Asbestos Survey Report

155 Coonawarra Road, Winnellie NT 0820

Public Trustee For the Northern Territory

Bld 3, Floor 1
631 Stuart Highway
Berrimah NT 0828

Prepared by:

SLR Consulting Australia

SLR Project No.: 680.030382.00001

11 March 2025

Revision:2.0

Revision Record

Revision	Date	Prepared By	Checked By	Authorised By
2.0	10 March 2025	Flynn Mackley	Gemma Sheridan	Gemma Sheridan

Basis of Report

This report has been prepared by SLR Consulting Australia (SLR) with all reasonable skill, care and diligence, and taking account of the timescale and resources allocated to it by agreement with Public Trustee For the Northern Territory (the Client). Information reported herein is based on the interpretation of data collected, which has been accepted in good faith as being accurate and valid.

This report is for the exclusive use of the Client. No warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from SLR.

SLR disclaims any responsibility to the Client and others in respect of any matters outside the agreed scope of the work.

Executive Summary

SLR Consulting Australia Pty Ltd (SLR) was engaged by Rebecca Davies of the Northern Territory Public Guardian and Trustee (PGT) to undertake an asbestos containing materials resurvey of the building located at 155 Coonawarra Road, Winnellie NT 0820 (herein referred to as the Site). The survey was conducted by Flynn Mackley from SLR on 20 February 2025.

This report constitutes an asbestos register for the Site as required under the *Work Health and Safety (National Uniform Legislation) Regulations 2011* ('*WHS Reg*').

The following asbestos or Asbestos Containing Materials (ACM) were identified or assumed present.

Asbestos or Asbestos Containing Materials (ACM)

155 Coonawarra Road

- External - Carport - Northern Aspect - Fascia panels, Fibrous Cement
- External - Eastern Aspect - Electrical backing board, Bituminous Electrical Backing Board (BEBB)
- Internal - Ground Floor, Ground floor kitchenette - Hot water cylinder, Insulation
- Internal - Ground Floor, Shed storage area - 2x combination safes, Insulation
- Internal – Ground Floor, Bathroom – Wall linings, Fibrous Cement
- Internal – Ground Floor, Toilet – Wall linings, Fibrous Cement

Recommendations

The recommendations arising out of this Asbestos Survey Report include the following:

- For the below mentioned friable assumed ACM, manage in situ and, if the seal containing the assumed friable asbestos is damaged, the material should be removed as soon as possible by a Class A (or friable) licensed asbestos removalist (unless sampling and analysis proves the material is non-ACM):
    - Internal - Ground Floor - Ground Floor Kitchenette, Hot water cylinder, Insulation
    - Internal - Ground Floor - Shed Storage Area, 2x combination safes, Insulation
- Note: At the time of the inspection, the abovementioned friable asbestos materials were sealed and were considered to pose a low risk to health in their current condition
- For all non-friable ACM – manage in situ.

All friable asbestos removal must be undertaken by a Class A (or friable) licensed asbestos removal contractor. In the interim, access to locations containing friable asbestos should be appropriately restricted (ie barricaded, etc.). Persons wishing to access the areas must complete a suitable and sufficient risk assessment, the results of which may include the use of appropriate Personal Protective Equipment (PPE) which may include disposable coveralls and respiratory protection.

1 As required by the '*WHS Reg*', a person with management or control of a workplace (PWMC) must ensure, so far as is reasonably practicable:
   a) An Asbestos Register is prepared for all asbestos or ACM that has been identified or assumed present at the workplace, and kept at the workplace and is readily available;
   b) The presence and location of all identified and assumed asbestos or ACM at the workplace is clearly indicated, and if it is reasonably practicable to do so, indicate by a label;
   c) That an Asbestos Management Plan (AMP) is prepared for the workplace and is readily accessible; and
   d) The Asbestos Register and AMP are reviewed and as necessary revised.
2 ACM identified on-site that do not pose a significant risk to health may remain in situ and be managed with the aid of an AMP.

The list above is a summary/overview only and should not be relied on to accurately identify all asbestos or ACM. The locations and details of all items of known and assumed asbestos or ACM at the property are documented in the Asbestos Register in Section 5.0 of this report.

In order to comply with the '*WHS Reg*', the PWMC of a workplace where an Asbestos Register is kept must ensure that the register is reviewed and as necessary revised if, asbestos is removed from, or disturbed, sealed or enclosed at, the workplace. The Asbestos Register is located in Section 5.0 in this report.

Copies of the NATA Laboratory Certificates for the asbestos identification analysis are provided in **Appendix A**. Refer to the General Information in **Appendix B** of this report for more information about hazardous building materials.

The information provided in this report should not be relied on to accurately identify all asbestos or ACM at the Site. Asbestos or ACM may have been concealed i.e. behind new walls, flooring, ceilings, etc. that may have been inaccessible at the time of the inspection. If any asbestos or ACM are reasonably suspected at the Site, which are not identified within this report, further investigation is recommended by a competent person/s to undertake additional confirmatory inspections and/or sampling and analysis as required.

This report should be read in full including all attachments.

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Acronyms and Abbreviations

ACM	Asbestos Containing Materials
AMP	Asbestos Management Plan
ARCP	Asbestos Removal Control Plan
Client	Public Trustee For the Northern Territory
COP Demolition	Demolition work Code of Practice 2020
COP Management	Code of Practice How to Manage and Control Asbestos in the Workplace 2022
COP Removal	Code of Practice How to Safely Remove Asbestos 2023
PPE	Personal Protective Equipment
PWMC	Person With Management or Control
Relevant State Workplace Authority	NT WorkSafe
SLR	SLR Consulting Australia
WHS Act	*Work Health and Safety (National Uniform Legislation) Act 2011*
WHS Reg	*Work Health and Safety (National Uniform Legislation) Regulations 2011*

1.0 Scope and Background

SLR Consulting Australia was engaged by Northern Territory Public Guardian and Trustee (PGT)to undertake a survey of 155 Coonawarra Road, Winnellie NT 0820, herein referred to as the Site. The survey was conducted by Flynn Mackley from SLR on 20 February 2025.

The scope of work was to undertake an asbestos re-survey for the condition assessment of previously identified in situ asbestos containing materials (ACM) and identify any previously unidentified ACM.

The re-survey and samples collected for subsequent analysis (where applicable) was completed in order to confirm, as far as reasonably practicable, the location, condition and risk presented by in-situ ACM, based on the level of access available at the time of the assessment.

Other hazardous building materials may be present but are outside the scope of this investigation.

As this is not an intrusive, demolition or refurbishment style survey, findings must not be deemed absolute. A demolition/refurbishment style survey is to be conducted prior to such works commencing as described in AS 2601-2001 The Demolition of Structures and outlined in Demolition Work Code of Practice 2020.

1.1 Site Description

The Site is located on the north side of Coonawarra Road. A Site Locality Map is presented in **Figure** 1. For the purpose of this report, Coonawarra Road is taken to run in an east/west direction, directly adjacent to the Site.

The following information is known about the building:

- The building is a single storey warehouse constructed circa 1980’s with toilets, storage and an office area.
- At the time of the survey the building was used as a storage warehouse for PGT and only occupied intermittently.
- The warehouse manager was present in the building at the time of the inspection

The following areas were surveyed at the time of the inspection:

- Main Office (entrance to the building)
- Bathroom/ Toilet
- Kitchenette
- Storage Room
- Storage Room to rear, east
- External Yard

Figure 1 Site Locality Map

Satellite imagery obtained from Nearmap– Accessed on 28-02-2025.

