Asbestos Register

Blue Mountains City Council maintains asbestos registers ("registers") and asbestos management plans ("plans") relating to each of the buildings owned or occupied by the Council. The registers and plans record information about the existence and location of any known or presumed asbestos containing materials ("ACM") within those buildings.

The Council's governing body has adopted the Council's corporate [/asbestos-registers]Asbestos Policy, which is available on our website.

The registers and plans are in two forms. First, the Council maintains a corporate asbestos register and a corporate asbestos management plan. Second, the Council has prepared individual registers and individual plans for each building that contains or may contain ACM. Hardcopies of those individual registers and plans are held in the building concerned.

Whenever work is carried out on a Council building the hardcopy register and the hardcopy plan are each amended by hand, as required. This action ensures that Council employees or contractors who work from time to time within that building have access to accurate information about the ACM that it contains or may contain.

The electronic versions of each of the corporate plans and registers, and of the plans and registers for individual buildings, are periodically updated. However, the key documents are the hardcopy registers and the hardcopy plans for each building which must be inspected before any work is carried out on that building.

NOTES:

(1) The Council's electronic registers and plans are valid as dated, and ARE NOT to be relied upon as definitive records and ARE NOT to be used for reference purposes for any construction, demolition, maintenance or any other onsite works. IN ALL CASES, the onsite hardcopy building specific asbestos register and building specific asbestos management plan MUST BE CONSULTED prior to the commencement of physical works on the building concerned. While the electronic versions of the Council's registers and plans provide guidance concerning the presence or possible presence of ACM it is the onsite hardcopy registers and plans which will remain up to date.

(2) The Council's electronic registers and plans relate to Council owned or managed buildings. The electronic registers and plans do not relate to structures (such as picnic shelters, bus shelters and other freestanding structures). Before any work is carried out on such structures the Council's Hazardous Materials Team ("HMT") MUST BE CONSULTED. The HMT may be contacted at **council@bmcc.nsw.gov.au**. The HMT will provide information concerning any ACM that may be present in the structure concerned.

Further information: Further information on safe asbestos management may be obtained by contacting Councils Hazardous Materials Management Team at **council@bmcc.nsw.gov.au**.

global environmental solutions

HAZARDOUS BUILDING MATERIALS SURVEY REPORT

Attunga Road RFS

24 Attunga Road, Blaxland NSW 2774

Report Number 610.18030.00000-R01-ASR

13 April 2018

API Commercial
9 Pullman Place
Emu Plains, 2750

Version: v1

HAZARDOUS BUILDING MATERIALS SURVEY REPORT

Attunga Road RFS

24 Attunga Road, Blaxland NSW 2774

PREPARED BY:

SLR Consulting Australia Pty Ltd
ABN 29 001 584 612
2 Lincoln Street, Lane Cove,
Sydney, NSW 2066
T: +61 2 9427 8100
sydney@slrconsulting.com www.slrconsulting.com

DOCUMENT CONTROL

Reference	Date	Prepared	Checked	Authorised
610.18030.00000-HMR-R01-v1	13 April 2018	Jordan Harley	Matthew Hemingway	Neil Kumar

TABLES

FIGURES

APPENDICES

EXECUTIVE SUMMARY

SLR Consulting Australia Pty Ltd (SLR) was engaged by Athol Simpson of API Commercial to undertake an inspection of Attunga Road RFS, 24 Attunga Road, Blaxland NSW. The survey was conducted by Jordan Harley and Jacob Iskenderian from SLR on the 27th of March 2018.

The following asbestos containing building materials were identified:

- Ceiling inside cupboard , Fibrous Cement - Ground Floor East Entry foyer cupboard
- Ceiling inside cupboard , Fibrous Cement - Ground Floor East Entry foyer cupboard
- Ceiling panel, Fibrous Cement - Ground Floor Ceiling below mezzanine level
- Eave lining , Fibrous Cement - All External eaves
- Electrical backing board, Fibrous Cement - External Electrical Board North Wall

No paint containing lead greater than 1% was identified.

No lead in dust greater than acceptable levels was found.

No synthetic mineral fibres found.

No PCBs were identified onsite, however, fluorescent lighting is present onsite which was unable to be inspected due to live electrics. All fluorescent lights should be considered to be PCB containing unless otherwise determined by a suitably qualified consultant.

The recommendations arising out of this Management survey are:

1. No friable asbestos was identified within the scope of this survey.
2. Asbestos containing materials identified on-site that do not pose a significant risk to health may remain in situ and be managed with the aid of an asbestos management plan.
3. As required by Work Health and Safety Regulations 2011 (NSW), a person with management or control of a workplace is obliged to comply with the requirements outlined in the Regulation as follows:
    a. All asbestos or ACM at the workplace is identified and maintained in a register of asbestos containing materials;
    b. All in situ ACM is clearly indicated and labelled;
    c. Implementation of an Asbestos Management Plan; and
    d. Ongoing review of the Asbestos Containing Materials Register and Asbestos Management Plan.
4. PCB work is to be conducted in accordance with the *Environmental Protection & Heritage Council's Polychlorinated Biphenyls Management Plan, Revised Edition April 2003*. This includes:
    - Prior to demolition when the power is disconnected, inspect the light fittings;
    - Metal PCB containing capacitors are to be removed, placed in plastic lined 200 litre drums and disposed of as PCB Scheduled Waste. Any light fittings that show signs of oil staining from capacitors are to be disposed of as PCB contaminated;
    - Protective clothing including eye protection, PCB resistant gloves and overalls are to be worn;

- Contaminated gloves and disposable coveralls are to be disposed of as PCB contaminated waste; and
- Contractors licensed to transport and handle PCBs must be used for transport and disposal. PCB is a scheduled waste with strict guidelines regarding transport and handling.

The list above is a summary/overview only and should not be relied on to accurately identify hazardous materials. The locations and details of all items of known hazardous materials at the property are documented in the Asbestos Register in Part 4 of this report.

In order to comply with the Work Health and Safety Regulations 2011 (NSW), 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 the Asbestos Control Log attached in **Appendix A**.

Copies of NATA Laboratory Certificates for asbestos identification analysis are provided in Appendix B. Refer to **Appendix C** for Limitations of this survey. Relevant photographs taken during the inspection are provided in **Appendix D**.

1 BACKGROUND AND SCOPE

SLR Consulting Australia Pty Ltd (SLR) was requested by Athol Simpson of API Commercial to undertake a hazardous building materials survey of Attunga Road RFS, 24 Attunga Road, Blaxland to ascertain the location, extent, type and condition of hazardous materials. The survey was conducted on the 27th of March 2018 by Jordan Harley and Jacob Iskenderian from SLR.

