



# ASBESTOS CONTAINING MATERIALS SURVEY REPORT

## Analysis and Planning Rockhampton North

PREPARED BY:

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This report has been prepared by SLR Consulting Australia Pty Ltd with all reasonable skill, care and diligence, and taking account of the timescale and resources allocated to it by agreement with 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.

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This report may not be relied upon by other parties without written consent from SLR.

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### DOCUMENT CONTROL

Reference	Date	Prepared	Checked	Authorised
622.10968.00000/0040-R01-v1-Bid067	27 December 2017	Jordan Harley	Jason Hutchins	Narelle Carnes



























## 4 DISCUSSION AND RECOMMENDATIONS

As previously detailed in the Scope Section 2, SLR was appointed to complete a survey and assessment of Rockhampton North with regards to the identification of ACM. The extent of the inspection and samples collected for subsequent analysis was completed in order to confirm, as far as reasonably practicable, the location, condition and risk presented by ACM remaining in-situ (and was based on the level of access available).

- Within the scope and limitations of this report, no ACM were identified in the building surveyed at the time of inspection.
- This document should be held as an Asbestos Register of the building inspected and updated where a risk assessment indicates the need for re-assessment. All occupiers of the workplace are to be provided with a copy of this register and all updates to it.
- If any material that may contain asbestos is found on site the material should be sent for identification and expert advice sought. The material should be assumed to contain asbestos in the interim.

In order to comply with the Work Health and Safety Regulations 2011(QLD), any action taken to control asbestos and ACM in the place of work, or in plant at the place of work, is to be recorded in this register. These details are to be recorded in the Asbestos Control Log attached in

**Appendix A.**

## **5 LEGISLATION, GUIDELINES AND REGULATIONS**

- Work Health and Safety Act 2011
- Work Health and Safety Regulations 2011
- Code of Practice: How to Safely Remove Asbestos [QLD Workplace Health and Safety (2011)]
- Code of Practice: How to Manage and Control Asbestos in the Workplace [QLD Workplace Health and Safety (2011)]
- Code of Practice: Demolition Work [QLD Workplace Health and Safety (2011)]
- Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres 2nd Edition [National Occupational Health and Safety Commission: 3003 (2005)]
- AS/NZS 1716-2012 - Respiratory Protective Devices
- AS/NZS 1715-2009 - Selection, Use and Maintenance of Respiratory Protective Devices
- AS 2601-2001 - The Demolition of Structures
- AS 1319-1994 Safety Signs for the Occupational Environment



# Appendix A

Asbestos Control Log

**Appendix A**

Report Number 622.10968.00000/0040-R01

**ASBESTOS CONTROL LOG**

To comply with the WHS Code of Practice How to Safely Remove Asbestos 2011, all actions taken to control asbestos and ACM are to be recorded in the table below. It is recommended that similar details also be recorded for any other asbestos materials identified.

<b>NAME</b>	<b>COMPANY</b>	<b>DATE</b>	<b>ASBESTOS MATERIAL RELATED WORK UNDERTAKEN (Include any assessment concerning asbestos that took place before the work was carried out)</b>	<b>REFERENCE NUMBER (Include sample numbers, report numbers, quote number and/or purchase order number etc)</b>
Jordan Harley	SLR Consulting Australia Pty Ltd	27/09/2017	Asbestos Building Materials Survey	Report No 622.10968.00000/0040-R01-v1\ASR-bld67

# Appendix B

Certificate of Analysis

CLIENT DETAILS

Contact **Jordan Harley**  
Client **SLR CONSULTING AUSTRALIA PTY LTD**  
Address **Lego Building, 2 Lincoln Street  
(PO Box 176 NSW LANECOVE 1595)  
NSW 2266**  
Telephone **02 9427 8100**  
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Email **jharley@slrconsulting.com**  
Project **622.10968.00000-Rockhampton North Campus**  
Order Number **23358**  
Samples **37**

LABORATORY DETAILS

Manager **Huong Crawford**  
Laboratory **SGS Alexandria Environmental**  
Address **Unit 16, 33 Maddox St  
Alexandria NSW 2015**  
Telephone **+61 2 8594 0400**  
Facsimile **+61 2 8594 0499**  
Email **au.environmental.sydney@sgs.com**  
SGS Reference **SE170920 R0**  
Date Received **03 Oct 2017**  
Date Reported **10 Oct 2017**

COMMENTS

Accredited for compliance with ISO/IEC 17025-Testing. NATA accredited laboratory 2562(4354). Sample# 1-10, 13-15, 17, 25-32, 34-36 : No trace asbestos fibres detected using trace analysis technique. Asbestos analysed by Approved Identifiers Ravee Sivasubramaniam .