2.0 Methodologies

Asbestos surveys are undertaken considering a risk management approach, in accordance with State Legislation, Safe Work Australia Codes of Practice, NOHSC Guidance and best practice. The survey was conducted in a manner which conforms with the *Work Health and Safety (National Uniform Legislation) Regulations 2011* (‘*WHS Reg*’)..

Asbestos or ACM were identified or assumed through visual assessment and/or laboratory analysis and documented in the Asbestos Register in Section 5.0 of this report.

All works were carried out in accordance with the Code of Practice How to Manage and Control Asbestos in the Workplace 2022 (‘*COP Management*’).

The assessment was conducted based on the condition, type and location of the materials present at the time of inspection. The scope of the assessment did not allow intrusive sampling techniques to be undertaken, and consequently the register will have limitations as a reference document for the purposes of renovation or demolition.

Sample collection, where undertaken, was performed in a non-destructive and non-invasive manner by competent persons. Assumptions, based on knowledge and experience, that ACM may be present in inaccessible areas may also be made and stated within the register.

Material assessments consisted of a visual inspection with representative sampling/analysis of materials undertaken by a trained and experienced surveyor. Materials were assumed to contain asbestos where:

- Laboratory analysis has confirmed the presence of asbestos in a visually similar material; or
- Materials visually appear to be asbestos containing, but no sample was collected, for example due to access restraints.

Samples are typically collected using a hand tool or core borer. Hand drills and other tools are used where required. Power tools were not used during the survey.

Small, representative samples were collected, where necessary, from materials assumed to contain asbestos (where not previously identified). Samples collected are representative of the material sampled, individually identified, transported, analysed and reported upon in accordance with guidelines, relevant statutory regulations, codes of practice and SLR in-house work instructions and procedures. Samples were submitted to a NATA accredited laboratory for confirmation analysis by stereo microscope and polarised light microscopy with dispersion staining techniques.

Notably, with some asbestos containing bulk material it can be very difficult, or impossible, to detect the presence of asbestos using the polarised light microscopy analytical method, even after ashing or disintegration of samples. This is due to the low grade or small length, or diameter of asbestos fibres present in the material, or attributed to the fact that, very fine fibres have been distributed individually throughout the materials. Some materials, such as vinyl tiles, may require further analysis via X-ray diffraction or scanning electron microscopy.

The Asbestos Register consists of relevant information gathered on site, assessment of risk and recommendations for ongoing management of in-situ asbestos materials. Reference to photographs, where available, is made in the register along with sample identification and analysis results, where applicable. Sample analysis results from preceding assessments may be referenced in the Asbestos Register (refer to previous survey reports for analytical test results where reference is made to previous sample data).

3.0 Exclusions

Certain areas of the building may have been inaccessible at the time of the assessment. This includes areas/materials that were inaccessible due to being “live electrical” or “moving parts” equipment. **Table 1** lists those areas/materials that were inaccessible at the time of the assessment.

Table 1 Inaccessible Areas and/or Materials

Location	Explanation
External, carport – northern aspect	No access due to roof height
Internal, kitchenette – hot water cylinder	No access to insulation sealed within hot water cylinder
Internal – shed storage area	No access to insulation sealed within the two combination safes

Additionally, and unless specifically noted, the survey did not cover:

- Live electrical” or “moving parts” equipment.
- Wall/ceiling panelling behind laminations/coverings.
- Concealed floor coverings beneath carpet or superficial floor coverings.
- Items near or around “live” electrical equipment. E.g. Fuses of a certain age may contain asbestos flashguards.
- Hidden and/or inaccessible locations such as in or under concrete slabs, in or under vinyl/linoleum/carpet, wall cavities, hidden storage areas and the like. If the vinyl or linoleum is tested, this does not necessarily mean that the resin/glue is included in the analysis.
- Lift wells and inaccessible/unidentified shafts, cavities and the like.
- Air conditioning, heating, mechanical, electrical or other equipment.
- General exterior ground surfaces and subsurface areas e.g. asbestos in fill/soil.
- Materials dumped, hidden, or otherwise placed in locations which one could not reasonably anticipate.
- Materials other than normal building fabric, materials in laboratories or special purpose facilities and building materials that cannot be reasonably and safely assessed without assistance.

Materials other than asbestos are generally outside the scope of this investigation as identification can require specialised analysis/inspection techniques.

4.0 Survey Terms Explanation

To assist with the interpretation of the results, Table 2 provides detailed meaning of abbreviations and terms that may appear in the tables.

Table 3 provides details regarding the assessment of asbestos and ACM during the survey.

Table 4 provides the material assessment scoring and fibre release potential.

The results of the survey are presented in a tabular format in Section 5.0 and Section 6.0.

Table 2 Survey Terms Explanation

Date Identified	Date that the material was initially identified
Sample No. / Visual Observation	Refers to whether an item was sampled for analysis. If the material was visually similar enough to a previously sampled or assumed material the sample ID from the previous Report will be listed. The material may also be assumed to contain asbestos if there is insufficient evidence to confirm that it is asbestos free.
Photograph	Refers to the photograph reference number located in the appendices.
Internal / External	Refers to the location of the material in relation to the structure. Eg Eaves would be External of the building; Kitchen would be internal of the building.
Floor	Refers to the floor level on which the material is located.
Specific Location	Refers to the precise location of the material within a room e.g. Room 1 – infill panel below window on southern wall.
Material	Refers to the type of material identified e.g. vinyl tile, fibre cement sheeting, fibrous insulation, etc. Material does not refer to the use or application of the material. This is covered in 'Application'.
Application	Refers to the use or application of the material e.g. floor covering, soffit lining, pipe lagging, etc.
Extent	Usually refers to the surface area or length of the material expressed as either square metres (m^2) or lineal metres (Lin m). The dimension is an estimate only and should not be relied upon as an exact measure.
Friability of Asbestos	Friable or non-friable ACM are deemed to be friable if they are able to be crumbled or be reduced to powder by hand pressure when dry.
Product Type	Usually refers to the specific form or application of the material in which asbestos is present. Product types can vary widely depending on their use in construction, manufacturing, and other industries.
Material Condition / Extent of Damage / Deterioration	Refers to the physical state or condition of the material. Good – The ACM is intact and shows no signs of damage or deterioration. No visible cracks, breaks, or surface wear. Fair – The ACM is mostly intact with minor signs of wear or damage. Small cracks, chips, or surface wear may be present, but the material remains largely in place. Poor – The ACM shows moderate signs of damage or deterioration. Cracks, breaks, or surface wear are more pronounced, and some fibres may be exposed. Very Poor – The ACM is significantly damaged or deteriorated. Extensive cracks, breaks, or surface wear with visible fibre release.
Sealed / Surface Treatments	Refers to whether or not the material is encapsulated with a sealant such as paint, wallpaper, etc. concealing its exposed surfaces.
Analysis Result	Refers to the type of asbestos identified during laboratory analysis. There are three main commercial asbestos types: chrysotile (CH-white), amosite (A-brown or grey), and crocidolite (C-blue).