1.1 Site Description

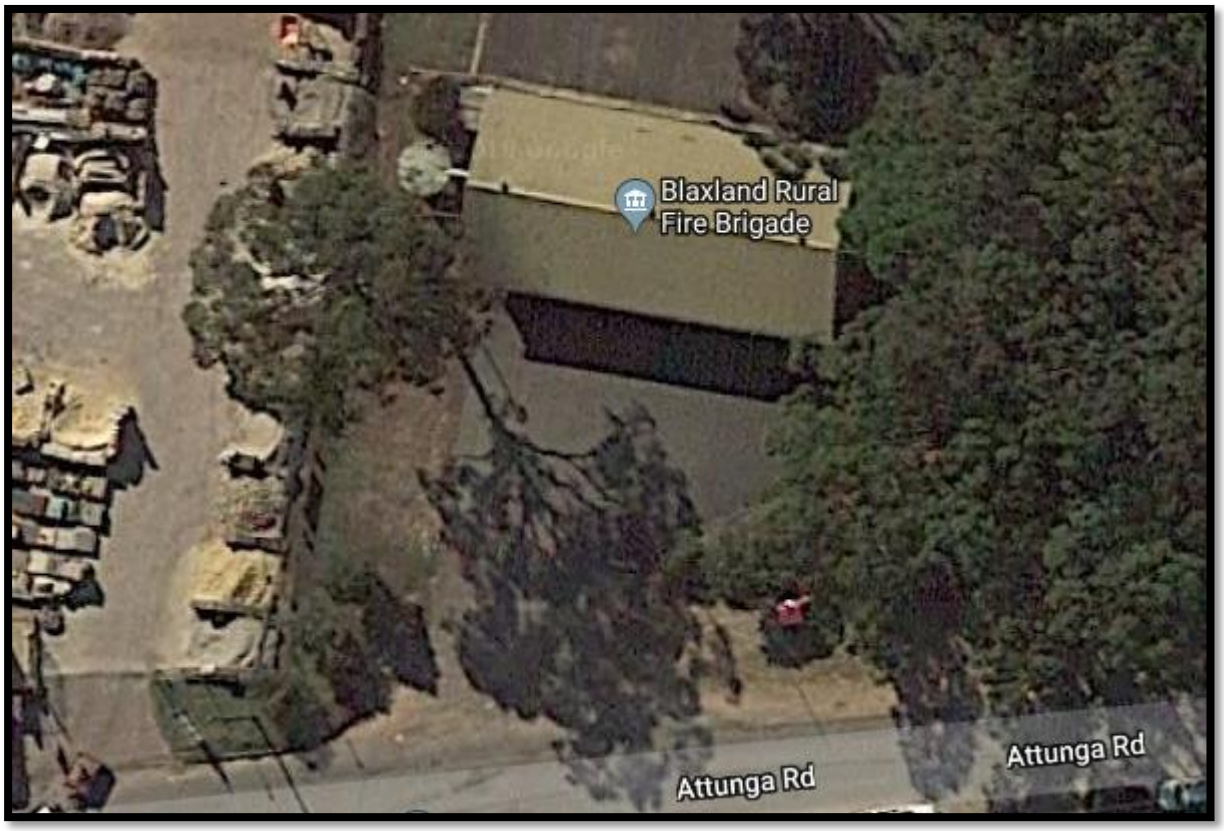
The site is located on the North side of Attunga Road. A Locality Map is presented in **Figure 1** for the purpose of this report. Attunga Road is taken to run in an east/west direction, directly adjacent to the site.

The following information is known about the building:

- The building is a single storey hall fire station, with a mezzanine level at the east end of the garage section.
- The building was still in use at time of the inspection, and consists of office space, bathrooms, kitchen, garage and mezzanine level, as well as a small externally accessed storage room.

Relevant photographs taken during the inspection are provided in **Appendix D**.

Figure 1 Site Location



1.2 Survey Strategy

Asbestos material surveys are undertaken considering a risk management approach, in accordance with best practice. The survey was conducted in a manner which conforms with the Work Health and Safety Regulations 2011 (NSW) and WHS Code of Practice How to Safely Remove Asbestos 2011.

1.3 Methodology

Asbestos

Asbestos material surveys are undertaken considering a risk management approach, in accordance with best practice, State Legislation and Safe Work Australia NOHSC Guidance. The survey was conducted in a manner which conforms with Work Health and Safety Regulations 2011 (NSW) and WHS Code of Practice How to Safely Remove Asbestos 2011.

Asbestos containing materials presumed or identified through visual and/or analytical characterisation were performed and reported in this report and documented in the Asbestos Containing Materials Register (ACMR).

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

Sample collection was performed in a non-destructive and non-invasive manner by competent persons. Presumptions, based on knowledge and experience, that inaccessible areas may contain asbestos materials may also be made and stated within the register.

The survey consisted of a visual inspection with limited sampling/analysis of materials undertaken by a trained and experienced surveyor. Materials are 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 from materials presumed to contain asbestos (where not previously identified). Samples collected are representative of the material sampled, individually identified, transported, analysed and reported in accordance with Guidelines, relevant Statutory Regulations, Codes of Practice and SLR in-house Work Instructions and procedures. Samples were submitted to a NATA certified laboratory for confirmation analysis by stereo microscope and polarised light microscopy (PLM) 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 ACMR 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 ACMR (refer to previous survey reports for analytical test results where reference is made to previous sample data).

Paint

Paint samples were collected for laboratory analysis for lead content. Flakes of paint were removed from non-intrusive areas to minimise disturbance. Paint flake samples included all layers of paint on a particular surface and are considered representative of paints in the location sampled. Samples were analysed in a laboratory for lead content by ICP - AES (Inductively Coupled Plasma - Atomic Emission Spectroscopy).

Lead paint spot tests are conducted using 5% Sodium Sulphide solution to detect lead in paint. A positive result by a spot test indicates a lead level greater than (>) 1%. The results of spot tests are generally only applicable to the layer of paint tested.

Dust

Settled dust was sampled and analysed for lead. Sampling and analysis was conducted in accordance with AS 4361.2 Guide to lead paint management Part 2: Residential and Commercial Buildings. Briefly, this involved the collection of settled dust from a known surface area by wet wipe. The collected dust is then analysed in a laboratory by ICP-AES for total lead content. The total lead content and area sampled is then used to calculate a lead in dust loading value in mg/m^2.

PCBs

Capacitors in old fluorescent light fittings are assumed to contain PCBs unless a more detailed inspection and/or laboratory analysis confirms otherwise. A more detailed inspection and/or laboratory analysis would require a qualified electrician to isolate and de-energise the light fittings.

1.4 Exclusions

Certain areas of the building(s) were inaccessible at the time of the inspection. 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.

Table 1 Inaccessible Areas and/or Materials

Location	Explanation
Fluorescent light fittings throughout	Live electrics at the time of inspection

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

- Wall/ceiling panelling behind laminations/coverings.
- Concealed floor coverings beneath carpet or superficial floor coverings.
- Fuses within "live" electrical panelling. Fuses of a certain age may contain asbestos containing flash guards.
- 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 eg 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, lead and PCBs are generally outside the scope of this investigation as identification can require specialised analysis/inspection techniques.

Settled dust is generally not sampled or commented on. Settled dust may contain hazardous materials, particularly if it is/was once in the vicinity of hazardous 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).

2 SURVEY RESULTS

The results of the asbestos survey are presented in a tabular format. **Section 3.1** details all of the ACM identified. **Section 3.2** shows all of the non-asbestos containing materials as determined during laboratory analysis.

To assist with the interpretation of the results the following legend provides detailed meaning of abbreviations and terms that may appear in the tables.

