

**ASBESTOS REGISTER
NTB - 00339
BORROLOOLA ACCOMMODATION COMPOUND
NORTHERN TERRITORY**



Prepared for:

DEPARTMENT OF INFRASTRUCTURE
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Prepared by:

AEC Environmental Pty Ltd
Date: September 2013
Register No: NT0587

Written/Submitted by:

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Asbestos Technician NT

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|-----------------------------------------------------|----------------------------------------------------------------|----------------------------------------------------------|
| Originator: <i>Bill Heath – Property Manager</i> | Approved by: <i>Leah Atkinson – Chief Financial Officer</i> | Approved for Intranet Publication: <i>11 Nov 2013</i> |
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1.0 INSTRUCTIONS

AEC Environmental Pty Ltd (AEC) was contracted by the Department of infrastructure (“the client”) to compile this Asbestos Register for Lot 379, Asset Number NTB-00339 Borroloola, NT.

The property was inspected in September 2013. The inspection procedure used was in accordance with the Northern Territory Australian Work Health & Safety Regulations 2012, Chapter 8 Asbestos, Part 3 Management of Asbestos and Associated Risks. All reasonable steps have been taken to identify asbestos containing materials (ACM) in the building. Inaccessible areas and areas requiring destruction or demolition have not been inspected. An intrusive or destructive audit is required if demolition or significant alterations are contemplated.

2.0 PURPOSE OF AN ASBESTOS REGISTER

An asbestos register inspection survey is a non-destructive audit to identify accessible and visually evident asbestos containing materials (ACM). The purpose of an asbestos register is to ensure that persons conducting a business or undertaking, (which includes workers, contractors, clients and other stakeholders) and persons with management or control of a workplace are aware of the location, type, condition and risk, in order to avoid inadvertent disturbance of the ACM.

Importantly, an asbestos register details the type condition and location of accessible asbestos materials to assist with the adoption of appropriate & regulatory asbestos management practices.

It is a requirement of asbestos management regulations that regular inspections of the asbestos are conducted by a competent person, firstly to identify the type, condition and location of asbestos and secondly to assess any changes in the state of the asbestos.

It is important to note that this report is not intended for use as a pre demolition or pre refurbishment survey. If demolition, significant alterations or refurbishment incorporating demolition or structural disturbance is contemplated, please contact AEC for information regarding recommendations relevant to an intrusive audit.

3.0 REGULATORY FRAMEWORK FOR ASBESTOS MANAGEMENT

On the 1st January 2012, The Northern Territory implemented the nationally harmonized Work Health & Safety Regulation. The regulations proclaim that a Person with Management or Control of a Workplace must ensure that an asbestos register is prepared and is kept and accessible at the workplace. Additionally, a Person Conducting a Business or Undertaking (PCBU) must ensure that exposure of a person to airborne asbestos is eliminated so far as is reasonably practicable.

Furthermore, a Person with Management or Control of a Workplace must ensure that a written Asbestos Management Plan (AMP) is prepared and is available and accessible, with established policies and procedures for the management of asbestos at a workplace, together with procedures for detailing incidents or emergencies involving asbestos containing materials at the workplace. These policies should be strictly adhered to and enforced by the Person with Management and Control of a Workplace and other persons (as defined) so that safe work practices in relation to asbestos management are in place as prescribed and required under the regulations.

Please contact AEC for assistance with the development of an Asbestos Management Plan.

A copy of the register must be kept at the workplace and be available for inspection by:

- Workers who have carried out, carries out or intends to carry out work at the workplace
- Health and Safety Representatives
- A person conducting a business or undertaking who has carried out, carries out or intends to carry out, work at the workplace, (e.g. Contractors)
- A person conducting a business or undertaking who has required, requires, or intends to require work to be carried out at the workplace

4.0 LIMITATIONS

Asbestos is known to have been used in some 3,000 building products, the most common being in fibro cement products, vinyl flooring, electrical switchboards and insulation materials to hot water and steam pipes. However, asbestos can also be found in many other products located in **inaccessible components** of buildings, plant and equipment including the following areas:

- Interior parts of air conditioning systems
- Wall cavities, slabs, underside of floors
- Interior workings of pumps and boilers
- Services, in ceiling or floor spaces or underground
- Wall “chased” lagged pipework
- Floor coverings subsequently overlaid
- Where asbestos products have been removed (eg vinyl floor coverings), then residue may exist under skirting boards and/or subsequently laid floor coverings.

Whilst this report provides approximate measurements and quantities of some materials found, we stress that they are approximate only. Accurate details would require a further visit to the site.

