



## ASBESTOS MATERIALS REPORT & REGISTER

Hibiscus Shoppingtown Pty Ltd  
Cnr Vanderlin and Leanyer Drives  
Project No. PJ.204125.NTa

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Site Visit Date: 4<sup>th</sup> January 2015

Consultant: Darren Kenny

## Contents

- 1 Introduction**
  - 1.1 General Inspection Notes
  - 1.2 Asbestos Materials Register - Legend
  - 1.3 Priority Classifications
- 2 Asbestos Materials Register**
- 3 Photographs**
- 4 Risk assessment protocols**
  - 4.1 Risk score calculator
- 5 Additional information**
  - 5.1 Asbestos Types
  - 5.2 Health Hazards
  - 5.3 Exposure Standards
  - 5.4 Asbestos Containing Materials
- 6 Methodology**

## Appendices

- Appendix A Terminology
- Appendix B Certificates of Analysis
- Appendix C Terms and Conditions
- Appendix D Asbestos Maintenance Log
- Appendix E Register Access Log
- Appendix F Plans (when provided)

# 1 Introduction

The purpose of this Asbestos Materials Report and Register is to identify the location, type and condition of Asbestos Containing Materials (ACM's) on site, to understand and document potential risks associated with the ACM's and finally, to meet current legislative compliance. It is also a document that provides a simple method for employees and contractors to understand the risks before any building work or maintenance is undertaken on the property.

Health Safety Environment Australia's auditor carried out a complete inspection and site survey. This Asbestos Report & Register documents the inspection. ACM's identified and products confirmed non-asbestos where sampled and analysed. It includes assessment of ACM's for material stability and possible exposure risk based on current site conditions. Our audit methodology is explained further in section 6 of this Asbestos Report & Register.

An audit should not be considered as absolute or complete and should you find an area or material of concern, contact the local site manager before any work begins or the Asbestos Auditor of this site, for further explanation or clarification.

Details of the findings are contained within the Asbestos Materials Register of the report (section 2).

This Asbestos Register and Report should be read in its entirety.

## 1.1 General Inspection Notes

As part of the inspection, generally samples are taken to qualify suspect asbestos materials. Sample results are recorded in the Asbestos Materials Register of the report (section 2).

A typical asbestos survey does not include intrusive investigation. Prior to building work, earthworks, or demolition an intrusive survey is required to assess hidden, previously inaccessible, unidentified or unknown materials. Alternatively, ACM's must be presumed present with appropriate hazard management controls in place to enable compliance.

Individual windows can be broken and replaced over time. It is recommended that putty to all windows be treated as suspect asbestos containing until proven otherwise by sample analysis for areas where works are likely to disturb.

## 1.2 Asbestos Materials Register - Legend

The ensuing section contains the register of materials identified or suspected of containing asbestos as a result of the audit conducted by Health Safety Environment Australia Pty Ltd.

Below, in the table, are the symbols used in this register to identify the assessment material:

Symbols	Material Assessment
CH	Chrysotile Asbestos (in red text)
CR	Crocidolite Asbestos (in red text)
AM	Amosite Asbestos (in red text)
SMF	Synthetic Mineral Fibre (in blue text)
UMF	Unidentified Mineral Fibre (in red text)
NAD	No Asbestos Fibres Detected (in black text)
NAV	No Asbestos Visible (in black text)

Symbols	Risk Rating
L	Low
M	Medium
H	High
E	Extreme

## 1.3 Priority Classifications

A priority rating is applied to individual asbestos containing items identified in the Asbestos Materials Register. This priority classification incorporates the action requirements for that item and a hierarchy of importance. For example, in the table below, P1 items have the highest, risk score.

For the full and complete definition of all the priority ratings refer to Appendix A.

Symbols	Definition
P1	Restrict access and isolate material, remove as soon as practicable.
P2	Limit access as an interim measure and implement immediate hazard management controls.
P3	Make safe and/or identify for removal where maintenance or refurbishment may disturb material.
P4	Leave insitu and re-assess condition on regular basis.

