-2022 00:00	A collection of cement sheeting debris.
EA200: Description	N4952/29Building 14, internal, 'Shower Block', stall partition wall - 20-Dec-2022 00:00	A collection of asbestos cement sheeting debris.
EA200: Description	N4952/30Building 2, ceiling cavity, settled dust - 20-Dec-2022 00:00	A collection of dust debris.
EA200: Description	N4952/31Building 22, ceiling cavity, settled dust - 20-Dec-2022 00:00	A collection of synthetic mineral fibre insulation and dust debris.

Inter-Laboratory Testing

Analysis conducted by ALS Sydney, NATA accreditation no. 825, site no. 10911 (Chemistry) 14913 (Biology).

(SOIL) EG005(ED093)T: Total Metals by ICP-AES

(SOIL) EA055: Moisture Content (Dried @ 105-110°C)

APPENDIX 4: HAZARDOUS MATERIALS INFORMATION

HAZARDOUS MATERIALS INFORMATION

Types and Uses of Asbestos Containing Materials

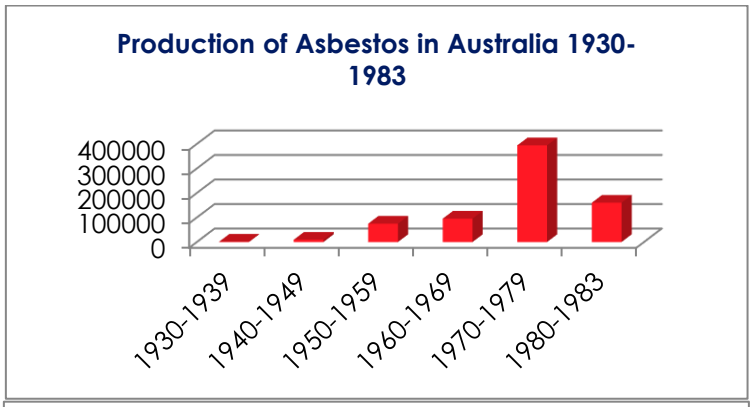
Asbestos is the fibrous form of mineral silicates belonging to the serpentine and amphibole groups of rock-forming materials. The most significant types include chrysotile, crocidolite and amosite (white, blue and brown or grey asbestos respectively). As a naturally occurring rock fibre, asbestos is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

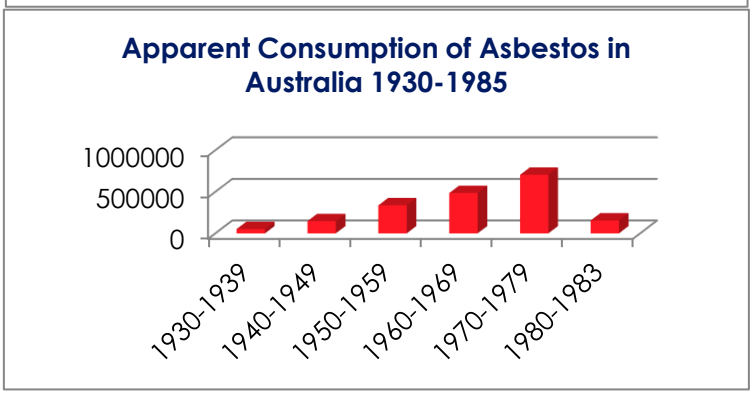
During the 1950s, 1960s and early 1970s it was common to use asbestos as fire insulation on structural members and as fire rating of penetration core holes. Its thermal energy conservation properties were used to insulate hot and cold water pipes and ducting. Asbestos was also used to a later date in products to increase their compressive and tensile strength. These products include asbestos cement (AC) sheeting, bituminous mastic and membrane, vinyl tiles, electrical backing boards and many other products.

Asbestos has unique properties, and because of this was used up until the mid/late 1980's in a large number of applications (over 3000 have been identified).

Asbestos was mined within Australia up until 1983, and commonly used in manufacturing until the mid to late 1980's. The final asbestos containing product sold in Australia was car brake pads. The sale of these was discontinued at the end of 2003.

Statistics on Australian production and consumption of asbestos are shown in the graphs below:





Notes: Data have been rounded off to the nearest 50 tonnes.
Source: Based on data from the Bureau of Mineral Resources and modified from Leigh, J., Driscoll, T. Internal Journal of Occupational and Environmental Health, Number 3, July/September 2003, pp 206-217

HAZARDOUS MATERIALS INFORMATION

The first recorded production of asbestos in Australia was at Gundagai in 1880, where small amounts of Amphibole asbestos were mined until 1921. In Australia, production peaked in 1980 when 92,418 tonnes were produced, mainly from the Woodsreef mine located near Barraba in northern New South Wales, but by 1983, only 3909 tonnes was produced, and production ceased entirely shortly after.