Legend

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 eg 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.
Photograph	Refers to the photograph reference number located in the appendices.
Approximate Extent	Usually refers to the surface area or length of the material expressed as either square metres (m^2) or linear metres (Lin m). The dimension is an estimate only and should not be relied upon as an exact measure.
Results of Analysis	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). The term NAD which appears only in the non-asbestos register; means no asbestos was detected during laboratory analysis. Materials shown as 'Similar to……' have not been sampled but appear the same as other materials previously sampled. 'Suspect' refers to those materials not sampled (perhaps for safety reasons) and which are not similar to previously sampled materials. 'Assumed' refers to those materials not sampled (perhaps for safety/access reasons) and which exhibit similar properties to other materials identified/sampled.
Risk of Disturbance	Refers to frequency of disturbance ***High:*** *The material is located in frequently accessible areas with potential for disturbance* ***Medium:*** *The material is prone to mechanical disturbance due to routine building activity and/or maintenance* ***Low:*** *Routine accessibility is unlikely to cause significant deterioration, the material is located in areas with minimal or no disturbance potential or the material is adequately sealed* ***NA:*** *Not Applicable where Analysis indicates No Asbestos Detected*
Overall Condition / Deterioration	Refers to the physical state or condition of the material. Good - material shows no, or very minor, sign of damage and/or deterioration Fair - material shows signs of minor damage and/or deterioration Poor - material shows sign of significant damaged and/or deterioration or the material is partly or wholly unserviceable for its intended use. Very Poor - High damage/visible debris.
Friability of Asbestos	Friable or Non Friable

<table>
<tr><td>Sealed / Surface Treatments</td><td>Refers to whether or not the material is encapsulated with a sealant such as paint, wall paper, etc. concealing its exposed surfaces.
Sealed - Non-friable composite asbestos/encapsulated cement.
Sealed- Enclosed sprays/lagging/board.
Partially Sealed - Bare AIB or encapsulated lagging/spray.
Unsealed - Unsealed lagging/spray/loose asbestos.</td></tr>
<tr><td>Outcome of Risk or exposure risk assessment</td><td>The Material Assessment score is calculated by adding the parameters above. The potential for releasing fibres is detailed below.
<table>
<tr><th>Material Assessment Score</th><th>Fibre Release Potential</th></tr>
<tr><td>10 or higher</td><td>High</td></tr>
<tr><td>7 – 9</td><td>Medium</td></tr>
<tr><td>5 – 6</td><td>Low</td></tr>
<tr><td>4 or lower</td><td>Very Low</td></tr>
</table>
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</td></tr>
<tr><td>Recommended control Actions</td><td>Refers to the recommended controls / actions required to ensure the identified asbestos materials are managed as per the legislative requirements.</td></tr>
<tr><td>Labels Affixed</td><td>Yes/No or NA - Not Applicable where Analysis indicates No Asbestos Detected</td></tr>
<tr><td>Additional Comments</td><td>Refers to any other relevant comments that may assist with the future management of the material.</td></tr>
<tr><td>Next Inspection Date</td><td>Determined by the Risk Assessment or NA - Not Applicable where Analysis indicates No Asbestos Detected.</td></tr>
</table>

3 ASBESTOS CONTAINING MATERIALS REGISTER

3.1 Asbestos Register

The following table is a register of all identified ACM on 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 ACM should be read in conjunction with all sections of this report.

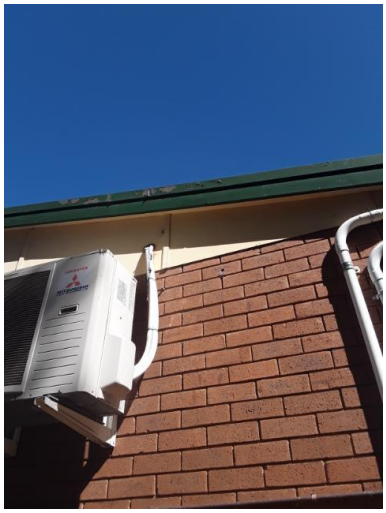
Sample No./ Visual observation	Photo	Location			Analysis	Risk assessment						Additional information		
		Int / Ext Floor Specific Location	Material Application	Extent	Result	Risk of Disturbance	Overall Condition / deterioration	Friability of Asbestos	Sealed/ Surface Treatments	Outcome of Risk or Exposure Risk Assessment	Recommended Control Actions	Labels Affixed	Additional Comments	Next Inspection due date
Assumed 1298		Attunga Road RFS External Electrical Board North Wall	Electrical backing board, Fibrous Cement	1m²	Assumed Asbestos	Medium	Fair	Non Friable	Unsealed FCS	Low	Manage and Label	No	-	27/03/2023
01 1306		Attunga Road RFS All External eaves	Eave lining , Fibrous Cement	25m²	Chrysotile	Low	Poor	Non Friable	Encapsulated FCS	Very Low	Encapsulate and Manage	No	-	27/03/2023

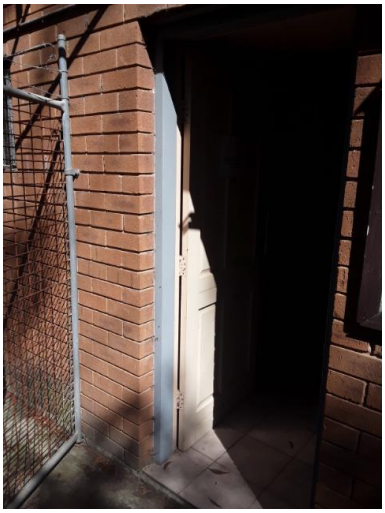
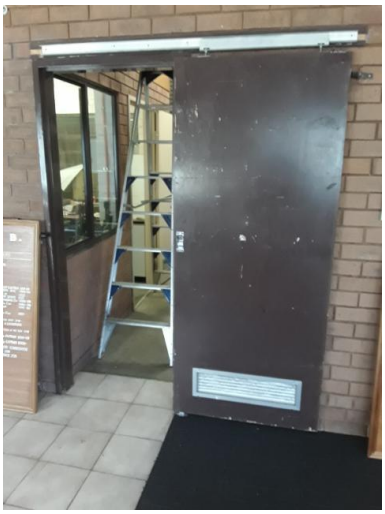
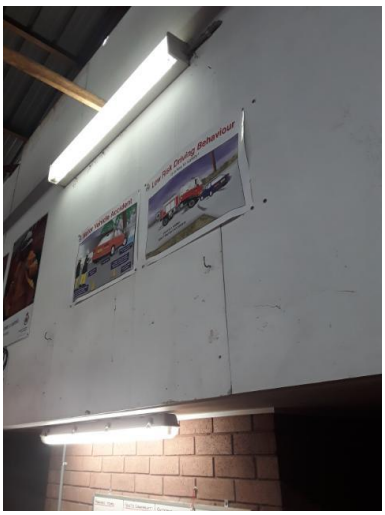
Sample No./ Visual observation	Photo	Location			Analysis	Risk assessment						Additional information		
		Int / Ext Floor Specific Location	Material Application	Extent	Result	Risk of Disturbance	Overall Condition / deterioration	Friability of Asbestos	Sealed/ Surface Treatments	Outcome of Risk or Exposure Risk Assessment	Recommended Control Actions	Labels Affixed	Additional Comments	Next Inspection due date
02 1308		Attunga Road RFS Cladding to gables	Eave lining , Fibrous Cement	15m²	Chrysotile	Low	Poor	Non Friable	Encapsulated FCS	Very Low	Encapsulate and Manage	No	-	27/03/2023
03 1312		Attunga Road RFS Ground Floor East Entry foyer cupboard	Ceiling inside cupboard , Fibrous Cement	0.5m²	Chrysotile	Low	Fair	Non Friable	Encapsulated FCS	Very Low	Manage	No	-	27/03/2023
04 1316		Attunga Road RFS Ground Floor East Entry foyer cupboard	Ceiling inside cupboard , Fibrous Cement	1m²	Chrysotile	Low	Good	Non Friable	Encapsulated FCS	Very Low	Manage	No	-	27/03/2023