## 2. Asbestos Materials Register

Item No	Internal / External	Building / Structure	Location Description	Item / Type of Material	Matrix Stability	Sample Ref	Analytical Result (example: CH, CR, AM, NAD)	Comments / Condition (also whether it's sealed)	Priority Rating	Risk Rating
1	Internal	Main Building	Shop 7 - Kitchen / Store room	Dividing wall lining	Bonded	B28482	CH	Good Condition	P4	L
2	Internal	Main Building	First Floor - Plant room - entry door	Fire Door Core Insulation	-	B28474	NAD		-	-
3	Internal	Main Building	First Floor - Plant room - East elevation AHU Room	Joint sealant to AC Duct work	-	B28450	NAD		-	-
4	Internal	Main Building	Shop 11 - Floor	Vinyl floor tiles	-	B18567	NAD		-	-
5	Internal	Main Building	Shop 18 - High wall lining m- West and North elevation wall.	Cement Sheet	-	B18568	NAD		-	-
6	Internal	Main Building	Mens Public Toilets - Urinal splashback lining	Cement Sheet	-	B18569	NAD		-	-
7	External	Main Building	Perimeter wall cladding - North and West elevations	Cement Sheet	-	B28476	NAD		-	-
8	External	Main Building	High Infill panels - Main Entrances - North elevation	Cement Sheet	-	B18566	NAD		-	-

### 3 Photographs



Site photo

## 4 Risk assessment protocols

The auditor has identified the material, observed the interaction of the operational requirements at the workplace, the environment and any actions that have the potential to release fibres in order to qualify the potential risk with this material. The risk calculator (presented below) used in this determination is based upon Australian Standard AS4360.

### 4.1 Risk score calculator

#### *Consequence or Impact*

Level	Descriptor	Description
1	Catastrophic	Asbestos is highly friable and unstable; fibres will be released in a size range and amount that are highly likely to cause a latent asbestos related disease.
2	Major	Asbestos is unstable and will release fibres in the amount and size that may cause latent asbestos related disease.
3	Moderate	Asbestos may be unstable and could release fibres in the amount and size that may cause latent asbestos related disease.
4	Minor	Local fibre release only and in amounts and fibre size that are unlikely to cause latent asbestos related disease.
5	Insignificant	Asbestos is stable, therefore, there is little likelihood of inhaling fibres above normal ambient levels.

#### *Likelihood of Exposure*

Level	Descriptor	Description
A	Almost certain	Is expected to occur in most circumstances-i.e. people regularly in the vicinity.
B	Likely	Will probably occur in most circumstances.
C	Possible	Might occur at some time.
D	Unlikely	Could occur at any time.
E	Rare	May occur only in exceptional circumstances.

#### *Risk Rating Calculator*






Impact ➡	1	2	3	4	5
Likelihood ⬅					
A	Extreme	Extreme	Extreme	High	High
B	Extreme	Extreme	High	High	Medium
C	Extreme	Extreme	High	Medium	Low
D	Extreme	High	Medium	Low	Low
E	High	High	Medium	Low	Low

## 5 Additional information



### 5.1 Asbestos Types

Asbestos is the generic term applied to a number of fibrous silicate minerals belonging to the Serpentine and Amphibole mineral groups. They have a number of common properties: durability, flexibility, heat resistance and a high tensile strength with good bonding properties, making them valuable in a wide range of commercial applications.

The Serpentine group contains Chrysotile, (white asbestos). Previously, Chrysotile has been used in the manufacture of:

-  Asbestos cloth, tapes, ropes and gaskets as packing for thermal and chemical insulation.
-  Asbestos cement sheeting and pipes used for construction, casing for water and electrical and telecommunication services.
-  Rubber, plastics thermosetting resins, adhesives, paints, caulking, compounds and sealants for thermal, electrical and insulation applications.
-  Fire-rated doors, equipment and structural beams in buildings.
-  Fillers and filters.