The work involved in preparing an Asbestos Register is based on visual inspection of the building and/or plant and equipment. As well, representative samples of suspect materials are collected and reasonable assumptions are made from those samples. These samples may not be a true representation of every element, part or component of the area of material concerned. Further, it is becoming increasingly apparent that some building materials containing asbestos have been removed and replaced by non-asbestos containing materials, particularly cement sheeting. In numerous cases only partial removal has occurred, leaving asbestos product remaining and this is often painted. While appropriate sampling has occurred the only sure determinant is to sample and analyse every section or piece in question. Full clarification would require a further visit to the site to obtain and analyse appropriate samples.

This asbestos register includes known asbestos building products detected in the course of the inspection. Additionally, where applicable, assumptions made on where asbestos is likely to be found are also stated. In some cases, builders have been known to mix asbestos into materials that would not normally contain asbestos (e.g. mortar, plaster, renders etc.) and, unless stated otherwise, these have not been sampled during the course of this survey. If an inaccessible area is suspected of having asbestos, it may need further verification. The decision regarding this will remain purely at the discretion of the client.

It is important to note that this report is not intended for use as a pre demolition or pre refurbishment survey. If demolition, significant alterations or refurbishment incorporating demolition is contemplated, please contact AEC for information regarding recommendations relevant to an intrusive audit.

There is no known instrument available for in-situ asbestos detection. Asbestos is a naturally occurring mineral of inert characteristics. **For the above reasons, including the inaccessibility of many asbestos products, no guarantee can be given, express or implied, that the inspection will reveal all the asbestos that may be located in the property described in this report.**

This report should be read in conjunction with any other asbestos related reports and or communication / documentation prepared for the property. No individual section of this report should be read in isolation without taking the whole report into account. If the report is to be copied for whatever reason the whole of the report should be included.

5.0 INSPECTION REPORT

An inspection of the buildings was undertaken using a systematic procedure developed by AEC Environmental Pty Ltd. As previously stated, the identification of asbestos and/or products containing asbestos cannot be carried out with any known in-situ measuring instrument and final confirmation of asbestos can only be done under microscopic examination. The inspection procedure developed relies on identifying asbestos bearing materials by visual means. Representative samples of materials that are considered to contain asbestos are often taken for analysis to confirm the presence of asbestos.

Full details of all asbestos products located within the property are found within the next section of this report. Section 7.0 outlines suggested management procedures.

6.0 ASBESTOS REGISTER

6.1 AREAS WHERE ASBESTOS HAS BEEN IDENTIFIED

It was common practice until the late 1970s for small diameter hot water pipes to be concealed in walls and to be partially or totally insulated with brown or white asbestos. Confirmation or otherwise as to the presence of these "chased" pipes is simply not possible with a non-destructive visual inspection. Appropriate precaution must be observed if the walls are disturbed in the vicinity of concealed hot water pipes. Refer to Section 7.0 - Policies and Management Procedures, where reference is made to the possibility of hot water pipes (with asbestos) concealed ("chased") in walls.

ASBESTOS CONTAINING MATERIAL DISTURBANCE

Before commencing any works that are likely to disturb building materials on the site, the asbestos management plan controller must be contacted.

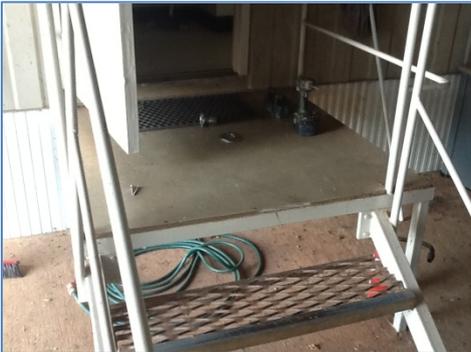
TRANSPORTABLE ONE – Internal

| Location | Type of Material |  | |
|-------------------------------------------------------------------------------|----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------|
| 1. Wall lining in 'A1' bedroom, only south elevation wall (6m ²) | Fibre cement sheet material containing white (Chrysotile) asbestos (sample no.2) | | |
| Recommendation and Action | | | |
| Refer to Asbestos Management Plan & Section 7.0: Policies and Recommendations | | | |
| Situational Asbestos Risk Assessment: | | | |
| Friability | Condition | Signage | Risk Rating |
| Non friable | Stable | Install 1 small warning signs | Low |

| Location | Type of Material |  | |
|--------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-------------|
| 2. Wall lining in 'A3' bathroom, section to left hand side of sink (floral pattern under paint) (2m ²) | Fibre cement sheet material containing white (Chrysotile) asbestos (sample no.3) | | |
| Recommendation and Action | | | |
| Refer to Asbestos Management Plan & Section 7.0: Policies and Recommendations | | | |
| Situational Asbestos Risk Assessment: | | | |
| Friability | Condition | Signage | Risk Rating |
| Non friable | Stable | Install 1 small warning signs | Low |