Sample No./ Visual observation	Photo	Location			Analysis	Risk assessment						Additional information		
		Int / Ext Floor Specific Location	Material Application	Extent	Result	Risk of Disturbance	Overall Condition / deterioration	Friability of Asbestos	Sealed/ Surface Treatments	Outcome of Risk or Exposure Risk Assessment	Recommended Control Actions	Labels Affixed	Additional Comments	Next Inspection due date
05 1319		Attunga Road RFS Ground Floor Ceiling below mezzanine level	Ceiling panel, Fibrous Cement	8m²	Chrysotile	Medium	Fair	Non Friable	Encapsulated FCS	Very Low	Encapsulate and Manage	No	-	27/03/2023

3.2 Lead and PCBs

Table 1 Lead Paint Spot Tests Analysis Results

Negative			
Test Number	**Test Location**	**Test Result**	**Photo**
ST07	External trims - Green colour paint to Paint on gutter and external trims	Negative <1%	
FA08	External trims - Cream colour paint to Paint on cladding and eaves	Negative <1%	

Negative			
Test Number	**Test Location**	**Test Result**	**Photo**
ST04	External trims - Blue colour paint to Doors trims	Negative <1%	
ST03	Internal Doors, Windows, Frames and Jams - Brown colour paint to Doors and window trims	Negative <1%	
ST05	Internal Walls - White colour paint to Paint on mezzanine cladding	Negative <1%	

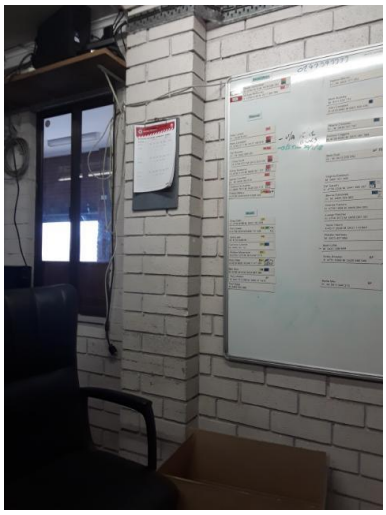
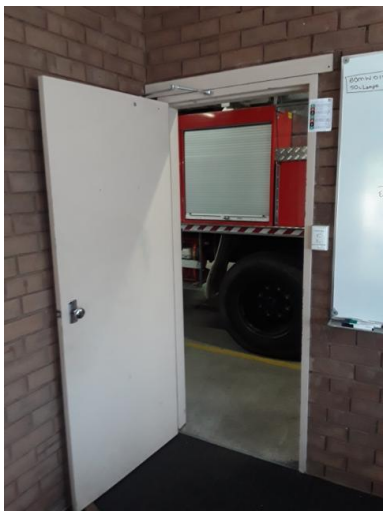
Negative			
Test Number	**Test Location**	**Test Result**	**Photo**
ST06	Internal Walls - Blue colour paint to Paint on lintel strips	Negative <1%	
ST06	Internal Walls - White colour paint to Paint on office wall	Negative <1%	
ST02	Internal - Cream colour paint to Doors and trims	Negative <1%	

Table 2: Lead in Dust Analysis Results

Test Number	Test Location	Test Result	Photo
LD01	Ground Floor Ceiling Cavity - Ceiling Void	5.3	

Table 3 Identified PCB's

Within the Scope and Limitations of this report, no PCB's were identified.

Notes:

- This Summary of Hazardous Materials should be read in conjunction with all sections of this report.
- Certificate of analysis/test results are detailed in **Appendix B** of this report.
- Negative = no lead paint detected or <1%.
- All other similar occurrences of the ACMs identified in the summary table above should be assumed to contain asbestos, and treated accordingly, unless sampling and analysis confirms otherwise.
- All other similar occurrences of the lead listed in the above summary table should be assumed to contain corresponding levels of lead.
- All other similar occurrences of lead in paint listed in the above summary table should be assumed to contain corresponding levels of lead.
- Any fluorescent light fittings of an older style present may house capacitors that contain PCBs, and should be assumed to do so unless a more detailed inspection and/or sample analysis confirms otherwise. A more detailed inspection and/or sample analysis requires a qualified electrician to isolate and de-energise the lights.

4 DISCUSSION AND RECOMMENDATIONS

As previously detailed in the Scope Section 2, SLR was appointed to complete a survey and assessment of Attunga Road RFS, 24 Attunga Road, Blaxland with regards to the identification of hazardous materials. 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 hazardous materials remaining in-situ (and was based on the level of access available).

Further to the completion of the on-site investigation and collection/analysis of samples, there are detailed site/work-specific requirements and precautions that must be taken in the management, control and removal of ACM. In addition to those listed on the Asbestos Containing Materials Register, the following are some general recommendations and precautions that should be considered. Detailed documents, which may include, Scope of Works, Safe Work Method Statements and Risk Assessments, should be prepared to appropriately address health and safety issues associated with specific work and site conditions.

It is also a requirement as per Regulation 429 an Asbestos Management Plan must be prepared if Asbestos or ACM has been identified or assumed present, or likely to be present from time to time in a workplace.

4.1 Site Specific Recommendations

- No friable asbestos was identified during this survey.
- All non-friable ACM in an in-tact 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, such as Emerclad paint, to minimise the risk of generating airborne asbestos fibres if/when these materials are disturbed.
- All damaged ACM or in poor condition or significantly damaged should be remediated or removed as soon as possible such as the following
    - AC Fibrous Cement Eave lining to All External eaves was noted to have minor holes due to electrical and light fittings. These edges should be encapsulated with an appropriate sealant, such as Emerclad paint.

4.2 General Recommendations

- This document should be held as an Asbestos Register of the areas inspected and updated every 5 years or earlier where ACM have been disturbed or 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 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.
- In order to comply with the Work Health and Safety Regulations 2011 (NSW), 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 the Asbestos Control Log attached in **Appendix A**.
- Any areas of the workplace that contain 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 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, such as SLR, can advise and assist in carrying out such works.
- Prior to renovation or demolition works a refurbishment/demolition asbestos building materials survey should be undertaken by a suitable qualified and experience consultancy, such as SLR. A Refurbishment and/or Demolition Survey is required under the WHS Code of Practice: Demolition Work (2015) and AS2601 (2001): The Demolition of Structures.

4.3 Lead

4.3.1 Lead in Paint

Within the scope and limitations of the investigation undertaken, no paints containing greater than 1% lead were identified during the survey.

Paints of 1% or more lead content are generally considered to be lead containing; however the dry sanding of paints with even 0.25% lead can result in the release of unacceptable levels of lead containing dust.

Procedures and precautions detailed in Australian Standard AS 4361.2-1998 *Guide to lead paint management Part 2: Residential and Commercial Buildings*, *National Standard for the Control of Inorganic Lead at Work* [NOHSC: 1012 (1994)] and the *National Code of Practice for the Control and Safe Use of Inorganic Lead at Work* [NOHSC: 2015 (1994)] should be followed in the treatment and management of paint containing lead.

4.3.2 Lead in Dust

Within the scope and limitations of the investigation undertaken, no dust containing greater than (>) 8 mg/m² lead was identified during the survey.

Australian Standard AS 4361.2-1998 *Guide to lead paint management Part 2: Residential and Commercial Buildings* does not offer any general guidance on lead levels in dust but it does have surface dust lead loading values as acceptance levels after lead paint management activities. The acceptance levels for surface dust are:

- Interior floors 1 mg/m² (as lead)
- Interior window sills 5 mg/m² (as lead)
- Exterior surfaces 8 mg/m² (as lead)

SLR uses the Australian Standard levels above as a guide in assessing lead dust risks. These figures can also be used to assess the risk of exposure from other lead sources.

The acceptance level of lead in dust for exterior surfaces is considered the most appropriate guideline for comparison for lead in ceiling dust.