Material Assessment Rating	Below is the general risk matrix that is followed however the consultant will take into account the specifics with each individual situation which may vary the outcome from risk assessment, such variations would be explained in the comments. Refers to the level of risk posed by the material based on its condition, friability, accessibility and other factors such as exposure to disturbance. The Material Assessment score is calculated by adding the parameters above. The potential for releasing fibres is detailed below. The material assessment looks at the type and condition of the ACM and the ease with which it will release fibres if disturbed. It does not take into account occupancy or activities within the area, including periodic maintenance works. Removal Recommended: Engage appropriately qualified persons (i.e. licensed asbestos removal contractor) to remove and dispose of the ACM under controlled conditions in accordance with relevant state specific Removal Code of Practice. Repair / encapsulation Recommended: Repair or encapsulate (e.g. paint) or enclose the ACM to minimise deterioration until such time that the ACM is removed. Suitable for Continual Use: ACM may remain in situ provided appropriate management controls are adopted, the material is appropriately labelled and re-assessed every 5 years or earlier, where a risk assessment indicates the need for reassessment or the ACM has been disturbed or removed. NA: Not Applicable where Analysis indicates No Asbestos Detected (NAD).
Labels Affixed	Yes / No or N/A – Not Applicable where Analysis indicates NAD.
Recommended Control Actions	Refers to the recommended controls / actions required to ensure the identified asbestos materials are managed as per the legislative requirements.
Additional Comments	Refers to any other relevant comments that may assist with the future management of the material.
Next Inspection Date	Due at least once within a 5 year period from the last Inspection Date.

Table 3 Material Assessment

Sample Variable		Score	Examples of Scores
A	Product type (or debris from product)	1	Asbestos-reinforced composites (plastics, resins, mastics, roofing felts, vinyl floor tiles, semi-rigid paints or decorative finishes, BEBB, asbestos cement, etc.).
		2	Millboards, other low-density insulation boards (LDB), asbestos textiles, gaskets, ropes and woven textiles, asbestos paper and felt.
		3	Thermal insulation (e.g. pipe and boiler lagging), sprayed asbestos, loose asbestos, asbestos mattresses and packing.
B	Extent of damage/deterioration	0	Good condition: no visible damage.
		1	Low damage: a few scratches or surface marks, broken edges on boards, tiles etc.
		2	Medium damage: significant breakage of materials or several small areas where material has been damaged revealing loose asbestos fibres.
		3	High damage or delamination of materials, sprays and thermal insulation. Visible asbestos debris.
C	Surface treatment	0	Composite materials that are sealed by nature (plastics, resins, mastics, roofing felts, vinyl floor tiles, semi-rigid paints or decorative finishes, BEBB), or Encapsulated FCS, AC.
		1	Unsealed FCS, AC, or Encapsulated millboard, other LDB (with exposed face painted/encapsulated), asbestos textiles, gaskets, ropes and woven textiles, asbestos paper, card. Enclosed Insulation (lagging, sprays, loose asbestos, mattresses, packing).
		2	Unsealed millboard, other LDB, asbestos textiles, gaskets, ropes and woven textiles, asbestos paper and card, or Encapsulated Insulation (lagging, sprays, loose asbestos, mattresses, packing.
		3	Unsealed Insulation (lagging, sprays, loose asbestos, mattresses, packing).

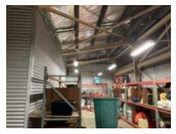
Table 4 Material Assessment Scoring

Material Assessment Score	Fibre Release Potential
7 - 9	**High**
4 - 6	**Medium**
1 - 3	**Low**

5.0 Asbestos Register

The following table is a register of all identified and/or assumed asbestos and ACM at the Site, confirmed through analysis or assumed materials deemed to be homogenous or consistent in appearance and manufacture to similar samples collected/analysed. This summary of asbestos and ACM should be read in conjunction with Asbestos Register all sections of this report.

Table 5 Asbestos Register

155 Coonawarra Road														
Date Identified	**Sample No. / Visual Observation**	**Photo**	**External / Internal Floor, Specific Location**	**Material & Application**	**Extent**	**Friability**	**Product Type**	**Condition**	**Surface Treatment**	**Analysis Result**	**Material Assessment Rating**	**Labelled**	**Control Actions & Additional Comments**	**Next Inspection due date**
20/02/2025	Assumed		External Carport - northern aspect	Fascia panels, Fibrous Cement	15m²	Non Friable	Asbestos reinforced composites etc.	Good	Sealed	Assumed Asbestos	Low	Yes	Manage – material assumed to be ACM.	20/02/2030
20/02/2025	Assumed		External Eastern aspect	Electrical backing board, Bituminous Electrical Backing Board	0.2m²	Non Friable	Asbestos reinforced composites etc.	Good	Sealed	Assumed Asbestos	Low	Yes	Manage.	20/02/2030
20/02/2025	Assumed		Internal Ground Floor, Ground floor kitchenette	Hot water cylinder, Insulation	<1m³	Friable	Thermal insulation, sprayed asbestos, loose asbestos etc.	Good	Sealed	Assumed Asbestos	Medium	Yes	Manage. Note: If the seal containing the assumed friable asbestos is damaged, the material should be removed as soon as possible by a Class A (or friable) licensed asbestos removalist (unless sampling and analysis proves the material is non-ACM)	20/02/2030
20/02/2025	Assumed		Internal Ground Floor, Shed storage area	2x combination safes, Insulation	<1 m³	Friable	Thermal insulation, sprayed asbestos, loose asbestos etc.	Good	Sealed	Assumed Asbestos	Medium	Yes	Manage. Note: If the seal containing the assumed friable asbestos is damaged, the material should be removed as soon as possible by a Class A (or friable) licensed asbestos removalist (unless sampling and analysis proves the material is non-ACM)	20/02/2030
20/02/2025	**Previous Sample** WIN-003 (SLR, 2017)		Internal Ground Floor, Bathroom wall linings	Wall linings – fibre cement	14 m²	Non Friable	Asbestos reinforced composites etc.	Good	Sealed	Chrysotile	Low	Yes	Manage.	20/02/2030

155 Coonawarra Road														
20/02/2025	**Similar to Previous Sample** WIN-003 (SLR, 2017)		Internal Ground Floor, Toilet wall linings	Wall linings – fibre cement	12 m²	Non Friable	Asbestos reinforced composites etc.	Good	Sealed	Chrysotile	Low	Yes	Manage	20/02/2030
20/02/2025	***Previous Sample*** *WIN-005* *(SLR, 2017)*	*N/A No photo Collected*	*External* *Eastern aspect – fire box, door seal*	*Woven rope material*	*8 Lin m*	*Friable*	*Woven Product*	*Very Poor*	*Unsealed*	*Chrysotile*	*N/A – material has been removed*	*NO*	*Material has been removed. No action required*	*N/A*

SLR, 2017, "*Asbestos Containing Materials Survey Report – Winnellie Warehouse, 155 Coonawarra Road, Winnellie NT 0821*", Report Number 680.10420-R01-ASR-v1.0, dated 18 October 2017
AC = Asbestos Cement; FCS = Fibre Cement Sheeting; BEBB = Bituminous Electrical Backing Board; NAD = No Asbestos Detected; m² = Metres Squared; Lin m = Lineal Metres; N/A = Not Applicable.
All other similar occurrences of the ACM identified in the summary table above should be assumed to contain asbestos, and treated accordingly, unless sampling and analysis confirms otherwise.
This summary of asbestos and ACMs should be read in conjunction with all sections of this report.

6.0 Non-Asbestos Register

The following table details all non-asbestos materials as determined through laboratory analysis.