The Amphibole group contains Amosite (brown asbestos) and Crocidolite (blue asbestos). The use of all types of asbestos in the Amphibole group was banned in the mid-1990s. These products were:

-  Asbestos cement sheeting and pipes used for construction. Casing for water, electrical and telecommunication services.
-  Thermal and chemical insulation such as fire rated doors, limpet spray, lagging and gaskets.

Asbestos was classified as a hazardous substance by the former National Occupational Health and Safety Commission (now Safework Australia), and is a cancer-causing agent.

### 5.2 Health Hazards

Asbestos fibres consist of many fine fibrils, so that when it is subject to impact, drilling, boring, cutting, filing, brushing, grinding, sanding, breaking, or blowing with compressed air, they separate into increasingly fine, long fibres, making them more hazardous. The fibres which are invisible to the naked eye, are the most dangerous as they penetrate to the deepest parts of the lungs. State and Territory legislation prohibits most of these invasive actions, and the relevant laws should be checked before performing any activity on asbestos-containing materials.

Asbestos-related diseases have a delay or lag usually in the order of 20-40 years, between first exposure and the onset of symptoms and detection of the disease. Asbestos disease can appear or progress even after a person is no longer exposed.

**Asbestosis:** is the scarring of lung tissue, from inhalation over many years of substantial amounts of asbestos. The primary symptoms are: breathlessness, which leads to disability, and in some cases, early death.

**Lung Cancer:** the risk is related to the amount of fibres inhaled, and is also greatly increased in persons that smoke. Currently, no safe exposure level of asbestos exposure for lung cancer has been identified.

**Mesothelioma:** is a cancer of the outer lung linings (pleura), or of the abdominal cavity (peritoneum). The risk of mesothelioma is less with Chrysotile than with other types of asbestos, and both pleural and peritoneal mesothelioma can result from exposure to Amosite and/or Crocidolite. Mesothelioma rarely occurs in less than 15 years from first exposure, and most cases occur 25 years after first exposure.





### 5.3 Exposure Standards

The exposure standards represent airborne concentrations of individual chemical substances which, according to current knowledge, should neither impair the health of nor cause undue discomfort. Due to the nature of biological variation and the range of individual susceptibility, a very small proportion of workers who are exposed to low concentrations around or below the exposure standard may suffer mild and transitory discomfort. An even smaller number may exhibit symptoms of illness. Thus, the exposure standards are not absolute, but should be considered as a benchmark to assess the quality of the working environment and indicate where appropriate control measures are required.

The time-weighted average (TWA) exposure standards for airborne contaminants are expressed as the average airborne concentration of a particular substance when calculated over a normal eight-hour working day, over a five-day working week.

The amount of asbestos fibre in the air people breathe is the crucial factor in determining the risk of exposure. The highest risk involves the breathing of air which contains high concentrations of asbestos fibres. The amount or concentration of fibres in the air can be determined by an occupational hygienist or other competent person, using equipment to capture a sample of air. The number of fibres in a set volume of air can then be counted under a microscope. This method is set out in the National Occupational Health and Safety Commission *Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres 2<sup>nd</sup> edition NOHSC: 3003(2005)*.

The NOHSC has set out exposure standards for the airborne concentrations of asbestos fibres, based upon the above sampling methodology which, for the most part, should not present a risk to health for workers. The exposure standards for asbestos are:

	Chrysotile (white asbestos)	0.1 fibres/ml
	Amosite (brown asbestos)	0.1 fibres/ml
	Crocidolite (blue asbestos)	0.1 fibres/ml
	Any mixture of these, or where the composition is unknown	0.1 fibres/ml

Accordingly, exposure should be prevented, and the national exposure standard of 0.1 fibres/ml should never be exceeded according to the relevant code of practice which provides additional information on control levels.