If any lead contaminated/potentially contaminated dust is encountered on site then access to the material should be appropriately restricted and advice sought from a suitably qualified and experienced consultant, such as SLR.

4.3.3 Metallic Lead

Within the scope and limitations of the investigation undertaken, no metallic lead was identified during the survey.

Metallic lead should not be ground, scraped, sanded, melted or otherwise disturbed to produce lead dust or vapours without the implementation of a suitable and sufficient risk assessment and the use of appropriate procedures and precautions. Procedures and precautions may include the use of appropriate Personal Protective Equipment (PPE) and control measures to ensure personnel are not exposed to lead materials or do not cause contamination of surrounding areas.

Precautions and procedures detailed in the *National Standard for the Control of Inorganic Lead at Work* [NOHSC:1012(1994)] and the *National Code of Practice for the Control and Safe Use of Inorganic Lead at Work* [NOHSC:2015 (1994)] should be followed in the treatment and management of metallic lead.

4.4 PCBs

Within the scope and limitations of the investigation undertaken, no old fluorescent light fittings were identified during the survey.

PCBs are assumed to be present in older fluorescent light fittings unless a more detailed inspection and/or sample analysis indicates otherwise. Sampling or a more detailed inspection would require the presence of a qualified electrician to electrically isolate and de-energise the light fittings.

PCBs are a scheduled waste with strict guidelines regarding transport and handling. PCB work is to be conducted in accordance with the *Environmental Protection & Heritage Council's Polychlorinated Biphenyls Management Plan, Revised Edition April 2003*. This includes:

- Prior to demolition when the power is disconnected, inspect the light fittings;
- Metal PCB containing capacitors are to be removed, placed in plastic lined 200 litre drums and disposed of as PCB Scheduled Waste. Any light fittings that show signs of oil staining from capacitors are to be disposed of as PCB contaminated;
- Protective clothing including eye protection, PCB resistant gloves and overalls are to be worn;
- Contaminated gloves and disposable coveralls are to be disposed of as PCB contaminated waste; and
- Contractors licensed to transport and handle PCBs must be used for transport and disposal. PCB is a scheduled waste with strict guidelines regarding transport and handling.

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 [Safe Work Australia (2011)]
- Code of Practice: How to Manage and Control Asbestos in the Workplace [Safe Work Australia (2011)]
- Code of Practice: Demolition Work [Safe Work Australia (2015)]

- 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

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.

NAME	COMPANY	DATE	ASBESTOS MATERIAL RELATED WORK UNDERTAKEN (Include any assessment concerning asbestos that took place before the work was carried out)	REFERENCE NUMBER (Include sample numbers, report numbers, quote number and/or purchase order number etc)
Jordan Harley	SLR Consulting Australia Pty Ltd	27/03/2018	Hazardous Building Materials Survey	Report No 610.18030.00000-HMR-R01

Appendix B
Certificate of Analysis

ASBESTOS ANALYTICAL REPORT

Report Number 610.18030.00000-R01--v1.0-ANA

Client: API Commercial

Client Contact: Jacob Motta

Client Address: 9 Pullman Place, Emu Plains NSW 2750

Date Sampled: 27-03-2018

Report Date: 13-04-2018

Sampled By: Jordan Harley

Site Address/ Location: 24 Attunga Road, Blaxland 2774

Work/Purchase Order: N/A

Test Methods: Sample(s) examined under a Polarised Light Microscope including dispersion staining techniques, in accordance with AS 4964

Results

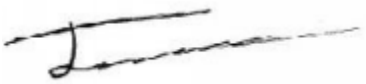
Sample No	Description	Location	Asbestos Present	Analysis Result
610.18030.00000/01	Fibre Cement	External Eaves	Yes	CHR
610.18030.00000/02	Fibre Cement	Cladding to Gables	Yes	CHR
610.18030.00000/03	Fibre Cement	Cupboard Ceiling	Yes	CHR
610.18030.00000/04	Fibre Cement	Cupboard Ceiling	Yes	CHR
610.18030.00000/05	Fibre Cement	Ceiling below mezzanine	Yes	CHR

Fibre identification Legend

AMO	Amosite (brown/grey asbestos)	ORF	Organic Fibre
BIT	Bitumen	NAD	No Asbestos Detected
CHR	Chrysotile (white asbestos)	NFD	No Fibres Detected
CRO	Crocidolite (blue asbestos)	SMF	Synthetic Mineral Fibre
INS	Insulation	UMF	Unknown Mineral Fibres

Notes:

- Sampling was undertaken by SLR
- The results contained within this report relate only to sample(s) submitted for testing



Jordan Harley
Project Consultant Hazardous Materials

Limitations

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 API Commercial and/or associated parties.

The analysis was undertaken by SLR at our NATA accredited facility.

All work conducted and reports produced by SLR Consulting are prepared for a particular Client's objective and are based on a specific scope, conditions and limitations, as agreed upon between SLR Consulting and the Client. Information and/or report(s) prepared by SLR Consulting 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 Consulting.

Before passing on to a third party any information and/or report(s) prepared by SLR Consulting, the Client is to inform fully the third party of the objective and scope, and all limitations and conditions, including any other relevant information which applies to the information and/or report(s) prepared by SLR Consulting.

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

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

Please direct correspondence to:

SLR Consulting Australia Pty Ltd
ABN 29 001 584 612
2 Lincoln Street Lane Cove NSW 2066 Australia
+61 2 9427 8100 +61 2 9427 8200
E: Hazmatau@slrconsulting.com www.slrconsulting.com

LEAD IN DUST SAMPLE ANALYSIS RESULTS

Report Number 610.18030.00000/01/LDA

Client:	API Commerical
Client Contact:	Jake Motta
Client Address:	9 Pullman Place, Emu Plains NSW 2750
Date Sampled:	27 March 2018
Report Date:	13 April 2018
Sampled By:	Jordan Harley
Site Address:	24 Attunga Road, Blaxland 2774
Work/Purchase Order:	N/A
Laboratory Name:	Eurofins mgt
Laboratory Address:	Unit F6, Building F, 16 Mars Road, Lane Cove West NSW 2006 (NATA Accreditation No. 1261, Site Mo. 18217).

1 Background

The Client required SLR to undertake Lead in Dust Swab Sampling/Analysis from the ceiling cavity as part of a Hazardous Materials Survey. A total of one (1) samples of Lead in Dust were collected.

This report shows the result from the Lead in Dust sampling.

2 Methodology

Settled dust was sampled and analysed for lead. Sampling and analysis was conducted in accordance with AS 4361.2-1998 *Guide to lead paint management Part 2: Residential and Commercial Buildings*. Briefly, this involved the collection of settled dust from a known surface area by wet wipe. The collected dust is then analysed in a laboratory by ICP-AES for total lead content. The total lead content and area sampled is then used to calculate a lead in dust loading value in mg/m^2

SLR Consulting Australia Pty Ltd 2 Lincoln Street Lane Cove NSW 2066 Australia
(PO Box 176 Lane Cove NSW 1595 Australia)
T: 61 2 9428 8100 F: 61 2 9427 8200 E: sydney@slrconsulting.com www.slrconsulting.com
ABN 29 001 584 612

3 Results

SLR Sample No.	Description	Location	Analysis Results
LD1	Lead in Dust	Ceiling Space	5.3mg/m^2 Lead

4 Recommendations

Australian Standard AS 4361.2-1998 *Guide to lead paint management Part 2: Residential and Commercial Buildings* does not offer any general guidance on lead levels in dust but it does have surface dust loading values as acceptance levels after lead paint management activities. The acceptance levels for interior surface dust are:

Interior floors	1 mg/m^2 (as lead)
Interior window sills	5 mg/m^2 (as lead)
Exterior surfaces	8 mg/m^2 (as lead)

SLR uses the Australian Standard levels above as a guide in assessing lead dust risks. These figures can also be used to assess the risk of exposure from other lead sources.