6.1 AREAS WHERE ASBESTOS HAS BEEN IDENTIFIED cont

| Location | Type of Material | | |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|--------------------|
| 3. Wall lining in 'A3' bathroom, South and East elevation walls. (6m ²) | Fibre cement sheet material containing white (Chrysotile) asbestos (sample no.4) |  | |
| Recommendation and Action | | | |
| Refer to Asbestos Management Plan & Section 7.0: Policies and Recommendations | | | |
| Situational Asbestos Risk Assessment: | | | |
| <i>Friability</i> | <i>Condition</i> | <i>Signage</i> | <i>Risk Rating</i> |
| Non friable | Stable | Install 2 small warning signs | Low |

| TRANSPORTABLE ONE – External | | | |
|-------------------------------------------------------------------------------|----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------|
| Location | Type of Material | | |
| 4. Landing at top of stairs – entry to unit 'A4'. (2m ²) | Fibre cement sheet material containing white (Chrysotile) asbestos (sample no.6) |  | |
| Recommendation and Action | | | |
| Refer to Asbestos Management Plan & Section 7.0: Policies and Recommendations | | | |
| Situational Asbestos Risk Assessment: | | | |
| <i>Friability</i> | <i>Condition</i> | <i>Signage</i> | <i>Risk Rating</i> |
| Non friable | Poor | Install 1 small warning signs | Low |

TRANSPORTABLE TWO – External

| Location | Type of Material |  | |
|-------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|--------------------|
| 5. Landing to both front and rear stairs –(2m ²) | Fibre cement sheet material containing white (Chrysotile) asbestos (per sample no.6) | | |
| Recommendation and Action | | | |
| Refer to Asbestos Management Plan & Section 7.0: Policies and Recommendations | | | |
| Situational Asbestos Risk Assessment: | | | |
| Friability | Condition | Signage | Risk Rating |
| Non friable | Poor | Install 2 small warning signs | Low |

Note: No access behind current linings in bathroom.

6.2 SUSPECT MATERIALS TESTED – NO ASBESTOS DETECTED

| Location | Material Tested | Result |
|------------------------------------------------------------------------------------------------------------------|----------------------------|-------------|
| TRANSPORTABLE ONE – Internal | | |
| Wall lining throughout A6, A5, A4 and part of A1 (A1 – North, East and West elevation walls (90m ²) | Cement sheet (sample no.1) | No asbestos |
| Wall lining in A3 Bathroom – North elevation wall. (5m ²) | Cement sheet (sample no.5) | No asbestos |
| TRANSPORTABLE ONE – External | | |
| Landing to stairs at rear of building- Back entry. (1m ²) | Cement sheet (sample no.7) | No asbestos |
| TRANSPORTABLE TWO – Internal | | |
| Wall lining throughout large and small bedrooms and kitchen (90m ²) | Cement Sheet (sample no.8) | No asbestos |
| Wall lining in alcove opposite main entry door (4m ²) | Cement Sheet (sample no.9) | No asbestos |
| Floor covering under HWS (<1m ²) | Vinyl Tile (sample no.10) | No asbestos |

7.0 POLICIES & MANAGEMENT PROCEDURES

It is important to note that if asbestos products are disturbed, asbestos fibres may be released, thereby resulting in a health risk. Great care therefore must be exercised in the immediate and ongoing management of any products found to contain asbestos.

If products containing asbestos have been identified in this building, specific actions are required as follows:

- Very High** Friable asbestos material likely to pose a risk to health from exposure (eg. Accessible insulation and likely to be disturbed, or located in air conditioning ducts, or asbestos poorly bonded to substrate, or asbestos is severely water damaged).
- High** ACM showing significant deterioration that is only likely to be disturbed during routine maintenance activity.
- Medium** ACM showing minor deterioration that is only likely to be disturbed during routine maintenance activity.
- Low** ACM that is not friable and in a stable condition (sealed/encapsulated) and unlikely to be disturbed by regular access in normal operation conditions.