Table 6 Non-Asbestos Register

155 Coonawarra Road						
Date Identified	**Sample No. / Visual Observation**	**Photo**	**External / Internal Floor, Specific Location**	**Material Application**	**Analysis Result**	**Control Actions & Additional Comments**
20/02/2025	16-343		External Storage shed	Expansion joint Mastic, Mastic	NAD	No action required
20/02/2025	16-341		External Ground Floor, Southern aspect	Eave linings, Fibrous Cement	NAD	No action required
20/02/2025	Similar to 16-343		Internal 2nd Floor, Air Conditioned Storage room	Expansion Joint Mastic, Mastic	NAD	No action required

FCS = Fibre Cement Sheeting; NAD = No Asbestos Detected; m² = Metres Squared; Lm = Lineal Metres; N/A = Not Applicable.
This summary of non-asbestos should be read in conjunction with all sections of this report.

7.0 Discussion and Recommendations

SLR was appointed to complete a re-survey of the Site with regards to the identification of ACM. The re-survey was completed in order to confirm, as far as reasonably practicable, the location, type, condition and date identified of ACM present at the Site.

As ACM have been identified within this Asbestos Survey Report, an AMP must be developed and implemented, with consideration of the items identified within this report, including decisions and reasons for decisions regarding management of ACM, procedures for detailing incidents or emergencies involving ACM at the workplace, and workers carrying out work involving asbestos.

The recommendations arising out of this Asbestos Survey Report include the following:

- For the below mentioned friable assumed ACM, manage in situ and, if the seal containing the assumed friable asbestos is damaged, the material should be removed as soon as possible by a Class A (or friable) licensed asbestos removalist (unless sampling and analysis proves the material is non-ACM):
    - Internal - Ground Floor - Ground Floor Kitchenette, Hot water cylinder, Insulation
    - Internal - Ground Floor - Shed Storage Area, 2x combination safes, Insulation
- Note: At the time of the inspection, the abovementioned friable asbestos materials were sealed and were considered to pose a low risk to health in their current condition
- For all non-friable ACM – manage in situ.

The following are some general recommendations and precautions that should be considered.

- This document should be held as an Asbestos Register of the areas inspected and updated every 5 years or earlier where the AMP has been reviewed, further asbestos or ACM has been identified, asbestos or ACM have been removed from, disturbed, sealed or enclosed at the workplace. All occupiers of the workplace are to be provided with a copy of this Asbestos Register and all updates to it.
- In order to comply with the '*WHS Reg*' the PWMC of a workplace where an asbestos register is kept must ensure that the register is reviewed and as necessary revised if, asbestos is removed from, or disturbed, sealed or enclosed at, the workplace.
- In order to comply with the '*WHS Reg*', an AMP must be developed and implemented. A suitably qualified and experienced consultant can advise and assist in developing an AMP.
- If any material that may contain asbestos is found on site that is not included within the register, the material should be sent for identification and expert advice sought. The material should be assumed to contain asbestos in the interim.
- As a precautionary measure, all materials, which may contain asbestos, should be assumed to contain asbestos and treated appropriately until sampling and analysis confirms otherwise.
- All non-friable ACM in and intact condition may remain in-situ provided they are not drilled, ground or otherwise disturbed. If generated, broken pieces are to be removed as soon as practicable. As part of good ongoing management, we recommend regular inspections of ACM left in-situ to check the condition of these materials.

- As a precautionary measure, any minor damaged, exposed/damaged edges of ACM remaining in-situ may be sealed with an appropriate sealant to minimise the risk of generating airborne asbestos fibres if/when these materials are disturbed.
- Any areas of the workplace that contain asbestos or ACM including plant, equipment and components should be signposted with appropriate warning signs to ensure that asbestos is not unknowingly disturbed without the correct precautions being taken. These signs should be placed at all the main entrances to the work areas where asbestos is present and should conform with Australian Standard AS 1319-1994 Safety Signs for the Occupational Environment.
- If asbestos materials become significantly damaged, weathered and/or produce visible dust or significant debris, then health and safety management works are likely to be required. A suitably qualified and experienced consultant can advise and assist in carrying out such works.
- Prior to renovation or demolition works a refurbishment/demolition asbestos survey should be undertaken by a suitable qualified and experience consultant. A Refurbishment and/or Demolition Survey is required under the ‘COP Demolition’ and AS 2601-2001 “The Demolition of Structures”.

Refer to General Information in Appendix B of this report.

8.0 Limitations

Surveys are conducted in a conscientious and professional manner. The nature of the task and the likely disproportion between any damage or loss which might arise from the work or reports prepared, and the cost of our services, is such that SLR cannot guarantee that all asbestos and ACMs have been identified and/or addressed.

Due to the possibility of renovations and additions to the building over time, asbestos and ACMs may have been concealed (for example behind new walls, flooring, ceilings, within boxing, etc.); such areas were inaccessible during the inspection. It is recommended that prior to any refurbishment/demolition works at the site that a full destructive asbestos refurbishment/demolition survey is undertaken by a suitably qualified and experienced consultancy. An intrusive survey is required under '*COP Demolition*' and AS 2601-2001 "The Demolition of Structures". If any materials reasonably assumed of containing asbestos or ACMs are found on site, which are not identified within this report, the client's independent consultant, should be contacted to complete additional confirmatory sampling and analysis as required.

A change in building use/nature of activities could affect the control actions recommended within this report and a re-survey may be required.

Thus, while we carry out the work to the best of our ability, we totally exclude any loss or damages which may arise from services we have provided to Public Trustee For the Northern Territory and/or associated parties.

Where potentially asbestos and ACMs are identified these are normally reported on to the best of the consultant's ability. Analysis is not normally included and there is no guarantee that all such materials have been identified and/or addressed.

All work conducted and reports produced by SLR are prepared for a particular Client's objective and are based on a specific scope, conditions and limitations, as agreed upon between SLR and the Client. Information and/or report(s) prepared by SLR may therefore not be suitable for any use other than the intended objective. No parties other than the Client should use any information and/or report(s) without first conferring with SLR.

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It is the responsibility of third parties to investigate fully to their satisfaction if any information and/or report(s) prepared by SLR are suitable for a specific objective.

The report(s) and/or information produced by SLR should not be reproduced and/or presented/reviewed except in full.

Materials other than asbestos are generally outside the scope as identification can require specialised analysis/inspection techniques.

Settled dust is generally not sampled or commented on unless specified. Settled dust may contain hazardous building materials, particularly if it is/was once in the vicinity of hazardous building materials (such as asbestos containing materials or lead paint). It may also contain hazards originating from outside the building (such as lead from petrol combustion).

9.0 Legislation, Guidelines and Regulations

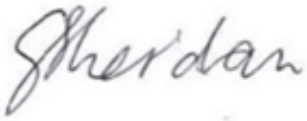
- *Work Health and Safety (National Uniform Legislation) Act 2011*
- *Work Health and Safety (National Uniform Legislation) Regulations 2011*
- Code of Practice How to Manage and Control Asbestos in the Workplace 2022
- Code of Practice How to Safely Remove Asbestos 2023
- National Occupational Health and Safety Commission: 3003 (2005) “Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres 2nd Edition”
- AS 1319-1994 “Safety Signs for the Occupational Environment”
- AS 1715 2009 “Selection, Use and Maintenance of Respiratory Protective Devices”
- AS 1716 2012 “Respiratory Protective Devices”
- AS 2601-2001 “The Demolition of Structures”
- Demolition work Code of Practice 2020
- Code of Practice Managing Risks of Hazardous Chemicals in the Workplace 2023

10.0 Closure

I trust that this report provides sufficient detail for your current requirements. We would be pleased to discuss this report with you as required - please do not hesitate to call me on 0428 012 854 if you have any queries.