All samples analysed were below the appropriate acceptance level of lead in dust.

Please feel free to contact the undersigned should you have queries on this report.

Jordan Harley
Project Consultant - Hazardous Materials
BEnvSc

Appendix A
Certificate of Analysis

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30 years Testing For Life 1987–2017
Celebrating 30 years Testing and Protecting Human Health

Certificate of Analysis

SLR Consulting
2 Lincoln St
Lane Cove West
NSW 2066

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Attention: **Jordan Harley**

Report **591726-A**
Project name ATTUNGA ROAD RFS
Project ID 610.18030.00000
Received Date Mar 29, 2018

Client Sample ID			**610.17816.00000.0340.LD01**
Sample Matrix			**Wipes**
Eurofins | mgt Sample No.			**S18-Ma34086**
Date Sampled			**Mar 29, 2018**
Test/Reference	LOR	Unit	
Heavy Metals			
Lead	1	Total ug	53

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

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
Heavy Metals	Sydney	Mar 29, 2018	180 Day

- Method: E022.4 Acid Extractable Metals in Filters and Wipes

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ABN– 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

Company Name: SLR Consulting (Sydney)
Address: 2 Lincoln St
Lane Cove West
NSW 2066

Project Name: ATTUNGA ROAD RFS
Project ID: 610.18030.00000

Order No.: 24127
Report #: 591726
Phone: 02 9428 8100
Fax:

Received: Mar 29, 2018 1:21 PM
Due: Apr 3, 2018
Priority: 1 Day
Contact Name: Jordan Harley

Eurofins | mgt Analytical Services Manager : Andrew Black

Sample Detail						Lead	Lead (% w/w)
Melbourne Laboratory - NATA Site # 1254 & 14271							
Sydney Laboratory - NATA Site # 18217						X	X
Brisbane Laboratory - NATA Site # 20794							
Perth Laboratory - NATA Site # 23736							
External Laboratory							
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**		
1	610.17816.00000.0340.LD01	Mar 29, 2018		Wipes	S18-Ma34086	X	
2	610.17816.00000.0340.FA9	Mar 29, 2018		Paint	S18-Ma34087		X
Test Counts						1	1

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram

mg/L: milligrams per litre

ug/L: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	Quality Systems Manual ver 5.1 US Department of Defense
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries: Recoveries must lie between 50-150%-Phenols & PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.1 where no positive PFAS results have been reported have been reviewed and no data was affected.

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling.Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

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

Authorised By

Andrew Black Analytical Services Manager

Glenn Jackson
National Operations Manager

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.

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Certificate of Analysis

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NSW 2066

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Attention: **Jordan Harley**

Report **591726-S**
Project name ATTUNGA ROAD RFS
Project ID 610.18030.00000
Received Date Mar 29, 2018

Client Sample ID			**610.17816.00000.0340.FA9**
Sample Matrix			**Paint**
Eurofins | mgt Sample No.			**S18-Ma34087**
Date Sampled			**Mar 29, 2018**
Test/Reference	LOR	Unit	
Lead (% w/w)	0.01	%	0.01

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

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
Lead (% w/w)	Sydney	Mar 29, 2018	6 Month

- Method: E022.5 - ACID EXTRACTABLE METALS IN PAINT IN LIQUID AND POWDERED FORM BY ICP-MS ANALYSIS

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ABN– 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
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Murarrie QLD 4172
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PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.1 where no positive PFAS results have been reported have been reviewed and no data was affected.

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4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
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Quality Control Results

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

Authorised By

Andrew Black Analytical Services Manager

Glenn Jackson
National Operations Manager

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 C
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.

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 API Commercial and/or associated parties.

Where potentially 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.

Before passing on to a third party any information and/or report(s) prepared by SLR, the Client is to inform fully the third party of the objective and scope, and all limitations and conditions, including any other relevant information which applies to the information and/or report(s) prepared by SLR.

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

Appendix D
Photographs

Location:	Attunga Road RFS, Ground Floor East Entry foyer cupboard	Material Application	Ceiling inside cupboard , Fibrous Cement	Extent:	0.5 m²	Sample Number	03

Main Photo	Close Up Photo
	

Product Type	Asbestos reinforced composites etc. (1)
Condition	Fair (1)
Surface Treatment	Encapsulated FCS, AC (0)
Asbestos Type	Chrysotile (1)
Recommendation:	Manage

Material Score
3
Risk
Very Low

Location:	Attunga Road RFS, Ground Floor East Entry foyer cupboard	Material Application	Ceiling inside cupboard , Fibrous Cement	Extent:	1 m²	Sample Number	04

Main Photo	Close Up Photo
	

Product Type	Asbestos reinforced composites etc. (1)
Condition	Good (0)
Surface Treatment	Encapsulated FCS, AC (0)
Asbestos Type	Chrysotile (1)
Recommendation:	Manage

Material Score
2
Risk
Very Low

Location:	Attunga Road RFS, Ground Floor Ceiling below mezzanine level	Material Application	Ceiling panel, Fibrous Cement	Extent:	8 m²	Sample Number	05

Main Photo	Close Up Photo		
		Product Type	Asbestos reinforced composites etc. (1)
		Condition	Fair (1)
		Surface Treatment	Encapsulated FCS, AC (0)
		Asbestos Type	Chrysotile (1)
		Recommendation:	Encapsulate and Manage

Material Score
3
Risk
Very Low

Location:	Attunga Road RFS, External All External eaves	Material Application	Eave lining , Fibrous Cement	Extent:	25 m²	Sample Number	01

Main Photo	Close Up Photo		
		Product Type	Asbestos reinforced composites etc. (1)
		Condition	Poor (2)
		Surface Treatment	Encapsulated FCS, AC (0)
		Asbestos Type	Chrysotile (1)
		Recommendation:	Encapsulate and Manage