## 5.4 Asbestos Containing Materials

**Asbestos cement products:** are likely to be present in a building if built or refurbished prior to the 1990s, when wall sheeting, roofing, associated capping and barging applications were commonplace. The material consists of asbestos fibres bound in a cement matrix and the degree of fibre release depends on the condition of the material. Asbestos cement products present a low risk to the occupants of the building unless damaged or deteriorated. The main health risk with asbestos cement products is from maintenance or similar activity where the material is cut, sawn, drilled or sanded resulting in the potential release of fibres from the material.

**Air conditioning duct in-line heaters and millboard insulation:** due to the friable nature of this material, exposure to airborne asbestos fibres through the air conditioning system may present a significant risk to occupants of the building, particularly if the material is in a poor or damaged condition, or is disturbed during access for maintenance purposes. Removal and replacement of this material with a non-asbestos insulation material is recommended due to the assumption of poor condition.

**Asbestos brake linings:** are considered to be a low level hazard, residual dusts released through frictional action may present a risk, and should be accessed under controlled conditions. Where possible, stored asbestos brake linings should be removed from stores, made redundant and disposed of in the appropriate manner. Actions which may promote the release of fibres should be avoided when handling in-situ brake linings.

**Asbestos fire door core material:** is usually sealed and undisturbed. This material does not pose a risk to exposure from airborne fibres, so long as the core is not disturbed or worked upon, i.e. drilled, cut, or abraded which may release the asbestos fibres into the environment.

**Asbestos gaskets and pipe lagging:** have been found to contain asbestos which can be in the form of either woven rope material or formed section insulation. Where the material is in-situ it does not pose a significant risk except where the materials have severely degraded. The main concern with these materials is during maintenance activities where significant fibre release can result when worked upon.

**Asbestos impregnated sealants (mastic) and caulking compounds:** are generally in good condition. This product does not pose a risk to exposure from airborne fibres, so long as they are not disturbed or worked upon, i.e. drilled, sanded or burnt, which may release the asbestos fibres into the environment.

**Bituminous membranes:** require attention when weathered or damaged. Replacement with non-asbestos substitutes can be undertaken during routine maintenance or if deteriorating.

**High rupturing capacity (HRC) fuses:** have been found to contain asbestos in the packing material installed in high power electrical installations. Should the fuse or the cylinder be ruptured by fire or other means, there is a risk of exposure to airborne fibres. The fuse should be removed and replaced to ensure that no hazardous airborne concentrations of asbestos fibres remain in that area. Fuses should be treated as asbestos-containing or sent for identification to confirm asbestos content.

**Resin or tar impregnated electrical mounting boards (e.g. Zelemite, Ausbestos or Lebah):** containing asbestos is an issue when damaged or deteriorated. It is necessary to prevent any drilling or abrading which may cause asbestos fibres to become airborne. It is recommended to label the mounting board or the electrical distribution cabinet with a sign: 'Warning Asbestos'. It is recommended that any dust and debris left from previous works be removed from the base of the cabinet to avoid any further potential for exposure.

***Vinyl floor tiles:*** asbestos contained in the vinyl floor tiles present a low risk to building occupants as long as the tiles are in good condition. Where damage occurs through abrasion, buffing or water damage, remedial action is required.

***Vinyl floor sheeting and backing paper:*** asbestos may present itself in the compressed fibrous (cardboard like) backing layer on some sheet vinyl products. Due to the fibrous nature of this material when the backing paper becomes exposed it must be removed or made safe with some immediacy.

***Wire sheathing:*** containing asbestos is considered friable and is readily disturbed from handling. Damage and abrasion should be avoided where asbestos coated wiring is located. Replacement with non-asbestos material should be considered during any maintenance or upgrade works likely to disturb the asbestos.