Sincerely,

SLR Consulting Australia



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11.0 Feedback

At SLR, we are committed to delivering professional quality service to our clients. We are constantly looking for ways to improve the quality of our deliverables and our service to our clients. Client feedback is a valuable tool in helping us prioritise services and resources according to our client needs.

To achieve this, your feedback on the team's performance, deliverables and service are valuable and SLR welcome all feedback via https://www.slrconsulting.com/en/feedback. We recognise the value of your time and we will make a $10 donation to our Charity Partner - Lifeline, for every completed form.

Appendix A Certificate of Analysis

Asbestos Survey Report

155 Coonawarra Road, Winnellie NT 0820

Public Trustee For the Northern Territory

SLR Project No.: 680.030382.00001

11 March 2025

Certificate of Analysis

Environment Testing

NATA Accredited
Accreditation Number 1261
Site Number 1254

Accredited for compliance with ISO/IEC 17025–Testing
NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration, inspection, proficiency testing scheme providers and reference materials producers reports and certificates.

SLR Consulting (NT)
GPO Box 654
Darwin
NT 0801

Attention:	Flynn Mackley
Report	1190248-AID
Project Name	155 Coonawarra Rd
Project ID	680.030382.00001
Received Date	Feb 21, 2025
Date Reported	Feb 27, 2025

Methodology:

Asbestos Fibre Identification	Conducted in accordance with the Australian Standard AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004 and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques. *NOTE: Positive Trace Analysis results indicate the sample contains detectable respirable fibres.*
Man-made vitreous fibre (MMVF)	Fibres exhibiting isotropic characteristics, including glass fibres, glass wool, rock wool, slag wool, ceramic fibres and bio-soluble fibres. NOTE: previously known as "synthetic mineral fibre" (SMF). Simple analytical procedures such as polarised light microscopy cannot detect or reliably identify asbestos in some types of commercial products containing asbestos, either because the fibres are below the resolution of optical microscopy or because the matrix material adheres too strongly to the fibres. For these types of products, electron microscopy may be necessary.
Subsampling Soil Samples	The sample submitted is dried and passed through a 10 mm sieve followed by a 2 mm sieve. All fibrous matter greater than 10 mm and greater than 2 mm and the material passing through the 2 mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 g to 60 g, then a subsampling routine based on ISO 3082:2017(E) is employed. *NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be subsampled for trace analysis, in accordance with AS 5370:2024*.*
Bonded asbestos-containing material (ACM)	The material is first examined, and any fibres are isolated for identification by PLM and DS. Where required, interfering matrices may be removed by disintegration using a range of heat, chemical or physical treatments, possibly in combination. The resultant material is then further examined in accordance with AS 5370:2024*. *NOTE: Even after disintegration, it may be difficult to detect the presence of asbestos in some asbestos-containing bulk materials using PLM and DS. This is due to the low grade or small length or diameter of the asbestos fibres present in the material or to the fact that very fine fibres have been distributed intimately throughout the materials. Vinyl/asbestos floor tiles, some asbestos-containing sealants and mastics, asbestos-containing epoxy resins and some ore samples are examples of these types of material, which are difficult to analyse.*
Limit of Reporting (LOR)	The performance limitation of the AS 5370:2024* method for non-homogeneous samples is around 0.1 g/kg (equivalent to 0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis, this is considered to be at the nominal reporting limit of 0.01% (w/w). The NEPM screening level of 0.001% (w/w) is intended as an on-site determination, not a laboratory limit of reporting, per se. Examination of large sample size (e.g., 500 mL) may improve the likelihood of detecting asbestos, particularly AF, to aid assessment against the NEPM criteria. Gravimetric determinations to this level of accuracy are outside of AS 5370:2024*, and hence, NATA Accreditation does not cover the performance of this service (non-NATA results are shown with an asterisk). *NOTE: NATA News March 2014, p.7, states in relation to AS 4964-2004: "This is a qualitative method with a nominal reporting limit of 0.01 % " and that currently in Australia "there is no validated method available for the quantification of asbestos". This report is consistent with the analytical procedures and reporting recommendations in the NEPM and the WA DoH.*

Project Name 155 Coonawarra Rd
Project ID 680.030382.00001
Date Sampled Feb 20, 2025
Report 1190248-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
16-341	25-Fe0052387	Feb 20, 2025	Approximate Sample 5g / 30 x 15 x 2mm Sample consisted of: Cement sheet	No asbestos detected. Organic fibres detected. No trace asbestos detected.
16-342	25-Fe0052388	Feb 20, 2025	Approximate Sample 8g / 55 x 25 x 4mm Sample consisted of: Vinyl tile	No asbestos detected. Organic fibres detected. No trace asbestos detected.
16-343	25-Fe0052389	Feb 20, 2025	Approximate Sample 5g / 75 x 12 x 3mm Sample consisted of: Mastic	No asbestos detected. No trace asbestos detected.

Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Melbourne	Feb 21, 2025	Indefinite

eurofins

web: www.eurofins.com.au
email: EnviroSales@eurofinsanz.com

Eurofins Environment Testing Australia Pty Ltd
ABN: 50 005 085 521

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West
VIC 3175	VIC 3216	NSW 2145	ACT 2911	QLD 4172	NSW 2304
+61 3 8564 5000	+61 3 8564 5000	+61 2 9900 8400	+61 2 6113 8091	+61 7 3902 4600	+61 2 4968 8448
NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794 & 2780	Site# 25079

Eurofins ARL Pty Ltd
ABN: 91 05 0159 898

Perth
46-48 Banksia Road
Welshpool
WA 6106
+61 8 6253 4444
NATA# 2377
Site# 2370 & 2554

Eurofins Environment Testing NZ Ltd
NZBN: 9429046024954

Auckland	Auckland (Focus)	Christchurch	Tauranga
35 O'Rorke Road	Unit C1/4 Pacific Rise	43 Detroit Drive	1277 Cameron Road
Penrose	Mount Wellington	Rolleston	Gate Pa
Auckland 1061	Auckland 1061	Christchurch 7675	Tauranga 3112
+64 9 526 4551	+64 9 525 0568	+64 3 343 5201	+64 9 525 0568
IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Company Name: SLR Consulting (NT)
Address: GPO Box 654
Darwin
NT 0801

Project Name: 155 Coonawarra Rd
Project ID: 680.030382.00001

Order No.:
Report #: 1190248
Phone: +61 2 9428 8100
Fax:

Received: Feb 21, 2025 9:45 AM
Due: Feb 28, 2025
Priority: 5 Day
Contact Name: Flynn Mackley

Eurofins Analytical Services Manager : Kristine Hood

Sample Detail						Asbestos Absence /Presence
Melbourne Laboratory - NATA # 1261 Site # 1254						X
External Laboratory						
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**	
1	16-341	Feb 20, 2025		Building Materials	M25-Fe0052387	X
2	16-342	Feb 20, 2025		Building Materials	M25-Fe0052388	X
3	16-343	Feb 20, 2025		Building Materials	M25-Fe0052389	X
Test Counts						3

Internal Quality Control Review and Glossary General

1. QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Samples were analysed on an 'as received' basis.
4. Information identified on this report with the colour **blue** indicates data provided by customer that may have an impact on the results.
5. This report replaces any interim results previously issued.

Holding Times

Please refer to the most recent version of the 'Sample Preservation and Container Guide' for holding times (QS3001).