Material Score
4
Risk
Very Low

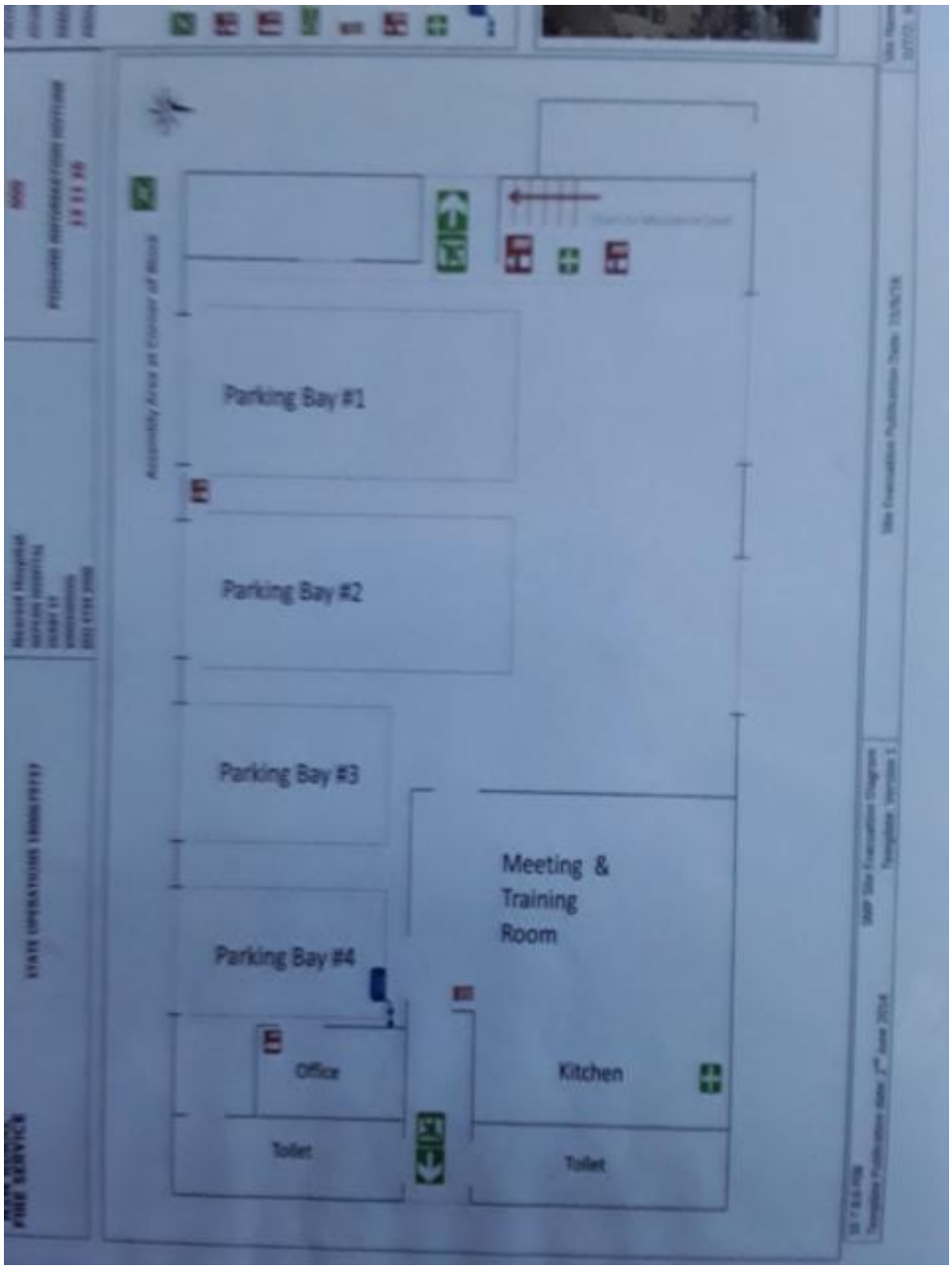
Location:	Attunga Road RFS, External Electrical Board North Wall	Material Application	Electrical backing board, Fibrous Cement	Extent:	1 m²	Sample Number	Assumed

Main Photo	Close Up Photo		
	No Photo Available	Product Type	Asbestos reinforced composites etc. (1)
		Condition	Fair (1)
		Surface Treatment	Unsealed FCS, AC (1)
		Asbestos Type	Assumed Asbestos (3)
		Recommendation:	Manage and Label

Material Score
6
Risk
Low

Appendix E
Site Plan

SITE PLAN


Parking Bay #1
Parking Bay #2
Parking Bay #3
Parking Bay #4
Meeting &
Training
Room
Office
Kitchen
Toilet
Toilet

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 (NSW), 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.

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 eg 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.

Licensing Requirements

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

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

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

Removal Procedures

The following procedures are recommended for demolition work involving non-friable asbestos cement sheeting in order to reduce the potential health risk to workers and to building occupants.

All asbestos removal and/or decontamination should be undertaken by a competent person working in accordance with the requirements specified in the Safe Work Australia Asbestos Codes of Practice and the Work Health and Safety Regulations 2011 (NSW). A licensed, experienced asbestos removal contractor is required to remove friable asbestos and >10m² of non-friable asbestos.

1. Prior to commencement of asbestos removal works, suitable warning signs must be erected. All windows and doors etc in the occupied areas of these buildings should be closed so as to prevent the spread of contamination.
2. All asbestos removal operatives to wear half-face particulate filter (cartridge) respirators and approved disposable coveralls.
3. The bolts fixing the asbestos cement sheets to the main frame must be cut out and removed. Abrasive cutting or sanding discs shall not be used on asbestos cement products. Only approved power tools may be used.
4. The asbestos cement sheets should be wetted or PVA coated (polyvinyl acetate). **High water pressures should not be used**.
5. All asbestos cement sheets should be removed with minimal breakage and be **lowered** to ground level, not dropped.
6. All asbestos cement dust and residues should be cleaned from the work area using an approved vacuum cleaner.
7. All asbestos containing waste must be removed from the site as soon as possible. The bins should be plastic lined, covered and taped secure prior to removal.
8. The asbestos waste shall be disposed of in accordance with the existing regulations.
9. Prior to engagement in the work, all asbestos operatives must be trained in safe working practices. These training aspects include:
    - Health hazards of asbestos
    - Safe working procedures
    - Wearing and maintenance of protective clothing and equipment

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 Work Health and Safety Regulations 2011 (NSW) and the Safe Work Australia Asbestos Codes of Practice.

Removal Procedures

The following procedures are recommended for the removal of asbestos containing vinyl tiles in order to avoid potential asbestos health risks to workers and building occupants.

If 10 m² or more of vinyl tiles are to be removed the work should be completed by a licensed, experienced asbestos removal contractor with notification to Work Health and Safety Regulations 2011 (NSW).

1. Prior to commencement of removal works, suitable warning signs must be erected. All windows, doors and vents etc in the occupied areas of the buildings should be closed to reduce the potential for cross-contamination/exposure.
2. All vinyl tile removal operatives are to wear appropriate personal protective equipment (PPE) including respiratory protection, safety glasses/goggles, disposable coveralls, hearing protection and gloves. Steel capped boots, hi-visibility vests and hard hats should also be worn as per the normal requirements for work on construction sites.
3. The tiles can be removed by heating the surface to loosen them or by use of a mechanical chisel to wedge them up. Care should be taken when heating tiles and the glues holding them in place to avoid the generation of toxic fumes. Do not grind, drill or otherwise abrade the tiles in any fashion that generates unnecessary dust/debris.
4. All waste is to be double bagged or placed in lined bins, sealed, and disposed of as asbestos waste in accordance with the Asbestos Codes of Practice and existing guidelines and regulations.
5. The removal area should be detailed clean using an approved vacuum cleaner fitted with a High Energy Particulate (HEPA) filter, and by wet wiping. A detergent should be used when wet wiping as this improves cleaning efficiency.
6. Obtain a clearance inspection and report from an independent, suitably qualified and experienced consultant such as SLR.
7. Upon satisfactory clearance inspection spray the area with a dilute PVA emulsion at low pressure. Multiple applications may be required to provide adequate coverage.
8. Prior to engagement in the work, all asbestos operatives must be trained in safe working practices. These training aspects include:
    - Health hazards of asbestos
    - Safe working procedures
    - Wearing and maintenance of protective clothing and equipment

Air 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.

All air monitoring must be completed by a NATA accredited organisation as specified in the Work Health and Safety Regulations 2011 (NSW)

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 Work Health and Safety Regulations 2011 (NSW). There may also be site specific requirements which should be complied with.

CORRUGATED ASBESTOS CEMENT ROOFING

Deterioration Mechanisms

Asbestos cement 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, such as SLR, 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 (eg at least once a year) by a suitably qualified and experienced consultant such as SLR 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 such as SLR.

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 Asbestos Management Plan. 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 such as SLR.