## 6 Methodology

An asbestos survey entails the gathering of data via inspection, consideration of the age, type or use of suspect materials on-site, sampling and interpretation. Representative sampling generally is undertaken, for example, on one like item (such as a fire door) per area/section of building. Unless specifically instructed, sample collection was performed in a non-invasive manner with minimal destruction. Samples are analysed in a laboratory for asbestos content.

Information may also be collected from the owners and/or occupiers on relevant issues pertaining to the site. Other information may be obtained from vendor manuals, standards, guidelines, regulations and other material available in the public domain (where applicable).

Where access was not available without demolition or due to the potential risk to safety to the surveyor or persons at the site; it should be presumed that the area contains asbestos. For example, inaccessible wall cavities or under floor areas may contain hidden asbestos containing products.

Asbestos fibre identification of collected samples were analysed using Polarised Light Microscopy (PLM) with Dispersion Staining Techniques (DST) in our in-house NATA Accredited Laboratory. However, due to the low grade, small size (length or diameter) of asbestos fibres present in material and—the fact that very fine fibres may have been distributed heterogeneously throughout the materials, Health Safety Environment Australia Pty Ltd may analyse the sample(s) using X-Ray Diffraction (XRD) techniques for determination to determine the level of asbestos content. Alternatively, ashing or burning of the product under controlled conditions may assist in identification.

# Appendix A

## Terminology

## Terminology

**Asbestos:** the fibrous form of mineral silicates that belong to the Serpentine or Amphibole groups of rock-forming minerals, including Actinolite, Amosite (brown asbestos), Anthophyllite, Crocidolite (blue asbestos), Chrysotile (white asbestos) and Tremolite, or a combination of two or more of these.

### ***Material Condition:***

**Good:** The material is in sound condition, and unlikely to present a significant risk to health if left in situ.

**Moderate:** The material is generally in sound condition, but is exhibiting signs of deterioration through age, weathering, mechanical action or multiple impact damage, and may release measurable levels of fibre which may present a risk to health if left in situ.

**Poor:** The material is damaged or severely deteriorated and has the potential to release measurable levels of airborne fibres which may present a risk to health if left in situ.

### ***Matrix Stability:***

***Friable asbestos-containing material:*** a non-bonded asbestos fabric; or is in the form of powder or may be crumbled, pulverized or reduced to powder by hand pressure when dry. Sprayed limpet, millboard, pipe and boiler lagging are examples of friable asbestos. Access to areas containing friable asbestos should only be permitted under controlled conditions.

***Bonded (non- friable) asbestos-containing material:*** contains asbestos in a solid bonded matrix. It may consist of Portland cement or various resin/binders and cannot be crushed by hand when dry. Asbestos fibres are usually not released when rubbed between the fingers, but the structure of the matrix is destroyed by mechanical abrading such as cutting or hammering. Asbestos cement products, which have been subjected to weathering, severely damaged by hail, damaged by heat/fire or other mechanical action, or illegal water blasting can then become a friable asbestos product.






***Semi bonded asbestos containing material:*** a generally bonded material with signs of surface deterioration (e.g. surface exhibits evidence of friability).

## Priority Classifications

All work is to be carried out in accordance with appropriate licensing requirements and relevant Codes of Practice for Asbestos.

### Priority 1 (P1):





Restrict access and isolate material remove as soon as practicable. The identified material presents an immediate occupational/environmental risk in its present condition. Typical instances of these materials may include (but are not limited to):

-  Friable asbestos material.
-  Friable asbestos material located in air conditioning ducting.
-  Asbestos material that is poorly bonded to the substrate.
-  Asbestos material that is severely water damaged or subject to continuous abrasion.
-  Asbestos debris in reasonably accessible areas.

These instances are typically risk rated as: *High*, and in rarer cases, *Extreme*.