Lab Ref	Client Reference	Matrix	Sample Description	Date Sampled	Fibre Identification	Est.%w/w*
SE170920.001	272	Other	40x20x3mm Cement sheet fragment	03 Oct 2017	No Asbestos Detected Organic Fibres Detected	
SE170920.002	273	Other	<1g Cement sheet fragments	03 Oct 2017	No Asbestos Detected Organic Fibres Detected	
SE170920.003	274	Other	<1g Cement sheet fragments	03 Oct 2017	No Asbestos Detected Organic Fibres Detected	
SE170920.004	275	Other	<1g Cement sheet fragments	03 Oct 2017	No Asbestos Detected Organic Fibres Detected	
SE170920.005	276	Other	20x15x8mm concrete fragments	03 Oct 2017	No Asbestos Detected	
SE170920.006	277	Other	10g Cement sheet fragments	03 Oct 2017	No Asbestos Detected Organic Fibres Detected	
SE170920.007	278	Other	20x20x1mm Grey paint flakes	03 Oct 2017	No Asbestos Detected	
SE170920.008	279	Other	10x10x2mm Cement stone fragment	03 Oct 2017	No Asbestos Detected	
SE170920.009	280	Other	<1g Cement sheet fragments	03 Oct 2017	No Asbestos Detected Organic Fibres Detected	
SE170920.010	281	Other	30x20x5mm Cement sheet fragment	03 Oct 2017	No Asbestos Detected Synthetic Mineral Fibres Detected Organic Fibres Detected	
SE170920.011	283	Other	<1g Cement sheet fragments	03 Oct 2017	Amosite & Chrysotile Asbestos Detected	
SE170920.012	284	Other	<1g Cement sheet fragments	03 Oct 2017	Amosite & Chrysotile Asbestos Detected	
SE170920.013	285	Other	<1g Cement sheet fragments	03 Oct 2017	No Asbestos Detected Organic Fibres Detected	
SE170920.014	286	Other	<1g Cement sheet fragments	03 Oct 2017	No Asbestos Detected Organic Fibres Detected	
SE170920.015	288	Other	<1g Brown fibre board fragments	03 Oct 2017	No Asbestos Detected Organic Fibres Detected	
SE170920.016	289	Other	20x20x2mm Cement sheet fragments	03 Oct 2017	Amosite & Chrysotile Asbestos Detected	
SE170920.017	290	Other	<1g Fibrous plaster board fragments	03 Oct 2017	No Asbestos Detected Organic Fibres Detected	
SE170920.018	291	Other	<1g Cement sheet fragments	03 Oct 2017	Amosite & Chrysotile Asbestos Detected	
SE170920.019	292	Other	<1g Cement sheet fragments	03 Oct 2017	Amosite & Chrysotile Asbestos Detected	
SE170920.020	293	Other	<1g Cement sheet fragments	03 Oct 2017	Amosite & Chrysotile Asbestos Detected	
SE170920.021	294	Other	<1g White fibrous material	03 Oct 2017	Chrysotile Asbestos Detected	
SE170920.022	295	Other	<1g White spongy fibrous material	03 Oct 2017	No Asbestos Detected Synthetic Mineral Fibres Detected	
SE170920.023	297	Other	20x20x4mm Cement sheet fragments	03 Oct 2017	Amosite & Chrysotile Asbestos Detected	
SE170920.024	298	Other	25x10x5mm Cement sheet fragments	03 Oct 2017	Amosite & Chrysotile Asbestos Detected	
SE170920.025	299	Other	<1g Cement sheet fragments	03 Oct 2017	No Asbestos Detected Organic Fibres Detected	
SE170920.026	300	Other	<1g Cement sheet fragments	03 Oct 2017	No Asbestos Detected Organic Fibres Detected	
SE170920.027	301	Other	<1g Cement sheet fragments	03 Oct 2017	No Asbestos Detected Organic Fibres Detected	
SE170920.028	302	Other	<1g Cement sheet fragments	03 Oct 2017	No Asbestos Detected Organic Fibres Detected	
SE170920.029	303	Other	20x10x3mm Cement sheet fragment	03 Oct 2017	No Asbestos Detected Organic Fibres Detected	
SE170920.030	305	Other	<1g Cement sheet fragments	03 Oct 2017	No Asbestos Detected Organic Fibres Detected	
SE170920.031	306	Other	15x5x4mm Cement sheet fragment	03 Oct 2017	No Asbestos Detected Organic Fibres Detected	
SE170920.032	307	Other	20x5x3mm Cement sheet fragment	03 Oct 2017	No Asbestos Detected Organic Fibres Detected	
SE170920.033	308	Other	25x20x8mm Cement sheet fragments	03 Oct 2017	Amosite & Chrysotile Asbestos Detected	
SE170920.034	309	Other	<1g Cement sheet fragments	03 Oct 2017	No Asbestos Detected Organic Fibres Detected	
SE170920.035	310	Other	25x15x3mm Cement sheet fragments	03 Oct 2017	No Asbestos Detected Organic Fibres Detected	
SE170920.036	311	Other	20x20x5mm Cement sheet fragments	03 Oct 2017	No Asbestos Detected Organic Fibres Detected	