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

LEAD

Lead contamination comes from numerous different sources. Common sources include lead-containing paint, putties, leaded petrol and lead flashing.

Lead is absorbed by ingestion, inhalation and directly through the skin. The finer the particle size the more readily it is absorbed. As a result, some lead compounds are more readily absorbed than others. High lead exposure can cause death, however far lower exposures can also cause a number of adverse consequences, including a reduction in IQ, particularly in children.

Lead containing materials should be managed in accordance with the Work Health and Safety Regulations 2011 (NSW)the *National Standard for the Control of Inorganic Lead at Work* [NOHSC:1012(1994)], the *National Code of Practice for the Control and Safe Use of Inorganic Lead at Work* [NOHSC:2015(1994)] and other relevant standards and guidelines as outlined below.

Acceptable Levels

There are numerous standards but application to particular situations is not always clear.

Paint

In 1969 the National Health and Medical Research Council (NH&MRC) introduced the Uniform Paint Standard which banned the use of white lead for domestic buildings and placed a limit on other forms of lead (usually in the form of dryers) in such paints of 1% (by weight on the dry weight). In March 1992 this limit was lowered to 0.25% and has more recently been reduced even further in domestic paints as outlined in Appendix I (the letter not the number) of Standard for the Uniform Scheduling of Drugs and Poisons No 20, 2005 published by Australian Therapeutic Goods Administration under the Therapeutic Goods Act 1989. It is therefore common to find up to 1% lead in paint especially in glossy paints. There is no limit on the lead content of old paint finishes.

Moderate lead levels (less than 4%) are generally not considered an immediate health risk if the paint is in good condition and not likely to be damaged or accessible to children who might chew the paint etc. Removal of such paint however poses a health risk if it is not adequately controlled.

Paints of 1% or more lead content are generally considered to be lead containing; however the dry sanding of paints with even 0.25% lead can result in the release of unacceptable levels of lead containing dust.

Australian Standards AS 4361.1-1995 Guide to lead paint management Part 1: Industrial Applications and AS 4361.2-1998 Guide to lead paint management Part 2: Residential and Commercial Buildings provide guidance for the management of lead paint, information on lead paint testing and selection of an appropriate management strategy.

There is a duty of care to ensure that workers and building occupants are not exposed to excessive lead levels. Young children are particularly at risk.

Dust

Lead in dust is of particular concern because it is easily disturbed and frequently in the form of very fine particles which are more readily absorbed by the human body.

The NH&MRC (National Health & Medical Research Council) has not set guidance concentration levels for lead in dust. Australian Standard AS 4361.2-1998 Guide to lead paint management Part 2: Residential and Commercial Buildings, does not offer any general guidance on lead levels in dust but it does provide acceptable surface-dust lead concentrations after lead paint management activities. The acceptance levels for surface dust are:

- Interior floors 1 mg/m² (as lead)
- Interior window sills 5 mg/m² (as lead)
- Exterior surfaces 8 mg/m² (as lead)

The National Environment Protection (Assessment of Site Contamination) Measure (NEPM) 1999 Guideline on the Investigation Levels for Soil and Groundwater sets a limit of 300 ppm lead in soils for “standard” residential land-use. This limit is based on both Human Health and Environmental considerations.

Air

The NOHSC (National Occupational Health & Safety Commission) maximum allowable TWA (Time Weighted Average) concentration for airborne lead (inorganic dusts and fumes) is 0.15 mg/m³, however some lead compounds have lower levels. The ACGIH (American Conference of Governmental Industrial Hygienists have adopted a Threshold Limit Value (Time Weighted Average) of 0.05 mg/m³ for lead and inorganic lead compounds as lead.

Metallic Lead

Metallic lead or solder containing lead should not be ground, scraped, sanded, melted or otherwise disturbed to produce lead dust or vapours without undertaking appropriate procedures and precautions. Procedures and precautions may include the use of appropriate personal protective equipment (PPE) and control measures to ensure that personnel are not exposed to lead and there is no contamination of surrounding areas.

Control Measures

When high lead levels are encountered control measures should be put in place which are appropriate to the particular situation, in many cases this may consist of a few simple low cost precautions, in some cases removal by experienced contractors working to detailed procedures with air monitoring and independent supervision is required.

The disposal of lead contaminated material should be in accordance with current legislation and guidance.

SLR can provide expert advice, air monitoring, sampling and project management on lead related issues.

PCBs (POLYCHLORINATED BIPHENYLS)

Description, Properties and Uses

PCBs is an abbreviation for Polychlorinated Biphenyls, a group of synthetic chlorinated organic compounds commonly used as non-flammable oils in electrical equipment.

PCBs were commonly used as insulators in electrical capacitors and transformers but were also used in a wide range of other products that took advantage of their stability. Normally the PCBs are held in a metal container carrying no label signifying PCB content.

Small PCB filled capacitors were fitted to electric motors, welders, and fluorescent lights. Typically they are small metal containers holding about 50 millilitres of PCB. Large oil cooled transformers may contain many litres of PCBs.

Health Hazard of PCBs

PCBs are suspected human carcinogens and are a serious health problem due to their persistence in the environment, their potential for chronic or delayed toxicity and their accumulation in human and animal tissues. They can enter the body in three ways; by absorption through the skin, by inhalation of the vapour of heated PCBs (not a problem at room temperature), and by swallowing contaminated food or drink. Once PCBs are in the body they tend to lodge in the body fat and stay there for a considerable time.

Exposure to PCBs can cause a range of health problems whose effects increase with the duration of exposure and concentration levels.

PCBs are proven animal carcinogens and suspected human carcinogens. The results of exposure may include liver damage, respiratory disorders, chloracne (a severe skin rash), eczema and skin discolouration. PCBs have also been associated with thyroid gland disorders, muscle and joint pain, headaches, nausea, loss of appetite, abdominal pain, and are potentially related to reproductive problems in humans. Pregnant women should avoid PCB polluted areas.

PCB liquid and vapour is moderately irritating to the eyes.

Collection, Transport and Disposal

PCBs must be handled with care. They are very penetrating and will pass through some types of plastic gloves. When collecting PCBs appropriate personal protective equipment (PPE) must be worn.

PCBs are assumed to be present in fluorescent light fittings unless inspection indicates otherwise. Removal requires the following:

- Prior to demolition when the power is disconnected inspect the light fittings.
- Metal PCB containing capacitors are to be removed, placed in plastic lined 200 Litre drums, sealed and disposed of as PCB Scheduled Waste. Any light fittings that show signs of oil staining from capacitors are to be disposed of as PCB contaminated waste.
- Protective clothing including PCB resistant gloves to be worn.
- Contaminated gloves and disposable coveralls to be disposed of as PCB contaminated waste.
- PCBs are covered by a Chemical Control Order under the Environmentally Hazardous Chemicals Act 1985. The labelling, storage, transport and disposal of PCBs is highly regulated, and professional advice should be sought on how to deal with these materials.
- Contractors licensed to transport and handle PCBs must be used for transport and disposal.

Register and Management Plan

The Environment Protection & Heritage Council's *Polychlorinated Biphenyls Management Plan, Revised Edition April 2003* requires that a risk-based strategy for equipment containing PCBs be adopted. The elements of this strategy are surveying, testing and removal of identified high risk equipment. **There is a timetable by which surveys are to be completed**.

Property owners and managers should have a PCB register. This could form part of their Hazardous Materials Register for the site. Where PCBs are identified a PCB Hazard Management Plan should be in place. This could be a part of the Hazardous Materials Management Plan for the site.