### Priority 2 (P2):



Limit access as an interim measure and implement an immediate hazard management controls. Identify material for short term removal as the identified material presents a potential occupational/environmental risk in its present condition. Typical instances of these materials may include (but are not limited to):

-  Materials that exhibit impact, abrasion or that further damage or deterioration to the material is likely to occur.
-  Friable material that is enclosed or encapsulated,
-  Friable material where disturbance of, or entry into, the enclosure is unlikely to occur.
-  Asbestos gaskets and brake linings.

These instances are typically risk rated as: *High* or *Medium*.

### Priority 3 (P3):

Make safe and/or identify for removal where maintenance or refurbishment may cause disturbance of the material. Treat material to prevent potential fibre release as an interim measure. The identified material presents a potential occupational/environmental risk in its present condition if acted upon. Typical instances of these materials may include (but are not limited to):

-  Materials that exhibit minor impact damage or degradation.
-  Asbestos cement products showing early signs of weathering.

These instances are typically risk rated as: *Medium* or *Low*.

### Priority 4 (P4):

Leave in situ and re-assess condition on a regular basis as required by legislation. Consider removal when maintenance or refurbishment may cause disturbance of the material. The identified material presents a low occupational/environmental risk in its present condition unless acted upon.

Typically, these materials are inaccessible and/or fully enclosed, stable and unlikely to be damaged from adjacent activities.

These instances are typically risk rated as: *Low*.

## Appendix B

### Certificates of Analysis

## CERTIFICATE OF ANALYSIS

### FIBRE IDENTIFICATION REPORT

HSE Job No:	PJ.204125.NTa	Client Reference:	-
Report No:	PJ.204125.NTa -1FI	Date Received:	10/02/2015
Client:	Hibiscus Shoppingtown		
Client Address:	PO Box 40144 Casuarina NT 0810		
Sampled By:	D Kenny		
Location:	Hibiscus Shoppingtown		
Analysis Method:	Samples analysed by Polarized Light Microscopy (PLM) techniques and Dispersion Staining (DS) using AS 4964-2004 and Health Safety Environment Australia SWI 04.		



Accreditation No: 15696

Accredited for compliance with ISO/IEC 17025

Approved Identifier  
Michelle Barnes  
17/02/2015

*This test report shall not be reproduced except in full.*

Sample Number	Sample Description (approximate dimensions)	Analysis Results
B28474	Fire door core material First floor plant room Isolative material (1 x 1 x 1mm)	No Asbestos Detected Organic Fibre Detected
B28450	AC Duct joint sealant First floor plant room – AHU Room Sealant (6 x 2 x 2mm)	No Asbestos Detected
B28482	Wall lining – Shop 7 – Kitchen / store room Fibre cement sheeting (3 x 4 x 2mm)	Chrysotile Asbestos Detected
B18567	Vinyl floor covering – shop 11 Vinyl floor sheeting (5 x 5 x 2mm)	No Asbestos Detected
B18568	High wall lining – shop 18 Fibre cement sheeting (3 x 2 x 2mm)	No Asbestos Detected Organic Fibre Detected
B18569	Men's public toilets – urinal splashback Fibre cement sheeting (3 x 2 x 2mm)	No Asbestos Detected Organic Fibre Detected
B28476	External – Perimeter wall cladding Fibre cement sheeting (3 x 2 x 2mm)	No Asbestos Detected Organic Fibre Detected
B18566	External – High infill panels Main entrances – North elevation Fibre cement sheeting (1 x 2 x 1mm)	No Asbestos Detected Organic Fibre Detected

# Appendix C

## Terms & Conditions

## Special Conditions to HSE Australia Standard Terms and Conditions (Asbestos Assessments)

### 1. General

This report and associated services performed by HSE Australia are in accordance with the scope of services set out in the contract and discussions between HSE Australia and the Client. The scope of work was defined by the time and budgetary constraints imposed by the client. The data, findings, observations, conclusions and recommendations in the report are based solely upon the state of the site at the time of the investigation. The passage of time, manifestation of latent conditions or impacts of future events (ie changes in legislation scientific knowledge, land uses, etc) may render the report inaccurate. In circumstances such as this, HSE Australia shall not be liable for any loss or damage that may be occasioned directly or indirectly through the use of or reliance on the contents of this report.