Fibre ID in bulk materials				Method AN602		
Lab Ref	Client Reference	Matrix Other	Sample Description	Date Sampled	Fibre Identification	Est.%w/w*
SE170920.037	312		20x10x2mm vinyl sheet	03 Oct 2017	<b>No Asbestos Detected Synthetic Mineral Fibres Detected</b>	

- AN602 Qualitative identification of chrysotile, amosite and crocidolite in bulk samples by polarised light microscopy (PLM) in conjunction with dispersion staining (DS). AS4964 provides the basis for this document. Unequivocal identification of the asbestos minerals present is made by obtaining sufficient diagnostic 'clues', which provide a reasonable degree of certainty, dispersion staining is a mandatory 'clue' for positive identification. If sufficient 'clues' are absent, then positive identification of asbestos is not possible. This procedure requires removal of suspect fibres/bundles from the sample which cannot be returned.
- AN602 Fibres/material that cannot be unequivocally identified as one of the three asbestos forms, will be reported as unknown mineral fibres (umf). The fibres detected may or may not be asbestos fibres.

#### SIGNATORIES

*S. Ravesium*

Ravee Sivasubramaniam  
Hygiene Team Leader

#### FOOTNOTES

Amosite	-	Brown Asbestos	NA	-	Not Analysed
Chrysotile	-	White Asbestos	LNR	-	Listed, Not Required
Crocidolite	-	Blue Asbestos	*	-	NATA accreditation does not cover the performance of this service.
Amphiboles	-	Amosite and/or Crocidolite	**	-	Indicative data, theoretical holding time exceeded.

Sampled by the client.

Where reported: 'Asbestos Detected': Asbestos detected by polarised light microscopy, including dispersion staining.

Where reported: 'No Asbestos Found': No Asbestos Found by polarised light microscopy, including dispersion staining.

Where reported: 'UMF Detected': Mineral fibres of unknown type detected by polarised light microscopy, including dispersion staining. Confirmation by another independent analytical technique may be necessary.

Even after disintegration it can be very difficult, or impossible, to detect the presence of asbestos in some asbestos-containing bulk materials using polarised light microscopy. This is due to the low grade or small length or diameter of asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials.

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# Appendix C

Limitations

**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 building materials have been identified and/or addressed.

Due to the possibility of renovations and additions to the building(s) over time, 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 building materials refurbishment/demolition survey is undertaken by a suitably qualified and experienced consultancy, such as SLR. An intrusive survey is required under AS 2601 (2001) The Demolition of Structures. If any materials reasonably suspected of containing asbestos are found on site, which are not identified within this report, the client's independent consultant, SLR, 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 CQ University and/or associated parties.

Where potentially ACM 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.

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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. Settled dust may contain asbestos, particularly if it is in the vicinity of ACM or areas where ACM have been removed.