Units

% w/w:	Percentage weight-for-weight basis, e.g. of asbestos in asbestos-containing finds in soil samples (**% w/w**)
F/fld	Airborne fibre filter loading as Fibres (**N**) per Fields counted (**n**)
F/mL	Airborne fibre reported concentration as Fibres per millilitre of air drawn over the sampler membrane (**C**)
g, kg	Mass, e.g. of whole sample (**M**) or asbestos-containing find within the sample (**m**)
g/kg	Concentration in grams per kilogram
L, mL	Volume, e.g. of air as measured in AFM (**V** = **r** x **t**)
L/min	Airborne fibre sampling Flowrate as litres per minute of air drawn over the sampler membrane (**r**)
min	Time (**t**), e.g. of air sample collection period

Calculations

Airborne Fibre Concentration: $C = \left(\frac{A}{a}\right) \times \left(\frac{N}{n}\right) \times \left(\frac{1}{r}\right) \times \left(\frac{1}{t}\right) = K \times \left(\frac{N}{n}\right) \times \left(\frac{1}{V}\right)$

Asbestos Content (as asbestos): $\%\, w/w = \frac{(m \times P_A)}{M}$

Weighted Average (of asbestos): $\%_{WA} = \sum \frac{(m \times P_A)_x}{x}$

Terms

%asbestos	Estimated percentage of asbestos in a given matrix may be derived from knowledge or experience of the material, informed by HSG264 *Appendix 2*, else assumed to be 15% in accordance with WA DOH *Appendix 2* (**P_A**). This estimate is not NATA-accredited.
ACM	Asbestos Containing Materials. Asbestos contained within a non-asbestos matrix, typically presented in bonded (non-friable) condition. For the purposes of the NEPM and WA DOH, ACM corresponds to material larger than 7 mm x 7 mm.
AF	Asbestos Fines. Asbestos contamination within a soil sample, as defined by WA DOH. Includes loose fibre bundles and small pieces of friable and non-friable material such as asbestos cement fragments mixed with soil. Considered under the NEPM as equivalent to “non-bonded / friable”.
AFM	Airborne Fibre Monitoring, e.g., by the MFM.
Amosite	Amosite Asbestos Detected. Amosite may also refer to Fibrous Grunerite or Brown Asbestos. Identified in accordance with AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004.
AS	Australian Standard.
Asbestos Content (as asbestos)	Total %w/w asbestos content in asbestos-containing finds in a soil sample (**% w/w**).
Chrysotile	Chrysotile Asbestos Detected. Chrysotile may also refer to Fibrous Serpentine or White Asbestos. Identified in accordance with AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004..
COC	Chain of Custody.
Crocidolite	Crocidolite Asbestos Detected. Crocidolite may also refer to Fibrous Riebeckite or Blue Asbestos. Identified in accordance with AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004..
Dry	Sample is dried by heating prior to analysis.
DS	Dispersion Staining. Technique required for unequivocal Identification of asbestos fibres by PLM.
FA	Fibrous Asbestos. Asbestos-containing material that is wholly or in part friable, including materials with higher asbestos content with a propensity to become friable with handling, and any material that was previously non-friable and in a severely degraded condition. For the purposes of the NEPM and WA DOH, FA generally corresponds to material larger than 7 mm x 7 mm, although FA may be more difficult to distinguish visibly and may be assessed as AF.
Fibre Count	Total of all fibres (whether asbestos or not) meeting the counting criteria set out in the NOHSC:3003
Fibre ID	Fibre Identification. Unequivocal identification of asbestos fibres according to AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004.. Includes Chrysotile, Amosite (Grunerite) or Crocidolite asbestos.
Friable	Asbestos-containing materials of any size that may be broken or crumbled by hand pressure. For the purposes of the NEPM, this includes both AF and FA. It is outside of the laboratory’s remit to assess the degree of friability.
HSG248	UK HSE HSG248, *Asbestos: The Analysts Guide*, 2nd Edition (2021), ISBN: 9780616667079.
HSG264	UK HSE HSG264, *Asbestos: The Survey Guide* (2012), .ISBN: 9780717665020
ISO (also ISO/IEC)	International Organization for Standardization / International Electrotechnical Commission.
K Factor	Microscope constant (**K**) as derived from the effective filter area of the given AFM membrane used for collecting the sample (**A**) and the projected eyepiece graticule area of the specific microscope used for the analysis (**a**).
LOR	Limit of Reporting.
MFM (also NOHSC:3003)	Membrane Filter Method. As described by the Australian Government National Occupational Health and Safety Commission, *Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres*, 2nd Edition [NOHSC:3003(2005)].
MMVF	Man-Made Vitreous Fibre - exhibiting isotropic characteristics, including glass fibres, glass wool, rock wool, slag wool, ceramic fibres and “bio-soluble fibres. NOTE: previously known as “synthetic mineral fibre” (SMF).
NEPM (also ASC NEPM)	National Environment Protection (Assessment of Site Contamination) Measure, (2013, as amended).
Organic	Organic Fibres Detected. Organic may refer to Natural or Man-Made Polymeric Fibres. Identified in accordance with AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004..
PCM	Phase Contrast Microscopy. This is used for fibre counting according to the MFM.
PLM	Polarised Light Microscopy. As used for Fibre Identification and Trace Analysis according to AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004..
Sampling	Unless otherwise stated, Eurofins are not responsible for sampling equipment or the sampling process.
SRA	Sample Receipt Advice.
Trace Analysis	An analytical procedure is used to detect the presence of respirable fibres (particularly asbestos) in a given sample matrix.
UK HSE HSG	United Kingdom, Health and Safety Executive, Health and Safety Guidance, publication.
UMF	Unidentified Mineral Fibre Detected. Fibrous minerals that are detected but have not been unequivocally identified by PLM with DS according to AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004.. It may include (but is not limited to) actinolite, anthophyllite, or tremolite asbestos.
WA DOH	Reference document for the NEPM. Government of Western Australia, *Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia* (updated 2021), including Appendix Four: *Laboratory analysis*
Weighted Average	Combined average %w/w asbestos content of all asbestos-containing finds in the given aliquot or total soil sample (**$\%_{WA}$**).

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	No
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Asbestos Counter/Identifier:

Zoe Burke	Senior Analyst-Asbestos

Authorised by:

Hiren Patel	Senior Analyst-Asbestos

Glenn Jackson
Managing Director

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

Appendix B General Information

Asbestos Survey Report

155 Coonawarra Road, Winnellie NT 0820

Public Trustee For the Northern Territory

SLR Project No.: 680.030382.00001

11 March 2025

General Information

Asbestos: Description, Properties and Uses

Asbestos is the generic term given to a group of naturally occurring fibrous minerals, based on hydrated silicates, which are found in various rock formations. Differing ratios of oxygen, hydrogen, sodium, iron, magnesium and calcium elements account for several different types of asbestos minerals, the most common varieties being Amosite (brown asbestos), Chrysotile (white asbestos), Crocidolite (blue asbestos). Other types include Anthophyllite, Actinolite and Tremolite.

The immense popularity of asbestos as a building material is attributed to its near unique properties of fire resistance, high abrasion resistance and superb acoustical characteristics coupled with its relatively low cost. Prior to 1973, asbestos was the material of choice for fire proofing, thermal insulation, sound insulation and abrasion resistance. It was used as a spray-on insulation of ceilings and steel girders; as a thermal insulation of boilers, pipes, ducts, air conditioning units, etc; as an abrasion resistant filler in floor tiles, vinyl sheet floor coverings, roofing and siding shingles; as a flexible, though resistant joining compound and filler of textured paints and gaskets; as the bulking material with the best wear characteristics for automobile brake shoes and in countless domestic appliances such as toasters, grills, dishwashers, refrigerators, ovens, clothes dryers, electric blankets, hair dryers, etc.