- a) In addition to the HSE Australia Standard Terms and the terms of any Proposal, these special conditions (Special Conditions) to the Terms of Engagement apply where the Client has engaged HSE Australia to provide Services that include:
  - (i) undertaking an asbestos assessment (Asbestos Assessment); and
  - (ii) preparing verbal or written advice, reports, data, laboratory test results, general findings or recommendations relating to any Asbestos Assessment (Asbestos Related Services).
- b) Capitalised terms appearing in this document not otherwise defined in these Special Conditions have the meaning given to them in the Standard Terms or the Proposal (as the case may be).

### 2. Special Conditions

#### 2.1 Scope of Asbestos Assessment and Asbestos Related Services

The Client acknowledges and agrees that any Asbestos Assessment carried out, or any Asbestos Related Services provided by HSE Australia:

- a) will be carried out or provided (as the case may be) under and in accordance with:
  - (i) the Terms of Engagement (including these Special Conditions); and
  - (ii) the terms and conditions of:
    - (A) any licence granted to, and held by, HSE Australia and any of its employees, agents, contractors and sub-contractors (as the case may be) from time to time for the purposes of undertaking any asbestos assessments, or handling, removing, disposing, storing or transporting any asbestos or ACM;
- b) will not, subject to clause 2.1(c) of these Special Conditions, include Services that involve or require the removal, disposal, transportation or handling (by any means) by HSE Australia or its employees of any asbestos or asbestos containing material (ACM); and
- c) may require, or result in, HSE Australia removing small samples of materials containing, or suspected of containing, asbestos or ACM for the purposes of further testing.

## 2.2 Qualifications to Asbestos Assessments and Asbestos Related Services

The Client acknowledges and agrees that:

- a) Any Asbestos Assessment will be conducted by HSE Australia on the basis of the presence and condition of the site materials at the time of inspection.
- b) No Asbestos Assessment can be regarded as absolute in locating all instances of asbestos or ACM on site. Accordingly the outcome and results of any Asbestos Assessment and Asbestos Related Services undertaken by HSE Australia and any resulting report prepared by HSE Australia is not (and is not to be considered, read or construed as) final confirmation of:
  - (i) the presence or absence of asbestos and/or ACM; or
  - (ii) all locations or locations of any asbestos and/or ACM.
- c) It may not be possible for HSE Australia to locate all asbestos or ACM due to physical constraints and restrictions on site access.
- d) As there is a need to avoid damage to the Client's property (e.g. through sample taking), as well as minimising disruption (e.g. dismantling equipment) and inconvenience during an inspection, no destruction or demolition of finishes or structures (walls, fixtures, plant or other equipment) will be carried out by HSE Australia unless the Client specifically requests or the Proposal indicates otherwise.
- e) No specific Asbestos Assessment and inspection will be conducted under-floor spaces or under existing floor coverings, and the Asbestos Assessment is limited to those ceilings spaces that are (in HSE Australia's opinion) reasonably accessible.
- f) Assessment of the presence of asbestos or ACM in soil is expressly excluded from any Asbestos Assessment or Asbestos Related Services unless soil assessments are specifically included as part of the scope of work set out in the Proposal.
- g) Integral parts of plant/equipment will not be inspected unless requested by the Client and those items of plant and/or equipment are specifically de-energised, isolated, deactivated or otherwise rendered inert and safe, prior to any inspection. Where no inspection of items of plant and equipment is carried out, a presumption of the presence of asbestos or ACM may still be documented.
- h) Asbestos or ACM may be located/ or identified in inaccessible areas such as (but not limited to) wall cavities, lift shafts, under floor slabs, along pipework and shrouds, within boilers, heater banks, ductwork, live electrical installations, within pipe chases, and the like. Buried fibre cement pipes, insulation, or pits may also be discovered during excavation.
- i) The presence of Client or tenant plant/equipment, furniture or stock may (either partially or entirely) limit, impinge or obstruct HSE Australia from conducting a full visual assessment.
- j) HSE Australia surveyors may collect samples at any known or suspected asbestos or ACM locations. Where no asbestos is detected (NAD), the samples and laboratory results will still be listed in HSE Australia's final report so as to provide information for use during future assessments and inspections.
- k) Representative sampling is sometimes undertaken where similar or identical materials are recognized in similar locations or situations within the same building or structure (Similar Materials). This sample extrapolation is used only when a laboratory result confirms the presence of asbestos or ACM in one instance of the Similar Material, so that the positive asbestos/ACM result may be applied to any other instances of Similar Material. Other instances of the Similar Material will be presumed to contain asbestos or ACM until otherwise qualified by further sample collection and laboratory analysis.