The following is provided for information and a guide on the specific actions required:

- 7.1 Adopt procedures that restrict access to the asbestos containing products.
- 7.2 Persons having management or control of a workplace should ensure all staff, contractors and sub-contractors are aware of the presence of asbestos on the site, particularly prior to work being carried out on asbestos containing materials.
- 7.3 When changes to the workplace are required affecting asbestos containing materials, management, staff, contractors and sub-contractors should be aware that breakage, cutting or machining of asbestos containing materials is likely to cause asbestos fibres to be released, resulting in an increased health and safety risk.
- 7.4 Within prescribed parameters, when either friable or non-friable materials are to be removed, NT regulations stipulate that only licensed asbestos removal companies can remove the materials. For further information contact AEC Environmental or SafeWork NT.
- 7.5 In accordance with the Northern Territory legislation, asbestos registers must be reviewed / updated whenever the management plan is reviewed, whenever further asbestos is identified or when asbestos materials are removed, disturbed, sealed or enclosed, or before demolition or refurbishment.
- 7.6 In accordance with the Code of Practice –“How to Manage and Control Asbestos in the Workplace”, warning signs must be installed on asbestos containing materials. Contact AEC regarding sign installation.
- 7.7 Any person who intends to carry out work should first be shown this asbestos register and sign the control form in Section 9.
- 7.8 Vinyl tile and vinyl sheet flooring manufactured prior to 1982, in many cases, contained asbestos. It is safe practice therefore, in the event of renovation work or other activities disturbing such flooring, to assume that the material does in fact contain asbestos. Laboratory testing at the time of works would verify the existence or otherwise of asbestos. If the existence of asbestos has been positively identified within this report then no further testing would be required.
- 7.9 It was common practice until the late 1970s for small diameter hot water pipes to be concealed in walls and to be partially or totally insulated with brown or white asbestos.

Confirmation or otherwise as to the presence of these “chased” pipes is simply not possible with a non-destructive visual inspection. Appropriate precaution must be observed if the walls are disturbed in the vicinity of concealed hot water pipes.

- 7.10 In the event that the subject workplace has been found to contain products-containing friable asbestos, eg pipe lagging, woven asbestos rope material, then please take note of specific recommendations within this section of the report. In broad terms, great care should be taken at all times not to disturb the friable asbestos, signage must at all times be present and, finally, removal should take place as soon as reasonably practicable, or as recommended in this report.
- 7.11 If roof cladding contains asbestos (eg “Deep 6” corrugated fibre cement), the following special restrictions are recommended:
- Limit access to the roof to suitably trained and qualified persons, adopting appropriate safety measures.
 - Prepare and review safe work plan before any work is undertaken on the roof.
 - Incorporate annual audit of the roof to monitor its condition (incorporate airborne monitoring tests into audit results).
- 7.12 All work which could involve disturbing the materials containing asbestos should be carried out in accordance to the requirements of the Code of Practice “How to Manage and Control Asbestos in the Workplace 2011”, Code of Practice “How to Safely Remove Asbestos December 2011”. A copy of this publication should be kept with the Asbestos register.
- 7.13 In the event of further asbestos products being located at the property, the asbestos register must be reviewed / updated.
- 7.14 A copy of the Asbestos Register must be kept at the workplace at all times and be available for inspection.

8.0 CONCLUSION & RECOMMENDATIONS

The inspection carried out has **identified asbestos** in some of the building materials.

It is important to note that if asbestos products are disturbed, asbestos fibres may be released, thereby resulting in a health risk. Great care therefore must be exercised in the immediate and ongoing management of any products found to contain asbestos.

It is very important that the Policies & Management Procedures as listed in Section 6.0 are adopted.

The real risk of asbestos exposure is only likely to occur if these materials are disturbed in some way in contradiction to the recommendations listed in this report. It is recommended that implementation of the prevention measures listed in this report be adopted.

In addition, it is important that trades people and any persons carrying out maintenance activities in the building are made aware of the asbestos register before commencing any work.

All work with asbestos containing materials should be conducted in accordance with the guidelines set out in the:

Work Health and Safety (National Uniform Legislation) Act 2011

Work Health and Safety (National Uniform Legislation) Regulations 2012

HOW TO SAFELY REMOVE ASBESTOS Code of Practice

HOW TO MANAGE AND CONTROL ASBESTOS IN THE WORKPLACE Code of Practice

Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres 2nd Edition
NOHSC: 3003 (2005)

If the reader is in doubt in respect to any of the detail and or implications of the contents of this report, then they are invited to call the following:

AEC Environmental Pty Ltd: 08 8984 4244

NT Worksafe: 08 8999 5010

APPENDIX A

Laboratory Test Results

| LOCATION | SAMPLE I/D NO. | LABORATORY RESULTS |
|------------------------------------------------------------------------------------------------------------------|----------------|-----------------------------|
| <i>TRANSPORTABLE ONE – Internal</i> | | |
| Wall lining throughout A6, A5, A4 and part of A1 (A1 – North, East and West elevation walls (90m ²) | No.1 | No asbestos |
| Wall lining in 'A1' bedroom, only south elevation wall (6m ²) | No.2 | White (Chrysotile) asbestos |
| Wall lining in 'A3' bathroom, section to left hand side of sink (floral pattern under paint) (2m ²) | No.3 | White (Chrysotile) asbestos |
| Wall lining in 'A3' bathroom, South and East elevation walls. (6m ²) | No.4 | White (Chrysotile) asbestos |
| Wall lining in A3 Bathroom – North elevation wall. (5m ²) | No.5 | No asbestos |
| <i>TRANSPORTABLE ONE – External</i> | | |
| Landing at top of stairs – entry to unit 'A4'. (2m ²) | No.6 | White (Chrysotile) asbestos |
| Landing to stairs at rear of building- Back entry. (1m ²) | No.7 | No asbestos |
| <i>TRANSPORTABLE TWO – Internal</i> | | |
| Wall lining throughout large and small bedrooms and kitchen (90m ²) | No.8 | No asbestos |
| Wall lining in alcove opposite main entry door (4m ²) | No.9 | No asbestos |
| Floor covering under HWS (<1m ²) | No.10 | No asbestos |

APPENDIX B

Laboratory Test Report

AEC Environmental

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ASBESTOS IDENTIFICATION REPORT No. NT0587

CLIENT: Department of Infrastructure **RECEIVED DATE:** 23 September 2013
ATTENTION: Bill Heath **REPORT DATE:** 24 September 2013
PROPERTY ADDRESS: Lot 379, Borroloola **SAMPLED BY:** Darren Kenny

Test Methods: In house method LOP-002 Asbestos Identification by Polarised Light Microscopy including Dispersion Staining (Based on AS4964-2004 Method for the qualitative identification of asbestos in bulk samples) and In house method LOP-005 Serpentine Detection and Chrysotile Non-detection by X-ray diffraction

| No | Location | Dimensions | Description | Asbestos by PLM | Chrysotile by XRD | OF |
|------------------------|-------------------------------------------------------------------------------------------|------------|---------------------------------------------|-----------------|-------------------|-----|
| TRANSPORTABLE 1 | | | | | | |
| INTERNAL | | | | | | |
| 1 | Wall lining throughout, A6, A5, A4 and part of A1, north, east and west elevation walls | 10x10x2mm | Pale brown cement sheet, painted white | No | | Yes |
| 2 | Wall lining remaining A1 wall, south elevation | 10x5x2mm | Grey cement sheet, painted white | Chrysotile | | Yes |
| 3 | Wall lining in A3 bathroom, section to left hand side of sink, floral pattern under paint | 5x3x1mm | Grey cement sheet, painted white | Chrysotile | | |
| 4 | Wall lining to A3 bathroom, south and east elevations | 5x5x1mm | Pale brown cement sheet | Chrysotile | | Yes |
| 5 | Wall lining in A3 bathroom, north elevation wall | 10x5x2mm | Pale brown cement sheet, painted white | No | | Yes |
| 6 | Landing at top of stairs, entry to Unit A4 | 25x10x3mm | Grey cement sheet | Chrysotile | | |
| 7 | Landing at rear of building, back entry | 45x20x5mm | Pale grey cement sheet | No | | Yes |
| TRANSPORTABLE 2 | | | | | | |
| INTERNAL | | | | | | |
| 8 | Wall lining throughout, large and small bedrooms & kitchen | 5x5x1mm | Pale grey cement sheet, painted off-white | No | | Yes |
| 9 | Wall lining in alcove opposite main entry door | 10x5x1mm | Pale grey cement sheet, painted pale yellow | No | | Yes |
| 10 | Floor covering under hot water service, blue tiles | 30x10x2mm | Pale blue vinyl floor tile | | No | |

Approved Identifier and Signatory (PLM)

Naclye Haliloff

Testing Officer and Signatory (XRD)

Michael Till

Please note that the results contained in this report relate only to the sample(s) submitted for testing. Sample Dimensions and Descriptions are approximate only. PLM = Polarized Light Microscopy, XRD = X-ray diffraction. Chrysotile is commonly known as white asbestos, Amosite is commonly known as brown asbestos and Crocidolite as blue asbestos. SMF (Synthetic Mineral Fibre) is commonly known as glass fibre, and was not detected. OF (Organic Fibre) includes natural fibres and synthetic organic fibre. A blank in the OF column implies not detected. A blank in the PLM or XRD columns implies not tested by this method.
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