Asbestos: Health Effects

Many asbestos bearing materials or products are of no significant health risk whatsoever when used in the normal course of events. A health risk exists when asbestos fibres are released into the air and when that air is inhaled into the lungs. Even then, it appears that most people exposed to relatively small amounts of asbestos do not develop any related health problems. There is however no “safe” level of asbestos exposure since the risk is dependent on numerous factors including the time since exposure, exposure duration and concentration, asbestos type, the attributes of the particular individual and environmental factors such as exposure to cigarette smoke and other airborne pollutants.

There are three main diseases associated with airborne asbestos fibres:

Asbestosis - A fibrosis (or scarring) of the lung associated with relatively massive exposure to asbestos.

Lung Cancer - Indistinguishable from that caused by smoking and a common cause of death. The risk of lung cancer is much higher when there is exposure to both cigarette smoking and to airborne asbestos.

Mesothelioma - A cancer of the chest and abdominal lining, it is specific to asbestos exposure.

A feature of these diseases is that symptoms take a long time to appear, generally 5 to 40 years. Once symptoms are evident the disease progresses rapidly.

There is some evidence that Chrysotile asbestos is less carcinogenic than Amosite, and that Amosite is less carcinogenic than Crocidolite in causing mesothelioma, but the evidence is less clear for lung cancer.

Measurement of Airborne Asbestos Fibres

The ‘*WHS Reg*’ and the Safe Work Australia Asbestos Codes of Practice & Guidance Note set the maximum allowable time weighted average for all forms of asbestos at 0.1 fibre/mL of air.

Air monitoring is used to determine airborne fibre levels. SLR is NATA certified for Asbestos Fibre Counting and Volume Measurement to carry out such monitoring.

The '*COP Removal*' states that air monitoring should be performed whenever Asbestos Containing Materials (ACM) are being removed, to ensure the control measures are effective.

The onus to provide a safe environment rests with persons in control of a business or undertaking, persons with management or control and persons carrying out demolition or refurbishment work. To meet these obligations it is recommended that SLR be engaged by the site controller, or their representative, and not an asbestos removal contractor as there could be a conflict of interest in the latter arrangement.

Asbestos Survey

Asbestos surveys are undertaken to identify any asbestos materials/hazards and assess the risk associated with the material/hazard.

Surveys are conducted through visual inspection by experienced personnel. During the inspection material samples are taken as appropriate for analysis.

Limitations

Due to the nature of the task all asbestos surveys are limited. Since asbestos can occur in so many forms and in so many locations, and as there is no instrument to detect asbestos, it is never possible to guarantee all asbestos has been identified. Access is usually restricted, and there may be asbestos hidden behind walls or other structures. Building plans are of great assistance to consultants undertaking surveys.

Asbestos Register

An asbestos register is a record of the location, type and condition of all asbestos containing products identified in a building. Under the Safe Work Australia Codes of Practice and the legislation, any place of work constructed prior to 31 December 2003 must have an Asbestos Register. A SLR Asbestos Survey Report includes an asbestos register.

Registers must be maintained and changes in the condition or extent of any asbestos present should be recorded. Registers should also detail the next review date, at present annually since the condition of asbestos materials, legislation, guidelines and standards change.

Asbestos Management Plan

An AMP is required where asbestos materials have been identified and are to remain on site. The plan would normally be a component in the overall AMP for the site.

Control Options

Asbestos judged to constitute a health risk should be removed, enclosed or encapsulated by an approved asbestos contractor.

Enclosure

This involves the installation of a permanent, solid, non-porous, impervious barrier between the asbestos material and the surrounding environment. Examples include building boxes around steam pipes etc. A suspended ceiling is not permanent and, since occasional access is necessary above a suspended ceiling, enclosure is negated. Furthermore, many suspended ceilings act as return air plenums so enclosure is impossible.

Encapsulation

Encapsulation involves coating the material with a sealant. Good sealants penetrate through the asbestos material to the substrate. The encapsulating substance then hardens and binds

all the asbestos fibres into a solid matrix. This is usually a short to medium term management option.

Removal

Removal is not without hazards to the occupants of the building. If not strictly controlled, the removal process can result in increased fibre counts in other areas. Technical competence, experience and integrity are of prime importance in evaluating asbestos removal plans.

We advise clients to work within the usual practised time frames of the experienced asbestos removal companies under strict supervision by a qualified person. Pressing for quicker turnaround times may result in low quality workmanship and unnecessary asbestos risk. Building owners may be in part responsible for risks created by the removal Contractor due to carelessness or negligence.

An independent consultant experienced in the supervision of asbestos removal, should be retained to act on the client's behalf.

Clearance Inspection

A clearance inspection must be conducted at the completion of asbestos removal works. The clearance inspection may include airborne asbestos monitoring and/or sampling/analysis of materials and should be completed by a suitably qualified and experienced consultant.

Air Monitoring

The '*COP Removal*' states that air monitoring is required during all Class A asbestos removal work, it must also be carried out if there is uncertainty as to whether the exposure standard is likely to be exceeded.

Air monitoring must be carried out by a licensed asbestos assessor or competent to a standard that conforms with the *National Occupational Health and Safety Commission: 3003 (2005) "Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres 2nd Edition"*.

Asbestos fibres are generally well bound in the vinyl matrix and fibre release is unlikely provided the tiles are not ground, drilled or similarly disturbed.

Note: These are general recommendations. In all cases the asbestos removalist should be familiar with, and comply with, the relevant Codes of Practice and the '*WHS Reg*'. There may also be site specific requirements which should be complied with.

Licensing Requirements

Asbestos-containing products are classified as non-friable or friable. Asbestos cement (AC) is classified as non-friable asbestos however once it is significantly broken, crushed or otherwise damaged NT WorkSafe may consider it to be friable asbestos. The rules governing friable asbestos are far more stringent.

A NT WorkSafe asbestos licence is required to remove 10 square metres or more of non-friable asbestos and there must be NT WorkSafe notification.

Anyone wishing to carry out friable asbestos removal must obtain a friable asbestos removal licence from NT WorkSafe. A friable asbestos removal permit must be obtained for all friable asbestos jobs.

Asbestos Cement Sheeting

A large number of building products used in the building and construction industry have been made with asbestos and cement. Products include:

Flat or corrugated, compressed sheeting

Pipes for water, drainage, flues

Roof shingles

Building boards e.g. Villaboard, Hardiflex, Wundaboard, Flexiboard

Cable trays for electrical wiring

Numerous preformed items such as cisterns, protective housings, etc.

Provided these products are maintained in good condition, they present no health risk, however precautions must be observed during demolition, refurbishment etc.

Asbestos Containing Vinyl Tiles

Vinyl tiles which contain asbestos are considered to be of minimal risk whilst undisturbed and in good condition. The asbestos contained within vinyl tiles is well bound in the parent matrix and fibre release is virtually impossible provided the tiles are not ground, drilled, or otherwise abraded. Normal floor cleaning operations will not release asbestos fibres.

If the tiles are intact and not abraded or drilled etc it is safe to leave them in-situ. However, prior to demolition and/or refurbishment all asbestos containing vinyl tiles in the work area must be removed in accordance with the Occupational Health and Safety Regulations 2017 and the Safe Work Australia Asbestos Codes of Practice.