- l) Successful laboratory analysis of any asbestos or ACM may be affected or compromised in instances where the material has been heat-affected, as heat may alter the morphology of the fibrous material.
- m) The Asbestos Materials Register is to be read in conjunction with the whole of any Client report prepared by HSE Australia. HSE Australia can offer advice, upon request from the Client, on required Asbestos Management Plans for controlling asbestos or other hazards, however such advice is separate from, and does not constitute part of, the Services provided under the initial Terms of Engagement.
- n) Any report that is or may be prepared by HSE Australia following an Asbestos Assessment or as part of any Asbestos Related Services:
  - (i) is prepared specifically for the Client and Health Safety Environment Australia accepts no liability or responsibility for any loss or damage suffered by any other person or organisation in relation to any matter contained within this report; and
  - (ii) may not, in whole or in part, be used or referred to for any other purpose or provided to, or relied on by, any other person, without the express written consent of HSE Australia, and then only in accordance with the provisions of that report and the terms of such consent.
- o) All measurements or quantities stated or referred to in any report prepared by HSE Australia for the Client are approximations only, and should not be relied upon for estimation of asbestos or ACM removal costs or as a basis for contracts for such removal.

## 2.3 Recommendations

The Client acknowledges that HSE Australia makes the following recommendations regarding asbestos-related inspections generally:

- a) An intrusive asbestos inspection is recommended by HSE Australia prior to all building upgrade work or demolition, in accordance with applicable regulatory requirements, to mitigate the risk of uncovering previously unidentified/hidden asbestos or ACM.
- b) With some bulk material containing asbestos or ACM, it can be very difficult (or even impossible) to detect the presence of asbestos or ACM using the polarised light microscopy analytical method, even after ashing/disintegration of the sample. Similarly, some products and materials found may have material inconsistency and, consequently, a small sample taken and analysed may not accurately represent the material as a whole. HSE Australia recommends that a continuous asbestos sampling program be maintained, with samples taken prior to commencement of any disturbance work (unless, as a precautionary measure, the relevant materials, plant or equipment are assumed to be or contain asbestos or ACM).

## Appendix D

### Asbestos Maintenance Log

Record of works undertaken on asbestos materials  
(Make safe's, removals, partial removals and maintenance)

## Asbestos Maintenance Log

This section of the Register is to record details of any asbestos works undertaken.

Date		Time		Order Number	
Company		Company's Supervisor			
Nature of Work Carried Out					
Company's Supervisor Signature		Owner / Occupier Signature			

Date		Time		Order Number	
Company		Company's Supervisor			
Nature of Work Carried Out					
Company's Supervisor Signature		Owner / Occupier Signature			

Date		Time		Order Number	
Company		Company's Supervisor			
Nature of Work Carried Out					
Company's Supervisor Signature		Owner / Occupier Signature			

## Appendix E

### Register Access Log

This Log is for the purpose of recording details of all personnel who read this asbestos register.

[illegible]

## Appendix F

### Plans

(when provided)