The primary use of asbestos was in asbestos cement sheeting, and production of this peaked in 1974 when about 44,000,000 m^2 (44 km^2) was produced. The year 1987 is generally regarded as the cut-off year for asbestos use. Asbestos containing materials are widespread in the community, and it can be expected that any building constructed prior to 1987 may contain asbestos products. This includes a significant percentage of the existing Australian housing stock.

Nature of the Potential Hazard from Asbestos

Asbestos is a naturally occurring fibrous silicate mineral, one of the Serpentine groups. It was mined extensively in Australia until the early 1980's.

These minerals were commonly used in the past because of their fibrous nature (providing structural strength in products such as asbestos cement sheeting), low heat conductivity (providing insulation on steel building structures, steam pipes etc.), high electrical resistance (used in power boards, electrical fittings, etc.) and chemical inertness.

The primary types of asbestos used were chrysotile (white asbestos), crocidolite (blue asbestos) and amosite (brown asbestos). The risk to human health from asbestos arises primarily from the inhalation of asbestos fibre derived from the disturbance of asbestos-containing products. Because of its small fibre size, asbestos may penetrate deep into the lung, and because of its inert nature, body processes have difficulty expelling the material.

Exposure to asbestos fibre may result in an outcome of chronic adverse health effects. These may include asbestosis leading to the onset of mesothelioma, a painful, fatal cancer of the lining of the lung. The health effects of asbestos may take 20 – 40 years to manifest themselves. In Australia at the present time there is a high prevalence of asbestos related disease resulting from the widespread use of the material in the construction and shipping industries during the 1960's and 1970's.

Asbestos fibre may be held strongly in a matrix, for example cement (asbestos cement) and in this form is known as bonded. If the matrix does not hold the asbestos fibre strongly, and the fibre can be liberated easily, for example by crushing between the fingers, the form is known as friable. Friable asbestos is more of a health risk than bonded because exposure to fibres happens more easily.

Asbestos cement is a bonded asbestos product with the asbestos fibre contained within a stable matrix. Because asbestos cement is bonded, asbestos fibre is only liberated if the materials are degraded in some way, such as by sawing, drilling or grinding. Broken asbestos cement pieces are regarded as bonded by SafeWork NSW. Issues related to occupational exposure to asbestos are administered in NSW by SafeWork NSW under the *Work Health and Safety Act 2011 and Regulation 2017*. SafeWork also licence asbestos removal contractors.

HAZARDOUS MATERIALS INFORMATION

Types and Uses of Synthetic Mineral Fibre

For more than 60 years glass fibre, mineral wool and ceramic fibre materials have been used in products for their thermal, acoustic and fire insulation properties and in some products for fibre reinforcement. These fibres have, in special circumstances, been used as a replacement for asbestos based materials. The fibres of all these types of materials are described as SMF and are categorised as amorphous (non-crystalline) fibre.

The potential for detrimental health effects resulting from exposure to synthetic mineral fibre particularly glass wool and rock wool has for many years been the subject of conjecture, primarily due to its irritant properties, however, exhaustive research over a 30 year period by the IARC (International Agency for Research on Cancer) found this material to be non-carcinogenic to humans.

The use of and the safe removal of SMF materials should be conducted in accordance with the National Code of Practice for the safe use of Synthetic Mineral Fibres [NOHSC: 2006 (1990)].

Lead Based Paint & Dust

Lead is a naturally occurring metal with properties that make it useful for a wide range of applications including producing and using solder, batteries, x-ray shielding and ammunition.
Solid lead, in itself, presents little or no risk to people. However, when lead is processed in a way that produces lead dust, fumes or mist (e.g. sanding or grinding, heating lead or spraying lead-based coatings) it poses a risk to health. Even small amounts of lead and lead compounds can be toxic when ingested or inhaled.

AS/NZS 4361.2:2017 Guide to hazardous paint management – Part 2: Lead paint in residential, public and commercial buildings a lead-based paint as a paint film or component coat of paint system containing lead or lead compounds, in which the lead content is in excess of 0.1 % by weight of the dry film as determined by laboratory testing.

Exposure of high levels of dust or paint can have negative effects in both children and adults. Exposure to lead may cause reproductive problems, high blood pressure, digestive, nerve and memory issues, as well as muscular and joint pain.

Types and Uses of Polychlorinated Biphenyls

Polychlorinated Biphenyls (PCBs) are a toxic organochlorine used as insulating fluids in electrical equipment such as transformers, capacitors and fluorescent light ballasts that were largely banned from importation in Australia in the 1970s.

The extent of the use of PCB is varied. They were used in fluorescent light capacitors for power factor correction on an inductive ballast circuit. They have also been used in transformers, vacuum pumps and gas – transmission turbines, and in the United States as plasticisers, adhesives and pesticide extenders and as well as many other products

Prolonged exposure to high concentrations of PCB can cause problems including cancerous growths, nervous disorders, skin irritations, liver and pregnancy problems.