Corrugated Asbestos Cement (AC) Roofing

Deterioration Mechanisms

Asbestos cement (AC) roofs deteriorate slowly over time. The upper surface exposed to the elements slowly loses cement binder and asbestos fibres become increasingly exposed. This may result in excessive fibre loss and a general weakening of the roof materials which will eventually become porous.

The process of natural weathering may be compounded by exposure to steam, acid fumes and other agents from industrial processes, resulting in accelerated deterioration of the roof.

Hail, heavy rain and other storm activity can cause also significant problems including:

Cracks and/or penetrations in asbestos cement panels, and resultant generation of asbestos cement dust/debris.

Shedding of asbestos fibres which may contaminate runoff and enter gutters and drains etc.

Blocking of gutters with hail and other debris resulting in overflow and asbestos contamination of surrounding areas.

In most situations the underside of AC roofs exhibit very little deterioration however asbestos containing dust can accumulate on the roof support structure and other exposed locations below/around the roof.

If an asbestos cement roof becomes significantly damaged, weathered and or produces visible dust or significant debris it is likely that health and safety management works will be required. A suitably qualified and experienced consultant can advise and assist in carrying out such works.

Life Expectancy and Maintenance

AC roofs in good condition may remain in place indefinitely providing certain precautions are taken.

On no account may high pressure water be used to clean AC roofs. This is forbidden under the Safe Work Australia asbestos codes of practice as it can result in widespread contamination.

AC roofs may not be drilled, ground, cut or otherwise damaged as this may result in the release of airborne asbestos fibres.

In general, roofs are best left undisturbed if in good condition. There are however several sealing compounds which may be used on AC roofs. The underside of AC roofs may be encapsulated, shielded with sarking or enclosed with a fixed ceiling or other materials. Enclosures are fixed, permanent, non-porous barriers that prevent fibre penetration. All barriers need to be maintained.

The roof including internal support structure should inspected regularly (e.g. at least once a year) by a suitably qualified and experienced consultant to assess the condition and extent of the asbestos materials present.

Gutters and down pipes should be kept clean and in good condition. Some gutters may accumulate a build-up of debris which contains asbestos; this is best removed by an experienced licensed asbestos removal contractor.

Down pipes etc. should be protected from damage by forklifts and other vehicles via the installation of appropriate barriers.

Damaged sections of asbestos containing material should be removed as soon as possible by an experienced licensed asbestos removal contractor. It is illegal to re-use asbestos containing materials.

As a precautionary measure any exposed broken edges of asbestos material temporarily remaining in place should be sealed with an appropriate sealant such as Emerclad paint.

Demolition

Demolition of AC roofs should only be undertaken by an experienced licensed Asbestos Removal Contractor.

It is recommended that asbestos removal supervision, air-monitoring and clearance inspections be undertaken by an independent, suitably qualified and experienced asbestos consultant.

Asbestos Containing Fire Doors

The cores of older fire doors frequently contain asbestos materials. Such doors may remain in place provided certain precautions are taken. These include:

Labelling the doors with appropriate warning signs that advise of the asbestos risk.

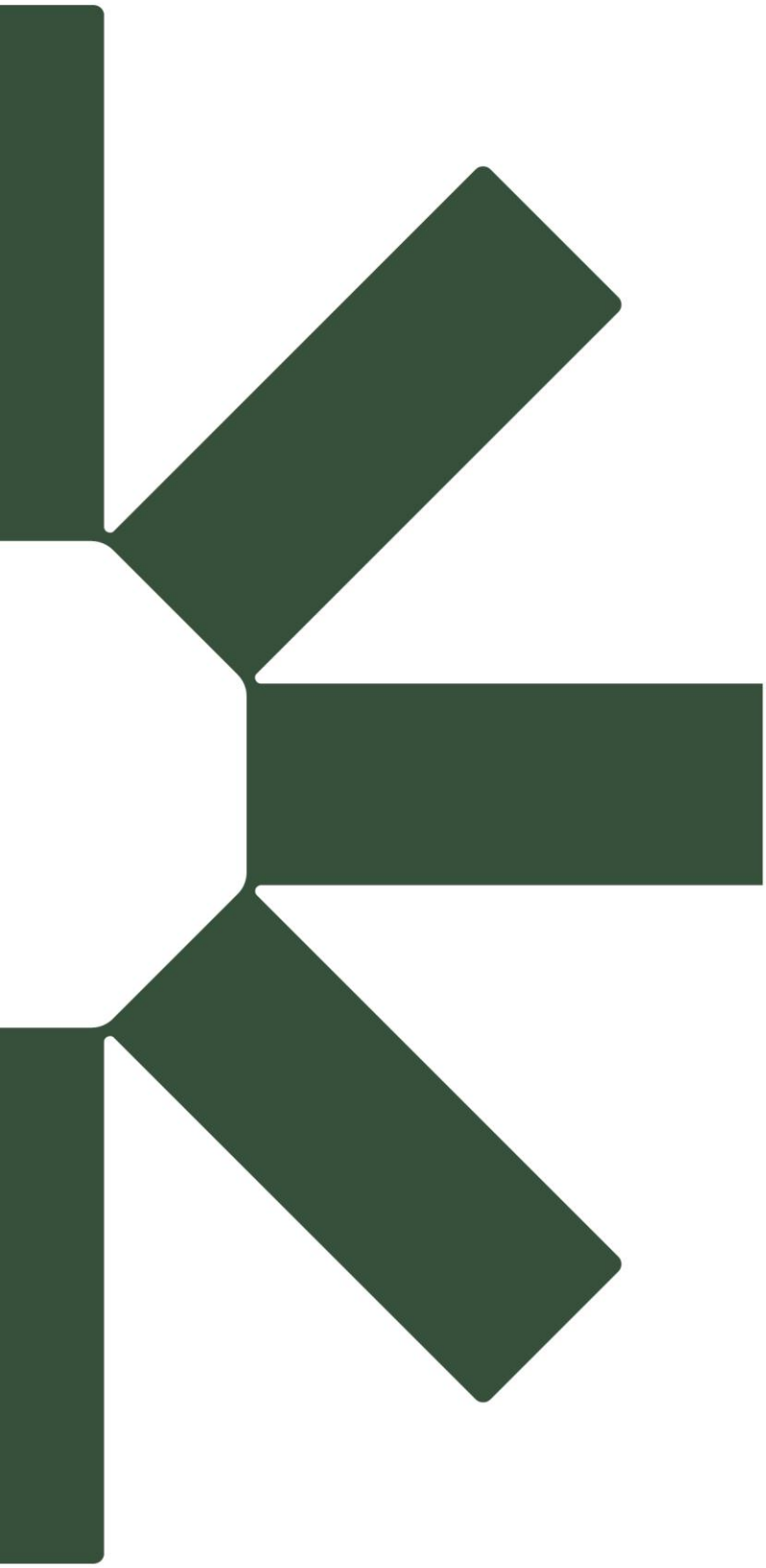
Not drilling or otherwise disturbing the doors so as to release airborne asbestos fibres.

Recording the location, extent and condition of the doors in the site Asbestos Register and addressing them in the site AMP. A copy of the Asbestos Register and Management Plan should be held by the Building Manager who is to ensure that no work is carried out on the doors without their prior knowledge and the implementation of adequate health and safety precautions.

Regular inspection and reporting of the condition of the doors.

If the fire doors are damaged, then access to the area is to be appropriately restricted and advice sought from a suitably qualified and experienced consultant.

Any asbestos removal and/or remediation/decontamination work should be undertaken by a licensed Asbestos Removal Contractor.



Making Sustainability Happen