# Appendix D

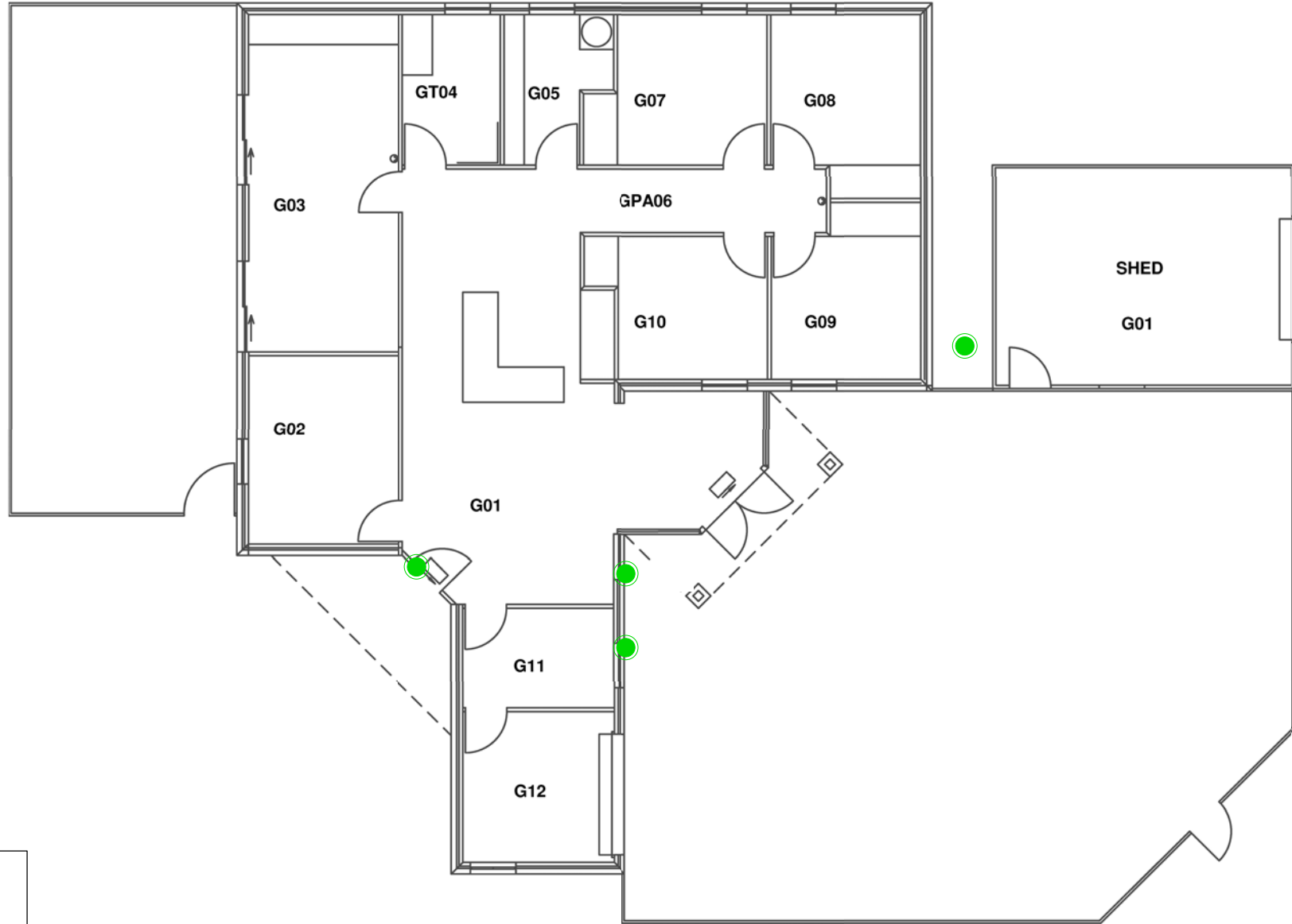
Photographs

No Asbestos Containing Materials Identified

# Appendix E

Site Plan

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NOT TO SCALE FOR DIAGRAMMATIC PURPOSES ONLY

Sheet Size: A4



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Building No:	67
Inspection Date:	Sept / Oct 2017
Inspected By:	NC / JH / SA
Figure No.:	SLR62210968-RN-67-01
Drawn By:	LF
Drawn Date:	18/1/18



CQ University Asbestos Audits

ROCKHAMPTON NORTH CAMPUS

**Analysis and Planning**  
**Bruce Highway, Rockhampton North,**  
**QLD 4702**

# Appendix F

General Information

**ASBESTOS****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 Work Health and Safety Regulations 2011(QLD), 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 Safe Work Australia Code of Practice How to Safely Remove Asbestos 2011 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.

### **Management Plan**

An asbestos management plan is required where asbestos materials have been identified and are to remain on site. The plan would normally be a component in the overall Hazard Management Plan 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 such as SLR, 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, such as SLR.